

Fort
Huachuca,
Arizona

*Nomination for FY 2002
Secretary of Defense
Environmental Award*

Natural Resources Conservation-Large Installation

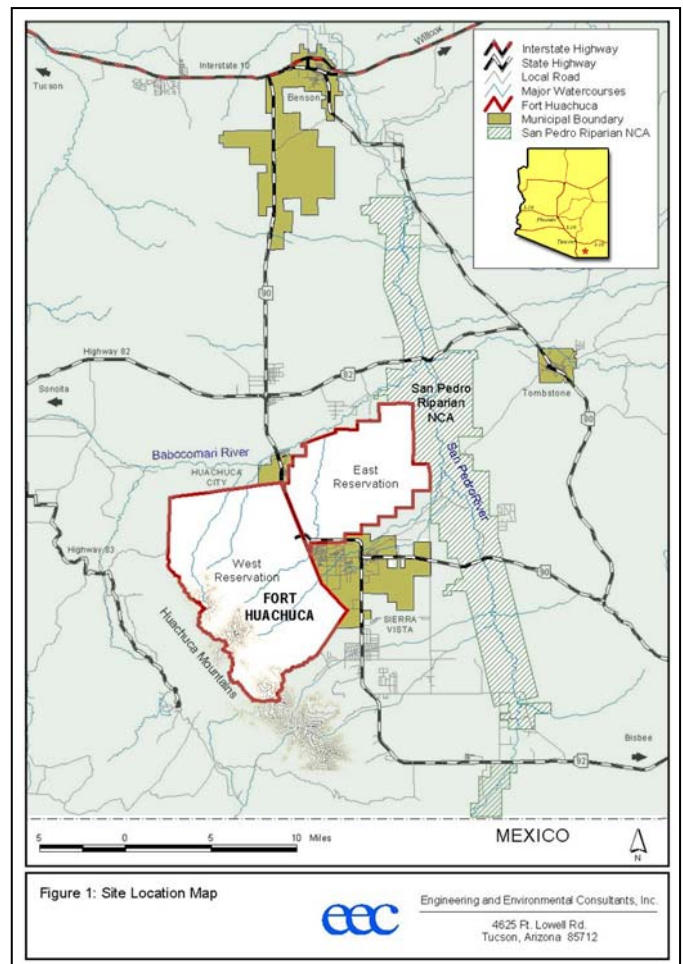


United States Army Intelligence Center and Fort Huachuca

INTRODUCTION

Established in the Huachuca Mountains during the Indian Wars of the 1870s and 1880s, Fort Huachuca is home to the legendary buffalo soldiers and the Apache scouts. Today it provides the critical edge in research, development, testing, and evaluation of intelligence, electronic warfare, and information systems—and in training soldiers to use these tools on today’s highly technological battlefields. Because of its moderate year-round climate, clean air, and pristine electromagnetic spectrum, Fort Huachuca is an ideal site for testing and training electronic and communication systems. The Fort is home to the U.S. Army Intelligence Center and School, Network Enterprise Technology Command, Joint-services Unmanned Aerial Vehicle (UAV) Program, Joint Interoperability Test Command (JITC), the Electronic Proving Ground (EPG) and the Intelligence and Electronic Warfare Test Directorate.

Located on the western edge of the San Pedro River Valley in Cochise County, Arizona, Fort Huachuca is southern Arizona’s largest military installation and the county’s largest employer with more than 5,800 civilian and 6,700 military employees. The Fort covers 73,142 acres with an additional 29,987 acres of leased/withdrawn land to support the military mission. Approximately 67,872 acres of unimproved land is available for military training and outdoor recreation activities, with 5,720 acres of improved land, 23,650 acres of forest, 1,460 acres of grazing, 4.5 miles of perennial streams, 64 acres of wetlands, and 770 acres of riparian habitat.



The Fort’s unique natural features include more than 7,100 acres of agave.

