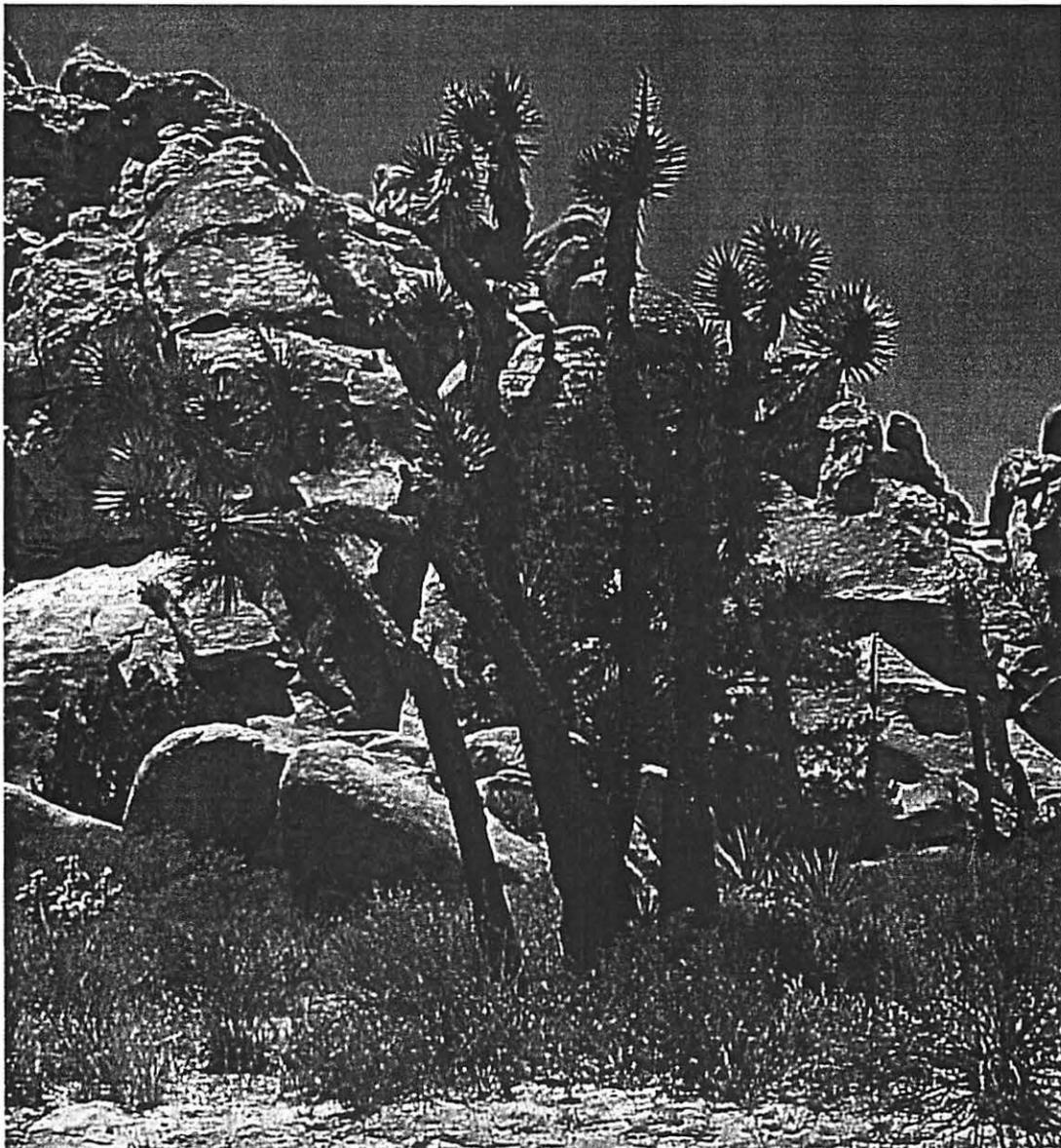


United States Department of the Interior  
National Park Service

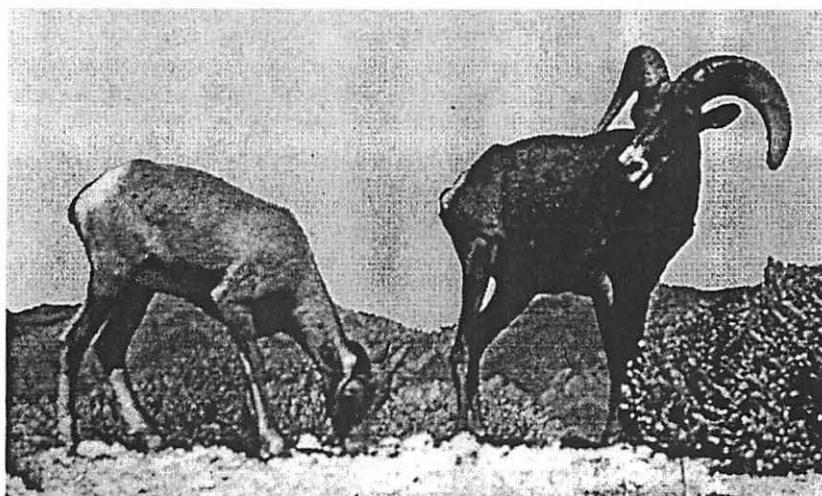


**SUPERINTENDENT'S ANNUAL REPORT  
2000**

JOTR  
Plan  
Report  
APR  
2000

**JOSHUA TREE NATIONAL PARK**

United States Department of the Interior  
National Park Service



SUPERINTENDENT'S ANNUAL  
REPORT  
2000

JOSHUA TREE NATIONAL PARK

*Ernest Quintana*

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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*** - Joshua Tree National Park completed its first backcountry and wilderness management plan, which now serves as an amendment to the park's *General Management Plan*. The final plan was printed, a Notice of Availability was posted in the *Federal Register*, and a 30-day no action period occurred. The record of decision was signed in January 2000.

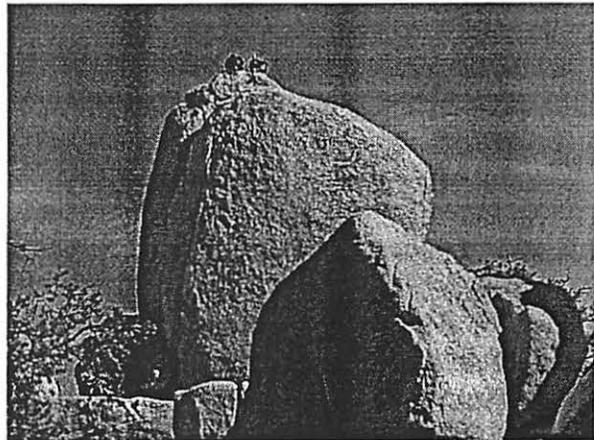
The plan:

- designated a trail system for foot, bicycle, and equestrian use;
- designated unpaved roads as either open or closed to public use;
- prescribed strategies to manage recreational climbing activities;
- determined that roadside auto camping would not be permitted;
- identified areas closed to the public either overnight, seasonally, or permanently;
- established group size limits for overnight stays in the backcountry and wilderness;
- implemented the Department of the Interior's *Desert Tortoise Recovery Plan*; and
- determined the need for a scientific analysis of the necessity of major artificial water sources in wilderness.

Since mid-winter, the park has been implementing the *Backcountry and Wilderness Management Plan*. The park created an inter-divisional Wilderness Steering Committee, comprised of a representative of each division. The Committee considers actions needed to implement the plan and makes recommendations to park management. They coordinate efforts from all park divisions to identify, distribute, and coordinate the

implementation of the plan. They are planning publications, exhibits, trail maintenance and construction, patrol activities, and closures.

Two recreation fee demonstration programs that are essential for plan implementation were approved in 2000. The Committee manages these projects. The first addresses a wide range of backcountry and wilderness issues and the second specifically funds a study to obtain baseline data about recreational climbing.



*Climbers in Hidden Valley*

The park began a wilderness suitability study to determine if 27,000 acres in the Cottonwood Mountains were appropriate for wilderness designation. An initial survey of the area was conducted and the preliminary indications are that the area should be designated wilderness. The park will move forward with the study next year.

***Proposed Eagle Mountain Landfill*** - Mine Reclamation Corporation (MRC), in partnership with Kaiser Ventures, Inc., proposes to establish a landfill of an unprecedented scale adjacent to Joshua

Tree National Park. The landfill at optimum operation would receive 20,000 tons of garbage a day transported by rail and truck from seven counties in the southern California region for the next 115 years. The project's long-term consequences would be devastating on biological communities, air quality, and wilderness values of the park.

The proposed landfill is in the abandoned Kaiser open-pit iron mine sites. These lands are a combination of private and Bureau of Land Management (BLM) holdings. The landfill will be sited less than two miles from the park's southeast boundary, surrounded on three sides by the park. An exchange of lands totaling about 3,500 acres of public lands, currently administered by the BLM, for about 2,800 acres owned by Kaiser was approved by the Department of the Interior.

The BLM served as the lead agency in preparation of an Environmental Impact Statement (EIS) in June 1992 that was approved by the Riverside County Board of Supervisors, but subsequently found inadequate by the Superior Court in 1994. In March 1995, it was determined that a new Environmental Impact Report (EIR) would be prepared to comply with the court decision. The new EIS/EIR was again found to be inadequate in February 1998 by a Superior Court judge. The Court cited that the environmental document still failed to adequately address issues and concerns about the impacts to Joshua Tree National Park and the Federally-listed threatened desert tortoise. During the 1999 fiscal year, the State Appellate Court overturned this court decision, and the California State Supreme Court refused to hear the case. This cleared the way for MRC to proceed with the landfill project.

