

United States Department of the Interior
Bureau of Land Management
Agua Fria National Monument



Agua Fria River Canyon

BLM National Landscape Conservation System

FY 2009 Annual Manager's Report

Agua Fria National Monument
BLM Phoenix District Office
21605 N. 7th Ave.
Phoenix, AZ 85027
623-580-5500
623-580-5580 fax
www.blm.gov/az



Agua Fria National Monument Arizona

BLM National Landscape Conservation System
FY 2009 Annual Manager's Report



The Agua Fria National Monument is a part of the BLM's National Landscape Conservation System, the mission of which is to conserve, protect and restore nationally significant landscapes that have outstanding cultural, ecological and scientific values for present and future generations of Americans.



**United States Department of the Interior
BUREAU OF LAND MANAGEMENT**

– NATIONAL LANDSCAPE CONSERVATION SYSTEM –

FY 2009 ANNUAL MANAGER’S REPORT

Introduction

- Unit Name: Agua Fria National Monument

- Manager: Rem Hawes
BLM Phoenix District Office
21605 North 7th Avenue
Phoenix, Arizona 85027

- Established: Proclamation 7263, January 11, 2000
Establishment of the Agua Fria National Monument
By the President of the United States of America under the
Antiquities Act of 1906

- Acreage: 70, 900 acres – about 110 square miles

- Annual visitation: Approximately 48,000 visitors

Primary Mission: Protect and sustain the extraordinary combination of cultural, natural, and scientific resources within the high desert grasslands, canyons, and streams of the Monument. To the extent consistent with resource protection, provide opportunities for scientific research, public education, interpretation, and other compatible activities.

The 70,900-acre Agua Fria National Monument, is the home of the prehistoric Perry Mesa Tradition people, and is one of the most significant natural and cultural landscapes in the American Southwest. The Monument includes all of the BLM-administered public lands that make up the Perry Mesa Archaeological District listed on the National Register of Historic Places. The District was established to recognize and protect the particularly well-preserved system of prehistoric communities that were inhabited between A.D. 1250 and 1450. The approximately 50,000-acre Archaeological District is the largest prehistoric district in the nation.

The Monument, part of the BLM’s National Landscape Conservation System, is located 40 miles north of Phoenix. The public lands within the Phoenix District, which includes the Agua Fria and Sonoran Desert National Monuments, are the BLM’s most intensely urbanized. The Monument and surrounding Sonoran desert continue to experience the effects of long-term drought which is dramatically impacting vegetation communities and wildlife populations.



1. Natural and Heritage Resource Conditions

a. *Overview:* Natural resource conditions improved notably in 2009. New road signs helped to keep drivers on the existing roads. Changes in livestock grazing helped improve riparian areas. For cultural resources the condition trend remained stable.

i. *Natural resources trends:*

1. The overall condition of the Monument's natural resources continues to improve. Winter season grazing use has been implemented on the Box Bar, Cross Y, Sycamore, and the 2Y allotments. These changes are leading to proper function riparian conditions.
2. The lessee of the Horseshoe Ranch, which includes approximately 30,000 acres of public lands, has been resting the allotment from 2007 to 2009. This rest period should allow conditions to recover from recent drought effects. During this period, the ranch owner worked with BLM, the Arizona Game and Fish Department, and Arizona Antelope Foundation to evaluate management strategies for improving pronghorn habitat and grazing regimes.
3. After two years of rest the lessee of the Cross Y Allotment began grazing again. The operator began with a small cattle herd of 30 head and took non-use for the remainder of the permitted use.

b. *Heritage resources trends:*

The condition trend remained stable for cultural resources. BLM staff and volunteers from the Arizona Site Steward Program and Friends of the Agua Fria National Monument conducted regular patrols to check the condition of more than 20 major archaeological sites. They focused their efforts on the large, conspicuous and accessible sites that are most vulnerable to vandalism and other types of disturbance. There were no major instances of vandalism or damage, but two sites were impacted by episodes of illegal trash dumping.

Vandalism occurred to features of the historic Teskey home site, including shooting of signs and littering at the site. The Friends of the Agua Fria



National Monument assisted the BLM to stabilize and interpret the site. Efforts included construction of protective fence and covering graffiti on the chimney. Working with BLM, the Friends installed an interpretive sign and sign-in box. In December, a dedication highlighting the efforts was well attended by BLM employees,

the Friends of the Agua Fria National Monument, local residents, and especially the extended Teskey family. Increasing the historic appreciation of site has led to greater protection of the area and is a source of pride by the residents of nearby Cordes Lakes.

We remain concerned about potential damage to cultural resources associated with increasing levels of off-highway vehicle use and recreational target shooting. Actions were taken to monitor and control off-highway vehicle activities in the current problem areas at Badger Springs, lower Silver Creek, and the Agua Fria River near Cordes Junction. Vehicle barriers were constructed to prevent vehicles from driving in the Agua Fria River and Silver Creek. Recreational target shooting activity remains high. The Monument Resource Management Plan, which will be finalized in 2010, will help address these issues by designating roads and closing the Monument to target shooting (but not hunting). Both measures will require significant effort to implement in 2010.



Perry Mesa and Agua Fria River Canyon.

c. *Land Health Assessments.*

- i. Ninety percent of the livestock grazing allotments in the Monument have been assessed in reference to the Arizona Standards for Rangeland Health Evaluation.
- ii. Of the allotments that have been assessed, all are meeting or making significant progress towards meeting Standards 1 and 3 for Rangeland Health in upland areas. 67% of allotments are meeting or making significant progress towards meeting Standard 2 for Rangeland Health in riparian areas. The majority of riparian areas in the Cordes, Box Bar, and EZ Ranch allotments currently are not meeting Standard 2. The Cordes allotment is currently in non use, the Box Bar will become winter season grazing only, and EZ Ranch is still being assessed. The purpose of these measures is to ensure progress towards meeting Standard 2 in these allotments.
- iii. One grazing allotment, approximately 30,000 acres, remains in livestock grazing nonuse following the June 2005 Cave Creek Fire which burned much of the area. With the finalization of the Monument resource management plan in 2010, the BLM expects to institute livestock exclosures or non-growing (winter) season grazing use for all riparian pastures within the Monument, which will lead to significant improvement in the riparian areas.

d. *Inventory:* Work to inventory natural and heritage resources continues to be done by BLM staff and increasingly through partnerships with universities, museums, botanic gardens, members of the Friends of the Agua Fria National Monument, Arizona Site Stewards, Arizona Game and Fish Department, and local volunteers. Work was done to inventory all roads, route signs, assets and facilities. Arizona State University continued to survey additional acres and document newly discovered cultural resources. The Desert Botanical Garden has continued to collect data for the Floristic Study on the monument and are in the final year of analysis for the fire rehabilitation and grassland restoration study.

e. *Restoration:*

Grasslands Restoration: The Bureau of Land Management is one of four agencies focused on the conservation of grassland habitat in Central Arizona. With key portions of grassland habitat occurring on the Agua Fria National Monument, staff has worked in conjunction with the Arizona Game and Fish Department, the Prescott and



Tonto National Forests, and the Natural Resources Conservation Service to develop the “Central Arizona Grasslands Strategy.” This strategy provides a framework for multiagency projects that benefit grassland habitat restoration on a landscape scale and across jurisdictional boundaries. Based on these efforts, the Central Arizona grasslands have also become a focal area for the Healthy Landscapes Initiative.