Fort Huachuca is home to some of the highest species diversity in the U.S. This results from its location in the transitional zone among the Sonoran, Chihuahuan, and High Desert vegetation types, and a large elevational gradient (3,940–8,625 feet). Its unique natural features include more than 7,100 acres of agave and 12 caves. Other unique areas border the Fort, including the Miller Peak Wilderness Area to the west and the 58,000-acre San Pedro Riparian National Conservation Area (SPRNCA) to the east. The SPRNCA, a globally important bird area, was the first national conservation area designated by Congress and contains the largest undammed river in the southwest.

The Fort’s tremendous archaeological history dates back at least 6,000 years. To date, the Fort has identified 327 sites, to include 232 prehistoric sites, 39 historic sites, and 56 sites with both prehistoric and historic components. Three prehistoric sites in Garden Canyon and the 48 structures within the National Historic Landmark District are on the National Register of Historic Places. The Fort is also home to some of the finest historic adobe structures in Arizona.

BACKGROUND

Fort Huachuca’s Integrated Natural Resources Management Plan (INRMP) was completed in FY02 and is currently being implemented. A total of six cooperative agreements assist with plan implementation.

Partner	Purpose and Year of Agreements
The Nature Conservancy (TNC)	<ul style="list-style-type: none"> Acquisition of conservation easements (FY00) Management of groundwater (FY01)
U.S. Forest Service (USFS)	<ul style="list-style-type: none"> Cave resources management (FY94) Fire resources management (FY00)
Natural Resources Conservation Service (NRCS)	<ul style="list-style-type: none"> Integrated Training Area Management (ITAM) Program implementation (FY02)
University of Arizona (UofA)	<ul style="list-style-type: none"> Geographic Information System (GIS) development (FY00)

The Directorate of Installation Support (DIS), Environmental and Natural Resources Division (ENRD), oversees natural and historic properties management on Fort Huachuca. Natural resources staff includes one ecologist, two wildlife biologists, one forester, one physical scientist, and one wildlife technician. The Directorate of Community Activities (DCA) manages recreational activities and coordinates outdoor recreational activities with ENRD staff. An ITAM coordinator is located at Range Control and helps to integrate training needs within the installation’s environmental restrictions.

The ENRD staff is augmented with volunteers, graduate students, interns, regional research institutions, and contract personnel. Various committees provide an avenue for information exchange, facilitation of new ideas, and integration of the environmental and natural resources stewardship with the military mission and with surrounding communities and federal, state and local agencies. Through its participation in these committees, Fort Huachuca takes a leading role in regional conservation programs.

COMMITTEES INFLUENCING NATURAL RESOURCES MANAGEMENT ON FT. HUACHUCA

- Fort Huachuca Conservation Committee
- Environmental Quality Control Committee
- Energy and Water Conservation Council
- Upper San Pedro Partnership (USPP)
- Huachuca Mountain Fire Working Group

PROGRAM SUMMARY

Because of the Fort’s sensitive high-desert environment and tremendous biodiversity, its natural resources program faces many challenges. These include the management of groundwater, watersheds, fire, threatened and endangered (T&E) species, nature-based recreation, and archaeological resources. Consultation with 11 Native American tribes also makes natural resources management more complicated. In 1999, litigation was filed against Fort Huachuca by local environmental groups for its use of groundwater and the potential effect it may have on the San Pedro River, T&E species, and critical habitat. As a result, Fort Huachuca has been faced with even more challenges for natural resources management, but it has overcome these challenges using numerous innovative approaches:

- **Improving planning through the development and implementation of a new INRMP (FY02), Army Water Resources Management Plan (AWRMP) in FY02, and watershed improvement plans (FY00 and FY02)**
- **Expanding and improving partnerships and agreements to reduce water use by more than 20% and take advantage of resource and cost-sharing opportunities (FY00–02)**
- **Completing a Programmatic Consultation for 28 listed species in FY02, saving the Army more than \$200K and allowing for the transformation and expansion of its military mission**

