

NATIONAL PARK SERVICE WILDLAND FIRE REPORT 1992

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FIRE ACTIVITY SUMMARY - -

Alaska Region

The 1992 fire season for the Alaska Region was remarkable for the number of fires that did not occur and the amount of acreage that did not burn.

The Region recorded a grand total of seven fires that consumed 199 acres and the 1992 fire season was the first time in many years that fire suppression support forces were not requested from the lower 48 states.

Mid-Atlantic Region

The region experienced rather quiet fire seasons during 1992 due to higher than normal moisture. A total of 22 fires over 133 acres occurred within park units. Due to preplanning and interagency coordination the region was able to mobilize 71 firefighters and 14 overhead for western fire assignments. This was due in large part to the efforts of the individuals assigned to the Eastern Interregional Coordination Center located at Shenandoah National Park. This includes both park staff and personnel detailed from other parks within the region. This mobilization overlapped with the mobilization following Hurricane Andrew which brought the Mid-Atlantic total mobilized forces to well over 125 at one point in time.

Midwest Region

The Midwest Region experienced a very quiet wildfire year with 155 incidents/responses, excluding prescribed fire operations. A cool and moist fire

season in many of the parks helped keep fire occurrence down and subsequent burned acreages quite small. The major exception was Indiana Dunes National Lakeshore, which experienced 95 incidents/responses alone. Voyageurs National Park was the second most active, followed by Ozark National Scenic Riverways. All park wildfires responded well to initial attack efforts and none developed into project fires. Burned acreage was kept to its lowest level in the past 10 years. Mutual aid responses rose though, to an all time high; again, mostly at Indiana Dunes. Fire causes were within norms, with 16 percent attributed to railroad ignition, 15 percent to trash and debris burning, 10 percent to campfires, 9 percent to exhaust systems, 8 percent playing with matches, and the remaining 42 percent in various other categories. In contrast to last year, lightning ignitions played a minor roll, down 76 percent. Even though the Region now has two parks (Voyaguers and Isle Royale) with approved natural prescribed fire programs, no acceptable natural fire ignitions occurred this year as the fire season across the upper Great Lakes region was generally cool and wet.

Western Mobilization occurred during August and September with 65 fire personnel committed. The wildland fire mobilization system was also utilized to provide emergency resources to the Hurricane Andrew incident in the South Florida parks.

North Atlantic Region

The region experienced wildland fires throughout the calendar year. The wildland fires numbered 56 and burned a total of

291 acres. There was no reported property damage associated with any of these fires. Gateway National Recreation Area experienced the majority of the wildland fires. No parks experienced significant drought or fire severity conditions this year.

The role of prescribed fire in the regional fire management program was expanded this year. A total of 11 prescribed fires were ignited, from April through August, burning a total of 92 acres. Acadia National Park and Cape Cod National Seashore each conducted research burns. Saratoga National Historic Park has now developed their staff qualification to the level that they can conduct their historic scene maintenance burns without additional personnel or equipment support.

In August and September personnel were mobilized to wildland fire incidents. A Type II NPS crew was dispatched to project fires in Idaho. No overhead personnel or trainees were mobilized for fire assignments. The Regional FIREPRO Assistant worked an assignment at the Eastern Interagency Coordination Center in an attempt to further develop a working relationship with that office.

National Capital Region

The Region provided a full crew and three additional firefighters during the activation of the Dulles Module. The Module was dispatched to Idaho to assist on the Foothills and Dunnigan Creek Fires.

Although Regional firefighters assisted on local zone fires, the weather kept area fire activity to a minimum. Several employees from parks in the region were dispatched

to southern Florida to assist in the Hurricane Andrew relief effort.

Pacific Northwest Region

The drought continued in the Pacific Northwest during 1992. For the second year, Student Conservation Association (SCA) resource assistants were hired under severity funding to serve as a reserve fire crew (commonly called the "Warm Shots"). Nine SCA's were hired for Mount Rainier, 7 for Olympic, and 5 at Crater Lake. The SCA's attended interagency fire training and were housed as units at their respective parks. When not on fire duties, they worked on resource management projects, assisted in emergency search and rescue operations, or received additional fire training. During wildland fire emergencies the crews were hired as AD's and sent out with regular park fire crews, staffed fire lookouts, or were placed on emergency standby.

The largest fire in the Region was a 2,000 acre confinement strategy fire at Craters of the Moon in Idaho. The fire location was not easily accessible, due to the extensive lava flows, and air transportation was not available because of other western fires. The fire burned for several days before anyone was able to reach it, and the fire eventually burned itself out.

Rocky Mountain Region

For the second straight year, much of the Region experienced heavy snowfall early in the winter (with many areas reporting record levels). However, this situation did not continue throughout the entire winter and the spring season brought dry

conditions with increased fire danger.

Zion National Park had the first major fire (Cliffhanger) of the season in April.

During the month of May, moisture conditions in the northern portion of the Region dropped to levels that were projected to surpass those experienced in 1988. Severity funding was obtained for Yellowstone National Park in conjunction with the Forest Service's Northern Region. A hotshot crew was prepositioned in the park throughout May until regular FIREPRO personnel came on duty in early June.

During the late spring, rainfall increased in the southern and central portions of the Region and many areas reported record levels throughout the summer. As summer ended, thunderstorm activity diminished and conditions again worsened with drier weather. Glacier National Park mobilized a Type II Incident Management Team for the Starvation Incident.

Prescribed natural fire (PNF) programs were active all season in Glacier, Yellowstone, and Grand Teton National Parks, and Dinosaur National Mounment. The PNF program was restarted in July in Rocky Mountain National Park. All parks managed PNF's during 1992.

Management ignited prescribed fires were carried out in Glacier, Yellowstone, Zion, Rocky Mountain, Wind Cave, and Badlands National Parks. The burns in Glacier and Zion represented initial projects in emerging programs which should greatly expand in operational magnitude over the coming years.

