# TABLE OF CONTENTS

I. **ADMINISTRATION**

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Telecommunications Services</td>
<td>1</td>
</tr>
<tr>
<td>1. Radio Communications</td>
<td>1</td>
</tr>
<tr>
<td>2. Telephone Communications</td>
<td>1</td>
</tr>
<tr>
<td>3. Data Communications</td>
<td>1</td>
</tr>
<tr>
<td>4. Old Faithful Geyser Monitoring</td>
<td>1</td>
</tr>
<tr>
<td>B. Program Analysis</td>
<td>1-2</td>
</tr>
<tr>
<td>1. A-76</td>
<td>1-2</td>
</tr>
<tr>
<td>C. Energy</td>
<td>2</td>
</tr>
<tr>
<td>D. Budget and Finance</td>
<td>2-3</td>
</tr>
<tr>
<td>E. Data Processing</td>
<td>3</td>
</tr>
<tr>
<td>1. Supply Inventory</td>
<td>3</td>
</tr>
<tr>
<td>2. Purchase Orders</td>
<td>3</td>
</tr>
<tr>
<td>F. Personnel</td>
<td>3-4</td>
</tr>
</tbody>
</table>

II. **CONCESSIONS MANAGEMENT**

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Hamilton Stores, Incorporated Litigation</td>
<td>5</td>
</tr>
<tr>
<td>B. Offer &quot;to Sell of West Thumb Facilities&quot;</td>
<td>5</td>
</tr>
<tr>
<td>C. Review of TW Services, Incorporated Contract</td>
<td>5-6</td>
</tr>
<tr>
<td>D. Comparability Study</td>
<td>6</td>
</tr>
<tr>
<td>E. Winter Operation</td>
<td>6</td>
</tr>
<tr>
<td>F. Concessioners</td>
<td>6-7</td>
</tr>
<tr>
<td>G. Capital Improvement and Maintenance Program (CIMP)</td>
<td>7</td>
</tr>
<tr>
<td>H. Rehabilitation of Concessioner Facilities (Pkg. 620)</td>
<td>7</td>
</tr>
</tbody>
</table>

III. **INTERPRETATION**

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. General</td>
<td>8-9</td>
</tr>
<tr>
<td>1. VIP Program</td>
<td>8</td>
</tr>
<tr>
<td>2. Yellowstone Library and Museum Association</td>
<td>8-9</td>
</tr>
<tr>
<td>B. West District</td>
<td>9-10</td>
</tr>
<tr>
<td>1. West Yellowstone</td>
<td>9</td>
</tr>
<tr>
<td>2. Madison Junction</td>
<td>9</td>
</tr>
<tr>
<td>3. Old Faithful</td>
<td>9-10</td>
</tr>
<tr>
<td>C. South District</td>
<td>10-11</td>
</tr>
<tr>
<td>1. Winter Operations</td>
<td>10</td>
</tr>
<tr>
<td>2. Summer Operations</td>
<td>10-11</td>
</tr>
<tr>
<td>D. North District</td>
<td>11-12</td>
</tr>
<tr>
<td>E. Curator</td>
<td>12</td>
</tr>
<tr>
<td>F. Special Projects Unit</td>
<td>12-13</td>
</tr>
</tbody>
</table>
IV. MAINTENANCE

A. General ........................................... 14
B. Buildings ........................................... 14
C. Utilities ........................................... 14
D. Quarters ........................................... 14
E. PRIF ............................................... 15-17
F. Roads and Front Country Trails .................... 17-18
G. Backcountry Trails ................................ 18-19
H. Operations ......................................... 18-19

V. RESEARCH

A. General ........................................... 20
B. Research in the Park ............................... 20

VI. RESOURCE MANAGEMENT AND VISITOR PROTECTION

A. General ........................................... 21
B. Law Enforcement ................................... 21
C. Fish and Wildlife Management ....................... 21-23
   1. Major Fishery Resources Accomplishments in 1984.. 21-22
   2. Wildlife Management .............................. 22-23
   3. Threats to the Park Resources and Monitoring .... 23-24
D. Wilderness and Backcountry Management .............. 24
E. Park Visitation ..................................... 25
F. Lost and Found Summary ............................ 25
G. Fee Collections .................................... 25
   1. Entrance and Golden Eagle ....................... 25
   2. Campground Fees ................................ 25
H. Permits .............................................. 26
I. Central Communications Center Records Summary .... 26
J. Fire Management ..................................... 26-27
   1. Structural Fire .................................. 26
   2. Wildland Fires ................................... 26
   3. Air Operations .................................. 26-27
K. Forestry Program .................................... 27
   1. Forestry Crew .................................... 27
   2. Exotic Weed Control .............................. 27
   3. Hazard Trees ..................................... 27

VII. SUPERINTENDENT'S OFFICE

A. Public Information Office ......................... 28-33
   1. Personnel ........................................ 28
   2. General Information Services ................. 28-29
   3. News Releases ................................... 29
   4. Media Relations .................................. 29
   5. Official Visitors ................................. 29-30
   6. Filming Permits .................................. 31
7. Meetings and Conferences
8. Special Events
9. Photo/Slide Requests
10. Publication Editing Requests
11. Special Projects

VIII. OTHER

A. Auxiliary Programs
1. A Christian Ministry in Yellowstone National Park

B. Status of Planning
1. Old Faithful DCP
2. Lake/Fishing Bridge/Bridge DCP
3. Fishing Bridge Ecological Report
4. Winter Use Plan
2. General

C. Safety Program

Visitation Statistics
I. ADMINISTRATION

A Special Use Permit was issued to the North Yellowstone CABLE Company of Gardiner, Montana, to provide an underground CABLE-TV System in the residential and concession areas of Mammoth Hot Springs. Construction and satellite dish installation was completed in November and the new system offers ten television channels including public broadcasting.

A. TELECOMMUNICATIONS SERVICES:

1. Radio Communications:

   Yellowstone's new radio system served the Park well this past year. The new scene-of-action equipment was deployed and used successfully to support several emergency situations including an extended search and rescue effort, the surveillance activities following the fatal bear mauling, and a major interagency law enforcement arrest action.

2. Telephone Communications:

   We have continued to evaluate the impact of the divestiture on our costs and services and some progress has been made in establishing a bargaining position with Mountain Bell. Costs are increasing. We will continue to place emphasis on the development of a plan. Service at Mammoth was upgraded to touchtone dialing using some 200 telephone sets purchased and installed by the government.

3. Data Communications:

   A data-over-voice communications system that allows the simultaneous use of existing telephone extensions for both telephone and the operation of computer peripherals has been purchased and installed.

4. Old Faithful Geyser Monitoring:

   Equipment has been purchased to implement an automated system, using INFRA-RED pyrometer and computer storage techniques to monitor and store interval and duration data on the Old Faithful Geyser. Plans call for installing the system in 1985 and adding other geysers in the future.

B. PROGRAM ANALYSIS:

1. A-76:

   Two activities were analyzed and offered for contracting during the year. The first, Solid Waste Collection and
Disposal, was advertised in mid-summer with no bidders responding; therefore, the Government's bid was not opened. However, there was an involved protest which was resolved in the Government's favor.

The second activity, Custodial Services, went out for bid about the same time as Solid Waste, but the only bidder was much higher than the Government and a resulting protest has been resolved in the Government's favor.

C. Energy:

Contractor warranty work on the park's residential solar water heaters was completed during the year and all units are now operable. They continue to require more maintenance than conventional systems, but are generally effective and economical, at least during the warmer half of the year. An annual savings of about 3,000 gallons of heating oil has been achieved.

Park-wide, heating oil consumption in fiscal year 1984 was lower than in 1983 and is down by 40% from the peak year of 1975. Also, gasoline used in park vehicles matched the lowest level in the past ten years although diesel fuel use was higher because of increased emphasis on road repair. Electricity consumption, too, was high because of process-energy requirements for the new water and sewer plants.