- **Obtaining \$12 million in FY00 and FY02 funding to expand its effluent recharge and reuse program**
- **Developing several new programs for conservation education, law enforcement, and outdoor recreation (FY00–02)**
- **Integrating the military mission with natural resources management through the continued development and use of a comprehensive GIS with more than 200 data layers (FY00–02)**
- **Purchasing a conservation easement to retire agricultural pumping along the San Pedro River to save over 630 acre feet of water and mitigate installation groundwater use**

Fort Huachuca's INRMP focuses on ecosystem management, enhancing biodiversity, protecting listed species and unique habitats, improving quality of life, and supporting the military mission. The Fort has accomplished all of these objectives through innovative and cost-effective approaches and by maximizing partnerships and volunteer opportunities while expanding the military mission. It has supported the military mission through additional training and range operation days and providing increased access and opportunities for realistic training. These accomplishments earned Fort Huachuca a number of prestigious awards in FY00–02.

ENVIRONMENTAL AWARDS, FY00–02

- **Federal Energy Awards (1999, 2001)**
- **Department of Energy and Water Conservation Award (1999)**
- **Arizona Game and Fish Commission Award of Excellence (1999)**
- **Arizona Conservation Organization of the Year Award (2000)**

SIGNIFICANT ACCOMPLISHMENTS

OVERALL CONSERVATION MANAGEMENT

The ENRD coordinates with the DCA, Directorate of Public Safety, the Public Affairs Office, Staff Judge Advocate, Directorate of Resources Management, Occupational Health, Veterinary Services, and DIS engineering, master planning, real property and pest management personnel for proactive planning and a balanced multiple use of natural resources.

Internal coordination is achieved through frequent interaction, team and committee meetings, training sessions, standard operating procedures, policies, and regulations. Coordination is also achieved during the development and implementation of various natural resources management plans, partnerships, and cooperative agreements.

Coordination and integration of natural resources with the military mission is accomplished through the Installation Operations Directorate, Range Control Office, and the ITAM Program. By overseeing the Fort's well-developed GIS and acting as a centralized archive for spatially referenced data, the ITAM coordinator can identify potential conflicts early in the planning stages and provide viable alternatives to meet both mission requirements and natural resources management needs. The Fort has significantly enhanced its natural resources program through alternative staffing and funding opportunities, including the development of the San Pedro Foundation, a public charity that provides an additional funding mechanism and grant-writing abilities. The Fort also used three Arizona Heritage Fund Grants, a National Science Foundation Grant and funding from agricultural outleases, Legacy, and the Conservation Assistance Program. These alternative funding opportunities provided an additional \$1.9M for natural resources management during the award period. In addition, the Fort took advantage of the UofA Conservation Biology Intern Program and volunteer labor from scout groups, universities, non-profit organizations and the local community, for a savings of over \$200K.

With the completion of an INRMP (FY02) and an inventory of wetland and riparian habitats (FY00), Fort Huachuca completed all baseline inventories needed on the installation.

Fort Huachuca’s overall conservation management benefits the mission by minimizing training conflicts and providing additional funding and staffing to address natural resources management challenges that could hamper military readiness.

ECOSYSTEM MANAGEMENT

Regionally-based ecosystem management and adaptive management are the foundation of Fort Huachuca’s natural resources program. Management focuses on ecosystem processes, exemplified by the recent completion of an AWRMP, two watershed management plans (Garden Canyon Watershed Management Plan and the East Range Restoration Master Plan), and an ongoing study of landscape fragmentation and connectivity in the Upper San Pedro River Basin (USPB). Through the Upper San Pedro Partnership (USPP), a water management consortium of 22 agencies, Fort Huachuca helps to lead a regional water management effort in the 2,500 square mile USPB. The Fort is one of six core members of the USPP and provides valuable funding and expertise to support regional water management research, projects, and educational outreach efforts.