Participation in interagency crew programs

by NPS personnel in the Region was strong this season and opportunities continue to grow each year.

Southeast Region

Apparently the El Nino event (high sea surface temperatures in the central and eastern Pacific Ocean) led to relative inactive fire seasons across the Southeast Region as compared to previous years. However, 10 firefighters were dispatched to Big Cypress National Preserve in early April to increase the Preserve's initial attack capability and for the firefighters to receive experience and fire training.

In late May, 4 dispatchers were provided to support a large fire on the Appalachicola National Forest.

Due to high indices in early June, a 4 person squad of firefighters was dispatched to the newly acquired East Everglades addition to Everglades National Park.

High indices and the absence of the Seashore's fire coordinator in mid-August led to 3 firefighters and 1 Crew Boss to be dispatched to Cumberland Island National Seashore.

In mid to late August, 12 overhead personnel and 76 firefighters from the Region were sent West to assist in fighting wildfires in California, the Great Basin, and the Intermountain Region.

On August 24, while the western fire mobilization was underway, Hurricane Andrew struck the South Florida parks (Big Cypress, Biscayne, and Everglades). Substantial damage occurred to facilities, utilities, and employee and government

owned homes at Biscayne and Everglades (primarily the headquarters area). Some damage also occurred to Big Cypress facilities. A large number of regional as well as national resources from across the country and from all agencies and divisions were involved in the recovery efforts for the 3 parks. In addition, some of the region's law enforcement personnel and dispatchers provided assistance at four Hurricane Andrew relief sites (2 sites in Louisiana; 2 sites in Florida) which were operated by the U.S. Forest Service for the Federal Emergency Management Agency.

Southwest Region

Record snowfall throughout Arizona and New Mexico, coupled with well above average rain throughout the entire Region, led to another quiet fire season in the Southwest. Initial attack efforts were totally successful and there was no utilization of either the Type II or Type I teams. While these conditions were good news for this year, the fuel loads now resemble those present in the mid-80's which led to several record setting fire seasons.

As a result of the reduced activity, Southwestern resources were available to assist other areas in both fires and all risk incidents. Firefighters and overhead were committed to fires in California, Oregon, and Idaho throughout the summer.

Parks were able to take advantage of the occasional windows of opportunity to make good progress with their prescribed fire programs. As usual, Big Thicket led the way in ignitions and acreage, completing all funded projects. Other

highlights included Bandelier conducting its first burn above the 9,000 foot level, Carlsbad renewing its program with several burns, and El Malpais initiating its new program with two large burns.

As a result of all risk incident management activities this year, the Region has decided to establish a standing Type II All Risk Incident Management Team built around NWCG qualification standards. The team should be in place by early 1993.

Western Region

At the height of fire activity, a total of 102 firefighters and 58 overhead personnel were dispatched to out-of-park fires.

Several notable NPS wildfire incidents occurred in the Region during 1992, included among them were the Ostrich Fire in Yosemite National Park which started as a prescribed natural fire. The fire was converted to a wildfire status due to the severe fire situation in California and other western states which resulted in resource shortages. The Octrich Fire was contained on August 24 at 467 acres.

In Devil's Postpile National Monument, the 8,645 acre Rainbow Fire which started outside the monument burned approximately 500 acres of park land. There was little significant impact on the north side of the Monument or damage to structures, however, the south side had approximately 75 percent tree loss, loss of trail improvements, and a need for considerable work to remove hazard trees.

In Hawaii Volcanoes National Park, a mainland fire crew assisted in suppression of the 3,700 acre Napau Fire which was

caused by volcanic activity in early spring. The Naulu fire also occurred in conjunction with volcanic activity and burned nearly 3,000 acres.

During the major California fire activity in late summer, the Western Region mobilized four Type II handcrews at the Regional Mobilization Center at Golden Gate National Recreation Area. Also during the major California activity, two engines from Lava Beds National Monument, one engine from Whiskeytown National Recreation Area, and the NPS Arrowhead Interagency Hotshot Crew were assigned to interagency incidents. At the height of fire activity in the west, a total of 102 firefighters and 58 overhead personnel were dispatched to out-of-park fires.

The Western Region saw a significant increase in management ignited prescribed fire activity in 1992, with approximately 4,050 acres burned. Two particularly significant events occurred in this program including the growth of the Grand Canyon National Park program which accounted for most of the program's acreage; and the suppression of an escape that occurred during the Suwanee prescribed burn in Sequoia National Park which required mobilization of an Incident Management Team. The increased activity in Grand Canyon was supported by the transfer of hazard fuel funds from Sequoia and Kings Canyon, and Yosemite National Parks due to severe conditions in those areas. The transfer of funds allowed Grand Canyon to take advantage of more suitable burning conditions in the park.

The continuing drought in California resulted in a conservative approach to

prescribed natural fire (PNF) programs in 1992. Compared to 1991, more PNF's occurred (51), but fewer acres burned (1,699). Yosemite reduced the size of its PNF zone. Sequoia and Kings Canyon National Parks, Saguaro National Monument, and Yosemite, each converted one PNF to wildfire status. In all cases, the conversion was accomplished and the fire suppressed without incident.

Management of prescribed natural fires was assisted by interpark mobilization of monitors. Personnel from Yosemite and Grand Canyon assisted Saguaro, and several parks participated in the Yosemite PNF's.

PROGRAM ACCOMPLISHMENTS - -

Branch of Fire and Aviation Management

Three current and former members of the Alpine Hotshot Crew were given the Department of the Interior valor award for their efforts to save the lives of another crew in the 1990 Dude fire on the Tonto National Forest in southern Arizona. The three included crew superintendent James Mattingly, squad boss William Moe, and emergency medical technician David Niemi. They were honored for moving into an area of "extreme fire behavior at significant risk to their own lives" where a firefighting crew had become trapped. The action saved the life of one seriously burned crewmember and enabled others to reach safety.