D. Budget and Finance:

Final FY 84 budget for the park was:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONPS</td>
<td>$ 12,200,400</td>
</tr>
<tr>
<td>General Management</td>
<td>$ 436,000</td>
</tr>
<tr>
<td>Interpretation</td>
<td>590,300</td>
</tr>
<tr>
<td>Resource Management and Visitor Protection</td>
<td>2,308,100</td>
</tr>
<tr>
<td>Maintenance</td>
<td>6,997,000</td>
</tr>
<tr>
<td>Concessions</td>
<td>273,600</td>
</tr>
<tr>
<td>Administration</td>
<td>1,310,100</td>
</tr>
<tr>
<td>Research</td>
<td>285,300</td>
</tr>
<tr>
<td>Education of Children</td>
<td>475,000</td>
</tr>
<tr>
<td>West Yellowstone Fire Base Support</td>
<td>39,000</td>
</tr>
<tr>
<td>Park Restoration &amp; Improvement Program (PRIP)</td>
<td>931,000</td>
</tr>
<tr>
<td>Seasonal Sanitarian</td>
<td>18,600</td>
</tr>
<tr>
<td>Volunteers-in-Parks</td>
<td>5,500</td>
</tr>
<tr>
<td>Construction, Line Items</td>
<td>5,687,000</td>
</tr>
<tr>
<td>Grizzly Bear</td>
<td>263,380</td>
</tr>
<tr>
<td>Federal Lands Highway Program</td>
<td>283,000</td>
</tr>
<tr>
<td>PRIP - Cultural Resource</td>
<td>169,107</td>
</tr>
</tbody>
</table>
Construction, Lump Sum 174,000
Management Trainee 21,000
Geothermal Studies, Yellowstone 161,400

Total Park Budget $ 20,432,387

E. Data Processing:

Late in the year, we received a new Datapoint 8640 Processor with three 9327 hard disk drives. This gave us 120 megabytes of additional disk storage, plus a 10 megabyte removable disk pack, providing more storage capacity for all users, as well as sufficient memory to accommodate demand. In addition, having a second or "backup" system provides for continuing computer use in the event that one of our systems is under repair. This increase in capacity also provided sufficient storage and memory to allow use of these new application systems which were developed during the summer and fall.

1. Supply Inventory: This system tracks all items in supply by:

   a. instantly modifying the average cost with each new purchase.
   b. keeping a running count of numbers on hand.
   c. generating regular output reports of supply status monthly, or upon demand.

2. Purchase Orders: This system provides for the input of purchase orders, with verification that no duplicate purchase order number exists. Information is then distributed in the following ways:

   a. sent to the printer for printing on purchase order forms.
   b. updates the local supply system.
   c. updates the local cost tracking system.
   d. supplies information in the proper format for the Regional and Washington cost systems.

F. Personnel:

This year, Personnel implemented the PAY/PERS system for Yellowstone. Implementation occurred at the busiest time of the year in regards to other personnel functions. A tremendous amount of effort was required to resolve systemic problems and coordinate changes and functional relationships with our Regional Office and the Central Payroll Office. All work was accomplished in a timely manner, very little overtime work was required, and all other personnel functions were completed.
In July of 1984, the Regional Office conducted a Personnel Management Evaluation of Yellowstone National Park. The Personnel staff met the demands of this evaluation while maintaining on-going functions without disruption. The evaluation identified numerous problem areas. Corrective actions have been taken to resolve most of the problems identified, while we anticipate resolution of those not yet addressed by April 1985. The Personnel staff is continuing efforts to improve the regulatory aspects of our personnel program while, at the same time, improving our service to the public and park employees.
II. CONCESSIONS MANAGEMENT

A. Hamilton Stores, Incorporated Litigation:

On September 27, 1984, Hamilton Stores, Inc. filed a complaint against Secretary Clark and others alleging breach of contract and requested relief in the amount of $40 million. Hamilton Stores asserts that it had a preferential right to provide gifts, fast food, and gasoline services throughout Yellowstone and that the breach resulted from the NPS entering into a concession contract with TW Services, Inc. to provide these and other services.

The NPS and the Solicitor's Office have filed a motion for dismissal.

B. Offer to Sell of West Thumb Facilities:

Negotiations were completed for execution of an Offer to Sell with Hamilton Stores for West Thumb facilities. The offer was dated July 28, 1984. The United States agreed to pay $492,000 to Hamilton Stores for specified assets payable upon acceptance of the offer. The United States is responsible for restoration of the land to a natural condition and removal of the facilities as well as the cost for removal and demolition of the property. The United States agreed to pay Hamilton Stores $20,425 at the time of the agreement for the removal of personal, moveable property. Any costs above this amount will be borne by Hamilton Stores.

C. Review of TW Services, Incorporated Contract:

The TW Services, Incorporated concession contract for services in Yellowstone is for five years and shall be continued for five additional years on the same financial arrangement "unless upon written notification to the concessioner prior to November 1, 1985, the Secretary determines that the contract shall be for five (5) years only."

Studies are now underway in Yellowstone which will provide a basis for the decision to either continue on essentially the same arrangement as exists under the contract or enter into a new contract on a new basis. The focus of the studies centers on the following issues:

a. investment needed to get facilities up to standard;

b. future of the bus operation;

c. future of the service stations (they are owned half by NPS and half by Hamilton Stores, but operated through a joint venture between TW Services and Hamilton Stores); and,
d. the economic feasibility of TW Services taking on any particular obligation or combination of obligations.

D. Comparability Study:

Prior to approval of 1984 lodging rates, a comprehensive comparability study was conducted by the Concessions Office. This study provided the basis for holding the lodging rates within reason (comparability) and proposed increases to a minimum.

E. Winter Operation:

TW Services opened the Mammoth Hotel for the third winter season on December 21, 1984. As expected, operation of the hotel and winter services has become very successful; so successful that this year it became a financially attractive operation. The Old Faithful Snowlodge continues to be popular to winter visitors.

F. Concessioners:

TW Services, Incorporated reported 681,424 overnight guests during the summer of 1984. During the same period, 1,458,607 meals were served in TW Services' food service facilities. This compares to 658,016 overnight guests and 1,600,611 meals during the same period in 1983. The renovation of many of the park's facilities by TW Services has greatly enhanced visitors' enjoyment of the park. Two hundred rooms were added at Grant Village along with a new restaurant, registration building, and gift shop during the 1984 season. They also operated a steak house-type restaurant which offered lower priced food service at the Grant Village marina facility.

Hamilton Stores, Incorporated reported an increase in sales of approximately 9 percent. Hamilton Stores expanded their services within the park with the opening of a new 25,000 square foot store at Grant Village and a 35-room employee dorm. The store is spacious, well-merchandised, and attractive.

Yellowstone Park Service Stations sold 2,793,868 gallons of gasoline in 1984 compared to 2,855,793 in 1983. The West Thumb Service Station closed this fall and will be removed in accordance with the park's Master Plan.

West Park Hospital reported treating 5,262 outpatients and 74 inpatients. NPS purchased approximately $43,000 worth of equipment to replace antiquated equipment at Lake Hospital. The items included:

- blood gas analyzer
- (2) lifepack 7 portable monitors and defibrillators
cardiac monitoring system
- x-ray processor

G. Capital Improvement and Maintenance Program (CIMP):

This was the third year that TW Services committed 22 percent of their gross revenue toward capital improvements and repair and maintenance (R&M) of the facilities they operate. Expenditures and improvements included $450,000 for the Lake Hotel Lobby Restoration. The Lake Hotel Lobby Restoration leaves room renovation as the final step in the involved process which included kitchen renovation and foundation repair. NPS is responsible for repairing and painting to the hotel's exterior. The effort started in 1983, to upgrade standard cabins was continued in 1984 at Canyon Village by painting the interior of the majority of the cabins. Carpeting was also purchased to be used as needed in the cabins.

H. Rehabilitation of Concessioner Facilities (Package 620):

This year, an FY 82 project in the amount of $379,837 for reshelining of the Old Faithful Inn was completed. All FY 83 Package 620 projects were either underway or completed, carrying a total of $6.6 million. A contract in the amount of $7.9 million was awarded for boiler and laundry rehabilitation. This program calls for replacement of boiler plants at the Old Faithful Inn, Old Faithful Lodge, Lake Hotel, Lake Lodge and Mammoth, and a new laundry at Gardiner to replace the Old Faithful and Lake laundries.
III. INTERPRETATION

A. General:

Several staffing changes occurred in the Division of Interpretation during 1984. Norman A. Bishop served as Staff Interpretive Specialist until his position was rewritten as Assistant Chief of Interpretation. Under the staff position, he was able to concentrate on central issues, and provided hundreds of pages of material on management and natural history to field stations during the summer of 1984. William Laitner joined the Interpretive Staff on April 1 as the South District Naturalist. Bill transferred to Yellowstone from Guadalupe Mountains National Park.

In September, the Interpretive Planning Team made an intensive two-week visit to Yellowstone. Working closely with our staff, the team addressed such subjects as: museum exhibits, wayside exhibits, publications, and audiovisual needs. A draft Interpretive Prospectus was developed from the team's recommendations.

1. VIP Program: Yellowstone's VIP Program, which is coordinated in the Division of Interpretation, continued to grow in 1984, with an allocated budget of $9,700. There was a 32% increase in the number of volunteer hours for FY 84 over those recorded in FY 83. The total number of volunteer hours was 17,988, with 117 active VIP's participating in the program. Every division utilized volunteers in some capacity including trail maintenance, research data collection, interpretation and visitor service contacts, geyser monitoring, and as campground hosts.