With the help of a group of federal, state, and local entities known as the Huachuca Mountain Fire Working Group, the Fort uses ecosystem management on a mountain-wide scale to address catastrophic wildfire concerns on and off the installation. This effort has improved fire management planning, increased beneficial cost-sharing of personnel and equipment, and allowed the Fort to take advantage of other agencies’ fire expertise within the region. These efforts, along with use of the comprehensive GIS, have enabled the Fort to practice adaptive management and maximize military mission capability.

Ongoing contributions to regional conservation also include participation in the re-establishment and recovery of the Ramsey Canyon leopard frog, Mexican spotted owl, Gould’s turkey, and Sonora tiger salamander, and the completion of a \$1.5M DoD Legacy Project, Alternative Futures for Changing Landscapes-The USPB in Arizona and Sonora. The Fort partners more than 25 federal and state agencies, private individuals, and non-government organizations to address the region’s natural resources management challenges, improve quality of life, and ensure that military mission needs are met for the generations of today and tomorrow.

LAND AND WATER MANAGEMENT

Fort Huachuca has no agricultural outleases, as they are not cost-effective in the arid high desert environment. However, the Fort grazes approximately 1,460 acres for government-owned horses as outlined in the Fort Huachuca Grazing Management Plan.



Sound conservation management depends on excellent working relationships and successful cooperation with a host of partners.

Fort Huachuca actively manages erosion and water quality through best management practices and an East Range Watershed Improvement Plan. Specific projects include the repair of three miles of roadway within designated critical habitat (FY01), the construction of stormwater retention basins to increase water recharge and decrease erosion (FY02), the repair of eroded stream crossings (FY02), the use of wood mulch that was converted from 45 tons of scrap wood and pallets (FY01), and the use of slash generated from tree-pruning activities to control stormwater runoff (FY00–02).



Reduction of water use was partially achieved by converting administrative and family housing landscaping to desert landscaping.

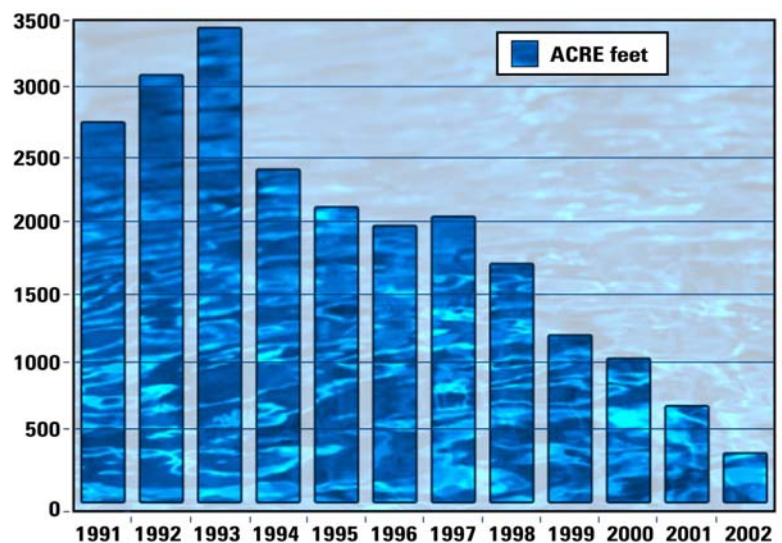
Conservation of native plants is important and is supported through active invasive species control, an ongoing grass-land ecosystem study and the salvage of native cacti and succulents for use in desert landscaping. This work is conducted via agreements with the UofA and NRCS.

Water availability and management were major challenges in this arid region during Fort Huachuca’s inception, and the 1999 lawsuit against the Fort concerning its water use in the region emphasizes how critical this issue is today. Through Fort Huachuca’s Programmatic Consultation in FY02, the Fort addressed the regional water use issue and committed to balancing all water use attributable to it by 2011 (3,077 acre feet). This will be accomplished through water conservation (437 acre feet), water recharge (1,040

acre feet), and conservation easements (1,600 acre feet). The remaining water deficit in the region will be addressed by the USPP. The Fort developed a Water Management Team to ensure that water commitments are met. This team consists of environmental scientists, compliance officers, environmental services contractors, engineers, real property specialists, technicians, attorneys, and educators.