The valor award is the second for the three men, who earlier were honored with a Department of Agriculture valor award. The entire Alpine Interagency Hotshot Crew, which was based at Zion National Park at the time, was awarded a special commendation by Rocky Mountain Regional Director Robert M. Baker.

Gladys Crabtree was selected in February for a new Computer Assistant position in the Branch. Gladys came to the NPS from a similar position on the Flathead National Forest. Among her responsibilities are VAX operations, LAN operations and administration, and CCMail coordination and management.

Michelle Hawley was selected in December for a new NPS Electronics Technician position in the BLM RAWS shop at NIFC. Prior to her selection, Michelle had been employed by the BLM as a temporary RAWS technician for 8.5 months, and has previously served for 6 years as an electronics technician in the U.S. Navy. Michelle will be working part-time while she pursues an electronics technology degree at Boise State University.

Branch staff conducted site visits for the purpose of program review and assistance to parks in the Southern Arizona Group (Saguaro, Chiricahua, and Coronado). One side benefit of the Coronado program review was the assignment of Interagency Hotshot Crew Superintendent Jim Mattingly to draft the Coronado Fire Management Plan, a project which is almost complete at years end. Program reviews were also conducted at Canaveral and Gulf Islands in the Southeast, and Mount Rainier in the Pacific Northwest. FIREPRO program audits were conducted in Bandelier, Southeast Regional Office, Cape Cod, Lassen Volcanic, Lava Beds, Mesa Verde and North Cascades. Several NPS units were visited to evaluate structural fire programs.

Branch staff participated in fire reviews of the Gauley and Gauley Mountain fires in New River Gorge. Incident Commander Rick Gale was on the receiving end of incident reviews conducted following the 50th Anniversary of the bombing of Pearl Harbor and the recovery, rehabilitation and restoration efforts at Big Cypress, Biscayne and Everglades following the aftermath of Hurricane Andrew.

All-risk incident management continued to occupy much Branch time. Branch

personnel participated in the development of an exercise scenario for Type II All-Risk Incident Management teams. Branch personnel also assisted the Department in the review and development of it's all-risk response needs and procedures as well as beginning the development of an all-risk business management supplement to the Interagency Fire Business Management Handbook.

Requests for a permanent location for the Alpine Interagency Hotshot Crew (IHC) were advertised. Six areas - Dinosaur, Grand Canyon, Golden Gate, Wind Cave, Yellowstone and Rocky Mountain submitted bids. A task group completed an exhaustive analysis and after on-site visits to the two finalist parks, Rocky Mountain was selected as the new permanent home for the Alpine IHC.

A total of \$1,100,000 was allocated to parks to purchase wildland fire equipment under the capital equipment acquisition program.

Several changes were made in the ADP contract providing programming services for further development, enhancements and maintenance of the Wildland Fire Management Computer System (WFMCS), and allowing for continued support and maintenance for BIA and USFWS use of NPS developed software. BLM and Oil Spill interests have approached the Branch to incorporate their needs in the NPS Incident Qualifications software.

The revised Qualifications and Certification System in the Wildland Fire Management Computer System came online in 1992 and has since experienced a continuing series of changes over the past

several months. The system will continue to evolve through 1993 as new programs are developed. Enhancements include: redesigned Red Card; new experience documentation; easier data entry; instructor experience entry; more local control of the certification process; and, an individual development program. Comments from the field users concerning these programs have been the main force behind the evolution of this system. The success of providing what the users demand is demonstrated by the fact that all the Interior wildland fire agencies have adopted the NPS Qualifications computer programs. These Interior agencies should be able to share files and information through a joint system by 1994.

ADP Communications Manager Wendy Bristol participated as the NPS representative to the InciNet Steering Committee and as Chairperson to the InciNet Hardware Committee. The hardware purchase contract was awarded and the final price came in under original estimates. A side benefit of the contract allows NPS offices and other federal agencies to purchase InciNet equipment.

Branch staff participated on the Information Resource Management Working Team (IRMWT). This committee operates under NWCG and is currently reviewing means of coordinating and integarting interagency fire applications/data.

The first interagency "Fire Management for Agency Administrators" training was conducted at NARTC in Marana with the U.S. Forest Service. Twenty-seven NPS superinten- dents participated in the course. This was the third year for NPS

involvement in fire management courses for superintendents.

The Branch-developed "Look Up, Look Down, Look Around" four hour training package with video was completed and published in the Publication Management System. Several thousand copies were purchased in the first 6 months of availability. Additionally, the NWCG Fire Behavior Committee adopted the package and incorporated it into the new S-290 Intermediate Fire Behavior course, to be published in 1993.

A great deal of filming was accomplished for development of the "Fire Management in the NPS" video, a 20 to 30 minute film. Shooting was conducted at Big Cypress, Bandelier, Grand Teton, Yellowstone, Sequoia-Kings Canyon, and Yosemite. Additional filming will occur in Saratoga, Acadia, Voyageurs, and Herbert Hoover, with completion of the video expected in October, 1993.

A two-week RX90 "Prescribed Fire for Burn Bosses" session was successfully conducted in the George Washington National Forest in October. The course was coordinated by Shenandoah National Park, with several NPS employees providing assistance on the faculty.

NPS Interagency Hotshot crew personnel assisted in presentations of two-week Basic Skills Academies for Western Region, and for the joint training effort by North Atlantic/Mid-Atlantic/National Capitol Regions. This has been a very successful and cost effective technique for presenting several related courses in a consolidated package. The regions are to be commended for these efforts.

Branch staff were involved in testing NWCG ICS position task books during the Hurricane Andrew recovery effort; in developing prescribed fire complexity and position tasking for NWCG; and in drafting NFPA Standard 1051 "Wildland Fire Management Qualifications".

