

United States Department of the Interior
National Park Service

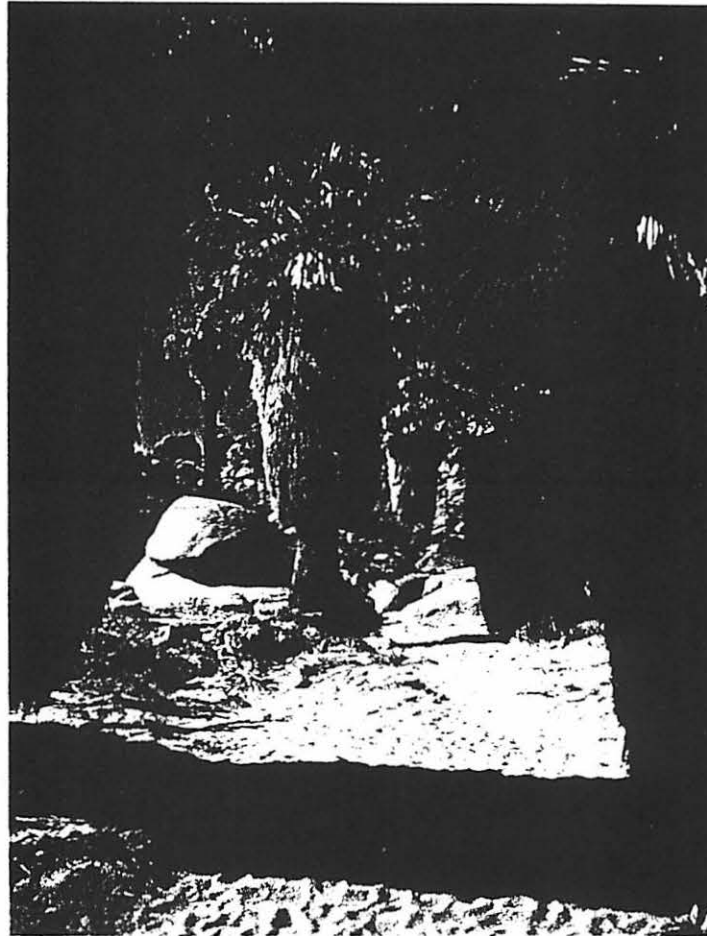


SUPERINTENDENT'S ANNUAL REPORT
2002

JOSHUA TREE NATIONAL PARK

Ernest Quintana

Mission Statement



***The National Park Service at Joshua Tree National Park
preserves and protects a representative area of the
Colorado and Mojave deserts
and the natural and cultural resources
for the benefit and enjoyment of
present and future generations.***

***The park includes rich biological and geological
diversity, cultural history, recreational resources, and
outstanding opportunities for scientific study.***

SUPERINTENDENT'S OFFICE

Backcountry and Wilderness Management Plan

The record of decision approving the Joshua Tree National Park Backcountry and Wilderness Management Plan was signed in January of 2000. Since that time the park has been busy implementing plan recommendations utilizing a park inter-divisional Wilderness Steering Committee. Fee Demonstration dollars have made it possible for the Steering Committee to plan and fund projects. One of the major plan initiatives for 2001 was the work by the Climbing Committee to develop a permit system for bolting in park wilderness and non-wilderness areas. Bolting continues to be controversial, however, the climbing committee is making progress in establishing a process for evaluating and permitting placement of new bolts. Work by the park trail crew to implement the trail component of the plan continues. The BWMP postponed addressing adding new trails in the Indian Cove region of the park until an assessment of access along the park boundary could be resolved. This past year the park initiated an Environmental Assessment to review options for placement of a new equestrian trail within Indian Cove. This assessment will continue into 2002.

Eagle Mountain Landfill

Mine Reclamation Corporation, in partnership with Kaiser Ventures, Inc., proposes to establish a mega dump adjacent to Joshua Tree National Park. The dump at optimum operations would receive 20,000 tons of garbage a day for the next 115 years. The long-term consequences of the dump on the surrounding ecosystem would be devastating on biological communities, air quality, and wilderness values. In 2001 MRC sold the rights to the dump to the Los Angeles County Sanitation

District for a reported sum of 41 million. Legal challenges to stop the landfill have been filed in federal district court. One by the National Parks and Conservation Association against the Bureau of Land Management citing the impropriety of the land exchange, and one by a coalition of private individuals against the Bureau of Land Management and the National Park Service citing the impropriety of the land exchange and failure of the park service to protect the park. Until the legal challenges are settled by the courts no action to proceed with the dump will occur. Both legal issues will most likely be heard in 2002.

Desert Managers Group

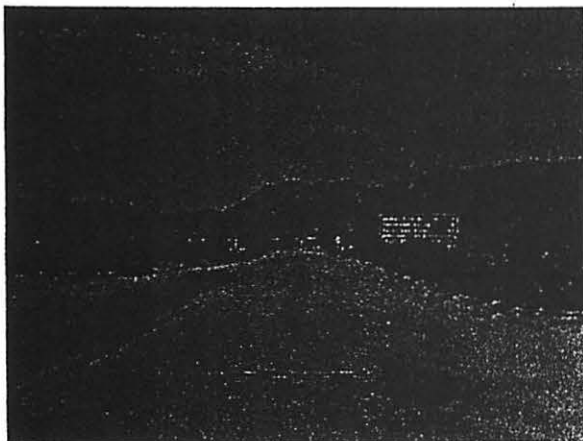
The park continues to be an active participant in the regional Desert Managers Group, a collaborative effort by the various Federal and State land management agencies and Department of Defense installations to achieve consistency in management of the California Desert and to address common issues. A primary focus of the DMG this past year was in the inventory and monitoring of the Threatened Desert Tortoise. The DMG was instrumental in hiring a Coordinator to serve as the point person for tortoise monitoring throughout the range of the Tortoise. This past year the DMG spent considerable amount of time in re-evaluating its role as a management tool for member agencies. The DMG continues to be an important forum for communication and information sharing among state and federal agencies and departments. The future of the DMG is solid and will continue into the future.

Adjacent Land Use

Development adjacent to the park boundary continues to be a concern for the park. The encroachment along the parks southern and

northern boundaries continues at a steady pace. Land speculators for development along the parks southwest boundary are actively seeking county approval to permit high-density resort communities.

Corporations are actively seeking approval to build power-generating plants. The park provides comment and input to all development proposal thorough the NEPA and CEQA process.



South Entrance – location of proposed comprehensive development

Joshua Tree National Park Advisory Commission

The California Desert Protection Act of 1994, established a 15 member commission to advise the Secretary about the development and implementation of a new or revised management plan for the park. The Commission met once during the year. Complications arose this year in that ratification of the Commission Charter and Commissioners has not been done by the new administration. The Park Advisory Commission is on hold pending ratification.

Oasis of Mara Visitor Center

In 1996 Joshua Tree National Park released a final General Management Plan. The GMP recognized the need for new facilities dedicated to providing information and public services. Upgrading of the existing Oasis of Mara Visitor Center was a priority.

In 1996 the park convened a design charette using the services of Denver Service Center to review options for upgrading the park Visitor Center. The park settled on a design that provided for the establishment of a new Visitor Center located in an undeveloped area just north of the Oasis. The existing visitor center would then be converted to needed office/administrative space. In order to move forward with this initiative a benefactor will need to be found to purchase the undeveloped area north of the Oasis for eventual donation to the park. The park, with the support of the City of Twentynine Palms, continues to work on this new visitor center initiative.

Reduction of the Park Deferred Maintenance Backlog

The Fee Demonstration Program has permitted Joshua Tree National Park to systematically address the deferred maintenance backlog. Fee Demonstration funds have proved valuable for funding improvements to park facilities, signing, wayside exhibits, visitor center exhibits, entrance stations, park roads, making safe abandoned mine sites, campground amenities (restrooms, recycling stations, picnic tables, fire grates, etc.) and trails improvement.

Federal Highway Construction

The park completed construction of Road Project #291 (road re-construction from Quail Springs Picnic Area to the Cap Rock intersection and from Hidden Valley Day Use to Barker Dam Parking area). Roadwork was completed on schedule and within the allotted budget. Planning for phase II, re-construction of park roads from Cap Rock Intersection to Geology Tour Road Intersection was initiated this year. Construction for phase II is anticipated to being in 2002.

Alternative Energy

Joshua Tree National Park continues to a showcase for application of alternative energy use and sustainability practices. Plans for establishment of a solar collection system at park headquarters are underway. This solar system will generate energy for delivery back to the commercial power grid. The intent is to reduce energy dependency on commercial supplied power and to expand the parks use of solar energy systems.

Division of Administrative Services

During 2002, the Division of Administrative Services continued to provide support for the park in the areas of finance, budget and programming, purchasing and contracting, property management, human resource management, housing, and computer operations. All of these functions supported the total park operation and required a close working relationship with other divisions and management.

In FY 2002, Joshua Tree National Park received \$4,203,000 base funds and 96 FTE based on the green book.