Accomplishments during the award period include:

- **Replacing high water-use fixtures with innovative low-flow fixtures, including approximately 2,000 showerheads, more than 200 waterless urinals, 280 horizontal-axis washing machines and aerating faucets, and Purell dispensers**
- **Installing a new evapotranspiration monitoring system at the golf course to reduce irrigation**
- **Expanding the use of treated effluent on parade fields and an outdoor sports complex**
- **Conducting sewer and water leak detection surveys and repairing leaking infrastructure**
- **Constructing seven effluent recharge basins and one stormwater recharge basin (\$6M project)**
- **Developing a Water Mitigation Policy to mitigate water use associated with future mission increases**



Decrease in water use at Fort Huachuca, 1991–2002.

- **Purchasing a conservation easement to retire agricultural pumping along the San Pedro River and save more than 630 acre feet of water**

The use of a conservation easement allowed Fort Huachuca to reduce the greatest immediate threat to the San Pedro River (agricultural pumping) while reducing its water balance by 630 acre feet and saving money, as conservation easements are cheaper than water recharge and conservation efforts. Because this type of deed restriction may be used for a variety of property-use rights (forestry, development, etc.), it is a very transferable approach for installations faced with encroachment issues.

FOREST AND FIRE MANAGEMENT

Although Fort Huachuca contains 23,650 acres of forest and woodland, the low quality of timber precludes a commercial forestry program. Forest management outside of the cantonment area focuses on improving watershed health and wildlife habitat through fuelwood harvesting and fuel load reduction. Volunteers, Eagle Scouts, commercial woodcutters, and USFS fire crews completed more than 200 acres of fuel load reduction in FY00–02, for a savings of over \$50K. The ENRD provides permits to the public for woodcutting, which helps to meet the local demand for fuelwood, reduces high fuel loads at no cost to the Fort, and maintains forest health. These efforts support the military mission by improving quality of life, decreasing the threat of catastrophic wildfire, and improving training access. In addition, these efforts have improved late-summer acorn collecting for the 11 Native American tribes that consult with the Fort.

Within the cantonment area, Fort Huachuca's Urban Forestry Program is responsible for trimming, pruning, and maintaining the overall health and aesthetics of over 5,000 trees and 20,000 shrubs. With the help of Eagle Scouts and the UofA Cooperative Extension, the Fort has planted several hundred desert-adapted trees and shrubs. This effort reduces water use, decreases maintenance, and maximizes aesthetic value.

One of the greatest threats to Fort Huachuca is that of catastrophic wildfire, which could cost the Fort its positive public image, lives, property, lawsuits, and millions in fire-suppression costs. The fire management challenge is augmented by hazardous fuel accumulation; limited resources, funding, and personnel; and fire-management restrictions due to T&E species, historic properties, and wildland/urban interface concerns. To address these challenges, Fort Huachuca continues to develop partnerships for the cost-sharing of resources, reduce fuel loads, and coordinate and integrate fire management with federal, state, and local agencies and all facets of its natural resources management program. These efforts are outlined in the Fort Huachuca Fire Management Plan and are made possible through cooperative agreements with the USFS and UofA. Fire management supports the military mission because prescribed burns maintain natural healthy ecosystems, provide realistic training, minimize the risk of catastrophic fire, and protect

the Fort's range structures and housing areas. By providing stand-by fire support for the firing of tracers and supporting explosive ordnance disposal, fire management has provided an additional 60 range operation days each year.



Garden Canyon Creek is part of the Fort's 4.5 miles of perennial stream and is critical habitat for the endangered Huachuca water umbel.

FISH AND WILDLIFE CONSERVATION

A total of 500 bird, 80 mammal, 75 amphibian and reptile, 180 butterfly and over 1,000 plant species have the potential to occur locally at Fort Huachuca.

