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MAR 18 1981

Memorandum

To: Regional Director, Western Region
From: Superintendent, Yosemite
Subject: Annual Report of the Superintendent 1980

Enclosed is the "Annual Report of the Superintendent" for the Calendar
Year 1980.

(Sgd.) Robert O. Binnewies

Enclosure

DCard:mm1 3/17/81

PARK HIGHLIGHTS FOR 1980

The year 1980 in Yosemite National Park was punctuated by significant events. We had: A flood; structural earthquakes; large and small rockslides; natural and prescribed fires; and the final approval on our General Management Plan. Budget reductions again this year forced us to either do more with less or discontinue some functions. If 1980 was made outstanding by any one thing, it was the team effort put forth by the highly talented and creative Yosemite staff. Despite the many crises, we provided the visiting public with uninterrupted high quality service.

The signing of the General Management Plan by Howard Chapman, Western Regional Director, on September 17 marked a major step forward in the future of Yosemite. With this document in hand, Yosemite began to plan for its implementation.

A team of staff members began to formulate a strategy plan, look into the prospect of private financing of development in El Portal, and make arrangements with the Department of Transportation to do the Transportation Plan.

The internal planning process with Denver Service Center continued. Denver finished the final drawings for the western end of the village mall, and construction began. The final surveying and landscaping is scheduled to be finished in the spring of '81. DSC also began the comprehensive design process for El Portal. Several community meetings were held. The phase-in plan for the El Portal site is scheduled to be completed in March of '81.

Each division in Yosemite had some unique problems and accomplishments. What follows is a breakdown by division of these:

ANNUAL REPORT OF THE SUPERINTENDENT

Resources Management

The first officially declared flood since December 1964 occurred on January 13 and 14, 1980. A number of Valley meadows were inundated and, at the peak of the flood, three to six inches of water flowed over El Capitan Bridge. Runoff from sustained rainfall was spectacular from the north walls of Yosemite Valley and resulted in some minor damage to the Yosemite Lodge Annex. However, flow levels and duration were not extreme, and except for the damage mentioned above along with temporary slide closures of Highways 41, 120 and 140, this event was classed as a minor flood.

The first of a long series of earthquakes occurred on Sunday, May 25, 1980. At that time, a very heavy and prolonged quake was experienced in

Yosemite Valley which shook entire houses for up to one minute. This quake came without warning and marked the start of a series of three major and twelve minor earthquakes and aftershocks that shook Yosemite Valley intermittently for approximately 23 hours over the last two days of the Memorial Day weekend.

The earthquakes described above triggered a large number of small rock-slides, especially the short, heavy quake at 12:44 p.m. on May 25. This latter quake caused a slide which destroyed 70 percent of the Sierra Point Trail and seriously injured two people. The same quake triggered a rockslide near Sentinel Rock and a number of other slides throughout Yosemite Valley.

In 1980, the natural and conditional fire management zones remained the same as in 1979. There were 25 natural fires and these burned a total of 6,203.39 acres. This compares with a high of 36 natural fires in 1976, and a previous high of 3711.69 acres burned in 1974. The 2,560 acre Laurel Lake Fire was the second largest natural fire in Yosemite since the program inception in 1972. It resulted from two separate fires ignited on September 8, which eventually burned together. During its most active phase in early October, this fire burned over 300 acres per day making it the fastest spreading natural fire on record in Yosemite. This and other large natural fires burned under what were considered to be extreme fire weather conditions at various times, especially in late September and early October. Even under these conditions all the fires remained low to high intensity surface fires, with crowning occurring on less than 3 percent of the burned area.

The following table summarizes prescribed burning projects for this year:

Unit	Dates	Acres Burned	Cost	Cost/Acre
PW6-10	9/24-12/12	3,040	\$54,327	\$17.87
YV1	9/21-9/22	20	494	24.70
YV3	11/5-11/7	50	1,592	31.84
YV5	9/18-9/19	32	851	26.59
YV14	9/20	10	402	40.20

Yosemite has the only known active Peregrine eyrie in the Sierra Nevada Range. During 1980, two young were documented to have fledged from the nest. Eggshell fragments collected from the nest in 1980 were 13 percent thinned due to DDT. This level of thinning is close to the critical level of 15 percent associated with reproductive failure. Ten birds each from 5 species felt to be potential Peregrine prey were collected and analyzed for pesticide levels. Preliminary data suggest that prey wintering in Latin American countries obtain sufficient levels of pesticide to eliminate the reproductive capability of Peregrine Falcons. Within the next two years, it is anticipated that the Peregrines in Yosemite will no longer be able to rear young.