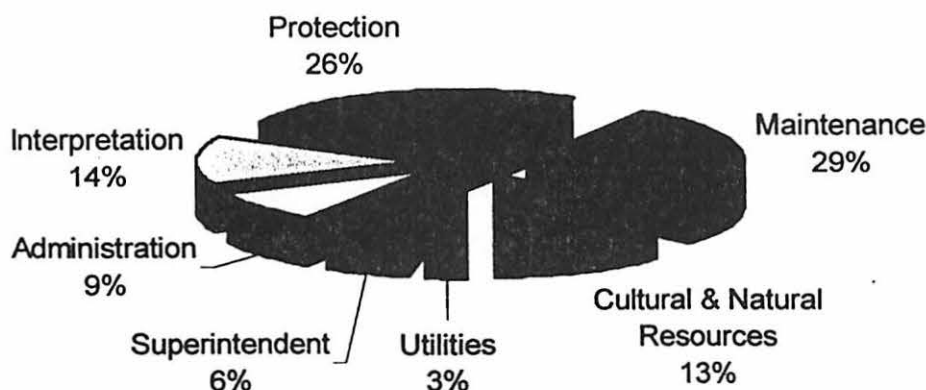
Personnel and fiscal resources are distributed across five broad categories to address the mission, long-term, and annual goals. These categories include natural resources, cultural resources, visitor satisfaction, visitor safety, and visitor understanding.

Many of the park's accomplishments in recent years were made possible because of funds from sources other than the park's base budget. In 2002, the park received approximately \$4.7 million from other

sources such as other National Park Service monies (repair/rehabilitation, cyclic maintenance), fee demonstration, Federal Lands Highway Program (FLHP), National Interagency Fire Center, and special grants.

A Business Plan was completed this year which identifies the park's financial status based on FY 01 to our primary stakeholders. This undertaking was provided through the *Business Plan Initiative* in cooperation with NPCA. Results of the Business Plan are threefold. First, it provides the park with a synopsis of its funding history. Second, it presents a clear, detailed picture of current park operations and funding. Finally, it outlines park priorities and funding strategies for the future. In summary, the Budget Plan recognizes a parkwide shortfall of over \$2.6 million with operational priorities being centered around cultural and natural resources (\$754,700), safe public access and protection needs (\$595,100) and public health and environmental mandates (\$662,800). External challenges (\$278,100) and staff productivity and safety (\$240,500) are also recognized needs.

FY02 ONPS Budget Allocation



Integrated/Interfaced Data Systems

Changes in communication technology have made it possible for us to extend internet capability to one of the most remote sites in the park. With no cellular or landline phone service, the Cottonwood Ranger Station/Maintenance area has been connected via satellite internet service. With the activation of Virtual Private Networking, park employees are now able to conduct email and internet transactions via the government websites.

Ninety-five percent of park employees have been converted from cmail to Lotus Notes.

Recognizing the need to replace aging telephone lines within the park headquarters, a telecommunication upgrade of the park phone lines has begun with the replacement of the Visitor Center's phone lines. In conjunction with this upgrade the Joshua Tree National Park Association was relocated into a new facility that was wired for telephone, networking, burglar and fire alarm by the IT staff.

Joshua Tree's main park server was replaced in preparation for the conversion to Windows 2000 Active Directory.

In response to the increase need of a high volume printer with PCL font capabilities a new division printer for the Interpretive staff was installed.

Performance Standards

All employees have performance standards linked to strategic and annual goals.

Workforce Diversity

As of September 30, 2002, the number of encumbered permanent positions in the targeted occupational series is 26 (up from 25 positions in FY2001). Of those 26 positions, as of September 30, 2002, 12

(48%) met the definition of diverse employees.

Targeted Occupations: 0025, 0193, 0301, 0401, 1010, 1015, 1640.

Employee Housing

The annual housing income in FY2002 was just under \$30,000. One housing unit at Cottonwood was upgraded from Fair to Excellent for interior condition. The park maintained the condition of all other housing units.

Employee Safety

Park records indicated that during FY02, there were twelve recordable employee injuries with four being lost-time injuries resulting in a total cost of approximately \$8,000. The park also recorded four employee motor vehicle accidents. To determine the rate, we used the formula of 96 FTE divided by 100; multiplied by 4 for a 3.84 lost-time injury rate. The park had 228 hours of continuation of pay.

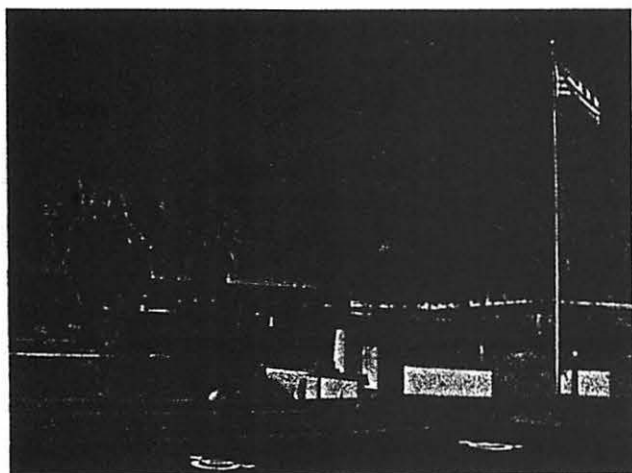
Accountable Property

The park continued to work on bringing all park property into compliance with applicable rules and regulations. It finally had the necessary personnel to initiate program updates, inventory corrections and excess property, which it continues to do. As radios are no longer considered formal, accountable property, they were given the new informal property tags. Informal property processes are being identified and will be initiated this next fiscal year.

Division of Facility Management

The *Division of Facility Management*

Continued to plan, program, and coordinate the overall maintenance and operation of park facilities and special projects. Fully implemented the MAXIMO FMSS program at Joshua Tree. The Division constructed, maintained, or improved physical facilities (roads, trails, buildings, utilities, vehicles) and served as the professional representative in matters concerning alternative energy use, engineering, planning, design, construction, and operation. The Division has established a close relationship with central offices and other government agencies, such as the Federal Highway Administration, to assure that the maintenance and development programs are carried out in accordance with the Service-wide goals and objectives.



Twenty-nine Palms Park Headquarters facility.

The park's nine campgrounds range in elevation from the 65-site Cottonwood Campground at 3,000 feet to the 4,500-foot Sheep Pass Campground that contains 6 group sites. These campgrounds provide for a relatively primitive camping experience as only Black Rock and Cottonwood have water, dump stations, and flush toilets; the others have pit toilets. Combined, the campgrounds provide 491 individual sites that accommodate up to six people each and 22 group sites that vary from 10 to 70 people. Neither showers nor hookups for

recreational vehicles are provided. Water is available at the Oasis Visitor Center, Indian Cove Ranger Station, West Entrance, and the Black Rock and Cottonwood Campgrounds.

Park headquarters, administrative facilities, and the primary visitor center are located in Twenty-nine Palms. The visitor center provides information, interpretive displays, and an interpretive materials sales outlet. The complex also houses park headquarters, satellite offices, and storage. Maintenance facilities are concentrated at Pinto Wye, which is approximately five miles inside the park's north boundary.

The other administrative center is located in the south end of the park at Cottonwood. Here the campground, visitor center, limited employee housing, maintenance facilities, and offices service this remote section of the park. Commercial utilities do not service Cottonwood. The National Park Service converted from a diesel generator to a photovoltaic system to provide power in 1998. We have yet to find a viable method of providing telephone service to the area. Elsewhere in the park, a single residence is provided both at Indian Cove and Black Rock for required occupancy protection personnel.

The Black Rock Nature Center, located in the Black Rock Campground, functions as a center for environmental education activities. The park's *General Management Plan* calls for it to also serve as a visitor contact station with exhibits and audiovisual programs. Currently, a fee collection building and restroom facilities are found at the park's west entrance, but the *General Management Plan* prescribes the development of another visitor center. This center would provide for orientation, trip planning, and interpretation of a broad spectrum of themes.

The park contains more than 100 miles of paved road and 120 miles of unpaved roads as access for use, enjoyment, and protection of the park. Planning and an Environmental Assessment were completed for the next phase of Federal Highway road construction scheduled for 2003.



Asphalt strip along damaged section of road edge

Emergency repairs were made to 4.5 miles of route 12 road shoulders damaged during the FLHP 173 project. Work included excavating a 2-foot by 3-inch section of road along both outside edges and placing 515 Tons of cold mix asphalt.

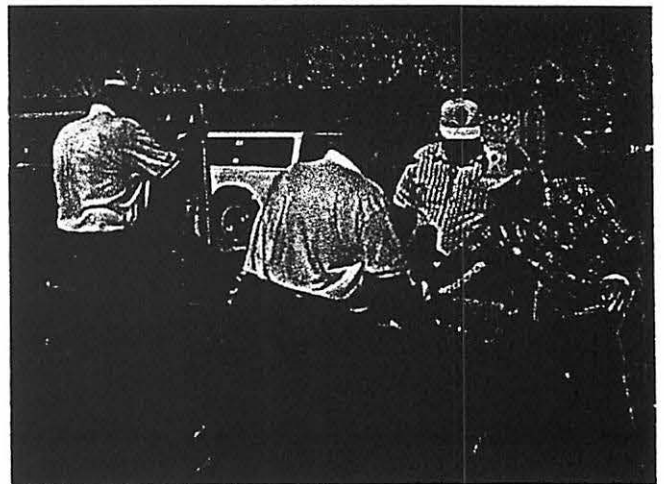


Striping at the park's West Entrance

The park chip sealed 11.2 miles of park route twelve. This contract also included 25,000 tons of rubberized crack seal with over 63,200 lineal feet of road striping.