The majority of the Monument’s restoration projects are focused on improving wildlife habitat and maintaining movement corridors for pronghorn antelope. A portion of this work is accomplished through BLM’s fuels program in cooperation with the Arizona Game and Fish Department. In FY 2009, we completed over 500 acres of juniper thinning and pile burning in the area of Sycamore Mesa to help restore connectivity between grassland habitats utilized by pronghorn. An additional 2,700 acres between Long Gulch and Indian Creek were treated utilizing prescribed fire to reduce woody species encroachment and maintain grassland habitat.

Post-Fire Restoration: The post-fire vegetation change and efficacy of ecological restoration of semi-arid grasslands study on Black Mesa will continue throughout 2010. In FY2009 the Desert Botanical Garden (DBG) compiled information from multiple sources on historical land uses practices and trends in vegetation changes (e.g., trends in use by domestic livestock; wildfire) for future land use decisions; established monitoring transects and documented vegetation composition in burned and unburned areas; created a GIS database with site locations and associated data; and completed the analysis of relationships between perennial grasses and their variables, including substrate condition and cover of the invasive stock, *Brassica nigra*. Approximately 8,000 acres of the Monument was monitored as part of the post-fire vegetation study. The project yields useful information for the restoration of native vegetation in the Monument and other semi-arid grasslands in the Southwest.

Biological Resources: The condition of native fish populations has remained stable. The endangered Gila Chub and Gila Topminnow populations continue to thrive in Lousy Canyon, and the tributary of Larry Creek. Endangered Desert Pupfish were introduced into both of these areas in the spring of 2006, however; they do not appear to have established a self-sustaining population and additional stocking may be required. Drought conditions have continued to stress the endangered Gila chub populations in Silver Creek and Indian Creek, where they remain confined to the few remaining pools throughout the early summer until monsoons arrive to provide relief.

Management actions were also taken in FY09 to protect riparian habitat along portions of the Agua Fria River and Silver Creek. Vehicle barriers were installed to prevent off-highway vehicle use within these riparian areas. This action will protect habitat used each summer for breeding and nesting by the Western Yellow-Billed Cuckoo, a federal candidate for listing; as well as improve habitat conditions for native fish such as the Longfin Dace.

Infestations of exotic crayfish continue to threaten native aquatic wildlife. The impacts caused by this aquatic pest are amplified by drought conditions, which

concentrate both native and exotic species in small remaining pools of water within the streams.

2. Recreation Facilities, Roads, and Trails Conditions

- a. *Overview.* The condition of the Monument's few constructed facilities and assets is good. Vandalism of improvements continues, but was less than in previous years with no permanent destruction or theft of constructed assets. In 2009 the Agua Fria National Monument implemented the Annual Maintenance Operating (AMOC) pilot program to document costs and personnel hours to maintain facilities, assets and roads.
- b. *Construction:* None.
- c. *Maintenance:* Annual maintenance is limited. Road maintenance consists of grading six miles of road, which is adequate, and emergency repairs to the Monument's few constructed assets. Stabilizing visitor areas and roads to prevent resource impacts
 - i. *Constructed Assets: Vault Toilets:* The Monument has two vault toilets, one at Badger Springs Wash and the other at Silver Creek on the Bloody Basin Road. Decorative rock barriers around the restroom buildings were constructed to protect them from damage by vehicle traffic. These restroom facilities are of a high mission priority, are serviced regularly, and are in good condition.

Kiosks: A new information kiosk of an improved design was installed at an area near Cordes Lakes that experiences heavy visitor use. There are a total of four kiosks with the remaining three located at the Badger Springs Road exit from Interstate 17 and at the east and west entrances to the Monument on Bloody Basin Road. In late 2005, the information cases at Badger Springs and east Bloody Basin Road were stolen. BLM replaced the \$1,500 information case at the highly visited Badger Springs location, and constructed a metal-framed plywood display panel at the east Bloody Basin Road kiosk. The addition of a mounted lexan cover was installed in 2009 due to repeated vandalism of the display.

Trailhead: The Badger Springs trailhead access includes some of the most important constructed assets in the Monument for public visitation and resource protection. The Badger Springs site and surrounding area includes the trailhead, vault toilets, interpretive kiosk, portal sign, and two parking



Badger Springs Wash Trail.

lots. The kiosk is in the categories of high mission priority and good condition (asset business plan “Quadrant 1” category condition). The portal and trail signs were repainted by the Park Ranger in 2008 as a temporary measure and in late 2009 new signs were requisitioned. Continuing maintenance of the parking lots is needed in order to move these constructed assets into the Quadrant 1 category

- ii. *Roads:* All roads in the Monument are dirt roads, and most are very rough and suitable only for vehicles with high clearance and, in many cases, four-wheel drive. During periods of the year with storms and precipitation, many roads are not passable due to mud or flooding. Unless such road conditions contribute to resource impacts, these rough roads actually protect delicate natural resources and contribute to the backcountry experience that characterizes BLM’s NLCS units. Generally, road maintenance is conducted to address only significant safety and resource protection concerns.

The Badger Springs Road and its associated parking lots remain subject to frequent flooding due to its low elevation. Because the road is the primary access for the popular recreation trail through Badger Springs Wash, road conditions during wet periods of the year are inadequate to meet the needs of visitors lacking four-wheel drive vehicles. Continuing maintenance of the parking lots is needed in order to move these constructed assets into the categories of high mission priority and good condition (asset business plan “Quadrant 1” category condition).

The Bloody Basin Road, which bisects the Monument and connects the western boundary and Interstate 17 with the eastern boundary with the Tonto National Forest, is the most heavily used road in the Monument. In dry conditions the first five miles of this road are passable in a passenger car, but four-wheel drive vehicles with high clearance are necessary for nearly all other roads. Maintenance work on the road is conducted according to an approved schedule. Yavapai County maintains approximately five miles of Bloody Basin Road, and the BLM maintains an additional four miles annually.