In December 2000, Kaiser Ventures, Inc., sold the rights to the Eagle Mountain Landfill to the Los Angeles County Sanitation District. A new lawsuit brought against the landfill owners and the Department of the Interior was filed in federal court. The lawsuit contents that the Government-supported land exchange/sale was "undervalued."

The National Park Service feels this projects poses significant threats to park resources and is inappropriate next to one of the world's most pristine desert ecosystems. The National Park Service has gone on record on numerous occasions in opposition to the proposed landfill.

Research must determine baseline information about the resources that could potentially be affected by the landfill should it be approved. Once baseline information is obtained, a long-term monitoring program must be implemented. Potentially impacted resources include air quality, water resources, predators, sound pollution, light pollution, vegetation, small mammals, threatened and endangered species, deposition, invertebrates, bats, bighorn sheep, disease, exotics, and ravens.

#### ***Government Performance and Results Act***

– Congress passed the Government Performance and Results Act (GRPA) in 1993. Building upon the NPS's broad service-wide and long-term goals, the park merged the service-wide plan and Joshua Tree National Park's mission, purpose, and significance to develop the park's *Strategic Plan for 2001 to 2005*. The park developed long-term goals under the national broad goal categories of preserving park resources, providing for public enjoyment and visitor experience, and ensuring organizational effectiveness.

The park also completed the *2001 Annual Performance Plan* and the *2000 Annual Performance Report*.

**Land Acquisition Program** - Joshua Tree National Park is comprised of 792,726.06 acres. As of 1997, there were 553 parcels of non-Federal lands within the boundaries of the park. Of the parcels of non-Federal land, 48 were owned by the State of California, 1 was owned by the County of Riverside, 2 were owned by the County of San Bernardino, 23 were owned by the Metropolitan Water District of Southern California, and 479 tracts were owned by other private, non-Federal parties for a total of 57,280 acres.

Since 1997, the park and the Pacific Land Resources Program Center have completed the first phase of transfer of state lands for 12,914 acres. Level 1 surveys were completed, and the necessary documentation was submitted to BLM.

The park also provided on-site support for the Pacific Land Resources Program Center to facilitate the donation of lands from two non-profit organizations, the Nature Conservancy and the Wildlands Conservancy. We accepted a 160-acre donation from the Nature Conservancy in November 1998. The National Park Service accepted a donation of 14,236.19 acres from the Wildlands Conservancy this year. These donations are for land added to the park in 1994 in the Little San Bernardino Mountains.

The National Park Service purchased approximately 250 acres from other inholders within the old monument boundaries. By the end of 2000, almost 35,000 acres of the 57,280 acres as of 1997 had been transferred to National Park Service ownership.

**Desert Managers Group and Regional Planning** - Superintendent Quintana participated in the 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. This new concept in multi-agency management of the vast Mojave and Colorado Desert resources and public use continues to be one of the shining stars in cooperative and effective management strategies. Assistant Superintendent Risser assumed the chairmanship of the Overflights Work Group.

The park continued to participate in the three ecosystem management plans that include the park: the *Northern and Eastern Colorado Desert Coordinated Management Plan*, the *West Mojave Desert Coordinated Management Plan*, and the *Coachella Valley Multi-Species Habitat Conservation Plan*. All of these plans are multi-species habitat conservation efforts on a regional scale.

**Military Overflights** - The park completed a cooperative effort with the U.S. Navy to relocate VR-1257. VR-1257 is a one-way 590 nautical mile low altitude training route that flies over Joshua Tree National Park and ends at the training ranges in El Centro south of the park.



The path transited the northwestern and central part of the park. It passed over a major scenic roadway and the most visited portions of the park. The route overlaid seven of the nine campgrounds and six of the eight picnic areas. It also flew over the highest concentration of desert tortoise, bighorn sheep watering and lambing areas, nesting raptor sites, and 12 cultural resources.

Working together, the park and the U.S. Navy developed an environmental assessment that evaluated the environmental consequences of relocating the route. The preferred alternative moved the route to the southern portion of the park. This area receives little visitor use and has no campgrounds or picnic areas. In addition, only two historic properties would lie under the route. Few, if any, desert tortoise, no bighorn water and lambing areas, and no raptor nesting sites occur under the proposed route. The environmental assessment was released for public review and comment. Working in conjunction with Congresswoman Bono's office, the National Park Service and the U.S. Navy conducted a demonstration flight for our park neighbors to the south.

The final environmental assessment was completed and both the National Park Service and the U.S. Navy signed the finding of no significant impact (FONSI). The Federal Aviation Administration published the revised route in their December 2000 aeronautical maps, and pilots have begun to use the new route.

#### ***Adjacent Land Uses***

Developments and other land uses adjacent to the boundary threaten the integrity of the park's resources, views, and wilderness values. Surrounding land

use has changed significantly since the creation of the monument. Subdivisions, utility corridors, interstate and state highways, mining, military facilities, and agricultural interests are near or right along the boundary. The Eagle Mountain Landfill has been proposed near the southeast boundary. Concerns include impacts to the flora and fauna, trash, ground water contamination, and air quality degradation.

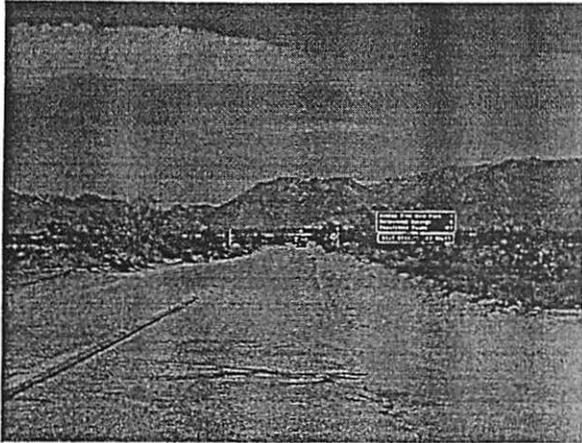
Two developments have been proposed between Wide Canyon and Deception Canyon on the park's southern boundary. The Habitat proposal consists of dividing 1,667 acres into 275 single family lots, 50 condominium style dwellings, a park site with open space and common area, and two 18-hole golf courses and related facilities between Joshua Tree National Park and the Coachella Valley Fringe-toed Lizard Preserve.

The Joshua Hills proposal is even more ambitious. It includes 10 golf courses and related facilities, a variety of residential housing styles in seven different communities, a luxury resort and conference center, vacation club units, a mixture of retail services, school, medical facilities, public safety services, public utilities, polo fields, winery and associated vineyards, and a 3,000,000 square feet of building area devoted to the development of computer and software companies and associated intellectual technologies.

Another development, Paradise Valley, is being explored between the southern park boundary and Interstate 10 near entrance of the park at Cottonwood.

These developments would intrude upon the Park scene and diminish the naturalness, solitude of wilderness, night skies, natural quiet, and ecosystem

viability. Because of these developments' location, impacts to wildlife corridors and impacts due to fragmentation of wildlife habitat, corridors, and ecosystem is troubling. The first two developments



*South Entrance – location of proposed comprehensive development*

threaten the connectivity between the park and preserve and the sustainability of the Fringe-toes lizard preserve's ecosystem. A proposal to establish a flood debris basin in the base of East Deception Canyon raises concerns for the potential impacts to upstream dry wash habitat and natural sheet flow activity.

Other effects of adjacent land use include effects from air and water pollutants, groundwater drawdown, invasion of nonnative species from adjacent land, and noisy overflights that affect wilderness solitude. The park's resources are also seriously threatened by illegal activities, such as off-road vehicle use, poaching, theft of desert vegetation and archeological resources, wood cutting, and dumping of hazardous and domestic wastes.

During 2000, the Superintendent's Office devoted a considerable amount of time reviewing and commenting upon development project proposals, attending County planning meetings, and meeting with the project proponents.

***Joshua Tree National Park Advisory Commission*** - The California Desert Protection Act of 1994, P.L. 103-433, established a 15-member Advisory Commission to advise the Secretary about the development and implementation of a new or revised comprehensive management plan for the park. The Commission held two meetings during 2000.

## *Division of Administrative Services*

During 2000, 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 2000, Joshua Tree National Park received a \$498,000 and 8 FTE increase to our base budget. This addition brings the base budget for the park to \$4,018,000 and 80 FTE (see appendix A). The initial budget plan for Joshua Tree National Park was prepared to include full costs with all positions filled. The remainder of the funds was allocated on a priority basis for other costs.

These 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 2000, the park received approximately \$2,432,000 from other sources, such as other National Park Service monies (repair/rehabilitation, cyclic maintenance), fee demonstration, National Interagency Fire Center, and special grants.

The fee demonstration program funded projects for \$725,750. Highlights

included construction of restrooms at the Cottonwood Visitor Center, vegetation mapping, desert tortoise monitoring, planning of wayside exhibits, and tours at Keys Ranch. Grants for \$9,000 provided for research of a sensitive plant species, \$31,000 funded the installation of slow and fast fill compressed natural gas stations, and moneys to present training. \$17,500 from the Youth Conservation Corps and \$45,000 from the California Conservation Corps funded youth programs.