Visitor Satisfaction -

The Division of Facility Management maintained 3 visitor centers, 9 campgrounds, 175 miles of trails, 32 buildings, and many other types of constructed assets. The Division maintained these assets so that they could safely and cost effectively provides services to employees and the public. The park-wide recycling program partnership with VFW Post 9431 in Yucca Valley was awarded the **2002 Department of Interior's Environmental Achievement Award** for their continuing management of 25 recycling stations parkwide.



VFW Post 9431 members sorting recyclable.

The park hosted a 15-enrollee Youth Conservation Corps (YCC) camp and partnered with Great Basin National Park, Mojave Preserve, Devils Postpile and Pinnacles National Monument on partnership projects. The crew constructed four new Picnic sites at the Hidden Valley Trailhead with sustainable products to meet ADA standards. In addition, they rehabilitated the 1.2-mile Hidden Valley Interpretive Trail. Constructed 250-sq. ft. of retaining wall and 300 linear feet of new trail on Old Pinnacle Trail. Cleared over 50 downed trees and felled 30 hazardous trees

and cleared vegetation on 23 miles of trail at Great Basin. Assisted with the spring opening of the trail system at Devils Postpile.

The park continued its partnership program with the California Conservation Corps. This internship program targets young people between 18 to 23 years old from the Morongo Basin. Upon the completion of a one-year appointment, participants receive a \$2,000 scholarship. If the participants complete a second year, they receive another \$2,000 scholarship. The program provides a diverse experience across the three branches of the maintenance division.



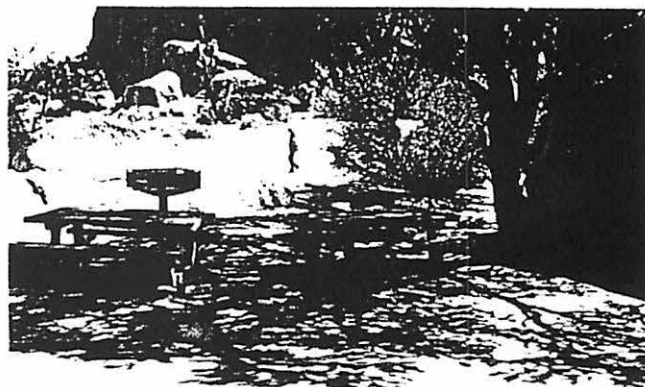
Youth Conservation Corps members at Hidden Valley

Thirty three trails totaling 83 miles were worked at Joshua Tree resulting in: 260 sq. ft. of retaining wall, 175 stone steps, 190,000 linear feet of tread maintenance, 115 water bars, 400 sq. ft. of hardened surface picnic area, 76 linear feet of hardened trail constructed and the installation of 32 interpretive signs for fiscal year 2002.

Joshua Tree National Park's Trail Crew has been selected to receive the **Department of Interior's 2002 Environmental Achievement Award** for the Cap Rock Rehabilitation Project in 2001.

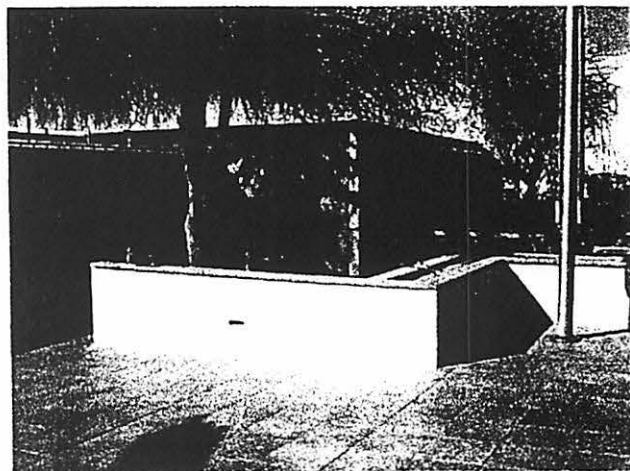
Other National Park Service funding was

utilized for the rehabilitation of the Hidden Valley Day Use Area. Eight fire grates and 40 concrete picnic tables were placed to meet ADA standards. Thirteen new recycling centers were placed at the new trailheads and parking lots associated with FLHP 173-road project.



Group picnic site at Hidden Valley Day Use Area

Work was completed to give the Oasis of Mara Visitor Center a sustainable facelift. The project replaced the walkways and patio area, covered the 4,250 square feet of



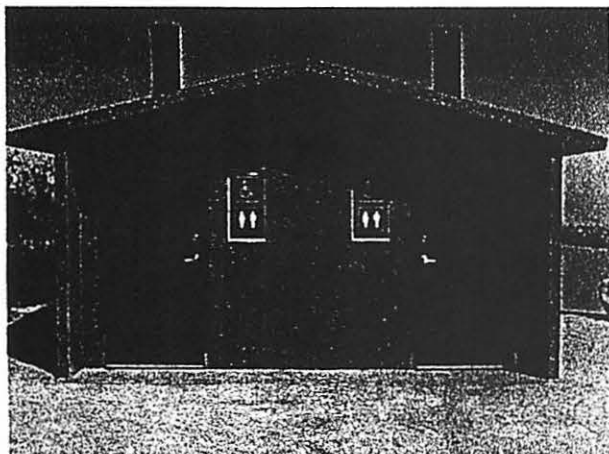
Oasis of Mara Visitor Center Visitor Courtyard

building with a sustainable concrete stucco finish, landscape barriers were replaced with colored concrete curbing and all exterior support wood beams were

replaced. Placed an ADA water fountain and benches to fill the new patio area adjacent to the restrooms providing an area for visitors to plan their visit to the park.

Visitor Safety - The Division of Facility Management maintained 3 water systems, 75 miles of trails, and more than 100 miles of paved and 120 miles of unpaved roads, and other constructed assets. Their work ensured that the facilities safely and cost effectively provided services to employees and the public. In addition to the routine operational activities, the Division was involved in many special projects and emphases.

Replaced 22 fiberglass vault toilets with ten precast concrete SST vault toilets.



CXT concrete vault toilet (SST)

Division of Resources Management

The Division of Resources Management manages all natural resource programs, such as environmental compliance, wildlife management, vegetation management, mining management, exotic plant control, threatened and endangered species, Integrated Pest Management, air and water quality monitoring, and the Geographic Information System (GIS). It also manages the cultural resource programs, including historic preservation, archeological projects, Section 106 compliance, Native American consultation, the collection's facility, and a research library. The division administers the park's science program, including reviewing and issuing scientific collecting permits for all research in the park.

The Vegetation Branch of the Resources Management Division performed a wide variety of works through the year.

Disturbed Lands

Continuing with the Federal Highway Project (JOTR 173), the park replanted disturbed sites associated with the construction project October through December 2002. Total material planted was over 2,000 small and large container stock, either salvaged or nursery grown material. The Sheep's Pass Borrow Pit continues to act as a satellite nursery holding facility, with an extensive irrigation system in place and drip lines for approximately 1,100 plants. The area was cleared and is ready for the next road construction phase (JOTR 291). Between October and January, a revegetation crew of 6 Student Conservation Associate Interns (SCA) was brought aboard to supplement the existing crew of one technician and one work leader. The crew successfully replanted all of the salvaged plant material and nursery grown material in the rehabilitation areas created by JOTR 173. Horizon Tree Transplanting replanted 300 30-inch/36-inch/42-inch

boxed acacias, yuccas, and Joshua trees. A total of approximately 2,728 plants have been planted for this project. Plants relocated along the construction area were watered throughout the summer with survival rates close to 100%. Bar 7 Custom Ranching installed 6531 feet of post and cable fencing to protect revegetated areas throughout JOTR 173. Over 200 volunteer hours have contributed to this project.



Maintenance of restoration sites, continued with the watering of 202 plants at Rockhouse and 2,728 plants within JOTR 173. Plants were maintained throughout the summer, with an overall survival rate of 85-90% (Rockhouse).

The Center for Arid Lands Restoration nursery facility continued to work with Fort Irwin National Training Center to propagate 3790 plants and maintain 650 plants for arid lands projects on the army base. Park staff delivered over 3600 plants to Fort Irwin during the year. In addition, approximately 420 plants of mixed species were grown for Death Valley National Park and 725 plants for Saguaro National Park for landscaping and restoration purposes. Bureau of Land Management (BLM) offices requested 290 plants for the El Centro Resource Area and

1000 plants for the Ridgecrest Resource Area. Staff also grew 300 plants for Federal Highway Project JOTR 173 and has started over 250 plants for Federal Highways Project JOTR 291. Two restorationists from the BLM were on a 12-week detail to train with nursery and field staff; the detail was a great partnership opportunity to provide interagency training and receive much needed help in the greenhouses and on field projects. A Student Conservation Intern (SCA) completed a 6-month internship assisted with nursery operations. The nursery continues to host educational tours for local elementary schools, community groups and local community colleges. Several dedicated volunteers come on a weekly basis to assist with nursery projects.