In FY02, the Fort completed a Programmatic Consultation that addressed its entire mission on a regional scale. This resulted in comprehensive ESA compliance for the Fort through one consultation and minimized the need for future

consultations. The consultation included 28 federally listed, proposed, and candidate species and designated critical habitat for four species. Fort Huachuca spends approximately \$1.5M annually to implement proactive conservation measures for these species. Such measures are designed to protect listed species while enhancing biodiversity for all species. A comprehensive T&E species management program on Fort Huachuca involves habitat protection, watershed management, surveying and monitoring, research, and integration with the military mission and recreation. Fort Huachuca is home to 3.8 miles of critical habitat for the Huachuca water umbel and 24,038 acres of critical habitat for the Mexican spotted owl. Fulfilling ESA obligations while meeting mission requirements is a tremendous challenge for Fort Huachuca, as it involves all facets of the natural resources program and partnerships with the Arizona Game and Fish Department (AGFD), USFS, UofA, NRCS, TNC, and USFWS. It also requires adhering to the many military training restrictions placed on the mission by T&E species management.

FORT HUACHUCA T&E SPECIES MANAGEMENT PROGRAM

- Huachuca water umbel (endangered)
- Sonora tiger salamander (endangered)
- Mexican spotted owl (threatened)
- Lesser long-nosed bat (endangered)
- Southwestern willow flycatcher (endangered)
- Lemmon fleabane (candidate)
- Huachuca springsnail (candidate)
- Yellow-billed cuckoo (candidate)
- Ramsey Canyon leopard frog (conservation agreement)

Active and retired military personnel, their families, civil service employees, and the public enjoy the many outdoor recreational opportunities on Fort Huachuca. Opportunities include hunting seasons for javelina, antelope, black bear, mule and white-tailed deer, mountain lion and many small game species. All hunting schedules are coordinated through Range Control to avoid military training and live-fire schedule conflicts.

Fishing enthusiasts enjoy seven fishing locations on the Fort with opportunities to catch rainbow trout, channel catfish, largemouth bass, bluegill and sunfish. Fisheries populations are managed through stocking and recreational fishing regulations.

Significant accomplishments for the award period include:

- **Developing a guest hunter program for small game hunting (FY00)**
- **Initiating the first deer hunt for disabled hunters in Arizona (FY01)**
- **Hosting the first-ever Gould’s wild turkey hunt in the U.S. after its population was restored by installation biologists (FY02)**
- **Discovering rare barking frog populations and a maternity roost for the sensitive western big-eared bat on the installation (FY02)**
- **Mapping southwestern willow flycatcher habitat on the SPRNCA and Babocomari River for habitat trend analysis (\$250K project, FY01)**



The Fort supported research and development of a Gould’s Turkey Management and Restoration Plan for Southeastern Arizona.

Fort Huachuca has improved wildlife habitat, protected sensitive species and habitats, and enhanced biodiversity through many projects. Some of these include maintaining wildlife watering devices (FY00–02), pruning and thinning oak stands (FY00–02), removing two miles of fence to improve wildlife corridors (FY02), installing real-time live video surveillance equipment at bat caves (FY02), controlling invasive species (FY00–02), protecting critical habitat with natural barriers (FY00), and closing 140 miles of unneeded roads (FY02). In FY00–02, volunteers assisted with working big-game check stations; stocking fish;

monitoring game, nongame and sensitive species; and teaching hunter education courses. The Fort has helped restore the Gould’s wild turkey by supporting research and the development of a Gould’s Turkey Management and Restoration Plan for Southeastern Arizona. In addition to listed species monitoring, the Fort monitors for mountain lion, bear, deer, peregrine falcon, northern goshawk, and Huachuca springsnail. These accomplishments were possible through thousands of hours of volunteer support and partnerships with AGFD, USFS, USFWS, the Arizona Antelope Foundation, the National Wild Turkey Federation (NWTf), and other state and local organizations.

OTHER NATURAL RESOURCES

Recreational activities on the Fort include hiking, horseback riding, spelunking, picnicking, birding, jogging, nature photography, butterfly collecting, and bicycling. Each year tens of thousands of nature



This hiking/running trail, established on Fort Huachuca in 2002, was developed by Boy Scouts and other volunteers using wood chips obtained from the grinding of pallets.