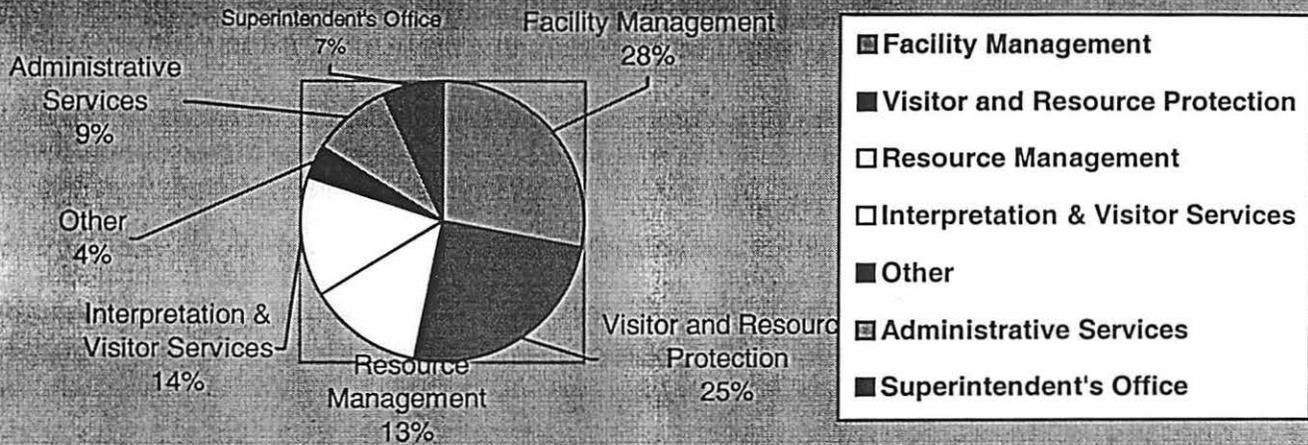
Other National Park Service funding provided more than \$1 million to essential park programs. Some of these included air quality monitoring, restoration of the Wall Street Mill, conservation efforts to remove mold from baskets in the park's museum collection, rehabilitation of Cottonwood's well and water lines, vegetation mapping, rehabilitation of exhibits at Black Rock.

Highlights of the park's budget included:

Approximately \$837,000 were related to park projects for resource preservation and management, such as the restoration of park lands disturbed by prior human activity; containment of targeted invasive plant species, and research activities associated with the Federally-threatened desert tortoise and other species of concern. Monitoring air and water quality, ensuring compliance with NPS mining regulations, and preserving archeological sites, the museum collection, and structures on the List of Classified Structures also fall under this category.

Approximately \$1,100,000 provided for maintaining park roads, utility systems,

### FY00 ONPS Budget by Divisions



trails, grounds, and facilities. A \$6 million Federal Lands Highway Program project will reconstruct 6.5 miles of road in the interior of the park.

In addition, approximately \$1,600,000 provided for visitor services, such as interpretive programs for park visitors, production of park interpretive information, and an education outreach program for region schools. It also included conducting search and rescue activities and emergency medical services, responding to requests for visitor assistance, and providing visitor contacts in campgrounds, entrance station and visitor centers.

Approximately \$190,000 provided for park management, the Advisory Commission, and administrative support for park management.

***Integrated/Interfaced Data Systems*** - In fiscal year 1998, the administration building, the visitor protection complex, the resource management complex, the cooperating association's modular building, and the Oasis Visitor Center and interpretation offices were connected to

the park's Local Area Network (LAN). During fiscal year 1999, the Black Rock Nature Center and the West Entrance Station were added to the LAN.

With the installation of a T1 point to point 128K frame relay from the Black Rock Fire Center and Park Headquarters during fiscal year 2000, eight of ten office complexes throughout Joshua Tree National Park are connected through an integrated/interfaced data system. The two remaining sites are Pinto Wye and Cottonwood.

Replacement of park 10mbs hubs to 10/100 mbs switches and the addition of battery backup for each switch has increased the overall performance of the park local area network and reduced the possibility of network damage by electrical instability.

The park identified all commercial phone lines used within the park and converted to MCI WorldCom to reduce long distance charges. Another dial in modem was added to reduce local dial in access to the Internet for remote users.

**Essential Competencies** - National competencies for maintenance and visitor protection employees are being developed by the Department. The Chief Ranger served on a task force to assist in the development of the competencies for the Visitor and Resource Protection Division.

**Performance Standards** - Almost all of the employees had their performance standards linked to strategic and annual goals. Only the road crew's performance standards need to be revised to link to goals.

**Workforce Diversity** - During fiscal year 2000, the park continued its exemplary commitment to increasing the diversity of the workforce. As of September 30, 2000, only 26 of the park's permanent positions in the targeted occupational series were encumbered rather than the 30 positions that were encumbered when the baseline numbers were determined. Of those 26 positions as of September 30, 2000, employees, who met the definition for diverse employees filled, 12 positions or 46 percent. The number of diverse employees rose by 2 over fiscal year 1999 and the percentage increased by six. So the park exceeded the percentage of positions filled by diverse employees.

The park began issuing news releases to diverse media outlets on the *Pacific West Region's Diverse Media Outlets Database* in an attempt to reach diverse audiences with information about the park and the National Park Service. We made an effort to increase the diversity of the park's seasonal fire crew by issuing a press release about our recruitment efforts to the diverse media outlets in southern California. The news release generated a great deal of interest in the positions for individuals, whom we would not have

reached through traditional recruitment methods. We also tried to recruit the assistance of an Assemblyman from southeast Los Angeles to identify potential applicants. Although the park received several applications as a result of this recruitment effort, none of the applicants qualified for the positions. We plan to continue this effort next season. The park offered the basic firefighting courses the first week of December for interested individuals.

The park participated in a number of career fairs to recruit and generate interest in the National Park Service as a career for any interested citizen, including those in underrepresented groups.

**Employee Housing** - The Housing Needs Assessment suggested that a mobile home at park headquarters be removed from the housing inventory and converted to other use. This was agreed to by the park's management team and took place in early fiscal year 1999.

The Interagency Fire Dorm at Black Rock Canyon was completed this fiscal year. Through an agreement with the Bureau of Land Management (BLM), the park provided the labor and the BLM funded the construction of a new Interagency Fire Dorm to replace an existing and condemned three bed facility. Techniques have been used to make the facility as sustainable as possible. Flooring called "Extreme Flooring," which is made from 100 percent recycled rubber tires, was installed in the exercise room. Recycled ceramic tiles were used in the audio-visual and kitchen areas.

The maintenance worker at Cottonwood was removed from the required occupancy list and converted to Category II - permitted.

**Employee Safety** - All components of the annual work plan were completed. Park records indicated that during FY00, there were six lost-time accidents. To determine the rate, we used the formula of 88.51 FTE divided by 100; multiplied by 6 for a 5.31 lost-time injury rate.

The Safety Officer from Yellowstone National Park visited the park last summer to introduce the park staff to a behavior-based safety program. The Safety Committee developed a Safety Improvement Plan, which was endorsed by the park's management team and is now being implemented.

The Division of Visitor and Resource Protection implemented medical standards testing, in accordance with DO-57. The Division of Facility Management conducted safety meetings. All maintenance employees were equipped with required safety equipment, training, and supervision essential to create an accident free work environment. The Division of Interpretation and Education also addressed safety issues during their periodic divisional meetings. Safety is completely integrated into the park's Abandoned Mineral Lands program and the nursery operation.

**Accountable Property** - The park brought the property management program up to speed. All the capitalized equipment that lacked property numbers or inclusion on the inventory were issued a number and added to the inventory. Locations of property were recorded during the annual inventory. Separate inventories were completed for computer equipment and for radios. Radios and weapons were identified in the records and engraved with property numbers. Interior-owned vehicles were added to the inventory for more efficient tracking purposes.

## ***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. 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.



*Jumbo Rocks campground*

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 Twentynine 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. A major road improvement project by the U.S. Federal Highway Administration will begin in 2001. Unpaved roads are easily washed out from erosion and the lack of human and fiscal resources.



*Geology Tour Road and Berdoo Canyon Road intersection after flash flooding*

**Visitor Satisfaction** - Based upon the Visitor Survey Cards, which were distributed to park visitors in April, the park exceeded its performance target, and 97percent of park visitors expressed their satisfaction with their park experience.

The Division of Facility Management maintained 3 visitor centers, 9 campgrounds, 75 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 provide services to employees and the public. The park-wide recycling program partnership with VFW Post 9431 in Yucca Valley continued.



*Youth Conservation Corps members*

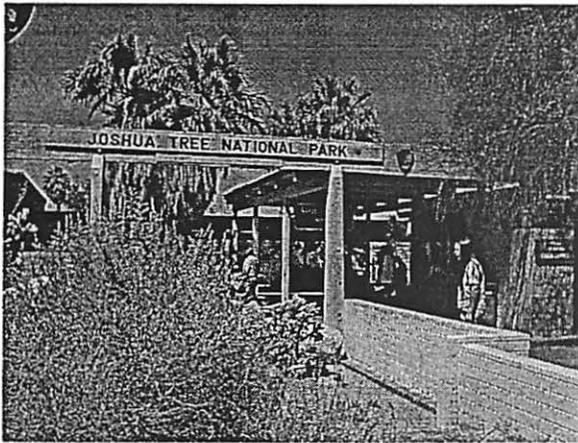
The park hosted a 15-enrollee Youth Conservation Corps (YCC) camp and partnered with Great Basin National Park and Channel Islands National Park on projects. The crew concentrated primarily on trail maintenance this season. They worked on a variety of trails in Joshua Tree, Great Basin, and Channel Island. In addition, they rehabilitated campground walkways at Great Basin. At Channel Islands' visitor use areas, they tore down old buildings and removed the debris and also conducted hazard tree maintenance.

