

SUPERINTENDENT'S ANNUAL REPORT
ZION NATIONAL PARK

ADMINISTRATION AND MANAGEMENT

During 1981, 1,405,205 visitors toured Zion National Park. This established a new all-time high travel figure for the park and represented a 12 percent increase over 1980. Campground use for 1981 totaled 207,731 campers, an increase of 8 percent compared with 1980. Backcountry camping increased 27 percent over last year (to 15,406 people). Tour buses continue to increase, this year delivering a record 35,926 passengers to the visitor center alone--an increase of over 21 percent from 1980. A record of 19 buses for one day was set on June 23. International visitors continue to represent just under 20 percent of the total annual visitation.

Superintendent John O. Lancaster accepted a transfer to Glen Canyon National Recreation Area in May. Superintendent Clay Alderson of Cedar Breaks National Monument and Chief Park Ranger Malcolm Nicholson served, respectively, as Acting Superintendent until the arrival of Harold L. (Harry) Grafe from Rocky Mountain National Park. He accepted the position in October.

Zion had the following special visitors during the year:

Ms. Dianne Thorniley, Park and Forest Assistants Program Director,
Student Conservation Association

Ms. Carolyn Tettigrew, New South Wales, Australia

Mr. Graeme Ayres, Park Ranger, Mount Cook National Park, New Zealand

Mr. Reese Stein and Mr. Mark Eubank, Channel 2/KUTV, Salt Lake City

Mr. James V. Murfin, Cooperating Associations Coordinator, WASO

Soviet botanists:

Dr. Alexi K. Skvortsov, Academy of Sciences U.S.S.R., Moscow

Dr. Isa Baitulin, Academy of Sciences-Kazakhstan, Alma-Ata

Mr. Igor Smirnoff, Academy of Sciences, U.S.S.R., Moscow

Dr. Thomas Elias, Assistant Director, Cary Arboretum of the New York
Botanical Gardens

Ms. Lora Finnegan, Assistant Travel Editor, Sunset Magazine

Congressman Kazen, Texas, and his wife accompanied by his cousin and
her husband

Mr. Mike Scott, Southwest Regional Representative, The Wilderness Society

Group of 17 Bavarian state government officials, Federal Republic of Germany (West Germany)

Mr. Robert Unger, National Reporter, Kansas City Times

Mr. Russell D. Butcher, Southwest Regional Representative, National Parks and Conservation Association

Development Concept Plan

In 1980, an environmental assessment addressed five alternatives for a draft Development Concept Plan for Zion Canyon. This resulted in a Record of Decision and Finding of No Significant Impact in May of 1981. The decision was to allow overnight lodging to remain in the canyon and to look at an expanded voluntary transportation system to ease the congestion of vehicular traffic in the park. The public will be asked to comment on the selected alternative in the early spring of 1982.

Springdale Domestic Water

Mr. Robert J. Mitchell was hired by the Regional Lands Division to conduct a water appraisal on the water rights inside the park held by the town of Springdale. Mr. Mitchell conducted his survey and submitted a report and cost appraisal. This information was transmitted to Springdale for the town's review and comments. A letter from the mayor of Springdale was received in June of 1981 stating the town felt the appraisal amount was too low and that the appraisal was based on an irrigation water right instead of a domestic water right. This reply was relayed to the Regional Office and a reply was sent to the town. Springdale has never commented on the Regional letter. They are currently looking at several possibilities for a water system, but no information about these alternatives has been received in the park from the town.

Proposed Public Land Order - Parunuweap Canyon

Zion completed the work necessary to return the two parcels of land in Parunuweap Canyon back to the Bureau of Land Management (BLM). These lands were originally part of Executive Order 4181, and the BLM has asked that the matter be settled. A survey was completed and it was determined the lands were not necessary to the park operations; a partial revocation of the Executive Order to return these lands to BLM management was requested.

Proposed Hydrodams on the Virgin River

Garkane Power Company filed with the State Engineer to dam the North Fork of the Virgin River just outside the park's northeast boundary. Zion asked that the request be protested by the U.S. Attorney because the proposal showed the power plant and discharge point inside the park. The park has received no comment on the protest.

The Dixie Escalante Rural Electric Association filed with the State Engineer to build a hydro project near the southwest corner of the park on the Virgin River. Zion protested this application because one of the intake locations was located inside the park. The company stated the location was an error and changed the point of diversion. Zion withdrew the protest after ascertaining the location was outside the park.

Crystal Creek Dam

Zion has heard of no activity in the past year on the proposed Crystal Creek Dam. Some engineering surveys were supposed to have been accomplished, but the park has had no information on these. This project, if completed, would have a significant impact on the Zion Narrows and Zion Canyon.

Warner Valley Power Plant

The Environmental Protection Agency (EPA) denied a PSD permit to Warner Valley because of potential air pollution violations in Zion National Park. Warner Valley has filed suit to overturn the decision, and to our knowledge, no decision has been made. EPA officials offered to consider a 250 megawatt plant instead of the 500 megawatt plant proposed by Warner Valley. However, to our knowledge, Warner Valley has never submitted a request for a smaller plant. The city of St. Geroge has been seeking participation in the Harry Allen plant proposed to be built near Las Vegas.

Integral Vistas

Integral vistas were located and documented. County commissioners from Kane and Washington Counties came to the park to look at the possible sites. A representative from the State Air Quality Office was also present. Comments were solicited and sent to Region.

Personnel

Staffing at the close of the year showed a total of 27 permanent, full-time positions and 13 permanent, less-than-full-time positions for Zion National Park; three permanent, full-time and one permanent, less-than-full-time positions at Cedar Breaks National Monument; and four permanent, full-time positions at Pipe Spring National Monument.

Zion had one vacant full-time position at the end of the year. A Park Ranger GS-09 position has been redescribed as a Park Technician GS-05/06/07 and is being advertised as an upward mobility position. Cedar Breaks had two vacancies at the end of the year: Park Ranger GS-025-09 and Administrative Clerk GS-301-05. Both are being advertised.

There were no retirements during the year; however, there were two resignations: Tamra A. Eberhard from a subject-to-furlough Park Technician slot in the Naturalist Division on February 7, 1981, and Jeanne Dennis from a subject-to-furlough position of Program Clerk in the Maintenance Division on November 14, 1981.

Seasonal staffing at Zion totaled 33 with six each at Cedar Breaks and Pipe Spring. This does not include VIP, SCA, YCC or other such programs.

During the year, approximately 229 requests for personnel action were initiated at the park level for the three areas.