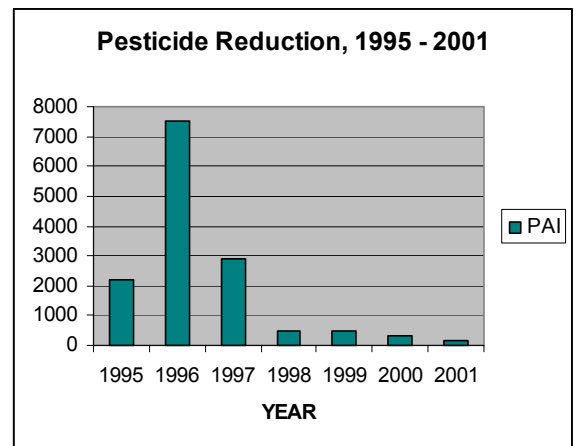
enthusiasts enjoy Fort Huachuca’s tremendous biodiversity and hike on over 40 miles of maintained trails. In 2002, the Fort and local Boy Scout troops blazed 1.2 miles of additional hiking trail to serve as a troop jogging/nature trail and expanded Heritage Park by adding 1.4 miles of interpretive trail with benches.

To balance the tremendous demand for nature-based recreation, the Fort has revised its off-road vehicle policy and recreational regulations, protected sensitive habitats with natural barriers, increased environmental awareness activities, and installed more than 50 informational signs at canyon trailheads, caves and riparian habitats. Work was accomplished with the use of volunteers and cooperation with the USFS, USFWS, AGFD, TNC, and local birding and hiking clubs.

PEST MANAGEMENT

Fort Huachuca’s pest management program is well integrated with its natural resources, and excellent coordination occurs between the installation’s pest management coordinator, Preventive Medicine, Occupational Health, Veterinary Medicine, ENRD, Arizona Department of Health, AGFD, and the USFWS. The Fort has made tremendous strides in reducing its pesticide use by 64% in the past three fiscal years.

The pest management program includes surveillance programs for rabies, Hantavirus, West Nile virus and gypsy moths. Additional activities include the control of non-native species such as bullfrogs, crayfish, mosquito fish and salt cedar, through regulations, trapping, and physical removal. The Fort is currently researching the ecological effects of Lehmann lovegrass, an invasive African grass, and its potential effect on fire regime, agave, and native plant and animal species.



Fort Huachuca has reduced its pesticide use from 2,185 pai in 1995 to 168 pai in 2001.

CONSERVATION EDUCATION

Fort Huachuca has continued to develop and implement its Water Wise and Energy Smart (WWES) Program, which is designed to educate soldiers and civilians who work or live on Fort Huachuca about energy and water conservation. During the award period, the

program has conducted 178 educational programs that reached over 2,236 students. This program provides informational displays and activities at special events and is one of the featured programs in the Fort's bi-weekly self-help classes for military family housing members. In addition, the WWES staff assists military housing families with energy and water use audits, landscaping consultations, and landscape renovation.

In FY00–02, Fort Huachuca provided water conservation training to over 3,000 military and civilian personnel through professional development seminars and organizational briefings. The Fort sponsored several poster contests, developed nine desert landscape demonstration areas, conducted 32 water audits, developed four self-guided landscape tours, completed seven landscape projects, and developed numerous brochures to promote water and energy conservation and desert landscaping. The Fort also worked with elementary and middle schools to develop habitat gardens that provide a learning lab for students.