The park initiated a 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.

Fee demonstration revenue provided the funding for a new restroom facility at the

Cottonwood Visitor Center. Construction suffered a set-back when an arsonist set the facility on fire. Rangers in the Division of Visitor and Resource Protection apprehended a suspect, who was found guilty and is currently serving time.

Other National Park Service funding rehabilitated the Black Rock parking lot and campgrounds. New fire grates and concrete picnic tables were placed in the campsites.



*Oasis of Mara Visitor Center*

Work was expected to begin to give the Oasis of Mara Visitor Center exterior a facelift. The project calls for the walkways and patio areas to be replaced, for the building to be covered with a sustain-able stucco, and exterior wood to be replaced or rehabilitated. The project was put on hold, however, until a Determination of Eligibility for nomination to the National Register of Historic Places could be conducted. The buildings were found to be not eligible and the work is expected to be completed during fiscal year 2001.

**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.

The park was awarded \$6 million for a Federal Lands Highway Program project with ground breaking scheduled to occur in fiscal year 2001. The park spent a great deal of time this year meeting with the Federal Highway Administration and Denver Service Center staff members who are involved in the project. Several on-site visits were conducted. Engineering plans and contract specifications were thoroughly reviewed, revised, and finally approved. An environmental assessment was distributed for public review and comment, and the FONSI was signed in spring.

Park management conducted meetings with local community members to discuss time and cost-cutting measures that have been incorporated in the contract. Numerous press releases have been issued to keep the public informed about the project. Fee demonstration moneys funded the purchase of three Travel Information System units to keep the travelling public informed about road conditions.



*Flash flood over the Cottonwood Road in Porcupine Wash*

The park experienced several periods of severe flooding this year. Rangers ensured public safety during the incidents. The worst flooding came at the end of August. The main north-south park road between Twentynine Palms and Cottonwood was closed for several days because of the mud, sand, and debris on the road.



*Grader clearing the Cottonwood Road*

The park's road crew worked from dawn to dusk to remove the debris and ensure that the road was safe. The unpaved backcountry, four-wheel drive roads were closed for longer periods of time. The road through Cottonwood Canyon sustained damage and emergency funding requests were submitted to the Regional Office. Visitor Use Assistants at the entrance stations provided detour and other safety information during the flooding and for several days following.

Repair/rehab moneys funded the rehabilitation of the well and water lines at Cottonwood.

## *Division of Interpretation and Education*

The Division of Interpretation and Education provided personal and non-personal interpretation of the area's natural and cultural resources to the public. It coordinated the cooperating association's activities and the environmental education, special emphasis, Volunteers-in-Parks, and Student Conservation Association programs. The division managed information services through formal interpretive programs and the operation of two visitor centers. It produced interpretive planning documents such as visitor center exhibit plans and wayside exhibit plans.

**Visitor Understanding** - Based upon the results of the Visitor Survey Cards, which were distributed to park visitors in April, the park far exceeded this goal with 98 percent of park visitors understanding and appreciating Joshua Tree National Park.

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 broke all previous records for programs offered and students served in fiscal year 2000. A part-time education seasonal was upgraded to a full-time seasonal position this year. The potential audience for our curriculum-based education services is limited only by our lack of staffing. This is a program where even modest increases in personal services dollars result in

significant increases in students reached with our resource messages. The staff offered 585 programs with 14,485 students in attendance.



*Twentynine Palms elementary school junior rangers attending a program in the nursery*

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.

The three visitor centers provided orientation and interpretive information to 233,314 visitors. Formal interpretive programs reached 13,065 people through 559 different programs, and informal interpretation reached 10,905 people. The staff presented 36 community programs with 11,599 people in attendance.

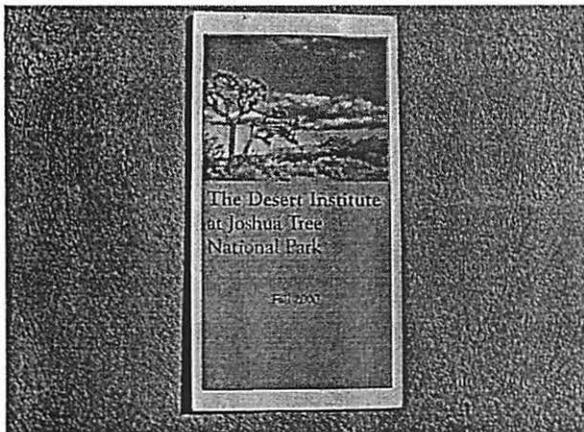
Work on Phase II of the Oasis Visitor Center is 95 percent complete. Discovery of a dermestid beetle infestation in the Visitor Center delayed completion of the project and final exhibit installation. A rehabilitation of the Black Rock Visitor Center exhibits was begun in fiscal year 2000. Planning and design was completed and exhibit production is

underway. The exhibit rehabilitation should be completed early next year.



*New exhibit at the Oasis of Mara Visitor Center*

Twenty-one new campground waysides were installed in the new covered kiosks that park maintenance crews built. A Final Project Agreement with Harpers Ferry Center was reviewed and signed. Six copies of an orientation map exhibit were produced and installed at all park entrances and at visitor centers and ranger stations, thus completing a project started several years ago. Fiscal year 2001 will see the production of a complete Wayside Exhibit Plan for the entire park with exhibit production and installation in 2002 and 2003.



*Desert Institute brochure and class schedule*

The Joshua Tree National Park Association-operated Desert Institute

completed its first full year of operation. College level courses were offered in the park during the fiscal year in conjunction with the University of California-Riverside.

The Keys Ranch Fee Tour Operation was initiated in fiscal year 1999 and continued this past year. We were able to offer 319 programs with 10,905 people attending.



*Keys Ranch tour*

The Association, with the encouragement and support of park management, agreed to assist the park in establishing a formal fundraising program, the Joshua Tree Fund. The Fund will work in partnership with Merrill Lynch of Palm Springs to raise funds for approved park projects. The Association formally adopted the park's volunteers art program, *Park Stewardship through the Arts*.

The Association donated more than \$85,000 to the National Park Service. It also completed the fabrication of visitor center lobby displays and fixtures that was initiated in fiscal year 1999. The Association funded a part-time librarian position for the park 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 assisted the Desert Mangers Group with the

support of a student logo design project undertaken by the Art Center College of Design in Pasadena, California. The Association increased its support of the park's seasonal training program. All this was accomplished in a year when both visitation and Association sales revenue declined.

Park staff assisted the Desert Mangers Group (DMG) on a number of different projects in 2000. The Chief of Interpretation served as the Chair of a DMG task group charged to oversee the Desert Managers' public information website: [www.californiadesert.gov](http://www.californiadesert.gov). The work group developed an on-line magazine for the website. A park employee serves as the webmaster and assisted with the site design and editing as well as the coding for posting the site on-line.

The Division coordinated the park's Volunteers in Parks Program. During 2000, volunteers contributed 18,050 volunteer hours to Joshua Tree National Park.



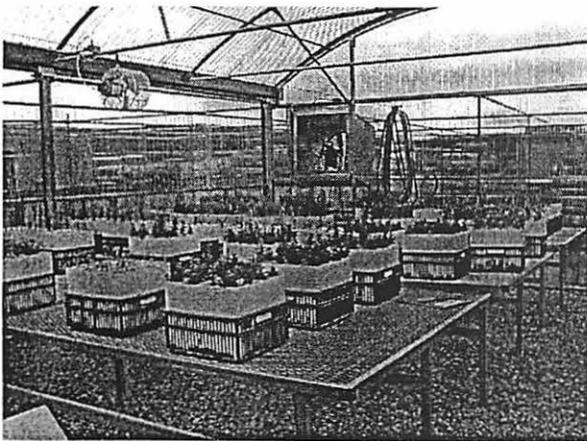
*Visitors using self-guided trail signs*

Non-personal services, such as museum exhibits, waysides, trail signs, publications, the park Web site, and information handouts communicated the purpose and significance of the park to the public. Community outreach and media programs reached large audiences with specific messages related to the role the park plays in the preservation of the nation's natural and cultural heritage.

## *Division of Resources Management*

The Division of Resources Management administered the park's science program, including reviewing and issuing scientific collecting permits for all research in the park. The division managed 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 managed the cultural resource programs, including historic preservation, archeological projects, Section 106 compliance, Native American consultation, the collection's facility, and a research library.

***Disturbed Lands*** - Last year, a fee demonstration project upgraded the Joshua Tree National Park Center for Arid Lands Restoration. The project expanded the nursery facility and constructed a new greenhouse with adequate environmental controls.



*Center for Arid Lands Restoration*

The Center for Arid Lands Restoration nursery facility continued to work with Fort Irwin National Training Center to

propagate 4800 plants for arid lands projects on the army base. Mojave National Preserve was unable to pick up the 1400 creosote plants grown in FY99, and the nursery maintains these plants until ready for delivery. In addition, Death Valley National Park ordered 500 plants in September 2000; 140 have been started.