In 1980, status reports were written for all 26 sensitive plant taxa for which the Park is currently collecting information. These status reports were sent to the Regional Office, the State Rare and Endangered Species Office, and the U.S. Fish and Wildlife Service Endangered Species Office. In addition, all available information on each taxon, including maps, population reports, photographs, articles, and official communications, was gathered into a compendium for the first time.

Reported frontcountry bear incidents, involving 10 percent of the Park, were down to 75 in 1980 compared to 879 in 1975. Reported backcountry bear incidents, involving 67 percent of the Park, totalled 268 compared to 96 in 1975. The continuing high level of Human/Bear conflicts in the backcountry is a great concern and will be the focal point of our Bear Management effort during 1981. Portable bear-proof food containers, weighing 3 pounds and designed to fit inside a backpack, show very promising results. Cost estimates for large scale production from molded plastics average \$3 - \$5 per container after initial mold development. Final testing and design recommendations will be completed in 1981 with containers available for public use in 1982.

Through a hazardous tree removal sale, 2,345 trees containing 1,876,050 board feet were removed from Yosemite National Park during the spring of 1980. The dead trees, of minimum merchantable quality, were sold as surplus personal property. As a result of this sale, \$11,914.32 was remitted to the Treasurer of the United States as "Miscellaneous Receipts."

Concessions Management

A contract commitment was reached for seven new tractors and seven trailers to replace the Park Service owned vehicles used by Yosemite Park and Curry Company at the Mariposa Big Trees Grove.

Dr. David Christianson from the University of Nevada at Las Vegas worked at the Park this summer to develop a planning document for future use of concessions facilities here in Yosemite.

The Concessions Management staff and the Park Sanitarian completed 94% of all required inspections and follow-up inspections on concessions facilities for 1980 fiscal year. This was the most extensive series of inspections ever completed at Yosemite National Park.

All price increases received by the Yosemite Park and Curry Company this year were based on Cooper and Sybrand Comparability Studies. Comparable operations have been located and established for all food service and overnight accommodations.

The Pohono Indian Shop was discontinued as a concessions facility in accordance with the General Management Plan.

Interpretation

The park's first Statement for Interpretation that documents interpretive program objectives; operations and activity overviews; program participation data; and analyses of management concerns, use and user patterns, resource bases, program constraints, costs, and productivity was submitted in 1980.

The new large-format park folder for Yosemite, written by the park staff, was published early in the summer. Distribution to visitors began with the arrival of the first shipment in early July.

The Denver Service Center allocated \$18,000 to the park to staff and operate on an experimental basis four off-site information stations on the approach roads to Yosemite between Memorial Day weekend and the end of September. With the cooperation and support of the U.S. Forest Service, the park employed receptionists to operate information outlets at the Mariposa, Oakhurst, and Lee Vining Ranger Stations and the Inter-agency Information Station near Sonora jointly with USFS personnel. This pilot project was moderately successful in providing visitors enroute to the park advance information about campgrounds, accommodations, and activities and informing them of alternatives when park facilities were full. This cooperative venture also helped strengthen interagency and community relations and promote goodwill.

Remodeling of the Valley Visitor Center information lobby and sales area neared completion. Cabinetmaker Horst Remmling, a masterful craftsman, built a new information desk, bookcases, and other furnishings. The project was a joint NPS-YNHA venture, including cost sharing. A digital electronic information board and two foreign-language translators were also installed.

In the Mariposa Grove, a 600-year-old Sequoia fell the night of January 15.

At Glacier Point the 12½-inch telescope donated by YNHA in 1979 was finally put into use with the completion of a housing fabricated from a modified dumpster. The dumpster is on a caster that allows it to be rolled away on channel tracks embedded in the ground when the telescope is needed for viewing.

Light snow affected the winter program both early and late in the year. The dry fall and late arrival of winter precluded the start of any winter interpretive activities before the end of the year.