Exotic Species

The exotic tree species Tamarix continues to receive attention throughout the park. In 2002, twenty-six sites (approximately 820 acres) were monitored for this exotic tree. Many areas were treated (hand pull, cut, and/or herbicide) throughout the year: Stubbe Spring, Smithwater Canyon, Pinkham Well, Optimo Dam, Lost Palms Canyon, Johnny Lang Canyon, Garrett Canyon, Coxcombs North, Bolster Canyon, Buzzard Spring, and Barker Dam. The Optimo and Coxcombs North sites were both new locations for infestations. Field inspections at Cow Camp, Keys Lake, and Meek Seep showed the areas clean of weeds. Tamarisk found was mapped,

eradicated, and logged in to the database. The park continues to have resprouts, new seedlings, and new locations requiring annual monitoring and treatment. This program is primarily supported through the efforts of volunteers HW Baczkowski and G Garrett.

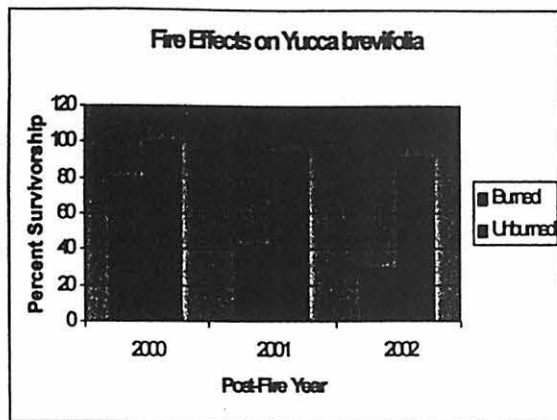
The park continues to coordinate with the California Exotic Pest Plant Council (CalEPPC), the San Bernardino County Weed Management Area, and other parks to develop strategies to address Moroccan mustard (*Brassica tournefortii*) and eradicating it in priority areas (notably the Pinto Dunes and Pinto Wash). Rainfall in 2001-02 was extremely low; no new germinants were reported in areas previously treated. A funding proposal is being developed for "Pulling Together" as a partnership project to examine eradication methods on NPS, BLM, and DOD lands.

Species of Concern

Work on *Monardella robisonii* continued with the completion of the inventory report including recommendations for management. New sites continue to be reported by park volunteers and staff.

In FY02, the park collected third year data on the effects of fire on the Joshua tree (*Yucca brevifolia*). This charismatic species, the namesake of the park, may be seriously effected by new fire regimes. Fire effects information is critical to understanding how these ecosystems may be changing as a result of exotic plant invasion and new fire cycles.

In April and May, 1256 Joshua trees were re-sampled for long-term effects from fire scorch and fire rehabilitation efforts. These trees will be monitored over the next few years for survivability and growth with the assistance of the USGS Biological Resources Division (Todd Esque, BRD Ecologist). Three years of data indicate a mortality rate of 21% in year one, and 58% in year two, and 71% year three. Data to be



published in peer-reviewed journal winter 2003.

Concurrent with this project, park staff is working with the USGS and UC Riverside to conduct experimental research fires and create a complete fire history for the park. The fire history should be available in FY02; research burns are scheduled to begin in spring 2003.

Integrated Pest Management

Africanized Bees continue to be a high priority pest problem in the park. Three bee reports were filed by visitors, all from campgrounds where food and liquids were likely attractants to foraging bees. One hive was removed at the Oasis of Mara. Bee incidents continue to be monitored on an ad hoc basis, but a comprehensive IPM Plan needs to be developed. Coyotes begging along roadsides have becoming an increasing issue this year, with hand feeding by visitors posing a potential biting threat.

Other

A park-wide vegetation map continues to be developed. In FY 2002, photo interpretation of 999 aerial photos was completed, including delineation and labeling of over 50 vegetation mapping units, alliances, and associations. The vegetation map contractor performed quality control for this phase. Field verification was conducted of each ecological region with the help of State Plant Ecologist Todd Keller-Wolf. Final automation and a park quality assessment are slated for FY03.

Dr. Richard Minnich of the University of California, Riverside completed additional photo-interpretation work by providing base maps delineating historic wildfires from park archive and current aerial photographs.

Desert Tortoise Mitigation and Management

The resources staff continued to work with contractors on the new federal highways project to protect and mitigate construction impacts to the threatened desert tortoise. The park had completed all of the USFWS clearance surveys and Section 7 consultation. Joshua Tree National Park staff and the USFWS worked together to develop the proper mitigation measures to be taken once the construction began. Two on-site tortoise monitoring personnel were present during construction. Contract employees were given "sensitivity" training on the importance of tortoises as a natural resource and on the laws that protect them as a threatened species.

Construction workers were trained to watch out for tortoises and on what to do when tortoises were encountered in the vicinity of road construction. Daily areas of construction and concern were monitored for desert tortoise activity. Construction staging areas such as the Sheep Pass and Barrow Pit were fenced to exclude tortoises.

Additional Section 7 tortoise compliance clearance surveys were also conducted for other projects occurring in or near desert tortoise habitat; these projects included historic structure rehabilitation, proposed prescribed burn experiments of *Coleogyne*, establishment of new equestrian trails, and future road rehabilitation projects.

In consultation with USFWS, a desert tortoise monitoring plan will be developed to specifically document the adequacy of mitigation measures implemented from road construction on the movement, behavior, and survival of desert tortoises. This plan

will also assess how the tortoise habitat impacted by construction affects the quality of the surrounding desert tortoise habitat (i.e. establishment of invasive annuals).

The park continued to work in cooperation with the U.S. Fish and Wildlife Service Desert Tortoise coordinator to conduct distance-sampling surveys in the park. The park provided funding to the USFWS so that they could conduct the integrated surveys. Over 128 kilometers of distance sampling transects were conducted in the park. These long-term surveys will provide data on tortoise population status for the entire Mojave Desert.

Eagle Mountain Landfill

Eagle Mountain landfill continues to be a potential threat to the park. Several court cases have delayed the plans for this site. The park's strategy to address the potential impacts of the Eagle Mountain landfill has been in a constant state of change due to fiscal constraints and the almost month by month changes in information relating to whether or not the landfill will be constructed.

The park has baseline information about 3 out of 16 of the resources potentially impacted by the proposed Eagle Mountain landfill. The University of Nevada at Las Vegas completed an inventory of the bighorn sheep in the Eagle Mountain area in 1999 and in 2000 two preliminary baseline studies for insects and ravens related to the Eagle Mountain landfill were also completed.

In 1998, \$39,500 was provided to the park from regional contingency funds to support Eagle Mountain research. It was anticipated that these funds would support a program management position to assist the park staff on the Eagle Mountain monitoring. It was found, however, that a full-time position could not be maintained in the long-term. Thus, a decision was made to, at a minimum, organize a consortium of experts

in their fields to develop a more detailed impacts monitoring plan and to evaluate certain key resource issues. This funding was transferred to the U.S. Geological Survey Biological Resources Division at the University of California, Riverside for them to develop the monitoring plan.

In the fall of 1999, a consortium of experts in the field of environmental monitoring was assembled for the park to develop a monitoring plan and evaluate key resources issues. Strategies obtained from this meeting were collated into the Eagle Mountain Landfill Impact Monitoring Plan, which was completed in the fall of 2000.

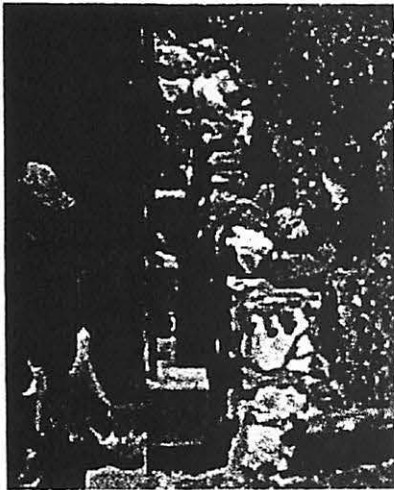
Cultural Resources

la5 - List of Classified Structures - By September 30, 2002, 12 (13.6 percent) out of 88 of Joshua Tree National Park historic structures on the 1999 List of Historic Structures (LCS) are in good condition.

This goal was exceeded and 14 LCS listed structures are currently in good condition. Three structures at Lost Horse Mill and three at Eagle Cliff Mine were stabilized in FY02. Three of the structures stabilized in FY02 are now listed as being in "Good" condition. The further stabilization of the Lost Horse Mill also helped to improve safety at the site. The following structures are now in "Good" condition. Further, the condition of the Eagle Cliff Mine Cabin (IDLCS 05608) has now been improved from "Poor" to "Fair" condition.

IDLCS 56330 Keys Ranch Cave Shelter
IDLCS 05591 Keys Ranch Windmill
IDLCS 55032 Wall Street Mill boundary Markers
IDLCS 05577 Keys Ranch Shed
IDLCS 05579 Keys Ranch Men's Outhouse (FY01)
IDLCS 05581 Keys Ranch Disney Shed (FY01)
IDLCS 05583 Keys Ranch Guest House
IDLCS 05592 Keys Ranch South House

IDLCS 05602 Wall Street Mill Well
 IDLCS 09467 Barker Dam Watering Trough
 (FY01)
 IDLCS 00749 Lost Horse Stamp Mill (FY02)
 IDLCS 08218 Lost Horse Mine Office Ruin
 (FY01)
 IDLCS 08219 Lost Horse Mine Assay Office
 Ruin (FY02)
 IDLCS 08220 Lost Horse Mine Cookhouse
 Ruin (FY02)



Lost Horse Mill rock wall stabilization in progress.