Reassignments/Transfers

Eric J. Brueck, Painter (from Grand Canyon, 04/04)
 Kenneth E. Armstrong, Park Ranger (from Bandelier, 08/09)
 Mervin Lee Randall, Concessions Specialist (from Hawaii Volcanoes, 08/09)
 Harold L. Grafe, Superintendent (from Rocky Mountain, 10/04)
 C. Douglas Dewitz, Maintenance Mechanic, PISP (from Grand Canyon, 11/01)
 Faye P. Ott, Program Clerk (from Cedar Breaks, 11/15)

Anthony J. (Tony) Bonanno, Park Ranger (to Blue Ridge Parkway, 02/22)
 Richard W. (Dick) Hayes, Concessions Specialist (to Glacier, 03/22)
 Dale L. Scheier, Park Technician, PISP (to Great Sand Dunes, 04/19)
 John O. Lancaster, Superintendent (to Glen Canyon, 05/17)
 Henry E. McCutchen, Biologist (to Rocky Mountain Regional Office, 07/12)
 Faye P. Ott, Administrative Clerk, CEER (to Zion, 11/15)
 Nancy Jane Cushing, Park Ranger (to Bent's Old Fort, 12/13)

There was one change to a lower grade and one conversion at Zion this year. Mark J. Kelleher moved to a Maintenance Worker position from a Park Ranger slot on January 11, and Debra Sandstrom was converted from a temporary appointment to career-conditional on January 25.

Training

Training opportunities were afforded to several employees this year, including the following:

<u>Name</u>	<u>Course Title</u>	<u>Date</u>
CUNDICK, Maurine (Z)	Training for EEO Counselors	02/81
CUSHING, Nancy Jane (C)	Criminal Evidence	03/81
HAYS, Larry (Z)	Management of Visibility Resources	03/81
SCHEIER, Dale (P)	Law Enforcement Refresher	03/81
RICHEY, Mark (Z)	EEO Counselor Training	03/81
BANKS, Fred (P)	Basic Curatorial Accountability Collection Management	04/81
CUSHING, Nancy Jane (C)	Basic Curatorial Accountability Collection Management	04/81
WOOD, Robert (Z)	Basic Curatorial Accountability Collection Management	04/81
CUNDICK, Maurine (Z)	Government Contract Administration	04/81
HAYS, Larry (Z)	TI-59 Fire Danger Rating/Fire Behavior Training	04/81
SCHEIER, Dale (P)	Emergency Medical Technician Refresher	04/81

<u>Name</u>	<u>Course Title</u>	<u>Date</u>
WOOD, Robert (Z)	Interpretive Methods	04/81
HERR, William (P)	Native American Concerns	05/81
RANDALL, Mervin (Z)	Concessions Management School	09/81
SORENSEN, LaMaun (Z)	Introduction to Supervision	10/81
HEEBNER, Belinda (Z)	Review Procedures of Employee Benefits	11/81
GRAFE, Harold (Z)	Air Quality for Managers	12/81

April 7 through 9, an on-site DIPS Timekeeping Training Class was sponsored by Zion National Park. Regional personnel presented the 24 hours of classroom training. Employees attending from Zion were Cynthia Craig, Marilyn Davis, Belinda Heebner, Debra Sandstrom and Robert Wood. Faye Ott represented Cedar Breaks National Monument, and Nora Heaton represented Pipe Spring National Monument.

In May, Patricia Fesler and Belinda Heebner spent a week at the Regional Office in Denver for on-the-job training in budget and classification respectively.

Throughout the year, the Ranger Division sponsored a wide variety of training sessions in the park which included the following:

February - Rescue Training (two days) was attended by seven park personnel and one each from Cedar Breaks and Pipe Spring.

Structural Fire Training was given three times in 1981. In February, nine employees participated with the emphasis on chimney fires; in March, six employees attended the training on nozzles; and in October, seven employees attended training on truck operation.

March - The Washington County Chief Deputy and an instructor from the Utah Department of Public Safety presented a one-day training class on Criminal Activities and Outlaw Motorcycle Gangs in Utah and Crime Scene Investigation, which five Zion and two Cedar Breaks employees attended.

April - Six Zion and one Cedar Breaks employees attended training by FBI personnel (including Range Instruction).

May - The three law enforcement seasonal employees received Range Training and instruction on handling violations and legal actions.

Eleven employees received a one-day instruction course in wildland fire fighting techniques, fire behavior, safety, fire tool management and care, and chain saw demonstration.

Nine seasonal employees from the Ranger Division attended two days of seasonal training.

October - An American Heart Association CPR instructor conducted an eight-hour CPR course for Basic Instructor Certification for four Zion employees and Basic Rescuer Certification for two Zion employees, one Zion Natural History Association (ZNHA) employee, one Cedar Breaks employee and three dependents of park employees.

November - Five employees were involved in two days of Technical Rescue Techniques and climbing exercise.

Practical applications of protective breathing equipment and rescue was attended by five employees.

December - Two employees attended a two-day Accident Investigation course given by the Utah Highway Patrol in Cedar City.

Six Zion and one Cedar Breaks employees attended eight hours of Range Firing.

Seasonal training was presented to the seasonals in late May and early June. Specialized training was conducted at various times in different divisions to supplement divisional needs.

Employee Relations

The EO Committee at the end of the year consisted of the following:

Chairman: Clay Alderson, Superintendent, Cedar Breaks

FWPC: Ellen De Mille, Secretary, Zion

Counselors: Maurine Cundick, Administrative Division, Zion
Mark Richey, Maintenance Division, Zion

Members: Robert Wood, Interpretive Division, Zion
Jon Dick, Ranger Division, Zion

EO Designee: Belinda Heebner, Personnel Assistant, Zion

In an ongoing effort to improve the status of female and minority employees, the vacant Park Ranger position in the Ranger Division has been redescribed to a Park Technician, GS-026-05/06/07 Upward Mobility position. The announcement should be out in early 1982.

In November a recruiting team comprised of Park Rangers Roy Given and Nancy Jane Cushing and Personnel Assistant Belinda Heebner spoke to students at the University of Nevada at Las Vegas, Northern Arizona University at Flagstaff and Northland Pioneer College at Winslow in an effort to reach minorities and women and make them aware of seasonal employment opportunities in the National Park Service. Hopefully, our efforts will be realized when the seasonal certificates are received.

Awards

Employees who received special achievement awards in 1981 were Dale L. Scheier, Pipe Spring, and Robert B. McComb and Roy Given, both of the Interpretive Division, Zion.

Suggestion awards were received by Robert Wood, Interpretive Division, Zion, and Clay Alderson, Superintendent, Cedar Breaks.