2. Yellowstone Library and Museum Association: During 1984, our cooperating association, Yellowstone Library and Museum Association (YLMA), provided $74,082 worth of aid to the Division of Interpretation. These monies were utilized in having our "Explore Yellowstone" brochure and other leaflets printed, to covering costs of annual training for all interpreters, and to paying salaries of librarians in the research library.

The position of Executive Director of YLMA was created to coordinate all the activities of the association. Gene Ball was selected for that position in October. Gene's responsibilities also encompass overseeing the Yellowstone Institute. In the period of June 1 to September 1, twenty-eight courses were given at the Institute, with 314 individuals participating. Classes on a variety of subjects were offered including zoology, plant life, history, and geology.
At the Cooperating Associations Conference held in November, the YLMA publication "Freshwater Wilderness," by John Varley and Paul Schullery, won two awards. The Director's Award for professionalism in publications and the National Park Service Award for excellence in publications were presented to Geri Hape, YLMA Business Manager.

B. West District:

1. West Yellowstone: No regular seasonal interpretive personnel were assigned to the West Yellowstone area this year. However, the District Naturalist gave two programs at the Stagecoach Inn to special groups during the 1983-84 winter season, and the Chief Naturalist's Office hired an information receptionist to work in the West Yellowstone Chamber of Commerce Information Office four days per week from July 4 through September 3.

2. Madison Junction: TW Services, Incorporated, set up the same portable warming hut for the 1983-84 winter season that had been used during the previous winter. Snowmobilers repeatedly expressed appreciation for the various warming huts around the park. Interpretive activities were offered at the hut and along the roadway.

The Madison Museum was opened on a daily basis again during the 1983-84 winter season and throughout the summer season as well. The new exhibit project for the museum is still in the planning stages.

Cheryl Schreier was hired as the winter seasonal naturalist for the Madison area. She provided interpretation and information for snowmobilers and snowcoach passengers as they stopped at the warming hut. She also contacted visitors along the roadway while they stopped at points of interest.

3. Old Faithful: During the winter season (December 16 - March 11), the visitor center was open between 9 a.m. and 4:30 p.m. Evening programs were conducted at the visitor center between 8 p.m. and 9:30 p.m. daily.

Visitor center attendance for the winter season was 11,137. A total of 794 visitors participated in the 131 guided trips while 4,686 attended the 96 evening programs. Eleven skills demonstrations were attended by 56 persons. The geyser movies were shown 11 times to a total of 54 visitors.

Although the west side of the park opened to wheeled vehicles in late March, the visitor center did not open for the summer season until April 19 due to budget constraints.
The summer staff consisted of 1 GS-4, 10 GS-5, and 2 GS-6 park technicians (including the campground position).

For the summer, approximately 492,336 visitors entered the visitor center; 144,035 attended the 3,007 audio visual showings; 7,024 participated in the 298 guided trips; and 41,838 came to the 445 evening programs. A total of 3,788 participated in the 101 skills and demonstration activities while 32,009 were contacted during 877 hours of roving and informed contact.

Diversity and creativity were strongly urged resulting in many new activities offered as well as new themes and topics being included that were previously given only minimal attention. It was a highly productive summer.

C. South District:

South District Interpreters provided interpretive services at Canyon, Fishing Bridge, Lake, Grant Village, and Lewis Lake.

1. Winter Operations: During the winter of 1983-84 the warming station at Canyon was staffed by a full-time, paid employee while the warming station at West Thumb was staffed intermittently by volunteers. The warming huts were open from mid-December to mid-March. During the winter of 1984-85 the staffing at Canyon remained the same as during the previous winter. At the West Thumb Warming Hut one full-time seasonal and one two-day-per-week seasonal were hired to meet minimal needs there. Interpretive activities included Canyon Rim snowmobile tours, walks in the West Thumb Geyser Basin, and guided ski trips in both areas. In 84-85, interpreters presented a variety of short programs in the warming huts. They are also developing a variety of new interpretive exhibits for both areas.

2. Summer Operations: Summer staffing remained essentially the same as in the previous summer. Canyon was staffed by nine paid seasonal employees and one full time Student Conservation Aid. Fishing Bridge was staffed by nine paid seasonal employees and one full time student intern. Grant Village was staffed by four paid seasonal employees and one full time student intern. Visitor centers opened the last week in May and closed in mid-September except for Canyon which closed the third week in September.

Statistical highlights include 828 walks and hikes with over 24,000 visitors attending; 335 evening campfire programs with 100,000 in attendance; 500,000 entered the 3 visitor
centers; and 44,000 watched our automated slide programs or movies. Grand total contacted was 750,000 visitors.

During the summer, all interpretive activities in each area were published in biweekly newspapers at Canyon, Fishing Bridge, and Grant Village. These newspapers, with the "Explore Yellowstone" brochure, provided a complete listing of all interpretive activities.

Interpretation, again this summer, provided 32 hours of work per week at the Canyon, Fishing Bridge, Bridge Bay, and Grant Village Campgrounds.

The new Canyon movie "The Faces of Yellowstone," was installed and received extremely favorable comments from park visitors.

Late in the summer a new eight-foot by ten-foot fiberglass relief map of the park was installed in the Grant Village Visitor Center. It should be frequently used in 1985 for general orientation and for specific interpretation.

D. North District:

The North District Interpretive Staff provided interpretation and information at Mammoth Hot Springs, Norris, and Tower. During the summer, there were five seasonal interpreters and one Student Conservation Association aid at Mammoth, five at Norris, and one at Tower, a reduction of three positions from 1983. The two members of the Division's Special Projects Unit supplemented this staff. These employees also contributed 80 hours per week to the operation of Norris and Indian Creek Campgrounds. The winter 1983-84 staff included two seasonal interpreters and one full-time volunteer at Mammoth.

The Albright Visitor Center at Mammoth was open every day of the year, serving 242,240 visitors in FY 84, a decline of 5.8% from FY 83. The Norris Museum was open from June 1 through September 30 and served an estimated 551,000 people. A large number (33,444) of people participated in 192 different programs (1,043 individual presentations). Another 36,843 people were contacted during interpretive roves in 11 locations. The majority of the programs presented in 1984 were new, showing the determination of the staff to keep the art of interpretation a lively one with the goals of better serving the public and protecting the park.

Volunteers contributed significantly by assisting at the visitor center desk in winter, cataloging hundreds of items into the library's vertical files, and gathering large quantities of data on the hot springs at Norris during the summer. All these
activities freed interpreters to provide a larger and more varied program.

Geological developments on the Mammoth Hot Springs included the draining of Bath Lake, a decrease in the activity of the large unnamed spring across the road from the lake, a continuation of the rapid growth of Minerva and the formation just south of Narrow Gauge Terrace, and a modest renewal of Opal Terrace which was dormant during 1983.

The North District Naturalist also serves as Park Historian, maintaining the park archives and supervising the Park Curator and Librarians. The library served 476 National Park Service and 310 non-Service patrons in addition to daily use by the staff having offices in the visitor center who answer many requests for information. Seventy new books were added and approximately 400 items were catalogued into the vertical files. Almost all financial support for the library is provided by the Yellowstone Library and Museum Association.

E. Curator:

Major projects included working with a contract rare book conservator to complete analysis of book conditions and revise storage; planning seasonal training and preparing materials to supplement sessions, coordinating the production, review, and revision of a variety of publications, coordinating wayside exhibit planning, staffing the Albright Visitor Center, conducting interpretive programs (Camera Safari), and overseeing the Historical Photograph Collection. 674 requests for photographic services were received.

F. Special Projects Unit:

During FY 84 the Division's Special Projects Unit made significant progress on two of its most important projects, Expedition: Yellowstone! and The Yellowstone Game. In addition, the two employees of the unit contributed to the general interpretive effort by assisting with training of National Park Service and TW Services employees, and by working as field interpreters during the summer of 1984.

Expedition: Yellowstone!, a set of curriculum materials for 4th through 6th grades, went from being an idea to several chapters which will soon be field tested by a dozen teachers in Montana. We were able to secure grants of $1,500 from the National Park Foundation and of $5,000 from the World Wildlife Fund to help pay development costs of the project. In addition, we secured a publisher, Roberts Rinehart Company, for the materials. We hope
to have the final publication ready to use with classes of children in the park by the fall of 1986.

The Yellowstone Game, a board game about the interaction of Yellowstone wildlife with the park environment, was developed by the Special Projects Unit in December 1983, and January 1984. A contract for the production of the game was signed in September 1984, by the Yellowstone Library and Museum Association and the Avalon-Hill Game Company. The Yellowstone Game will be distributed nationwide in July 1985. We expect a significant royalty for YLMA from sales of this game, and plan to use the game as part of the Expedition: Yellowstone! school outreach program.

The Special Projects Staff was an integral part of the Division's training program for summer seasonals, and contributed significantly to the 1984 Employee Orientation Program of TW Services, reaching over 2,300 of that company's employees. In addition, a special training program was put on for TW Services' bus drivers.