A position paper was drafted for NWCG addressing training and certification by non-NWCG entities, approved through the NWCG Training Working Team with review by other working teams. A final version will be presented to NWCG in early January, 1993.

Various training and safety items and training packages were entered into the Publications Management System by Branch staff.

Advanced Fire Behavior Calculations, S-490, has been handed off to the field. This should enable regions to provide this course to more employees at less cost. The NPS has the lead in the development of the new S-190 course which should be available for field use in 1994.

The NWCG Entrapment Investigation Guidelines, based on NPS policy, were completed and approved by NWCG.

An NWCG position paper about use of wildland fire hardhats was completed, based on some negative encounters one of the NPS Interagency Hotshot crews had experienced. This is expected to receive NWCG approval in January, 1993.

The Branch remains involved with the NWCG Health Hazards of Smoke program, but has completed NPS-NIOSH research efforts wherein NIOSH and NPS

personnel performed health hazard evaluations on wildfires. Continued effort along those lines have been assumed by the Pacific Northwest Research Station.

The National Park Service continues to participate in the activities of the National Wildland/Urban Interface Fire Protection Initiative. Other members include the National Fire Protection Association (NFPA), National Association of State Foresters (NASF), United States Fire Administration, U. S. Forest Service, and the Department of the Interior fire fighting agencies. It appears that the initiative is at that stage of its existence where it becomes appropriate to re-visit the needs that formed this relationship and analyze the next suitable position and activity plan for the group. In these times of shrinking staff and budget, we will continue to maximize the effectiveness of our efforts.

The Structural Fire Task Group convened in March to continue the work underway. The needs assessment process being developed in the North Atlantic Region was reviewed and appeared to have potential for Servicewide application. A special work group met in May to fine tune the process. The result was an effort to work with the National Institute of Standards and Technology (NIST) to devise the methodology to develop the process and put the capability for meaningful analysis in the hands of NPS personnel in the most efficient, cost effective manner possible. The initial effort proved to be more costly than we can afford. Work continues in order to discover suitable alternatives.

The Structure Fire Steering Committee held its first ever meeting in September.

The group reviewed the current status of the Structural Fire Program. A great deal of discussion centered on the process of revising NPS-58 (Structural Fire Guidelines) to bring it up to date and to address the needs of the Park Service more effectively. The research proposal from NIST was reviewed and guidance was given for further efforts on that project.

HR 3360, the Federal Fire Safety Act of 1991, was signed into law by the President. Provisions of the bill require automatic fire sprinklers and smoke detectors in new high-rise federal offices and numerous categories of residential structures. Any significant renovation of existing leased or owned facilities would also require installation of automatic fire sprinkler systems in accordance with National Fire Protection Association (NFPA) standards. Many organizations, including the National Park Service, worked relentlessly to get the bill enacted. While the bill was weakened somewhat from its original version, the intent of the legislation unmistakably directs the federal government to improve fire and life safety in its own buildings.

The Structural Fire Program concerns were presented to many groups throughout the year: Chief Ranger conferences; Regional Safety Managers; and Safety for Line Managers classes.

Alaska Region

The Alaska Region began the oversight and support of a research project studying the implications of fire management on tundra carbon balance. This study is funded by the Department of the Interior and is scheduled to last three years.

Lack of summer wildfire activity allowed for a focus on completing field data collection and assessments of preliminary classifications for development of vegetation maps. Areas requiring fire protection also were identified. This information is critical for interagency fire management planning in Alaska.

Mid-Atlantic Region

Several significant training accomplishments occurred in 1992. Shenandoah hosted the Servicewide "Prescribed Fire for Burn Bosses" course and also some logistic courses to provide opportunities for overhead development. Fredericksburg hosted the tri-regional fire academy that provided development of Type III and IV Incident Commanders. The first presentation on the East coast for S-205, "Fire Operations in the Urban Interface", was included in the academy.

Hazard fuel reduction projects were completed at Delaware Water Gap and Appomattox Courthouse. A draft fire management plan was completed for Valley Forge that may be used as a prototype for many of our small historic parks. Shenandoah and Delaware Water Gap also completed their fire management plans, both of which include suppression and management ignited prescribed fire.

Midwest Region

Isle Royale National Park's Prescribed Natural Fire Management Plan was reinstated this September, after a 4-year hiatus, subsequent to all such plans being suspended after the Greater Yellowstone area fires in 1988.

Indiana Dunes National Lakeshore completed a major revision to their Fire Management Plan, broadening from a research only prescribed burning program to an operational resource management prescribed burn and hazard fuel reduction burning program.

Voyaguer's Fire Management Officer Steve Jakala was selected as chairman of a working group for prescribed fire established by the Minnesota Incident Command System (MNICS) Organization.

The Wisconsin Interagency Incident Command System (WIICS) Organization was chartered this year, primarily under the auspices of the wildfire umbrella, but willing to become involved in all-risk incidents also.

Michigan fire agencies are also drafting a charter to establish a similar ICS umbrella organization. Originally, the proposal was envisioned to cover the Upper Peninsula only, but the concept has now been broadened to cover the entire state in the current draft.

Midwest Region, in cooperation with the Rocky Mountain Region, is in the process of developing a Type II All-Risk Incident Management team.

North Atlantic Region

The North Atlantic Region, in cooperation with the Mid-Atlantic and National Capitol Regions, conducted a two week training academy. This academy was jointly sponsored in an attempt to make most effective use of the available training dollars. The objectives of the academy were to improve the initial attack response

of smaller parks and to expand the pool of eastern NPS instructors. It was felt that these objectives were accomplished. The regional training emphasis was to develop single resources qualifications that can be utilized either in the park or on mobilizations for large fires.