Length-of-service pins were presented to Ardell D. De Mille and Keith M. Wilkins (20 years) and Mark J. Kelleher (10 years).

Budget and Finance

The operating budget at Zion for fiscal year 1981 was \$1,174,680 for ONPS, which this year included fee collection funding converted to ONPS. In fiscal year 1980, the combined budget of \$1,186,400 ONPS and \$74,300 fee collection amounted to \$1,260,700--a decrease of \$86,020 in fiscal year 1981. Coupled with absorbing a percentage of the pay increases, the operating base funding is continuing to erode, resulting in a smaller seasonal staff to handle record visitation crowds.

The park staff at the beginning of the year consisted of 29 full-time budgeted positions, but under the new full-time equivalency (FTE), Zion's overall ceiling was changed to 27 permanent and 13 less-than-full-time budgeted positions.

In addition to ONPS programs, budget responsibility included \$71,868 reimbursable programs, \$2,786 donated by ZNHA for a special Nature Center project, \$5,144 for air quality, \$15,500 for special health/life safety projects, \$40,000 for cyclic maintenance projects and \$8,000 for storm damage repair. In fiscal year 1981, \$190,972 was spent on Zion/Springdale wastewater project.

A travel ceiling was placed on Object Class 2100 this fiscal year. Zion stayed within the ceiling of \$22,000, due to two positions that require a large volume of travel being vacant for an extended period of time.

The total budgeting authority for Zion was \$1,281,978.

Budget allotment for Cedar Breaks was \$127,700 ONPS with \$3,355 for reimbursable programs and \$45,488 for a special restroom construction project.

Budget allotment for Pipe Spring was \$133,300 ONPS and \$4,900 for reimbursable programs.

Contracting

Zion received interim Contracting Officer Warrant Authority for \$50,000 for the Purchasing Agent. This authority comes at a very opportune time in anticipation of the contracts generated by the Park Restoration and Improvement Program (PRIP).

The following contracts were issued in the 1981 fiscal year:

CX 1200-1-B032 to Western Rock Products Corporation of St. George, Utah, for MC-800 plant mix asphalt--\$14,332.75 (supply contract).

CX 1200-1-B033 to Utah Emulsions Company of Salt Lake City, Utah, for CRS-2 emulsions asphalt--\$21,719.34 (supply contract).

CX 1200-1-B067 to Scott Machinery Company of Cedar City, Utah, for a motorized road grader--\$63,582.72 (supply contract).

Procurement

During 1981, the imprest fund for Zion was increased to \$2,000 and the fund for Pipe Spring was increased to \$500. This doubled the imprest activity and enabled the park to handle most local purchases and travel advances up to \$300 through the imprest process. The imprest fund for Cedar Breaks remained the same at \$300.

<u>Area</u>	<u>Imprest Subvouchers</u>	<u>Total</u>
Zion National Park	352	16,368
Cedar Breaks National Monument	104	2,132
Pipe Spring National Monument	174	6,269

The number of purchase orders at Zion decreased over last year by about 40 due to the increased capabilities of the imprest fund. However, expertise required to accomplish the more difficult procurements has increased considerably because of more technical Federal Procurement Regulations. Pipe Spring purchase orders decreased by about 15, while those for Cedar Breaks remained about the same as the previous year.

<u>Area</u>	<u>Purchase Orders</u>	<u>Total</u>
Zion National Park	253	205,229
Cedar Breaks National Monument	22	21,497
Pipe Spring National Monument	19	9,852

Fedstrip activity remained about the same this year as last for all three areas, in spite of the fact that GSA was very slow in filling orders and requested line items of \$25 and under be purchased on the "open market."

<u>Area</u>	<u>Fedstrips</u>	<u>Total</u>
Zion National Park	22	18,486
Cedar Breaks National Monument	5	3,322
Pipe Spring National Monument	1	82

Property Management

The following property transactions were completed during the year:

Report of Personal Property for Sale - 9

These included backhoe and road roller from Zion, snowmobiles from Cedar Breaks and table saw from Pipe Spring. Also, the lost and found property system was updated to the current procedures.

Report of Excess Personal Property - 11

These included sewage treatment plant equipment from Zion and AB Dick copier from Pipe Spring.

Report of Survey - 19

These included road broom at Zion, duplexer and moisture scale at Lava Point, vandalized pit toilet at Observation Point and water pump at Pipe Spring.

Sale of Government Property

Two buildings in the Birch Creek area were put up for bid and sold to Paul Mangum. The buildings were removed and the site cleaned up satisfactorily. The area can now be used for an expanded horse concession operation.

It was a successful year in the Procurement Office; established park goals for minority, women-owned, labor surplus and small business purchases were surpassed. The backlog of property transactions was decreased. The removal of the two buildings at Birch Creek, updating of the lost and found system, and placing of dismantled sewage equipment on the excess property list were the largest endeavors.

The Mail and File Clerk position was redescribed to that of Procurement Clerk. This enabled the Procurement Office to handle the large volume of transactions, as well as many other types of requests, with courtesy and efficiency.

An increase in contract activity is anticipated; the staff feels prepared to meet this new challenge.

Concessions

Concessions Management Specialist Hayes transferred to Glacier National Park in March and was replaced by Lee Randall from Hawaii Volcanoes in August.

During the 1981 calendar year, there were three inspections completed on Bryce-Zion Trail Rides' operation within Zion National Park. The horse concession greatly improved its services, and no complaints were received during the 1981 operating season (April through October).

TWA Services, Inc., under the direction of Resident Manager Joseph Staebell, operated Zion Lodge, overnight accommodations, food service and a transportation system. There were three public health and facilities inspections completed during the 1981 season. In addition, there were several on-site inspections completed by Concessions Management Specialist Lee Randall. Deficiencies were corrected by the concessioner without delay.

A minimal number of complaints were received on TWA Services' operation, indicating that the concessioner was serving the public at a highly acceptable level and was sensitive to the needs of the visitor.

The concession contract with TWA Services expires at the end of December 1982. Since the decision was made in May to allow overnight accommodations to remain in the park, work is under way for preparation of a statement of requirements to lay the groundwork for a new concession contract in 1983.

INTERPRETATION AND RESOURCE MANAGEMENT

Resume of Interpretive Operations

The interpretive program of scheduled events began on March 22 with one guided walk and one evening program offered daily. March visitation increased 8 percent over the previous year (to 38,742) with good attendance at interpretive activities. This is a popular time of year for geologic field trips, as many colleges use the spring break period to visit the Southwest. In addition, Easter vacation traditionally brings a deluge of visitors to the park; thus Zion recorded a 300 percent increase in visitor center attendance and a 200 percent increase in program attendance over the previous week. Over 3,500 individuals were served daily in the visitor center during the week of Easter.