A highlight of the year was a new visitor center at Tuolumne Meadows. The former Mountaineering Center, a 1930's-era structure located about a mile west of the old contact station situated at the entrance to the campground, was refurbished, new exhibits and signs were developed, and

the entrance to the park area was realigned. This major undertaking was accomplished with the participation, support, and hard work of personnel in all divisions. The new facility was opened July 4 weekend. Staff apprehension about the building's relatively remote location diminishing its effectiveness were allayed early on; visitor contacts doubled and YNHA publication sales hit a new high.

A Halon fire suppression system was installed in the most vulnerable rooms of the Valley District Building early in the year. Historic preservation funding was allocated for this project.

Cyclic maintenance funding permitted conservation treatment of five historic paintings and 20 original manuscripts.

Relations between NPS and the American Indian Council of Mariposa County continued to improve. Curator Gyer spoke at one of the Council's meetings to discuss the ethnographic collections.

Circulation of materials in the Research Library increased by 35.9% over the previous year. Since 1976 the Research Library has proved increasingly valuable as reflected by an increase in circulation of 103.4%. Total number of people using the facility has increased by 89.8% since 1975.

Additions to the library collection totalled 985 pieces, including 303 books, thereby increasing the total number of volumes to 6,235.

The darkroom was staffed this year, partly on a Volunteer-in-Parks basis and partly by a temporary lab/photographer. More than 2,452 enlargements were produced, 22 park offices were serviced, and numerous photos were produced in response to mail requests. A full-time lab/photographer position is needed to handle the expanded darkroom and photo work. It should be funded by each division on a prorata basis according to the amount of work it requests.

Visitor Protection

We are faced with almost overwhelming challenges. However, we also have a fine team of professionals to accept that challenge. We look forward to the coming visitor travel season with some reservations knowing the problems that will arise without enough resources to meet them. We will find the ways to do the job in the most efficient manner and to the best of our collective abilities.

Summary statistics for the Division of Visitor Protection are as follows:

1. Flood emergency - Merced River crested on Jan. 13 at 10.5 ft. at the Sentinel Bridge. El Portal was cut off and trailer court evacuated.
2. Cliff Jumping program - 120 illegal jumps, 324 legal jumps (began Aug. 1 and terminated Sept. 9, 1980), 10 serious injuries, 15 arrests & 35 citations. This activity will not

be permitted again.

3. Fatalities - 25 total including 4 drownings, 3 climbing falls, 6 hiking/scrambling falls, 3 from falling rocks, 1 horseback, 1 MVA, and 6 heart attacks. A total of 17 Boards of Inquiry were held.
4. Trail Closures - Sierra Point Trail obliterated May 25 by earthquake; Mist Trail below Vernal Falls closed October 17 by rockslide caused by tree roots; Yosemite Falls Trail closed November 16, 1980 by rockslide caused by exfoliation which obliterated 48 switchbacks, killed 3 people and seriously injured four more.
5. Hang Gliding Program - 495 successful flights (June 7-Sept. 30, 1980)
6. Ambulance responses - 255 runs made by the Valley Ambulance (advanced techniques used 43 times) and an additional 40 (approx.) runs made from the outlying Districts.
7. Ski injuries - Total of 296 major injuries (referable to a doctor) were handled by NPS and pro-patrol personnel at Badger Pass.

Accident rate was 3.5 injuries per 1000 skiers (3.1 per 1000 in 1978-79).
8. Nordic Skiing - Over 18,000 X-C skiers used the marked trails at Summit Mdw., Crane Flat and other backcountry destinations. The Ostrander Ski Hut has a total of 1389 skiers in 119 parties.
9. Backcountry Use - A total of 21,263 parties (61,025 individuals) used the backcountry 158,875 use nights. Day use is very high with a sample count taken at Vernal Falls Bridge of 2,840 during an 8 hr. period 7/4/80. The trail crew averaged 400 people per day in May on the Yosemite Falls Trail and 250 per day in August on the Glen Aulin trail.
10. Law Enforcement 1980 Incident Summary:

		<u>Closed</u>	<u>% Closed</u>
Part I Offenses	1162	238	20.4%
Part II Offenses	5929		
Misc.	888		
Misc. Citations	2326		
Custodial Arrests	522		
Court Actions	1436		
Services to Public	4086		100%
Motor Vehicle Accidents	446		100%
Tort Claims	30		30%
Deaths/Boards of Inquiry	25 (17 B.O.I.)		
Lost/Found Transactions	7500		
Case Incident Records	14023		