- iii. *Backlog of deferred maintenance:* No change since 2006. Condition assessments we done on facilities in the Monument, and are in progress on all roads.
- iv. *Annual Maintenance Operating Cost Pilot*
The Annual Maintenance Operating Cost (AMOC) pilot program was implemented in 2009. The program is designed to track personnel and volunteer hours spent on the maintenance of assets including restrooms, signs, trails, roads, and dispersed areas. The Facility Asset Management System database manages annual maintenance cost information that is reported by

employees and volunteers performing maintenance tasks on the Agua Fria National Monument.

d. *Signage*

- i. *Sign plan.* A sign plan was completed for the Monument. BLM will seek funding to complete and implement it.
- ii. Bloody Basin Road entrance: The Monument has one BLM NLCS landscape-style portal sign at the main entrance of Bloody Basin Road. The portal sign has received weather and vandalism damage, and the BLM triangle signs were stolen. The landscape graphic began to deteriorate and new portal sign were requisitioned in late 2009 for the west and east entrances on Bloody Basin road.



Portal sign at Bloody Basin Road entrance.

- iii. Badger Springs entrance: The only other portal sign on the Monument is located at the Badger Springs entrance. The portal sign is an early style, secondary monument sign that does not meet BLM primary standards and a new sign was requisitioned in late 2009 in order for the entrance to meet the asset business plan "Quadrant 1" category of high mission priority and good condition.
- iv. Additional Needs and Signs: Primary portal signs are needed for the Monument entrances from the community of Cordes Junction and the Dugas Road in the adjacent Prescott National Forest to the north of the Monument.

The Monument has received interpretive signs from the Sonoran Chapter of Arizona Audubon for use within the riparian areas that were designated as Important Bird Areas. The Friends of the Agua Fria National Monument also began installing signs in 2008 that read “No littering please. Area cleaned by volunteers.” This project was completed in 2009 and the proved to be successful with a dramatic reduction in littering, dumping and vandalism to the signed areas.



- v. Interim Road Signing: Road signing began in October 2007 based on the inventory of existing roads in the Monument. In 2009 the BLM completed signing 90% of roads within the monument. The Monument resource management plan when finalized (early 2010), will also contain a travel management plan for the Monument. With the plan, all roads will be designated as open or closed for use by motorized vehicles, assigned a unique route number, and posted as such in the Monument. The interim signs, in addition to the visitor kiosks and portal sign, will help protect Monument objects until the official route designations can be implemented. Materials and supplies to initiate the project were purchased utilizing grant funds received through a \$10,000 recreational trails program grant from Arizona State Parks. The signs were installed by volunteers.

3. Outreach, Environmental Education, Interpretation, and Volunteers

- a. *Outreach:* In FY 2009, local officials, U.S. Congressional staffers from various Arizona districts, and interest group representatives toured the Monument. Officials learned about the release of the proposed Resource Management Plan, target shooting, travel management, wildlife, and cultural resource management.

BLM and the Friends group provided tours for the public, Arizona Archaeological Society chapters, Arizona Hiking Club, and as part of Arizona Archaeology and Heritage Awareness Month. Presentations on archaeology were given to the Kingman and Desert Foothills chapters of the Arizona Archaeological Society.

- b. *Visitor Centers:* With the support of the Friends, BLM is partnering in the Black Canyon Heritage Park on the banks of the Agua Fria River in Black Canyon City. The park’s visitor center will highlight area attractions including the Monument. Partners include Black Canyon City Community Association, Historical Society, Fire Department, Arizona Game and Fish, and National Park Service. BLM is also working to partner in development of the Cordes Museum in the Monument gateway community of Cordes Junction.

c. *Environmental Education:*

With the support of the Friends of the Agua Fria National Monument, we provided stewardship project opportunities, and on-site and off-site interpretation and environmental education presentations. The focus of these presentations was cultural resource stewardship, environmental stewardship, ecological restoration, wildlife resources, tread lightly and leave no trace. Attendees included area students, local individuals, archaeology enthusiasts, conservation groups, scouts, student agricultural clubs, and Site Stewards.

Other public outreach highlights included site tours for the public, the Arizona Archaeological Society, Agua Fria Open Space Convention, Arizona Hydrological Society, and the Verde Birding and Nature Festival. These tours were made possible by the efforts of the Friends of the Agua Fria National Monument and Arizona Site Stewards.

The Monument was the subject of several major Phoenix newspaper articles that focused on cultural resource protection, target shooting, and NLCS units in general. The Monument was the subject of dozens of articles published in gateway community markets; most contact was positive and focused on the particular projects, the Monument management plan, BLM staff, resource damage from target shooting, illegal dumping, volunteer cleanups and other projects, and prescribed fire activity.

Visitation to the Monument was approximately 48,000 people in FY 2009, up from 41,000 in FY 2008. We continue to see a change in recreation use patterns. In the past, many recreation users would visit the Monument for the weekend, camping on site. Now, many users are repeat day users, visiting weekly or more often. We attribute this primarily to the increase in the number of people who live in close proximity, and increasing land use restrictions in other areas around the growing Phoenix metropolitan area.

d. *Interpretation.*

The Friends of the Agua Fria National Monument followed up substantial research of the historic Teskey home site by developing it as an interpreted site. This project has broadened the understanding of one of the historic resources of the Monument, which is best known for its prehistoric resources. A protective fence was constructed around the home site and an interpretive sign and sign-in box were installed. The project has helped the local community in a greater understanding and appreciation of the Monument. Illegal dumping in the area and shooting has dramatically been reduced.



Teskey home site 1940s.



Teskey agricultural fields.

The Monument completed an interpretive plan for the Pueblo la Plata archaeological site through an Intra-Governmental Order with a Forest Service Enterprise Unit, Recreation Solutions. Work began on developing interpretive signs and a brochure.

e. *Volunteers:*

Pronghorn Partnership: Several times in FY 2009, between 40 and 60 volunteers participated in fence projects that improved wildlife habitat within the Monument, particularly for pronghorn antelope. Volunteers included individuals from the Arizona Antelope Foundation, Arizona State University, Arizona Game and Fish Department, Boy Scouts, Friends of the Agua Fria National Monument, local ranchers, and BLM staff. The teams focus on the mesas in the northern part of the Monument, which comprise native grasslands and are home to a variety of wildlife species. The area serves as a key migration corridor that connects grassland habitat north of the Monument.