The number and diversity of scheduled events reached its maximum on June 7 and lasted until August 8, when some seasonal naturalists were terminated due to lack of adequate funds. SCA participants terminated on August 22 after completing 12 weeks of volunteer work. The final scheduled event for National Park Service employees was on October 31; VIPs continued to provide guided walks and evening programs until November 7.

This late March to early November program adequately meets the needs of most visitors at this time. We have received many favorable comments as a result of the spring and fall activities when most other parks offer no naturalist activities. These events encourage people to spread out the visitation period, making the most efficient use of park facilities and personnel. We rely upon some VIPs to provide continuous coverage of guided walks, evening programs and information desk duty due to limited National Park Service funding. The demand is there for services, but we are often hard-pressed to provide the staff to meet the needs.

The visitor center remained open daily all year with maximum hours from 8 a.m. to 9 p.m. in summer and minimum hours of 9 a.m. to 5 p.m. in winter.

Spring and fall hours are typically 8 a.m. to 6 or 7 p.m., depending on staffing and visitor use patterns.

A summary follows of participation in scheduled interpretive events:

	<u>1980</u>	<u>1981</u>	<u>% Change</u>
Roving interpretive contacts	1,017	6,831	+571.7
Naturalist Choice talks	1,225	1,297	+ 5.9
Conducted walks and hikes	15,505	16,376	+ 5.6
Evening programs	60,913*	62,613	+ 2.8
Visitor center	<u>504,606*</u>	<u>532,824</u>	<u>+ 5.6</u>
	583,266	619,941	+ 6.3

*Visitor center and evening program attendance, as recorded in the 1980 Superintendent's Annual Report, are in error. They were originally recorded as 630,412 and 60,833 (due to several calculation errors) but were actually 504,606 and 60,913 respectively.

Attendance at conducted events increased slightly during 1981, with total park visitation rising 12 percent from 1,233,686 to 1,405,205. The number of scheduled walks and talks rose from 704 in 1980 to 760 due to increased use of VIPs and more efficient management and scheduling. The same holds true for roving contacts. The number of evening programs decreased only slightly from 485 in 1980 to 1981's total of 476. Part of this was due to a few talks being cancelled by thunderstorms and also because formal interpretive programs started a week later than in 1980.

Visitor center hours were essentially the same for both of the above years, and the 5.6 percent increase over 1980 corresponds to the 12 percent increase in total park visitation.

Interpretive employees issued 4,013 Golden Age Passports, 1,518 overnight camping and 1,070 Narrows permits in cooperation with the Ranger Division.

Visitor interest in the park continues to grow and the Interpretive Division once again filled many special requests requiring editorial expertise, photograph identification assistance, library references or photographs and/or information for upcoming newspaper or magazine articles. More and more potential visitors are learning of Zion through the printed media, especially overseas.

Environmental Education Programs

The Zion Nature Center began its eighth season on June 8 and ended at noon on August 7. During the nine-week program, 1,060 children aged 6 through 12 attended the outdoor educational sessions. National Park Service seasonal naturalists presented half-hour talks, specifically geared to the children, each afternoon of operation.

Zion continues to attract well qualified individuals as Nature Center teachers, and much time and effort went into the final selections from the field of eight students interviewed at Southern Utah State College on May 6. Teachers hired for the 1981 season were Ms. Tammy Benson, Mr. Walter C. Rogers and Ms. Tanya Reck. As in past years, they were paid the minimum wage (\$3.35 per hour) for the seven-hour per day, five-day week from the environmental education account of the Zion Natural History Association. Total expenses amounted to \$4,646.53. As an aid to the new teachers, five days of intensive training and orientation were provided before school opened.

The name has been changed to Zion Nature Center to better reflect the expanded purpose and use for the facility now that the cooperative agreement with Southern Utah State College has been terminated.

A close-out meeting was held on August 7 in the park with the teachers and Chief Naturalist Victor Jackson. All agreed that the quality of the program had been greatly enhanced through the guidance of Seasonal Naturalist Robert McComb, an accredited teacher and chairman of the Science Department at a Phoenix high school. In recognition of his fine efforts, Mr. McComb received a \$300 Special Achievement Award for overseeing the Zion Nature Center operation and for his highly professional interpretive programs.

Cooperating Association Activities

The Association again established a new sales record of \$376,789, a 13 percent increase over the 1980 fiscal year. Aid to National Park Service programs rose to \$67,302, which included \$27,531 for Aid to Interpretation. Other significant amounts were \$5,086 for Environmental Education and \$21,405 for Research. A budget of \$552,668 was approved for the 1982 fiscal year by the Board of Directors at the annual meeting held on November 21, 1981, in La Verkin, Utah. A complete summary of the Association activities may be found in its annual report.

Personnel

Mr. Joel Fishbein continued as the Treasurer/Business Manager during 1981. Mrs. Marion Hilkey, Secretary/Sales Clerk/Librarian, has also filled in during the absences of Mr. Fishbein. Mrs. Hilkey was aided by part-time assistants Harriett Bonanno, Christine Dick and Caroline Nicholson in assuming most of the Association-related duties that formerly were performed by the permanent interpretive staff during the winter season. During the rest of the year, the Association hired Merridy Cross, Howard Skinner, Brian Hopkins and Jill Blumenthal as needed, so that restocking and sales were almost 100 percent carried out by trained sales clerks. This freed SCA and seasonal naturalist personnel for visitor contact duties.

The Association hired three teachers for the Zion Nature Center. Southern Utah State College provided an applicant supply file from which the teachers were selected, namely, Ms. Tammy Benson, Mr. Walter C. Rogers and Ms. Tanya Reck. The program lasted nine weeks, and the teachers were paid the minimum wage of \$3.35 per hour for a seven-hour per day, five-day week.

Publications

Six new publications were produced during the year. The Outstanding Wonder, Zion Canyon's Cable Mountain Draw Works by Western Heritage Conservation, Inc., filled a long recognized void in our coverage of historic themes. A trilogy of children's books by Janice F. De Mille, consisting of Bushy's Secret Spot (A Child's Introduction to Zion Nature School), From Spring to Spring (Growing Up in Zion National Park), and Kendra's Surprise (A Child's First Visit to Zion), completes our plan for the production of young people's literature on the park. The park folder was translated into French and German for free distribution.

Items reprinted were Guide to the Trails by Roland Wauer, the Weeping Rock Trail Guide by Barbara Lund and Betty Smith and the "Geologic Cross Section" by Peter Coney and William J. Breed.