11. Fire Management - Summarized as follows:

	<u>1980</u>	<u>1979</u>
Fires Suppressed	107	206
Natural Fires	21	6
Management Fires	6	4
Research Fires	0	1
Total Man-caused Fires	82	206
(Percent of Total Fires)	65%	95%

Summary of Helicopter Use:

	<u>Fire Use: Hours</u>	<u>Flight Cost</u>	<u>Availability Cost</u>	<u>Total Cost</u>
N.P.S.	97.7	\$28,229	\$161,248	\$189,477

	<u>Initial Attack</u>	<u>Additional Flights</u>	<u>Number of Passengers</u>	<u>Pounds Cargo</u>	<u>Retardant Gallons Dropped</u>
N.P.S.	48	49	287	35,000	5,000

	<u>Number of Rescues/Jobs</u>	<u>Hours</u>	<u>Cost</u>	<u>Pounds Cargo</u>	<u>Number of Passengers</u>
SAR Use	48	46.8	\$12,095	11,125	195
Admin. Use	53	82.2	\$23,668	78,315	241
Recon/Pre-Sup	8	6.5	\$ 1,857	10,310	51

Structural Fire Summary:

Arson Fires	2
Accidentally Caused Fires	101
False Alarms	10
Total Number of Alarms Responded to	113
Total No. of Calls Received on Fire Phone	459
Amount of Damage to Govt. Property	\$ 732.00
Amount of Damage to Visitor Property	71,008.00
Amount of Damage to Concessioner Prop.	139,840.00
Amount of Damage to Other	5,519.50
Structural Fire Property Damage	\$ 217,009.50

12. Search and Rescue Summary:

Total of 151 SAR Operations in 1980 - Increase of 27 over 1979 (162 persons rescued, 96 injured persons, SAR Ops. on 18 body recoveries).

ONPS - 2,090 regular time - 477 hrs over 1979

ONPS - 2,227 hrs. overtime - 946 hrs over 1979

Non-ONPS - 711 hrs. - 441 hrs over 1979

\$13,766.27 worth of programmed ONPS time - \$4,007.83 over 1979

\$55,506.27 worth of non-programmed costs (O.T., Helo., etc.) -
\$27,210 over 1979

\$79,394.00 were the costs paid by other agencies or volunteers -
increase of \$42,985.57 over 1979.

The foregoing statistics tell a story of work accomplished, and we should celebrate the fact that everything went as well as it did and none of our employees were seriously injured in the operations mentioned above. One of the real dangers of the personnel cuts is the fatigue factor which leads to accidents. This is one of the problems we face this coming visitor season.

Administration

The summer of 1980 was highlighted by the move to the El Portal Administrative Office by the Fiscal Office, along with Research and the Planning Divisions. The Administrative Officer, Financial Program Specialist and Accounting Technician remained in the Valley. Many said it couldn't or shouldn't be done and voiced concerns as to the inconvenience, etc. In spite of the many changes it has proved to be functioning as well in the new location. Where there have been minuses in the move, we have added pluses.

The highlights from the warehouse were as follows:

Negotiated with Naval Reserve Unit to conduct annual warehouse inventory and reorganization of El Portal storage area during their scheduled two week active reserve duty, February 7 through 20, 1981.

Located abandoned fuel stations and negotiated for their removal with Naval Reserve Unit.

Disposed of old pump house at Happy Isles, the Degnan residence, and Masonic Hall, all located in Yosemite Valley.

Installed a credit card activated fuel dispensing system in maintenance area of Yosemite Valley.

Escalated mess operation to accommodate an estimated 125 personnel for summer season 1980.

Installed higher degree of accountability in the reporting of the park's capital inventory, resulting in lost items being found through cross-checking between divisions.

Formulated and implemented project "CRAP" (Consolidated Removal of Antiquated Properties).

NPS fuel pumps throughout the park tested for accuracy and repairs made per recommendation by County weight and measures.

The Personnel Office implemented the new performance appraisal system, the new WG Seasonal Hiring Procedures, and the new standards being developed for GS-026 and GS-025. Interim instructions mandate classification of all vacant GS-026 above the 4 level to GS-025 Series. The freeze on hiring from outside the Service caused concern but not insurmountable problems.