Friends of the Agua Fria National Monument members serve as volunteers.

The Friends project to care for and interpret the historic Teskey home site had the added benefit of facilitating local community understanding of the Monument, reducing illegal dumping in the area, and addressing the appropriate use of off-highway vehicles only on existing roads.

Community Volunteers: We made significant advances in 2008 to increase participation and volunteerism in the local communities of Cordes Junction and Black Canyon City, Arizona. The Monument also has a volunteer who has served the Monument for more than four years, and provided nearly 1,000 hours of volunteer service in FY 2009. As the Monument has only one park ranger, this individual's contributions to help watch over these lands makes a big impact.

4. Science

a. *Research and Inventory Work.*

Cultural Resource Research and Survey: In conjunction with the continuing Legacies on the Landscape research study, professors and students from Arizona State University (ASU) continued to document small archaeological sites discovered around Pueblo la Plata and Pueblo Pato and mapping extensive systems of prehistoric farming terraces on Perry Mesa. In addition to the Legacies project, ASU began the Alliance Project (“Alliance and Landscape: Perry Mesa, Arizona in the Fourteenth Century”), supported by two grants from the National Science Foundation.

ASU has analyzed samples of prehistoric ceramics collected from the surfaces of several Monument site. This research will give insight into prehistoric pottery production, trade, and the social relationships among villages and the surrounding region.

The Monument initiated archaeological survey of the Long Gulch Mesa, north of Perry Mesa of Perry Mesa. Working under the direction of Monument staff, volunteers from the Arizona Archaeological Society Friends of the Agua Fria National Monument surveyed 265 acres and recorded eleven new sites.

Agua Fria National Monument Flora Project: The Desert Botanical Garden (DBG) has been conducting floristic inventories of the Monument’s vegetation since 2003. The project includes the collection, identification, and curation of flora on the Monument. The data collected by DBG is also being entered onto the Southwest Environmental Information Network to share and disseminate biological information. As part of the Seeds of Success program, three different seed collections for three species were made on the AFNM in 2009, bringing the total number of collections from the monument to 35 and the total number of species 29. These studies are providing baseline data for supporting decisions that will foster productive ecosystem management and the protection of Monument landscapes, consistent with the Monument proclamation.



b. *Research Projects.*

The BLM defines “science” broadly, including basic and applied research in natural and social science, as well as inventory and monitoring. Science efforts included:

Legacies on the Landscape Project

Arizona State University

Since 2003, this interdisciplinary project is an ongoing effort of the School of Life Sciences and the School of Human Evolution and Social Change. Ecologists and archaeologists are studying the effects of the natural environment on the prehistoric human populations, and the long-term effects of the prehistoric settlements on the modern environment. ASU has been awarded two grants from the National Science Foundation to continue the project.

ASU expanded this effort to include the Alliance Project, which focuses on the analysis of prehistoric pottery types and their geographic distributions within and beyond the Monument. Partners include the Tonto National Forest and the Arizona Archaeological Society.

Vegetation and Post-Fire Restoration Study

Desert Botanical Garden

The principle purpose of the post-fire vegetation change and restoration study is to conduct basic and applied botanical research, and support research efforts toward protection and restoration of desert landscapes affected by wild fires on semi-arid grasslands of the desert Southwest. In addition and as part of the Seeds of Success program, DBG is collecting seeds from the AFNM to contribute to the National Seed Bank program. These collections are for use in future research and restoration projects and to hold and preserve in long-term storage a representative component of the plant diversity of the AFNM. This is a multi-year project expected to be completed in December 31, 2010.

Power Line Corridor Management Plan for Vegetation Management 500-2 Navajo to Westwing Power Line

Arizona Public Service

The entire length of a twin 500kV power line right-of-way that traverses the Monument was treated for vegetation maintenance in 2009. A Corridor Management Plan for Vegetation Management was developed by APS in coordination with AFNM and HFO staff. The vegetation management of this power line included an initial corridor clearing, ongoing hazard



vegetation pruning or removal, and follow-up routine vegetation maintenance scheduled cyclically approximately every five years. Vegetation maintenance serves four main purposes: to provide reliable, uninterrupted service to customers; provide safe and efficient transmission of power along existing lines; provide safe and reasonable access to the lines and structures for inspection and maintenance; and provide protection against wildfires by reducing the potential for fire ignition from vegetation around the power lines, and

reduce fuel load under the lines which reduces effects of existing fires damaging structures or causing a power fault in the lines. New federal energy regulations mandate vegetation inspections and treatment to maintain lines in safe and reliable operating conditions (NERC Reliability Standard FAC-003-1).

Study of Bird Species and Distributions

Sonoran Audubon Society

Audubon Society volunteers conducted surveys and studies of bird species and habitats in the Monument. Audubon has gathered sufficient data to designate the riparian areas within the Monument as the “Agua Fria National Monument Riparian Corridors Important Bird Area,” part of a global network of places recognized for their outstanding value to bird conservation.

- c. *Science Table* — attached at end of report.

5. Partnerships and Collaborative Relationships

- a. Invasive Weed Partnership: In 2009, by way of an assistance agreement with the Friends of the Agua Fria National Monument, the BLM and the Friends contracted the Agua Fria Open Space Alliance for the production of an Integrated Weed Management Plan (IWMP) for the Phoenix District. A final draft of the plan has been submitted to BLM and will be finalized in early 2010. Once the IWMP is completed the Phoenix District will have a strategic approach to managing invasive plant species, using a variety of treatments methods. BLM staff, Friends of the Agua Fria National Monument, and other volunteers continues efforts to control invasive plant species occurring on the Monument. New tamarisk populations have been documented on the Agua Fria River and tributaries within the Monument. Other invasive weed species such as Malta Star Thistle, Black Mustard, Sahara Mustard, and non-native annual grass species have been documented on the Monument as well. Additional weed inventories are planned for 2010 followed by treatments to remove and eradicate invasive plant populations.
- b. Friends of the Agua Fria National Monument: In 2009 the Friends completed their Strategic and Work Plans and began focusing on our priorities of education and preservation for the Agua Fria National Monument. Projects completed by the Friends and 4,629 volunteer hours includes: a trash pickup at the historic Teskey site, outreach activities that have include Cordes Junction in hope of discouraging vandalism at the Teskey site, an interpretive sign and preservation projects at the Teskey site, and organizing the annual Friends Group Meeting held at the Canyon Creek Ranch. To support cultural resources protection and outreach efforts, Friends volunteers devoted 432 hours to various site protection and documentation projects alone. FAFNM volunteers conducted site tours for the public and conducted interviews to complete oral history studies of the Teskey Homestead, the Richinbar Mine, and the Perry family history. The Friends received a grant of challenge cost share funds during FY 2009 (CCS project #046A). The funds were granted to support volunteer projects related to the Agua Fria National Monument 10 year

anniversary event. The Friends will match challenge cost share funds by providing volunteer assistance with the outreach, planning, and facilitation of the upcoming anniversary event.