Ia6 - Museum Collections - By September 30, 2002, 203 (90.2%) out of 225 applicable preservation and protection conditions for Joshua Tree National Park's museum collections are met.

Compliance with museum standards, as set in the Checklist for Preservation and Protection of Museum Collections, remains unchanged at 161 standards met, with 25 deficient standards. The percentage of standards met = 86.55.

Designs for the museum storage facility addition are 80% completed.

Backlog cataloging and the re-housing of museum objects continues as an ongoing project.

Ia08 - Archeological Sites - By September 30, 2002, 2 percent (7 out of 350) are in good condition.

This goal was exceeded. The following 29 sites are in good condition:

CA-RIV-0096	CA-RIV-0191
CA-RIV-0192	CA-RIV-0913
CA-RIV-0924	CA-RIV-0925
CA-RIV-0938	CA-RIV-1950
CA-RIV-2047H	CA-RIV-2049/H
CA-RIV-2048	CA-RIV-4808
CA-RIV-4841	CA-RIV-4911
CA-RIV-4944H	CA-RIV-5093
CA-RIV-5097	CA-RIV-6336/H
CA-RIV-6341H	CA-RIV-6345H
CA-RIV-6397	CA-RIV-6398
CA-RIV-6447H	CA-RIV-6480H
CA-SBR-0751	CA-SBR-0753
CA-SBR-0761	CA-SBR-7181

Ib2A - Cultural Resource Inventories - By September 30, 2002, the 1997 baseline information of the number of archeological sites entered into the Archeological Sites Information System (ASMIS) is maintained at 425 (0% increase).

This goal was met and 425 sites have been entered into the ASMIS database by WACC.

Ib2B - Cultural Landscape Inventories - By September 30, 2002, the number of Joshua Tree National Park cultural landscapes inventoried, evaluated, and entered on the National Park Service Cultural Landscape Inventory (CLI) at Level II is increased from 2 in FY 99 to 4 (100% increase).

This goal was met. Three Level 2 inventories and one Level 1 inventory have been completed and entered on the Cultural Landscape Inventory.

The final Level 2 CLI for Keys' Ranch, Barker Dam, and Cow Camp was completed in FY 2000. The report is

comprised of a parent landscape (the greater Keys Ranch) and three component landscapes (the ranch proper, Cow Camp, and Barker Dam). This work was done in FY 1999 by the CLI team from PGSO and the scope was more extensive than initially thought.

Research for a CLI for the Oasis of Mara was conducted in FY 2001 and the report finalized in FY02. This research determined that there were no significant cultural landscape components remaining in this location and the process therefore terminated at a Level I report.

lb2C – List of Classified Structures - By September 30, 2002, all 88 JOTR historic structures on the List of Classified Structures (LCS) have updated information in their LCS records.

This goal was met and 14 structures are now in "Good" condition. Three of these were improved in FY 2002 (IDLCS 00749 Lost Horse Stamp Mill, IDLCS 08219 Lost Horse Mine Assay Office Ruin, and IDLCS 08220 Lost Horse Mine Cookhouse Ruin. A request was made in writing by the superintendent to WRO on October 3, 2002 to update the condition of these structures to "Good" in the LCS database. Further, the Eagle Cliff Cabin, IDLCS 05608, was improved from "Poor" to "Fair" condition and it was also requested that this information be updated.



Eagle Cliff Mine Cabin fireplace with new mud mortar.

lb2D - Cultural Resource Inventories – By September 30, 2002, the number of museum objects entered in the automated National Catalog system and submitted to the National Catalog is increased by 1.5% from 116,705 to 118,455.

- 2,787 archeology objects cataloged
- 8,000 sheets of oversized plans/drawings, archives, and manuscripts were cataloged (backlog estimate)
- 2,000 historic photographs cataloged (backlog estimate)
- 20 history objects cataloged
- 18 biology specimens cataloged
- 8 paleontology specimens cataloged

Total objects cataloged in FY02 = 12,833 (estimate)

Collection total to date = 184,540 (estimate)

GIS

During 2002, the park continued to build and refine the GIS databases, as information became available. The GIS lab provided valuable support to park management by creating a variety of maps to be used in important planning and environmental compliance documents. These maps addressed complex issues and provided readers a clearer concept of the park's preferred alternatives through their graphics.

Continuing projects that the GIS lab worked on included the generation of maps of mine sites, shafts, and adits and then site-specific maps for planning and compliance documents associated with the abandoned mineral lands program. The GIS lab provided support to implement the Backcountry and Wilderness Management

Plan. Maps were produced for roads and for the climbing and the trails components of the plan. Support was also provided to the effort to obtain private lands inside and outside the park.

The GIS lab was also actively involved during the year in the Federal Lands Highway Program project in the park. Maps were produced for the tortoise monitoring and vegetation transplant and salvage operations.

Considerable time was devoted to assisting park staff in technical GIS support and training including vegetation, closed roads, wildlife, tortoise management and fire planning. Other program support included assisting resources staff in developing posters for presentations at professional symposia. Digital mapping of Dr. Richard Minnich's historic fire/vegetation maps was completed also this year.

New data was developed and included digitized location of the Colorado River Aqueduct adjacent to the park, digitized updated desert bighorn distribution, , digitized closed roads and digitized land ownership maps. Special work was done on developing a digitized overlay system to identify priority lands for acquisition. The conversation from UNIX to NT was continued, as was the upgrade to ArcInfo 8. GIS computers and the network connection were upgraded and maintained.

Disturbed Lands (AML)

In this the fourth year of a five year AML program, staff evaluated Abandoned Mine Land (AML) sites for historic resources, hazards, wildlife habitat and wilderness value. The park is currently placing all AML projects on hold until a Confined Space Entry Plan.

Facilitated rehabilitation and stabilization of Eagle Cliff mine using mules.

The park provided assistance to the Army Corps of Engineers in planning a program to

test potentially hazardous mill tailings at 14 abandoned mills within the park. A bid was accepted, and sampling is scheduled for December 2002.

In cooperation with Bat Conservation International and the National Park Service Geologic Resources Division, the park completed a 4-year survey of bats in abandoned mines. The information collected will be used to determine methods of providing for visitor safety at the mine sites without disturbing habitat used by bats in the park. MA2002

Air Quality

Division of Resources Management managed and maintained the continuous ozone and meteorology station at the Black Rock Campground. The park also maintained Cast-Net PM-10 monitoring at Black Rock. The park maintained and managed the data for the site and assured its accuracy and validity. The park maintained IMPROVE and wet deposition monitoring. The data was transmitted to the Air Resources Division for analysis.

The park participated in the California Desert Air Working Group (CDAWG), a consortium of California air resource regulators and industry representatives. We also participated in the Desert Clean Air Partnership (DCAP), Federal land managers dedicated to clean air.

The wilderness area of Joshua Tree National Park was designated as a Class I airshed by the Clean Air Act amendments (CAA) of 1977 Under the CAA amendments of 1990, any addition to a Class I wilderness is also made part of the Class I area. This classification allows the least incremental increases in particulate and sulfur dioxide pollutants. The CAA also imposes an affirmative responsibility to protect the air quality related values (including visibility) of Class I areas.

Several years of data indicate that the park should be an ozone non-attainment area. In spring of 2000, the National Park Service petitioned the California Air Resources Board (CARB) to classify the entire park as "non-attainment," which would require managing air districts to ensure that pollution sources negatively affecting the park be regulated and remedied. Scientific research indicates that additional reductions in air pollution will be necessary to truly protect Class I areas.

Joshua Tree National Park lost its status as the National Park Service unit with the most highly polluted air, in calendar 2000. The park had 50 episodes of one-hour ozone concentrations above 100 parts per billion and only one episode of one-hour ozone concentration above 124 parts per billion. Therefore, there was only one exceedence of the National Air Quality Standard for ozone in calendar 2000. Based on the second highest one-hour average of ozone concentration in atmosphere tested, Joshua Tree NP is now the second most polluted park, behind Cape Cod National Seashore.

Staff defended the park from resource impairment associated with a proposed power plant, planned for construction seven miles up wind of the park. The permit was withdrawn after substantive argument from park staff triggered a deeper level of review by the permitting agency.

Water Quality

Water quality and quantity was monitored at 75 springs, wells, and tanks within the park. Water was found at 35 locations, and 14 samples were analyzed. This is the second phase of an Inventory and Monitoring program for water resources. Water quality has not degraded measurably since the initial monitoring of resources in 1996; however, water quantities were severely restricted in this record drought year. The park is working with the Desert Managers Group to establish a more comprehensive Inventory and Monitoring program, to

include ecological monitoring as well as water quality.

Mining Management

Eleven patented mining claims remain in the park. Park staff continues to work on examining claims for validity and working with patents on a case by case basis.