During the summer season, the Special Projects Staff served on the North District Staff giving walks, evening programs, and operating the Albright Visitor Center. In addition, a special one-man dramatic presentation was given by Jack de Golia, portraying Rudyard Kipling's reactions to his 1889 visit to the park. This program was presented parkwide to over 7,800 visitors in 50 performances.

A slide program on the World Heritage Convention was also presented during the summer by Joe Zarki. In attendance at one of the programs was Ms. Ann Raidl, the Executive Secretary of the World Heritage Convention headquartered in Paris.

Other projects included arranging for the installation of donation boxes in visitor centers, compiling and maintaining a list of interpretive activity ideas, and revising the park's bird check list.
IV. MAINTENANCE

A. General:

Much of the staff's time was devoted to the A-76 program which required approximately five FTE's and $100,000 to produce two biddable documents for contracting during the year. The two activities mentioned under Administration were completed. Work on the third activity scheduled for review, Grounds Maintenance, is proceeding as a part of the new Productivity Improvement Program. The exact extent of this program is still undefined. The VIP bill mandated the implementation of a Maintenance Management system. As with the Productivity Improvement Program, the exact guidelines of this program are still undefined. Yellowstone has begun to prepare for the management program by utilizing work orders and improving tracking on the work completed or needed.

B. Buildings:

Work on park buildings consisted of responding to critical work orders involving repairs necessary to keep the building open and functional. Due to the ONPS funding levels, cyclic and preventive maintenance have been deferred at least another year. Most building repair and rehabilitation accomplished this year was funded under PRIP. The remaining cyclic work was deferred, thus increasing the backlog of necessary work.

C. Utilities:

Work progressed in a manner similar to "Buildings" work. Emergency work was accomplished at the Canyon Village water intake system located on the Yellowstone River just downstream of Chittenden Bridge. In order to provide an assured supply of raw water for Canyon Village for the summer season, an additional intake was installed in the river. Electrical hookups were installed at six park campgrounds for use by the Good Sam/Campground Volunteer Program.

D. Quarters:

North District Quarters work orders and quarters turn-over renovation was handled by a newly-formed quarters crew in 1984. Use of this crew has increased the crew production rate and has resulted in increased effectiveness in handling the routine quarters needs. An additional "portable quarters" building was also completed by this crew, replacing one of the deteriorated "wingfoots" at the CC Camp.
E. PRIP:

Approximately $1 million was obligated by the park during FY 84 on PRIP projects. An additional $10.1 million was obligated by the Federal Highway Administration for park road work. A description and status of each project administered or coordinated by the Maintenance Division is as follows:

1. Rewire Residential Buildings ($322,000): Day Labor - 100% complete. Rewired and replaced fiberboard with gypsum board in buildings #101, 16, 80, 87, 332, 9B, 7C, 7D and the West Entrance Office/Duplex. Some of this work consisted of completing work started in 1983. Upgraded buildings in order to conform to the Life Safety Code requirements. Ungrounded and deteriorated electrical circuits along with extensive use of fiberboard presented a serious fire hazard in these buildings, many of which are part of historic Fort Yellowstone.

2. Replace Asbestos - Heating ($39,000): Day Labor - 100% complete. Removed asbestos insulation from boilers, steam lines and heating ducts in buildings 39, 16, 29 and the Lake Hospital. Replaced with fiberglass insulation.

3. Rehabilitate South District and DSC Offices ($35,000): Day Labor - 100% complete. Rewired and replaced fiberboard with gypsum board in the South District Office and Denver Service Center Office at Lake. Insulated walls and ceilings, replaced plumbing, replaced LPG feed lines and upgraded buildings in order to conform to the Life Safety Code requirements.


5. Rehabilitate Lift Stations ($25,000): Day Labor - 100% complete. Repaired and rehabilitated lift stations at Tower Fall, Canyon, Grant Village and Fishing Bridge. Completed installation of back-up electrical generator station at Fishing Bridge.

6. Repair Obsidian Cliff Exhibit ($10,800): Contract - 100% complete. Repaired structural components and replaced the historical roof.
7. Repair Northeast Entrance Station ($242,000): Contract - 100% complete. Replaced rafter tips by epoxy consolidation and epoxied extensions. Replaced or repaired structural components and replaced the historic roof.

8. Rehabilitate Roosevelt Arch ($64,000): Contract - 20% complete. Repoint stones, replace the plaque, and replace the historic stone and concrete roof. The project will be completed in 1985.

9. Rehab Backcountry Cabins ($40,000): Day Labor - 100% complete. Log replacement, roof reshingling, rechinking, drainage corrections, partial flooring replacement, reconstruction of chimneys, roof jacks and the front steps were accomplished at the Crevice patrol cabin. Major log replacement was accomplished at the Thorofare barn. The remaining work at the Thorofare barn will hopefully be completed with FY 85 PRIP funding.

10. Repair Soda Butte Creek Bridge ($12,000): Day Labor - 100% complete. Spalled concrete on the abutments, beams and curbing was replaced. The excessive existing layers of asphalt were removed and the deck was resurfaced.

11. Repair Obsidian Creek Bridge ($12,000): Day Labor - 100% complete. The deteriorated abutment wingwalls were repaired by reanchoring, recapping and, in one case, total replacement. Curbs were placed at every abutment to protect the undermining of the abutment by stream erosion.

12. Repair Lava Creek Bridge ($12,000): Day Labor - 100% complete. The spalled concrete walks and beam facings were replaced. The excessive existing layers of asphalt were removed and the deck was resurfaced.

13. Rehabilitate South Entrance Road ($7 million): Contract through FHWA - 90% complete. The subbase and base failures were dug out and replaced and the road was resurfaced. Shoulder work, striping, and guardrail installation still remains in the Yellowstone portion of this contract.

14. Replace the Lamar River Bridge: FHWA will complete the design of this project and will shelve the design until replacement is needed. At that time, construction funds will be programmed.

15. Rehabilitate Portions of the Beartooth Highway: Two FHWA Contracts - $1,283,418 - 35% complete, $1,896,967 - 12% complete, for realigning, widening and resurfacing portions of the Beartooth Highway.
In addition to the above 1984 projects, 1983 PRIP projects that were contracted out have the following status:

1. Replace Firehole/Fountain Flat Bridge ($187,000): Contract through FHWA - 100% complete. The bridge was replaced in its entirety.

2. Replace Fishing Bridge Museum Roof: Contract - 100% complete. The contractor completed installation of new sheathing and shingles in mid-summer.

3. Replace Mud Volcano, Fountain Paint Pots, Firehole Lake Drive, Midway Geyser Basin and Terrace Springs Thermal Area Walks ($521,957): Contract - 100% complete. PRIP 8(a) contract to replace deteriorated walks, reroute areas to accommodate greater handicapped access and provide a more efficient view of the natural features.

4. Replace Unsafe Guardrail ($136,000): 1983 contract - 88% complete. The contractor accomplished the replacement of the wooden guardrail along the Northeast Entrance and Dunraven roads. Staining and some hardware installation still remains.

5. Hoodoo Slump Repair ($89,044.83): Contract - 100% complete. Horizontal drains and an underdrain were installed to collect the water that is causing the sunken road fill near the Hoodoo Slump area. Some of the horizontal drains were running water. Only time will tell if this construction helps stop or slow down the slippage.

F. Roads and Front Country Trails:

Deteriorated asphalt and boardwalks at the Old Faithful, Mammoth and Norris thermal areas were replaced. A new boardwalk and view deck were constructed at LeHardy Rapids.

The stone walls along the road to Mount Washburn were repaired to prevent erosion of the roadway.

A contract for roadway striping was awarded, but weather prevented any striping until 1985. Forty thousand cubic yards of road aggregate was also contracted for ONPS and FHWA day labor projects.

National Park Service crews completed major rehabilitation work along the Grand Loop Road from Mammoth to Tower Junction. This year's main project started at Frog Rock and continued for five miles toward Tower Junction. One parking area was restructured near Petrified Tree and a new parking area was constructed near
Frog Rock. Twenty thousand cubic yards of hot and cold asphalt were produced for use in half-soling and district road maintenance.

Rehabilitation work consisted of flushing and cleaning all drainage systems (culverts, underdrains, and ditches), repairing asphalt gutter, installing 6-inch CMP underdrain, repairing numerous "soft" areas in the road, paving several pullouts, and placing a 2-inch, hot-mix asphalt overlay over the sections involved.

Spring opening of roads was accomplished on schedule. The West Entrance was opened to Mammoth and Old Faithful on March 31, although spring storms caused it to be closed intermittently into May. The road was officially closed on November 2, due to poor conditions. The East Entrance and South Entrance opened on April 18 and both roads were closed to travel on November 2. The Beartooth Highway opened on May 31 and was closed on October 13.