- c. Wet-Dry Mapping: The Agua Fria River in the BLM's Agua Fria National Monument was the subject of an inaugural water mapping project conducted by volunteers on the Summer solstice, June 20, 2009. The volunteer/GPS water-mapping project mapped the presence or absence of water in the Agua Fria River. Volunteers also collected water samples for water quality testing. The project is a joint effort by the Arizona Nonpoint Education for Municipal Officials (NEMO), Friends of the Agua Fria National Monument, Upper Agua Fria Watershed Partnership, Upper Agua Fria Open Space Alliance, Arcosanti, Prescott College, USDA Agricultural Research Service, and the BLM.
- d. Arizona State University, Legacies on the Landscape project: This ongoing study continued under a CESU assistance agreement with challenge cost share funding. Students and professors completed various tasks of fieldwork, analysis, and report preparation. Students contributed at least 400 hours, valued at \$8,100. Adding the lead professor's time that was contributed at a value of \$7,546, the total contribution was approximately \$15,646. The BLM provided \$15,000 in funding and staff labor for oversight of the project.
- e. River Bend site rock art recordation: Members of the Arizona Rock Art Council and Monument Friends group recorded an extensive rock art site using new recording forms designed specifically to capture details of rock art elements and panels. The recording used photography, precise measurements, sketches, and categorization of element types. Orientation of elements to other elements and the landscape was also documented.
- f. Site protection projects were conducted at the Teskey Home site, with the assistance of the Friends of the Agua Fria National Monument.
- g. Arizona Site Steward Program: Arizona Site Stewards continue to provide necessary assistance to monitor and protect cultural sites as well as other natural resource conditions. Site Steward volunteers contributed 371 hours to site monitoring and tours. The total contribution is valued at \$6,964. The Site Steward Program receives challenge cost share funding to support the program at the statewide level through the Arizona State Office.



Shelley Rasmussen, a member of the Friends of the Agua Fria National Monument, was awarded Site Steward of the Year. Rasmussen has logged more than 20,000

volunteer hours in the Arizona Site Steward Program and currently serves as the coordinator for the Hassayampa Region.

Dr. David Wilcox received the Governor's Lifetime Achievement Award in Public Archaeology. With the help of volunteers from the Arizona Archaeological Society, Dr. Wilcox has done extensive research in the AFNM and is the author of *The Archaeology of Perry Mesa and its World*. Marlene Conklin, a volunteer who served on Dr. Wilcox's crews, received an award as Avocational Archaeologist of the Year.

- h. Central Arizona Grassland Management Strategy: Monument staff worked collaboratively with the Prescott and Tonto National Forests, and the Arizona Department of Game and Fish to develop an integrated management strategy for conservation and restoration of grassland ecosystems and associated pronghorn habitat in central Arizona. This coordinated approach will help facilitate the implementation of landscape level habitat projects, akin to the Healthy Landscapes initiative, by maximizing the use of available resources.
- i. Collaborative efforts with Local government: Monument manager and staff worked closely with cooperating agencies that administer nearby lands or have special expertise in resource management. These local and government entities include the Arizona Game and Fish Department, Yavapai County, Tonto National Forest, Prescott National Forest, Natural Resources Conservation Service, Yavapai Prescott Tribe, and local communities including Black Canyon City, Cordes Junction, and Mayer, Arizona.

6. Planning and Business Practices

Planning. The proposed Agua Fria National Monument and Bradshaw-Harquahala Resource Management Plan, Monument Management Plan, and Environmental Impact Statement were published in August 2008. The BLM resolved all protests, and then drafted the Record of Decision in 2009. The final Monument Resource Management Plan will be published in early 2010.

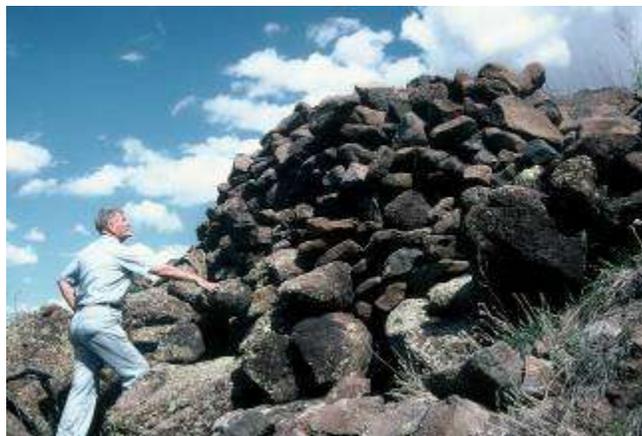
7. Manager's Corner

Republic of Georgia Delegation Met with Arizona BLM, NTC, NLCS Leads: The U.S. Department of the Interior, International Technical Assistance Program helped organize an environmental study expedition for a delegation of government officials from the Republic of Georgia. The delegation spent three days at the Agua Fria National Monument. The Department of the Interior has a long-standing program with the Georgian Ministry of Environment Protection and Natural Resources to enhance that country's network of protected areas and unique biodiversity resources. The Minister's entourage studied at Glacier National Park, the Grand Canyon and Arizona's Agua Fria National Monument. The BLM introduced the delegation to a model program for protected area management, providing instruction on the development of the Agua Fria

National Monument, part of the U.S. BLM National Landscape Conservation System. Delegates learned how the national monument was created and how the Bureau then implemented public and private partnerships to effectively implement on-the-ground management by and for the general public.