Due to the nursery's unique product and desert-adapted methods, the nursery has become an important source of plant materials for other National Park Service units, agencies, and organizations.



*Salvaging a pencil cactus*

The park began to salvage plant material that will be affected by the Federal Lands Highway Program, road package JOTR 173. The park staff identified more than 2,250 plants as being affected by this project, and each plant was documented and tagged.

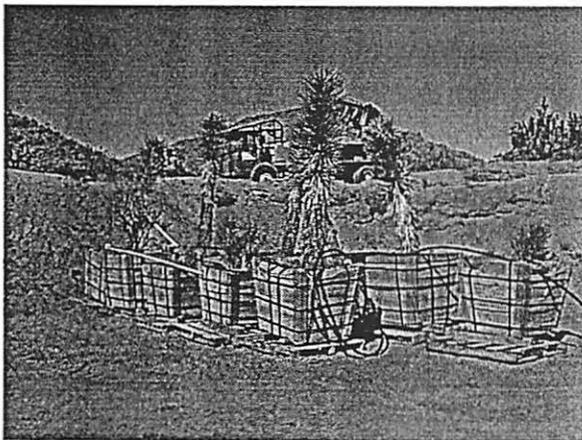
The National Park Service completed the Environmental Assessment and FONSI for this project in May 2000. Starting in May, a vegetation crew was hired to begin in-house plant salvage. Salvage included the following: soil crust removal and storage, bunchgrass harvesting and potting, cactus potting, and boxing of medium

sized material. By September 30, 2000, 100 percent of the plant tagging was complete, and 25 percent of the in-house plant salvage had been done. The park contracted with a private company with a large tree spade to transplant more than 365 large Joshua trees and other species.



*Boxing a Joshua tree*

The park established a large staging area at the Sheep Pass Borrow Pit to hold 170 boxed trees, salvaged cacti and yucca, and a 1200-gallon watering tank. More than 100 volunteer hours contributed to this project.



*Salvaged plants at Sheep Pass*

The park staff closed the primitive Rockhouse Canyon Road during the fiscal year. Seven miles of backcountry road that leads to federally designated wilderness were restored to a natural

condition. The nursery grew more than 500 plants for this project. Seventy-six plants were used to rehabilitate the hill climb area. This illegal off-road vehicle area was closed using fencing and gates. The park will continue to rehabilitate other small sections of this road with remaining plant material in October 2000.

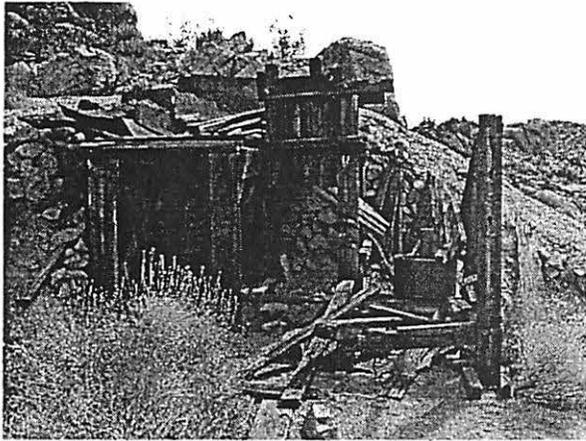
During fiscal year 2000, the park completed production of a GIS layer of the closed roads in the park. This coverage provides baseline data needed to assess, prioritize, and prescribe treatment for close roads within the park. This information will be extremely useful when implementing the *Backcountry and Wilderness Management Plan*.

**Abandoned Mines** - Several park divisions worked together to completely reclaim three abandoned mine sites: Crown Prince, #133, and Gold Point. Prior to restoration, compliance review was completed, which included a survey for bats. Plant material was salvaged prior to the restoration operation and was used to revegetate the area.

Planning and compliance was initiated and completed on several abandoned mine sites. Four assessments of effect (XXX) were completed for the Hexahedron, Gold Coin, 103 south, and My Mine mines. The park hosted a site visit by the State Historic Preservation Officer (SHPO) to review the use of polyurethane foam to make the mine shafts safe. SHPO agreed with the park's position that the use of the foam would have no effect upon the sites. The park initiated environmental compliance for the Elton, Hexahedron, 103 South, Contact, Pinyon Group mines.

Determinations of eligibility were initiated for the Elton, Gold Point, Gold Fields of

American, 4 Aces, #203, and #283 mines.



Adit

**Exotic Species** - The exotic tree species *Tamarix* continued to receive attention throughout the park. Approximately 100 acres were monitored for this exotic plant. Several stems were treated at Buzzard Spring, and field inspections at Victory Palms showed the area to be clean of weeds. *Tamarix* found was mapped, eradicated, and logged into the database. The park continues to have resprouts and new seedlings that require annual monitoring and treatment.



Tamarix

Last year, the park completed a survey of 49 Palms Canyon for the presence of the exotic weed, fountaingrass (*Pennisetum setaceum*). We were unable to treat the

fountaingrass this year, but made arrangements with Lake Mead National Recreation Area's Exotic Plan Eradication Team to treat the 49 Palms Canyon area in spring 2001.

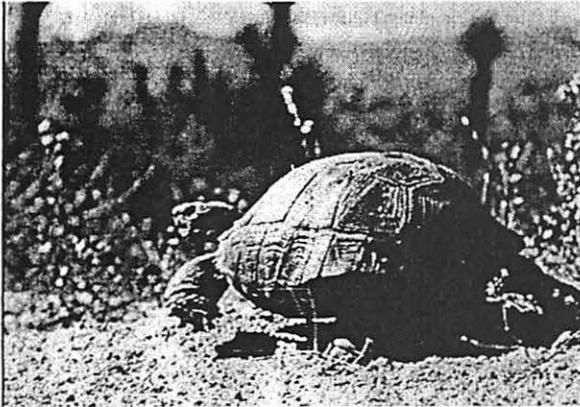
The Park continues to work with the California Native Plant Society to develop strategies to address Moroccan mustard (*Brassica tournifortii*) and eradicate in priority areas, notably the Pinto Dunes. Even after heavy summer rainfall, the dunes are clear of mustard. The park continues to develop partnerships to assist with our exotic plant problems and to procure project funds to manage weedy species.

Funding provided through the Burned Area Emergency Rehabilitation (BAER) Plan resulted in the installation of 44 long-term photo-monitoring plots within the Juniper Fire Complex burn. These plots will provide information on exotic annual plant reinvasion; 220 slide photos are stored with the Resources Division. It is believed that non-native annual grasses are responsible for accelerated fire regimes in the Mojave Desert.

**Threatened Species** - The park completed the third year of baseline data required by the U.S. Fish and Wildlife Service (USFWS) to determine population trends. During 2000, the park monitored distance sampling transects for desert tortoises. The 62 distance sampling transects, established in 1998, were established using PLGR GPS units. These transects met the Desert Tortoise Management Oversight Group approved methods distance sampling under Drs. Anderson and Burnham's review (1977). Student Conservation Association (SCA) crews along with park staff and volunteers participated in the fieldwork for 2000. Twenty desert tortoises were radio-

tracked and monitored during the field season, and their movements mapped.

The park staff completed additional surveying within the areas associated



*Desert tortoise*

with the park's new road alignment project to begin in fiscal year 2001. Areas of concern adjacent to the road project have been and will continue to be monitored for desert tortoise activity. The park completed all of the USFWS clearance surveys. Joshua Tree National Park staff and the USFWS worked together to develop the proper mitigation measures to be taken once the construction begins. Park staff prepared for the upcoming road project by purchasing equipment and undergoing the proper training.

As a result of the funding provided by the BAER Plan, 45 transects were established within the burned and suppression areas of the Juniper Complex Fire that occurred in 1999. All 45 transects were surveyed using the USFWS approved distance sampling methods. The results were recorded and mapped. A final report was submitted to the National Park Service's Pacific West Regional Office. This project was fully completed during the year.

**Air Quality** - Division of Resources Management managed and maintained the continuous ozone and meteorology station at the Black Rock Campground, three existing passive ozone monitors, and three new passive ozone monitors. 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 installed 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.

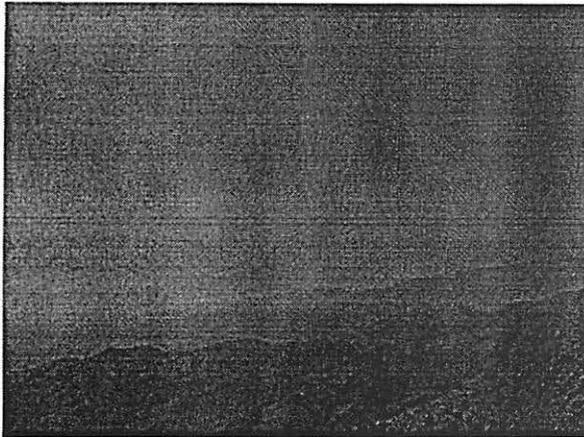
The wilderness area of Joshua Tree National Park was designated as a Class I airshed by the Clean Air Act amendments (CAA) of 1977. Under the CAA amendments of 1990, any addition to a Class I wilderness is also made part of the Class I area. This classification allows the least incremental increases 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 "nonattainment," 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. At their March meeting, the CARB



*View from Keys View on a "good" day*

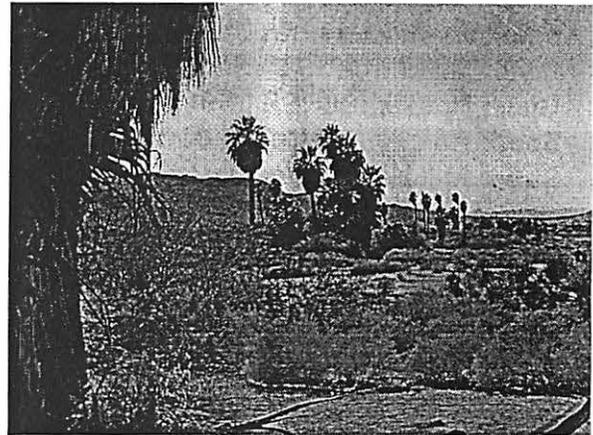


*View from Keys View on other days*

rejected the petition of the National Park Service. Only a narrow strip of the park in San Bernardino County between the west boundary and Twentynine Palms is classified as "nonattainment." The majority of the park remains "unclassified." The CARB must now present their recommendations to the Environmental Protection Agency (EPA). The National Park Service is preparing information to present to the EPA that refutes CARB's recommendation.