The region is in the final stages of completing a structural fire inventory and assessment procedure that will help parks assess their structural risks and develop prevention/control plans. These plans will allow management the flexibility of objectively assessing their risk and determine the most cost effective method of reducing their risk to an acceptable level. Regional approval was given to hire a Structural Fire Specialist on a temporary-not-to exceed one year appointment. Funding is for a four year period. The position should be filled by the spring of 1993.

National Capital Region

Interagency cooperation continues to be a high priority item. For the first time, the Region has a memorandum of Understanding with the State of Virginia covering all parks in the Region and fire suppression activities on the Appalachian Trail north of Shenandoah National Park. An agreement was also finalized between Manassas National Battlefield, Prince William Forest Park, and Prince William County. Efforts are under way to develop agreements with the State of Maryland and with other local jurisdictions.

The Region developed a mobilization guideline for the Dulles Crew Module. Copies were provided to other agencies in the Northeast Geographical Area to serve

as a basis for guidelines for other modules on the eastern seaboard.

A Regional Fire Cache was developed at Prince William Forest Park which will serve all parks in the region, including those which provide fire fighters but which do not have a wildland fire suppression program. The cache will also provide backup supplies for the Dulles Module. The concept was tested and worked as anticipated this summer when the Dulles Module was activated.

Training emphasis was placed on eliminating the shortage of qualified firefighters in the region at the Crew Supervisor - Single Resource and Incident Commander Type IV levels. The three northeastern NPS regions - Mid-Atlantic, North Atlantic and National Capital, combined efforts to present a two week long training academy for Initial Attack Incident Commanders. The result was a significant increase in the number of qualified Type IV Incident Commanders, Crew Supervisors, Strike Team Leaders, and Division/Group Supervisors. The addition of these expanded qualifications will greatly enhance the Region's ability in wildland fire suppression.

The Region hosted S-205, Fire Operations in the Urban Interface, Instructor Handoff, which was well attended by firefighters from several agencies.

Pacific Northwest Region

North Cascades National Park (NOCA), the Mount Baker/Snoqualmie National Forests (MBS), and the Pacific Northwest Regional Office have been preparing a proposal to combine the fire operations of

NOCA and the MBS into one. The proposal is still in the draft stages, with additional meetings planned in 1993 to include the Washington Department of Natural Resources, the province of British Columbia, and the Okanogan and Wenatchee National Forests. The proposal, if adopted, would call for a fire management plan that covers the entire ecosystem, with the Fire Management Office doing all the planning, programming, prescribed burning, and suppression actions regardless of political boundaries. Each agency would provide resource objectives and projects to the staff, with an oversight committee providing supervision.

The U.S. Forest Service detailed a Fire Management Officer (FMO) to Mount Rainier National Park for a four month period during the summer. The detail was designed to provide fire management oversight in the absence of a full time FMO during very high to extreme fire danger. The detailer, Sarah Robertson from the Willemette National Forest, was able to help the park obtain needed equipment, provide fire training, establish standard operating procedures for various fire situations, and outline long range planning and organizational needs.

Rocky Mountain Region

Numerous personnel actions took place in various park and region fire management positions during the year. Marcus Schmidt transferred from BLM's Nevada State Office to the Fire Management Officer position at Dinosaur. Tracy Schiess became the new Fire Program Clerk at Dinosaur, Jean Harris became the new Fire Program Assistant at the Regional

Office, Dale Kissner accepted the Fire Program Clerk position at Mesa Verde, and Kim Dreyfuss served in a detail capacity as the Wind Cave Program Clerk. In addition, in December, Jim Northup vacated the Grand Teton Fire Management Officer position to become Chief Ranger at Big Bend.

Regional staff participated in interagency coordination activities in three geographic area coordinating groups (Northern Rockies, Great Basin, and Rocky Mountain). In the Great Basin Area, Salt Lake City was selected as the location for the Eastern Great Basin Coordination Center. NPS staff served on task committees to determine agency contribution, site location, facility needs, prepare position descriptions for the Center Manager and Assistant positions for this coordination center.

Interagency Dispatch Centers were evaluated and implemented in Moab, Cedar City and Richfield, Utah; Pueblo, Montrose, and Craig, Colorado; and West Yellowstone, Montana.

Rocky Mountain National Park was selected as the permanent home unit for the NPS Alpine Interagency Hotshot Crew following the bid proposal process conducted bt the Branch of Fire and Aviation Management.

Regional and Park personnel participated in coordination and instruction in several interagency course offerings, including: S-336, S-330, S-205, and Fire Restoration in Rocky Mountain Ecosystems. Personnel also participated on numerous national and regional committees including: Extended Attack Analysis; InciNet Development;

Fire Effects Curriculum Development; FIREPRO Steering Committee; Interagency Helicopter Guidelines Development Committee; Great Basin Business Working Committee; Great Basin and Rocky Mountain Fire Prevention Working Committees; Rocky Mountain Incident Management Team Oversight Committee; Great Basin IADC Evaluation Committee; Great Basin Fire Operations Working Committee; Northern Rockies Equipment Working Committee; Rocky Mountain Area Training Committee: Great Basin Fire and Aviation Working Committee; Northern, Southern and Northwest Colorado Interagency Dispatch Center Advisory Groups; Fire Management for Agency Administrators Steering Committee; Great Basin Buying Team Task Group; and Utah Zone Fire Management Committee.

Personnel from the region filled various primary positions on Type I and II Incident Management Teams in the Northern Rockies, Great Basin, and Rocky Mountain geographic areas. Special assistance was also provided to non-fire emergencies including: Rainbow Family Annual Meeting in southwest Colorado; Sandbench Timber Sale and Protest; and Hurricane Andrew relief efforts in southern Florida.

Southeast Region

After six-years of inactivity, Congaree Swamp reinstituted management ignited prescribed burning with a 150 acre prescribed fire to maintain a red-cockaded woodpecker site in February. Assistance was provided by personnel from the Francis Marion National Forest, South Carolina Forestry Commission, and other

NPS units (Carl Sandburg, Cow Pens, and Fort Pulaski).