The delegation was escorted by Barbara Pitkin – the DOI’s ITAP Program Manager, and Patricia Bickley, ITAP International Program Analyst. The delegation arrived at the Agua Fria National Monument Sunday, September 20, 2009, where they were greeted by Manager Rem Hawes, Associate State Director Helen Hankins, Hassayampa Field Manager Steve Cohn, and district personnel. Monday’s field studies first featured a briefing by Hawes about the National Conservation Landscape System, land ownership issues and partnership opportunities, and management of protected cultural resources. The group next inspected several key areas within and adjacent to the Monument. The group stopped at the newly reopened Sunset Point rest area for a summary landscape view of the Black Canyon National Recreation Trail and education on the Bureau’s multi use mission. One of the highlights included a discussion at the prehistoric Pueblo La Plata. Hawes advised the delegation that nearly every visitor to the ruins is documented using a voluntary registry. Kristen Bail BLM Washington National Landscape Conservation System joined the delegation on Monday. On Monday night, 40 BLM associates and partners gathered for an active interchange of information that compared management practices of the two countries. This roundtable meeting brought together government agency leads Rod Lucas from the Arizona Game and Fish; Dan Shein, Arizona State Parks; Maricopa County Parks & Recreation Department Director RJ Cardin; Yavapai County Board of Supervisor Tom Thurman; Norm Perry, BLM AZ Resource Advisory Council; and BLM partners including: Tim Flood and Peggy Biegler - Friends of the Agua Fria National Monument; Bob Cothorn - Black Canyon Trail Coalition and the Black Canyon Heritage Park; Jeff Williamson - Director, Phoenix Zoological Society; Tice Supplee - National Audubon Society; Chris Byrne – Trust for Public Lands, Glen Collins – Public Land Foundation and BLM AZ Resource Advisory Council; Eric Gorsegnor – Sonoran Institute; Eddie Genna – Phoenix City College; and Richard Shaw- Friends of Table Mesa. BLM staff included Ken Mahoney, Elaine Raper, Pamela Mathis, JA Vacca, Amanda James, and Nancy Stallard. On Tuesday, the delegation traveled to Black Canyon City meeting with gateway community leaders and then toured the BLM National Training Center in Phoenix.

BLM Partners with Museum and ASU on Perry Mesa Exhibit: In FY 2009, Agua Fria National Monument staff worked with the Phoenix City Archaeologist, Pueblo Grande Museum staff, Arizona State University (ASU) researchers, and others to initiate development of a Museum exhibit about Perry



Mesa. Perry Mesa is the dominant geographic feature in the Agua Fria National Monument. The 50,000-acre Perry Mesa National Register District, which spans the Monument and part of the adjacent Tonto National Forest, was designated to recognize the significance and extent of the archaeology on Perry Mesa. Originally designated in 1975, the District was expanded in 1996 and is now one of the largest prehistoric districts listed on the National Register of Historic Places. The exhibit will highlight the history, ecology, rock art “petroglyphs,” artifacts, and pueblo ruins in the area, and their connections to the entire central Arizona landscape and other cultures. The nearly 3,000 square foot exhibit will open in March 2010, and be on display for one year at the Pueblo Grande Museum.

Archaeology Publication Features Four Articles on the Agua Fria National Monument: Four articles relating to the Agua Fria National Monument appear in the 2009 volume published by the Sharlot Hall Museum Press in Prescott, Ariz. titled *Prescott to Perry Mesa: 4,000 Years of Adaptation, Innovation, and Change in Central Arizona*. The volume includes presentations given at the Prescott Archaeological Conference in 2006. An article by Connie Stone, Hassayampa Assistant Field Manager, “From National Register District to National Monument: The Past Ten Years on Perry Mesa,” describes the BLM’s accomplishments in resource monitoring and protection; surveys and site documentation; support for scientific research; public education and interpretation; public partnerships; and resource management planning. Researchers from Arizona State University describe their ongoing research relating to “Warfare and Farming: Research on the Late Prehistoric Occupation of Perry Mesa.” Cliff Hersted, an independent researcher affiliated with the Upper Agua Fria Watershed Coalition, contributed articles describing a distinctive Perry Mesa petroglyph that may represent a prehistoric landscape map; and on long rock walls that may have functioned as devices used in hunting pronghorn.

Land Tenture:

Initial Meeting Regarding Potential Acquisition of Cross Y Ranch: On September 17, 2009, BLM met with the owner and representatives of the Cross Y Ranch, a 700-acre in-holding with additional lands totaling 2,000 acres in and adjacent to the Agua Fria National Monument, regarding potential acquisition of the ranch. Monument Manager Rem Hawes, Natural Resource Specialist Amanda James, and Realty Specialist Mike Werner met with ranch owner Bob Ashcraft, Headquarters West broker Charlie Havranek, and The Conservation Fund’s Mike Ford. The property serves as a buffer between the Monument and developments of Monument-gateway community Black Canyon City. The Agua Fria River and Squaw Creek flow through the ranch, which includes substantial additional water rights. The parties discussed complexities with acquisition which include disposition of substantial improvements on the property that the BLM would not acquire. The parties will meet again in mid-October at the ranch.

BLM, Arizona Game and Fish, and Trust for Public Lands Meet Regarding Potential Horseshoe Ranch Acquisition: On August 18, 2009, BLM Personnel met with Arizona Game and Fish Department officials, and the Trust for Public Lands' Southwest Coordinator to discuss the potential acquisition of the Horseshoe Ranch, located in the center of the Agua Fria National Monument. The Horseshoe Ranch, bisected by the Agua Fria River, sits off of the only road into and through the Monument, Bloody Basin Road, making it the gateway to the Monument. The ranch had been foreclosed on and was scheduled for sale at auction on July 10. In July 2009, the Trust for Public Lands (TPL) acquired the debt on the Horseshoe Ranch, effectively becoming the majority owner of the property. TPL stepped in following more than a year of coordination with the BLM and Arizona Game and Fish Department, and recent coordination with the owner and creditors. TPL often serves as a third-party, acquiring land for conservation with the intent that the agency or community acquire it from them, which is TPL's intention with the Horseshoe Ranch acquisition. BLM and the partners met regarding management and property improvements were it to be acquired. While BLM acquisition funding is a possibility, additional funding for operation and maintenance is not. The BLM, Arizona Game and Fish Department, and TPL met to consider the feasibility of the ranch acquisition, its operation and maintenance, and to determine the interest of a livestock grazing permittee and partners in operating the facility.

University Presents Research to BLM and Forest Service: On May 12, 2009, BLM Hassayampa Field Manager Steve Cohn, Assistant Manager Connie Stone, staff of the Agua Fria National Monument, and Forest Service staff attended the presentation of National Monument research results at Arizona State University (ASU). The ASU "Legacies on the Landscape" researchers presented archaeological and cultural findings regarding: population growth in the area around 1300 A.D. related to climate changes, evidence about the speed with which the prehistoric pueblos structures were constructed and inhabited, newly discovered farming terraces suggesting that agriculture was far more extensive than previously known, and the extent and purpose of "race track" linear features on the ground associated with 20-plus pueblos. Five of the pueblo ruins are nearly 100 rooms in size. The project began in 2004 with funding from the BLM under a Cooperative Ecosystem Study Unit (CESU) assistance agreement with challenge cost share funds. The pioneering ASU interdisciplinary research project focuses on the ecology and archaeology of the Monument. ASU has since been awarded two grants from the National Science Foundation to continue the project.