Service Related Operations

The Association continues to assist in a number of important programs that facilitate the management of the park and the quality of the visitor experience. The sum of \$27,531 was expended for Aid to Interpretation, which includes assistance to the Student Conservation Program, the Folklife Festival and a wide variety of donations to individual interpretive activities. Another \$21,405 was spent for the Administrative History of Zion National Park, botanical collections at Cedar Breaks National Monument, helicopter time for locating the reintroduced bighorn sheep, and chipmunk research.

Environmental Education was assisted by the donation of \$5,086 for the operation of the Zion Nature Center and the new scholarship programs at Dixie and Southern Utah State Colleges. Board members from the respective colleges form a committee for the selection of worthy and needy students in the natural history fields to receive a grant that pays three full quarters of tuition.

The Association paid \$5,099 for the purchase of new tables and chairs for use in the Zion Nature Center and another \$2,775 for the installation of insulation and siding on the Nature Center. This last addition will make the building much more energy efficient year-round.

The Association has offered \$5,000 for the five-acre Herman Frost inholding. This was not accepted; however, the funds are available and the offer good until August 1, 1982, should the owner change his mind.

The Association produced filmstrip "A Trip to Zion National Park" was shown 29 times to a total of 607 recorded viewers. The filmstrip is sent all over the country and provides an excellent opportunity for students far away to learn the basic geology and biology of the park.

Plans for 1982

The Association Board of Directors approved a donation of \$5,000 for the annual Folklife Festival.

An oral history project in the amount of \$16,648 was authorized to document the knowledge available from local residents that will be used, along with other information, to produce a new book in 1983 on the Pioneers of Zion.

Two major allocations are \$25,000 for approved storage space and \$56,449 as a building fund for the proposed visitor contact station to be built at Kolob Canyons.

Law Enforcement

There were 477 case incidents for 1981 including all classes of incidents within the reporting system. This is a decrease of 46 percent from 1980.

Part I offenses were down approximately 20 percent compared with 1980. Twelve motor vehicles were broken into, resulting in the loss of \$6,055 in cash and property. Zion Lodge had four larcenies resulting in the loss of \$4,040 in cash and property. There were 14 campground thefts reported, resulting in the loss of \$808 in property.

There was one motor vehicle theft, which occurred at Zion Lodge. The Nevada Pontiac was reported stolen on June 27.

A stolen vehicle, late model Chevrolet pickup from Michigan, was recovered during a routine traffic stop on May 11. The property and two juveniles arrested in connection with the stolen pickup were turned over to the Washington County Sheriff's Office.

There were 15 cases of vandalism to government property reported. There were five violations concerning possession of controlled substance, all of which involved marijuana. One arrest was made under Utah State law for possession of controlled substance with intent to sell. All other incidents were processed through the Federal Violation System.

There were four arrests made in connection with driving under the influence. These four separate incidents were prosecuted through the Washington County Court System.

There were 87 Federal citations issued during the year, an increase of 34 percent over 1980.

Hunting activity around the park was down this year. Two hunters were apprehended and cited in the northwest corner of the park near Horse Ranch Mountain. Poaching in this area is extremely heavy at times. The Kolob Canyons Road also presents a poaching problem. The remains of one carcass were found in a garbage can in this area. Seasonal manpower was not available this year to assist in an adequate hunting patrol operation.

Cattle trespass continues to be a reoccurring problem in the Kolob section, including Hop Valley, Lee Valley and Cave Valley. This year a local inholder, Kenneth Cornelius, permitted his hogs to trespass on park land. Approximately 200 hogs were released in the vicinity of Firepit Knoll and Upper Hop Valley.

The hogs were removed after considerable effort and investigation by Park Rangers.

Two large ponderosa pine trees were cut and removed from National Park Service property by Dixie State Bank of St. George, Utah. The incident was resolved by restitution from the bank for restoration of the land.

Fish and Wildlife Management

The peregrine falcon nesting site was located this year. Two young were fledged. Two additional young were seen in Oak Creek, but no nest was located.

The Zion deer herd seems to be stable. Numbers in the canyon remain low.

Bell's vireo was located near the Lodge, but no nesting was found.

Seven of the Zion bighorn sheep population were located near Mt. Spry during the summer. No lambs were observed, nor have any been reported.

Resource Management

The air visibility program is ongoing in Zion. The canyon station has been in operation about two years. The Memodyne data logger failed in September, and funds are not available to get it repaired. The solar-powered telephotometer station at Lava Point has been in now about one and a half years. Some electronic problems have occurred, but personnel have managed to keep the station running most of the time.

We have been experiencing problems obtaining filters and drums from Davis, California, for the Sierra multiday impactor. This has resulted in some gaps in data collection. The flow mechanism stopped and machines were exchanged with Davis. Pump problems have occurred, but work by personnel have resolved these difficulties.

Zion tunnel stress monitoring is continuing. The Westinghouse extensometer system failed in June. A power regulator chip failed, allowing too much power into the internal circuitry. The unit was removed for repair but when it was replaced in early December, it failed again. The rod supplied by Westinghouse for the convergence system broke in December and is being repaired. The sheer strip system, which can be monitored from headquarters, was installed in early December. The old Carlson strain gauge system is still in use but is in need of new wiring at the readout box.

Backcountry impact evaluations were made to see if use was affecting vegetation. The most heavily impacted areas were on the West Rim Trail at Cabin Springs and Potato Hollow. Since there was no coverage in the Taylor Creek area, backcountry use figures from that area continue to be poor.

The BLM is re-evaluating the Wilderness Study Areas (WSAs), especially the ones that are under 5,000 acres in size but may be contiguous with other Federal lands. Area Manager Rex Rowley of the Kanab Resource Management Unit has requested a meeting with Zion National Park officials early in 1982 to discuss National Park Service interest in several isolated BLM tracts that adjoin the park. BLM plans to conduct public meetings on the proposals in the spring of next year.

The proposed wilderness areas within Zion National Park continue to receive spotty coverage, mostly on a reactive basis, due to limited staffing.

Historic Preservation

An administrative history of Zion National Park is in draft and should be completed by 1982.

A project to interview local old-timers in the area in preparation for a book entitled "Pioneers of Zion" is getting under way.

Section 106 clearance has been obtained by Regional personnel for removal of the older Frontier and Pioneer cabins at Zion Lodge in preparation for the new construction proposed for the area. The park is working with Regional historians on the modifications that are to be made on the Western cabins, which will be retained for future overnight lodging.