Ten Squad Boss qualified employees received training to qualify them as Crew Bosses while serving as intial attack resources during a period of high fire indices at Big Cypress National Preserve (April 6-17).

Regional FIREPRO training funds were used to support the following fire courses: RX91, RX and Natural Fire Monitoring at Everglades; S-336, Fire Suppression Tactics at Congaree Swamp; support to the Mammoth Cave Job Corps crew; and to support a variety of individual employee fire training needs.

The Regional Fire Coordinator is working with the Ranger Activities Division in WASO to establish an all risk emergency account to provide for preparations for and recovery responses to natural disasters.

Fire programs were reviewed at Big Cypress, Canaveral, Everglades and Gulf Island. In addition to a program review, fiscal year 1991 FIREPRO expenditures for Blue Ridge were audited. The Branch of Fire and Aviation Management audited the Regional Office's fiscal year 1991 FIREPRO fund expenditures and reviewed the region's fire program in late April.

A park Fire Management Officer meeting was held in Atlanta, April 28 and 29. The meeting concentrated on budget and financial matters and fire qualifications, and included an orientation visit to the Southern Area Coordination Center.

A procedure was developed for assessing individual agency (NPS, USFS, USF&WS,

and state) fire training needs and formulating interagency training courses to meet deficiencies noted in the assessment at state and regional levels. The procedure was accepted by the cooperating agencies. Courses to be taught were included in the 1993 Southern Interagency Training calendar.

The NPS, along with the USFS and USF&WS, adopted the Southern Interagency Mobilization Plan. As a consequence the region's Emergency Operations Plan was revised so that it would be in concert with the Mobilization Plan.

The Regional Fire Coordinator, with the assistance of park Fire Management Officers, drafted and sent to the field a SER Wildland Fire Monitoring Guide. The document includes guidance in monitoring and documenting environmental conditions (including drought and severity) and fire behavior, and assessing and documenting the effects of fires on park resources.

Southwest Region

The Diablo Fire Crew made up of Mexican Nationals and managed by Big Bend was deployed to their first suppression actions resulting in major savings to the incident. In recognition of the significance of this international effort, the Southwest Fire Council presented Big Bend's Chief of Resource Management, Phil Koepp, its "Fire Manager of the Year" award. This was the first NPS recipient in the Council's 32 year history.

Carlsbad Caverns successfully reimplemented a prescribed natural fire program after a 3 year break. Several more parks are expected to follow this lead in 1993.

Program reviews/audits were completed at Buffalo River, Fort Smith, Lake Meredith, Salinas Pueblo Missions, Fort Union, Fort Davis, El Malpais, Capulin Volcano, and Arkansas Post.

Training remained a major emphasis highlighted by the Region hosting RX-90, Burn Boss, at Big Thicket. Carlsbad Caverns and El Malpais were particularly busy in hosting and coordinating a wide range of interagency training courses and the Regional Office was instrumental in developing and presenting several sessions of D-110, Dispatch Recorder. Instructors were also provided to NARTC sessions of S-490, Advanced Fire Behavior; S-590, Fire Behavior Analyst; and Fire in Resource Management.

In February, the Region hosted the annual Southwest Area Dispatcher's Workshop in Flagstaff. This was the first time the Service hosted this event. The Region also hosted the first ever meetings of the East Texas Interagency Coordinating Group held at San Antonio Missions.

Western Region

Two vacancies in the Regional Office were filled in 1992. Tom Nichols, transferred from Sequoia and Kings Canyon National Parks to fill the Prescribed Fire Specialist vacancy, and Paul Reeberg was recruited into a new position as Fire Effects Program Manager.

The Regional Office was involved in several major capitalized equipment

purchases. Assistance was provided to Yosemite and Kalaupapa National Historic Park in the purchase of new structural fire engines. Arrangements were made with the U.S. Forest Service for the acquisition of 17 surplus wildland fire engines. The cost for acquisition, rehabilitation, outfitting and delivery of these engines totalled \$200,000, a savings of more than \$1,200,000 for comparably equipped new engines. The engines will be delivered to a number of NPS areas Servicewide.

The Region was able to obtain authorization for use of FIREPRO funds for facility repair and rehabilitation for the Western Region Mobilization and Training Center located at Golden Gate. Part of the approved proposal included FTE for a seasonal Facility Manager position for the site.

Regional office staff assisted the Branch of Fire and Aviation Management in conducting a FIREPRO program audit of Lassen Volcanic National Park and the fire rehabilitation program at Yosemite National Park.

The Region provided assistance to 7 parks in securing severity funding for increased initial attack personnel due to continuing drought conditions in most California parks.

The Region sponsored the second Western Region Basic Wildland Fire Skills Academy at Golden Gate National Recreation Area (5 separate courses were taught in a two week period), and the second NPS/BLM Engine Academy at the Marine Mountain Warfare Training Center near Bridgeport, California. Both courses were attended by NPS personnel from

other regions as well as trainees from other agencies.

A fire program clerk training session was conducted for clerks from Northern California NPS units. Subject matter included the Wildland Fire Management Computer System, AFFIRMS, AFS/FFS, WIMS, and WEATHERBRIEF. In addition, the Region coordinated onsite training of all other new fire clerks within the region by experienced program clerks.

Lassen Volcanic National Park continued to develop an interagency prescribed natural fire (PNF) program with Lassen National Forest. This program is expected to be implemented in 1993, bringing the number of parks in Western Region with approved PNF programs to eight.

The Western Region has installed approximately 742 fire effects monitoring plots, in 15 parks, throughout grass, brush, and forest vegetation types. The target for the program is 955 plots, with 80 percent of the network completed to date. Analysis of data is expected to yield significant insight into preburn fuel conditions and stand structure, and postfire successional changes, with application to fire and resource management planning activities.