Two elk traps were removed and the area cleaned up in conjunction with the Biologist's Office. The Hamilton's Photo Shop was removed and the area restored in the Mammoth area.

G. Backcountry Trails:

Backcountry trail work was accomplished by three trail crews, but much work remains to try and catch up to the work that was deferred over the last five years. The heavy construction projects accomplished in 1984 are outlined as follows:

1. **Cascade Lake Trail**: Installed culverts, french drains and 120 feet of horse bridges on one mile of trail.

2. **Howell Creek Trail**: Corrected drainage problems and constructed five horse bridges.

3. **Canyon Area Trails**: Redid switchbacks and water bars on the seven-mile hole trail.

4. **Tower Fall Trail**: Worked on the tread, grade, and steps.

5. **Bliss Pass Trail**: Relocated the trail on the west side of Bliss Pass, repaired switchbacks and installed water bars.

6. **Black Butte Trail**: Rerouted 2,200 feet of trail, constructed 3 bridges, and constructed 7,450 feet of new trail.
7. Installed water bars, corrected drainage, and bridged bogs on the Buffalo Plateau, Cache Creek, Must Pass, Observation Point, Grants Pass, Black Butte, Bighorn Peak, Snake River, and Mountain Creek trails.

G. Operations:

As with other facets of the division, the operations portion was hindered by the lack of sufficient cyclic funds. The continued contract hauling of road aggregate kept up the hot mix crew's efficiency. Due to the age of the snowmobile fleet, 36 machines were replaced.

Docks were rebuilt at Trail Creek and a new roof and rafters were completed on the Trail Creek barn. The water system was completed at Lewis Lake, alleviating a problem that has concerned us for a number of years. Buildings 825 and 829 at Canyon were reroofed with metal to increase the life expectancy during the winter.

The Golden Gate viaduct deck holes were repaired via a $45,241 contract and the Fox Creek Bridge was stabilized by day labor forces, both funds from Lump Sum sources.

Work was started on the day labor portion of Package 179, a $264,000 project funded from the Federal Lands Highway Program. Preliminary work consisted of ordering materials and beginning grading at Fishing Bridge Intersection.

Painting of 33 buildings in Mammoth was accomplished by a contract funded by the Jobs Bill. Twelve historical structures included in the total were painted with Fort Yellowstone period colors.
V. RESEARCH

A. General:

Since its reorganization in November 1983, considerable progress has been made towards the consolidation of Yellowstone’s research functions. The Division has been housed, organizational structure established, and the roles and functions of individual scientists have been redefined where necessary. Increased contact and improved working relationships with other divisions in the park, cooperating institutions, and independent researchers are well underway.

The Division now has 12 permanent and 14 seasonal employees working in three general subjects: plant and animal ecology, geology, and the Interagency Grizzly Bear Study Team. In addition, the division serves as policy and logistics advisor to the Fisheries Assistance Office, U.S. Fish and Wildlife Service.

B. Research in the Park:

Yellowstone’s special physical and biological attributes attract researchers from all over the world. During 1984, about 120 research projects were underway in the park; over 94 percent of which were carried out by university or independent scientists. These projects represent the expenditure of about three million dollars in public and private funds. Roughly 25 percent of this total represents National Park Service appropriated monies.

Of the total number of research projects, 63 percent have a biological theme, 37 percent relate to the physical sciences, and less than 1 percent are involved with sociological topics.

Of the 76 biological projects, 32 percent dealt with park animals, 15 percent were involved with plant life, and 16 percent with the flora and fauna living in geothermal systems.

Forty-four projects related to the physical sciences. Broken down further, 21 percent were classic geological topics, 14 percent were involved with geothermal subjects, 1 percent atmospheric sciences, and 1 percent soils.

Public, media, and political interests continue to focus to a great extent on Yellowstone’s resource issues. The medium and long-term strategy for dealing with these issues commands a strong and viable research function. We believe that 1984 represented a major, positive step towards achieving that goal.
VI. RESOURCE MANAGEMENT AND VISITOR PROTECTION

A. General:

There was no major reorganization of the Ranger Division this year. Six subject-to-furlough rangers retired and their positions were filled.

The Student Conservation Association continued to participate in the park, providing 2 high school work groups of 10 each, and 10 student aids for 12 weeks each.

The Good Sam Campground Host program again provided 30 volunteers who worked at backcountry desks and campgrounds throughout the park.

The Youth Conservation Corp was reactivated this year using PRIP funding from a forestry/hazard tree account. A residential camp of 40 teenagers from Wyoming, Montana, and Colorado worked for 8 weeks in the park on a variety of resource projects. The YACC Camp facilities in Mammoth were used as base camp. A seasonal staff of 11 operated the camp under the supervision of the Chief Ranger's Office.

The permanent staff remained the same as in 1983, with the seasonal staff, other than YCC, at 142.

B. Law Enforcement:

Title 36 Code of Federal Regulations was revised and implemented. A compendium of Superintendent's regulations to compliment 36 CFR was also implemented.

Enforcement training in-park consisted of two 40-hour refresher courses, two 16-hour radar certification courses, one 40-hour rangemaster course, and one 8-hour revised CFR course. Rocky Mountain Region Special Events Team had a 40-hour training session, part of which included Yellowstone National Park Rangers, Montana Wardens, U.S. Marshals, and U.S. Fish and Wildlife Service Special Agents. This culminated in Operation Trophy Kill on October 4, wherein more than a dozen subjects were arrested for wildlife violations with assistance of park rangers.

C. Fish and Wildlife Management:

1. Major Fishery Resources Accomplishments in 1984:

   a. Parkwide Projects: Volunteer Fishermen Report (VFR) cards were issued for the eighth year in conjunction
with park fishing permits. Data was tabulated, evaluated, and presented in the Annual Technical Report. Information included in this report consisted of the results of data collected during the 1983 calendar year and encompasses an indepth view of all facets of our project activities.

b. **Aquatic Survey Program**: The backcountry lake survey program completed surveys on two lakes. The stream survey program was accelerated this year and hydrographic surveys were accomplished on 55 streams most of which were in the Lamar River drainage.

c. **Yellowstone Lake**: Spawning trap on Clear Creek was run during the season. Both upstream and downstream runs were enumerated on Clear Creek. The annual gillnetting of Yellowstone Lake was accomplished to evaluate the effects of regulation changes and population trends.

d. **Yellowstone River**: The annual monitoring of the spawning population was accomplished at LeHardy's Rapids.

A substantial amount of time was spent on assistance to independent researchers studying various aspects of the aquatic system.

e. **Lewis Lake**: The Lewis Lake lake trout project was accomplished with sperm collections from over 200 males. The sperm was used to fertilize approximately 1.2 million eggs at the Jackson hatchery for shipment to Lake Michigan.

2. **Wildlife Management**:

a. **Elk**: A late elk hunt was again authorized by the Montana Fish and Game Commission in hunting district 313, north of Corwin Springs, from mid-December 1984 to mid-February 1985. Special permits were used for 4-day and 2-day periods to allow redistribution of the animals 3 days weekly. A record 1,548 animals were harvested.

b. **Bears**: There were 1,835 bear sightings reported in 1984; 1,250 grizzly, 440 black, and 145 unknown species of bear. Five grizzly bear injuries occurred (includes one fatality).

Damages caused by bears totalled $2,841.00; 14 by grizzly ($2,105), one by a black bear ($5.00), and 14 by unknown species of bear ($736).
There were eight grizzly and no black bear relocations within Yellowstone Park, and grizzly relocations into the park from surrounding areas totalled eleven.

Bear deaths in Yellowstone Park included four grizzly (two management kills, one to a zoo, and one accidental overdose). One black bear was killed by a vehicle. During a relocation into the park from Idaho, a female grizzly was accidentally overdosed.

c. **Bison:** On several occasions late in the winter, small groups of bison left the park at the North Entrance. The State Fish and Game Department has assumed responsibility for bison once they leave the park and enter Montana. In February, state wildlife officials shot three bison about five miles outside of the park. In November, about 20 bison left the park near Reese Creek and moved on to Cinnabar Basin. Montana Fish and Game personnel herded the bison back to the park using a helicopter. State Fish and Game officials and park staff are discussing mutually acceptable ways to keep the bison from leaving the park.

d. **Bighorn Sheep:** Late in 1981, the park's northern bighorn sheep herd was infected with chlamydia, a type of pink eye. An outbreak of the disease has not been detected in 1983 or 1984. Visitor use limits and monitoring has continued.

e. **Peregrine Falcons:** In July, four peregrine falcons were placed in a hack box near the Madison River Valley. The reintroduction program was a continuation of the joint effort of the Peregrine Fund, the Wyoming Department of Game and Fish, and Yellowstone National Park. The falcons were fed and their activities monitored. By the end of the summer, all peregrines were capturing their own food. While surveying areas in the park to locate additional hack sites, two peregrines were located at a historic nesting site. This nesting and rearing activity indicates success in a program that has released 42 peregrines in northwest Wyoming since 1980.