Sign Program

Due to limited funds, little additional work was accomplished on signs in 1981. New sign posts to identify camping sites in the campgrounds were tried on a limited basis this year and will be fully implemented in 1982.

Fee Collection

A total of \$400,929 in fees was collected during 1981. Entrance fees collected amounted to \$317,215, while camping fees amounted to \$83,714. The increase in fees collected during 1981 represents the record year of visitation at Zion.

Camping fees were collected all year, although coverage during the summer was limited to about six hours per day because of a lack of fee collection personnel to adequately cover both the entrance stations and the campgrounds. At night when the campground fee stations were closed during the summer and throughout the winter, a self-registration system was in effect for the Watchman Campground. A self-registration system is currently being designed for the South Campground.

Camping fees for 1982 are being increased from \$2 to \$4 per site per night. The group camping charge will remain the same.

The South Entrance station was open from April 9 to October 31. The East Entrance station was open from May 26 to September 6 but had to be closed

five days per pay period and at night due to lack of funding to hire additional fee collectors. The \$2 fee per vehicle will remain the same in 1982, as will individual rates, Golden Eagle Passports and the issuance of free Golden Age Passports.

Additional revenue would likely be collected if there was a means to hire adequate fee collection personnel. Hopefully, a system will be adopted to allow parks to use revenue collected for that purpose.

Campgrounds

The South Campground opened in May and closed in September. The Watchman Campground remained open all year with a self-registration system. The self-registration system is monitored on a daily basis to insure compliance with campground fees.

The South Campground has new ground level fire grates installed for cooking. The picnic tables are continuing to be restored with metal benches and tops. The campground sites are being re-marked with new fiberglass site markers.

The reservation system for the organized group area in the Watchman Campground was operated from March through October. The total number of campers using the group area was 11,459. Total use in both campgrounds, excluding the group area, was 207,731 campers.

Special Use Permits

In March, one special use permit was issued to Peace and Quiet, Inc., to conduct a commercial backpacking trip in the La Verkin Creek area of the park. Fees totaling \$25 were received. No other permits were issued during the year.

Research

Dr. Richard W. Baumann, Brigham Young University, collected aquatic insects from the main canyon. No report has been received.

John Anderson, Endangered Species Office, U.S. Fish and Wildlife Service, surveyed the black spleenwort fern to determine the taxonomic status of the Zion population and whether it should be listed as a threatened or endangered plant. Only 12 plants were located.

Dr. William Wolfe, Rutgers University, did research on certain species of weevils and predacious diving beetles. Approximately 100 specimens were collected and are in the process of being identified.

Dr. John F. Addicott, University of Alberta, did research on insects associated with seed damage in Yucca. Work will continue on this project.

Larry L. St. Clair, Brigham Young University, finished the requested work on the lichen report for Zion. Better maps were supplied and problems with the written report were resolved.

Charles R. Nelson, Utah State University graduate student, continued work on the Virgin River research contract. Work is running over one year behind and the park is concerned about the status of the research.

Dr. James E. Platz, Creighton University, did preliminary work on the desert spring lizard. Early evidence shows that two subspecies occupy the same area. Since this overlap violates the subspecies concept, more work is needed.

Patricia A. Benner, Hood College, did research on aquatic insects in two streams in the park. Identification is complete and the report is in the process of being written.

Three Russian botanists accompanied by personnel from the New York Botanical Gardens visited the park on September 6 and 7. Plant specimens and seeds were collected during the two-day visit.

Hope Humphries, graduate student from Colorado State University, worked on a research project involving chipmunks. Study areas were located and identification work was started. Several species overlap in the park, and work is being done to determine the circumstances.

The bladderpod, Colutea arborescens, was collected in South Fork of Taylor Creek in the Kolob section of Zion by Chief Naturalist Victor L. Jackson and added to the park herbarium. Identification of this rare Utah plant was made by the Intermountain Herbarium at Utah State University, Logan, Utah.

Fire Prevention and Suppression

Fire weather stations were operated on a daily basis at park headquarters and Lava Point during the wildland fire season. The fire weather teletype was used to collect information during the summer season. It was removed in late October.

Cooperative Wildland Fire Agreements with Bureau of Land Management, U.S. Forest Service and the State of Utah were updated and maintained. The Fire Mobilization Plan was updated for the 1981 season, reflecting new contract agreements, supplies and manpower.

There were 15 wildland fires during the 1981 season, most of which were lightning caused. The month of August accounted for half of the total wildland fires within the park. One man-caused fire was unintentionally started east of the Virgin River near park headquarters. An employee of the Springdale Ditch Company threw down a burning match into some fine fuels. The area burned approximately four acres.

The structural fire brigade responded to six calls during the 1981 season. Three of these calls were in the local communities of Springdale and Rockville. There were three vehicle fires within the park. Two vehicles sustained minor damage and one vehicle was totally destroyed.

The annual fire and safety inspection was completed on December 2. Park employees assigned to the inspection surveyed residential buildings, work facilities and other public buildings for fire and safety hazards. Overall, the inspection results were satisfactory.

Search and Rescue

During the 1981 season, seven minor searches and three major searches were conducted. The minor searches consisted of lost children, family members or friends of park visitors. These searches were primarily conducted in congested areas of the main canyon and campgrounds, and all resulted in locating the lost persons without complications.

The three major searches were conducted in May and August.

On May 5, two park visitors reported that three friends who were on an extended backcountry trip in Zion were overdue by two days. The three hikers intended to hike from Lee Pass in the northwest corner of the park to the main canyon. The exact route was unknown. A track search was conducted on the day of the initial lost report. Due to deep snow and fresh snowfall on the previous day, route and tracks were difficult to find. On May 6, a helicopter was used to assist in the search. All major drainages and trails were checked. The three lost backpackers were located in the area known as Cougar Mountain. The three hikers were airlifted to park headquarters. The cost of the search was \$2,060.

On May 25, Mary Donnan, a backpacker, reported that her hiking companion, Rita McDonough, had gotten lost in the La Verkin and Willis Creek drainages. She stated that the separation occurred near the confluence of the two streams. The Washington County Sheriff's Office assisted with a fixed-wing plane search. A ground search was conducted by National Park Service personnel in the La Verkin/Willis Creek area. Ms. McDonough was located on the Kolob Reservoir Road near Lamareau Ranch and was returned to park headquarters by a Washington County Deputy Sheriff. The cost of the search was \$543.