Division of Interpretation and Education

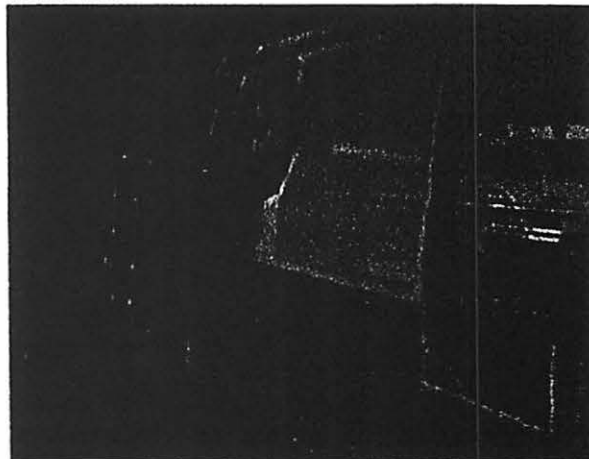
The Division of Interpretation and Education provides personal and non-personal interpretation of the area's natural and cultural resources to the public. It coordinates the cooperating association's activities and the environmental education, special emphasis, Volunteers-in-Parks, and Student Conservation Association programs. The division manages information services through formal interpretive programs and the operation of two visitor centers. It coordinates projects and activities in a variety of non-personal services media such as exhibits, publications, and websites.

In FY02, the Interpretation and Education program conducted a broad range of programs and activities designed to assist the public understand the park's purpose and significance. Ranger-conducted programs offered visitors an opportunity to learn about park resources and resource issues in an in-depth setting through first-hand experience.

The park's Education Program continued to reach significant numbers of area students with curriculum-based classroom services. The *Parks as Classrooms* programs and services use the park as an outdoor classroom. The program highlighted park resource issues in ways that supported classroom learning objectives. In FY02, 499 education programs were offered to 14,006 students.

The park completed the outfitting of a CNG van that is being used as a traveling classroom/museum in support of the education program. Custom-built exhibits used in support of classroom activities were installed in the van. Computer and video equipment used in the van are powered by an on-board solar system. The van exterior was custom-painted by noted local muralist Chuck Caplinger. With its vivid desert scenes, the van calls attention not only to

the park as a whole but to our efforts to reduce pollution by using alternative fuel vehicles.



Artist Chuck Caplinger brings the Education van to life.

The Education Program continued work on an Environmental Leadership Grant of \$24,000 to develop a family activity workbook titled "Do Your Part- Be Desert Smart." The activity book will help families learn ways to be better environmental citizens by recycling and by conserving water and energy. The program involves a partnership with Mojave National Preserve and is targeted at California desert residents from the Coachella Valley to the Barstow area. A draft manuscript of the workbook was developed in FY02. Editing, layout and design, printing, and distribution are scheduled for FY03.

Working with Channel Islands National Park, the park Education staff coordinated a major National Park Service presence at the National Science Teachers Association (NSTA) Conference held in San Diego last March. Joshua Tree Education Specialist Lorna Lange-Daggs and Education Ranger Caryn Davidson solicited contributions from cooperating association around the region to pay for the booth space, planned and built an exhibit, and coordinated staffing for the booth over the week-long conference. In addition, Lorna was a co-presenter at the conference with Carol Peterson from

Channel Islands National Park.

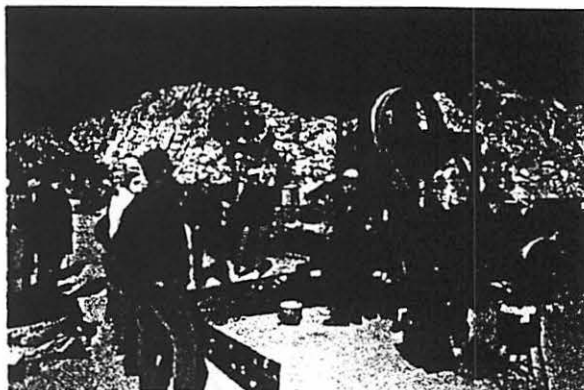


Ranger Mike Cipra discusses park education programs with a teacher at the NSTA Conference in San Diego.

The three visitor centers provided orientation and interpretive information to 170,211 visitors. Formal interpretive programs reached 15,435 people through 918 different programs, and informal interpretation reached 11,697 people.

Community outreach and media programs reach large audiences with messages about the role of the park in preserving our nation's natural and cultural heritage. Efforts have been made in recent years to boost the park's presence in Coachella Valley communities. Ranger Dar Spearing presented a program on American Deserts at a Symposium sponsored by the Palm Springs Desert Museum. Other outreach programs were presented in Palm Desert and Indio. The Interpretation staff also trained volunteer staff at the new California Welcome Center in Yucca Valley. The staff conducted 34 community programs and special events reaching 9,447 people.

The Keys Ranch Fee Tour Operation began in fiscal year 1999 and continued this past year. In FY02, we were able to offer 347 programs with 3,256 people attending.



Park Ranger Laureen Lentz shows Desert Queen Ranch visitors how a stamp mill works.

The Interpretive Division developed a number of programs and initiatives in support of the park's Wilderness and Backcountry Management Plan. Three seasonal interpreters developed and presented wilderness programs including outreach activities with rock climbers. A total of 109 programs with wilderness themes were presented to 3,182 people. Interpretation also participated in a BLM-sponsored clean up at Long Canyon on Earth Day weekend. The Education Program completed the development of a wilderness kit targeted at youth and community groups. The multi-faceted program is designed to foster a stronger stewardship ethic among organized youth groups that use the park on a regular basis. The kit is in final review with printing and distribution planned for early FY03.

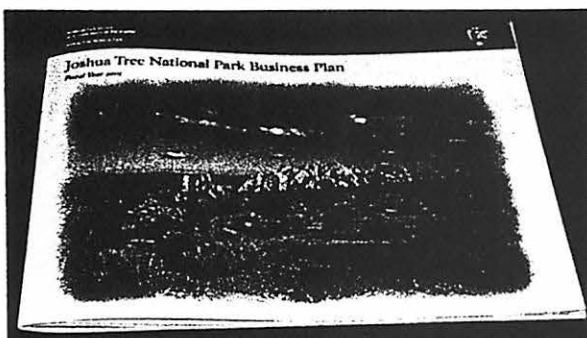
Non-personal services, such as museum exhibits, waysides, trail signs, publications, the park Web site, and information handouts communicate the purpose and significance of the park to the public.

Work on Phase II of the Oasis Visitor Center Exhibit Rehab is nearly complete. Discovery of a *dermestid* beetle infestation in the Visitor Center delayed completion of the project and final exhibit installation. A contract was awarded to Academy Studios for replacement of taxidermic mounts with inorganic animal models. Work on the animal models was completed in FY02 and installation took place during the first week

of October, 2002. Late in the fiscal year, the park received exhibit cyclic funds to replace a worn out set of exhibits used on the Oasis Visitor Center patio. The project will be completed in FY03 using both contract and day labor.

The park continued to work with the Harpers Ferry Center on the preparation and production of a complete park wayside package. A draft Wayside Exhibit Plan was delivered in June, 2002, with the final plan scheduled for delivery to the park in early fall, 2002. Contracting for the first phase of production is planned for late in 2002 or early in FY03. Work under this project is being funded through the Recreation Fee Demonstration Program.

The Division of Interpretation continued to fulfill editorial responsibilities for the Pacific West Region's *Green Voice* newsletter. Park Ranger Elize Van Zandt serves as feature editor and Visual Information Specialist Sandra Kaye is the designer for the *Green Voice*. With the assistance and support of the PWR Sustainable Practices Workgroup and other contributors, two issues of the *Green Voice* were prepared, printed, and distributed in FY02. The total number of copies printed and distributed was 616.



The Business Plan examines the park's financial health.

Interpretation also assisted the park with the layout, design, and printing of the park's Business Plan. Two M.A. candidates from top University business programs, Jim Annunziata from Cal-Berkeley and Katerina Tuovinen from Stanford, spent 10-weeks at

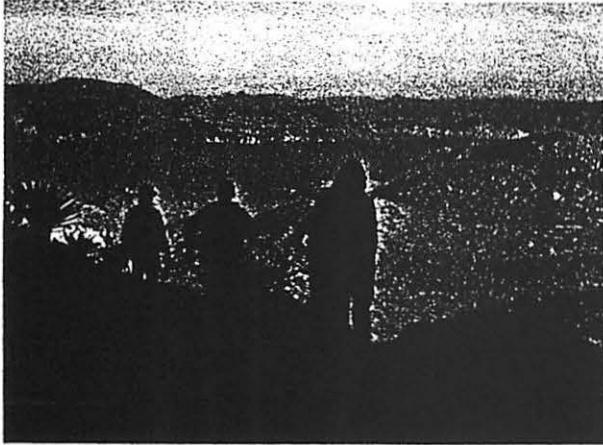
Joshua Tree and developed the park's Business Plan through an initiative sponsored by the National Parks and Conservation Association. The Business Plan will help the park better communicate with internal and external stakeholders about planning and budgetary issues. Sandra Kaye served as designer/editor for the Business Plan.

The Division coordinated the park's Volunteers in Parks Program. During 2002, 363 volunteers contributed 19,634 volunteer hours to Joshua Tree National Park. This was an increase of more than 900 volunteer hours over FY01.

FY02 marked another successful year for the Joshua Tree National Park Association. Gross sales reached \$593,888, a new sales record. Total FY02 Aid to the National Park Service reached \$108,298, also a record. In August, the Association moved into a brand new office suite built as part of the remodeling of the Oasis Visitor Center. The new work space will provide closer access to the Association's sales operations and allow better coordination with the park's interpretive staff. The park will use the modular building previously used by the Association as interim office space for the park maintenance staff as the park proceeds with its Headquarters Area renovations.