**Water Quality** - The park continued to participate in community outreach, attending the water board meetings, and

interfacing with water board executives regarding water quality and quantity protection. The park identified 30 water sources to be resurveyed next year to compare to the 1998 baseline report.



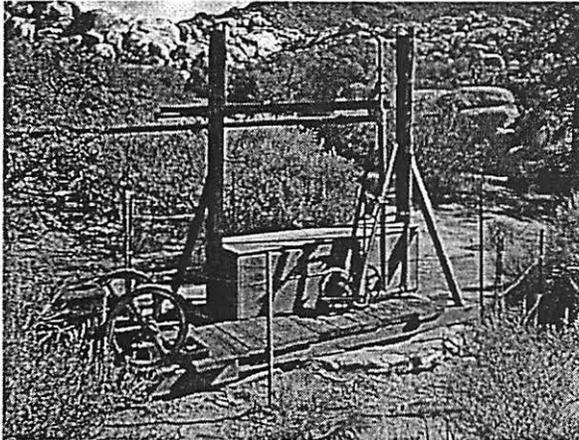
*Oasis of Mara*

Water remains a precious resource in desert areas. The Metropolitan Water District, which provides the water from the Colorado River for Los Angeles, has proposed various water storage projects in which water would be stored in the aquifer for later retrieval. One, to the northeast of the park in the Cadiz area, has become very controversial and a second EIS/EIR has been released for public review and comment. Joshua Tree National Park is coordinating comments with Mojave National Preserve, the Water Resources Division, and the Air Resources Division. Another project directly to the south of the park in the Hayfields area also proposes storing aqueduct water in the aquifer for later retrieval.

Water use and the condition has become a high profile issue in the Coachella Valley. To the north of the park, the Joshua Basin Water District has proposed various studies to determine the health of its aquifer.

**List of Classified Structures** - We now maintain 8.4 percent (7 out of 83) of the

historic structures in good condition. The following listed structures are now in good condition as reflected in the LCS database: IDLCS 56330 Keys Ranch Cave Shelter, IDLCS 05591 Keys Ranch Windmill, IDLCS 55032 Wall Street Mill boundary markers, IDLCS 05577 Keys Ranch Shed, IDLCS 05583 Keys Ranch Guest House, IDLCS 05592 Keys Ranch South House, and IDLCS 05602 Wall Street Mill Well.

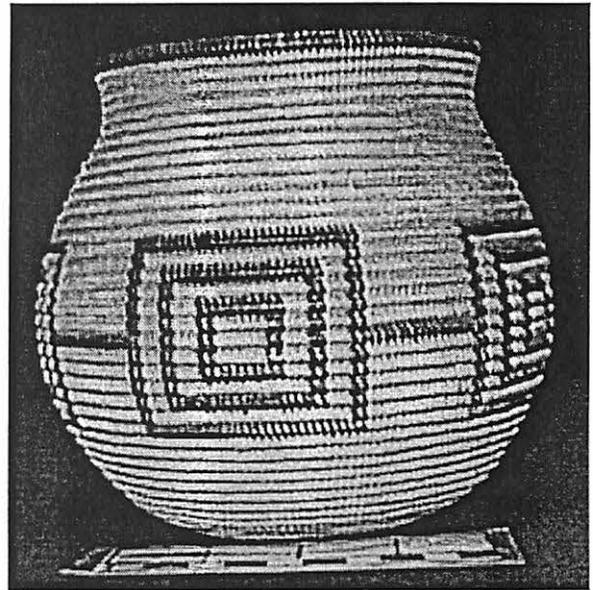


*Wall Street Mill Well*

During fiscal year 2000, the park received \$40,000 in cultural cyclic funding to stabilize the Wall Street Mill Well in good condition. The stabilization of the platform also corrected a safety concern that the open well shaft presented.

**Museum Collection** - The park monitored and maintained 78 percent (204 out of 263) of professional preservation and protection conditions in the park museum collections. The museum technician's position was encumbered throughout the year and routine maintenance activities were performed. The housekeeping list and various reports were updated, normal curatorial tasks were resumed, and organization and computerization occurred. The technician also conducted a job hazard analysis.

In addition to the routine maintenance, a considerable amount of time was spent reconciling the physical location of objects and their location in the ANCS database and museum collection book.



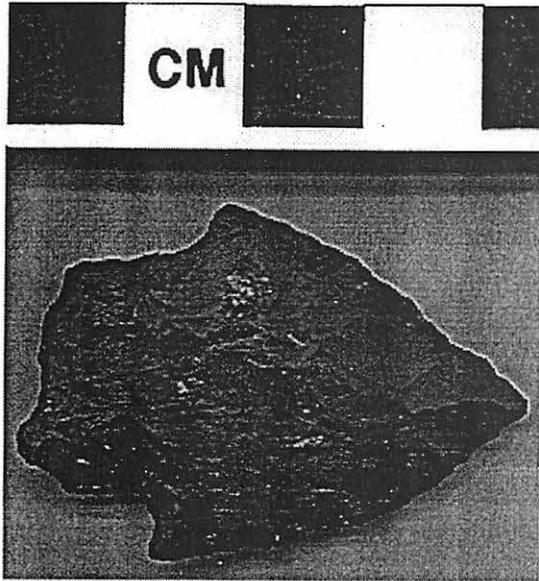
*Chemehuevi basket*

The park received \$17,000 to address a problem with mold on some of the collection's baskets. In addition, a conservator from the Western Archeological Center visited the park to examine the ollas in the collection. Discoloration and flaking were occurring due to the amount of salt in the clay used by make the ollas. The park is considering various treatment options.

**Archeological Sites** - 11 archeological sites are listed in good condition: 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, and CA-SBR-7181.

The park reviewed site records and made visits to the sites to verify that the sites were in good condition. An attempt is being made at the national level to redefine "good condition" of archeological

sites for the purposes of GPRA reporting.



*Projectile point*

**Eagle Mountain Landfill** - 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. This year two preliminary baseline studies for insects and ravens related to the Eagle Mountain landfill were also completed.

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 month by month changes in information relating to whether or not the landfill will be constructed.

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

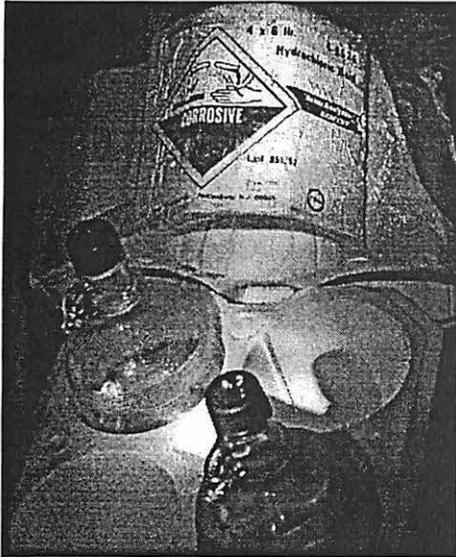
not be maintained in the long-term. Thus, a decision was made to, at a minimum, organize a consortium of experts in their fields to develop a more detailed impacts monitoring plan and to evaluate certain key resource issues. This funding was transferred to the U.S. Geological Survey Biological Resources 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.

**Mining Management** - All mining claims complied with NPS regulations. Several of the mining claimants dropped their claims during the fiscal year. Initially, there had been 60 claims. In 1999, the number dropped to 33, and by the end of 2000, only one unpatented claim remained in the park.

The park did two validity examinations during the year. A patented claimant approached the park about possible acquisition of the claim, and the National Park Service is exploring various acquisition possibilities.

The park began a process to address hazardous materials and explosives found at a claim that was acquired through the California Desert Protection Act in 1994, the El Sid mine in the Coxcombs. Because the El Sid lies within wilderness, the park is determining the minimum requirements to access the site, make it safe, and dispose of the hazardous materials.



Materials found at the El Sid mine

Species of Concern - Currently, the status of 4 out of 26 populations is known. The ample spring rains of 1998 brought out an abundance of the tiny Little San Bernardino gilia, or pink-spotted gilia, *Gilia maculata*, at all sites. The foxtail cactus, *Escobaria vivipera* var. *alversonii*, found throughout the park, also appeared stable. The golden eagle, *Aquila chrysaetos*, and the prairie falcon, *Falco mexicanus*, were present; nesting pairs had established territories. These populations appeared stable.