3. **Threats to the Park Resources and Monitoring:**

a. **Mining and mining-related activity:** Homestake Mining Company and American Copper and Nickel Company, Inc., formed a joint venture to operate the Jardine gold mine. A mine permit application was filed with the Montana
Department of State Lands and a Hard Rock Impact Mitigation Plan was prepared. A public meeting to review the plan was held in Gardiner on November 30. A draft EIS for the project is now under preparation by the Forest Service and the Montana Department of State Lands. The park staff is working closely with the Forest Service in the preparation of the draft EIS. Ore production at the mine is planned for 1987.

b. Oil and gas leasing activity: Leasing activity for oil and gas has decreased in most areas surrounding Yellowstone National Park. The only notable exception is the North Fork Well which is proposed for development in the Wapiti Valley, east of the park. A draft EIS was prepared by the BLM for the proposed well. The park staff was consulted in the preparation of the document.

c. Geothermal leasing activity: There were no significant actions in 1984.

d. Water resources: At the request of the State of Montana, the Federal Government is entering into negotiations with the State to develop a water compact for Federal Reserved Water Rights. Resource management staff have assisted the National Park Service Water Resources Office and the Justice Department in preparing a draft water compact to aid in reaching a negotiated settlement over disputed water rights.

Extensive monitoring of water flow and diversions has been conducted on Reese Creek this year.

D. Wilderness and Backcountry Management:

There were 15,890 people for a total of 35,584 visitor-use-nights using Yellowstone's backcountry overnight during the 1984 season.

The percent of visitors to the park using the backcountry for overnight purposes was less than 2% in 1984, and the number of stock-use-nights in the backcountry was 5,527. A reservation system for commercial horse operators was instituted this year which allows commercial operators to reserve individual campsites in advance with payment of a fee.

A draft, revised Backcountry Management Plan has been prepared by the Resource Management Office and is undergoing field review. A final plan is expected to be completed by the summer and will serve as a policy document for all backcountry operations.
E. Park Visitation:

The park was open for public travel on the traditional opening date; however, some areas were accessible as early as March 31. The Beartooth Highway was open May 31.

Road closures for winter began October 13, when the Beartooth Highway and the Northeast Entrance operation closed for the season. The East Entrance closed on October 29, with the West and South Entrances closing on November 1. The road from Mammoth to the Northeast Entrance is open to the public year-round. The park officially opened for winter travel on December 14.

Annual park visitation totaled 2,262,969. This reflects a decrease of 142,684 persons or down 5.93% compared to the 1983 season.

F. Lost and Found Summary:

The Visitor Services Office assigned 3,092 found numbers to items valued at approximately $68,800 found in the park. Of these, 715 were returned to the owner ($44,800 value), 236 were claimed by the finder ($8,600 value), and 165 were mailed to the Eyes for the Needy. This represents a 36% return rate. Money released to Fiscal was $175.86.

G. Fee Collections:

1. Entrance and Golden Eagle:
   Northeast $46,725.00
   North     $102,260.00
   West      $264,015.50
   South     $20,564.50
   East      $197,441.50
   Total     $631,006.50

In addition to fees collected from single visit permits and Golden Eagle Passports, 13,669 Golden Age Passports were issued free of charge to persons 62 years of age or older, and 303 Golden Access Passports were issued to citizens or permanent residents of the United States who have been medically determined blind or permanently disabled.

2. Campground Fees: Campground fees collected in the 12 campgrounds during the 1984 fiscal year were $879,738.68, a 6.5% decrease over 1983. Due to a hazardous tree removal program, Bridge Bay Campground did not open in May.
H. Permits:

The Visitor Services Office issued 67 Special Use Permits, 346 Park Supplier Permits, and 131 Commercial Use Licenses.

I. Central Communications Center Records Summary:

<table>
<thead>
<tr>
<th></th>
<th>1982</th>
<th>1983</th>
<th>1984</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Vehicle Registration</td>
<td>2,999</td>
<td>3,166</td>
<td>3,190</td>
</tr>
<tr>
<td>Visitor Identification Notices</td>
<td>414</td>
<td>416</td>
<td>426</td>
</tr>
<tr>
<td>Backcountry Permits Recorded</td>
<td>7,352</td>
<td>6,447</td>
<td>5,065</td>
</tr>
<tr>
<td>Number of People on Permits</td>
<td>21,529</td>
<td>17,926</td>
<td>15,890</td>
</tr>
<tr>
<td>Teletype Messages Sent on Law Enforcement Teletype System</td>
<td>6,350</td>
<td>7,502</td>
<td>8,402</td>
</tr>
<tr>
<td>NCIC Enquiries</td>
<td>5,858</td>
<td>9,339</td>
<td>10,739</td>
</tr>
<tr>
<td>Wrecker Requests</td>
<td>636</td>
<td>833</td>
<td>850</td>
</tr>
<tr>
<td>Law Enforcement Record Checks</td>
<td>12,363</td>
<td>27,648</td>
<td>30,696</td>
</tr>
<tr>
<td>All Points Bulletins</td>
<td>46</td>
<td>38</td>
<td>45</td>
</tr>
<tr>
<td>Field Investigation Card Files</td>
<td>1,469</td>
<td>2,785</td>
<td>6,049</td>
</tr>
<tr>
<td>Information Packets Mailed</td>
<td>17,596</td>
<td>22,493</td>
<td>23,669</td>
</tr>
<tr>
<td>Informational Calls</td>
<td>158,410</td>
<td>183,096</td>
<td>20,730</td>
</tr>
</tbody>
</table>

J. Fire Management:

1. Structural Fire: Eighty-seven fire brigade members received training in basic tactics, incident command, and firefighting skills. Facility improvements continued and now consist of 61 sprinkler systems, 40 stove top protection systems, 54 detection systems, and 9 cabin area alarm systems.

Forty-four fires and two explosions occurred. Total damages was $15,000, with one individual suffering burns as a result of the boiler explosion at Old Faithful. No firefighters were injured this year on the 142 alarms parkwide.

2. Wildland Fires: A very slow season was experienced with early dry weather followed by a moist August and September. A total of 11 fires were reported and 9 of these were allowed to burn naturally. Less than one acre was burned by all 11 fires.

Montana had an active season and through interagency agreements we sent overhead, firefighters, and the contract helicopter to the U.S. Forest Service, Bureau of Indian Affairs, Bureau of Land Management, and State of Montana on 23 occasions. The Alpine Hotshot Crew spent 64% of its time on fire assignments.

3. Air Operations: An Alouette Twin Star was contracted from June 12 through September 30. A total of 273.5 hours were
flown with use divided between bear management, fire management, research, administration, and search and rescue operations. Smokejumpers were used for one search operation.

K. Forestry Program:

1. **Forestry Crew:** The Forestry Crew consisted of six persons supported by park restoration and improvement funds. The Forestry Office provided law enforcement assistance to Rocky Mountain National Park and U.S. Fish and Wildlife Service, and provided medical assistance to the rangers. The Supervisory Forestry Technician was detailed to Zion National Park to assist with their first prescribed natural fire.

2. **Exotic Weed Control:** An extensive survey was conducted to inventory roadside weeds. New infestations of knapweed were found in the Lower Geyser Basin. About 30 acres of spotted knapweed were treated with Tordon herbicide.

3. **Hazard Trees:** The contract for removal of hazard trees from Bridge Bay Campground and the South Entrance road was continued. Park crews assisted the contractor in order to open Bridge Bay Campground for the summer. The contract has been extended until June 30, 1985, to allow the contractor to finish cleanup of stumps. Hazard trees were removed from the roadsides between Lake and West Thumb and West Thumb and Old Faithful. All remaining beetle-killed trees were removed from Madison Campground and picnic area. The trees were cut and the slash burned by the Forestry Crew, and the logs were sold to the public for firewood.
VII. SUPERINTENDENT'S OFFICE

A. Public Information Office:

1. Personnel: Employees directly associated with the Public Information Office included a GS-11 Management Assistant, a GS-11 Park Photographer, a GS-5 Correspondence Clerk, a GS-5 Seasonal Park Technician, and a GS-4 Seasonal Clerk Typist (July and August). Eight individuals served as volunteers in the Public Information Office in 1984, assisting with various projects.

Bill Keller, Park Photographer, retired on March 31. The function was analyzed and found to be more economical if commercial facilities were utilized.