On August 21, a lost persons report was obtained for missing person Fred Jacyssin. Mr. Jacyssin had been last seen near the South Campground on the evening of August 20. He told party members he was going to explore The Watchman. Two haste search teams began searching the area between the South Campground and The Watchman. Mr. Jacyssin's footprints were observed on a ridge that led to the edge of a cliff. The steep slope below the cliff edge was searched with the aid of a helicopter. Mr. Jacyssin's body was found below the edge of the cliff at a point directly under the footprints on the ridge above. The fatal incident was investigated by Deputy Sheriff Mike Excell and Park Ranger Larry Hays. Mr. Jacyssin's body was evacuated to park headquarters for transport to St. George, Utah. The total cost for the search and recovery was \$1,088.

There were seven minor rescues involving the Virgin River and the Narrows. One rescue was for a near drowning, resulting from a boy scout troop tubing in the Virgin River adjacent to the north end of the Gateway to the Narrows Trail on May 9. The boy, Lynn Maxwell, was rescued by fellow scouts and other park visitors. Park visitors gave Mr. Maxwell CPR prior to the arrival of National Park Service personnel. Mr. Maxwell was stabilized by Park Rangers and transported to Dixie Medical Center for treatment.

The other rescues consisted of assisting individuals who had become fatigued or developed soreness from the trip down the Narrows.

Climbing

Climbing activity appeared to decline by approximately 20 percent from 1980. There were 178 climbers who registered for 60 climbing permits. The park continues to experience late fall and early spring as its main climbing seasons. There were no accidents during 1981 involving climbing.

An analysis of significant climbing activity follows:

<u>Location</u>	<u>Number of Permits</u>
Angels Landing	3
Bridge Mountain	4
Checkerboard Mesa	9
Crazy Quilt	3
Great White Throne	3
Lady Mountain	1
Mount Majestic	1
Organ	3
Tucupit	1
Miscellaneous Climbs	<u>32</u>
	60

Park Radio System

The park radio system received some minor damage this fall from a lightning strike on the antenna at Lava Point. One of the antennas was replaced, and the duplexer was replaced due to water damage.

MAINTENANCE

Buildings

A routine maintenance program with special cyclic, lump sum and construction type projects was accomplished throughout the year.

All buildings were checked for maintenance needs and corrections made as time and funds permitted.

Painting of the interior of five and exterior of three residences was accomplished. Three others are ready for exterior painting.

Outdated steam heating systems were removed from Residences 8 and 9 and electric wall panels installed. Wood burning stoves were also installed in the above residences.

Four residences (8, 9, 25 and 38) received new floor coverings in kitchen, utility room and bathroom. New wall tile was installed in the bathtub and shower stall of Residences 8, 35 and 38.

New main switch boxes, weatherheads and circuit breaker boxes were installed in Quarters 8, 9 and 21.

New roofs were installed on the East Entrance quarters and the backside of garages at Residences 8 and 9.

In the furniture storage building, 1,200 feet of concrete floor was poured, and one building was rat-proofed.

Installation of rustic siding on the south end of the Nature Center was started and 30 percent completed. This project will be finished in fiscal year 1982.

Utilities

New sewer laterals were constructed to seven Oak Creek residences (7, 8, 21, 24, 25, 26 and 27). All cast iron plumbing was changed and systems to Quarters 8 and 24 were rerouted, making a total of 730 linear feet of new line.

Three hundred feet of new sewer line to service the Nature Center was installed. In the Watchman Amphitheater circle, a 2,000 gallon septic tank and 725 linear feet of leach field were excavated and constructed.

From the mechanic shop to the main line, 250 feet of four-inch water line was uncovered and 400 feet of new sewer line installed from the break room to the carpenter shop.

Excavation at 16 sewer manholes on the Oak Creek main sewer line was accomplished so the contractor could install a new slipline. All lines to manholes were connected, excavations back-filled and areas fine graded.

A concrete sand trap (10 by 18 by 4 feet) was installed on the Birch Creek water system to prevent sand from deteriorating chlorinators and water meters.

Grounds

About 100 new aluminum table tops and seats were assembled and installed in the Watchman Campground and picnic area.

Seven crushed culverts were replaced with rigid steel pipe in ditch crossings.

Approximately 50 high-standing fire grills were modified and reinstalled close to the ground.

All restroom toilet booth panels were painted; aerosol spray paint of the same color was purchased for constant touch-up painting.

Checking chlorinators and reading and recording meters involved 1,095 person-hours; 156 person-hours were spent on chlorine testing and preparation of water reports to comply with Federal and State requirements.

Approximately 600 person-hours were spent cutting weeds in the campgrounds (lost the battle).

Roads and Trails

Road and trail work was mainly routine during the year with the usual amount of fallen rocks, mud slides and ditches to be cleaned. There was no extensive winter damage to roads in Zion National Park.

On the Kolob Canyons Road, the blacktop was cleaned off a small slump area and the area filled in with lava rock base gravel and surface patched. Sealing the cracks around the old slump area to prevent water from getting under the road has reduced the number of slump areas.

Several spongy spots on the Kolob Terrace Road were dug out and filled in with lava rock base gravel and surface patched. A 24-inch culvert was installed across the road about one mile south of Maloney Hill. This will solve some of the drainage problems.

There has been very little activity in the Carl's switchback, Poison Ivy and Echo Rock slide areas this year. A spring was diverted above Poison Ivy slide, which helped dry out the slide area.

The annual sealcoat program was carried out by sealing Route 1 from the South Entrance to the west end of the long tunnel, the main road through the Watchman Campground to the group area, the road into Birch Creek and several of the turnouts up Zion Canyon. The three projects combined were a little over 6½ miles. These roads were also center striped, as was the Zion Canyon Scenic Drive to the Temple of Sinawava.

The bridges at Clear Creek and Checkerboard Mesa were repaired and painted.

The trail into lower Emerald Pool was cemented and several rock retainer walls installed to support the trail. The Court of the Patriarchs Trail was also cemented and retainer walls constructed.

Rainfall in the park was heavy during July, and the butane tank area at Zion Lodge was flooded. A rock wall was constructed on the upper side of the area to prevent a reoccurrence of flooding in this vicinity.

The High School Wilderness SCA crew camped at Stave Spring on the east side of the park and worked the Cable Mountain Trail and part of the Deertrap Mountain Trail. Robert and Patricia Davison of Springdale, Utah, provided excellent supervision of the SCA crew this year. The SCA program contributes much toward backcountry trail and sign maintenance. Were it not for this program, Zion would be unable to work on these trails because of a shortage of person-power.

Most road drainages were cleaned and the shoulders pulled. A good share of the shoulder work was done on the east end of Route 1. Base materials are needed to rebuild several miles of road shoulders throughout the park.