Summary of Personnel Actions

Classified 203 positions

Processed 1,649 SF-52's

Processed 11 awards (OSI's, Special Achievement, etc.)

Received 900 Seasonal Park Aid/Tech applications

The Budget Office again was kept very busy keeping up with the changing figures. Yosemite, thanks to good fiscal management, finished FY 1980 on target. The TAP System of Financial Management has been well received by the staff and is proving to be a fine management tool.

Research

The Research Office has been involved in two major studies for the past few years. The first study has the objective to determine the role fire plays and has played in the various ecosystems of the park, and to develop methods for the management of fire. Two phases of the project are currently underway; the refinement of prescriptions and the characterization of Sierra Nevada coniferous fuels. A total of 67 fire behavior plots were monitored for fuel, weather, and fire parameters on four different prescribed fires. These data were added to the fire behavior data base. Data from previous fires were reanalyzed using the TI-59 programs. The field portion of the fuel characteristics study was nearly completed during the year. A total of 71 plots were sampled for average secant, average diameter, and weight for five size classes of woody fuels, and for weight for four ground and three vegetative fuel layers. Fuels from 28 of the plots have been dried in the oven and weighed.

The objective of the second study is to determine carrying capacities for the backcountry based on physical, ecological, and human factors; and to develop a management system to keep backcountry use within those capacities. Primary efforts this year went into the publication of articles on wilderness permit compliance and validity, backcountry travel time behavior, and the effects of use limits on backcountry visitation trends. Preliminary work also done on preparing permits for the trailhead quota program and for the Wilderness Use Simulation Model.

Maintenance

Motley Construction Company began installation of a new 12,000 volt primary line in the Valley. Contract number 8800-9-0014 for \$348,134.16.

H.T. Engineers and Contractors began project to place 12,000 volt power-line underground from Powerhouse to existing underground line near Pohono Bridge. Contract No. 8000-0-0041 for \$254,841. The same company was also awarded Contract No. 8000-1-0005 for \$76,783 to replace a worn out circuit breaker with a vacuum switch at the Powerhouse.

Penstock was damaged in February by a rockslide and was out of service for 20 days.

M. E. Seebeck and Sons Construction Firm drilled four wells in El Portal under contract number 8000-0-9002 for \$131,000. System to be connected in 1981.

Preliminary design study began by the Denver Service Center for the Wawona Wastewater Treatment Plant, the White Wolf spray field and the El Portal Wastewater Treatment Plant revisions.

A new filter and storage tank was placed in service on Vernal Falls water system.

El Portal Well #1 was contaminated requiring sterilization of entire water system. The well was sealed against further contamination. A pressure filter system was installed on Moss Creek intake.

The El Portal Administrative/Fiscal trailer offices were brought in and made operational.

The Degnan's Bakery was relocated from Yosemite Valley to the Pioneer History Center in Wawona by Contract, CX8800-0-0039 for \$48,750.

The Masonic Hall was razed and the Donohoe/Degnan residence was moved from the Valley by contract.

The Valley Visitor Center pilot solar heating project was completed by NASA, Order Number H-2726313.

The Tioga Road was open on June 6th. The road was opened later than the historic Memorial Day opening due to travel and budget constraints.

Approximately 85% of the west end of the Valley Mall reconstruction was completed.

\$73,400 of emergency funds were received to repair road damages on routes 41, 120 and 140, caused by heavy rainfall during January. Work was completed by April 20, 1980.

Safety

1. We established requirements and approved plans for the Fire/Life Safety alterations made in the hotels in the Park.
2. We upgraded Park safety programs. Our new program is being used as a model plan for several parks in the region.
3. We implemented a chlorine spill disaster plan for Yosemite.
4. We implemented a plan to handle and store PCB oils to be disposed of. This plan will be sent to all the parks in the region.
5. We established and implemented an inspection and safety plan for concessioner's horse operation.
6. We conducted an annual inspection of all of the facilities in the Park, which consisted of 310 separate inspection units. This generated an additional 281 inspections in 15 days and 271 follow-up inspections in 30 days.

1980 was a very busy year for the Safety Office with several new requirements imposed on us by the new Department of Labor OSHA Regulations.