Agua Fria Hosts Statewide NLCS Meeting: May 31 – April 2, the Agua Fria National Monument Hosted the Statewide NLCS Meeting of managers of Arizona's National Landscape Conservation System (NLCS) units. The sessions were extremely timely, beginning only the day after President Obama signed the Omnibus Public Land Management Act of 2009, that established the national system of NLCS units by Congressional law. Participants discussed the ramifications of the Act, current NLCS policy developments in the agency and Department of the Interior, current work in each NLCS unit in Arizona, status of grazing permit renewals, science, travel management

planning, and pressing safety issues relating to conducting work amidst unsafe border conditions or not achieving workload measures. The group discussed the roles and opportunities for nonprofit “friends groups” for individual units. To demonstrate successful partnerships with Friends organizations, the Friends of the Agua Fria National Monument presented its accomplishments to the state NLCS managers and hosted a dinner for the BLM staffers. In an effort to better manage off-highway vehicle use, the NLCS managers also met with members of the Arizona OHV Ambassadors’ program, a newly developed volunteer program that works to promote responsible OHV recreation. The meeting included a tour of the Monument, showcasing the extraordinary natural objects that require significant and unique management challenges and opportunities.

Urban challenges: The Agua Fria National Monument is located 40 miles north of Phoenix. The public lands within the Phoenix District, which includes the Agua Fria and Sonoran Desert National Monuments, are the BLM’s most intensely urbanized. In 2009, Arizona remained the fastest-growing state in the nation, and the Phoenix-metropolitan area, now considered a “megapolitan area” by the Census Bureau, is the fastest-growing in the state. Seventy-percent of Arizona’s 6.2 million residents now live within the BLM Phoenix District. Many of these residents and Arizona’s 12.0 million annual tourist visitors regularly use BLM-administered public lands. Interest in, inquiries about, and visitation to the Monument reflect this increasing pressure.

Phoenix has a series of City and County “mountain parks.” These preserves are open, undeveloped desert park areas surrounded by development. As the Phoenix-megapolitan area grows, within a generation the southern edge of the Monument will serve as the northern-most extent of the megapolitan area. This will subject the Agua Fria National Monument to the kind of visitation and pressures seen today in the urban mountain parks.

Water rights: The Agua Fria National Monument is unique among BLM Arizona monuments in that its designation included a reserved water right, and requires the BLM to quantify and reserve the necessary water claim through Arizona’s water adjudication process. With regard to water rights, the Monument proclamation states: “There is hereby reserved...subject to valid existing rights, a quantity of water sufficient to fulfill the purposes for which this monument is established. Nothing in this reservation shall be construed as a relinquishment or reduction of any water rights reserved or appropriated by the United States.” The need to quantify and reserve sufficient water rights for the Monument remains a pressing concern as the drought continues, and as population growth and ground water use around and upstream of the Monument increases. Also, the free-flowing nature of the Agua Fria River and its tributaries is an important aspect of its suitability for designation as a Wild and Scenic River.

Prehistoric Archaeology: Fortunately, in the Agua Fria National Monument, there have been no major cases of vandalism to prehistoric rock art or archaeological sites since early 2000, when illegal excavations occurred at two sites shortly after the Monument

was established. This may be due to the higher visibility of BLM staff patrolling the Monument. It may also be due to the monitoring of sites by Arizona Site Stewards, and the general presence of volunteers and members of the Friends group in the field. We are pursuing public education as a means to reduce minor incidents of damage that are difficult to quantify, such as artifact piling and the casual collections of a few artifacts. That's the good news.

We must remain vigilant about damage to other resources and improvements. The rugged character of the Monument makes off road driving quite unpleasant if not impossible. Nevertheless, the BLM should and will block illegal access to fragile areas that are not and never were vehicle routes. The damage and vandalism that we see is most often directed at the Monument's facilities, signs, kiosks, and other infrastructure.

The Agua Fria National Monument is now a well known destination. It is becoming increasingly visited, enjoyed, and used. Its next door neighbor is the Phoenix megapolitan area. The more than 4.5 million (and growing) residents and 12.0 million annual visitors, will demand and deserve an outstanding natural and cultural landscape for generations to come. The BLM and its partners are well-positioned to provide it.

Monument Staffing: The Monument currently includes five onboard positions:

Monument manager: Rem Hawes
Park ranger: Nancy Stallard
Wildlife biologist: (vacant)
Natural resource specialist: Amanda James
Range technician (none)
Archaeologist: Brian Culpepper
Hydrologist/water rights specialist (none)
Recreation planner (none)
Seasonal park rangers (none)

The Monument wildlife biologist position was vacated in November 2009. The position is on the table of organization and will be filled at the entry level.

Due to funding and need, Monument staff support Hassayampa Field Office work. For our natural resource specialist and wildlife biologist this was particularly true in FY 2009 with the need to evaluate and renew livestock grazing permits and leases. Several field and district staff also regularly support Monument work as needed.

In FY 2009, the Monument archaeologist also spent substantial time working on cultural resource issues in the Hassayampa Field Office, including emergency excavations/collections, cultural oversight of multiple highway projects, and tribal consultations.