Public Information Officer Joan Anzelmo was detailed to Santa Monica National Recreation Area as the Site Supervisor for the National Park Service exhibits during the 1984 Los Angeles Summer Olympic Games. Joan Anzelmo was away from Yellowstone from May 29 to August 25. Karen Whitney, Assistant Chief of Public Affairs and Communications, Rocky Mountain Region, was detailed to Yellowstone as the acting Public Information Officer during the month of July. Amy Vanderbilt took over the responsibilities of that role during the months of June and August. Joan transferred to Great Falls Park as Site Manager in November at which time Amy resumed the duties of acting Public Information Officer and remained in that role through the end of the year.

The position of Correspondence Clerk was redescribed as a Park Technician (Public Information). The position was announced in December and was filled by Amy Vanderbilt.

2. General Information Services: The Public Information Office serves as a clearing house of information for the park and local communities and responds daily to written, telephone, and walk-in requests for assistance and information.

A wide range of correspondence, often requiring detailed answers, numbered more than 1,000 pieces. More than 25% of this correspondence was from foreign countries.

The Public Information Office worked closely with the Regional and Washington Public Affairs Offices, keeping them informed on a variety of matters and seeking advice on sensitive issues. Major issues facing Yellowstone included grizzly bear management, Old Faithful Geyser, Fishing Bridge, Grant Village, tree removal in Bridge Bay Campground, and bison management.
Assistance was provided in researching and preparing a wide variety of briefing papers and fact sheets for the Regional and Washington offices and the park in general. Frequent assistance was given to the International Affairs Office in Washington with foreign language requests for park information. We also programmed the visits of foreign dignitaries and foreign park managers while they were in Yellowstone.

3. News Releases: There were 50 news releases issued in 1984.

4. Media Relations: Yellowstone continues to be a focal point for local, regional, and national media. 1984 was again a very busy media year with an especially large focus on grizzly bear management and Old Faithful Geyser. Various resource management programs and issues received considerable attention. In a routine week we responded to an average of 30-40 media inquiries.


5. Official Visitors: Throughout the year, the Public Information Office assisted with programs and arrangements for United States and foreign government dignitaries, park officials, and other special guests.

Ann Raidl, World Heritage Committee, UNESCO, visited the park in July. She was accompanied by staff from the Public Information Office during her visit.

Senators Malcolm Wallop and Alan Simpson, and Congressman Dick Cheney met with Superintendent Barbee, key staff, and representatives from the Cody area to discuss Fishing Bridge and the proposed removal of structures in that area.

A delegation of government officials from the People's Republic of China visited Yellowstone after the opening ceremony of the Summer Olympic Games. They were escorted through the park by the Chief of Research and staff from the Public Information Office.
Assistant Secretary Ray Arnett attended the Wild Trout III Symposium in September. He spent one day with the Superintendent, Chief of Research, and Chief Ranger discussing resource management issues in the park.

Under Secretary Ann McLaughlin visited Yellowstone in October. She was escorted by the Assistant Superintendent and Public Information Officer and was flown by helicopter through the park enroute to Grand Teton National Park.

Fred Mohrman and Neal Sigmon, Staff Assistants, House Subcommittee on Interior, visited Yellowstone in November and snowmobiled through the park with the superintendent, assistant superintendent and division chiefs. They were briefed on the park's winter operation, concessioners, geologic and geothermal interests, and viewed construction activities in the Grant Village area.

The Public Information Office also coordinated arrangements for many official foreign visitors to Yellowstone. The programs of official foreign visitors were arranged in cooperation with many other offices and agencies, but primarily with the International Affairs Branch of the National Park Service.

Foreign visitors on official trips of varying types came to Yellowstone from the following nations:

- Australia
- India
- Poland
- Austria
- Indonesia
- Sweden
- Canada
- Israel
- Switzerland
- England
- Italy
- Thailand
- Finland
- Japan
- France
- Nepal
- Greece
- Oman
- Holland
- Tunisia
- The Federal Republic of Germany
- The People's Republic of China

Both individuals from these nations as well as some groups comprised more than 100 people whose trips were planned by the Public Information Office. Australia, China, France, and Israel sent various individuals on different programs during the summer. Special highlights included the Director of the Venezuela National Park Service, the Regional Director of National Parks, Southern Region, Western Australia, a visit by a representative from UNESCO, World Heritage Committee, as well as a visit by two Swiss medal-winning athletes shortly after the Summer Olympic Games.
6. Filming Permits: The Public Information Office staff provided orientation information to all commercial filmers and photographers, assuring compliance with park regulations. More than 100 film and photography permits were issued. Some of the major companies included: National Geographic Society, Cousteau Society, VanderKloot Film & TV, NBC, CBS, Disney Cable Network, PM Magazine, British Broadcasting Company, NHK Japanese TV, Iwanami Productions, Creative Enterprises, Marty Stouffer Productions, Entertainment Tonight, KUTV in Salt Lake City, Utah, Tele Planning International, and Unix Productions. A large number of permits were issued to individuals working on a free-lance basis which included KPVI of Idaho Falls, Athena Productions, David Grubin Productions, Inc., and Paisley Productions.

7. Meetings and Conferences: The Public Information Office was involved with arrangements for the Tri-State Travel Forum held at Old Faithful Lodge on May 17-19. Rocky Mountain Regional Director Mintzmyer attended the meeting and spoke to the group. Superintendent Barbee and Public Information Officer Joan Anzelmo also attended the meeting and made presentations.

The Greater Yellowstone Coalition held their second annual meeting at the Mammoth Hot Springs Hotel on June 15. The Public Information Office staff assisted with preparations and coordination of the meeting.

The Wild Trout III Symposium was held in Mammoth on September 24-25. Ron Jones, John Varley, and Joan Anzelmo were involved with the planning and coordination of the meeting.

On October 5, Joan Anzelmo and Steve Iobst attended the Annual Yellowstone-Teton Travel Association (YTTA) meeting in West Yellowstone, Montana and made presentations.

Joan Anzelmo attended the Annual Convention of the Society of Professional Journalists in Butte, Montana on October 20. She and Superintendent Haraden of Glacier National Park spoke on tourism, grizzly bears, and media relations with the national parks.

8. Special Events: On May 7, various National Park Service and TW Services, Inc. employees attended special functions in Cody held in appreciation of the National Park Service. The Public Information Office coordinated arrangements for the function.
On May 19, a special dinner/reception was held at the Lake Hotel to recognize the contributions of many people who have helped throughout the various stages of restoration and rehabilitation of the sun room and dining room. The special guests included the Rocky Mountain Regional Director, Denver Service Center staff, Yellowstone managers, staff from the Public Information Office, and TW Services managers and staff.

On June 26, the National Park Service, Conoco Inc. and TW Services, Inc. jointly hosted a reception and premiere showing of the film "The Faces of Yellowstone." This film on the geology and volcanic history of Yellowstone was funded by Conoco Inc. in conjunction with the Yellowstone Library and Museum Association. It was produced and directed by Dave Drum and Associates and is being shown at the Canyon Visitor Center. The reception was attended by over 100 representatives from the National Park Service, Conoco Inc., and TW Services, Inc. The Public Information Office planned and coordinated the event along with Conoco employee Tom Buek, Director of Public Relations, Denver Office.

9. Photo/Slide Requests: The Public Information Office answered over 100 requests for loans for a variety of slides and photographs on Yellowstone subjects.

The Photography Shop, adjacent to the Public Information Office, was disassembled in April after Bill Keller's retirement. Color photographic needs continued to be processed by Kodak. Black and white photographic needs were handled by individual staff members with various local area photo labs. Amy Vanderbilt assumed responsibility for coordination and processing of all color photographic needs and served as photographer for the Superintendent's Office.

10. Publication Editing Requests: The Public Information Office responded to more than 70 requests for editing publications concerning Yellowstone, and numerous other phone requests for the same. These requests were often complex, requiring extensive research on the part of the staff to supply accurate information.

11. Special Projects: Seasonal Park Technician Michelle Marti worked extensively, coordinating and compiling a parkwide wish list to be incorporated into a gift catalog for Yellowstone. After performing a survey and market analysis of parks which have catalogs, she set about developing a cost effective proposal for layout, design, printing,
marketing of the catalog. The projected completion date is Summer 1985.

The park worked closely with Phyllis Myers of the Conservation Foundation for a report which includes Yellowstone. The superintendent and key staff were interviewed.

The Public Information Office updated the reference volume on the Greater Yellowstone Area. This book was made available to various locations throughout the park to enable employees to assist visitors with questions regarding Yellowstone Park, the surrounding forests, and gateway communities.

Yellowstone continued to utilize the Foreign Language Handbook again in 1984 as an aid in locating park staff who could assist translating efforts with international visitors as well as translation of incoming correspondence.
VIII. OTHER

A. Auxilliary Programs:

1. A Christian Ministry in Yellowstone National Park/The Gardiner-Mammoth Winter Ministry: In 1984, the Ministry, under the direction of Reverend Bill Young, Resident Minister, was staffed by 58 college and seminary students representing 17 different denominations. Besides leading 37 services of worship each Sunday, the staff provided Bible studies and opportunities for Christian fellowship throughout the park. Over 18,000 park visitors attended services of worship during the summer months.