To address the challenge of protecting T&E species, sensitive habitats, and historic properties, while meeting the demand for outdoor recreation, Fort Huachuca developed a new law enforcement program in FY00. The program includes four environmental protection officers that ensure military and civilian activities adhere to federal, state, and installation laws, regulations, and policies. The Fort's conservation education efforts include the following:

- **Providing hunter education and boating safety courses to more than 600 students with the help of 15 volunteer certified instructors that donated over 1,100 hours (FY00–02)**
- **Hosting a NWTf outdoor experience weekend for youth and a Women in the Outdoors Weekend to teach outdoor skills and conservation (FY01)**
- **Mentoring eight Eagle Scout projects on the installation to include hiking trail development, tree planting, desert landscaping, invasive species control, and the building of an aviary for injured raptors (FY00–02)**
- **Supporting research efforts for western box turtles, white-nosed coati, lesser long-nosed bats, agave, Mexican spotted owl, Mearns's quail, grassland birds and fire ecology (FY00–02)**

COMMUNITY RELATIONS

Through WWES, the Fort plays an important role in promoting water, energy, and natural resources conservation to local communities. Participation in community events such as the Earth Day, Safety Day, the Cochise County Master Gardeners Conference, Water Awareness Week, and Public Lands Day, reached more than 19,000 individuals (FY00–02). By contributing articles for local newspapers, developing its own WWES Web site and Natural Resources Web Site, providing monthly gardening seminars, developing informational brochures and posters, and continuing its Conservation Committee, the Fort plays an invaluable role in community relations.



Through the Water Wise and Energy Smart Program, 178 educational programs have reached over 2,236 students.

FORT HUACHUCA LOCAL VOLUNTEERS

- Boy Scouts of America
- UofA, Northern Arizona University, and Arizona State University
- National Wild Turkey Federation
- Arizona Antelope Federation
- Cochise County Master Gardeners Association
- Arizona Archaeological Society
- Cochise County Cavers

The Fort's natural resources program has been featured on local and national television, in *National Geographic*, and in state-published magazines. The Fort's community relations involve many partners to include the UofA, Plant Sciences Center, TNC, NWTf, City of Sierra Vista, Cochise County, and other local organizations.

ENVIRONMENTAL AND MISSION ENHANCEMENT

Improved management of the Fort's watersheds, T&E species, vegetation, and water resources has enhanced Fort Huachuca's military mission. The completion of a Programmatic Consultation and its associated conservation measures resolved many concerns of potential adverse effects of the military mission on listed species and critical habitat. Through increased water conservation, recharge and effluent reuse efforts, and initiation of conservation easements and a water mitigation policy, Fort Huachuca addressed its impact on regional water resources and allowed for future expansion of the military mission. Access to training areas was improved and realistic training conditions were maintained through rehabilitation and sound watershed management. Proactive fire management and the development of a comprehensive GIS helped to increase military capability, increase range operation days, and more effectively integrate natural resource management with the military mission.

NATURAL RESOURCES COMPLIANCE

Fort Huachuca complies with all federal and state laws and regulations relating to natural resources management. The Fort's programmatic formal consultation was completed in FY02 and addressed litigation by several environmental groups. Funding for Fort Huachuca's natural resources program was \$2,189,340 in FY00, \$2,609,437 in FY01 and \$2,139,304 in FY02.

CONCLUSION

From FY00–02, Fort Huachuca accomplished a wealth of significant goals and learned many important lessons. With limited funding, personnel, and equipment, the Fort actively pursued alternative funding and staffing and expanded cooperative agreements and partnerships. To resolve ESA litigation and reduce potential erosion impacts on critical habitat, Fort Huachuca developed and implemented a new Programmatic Consultation and an East Range Restoration Master Plan. To address the complex issue of water resources management, the Fort implemented innovative water conservation technology, conservation easements, and several new water recharge projects. In addition, the Fort developed a new policy that will mitigate future water concerns that may accompany new military missions. Fort Huachuca overcame its natural resources management challenges by using innovative ideas, practicing ecosystem management, integrating management with the military mission, and managing natural resources on a regional scale. Fort Huachuca's use of a public charity, conservation easements, and partnerships to tackle difficult fire and water resource challenges on a regional scale are valuable lessons and transferable management tools. These efforts demonstrate the dedication and strong commitment to the conservation of natural resources of Fort Huachuca and the entire U.S. Army.