*Monardella robisonii* near Live Oak

In October 2000, the park began intensive surveys and herbarium work with *Monardella robisonii*. In 1999, the park was awarded a \$9000 National Fish & Wildlife Foundation Native Plants Conservation Initiative (RPF) grant to map the distribution of this rare mint. This grant is a collaborative effort with the California Native Plant Society (CNPS). Results of this work to date include relocation of 8 historic populations and the discovery of 15 unrecorded populations. All populations have been mapped and specimens collected for herbarium analysis. UC Riverside herbarium specialists will be confirming specimen identification in coordination with the CNPS botanist. This data will be used to develop a habitat model for *M. robisonii*.

During the year, the park studied 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. Information collected from the Black Rock Fire was analyzed with new data acquired from the Juniper Complex Fire. 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, park staff sampled 1000 Joshua trees for long-term effects from fire scorch and fire rehabilitation efforts. Five hundred of these trees are within the Juniper Fire Complex, and 500 are in adjacent unburned areas of similar vegetation. These trees will be monitored over the next few years for survivability and growth with the assistance of the USGS Biological Resources Division.

Concurrent with these two projects, park staff compiled historic fire data including a Joshua tree monitoring project started

after the Black Rock Prescribed Fire in 1993. A final report was assembled and is available from the Resources Division.

**GIS** - During 2000, 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.

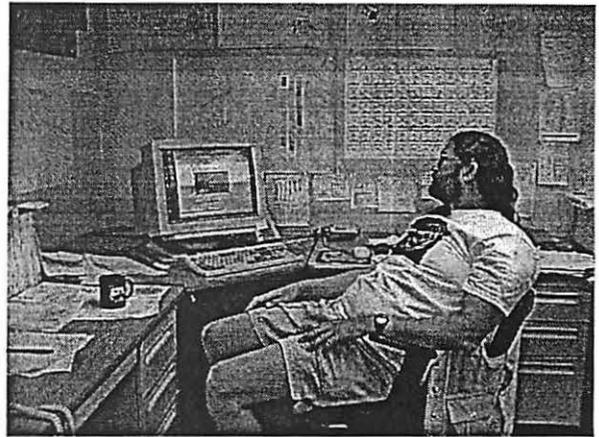
The GIS Specialist produced a series of maps for the environmental assessment that evaluated potential impacts of relocating VR-1257, the low-level military training route that overflies the park. He also calculated the exact location of the new turnpoints and provided detailed maps of these sites.

Other projects that the GIS lab undertook 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*. He produced maps for the climbing and the trails components of the plan.

The GIS lab was also actively involved in the Federal Lands Highway Program project in the park. He produced maps for the planning documents, tortoise monitoring and vegetation transplant and salvage operations.

Other program support included tortoise distance sampling, the BAER funded tortoise monitoring in the burned and

suppression areas of the Juniper Complex fire, and fire planning.



GIS lab

New data was developed and included digitized new roads theme, digitized place name theme, digitized revised park boundary, and digitized ownership maps. The conversation from UNIX to NT was begun, as was the upgrade to ArcInfo 8. GIS computers and the network connection were upgraded and maintained.

**Cultural Landscapes** – The final Level 2 Cultural Landscape Inventory for Keys' Ranch, Barker Dam, and Cow Camp has been completed. The report has a parent landscape (the greater Keys Ranch) and three component landscapes (the ranch proper, Cow Camp, and Barker Dam). The report will consolidate the four reports into one volume. A Cultural Landscape Inventory team from the Pacific Great Basin Support Office completed this work, and the scope was more extensive than initially thought.

Funds have been approved for a Level 2 Cultural Landscape Inventory for the Oasis of Mara, but the work has been delayed. The delay was caused by the requirement to complete a Determination of Eligibility to the National Register of Historic Plans for the Mission 66 Visitor

Center. Until the eligibility is determined, the landscape study cannot be done efficiently.

***List of Classified Structures*** - Five new entries were added to the List of Classified Structures in 1999: IDLCS 56010 Keys Ranch Boundary Fences, IDLCS 56043 Keys Ranch Chilean Mill Ruin, IDLCS 56044 Keys Ranch 5-Stamp Mill Ruin, IDLCS 56047 Keys Ranch Roads and Trails, and IDLCS 56049 Keys Ranch Irrigation System. This year IDLCS 05602, the Wall Street Mill Well, was stabilized. A request was made to the Regional Office to update the condition of this structure to good on the List of Classified Structures.

***Museum Collections Cataloging*** - The ANCS+ database has been increased by 631 cataloged items, from 116,705 to 117,336. An entomology collection (Accession #719) consisting of 560 items was entered into the database this year. It was expected that Accession #692, consisting of 1,130 items from six tested sites along the Hidden Valley highway corridor, would also be entered this year. The work has been contracted for over a year. This archeological collection, however, is still at WACC as researchers needed it as a comparative sample for the later highway excavation project.

***Africanized Bees*** - Africanized honey bees made their presence in the park known. In June they swarmed around four climbers. One of the climbers sustained a broken leg during his race to get back to their vehicle. One climber was stung several hundred times, another was stung approximately 100 times, and the other two were stung about 50 times each. The park worked with the San Bernardino Vector Control to determine that the bees were Africanized. Press releases and

notices on park bulletin boards and visitor centers were issued, and the incident attracted a great deal of local and regional press attention.

## ***Division of Visitor and Resource 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*** - The Visitor and Resource Protection Division coordinated a major park clean-up on the new park lands added to the park in 1994 to reclaim a fragile desert canyon system. More than 20 miles of roads were closed and partially reclaimed. The operation included the installation of three gates and large boulders to block access points in four remote locations. The clean-up involved all park divisions and was supported by more than 60 employees. Rangers spent more than 30 hours in coordination and preparation of the event. The closure will ensure that a large area of pristine desert canyon will remain.

The Visitor and Resource Protection Division continued to conduct horse patrol operations to support resource and social trail monitoring. Rangers averaged over 20 hours monthly during the park's peak season and patrolled impacted areas on horseback. In 2000, a second horse

and a horse trailer were added to the program to increase coverage and visibility. This allowed the horse patrol program to provide a ranger presence in areas that were previously unreachable.



*Unauthorized access to boundary*

Rangers detected, gathered evidence on, and prosecuted 83 incidents of vehicle trespass on park resources and exceeded our goal of 16 hours weekly in coverage of high-risk boundary areas. Rangers detected and mitigated significant boundary trespasses in the Whispering Pines, Long Canyon, Fan Hill Canyon, and Gold Park areas of the park.

***Threatened Species*** - The Division of Visitor and Resource Protection continued to monitor critical desert tortoise habitat for off-road vehicular traffic and for any incidents of taking or handling. Rangers conducted patrol operations that targeted wildlife violations. Three incidents involving the threatened desert tortoise were investigated, and one resulted in a successful prosecution. Rangers detected, gathered evidence on, and prosecuted more than 83 incidents of off-road vehicle violations. Rangers routinely reported sightings of the desert tortoise to park resource management personnel.

**Archeological Sites** - The Division of Visitor and Resource Protection inspected known archeological sites for vandalism and damage. The information on site conditions was forwarded to the resource management staff. Hundreds of known archeological sites were monitored. More than 10 incidents of damage to archeological resources were documented.

**Visitor Satisfaction** – Based upon the Visitor Survey Cards, which were distributed to park visitors in April, the park exceeded its performance target, and 97 percent of park visitors expressed their satisfaction with their park experience.

Since mid-winter, the park has been implementing the *Backcountry and Wilderness Management Plan*. The park created an inter-divisional Wilderness Steering Committee, comprised of a representative of each division. The Cottonwood District Ranger serves as the Committee chair. The Committee considers actions needed to implement the plan and makes recommendations to park management. They coordinate efforts from all park divisions to identify, distribute, and coordinate the implementation of the plan. They are planning publications, exhibits, trail maintenance and construction, patrol activities, and closures.

The park actually began to obtain baseline information to gauge the 1998 impacts of climbing. Initial surveys focused on determining the amount of land effected by social trails, identifying flora and fauna that live in the vertical ecosystems, and determining to what extent permanent fixed anchors are used in the developed zone and backcountry transition and wilderness subzones. The fee

demonstration project continues the study and is based on stratified sampling methodology that will be used to approximate the number of bolted routes that are present within Joshua Tree National Park.



*Climbers in Hidden Valley*

During fiscal year 2000, the Visitor and Resource Protection Division provided high visibility patrols in all park campgrounds, picnic areas, and public areas daily. They addressed 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.

Park rangers responded to assistance calls initiated from an experimental phone in the Hidden Valley Campground or county dispatch center after hours. They responded to more than 700 incidents in 2000.

In 2000, the park hired a climbing/wilderness ranger to increase patrols in popular climbing areas during peak season months of March and April. The Visitor and Resource Protection staff increased climber contacts through outreach, attendance at morning climbing-based interpretive programs, and increased

presence in climbing areas by an estimated 15 percent over the previous year.

Several issues were identified through monitoring of the special park uses program. The staff worked with the users to resolve problems and prevent impacts to park resources. Annual commercial use reports were collected by the required deadline and all user files were updated and now contain current information. All road-based tours that operated in the park were notified about national and park policies. Approximately 60 percent are now in full compliance, and work continues to bring the remainder into compliance.