The Gardiner-Mammoth Winter Ministry continues to provide spiritual care and nurture for the year-round personnel and residents of the communities.

B. Status of Planning:

1. Old Faithful Development Concept Plan: The draft DCP was placed on public review from March 15 to April 16, 1984. Public comment was received and reviewed by the park staff. Intense concern has been continuing throughout the planning by two respondents with regard to the removal of cabins. Park, DSC and Regional Office staff worked together on final editing of the plan which is scheduled for approval in early 1985. The park staff initiated Survey and Section 106 Compliance for removal of cabins and other incidental structures in December. The park plans to begin removal and relocation of cabins in the spring of 1985.

2. Lake/Fishing Bridge/Bridge Bay Development Concept Plan: In June, the Director made a decision to proceed with the planning effort based on the Master Plan and included the commitment to replace the campground, RV park, and related services within the park. Based on a request by the Wyoming Congressional Delegation, the NPS will be doing an Environmental Impact Statement to assess various socioeconomic as well as environmental concerns related to relocation and replacement of Fishing Bridge facilities. The Lake and Bridge Bay DCP will commence once the apparent future of Fishing Bridge has been defined. During a planning team visit in October, a good understanding of the new direction the DCP/EIS must take was reached. In December, the planning team met to discuss preliminary alternatives, the role of interpretation, compliance, and public involvement. Preliminary alternatives were developed and a scoping packet will be developed for public distribution in April 1985. The park staff will develop alternatives for campground and
RV park replacement. The draft Task Directive is near completion and a project time table has been developed.

3. **Fishing Bridge Ecological Report**: At the request of the Director, as a condition to planning at Fishing Bridge, a report was prepared by park staff to describe and document the ecological significance of the Fishing Bridge ecosystem. The report evaluates existing data to present the biological and environmental diversity of the area and its importance relevant to the grizzly bear. The report is in final printing and will be available in early February 1985.

4. **Winter Use Plan**: The winter use plan is well underway with a multi-divisional work group serving as a planning team. Topics to be addressed are sensitive wildlife habitat identification, use zones, shoulder season operation, expansion of overnight facilities, and assessment of impacts associated with increasing visitor pressure for winter use. The thrust of this effort is to provide management with a plan for dealing with short term operational concerns and long term resource management. A draft plan/environmental assessment will be ready by late summer 1985.

5. **General**: Environmental and cultural compliance improved in 1984 with better utilization of the Park Planner and the addition of a Cultural Resource Specialist to the staff. A Landscape Architect was hired late in the year rounding out what proves to be a very professional planning, compliance, and redevelopment staff.

C. **Safety Program**:

As in the past several years, emphasis has primarily been placed on visitor safety through the continued rehabilitation program for concession operated facilities. In 1984, we restructured the fire inspection program utilizing the expertise of the Park Fire Marshal. While the Package 620 construction program and the concession Capital Improvement Program are still allowing us to continue improvements on those facilities, a recent engineering survey on sprinkler systems in major hotels indicates critical deficiencies which we are beginning to address. We are still working on organizing an effective structural fire management program and plan to start implementation in 1985.

The Assistant Regional Safety Manager provided continued assistance to park areas within the states of Wyoming and Montana, with primary emphasis on Yellowstone.

The Park Safety Committee was reorganized. Numerous training courses were conducted throughout the year including defensive
driving, snowmobile operation, blasting, etc., with special emphasis on winter driving and winter survival.

An industrial hygienist from WASO made the first industrial hygiene survey of Yellowstone which pointed out areas that need to be addressed. Work is starting on correcting these areas.

The accident records indicate that although warning signs were placed throughout the park, different methods of visitor awareness of safety relating to wildlife continually need to be explored. Nine bison incidents and five incidents, including one fatality, involving bears, occurred in the park.
VISITATION STATISTICS

The number of visitors during the period between the establishment of the park (1872), and the beginning of this compilation (1895), was estimated to be not less than 1,000 nor more than 5,000 each year.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>VISITORS</th>
<th>YEAR</th>
<th>VISITORS</th>
<th>YEAR</th>
<th>VISITORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1895</td>
<td>5,438</td>
<td>930</td>
<td>227,901</td>
<td>1960</td>
<td>1,443,288</td>
</tr>
<tr>
<td>96</td>
<td>4,650</td>
<td>31</td>
<td>221,248</td>
<td>61</td>
<td>1,524,088</td>
</tr>
<tr>
<td>97</td>
<td>10,630</td>
<td>32</td>
<td>157,624</td>
<td>62</td>
<td>1,925,227</td>
</tr>
<tr>
<td>98</td>
<td>6,534</td>
<td>33</td>
<td>161,938</td>
<td>63</td>
<td>1,872,417</td>
</tr>
<tr>
<td>99</td>
<td>9,579</td>
<td>34</td>
<td>260,775</td>
<td>64</td>
<td>1,929,316</td>
</tr>
<tr>
<td>1900</td>
<td>8,928</td>
<td>35</td>
<td>317,998</td>
<td>65</td>
<td>2,602,475</td>
</tr>
<tr>
<td>01</td>
<td>10,769</td>
<td>36</td>
<td>432,570</td>
<td>66</td>
<td>2,130,313</td>
</tr>
<tr>
<td>02</td>
<td>13,433</td>
<td>37</td>
<td>499,242</td>
<td>67</td>
<td>2,210,023</td>
</tr>
<tr>
<td>03</td>
<td>13,165</td>
<td>38</td>
<td>466,185</td>
<td>68</td>
<td>2,229,657</td>
</tr>
<tr>
<td>04</td>
<td>13,727</td>
<td>39</td>
<td>488,936</td>
<td>69</td>
<td>2,193,894</td>
</tr>
<tr>
<td>05</td>
<td>26,188</td>
<td>1940</td>
<td>526,437</td>
<td>1970</td>
<td>2,297,290</td>
</tr>
<tr>
<td>06</td>
<td>17,182</td>
<td>41</td>
<td>581,761</td>
<td>71</td>
<td>2,210,487</td>
</tr>
<tr>
<td>07</td>
<td>16,414</td>
<td>42</td>
<td>191,830</td>
<td>72</td>
<td>2,245,827</td>
</tr>
<tr>
<td>08</td>
<td>18,748</td>
<td>43</td>
<td>64,144</td>
<td>73</td>
<td>2,061,537</td>
</tr>
<tr>
<td>09</td>
<td>35,545</td>
<td>44</td>
<td>85,947</td>
<td>74</td>
<td>1,937,768</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45</td>
<td>178,296</td>
<td>75</td>
<td>2,246,132</td>
</tr>
<tr>
<td>1910</td>
<td>19,575</td>
<td>46</td>
<td>814,907</td>
<td>76</td>
<td>2,525,174</td>
</tr>
<tr>
<td>11</td>
<td>23,054</td>
<td>47</td>
<td>932,503</td>
<td>77</td>
<td>2,487,084</td>
</tr>
<tr>
<td>12</td>
<td>22,970</td>
<td>48</td>
<td>1,013,531</td>
<td>78</td>
<td>2,623,141</td>
</tr>
<tr>
<td>13</td>
<td>24,929</td>
<td>49</td>
<td>1,133,516</td>
<td>79</td>
<td>1,895,169</td>
</tr>
<tr>
<td>14</td>
<td>20,250</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>51,895</td>
<td>1950</td>
<td>1,109,926</td>
<td>1980</td>
<td>2,018,852</td>
</tr>
<tr>
<td>16</td>
<td>35,849</td>
<td>51</td>
<td>1,166,346</td>
<td>81</td>
<td>2,549,307</td>
</tr>
<tr>
<td>17</td>
<td>35,400</td>
<td>52</td>
<td>1,350,295</td>
<td>82</td>
<td>2,404,862</td>
</tr>
<tr>
<td>18</td>
<td>21,275</td>
<td>53</td>
<td>1,326,858</td>
<td>83</td>
<td>2,405,653</td>
</tr>
<tr>
<td>19</td>
<td>62,261</td>
<td>54</td>
<td>1,328,893</td>
<td>84</td>
<td>2,262,969</td>
</tr>
<tr>
<td></td>
<td></td>
<td>55</td>
<td>1,368,515</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1920</td>
<td>79,777</td>
<td>56</td>
<td>1,457,782</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>81,651</td>
<td>57</td>
<td>1,595,875</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>98,225</td>
<td>58</td>
<td>1,442,428</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>138,352</td>
<td>59</td>
<td>1,408,667</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>144,158</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>154,282</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>187,807</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>200,825</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>230,984</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>260,697</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Beginning in 1952, the figures represent travel during the calendar year instead of the period October 1 to September 30 as previously used.*