The Association has two major publications in preparation- the *Geology of Joshua Tree National Park* and a revised edition of *Desert Reflections* by noted author Stephen Trimble. The Association funded a part-time librarian position to provide regular library hours for park employees as well as to catch up on backlog cataloging of library materials. The Association continued to support the Annual Park Research Grant program. It also administered an \$11,000 grant from the Lee family Foundation for inventory and monitoring studies on two lizard species whose populations may be vulnerable to the impacts of large wildfires. The Association increased its support of the

park's seasonal training program. All this was accomplished in a year when traffic at park visitors was the lowest since the late 1980s.



The Desert Institute Map & Compass class surveys the park.

The Joshua Tree National Park Association-operated Desert Institute completed its third full year of operation in FY02 and experienced solid growth in enrollment of revenues. College level courses were offered during weekends in partnership with the University of California-Riverside. The Desert Institute also offered The Old School House Lecture Series in partnership with the Twentynine Palms Historical Society. In FY02, the Desert Institute offered a total of 31 courses that were attended by 308 students, an enrollment increase of 13% over 2001. The lecture series was conducted 9 times to a total of 155 people.

Division of Resource and Visitor Protection

The Division of Visitor and Resource Protection continued to manage the park's law enforcement, physical security, drug interdiction, physical fitness, and critical incident stress programs. It provided emergency medical services and other emergency operations, such as search and rescue. The division also managed wildland fire management, backcountry use management, and resource monitoring. It coordinated entrance and campground fee collection, special park uses, and campground operations. The Division also continued to work closely with other law enforcement agencies and coordinated the prosecution of cases with the Assistant U.S. Attorney's Office, the U.S. Magistrate Judge, and JAG.

Disturbed Lands

In 2002, the ranger division maintained Horse patrol operations during peak season. The park horse was utilized into shoulder seasons, but returned to Sequoia to help fulfill Sequoia's demand during summer months. The horse patrol program provided resource-based patrols in areas of the park not normally reached due to time constraints of foot patrol. The horse operation provided monitoring for over 50 miles of boundary, and yielded over 50 cases of resource damage and violations of park regulations. The park horse played a critical role in the investigation of a feral dog problem that posed a serious threat to desert bighorn populations. The ranger division investigated and cited 75 incidents of resource damage from off road vehicle use. 1.1 mile of park wilderness boundary was posted and barriers were placed to prevent off-road vehicle travel. The ranger division led four park clean up events. Over 6400 lbs. of trash and debris was removed from the park. The ranger division continued to monitor road closures and re-vegetation sites of 4 wheel drive trails through Rockhouse and Thermal

Canyon, as called for by the Backcountry and Wilderness Management Plan. Rangers spent over 60 hours in coordination; all park divisions participated in the clean up.

Threatened Species

Visitor protection monitored critical desert tortoise habitat, and conducted specialized patrol operations targeting wildlife violations. The ranger division, in conjunction with the Department of Fish and Game and the Bureau of Land Management, conducted specialized patrols during summer months, targeting reptile poaching. Three contacts were made during the year for reptile poaching and one citation was issued for use of artificial light. The ranger division led an operation to rid the park of feral dogs that were seen harassing and killing park wildlife. The ranger division spent over 1500 hours managing the feral dog threat to park wildlife during the peak visitation season.

Archeological Sites

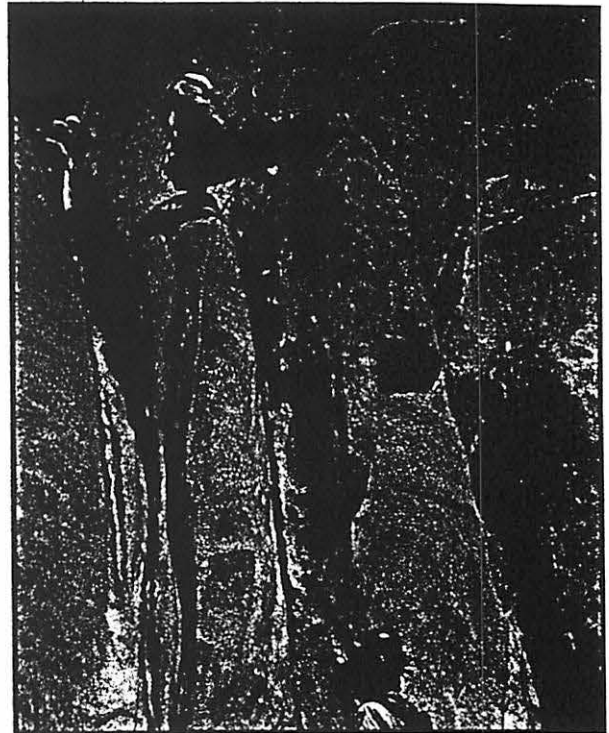
Rangers spent over 8 hours weekly conducting backcountry patrols, monitoring and observing archaeological sites. Two incidents of potential damage to rock art sites from recreational climbing were mitigated. Hundreds of known archaeological sites were monitored. 17 incidents of damage to archaeological resources were documented. Additionally, the park's criminal investigator assisted other park areas and other land management agencies on several other violations of the Archaeological Resource Protection Act.

Visitor Satisfaction

The division of Resource and Visitor Protection provided high visibility patrols in all park campgrounds, picnic areas, and

public areas daily, addressing all disturbances, complaints, and visitor conflicts. Patrols were provided in campground areas well into the evening and early morning hours on every weekend, and during the week during months of traditionally high visitation. Additionally, Protection rangers responded after hours to assistance calls initiated from the Hidden Valley Emergency Phone, or from the county dispatch center or the Indian Cove emergency phone. Rangers responded to approximately 815 incidents in 2002. In 2002, the Resource and Visitor Protection Division continued to foster relationships with the climbing community, promoting stewardship and the "leave no trace" outdoor ethic in one of the park's most prevalent user groups. The park's climbing ranger attended and spoke at weekly interpretive programs and coordinated partnership programs with local climbing advocacy groups. The division worked closely with the Climbing committee of the park advisory board to come up with strategies to promote stewardship and safety within the climbing community, and to generate support for the implementation of the Backcountry Management Plan.

In 2002, the ranger division hired a full time physical science technician charged with studying climbing use in the park, and to evaluate the potential impacts of climbing on natural resources. The ranger division initiated a cooperative agreement with The University Of Arizona, Tucson to co-sponsor the study. Over 20 volunteers were enlisted for a comprehensive inventory of the park's climbing resources, who logged over 850 hours of observation and survey in wilderness climbing areas.



The protection staff administered the park's special use program, issuing and monitoring over 64 Incidental Business Permits, 36 commercial filming permits, and 60 special Use permits, including permits for scientific research, weddings and special events. The park monitored 60 days of filming within the park. The IBP and Special use program both slowed in comparison to previous years, in part due to the effects of the 9/11 incidents on tourism and the film industry. The new draft of the new Special Park Use Guidelines was presented to the park NEPA compliance team and the initial steps in completing the Environmental Assessment for the Special use program were completed. The Special Use program collected over \$26,000 through the cost recovery program.

The Special Use program continued to work within the new NEPA guidelines as outlined in DO-12, to ensure all special use permits comply with the NEPA process. All 60 permits were cleared through the NEPA process.

Staff continued to chair the Wilderness Steering Committee, and continued implementation of the Backcountry Management Plan. The committee includes members from all park divisions, charged with park wide coordination of wilderness projects. The park completed artwork for a public climbing brochure and initiated a wilderness education kit for educational groups. We hosted a Leave No Trace workshop for nine park employees and hosted the Leave No Trace Training Trainers for 3 days. The Interpretation Division presented 109 wilderness hikes or evening campfire programs contacting 3,182 people. A wilderness/climbing supplement was developed as an insert into the park newspaper with a circulation of 60,000 copies. Cultural Resources inventoried 24 new archeological sites in the wilderness that have high potential for visitor impacts. A biological technician studied the appropriateness of llama use and four bighorn artificial water sources in the park. Five track pads were installed to monitor foot traffic into select wilderness areas. Finally, trail crews continued their work on the hiking and equestrian trails.

The park fee collection program administered and staffed Joshua Tree's campgrounds on the NPS service-wide reservation system, and staffed all entrance stations. All park entrance stations were manned during the peak season, and during peak hours on the off season. Visitor Use Assistants have provided much in the line of safety information in 2002. Federal Highways Road Project updates were distributed to all visitors during peak periods of construction. Entrance stations distributed educational material on wildlife management concerns, and public safety campaigns such as the *Buckle up for Safety* program.

The Visitor Use Assistants in the Protection division conducted the visitor satisfaction study as part of the reporting criteria for goal lia1.

The fee program purchased and implemented the *Advantage* fee software program to increase efficiency and accountability within the operation.

The Visitor Protection division continued with the Environmental Assessment for a program to issue permits to place fixed anchors in wilderness areas, in accordance with the backcountry management plan. The park approached the University of Nevada, Las Vegas to assist with the EA process, and entered into a C.E.S.U. agreement to ensure the quality and objectivity of the EA.