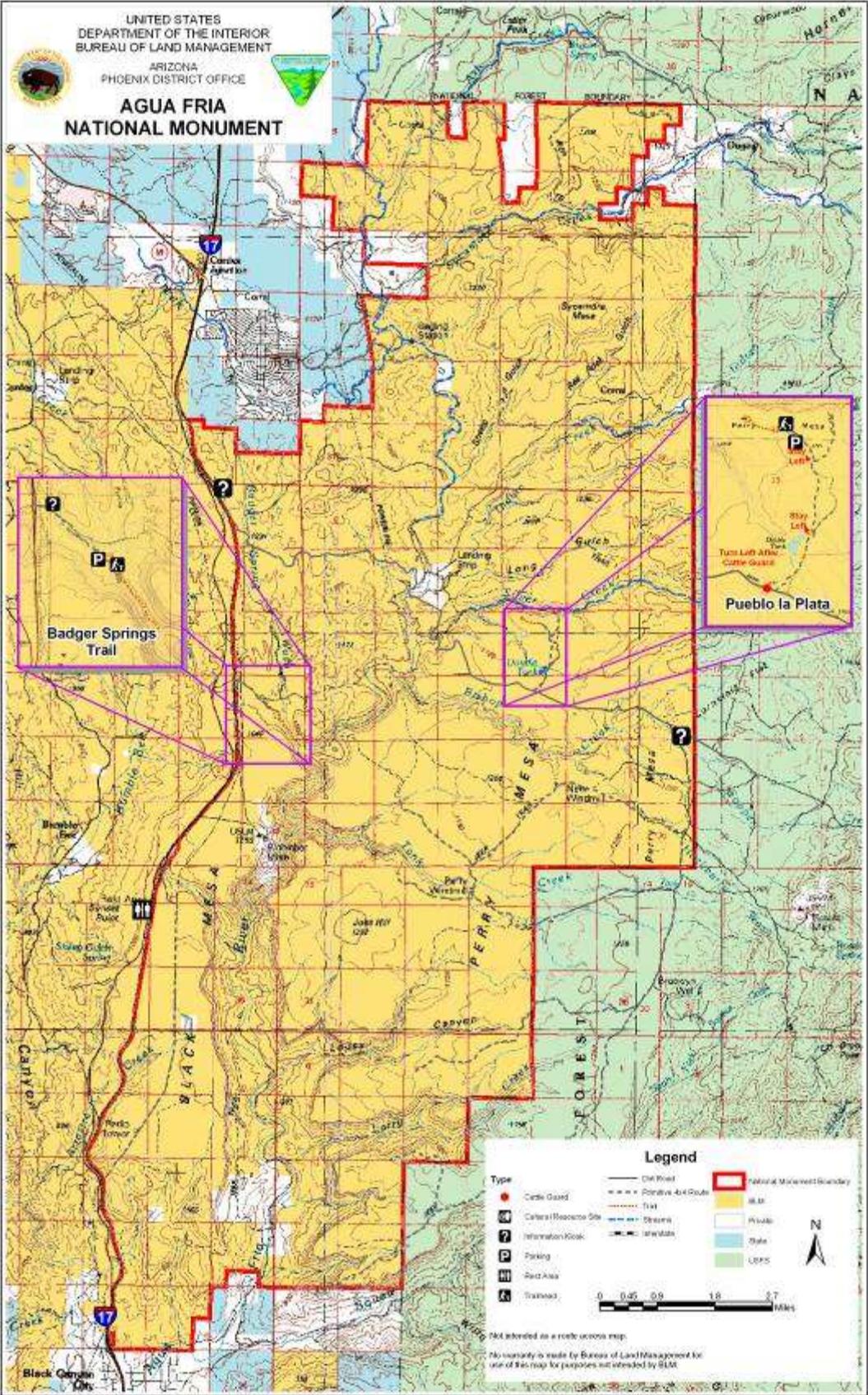
Due to constraints, the positions for a hydrologist and outdoor recreation planner are currently vacant. The hydrologist would be focused on water quantification and water rights, the recreation planner on partnership building, interpretation, and visitor use. When possible, we intend to hire temporary seasonal park rangers during visitor season, approximately October through April.



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ARIZONA
PHOENIX DISTRICT OFFICE



**AGUA FRIA
NATIONAL MONUMENT**



Legend

Circle Guard	National Monument Boundary
Cultural Resource Site	BLM
Information Kiosk	Private
Parking	State
Rest Area	USFS
Trailhead	
Old Road	
Route 44 Route	
Trail	
Drawings	
Interstates	

0 0.25 0.5 1.0 1.5 2.0 Miles

Not intended as a route across map.
No warranty is made by Bureau of Land Management for use of this map for purposes not intended by BLM.

SCIENCE: Agua Fria National Monument

Project Name	Discipline	Research Contributor/ Collaborator/ Partnership	Project Description	Status	Products	Applications	Outreach Options	BLM Contributions	Partner Contributions
Legacies on the Landscape	Archaeology, Ecology	Arizona State University School of Human Evolution and Social Change	The objective is to examine long-term effects of prehistoric settlement and land use on the natural landscape. Current efforts focus on studies of prehistoric farming, origins and distributions of pottery types, and climate changes that affected population movements, settlement, and abandonment of the mesas.	Ongoing	1) "Final Report of the 2007 - 2008 Field Season. Melissa Kruse-Peebles et al., 2009 2) Various posters and presentations given at professional conferences.	1) Documentation and understanding of the long-term ecological impacts of the prehistoric occupation of the semi-arid landscape of Perry Mesa. 2) Field research is organized through seminar in which ecology and archaeology faculty jointly engage students in the collection and analysis of ecological and archaeological data.	Posters and presentations given to museums and amateur archaeological organizations		
Post-fire vegetation change and efficacy of ecological restoration of semi-arid grasslands	Grassland Ecology	Desert Botanical Gardens, 1201 N. Galvin Parkway, Phoenix, AZ 85008	The principle purpose of this project is to provide opportunity to conduct basic and applied botanical research, support research efforts towards protection and restoration of landscapes affected by fires in semi-arid grasslands of the desert Southwest, on the ground application of knowledge gained through this research, environmental conservation, participation in the national seed bank program, partnership development, and to provide educational opportunities for students, volunteers, and the general public.	Ongoing - multi year project	1) Final Report is due December 31, 2010; 2) GIS Database of transect site locations and associated data.	1) Provide critical information on the effects of fires and the efficacy of restoration techniques for native grassland species and ecosystems in the AFNM. 2) Will contribute to sustaining and enhancing the native habitat of pronghorn, a sensitive species. 3) Will support the BLM's Seeds of Success program and its goal to increase the number of native species with seed available for emergency stabilization and longer term rehabilitation and restoration efforts.	Once the final report is submitted, reviewed, and approved by the BLM, DBG staff will prepare articles about the findings for both technical and non-technical audiences. A planned four page, full-color article that describes the entire project will be published.	2006 - \$70,000 2007 - \$70,000 2008 - \$25,000	2006 - \$42,990 2007/08 - \$23,050
Floristic Studies	Botany	Desert Botanical Gardens, 1201 N. Galvin Parkway, Phoenix, AZ 85008	The purpose of this project is to collect, identify, and curate flora and seeds on the Agua Fria Monument and to study floristics of the desert grassland ecology and interactions between humans and the environment from the pre-Columbian era to the present.	Ongoing - multi year project	Collections, identification, and curation of flora on the AFNM are located at the DBG herbarium. The data collected by DBG is entered onto the Southwest Environmental Information Network website. www.swbiodiversity.org	Activities and studies will contribute to public education and student training in ecological study methods and field and laboratory procedures. Public education will promote resource protection and responsible behavior by visitors.	Oral presentations on the project will be continued to both technical and non-technical audiences.	Challenge Cost Share Funding 2004 - \$11,000 2006 - \$7,000	2004 - \$11,000 2006 - \$7,000