Table 1. Interagency Hotshot Crew Workload Distribution 1983 - 1992

Year	Number of Fires	% Time Wildfire Suppression	% Time Prescribed Fires	% Time Other Projects
1983¹	19	20	18	26
1984	55	53	10	14
1985^{2}	42	65	5	13
1986	35	50	13	17
1987	35	63	4	15 .
1988	31	79	3	3
1989	32	68	10	6
1990	26	54	9	12
1991	30	51	5	20
1992	29	54	5	29

The National Park Service presently manages 2 of 63 Interagency Hotshot Crews as part of its contribution to national interagency fire suppression resources. The crews' primary function is hot-line wildfire suppression. When not needed for suppression activities, the crews are able to make significant contributions on interagency prescribed fire operations and other physically demanding natural resource projects.

The National Park Service crews are assigned to duty stations at host parks. The Arrowhead crew is permanently based at Sequoia-Kings Canyon National Parks, and in 1992, the Alpine crew was temporarily located in the Blackhills area with Wind Cave National Park serving as the administrative home unit.

In 1992, the Arrowhead crew project work included a pilot exotic species removal project near Muir Woods National Monument; trail maintenance, interpretive site construction, roadside brushing, campground and building maintenance, and workcenter construction in Sequoia-Kings Canyon National Parks. Many of the projects undertaken by the Alpine crew contributed to the Black Hills Interagency Fire Community (Custer National Forest, South Dakota State Forestry, Wind Cave National Park, Jewell Cave National Monument and Mount Rushmore National Memorial). In addition, the Alpine crew spent 5 weeks doing rehab work on the Foothills Fire in Boise National Forest and the Boise District of the BLM.

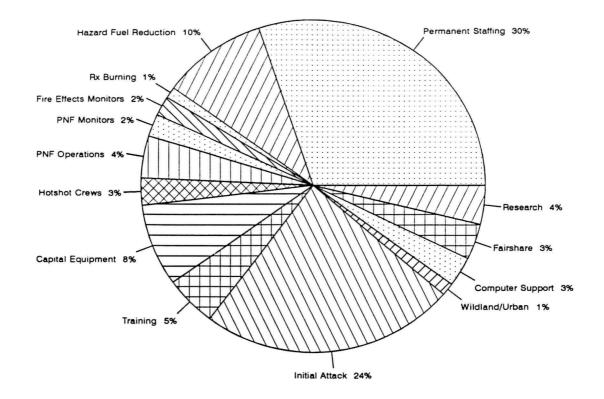
¹ 1983 - 1984 statistics include 3 crews: Alpine, Arrowhead, and Bison.

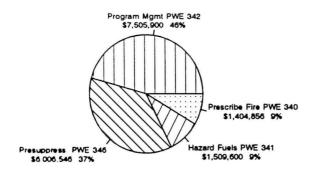
² 1985 - 1992 statistics include 2 crews: Alpine and Arrowhead.

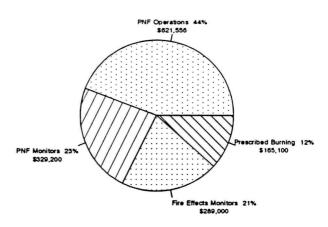
Table 2. Interagency Hotshot Crew Wildfire Assignments, 1992

CREW NAME	FIRE NAME	LOCATION	DATES
Arrowhead	AB Misc.	Sequoia NP	5/4-13
Alpine	Battle Axe	Black Hills NF	5/18
Alpine	Sheeps Canyon	Black Hills NF	5/19-20
Arrowhead	Call Box	Sequoia NF	5/24-26
Arrowhead	Pinal	Los Padres NF	5/30-6/2
Alpine	Triple #6	Black Hills NF	6/3
Arrowhead	Wren	Sequoia NF	6/8-9
Arrowhead	Pit	Los Padres NF	6/14-15
Arrowhead	Oso	Los Padres NF	6/16
Arrowhead	Prairie	Angeles NF	6/17-21
Arrowhead	Dome	Yosemite NP	6/21-23
Arrowhead	Stoney	Sequoia NF	6/25
Arrowhead	Loveland	Cleveland NF	7/18-21
Arrowhead	Moccasin	CDF/Calaveras RU	8/1-4
Alpine	Horsefly	Salmon NF	8/1-18
Arrowhead	Canyon	Sequoia NF	8/12-13
Arrowhead	Italian	Sierra NF	8/13-15
Arrowhead	Gulch	CDF/Calaveras RU	8/17-20
Alpine	Mahoney Creek	Challis NF	8/19-21
Arrowhead	Barker	Shasta-Trinity NF	8/21-25
Alpine	Woods	Targhee NF	8/23-25
Alpine	Foothills	Boise NF	8/25-31
Arrowhead	Fountain	CDF/Shasta RU	8/26-30
Alpine	Tomato Point	Payette NF	9/1-10
Arrowhead	Ruby	Stanislaus NF	9/7-10
Arrowhead	Indians	Los Padres NF	9/21-23
Alpine	Cliff	Bridger-Teton NF	9/21-10/4
Arrowhead	Cleveland	Eldorado NF	9/29-10/5
Arrowhead	Suwanee	Sequoia NP	10/7-16
Arrowhead	Red Fir	Sequoia NP	10/28