OTHER

Special Events

Mr. Ty Kearney provided an illustrated program on "The Eruption of Mt. St. Helens" in the Visitor Center Auditorium on April 28. He was the photographer and narrator for the 100 in attendance.

On May 1, a jazz concert was presented by the Weber State College Choralition in the Watchman Amphitheater; 30 people attended.

The Life Assurance Company of Bethel Lutheran Church of Encino, California, presented ". . . And There Was Light!" at the South Amphitheater to 68 visitors. This musical was sponsored by the Christian Ministry in Zion.

The fifth annual Folklife Festival was held at the Nature Center and at the Obert C. Tanner Amphitheater in Springdale on September 10, 11 and 12. An estimated 6,000 people participated in this very popular activity. Approximately 800 school children attended from towns in the vicinity of the park. One of the main purposes for the Festival is to help current generations visualize, understand and appreciate the lives of their forebearers. This program is on a year-by-year basis due to restrictive funding.

Media Relations and Public Affairs

The new Superintendent initiated contacts with the media and various civic organizations, local governments and other Federal agencies prior to the Christmas holidays. Several talks were lined up at area Chamber of Commerce luncheons and civic clubs. This will be continued in 1982, both to acquaint local people with the new incumbent and also to inform them of the happenings at Zion. Several events for 1982 that are of interest will be the Development Concept Plan proposal for Zion Canyon, the new concession contract, the PRIP program and informing people of our continual funding cutbacks that will result in fewer services.

Volunteers-In-Parks Program

The Volunteers-In-Parks program contributed greatly to Zion's needs. During 1980, 12 VIPs participated in this program, contributing a total of 1,373 hours; 28 VIPs in 1981 volunteered 3,112 hours! Most VIPs served in the Interpretive Division performing such duties as operating the information desk, conducting guided walks and hikes, presenting evening programs, working with the park herbarium and generally assisting the naturalist staff.

Former Zion Superintendent Warren Hamilton worked busy summer weekends as a VIP and assisted close to 2,000 visitors at trailheads and other points of congestion. Former Assistant Chief Naturalist J. L. Crawford continued to donate his darkroom skills to update the park's historic photograph files and provided valuable information concerning people, buildings and other landmarks identified in the photographs.

Other VIPs worked with the Resource Management Specialist on projects concerning the peregrine falcon and bighorn sheep populations, backcountry use patterns, petroglyph/pictograph inventories and aquatic insect and spring/stream surveys.

During the busy five-day period surrounding the Fourth of July, eight VIPs representing the San Francisco Sidewalk Astronomers presented day and night programs utilizing large, portable telescopes. Over 3,100 visitors participated in the special activities.

Most VIPs served without compensation, some were provided housing and some received both housing and a subsistence of up to \$5 per day. The money saved through VIP services continues to be quite impressive: Based upon a GS-4 salary, the 3,112 hours of donated time equal approximately \$18,394 worth of personal services funds, which were unavailable to perform the needed work. Consequently, the VIP program continues to be a significant asset to the park--well worth the minimal cost needed to provide housing.

Student Conservation Association Program

The Student Conservation Association provided the park with four Park Assistants. Three women worked with the Interpretive Division performing various naturalist duties, and a man was assigned to the Resource Management Specialist for bighorn sheep, peregrine falcon and backcountry use observations. The women assigned to interpretation were selected from SCA applicants showing the greatest potential for subsequent employment as seasonal naturalists the following year. This has been part of an active EO program with excellent results; four of five seasonal women naturalists in 1980 and two of five seasonal women naturalists in 1981 previously worked in Zion as SCAs. As in past years, the Zion Natural History Association provided funds for the housing needs of all the Park Assistants. All were housed within the park during 1981.

Four on-site naturalist talks on the history, natural resources and policies of Zion National Park were provided the High School Wilderness SCA group camped at Stave Spring.

Park Internship Program

Assistant Chief Naturalist Given instituted a Park Internship Program at Zion in order to provide additional personnel to meet staffing needs. Interns are special Volunteers In Parks who agree to spend 8, 10 or 12 weeks at the park in nonpay status in order to gain an orientation to the Park Service as well as practical field experience in a park setting. In turn, they are evaluated by the park internship coordinator weekly and receive semester credit at their college or university. Mr. Brian Hopkins from Slippery Rock State College in Pennsylvania was selected as the park intern and contributed over 500 hours while working for the Division of Interpretation and also with the Resource Management Specialist. All parties benefited from this successful program.

YCC Program

This program was curtailed in 1981 due to restricted funding, which limited the number of areas participating in the program.

Cooperation With Other Agencies

Zion conducted another bald eagle census in cooperation with the Utah State Department of Natural Resources. Input was also provided for their Utah Bird Latilong Distribution document.

The park has a cooperative agreement with the town of Springdale to provide structural fire protection.

Zion has a working agreement with the BLM, U.S. Forest Service and State of Utah Forestry Department on wildfire protection. Fires on mutual boundaries are covered and cooperating agencies can request help from each other when necessary. The BLM Office in St. George provided helicopter use for wildfires in the park from their Black Rock, Arizona Office. All fire flights were coordinated through the Cedar City Interagency Office to keep conflicts for air time to a minimum.

Safety

The Park Safety Committee held monthly meetings to review all safety-related problems within the park. The park staff participated in monthly programs, which provided educational material and increased safety awareness on the job and in the home. Weekly safety meetings were scheduled in the maintenance yard and presentations given by maintenance employees concerning safety.

Regional Safety Officer Dempsey inspected the park's facilities, including TWA Services and National Park Service workplaces, on August 10 and 11. Mr.

Dempsey stated in his report that all violations found were not serious. Those problems identified by the inspection were corrected or planning for their correction was under way by late November 1981.

Ranger and maintenance personnel conducted the annual inspection for fire and safety hazards in all park residences and facilities on December 2. Overall, the inspection reports were good in all areas.

There were 17 motor vehicle accidents during 1981, a 23 percent decrease compared to 1980. Three of the 17 accidents involved government vehicles. All government vehicle accidents resulted in little or no damage and no personal injuries.

Fifty-six accident/incidents, other than motor vehicle, occurred during 1981, which represented a 15 percent decrease from 1980. There were three employee on-the-job injuries compared with four in 1980.

An accidental fall resulted in the death of Fred Jacysson on August 20 or 21. A Board of Inquiry was held on August 25.

There were 14 emergency medical transports in 1981 and four medical responses to calls for assistance from the communities of Springdale and Rockville.

One bicycle accident occurred in the Zion-Mt. Carmel Tunnel. The cause of the accident was speed and inadequate head lamps. Bicyclist Joline Graham sustained minor injuries.