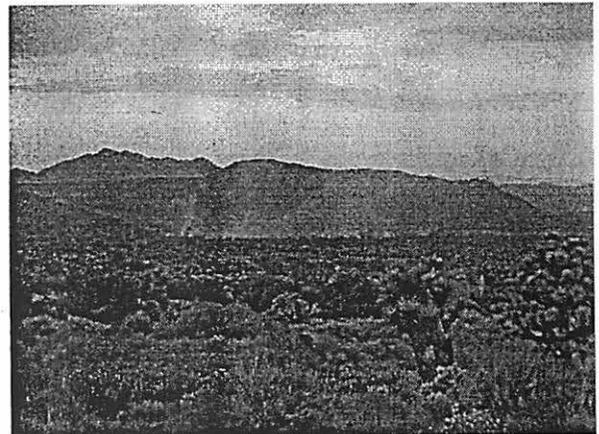


Film set at Split Rock

Staff administered the park's Incidental Business Permit program and Special Park Uses program. Fifty-eight incidental business permits were maintained, and over than 110 special park uses permits were issued. Permits ranged from small family weddings to major multi-day commercial filming projects. The park staff provided monitoring of events as needed to ensure that park resources were not impaired. The Division of Visitor and Resource Protection also worked with the Inland Empire Film Commission to put the park's film application and location photographs on their website.

The park fully staffed two family campgrounds and three group campgrounds on the Service-wide reservation system. The ranger division continued to administer the fee demonstration program and the park fee collection operation that allows for infrastructure improvements. The program was administered in a manner that optimized coverage during peak visitor seasons and resulted in increased revenues despite a decrease in visitation.

**Visitor Safety** - In 2000, fire apparatus were maintained so a minimal amount of out-of-service time was experienced. A full staff of wild-land firefighters were employed through-out the fire season and responded to incidents in and around the park. Wild-land fires within the park were quickly extinguished. No significant acreage was lost to fire in Joshua Tree National Park in 2000. The park provided support to national fire fighting efforts and supplied fire engines, overhead personnel, and technical support, as needed.

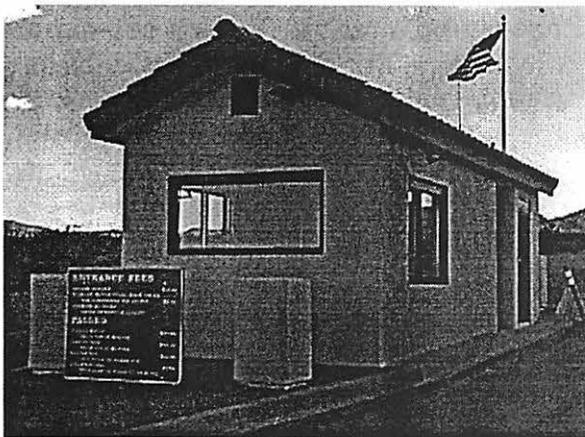


Three older patrol vehicles were rotated out, and new ones were outfitted for emergency response. All case reports were entered in the CIRS case incident reporting system. The ranger division added three network computers to

increase the opportunities to input incident data.

Rangers cultivated relationships with the U.S. Attorney's office, the California Highway Patrol, the San Bernardino County Coroner's office, the U.S. Marine Corps, and the Riverside and San Bernardino County Sheriff's Office. Many incidents were worked cooperatively based on improved relationships with surrounding agencies.

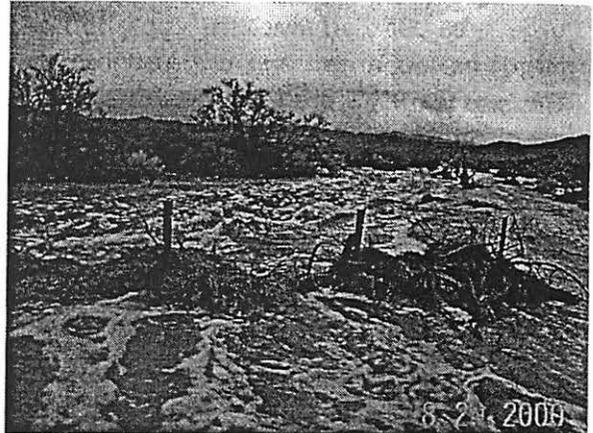
Rangers maintained high profile road patrols, and conducted traffic enforcement aimed at reducing the number of motor vehicle accidents. Rangers issued almost 240 traffic citations and investigated more than 20 motor vehicle accidents in 2000. Rangers responded to more than 40 requests for emergency medical services and 14 requests for rescues. The park incurred only one fatality, down by two from the previous year.



*North Entrance Station funded through Fee Demo program*

Visitor use assistants at the entrance stations provided much first-line safety information this past year. Fire brochures were handed out again this year. During the Memorial Day weekend, "Buckle Up for Safety" flyers and stickers were handed out to motorists, especially

targeting visitors with children.



*Flash flood over the Cottonwood Road in Porcupine Wash*

The park experienced several periods of severe flooding this year. Rangers ensured public safety during the incidents. The worst flooding came at the end of August. The main north-south park road between Twentynine Palms and Cottonwood was closed for several days because of the mud, sand, and debris on the road.



*Grader clearing the Cottonwood Road*

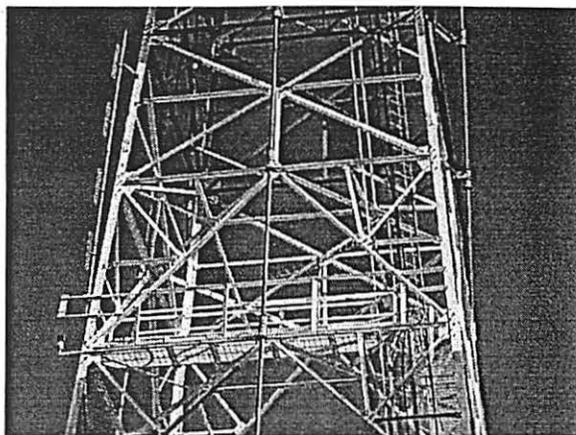
The park's road crew worked from dawn to dusk to remove the debris and ensure that the road was safe. The unpaved backcountry, four-wheel drive roads were closed for longer periods of time. The road through Cottonwood Canyon sustained damage and emergency funding requests were submitted to the Regional

Office. Visitor Use Assistants at the entrance stations provided detour and other safety information during the flooding and for several days following.

The Ranger Division finalized a General Agreement with the Emergency Physicians Medical Group of Southern Nevada to provide a medical director for the park. A separate General Agreement was initiated with University Medical Center in Las Vegas to provide a training hospital and a base station. As part of an inter-park cooperative Emergency Medical Service (EMS) unit, a consensus was reached regarding the format and content for EMS protocols to be applied desert-wide. Joshua Tree National Park staff served as the lead in the formulation and writing of the protocols.

Rangers sponsored an Emergency Medical Technician (EMT) refresher, which drew participants from seven different parks and the Bureau of Land Management. Sufficient additional training was provided to allow all ranger EMT's to maintain their certification. Cardiopulmonary resuscitation was taught to more than 30 people in all park divisions. Several life saving equipment items were added to the park's EMS inventory, including a full body vacuum splint that greatly aided rescue efforts on one major incident so far.

The park's antiquated radio system was maintained, and dispatch operations in the Federal Communication Center (FICC) in San Bernardino were supported. Staff continues to work with the NPS radio coordinator on the conversion to narrow-band. The park radio coordinator has satellite radio-phone units for the protection and fire staff.



*NPS antennas on Belle Mountain tower*

Rangers exceeded annual requirements for Law Enforcement training in 2000. attended workshops to receive information on the latest technology. The park acquired funding to purchase Park personnel sponsored and participated in two advanced law enforcement classes in San Luis Obispo. Additionally, rangers received advanced training in horse-mounted patrol techniques, advanced interviewing, motor vehicle accident investigation, verbal judo, and environmental crime investigation. Tactical shooting and simunitions training programs were also attended.

The Division of Visitor and Resource Protection maintained high profile patrols in areas where criminal activity traditionally occurs. The rangers documented and prosecuted 25 incidents of criminal damage and vandalism, almost 209 drug-related incidents, and 27 alcohol-related violations.

**Visitor Understanding** - Based upon the results of the Visitor Survey Cards, which were distributed to park visitors in April, the park far exceeded this goal with 98 percent of park visitors understanding and appreciating Joshua Tree National Park. High profile patrols were regularly conducted in areas with traditionally high visitor use. Educational contacts were

increased in climbing areas with the addition of a short-term climbing ranger in the park months of March and April. Protection rangers attended weekly interpretive programs aimed at the climbing community to clarify park climbing management policies. The division increased the activity of the volunteer equestrian patrol unit to increase contacts with the area's large equestrian community. Permanent climbing and backcountry trails ranger positions could not be filled in 2000, but should be filled in 2001. Training for park fee collectors included training about park issues and resources. This type of information was also provided at all park entrance stations.

***Employee Safety*** - The Division of Visitor and Resource Protection implemented medical standards testing in 2000, in accordance with DO-57. All required protection staff will be tested by the end of 2000. All division employees in identified arduous positions, including commissioned employees and fire fighters, participated in a physical fitness program. More than 70 percent of the staff increased their fitness score over preceding years. The division obtained surplus fitness equipment from local military resources and furnished an exercise room in the new Black Rock Interagency Fire Center.