Visitor Safety

In 2002, fire apparatus were maintained so a minimal amount of out-of-service time was experienced. Wildland fires within the park were quickly extinguished. No significant acreage was lost to fire in Joshua Tree National Park in 2002. The park provided support to national and regional fire fighting efforts in 2002, supplying fire engines as needed, overhead personnel, and technical support. Park firefighters responded to 44 wildland fire incidents in 2002, despite the continued drought.

The salary and length of employment disparity between the NPS and BLM Engine Captain was finally resolved. Both engine captains are now employed year-round and paid the same. There is still a difference between NPS and BLM in the length of employment for the Engine Operator (ENOP), Assistant ENOP and Senior FFTR positions. These jobs are permanent full-time in BLM and USFS. NPS positions are permanent less-than-full-time. This has resulted in vacant positions and delays in recruiting and retaining qualified employees. The park filled the ENOP and ASST. ENOP jobs in July. The ENOP is still working on his fire qualifications for Engine Boss. We cannot staff the NPS engine for 7-day coverage until that happens. The Senior FFTR position is still vacant. This job will be

used to hire an apprentice; the first time that NPS has ever participated in the program.

The park sponsored the 32-hour Basic Firefighter and (2) 16-hour annual Fire Refresher courses. 37 firefighters completed the training. Personnel from the Black Rock fire center actively provided instruction during the DOI Fire Engine Academy, NPS GIS National Workshop, and CA Interagency Incident Management Workshop. In March, the park hosted the CA Desert Fire Management Planning Workshop. Participants from the Pacific West Regional Office, SEKI, MOJA, LAME, DEVA, BLM CDD and JOTR attended. Work continues on revising the Park's Fire Management Plan using information taught during the workshop.

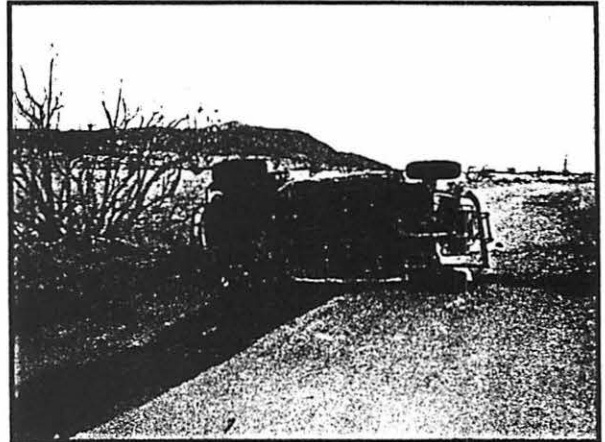
The park fire crew provided overhead and engine support to "Operation Imperial Dunes" during Presidents Day weekend and Easter Week. This is the first time that ICS was used to manage the hundreds of thousands of visitors to the Imperial Sand Dunes (a major law enforcement event), in which the majority of the command and general staff positions consisted of qualified Fire personnel.

The park fire program received "above average" overall rating during the Fire Readiness Review. The FMO participated on the Northern CA inspection team and produced a compact disk which depicts how the Annual Fire Readiness Review is conducted in CA. Copies were distributed by the BLM CA State Office to all the Northern California Field Offices and the National Interagency Fire Center.

Two older patrol vehicles were rotated out and new ones were outfitted for emergency response. All case reports were entered in the CIRS case incident reporting system.

The ranger division continued with the experimental public safety program that provides a satellite link between field

rangers and park dispatch. Joshua Tree's evaluation of the unit was critical in determining the final direction the program would take. Two field rangers were outfitted with equipment in 2002. The park is set to implement the program on all patrol vehicles in 2003, since the field trials were successful in 2002.



The accident/incident rate for 2002 is 3.076. The accident/incident rate for 2001 is 3.157. This indicates a drop in the accident/incident rate of 2.6%. In 2001, the criteria for reportable incidents were further clarified and criteria were narrowed. No baseline data further than 1-year back has been determined using amended criteria. The Ranger division will continue to monitor incident rate based on revised criteria, and will continue working on generating a comparable baseline.

Rangers cultivated relationships with the U.S. Attorney's office, the California Highway Patrol, the San Bernardino County Coroner's office, the United States Marine Corp, and the Riverside and San Bernardino County Sheriff's offices. Many incidents were worked cooperatively based on improved relationships with surrounding agencies. The ranger division sponsored cooperative training with the CHP and Twentynine Palms Fire Department to improve interagency cooperation. Two park radios were installed in Twentynine Palms Fire engines to facilitate cooperation on interagency incidents.

Rangers maintained high profile road patrols, conducting traffic enforcement aimed at reducing the number of motor vehicle accidents. Rangers issued 95 traffic citations, and investigated over 28 motor vehicle accidents in 2002. Rangers responded to over 37 requests for emergency medical services, and over 12 requests for rescues. The park incurred no fatalities in 2002, a reduction from the previous year.



The division staff continued to build relationships with University Medical Center of Las Vegas, Nevada, which serves as the park's base station hospital, and with the Emergency Physicians Medical Group of Southern Nevada, which serves as medical director for the park. Several in park training opportunities were provided. Joshua Tree Rangers assisted Mojave National Preserve in financing, and sponsoring an EMT refresher, drawing participants from 7 different parks, and the BLM. Sufficient additional training was provided to allow all ranger EMT's to maintain their certifications, and CPR was taught to over 23 employees and volunteers in all park divisions and 12 people were trained in basic first aid. Two volunteer units, the park Equestrian Volunteers, and the park Volunteer SAR team, were certified in CPR.

In September, the park's EMS Coordinator spent 2 weeks in Washington D.C. working on the new draft of Reference Manual 51. In September, she presented sections of the draft RM-51 at the National EMS Coordinators' and Physicians Conference in San Diego. Coordinators from all four Western Desert Group parks attended the refresher and also met with the regional EMS coordinator and the new national Medical Advisors. The park began to use new, national-level Patient Care Reports, in compliance with national data-collection standards.

The ranger division organized a new Volunteer Search and Rescue team. Support and interest in the team remains extremely high in the surrounding communities. Rangers provided training for the volunteers monthly, and provided organization and supervision to the unit. The volunteer unit has doubled the number of individual resources available for SAR incidents. The volunteer group has already participated in over 4 SAR incidents. The park received 10 requests for technical rescue response in 2001. All were completed successfully.

The Ranger division supported national security programs following the September 11 terrorist attacks. Rangers implemented internal security measures including building security initiatives, and an employee and visitor security pass program. Law Enforcement rangers supported security forces at both Hoover Dam, and Glen Canyon Dam on 3 different detail assignments.

The park filled 2 vacant ranger positions, including one District Ranger position. 3 Rangers were accepted into the Federal Law Enforcement Training Center, one resigned his position prior to completing the program.

High profile patrols were continued in areas where criminal activity traditionally occurs. The Rangers documented and prosecuted

26 incidents of criminal damage and vandalism, over 20 drug related incidents, and over 54 alcohol related violations.

The ranger division continued to improve the park's radio system, in accordance with the project 25 digital radio mandate. Joshua Tree is the only park in the National Park System that is in compliance with the digital radio mandate. Three additional mountain top relay sites were added to the system, allowing for handheld radio coverage in high use areas that had never before had radio coverage. This will substantially increase officer safety and public safety in some of the parks highest used areas. The Ranger division continued to support all of the mountain top repeater sites. The Park Radio Coordinator supported several other parks with technical support. The Park Radio coordinator assisted the Superintendent with the removal of a 250 foot telecommunications tower from a prominent peak within the park, ensuring that public safety requirements would not be compromised by the removal of the tower.

Visitor Understanding

High profile patrols were regularly conducted in areas with traditionally high visitor use. The park climbing ranger position was vacated in the early part of the year, however the position was recruited and re-filled by the end of the year. Educational contacts will continued to be a priority in climbing areas. Protection rangers attended weekly interpretive programs aimed at the climbing community to clarify park climbing management policies. The staff worked to increased the activity of the volunteer equestrian patrol unit to increase contacts with the area's large equestrian community. The Ranger Division assisted the interpretive division in creating and distributing a new educational flyer aimed at the equestrian community. The ranger division continues to participate in the creation of the climbing brochure that will be published in 2003. Training for park fee

collectors included training on park issues and resources, this information was provided at all park entrance stations.

Employee Safety

The staff continued to implement service-wide medical standards testing in accordance with DO-57. All protection staff had completed the medical standards testing process by the end of FY2001. All Ranger Division employees in identified arduous positions participated in a physical fitness program, including commissioned employees and fire fighters. All commissioned employees participated in physical fitness testing, using the FLETC standard test of the PEB. Over 70% of the staff increased their fitness score over preceding years.

The Ranger Division continued to administer the park safety program. One of the ranger staff serves as the park safety officer. 1,017 pounds and 177 gallons of hazardous waste generated by the park over several years was transported to recyclers. The park initiated a revision of its safety plan, 7 chapters of 40 were updated and re-written. A safety professional was hired to evaluate program and assisted the management team with establishing safety goals. A regional hazmat audit was accomplished and findings corrected. We increased our safety training courses being offered. An Executive Safety Committee was established and the members trained. The park presented a park safety presentation to approx. 300 US Marines from the nearby base. Safety equipment was purchased for confined space entry.

Visitor Use Statistics

In FY 2002, the park welcomed 1,193,046 visitors. The fee demo program collected \$1,836,025.00.