Table 3. Fire Management Authorizations







Presuppression and Program Management

Permanent Staffing 61% \$4.593,500

Wildland/Urban 2% \$185,800

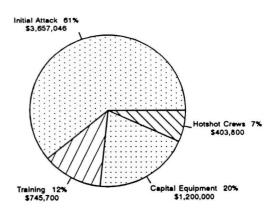
Program Support 16% \$1,202,900

Fire Research 8% Computer Support 6% \$523,000

\$435,700

PWE 342 - Program Management

PWE 340 - Prescribed Fire



PWE 346 - Presuppression

Table 4. Fire Severity Funding, Fiscal Year 1992

REGION	REQUESTOR	AMOUNT
Pacific Northwest	Olympic NP	\$29,000
	Mt. Rainier NP	\$37,400
	Crater Lake NP	\$21,300
	North Cascades NP	\$8,800
	Coulee Dam NRA	\$10,600
	Regional Office	\$4,000
Rocky Mountain	Yellowstone NP	\$38,000
Western	Lava Beds NM	\$47,200
	Lassen Volcanic NP	\$9,000
	Pinnacles NM	\$7,550
	Whiskeytown RA	\$9,500
	Yosemite NP	\$57,000
	Redwood NP	\$20,800
	Hawaii Volcanoes NP	\$1,000

TOTAL APPROVED FUNDING: \$301,150

Severity funding must be requested through the Regional Directorate, for approval by the Branch of Fire and Aviation Management, National Interagency Fire Center.

Severity funding is intended to increase initial attack preparedness and fire prevention response to an anticipated long term fire potential greater than the normal fire year. The severe fire potential may be the result of long term drought, unusual fuel conditions or other objective conditions.

Severity differs from step-up planning in that step-up plans are approved by the regional fire management officer; are driven by staffing classes which are determined by the burning index. Step-up plans are shorter term increases in preparedness and prevention.

Severity funds must be terminated as soon as conditions return to the normal fire year.

Table 5. Interagency Fairshare Programs, Fiscal Year 1992

REGION	UNIT	REQUEST	AMOUNT			
Pacific Northwest		Air Tanker Operations and Coordination Center	\$61,900			
Rocky Mountain		West Yellowstone & R1; R2 & Cody; BLM Colorado; Missoula Coordinator; Great Basin Computer	\$102,000			
Rocky Mountain	Dinosaur	Uinta Basin Interagency Helicopter Contract	\$5,000			
Rocky Mountain	Grand Teton	Helicopter Contract	\$20,000			
Rocky Mountain	Wind Cave	Helicopter Contract	\$6,300			
Southeast		Helicopters, Southern Area Coordination Center, Regional Cache	\$18,000			
Southeast	Great Smoky Mountains	Interagency Air Tanker Base Operation	\$21,000			
Southwest		SWFF Fire Crew, Lookout Tower/ELMA	\$4,500			
Western		Coordination Centers (3), Air Tanker Operation (GRCA), Smoke Mgmt. Coordinator	\$98,700			
Western	Joshua Tree	Coordination Center	\$3,000			
Western	Redwoods	Aerial Recon. Contract and Lookout	\$12,000			
Western	Saguaro	Coronado NF Helicopter	\$6,500			
Branch of Fire & Aviation Mgmt.		NWCG, Wildland/Urban Initiative, Smokey Bear Campaign, NARTC	\$160,000			
	TOTAL					

1992 - FIRE STATISTICS

Table 6. NPS Normal Fire Year¹ Statistics

SIZE CLASS IN ACRES	NUMBER OF WILDFIRES	NUMBER OF PRESCRIBED NATURAL FIRES
A (0 - 0.2)	480	86
B (0.3 - 9.9)	256	33
C (10 - 99.9)	65	17
D (100 - 299.9)	22	11
E (300 - 999.9)	14	10
F (1000 - 4999.9)	10	6
G (5000+)	5	2
TOTAL	852	165

Start Days: 271

Peak number of starts in a day: 25

¹ The normal fire year calculation is based on an analysis of NPS fire history for ten years from 1983 through 1992. "Normal" occurrence is defined as the third worst year in a ten year analysis period, and the statistics for each size class may be derived from different years.

Table 7. National Fire Activity

FIRE TYPE	# FIRES	NPS ACRES
Suppressed on NPS lands by NPS full control strategy	657	16,254
Suppressed on NPS lands by NPS modified control	60	437
Suppressed on NPS lands by other federal agency	22	205
Suppressed on NPS lands by non-federal agency	52	307
TOTAL WILDFIRES	791	17,203
Prescribed natural fires	111	1,853
Management-ignited prescribed burns	165	61,476
TOTAL PRESCRIBED FIRES	276	63,329
NATURAL OUT ON NPS LANDS	126	380
MUTUAL AID BY NPS ON OTHER LANDS	292	5,059
SUPPORT ACTIONS (NON-LOCAL)	544	
FALSE ALARMS	141	

Table 8. Wildfires and Acres by Size Class

SIZE CLASS IN ACRES	AGENC FIRES	Y LANDS ACRES	OTHER FIRES	LANDS ACRES	ALL FIRES	LANDS ACRES
A (0 - 0.2)	524	57.1	129	14.2	653	71.3
B (0.3 - 9.9)	198	280.3	114	237.7	312	518.0
C (10 - 99.9)	35	1,021.2	37	1,294.0	72	2,315.2
D (100 - 299.9)	10	1,470.8	7	1,322.8	17	2,793.6
E (300 - 999.9)	7	3,771.8	2	1,074.0	9	4,845.8
F (1,000 - 4,999.9)	5	12,163.0	1	1,374.0	6	13,537.0
G (5,000 +)	0	.0	290	5,316.7	1,069	24,080.9
TOTAL	779	18,764.2	580	10,633.4	946	139,105

There were 779 wildfires reported on NPS land in 1992, which is 91% of the normal fire year calculation (Table 6). Approximately 93% of the wildfires were controlled at under 10 acres in total size. The only fire size classes that exceeded the agency norm were those ranging in excess of 1,000 acres.

Table 9. Wildfires by Cause

	AGENCY LANDS		AGENC	Y LANDS
CAUSE	# FIRES	# ACRES	% FIRES	% ACRES
Lightning	298	5,713	38	31
Campfire	160	89	21	0
Smoking	25	70	3	0
Debris Burning	29	1,845	4	10
Incendiary	51	1,693	7	9
Equipment Use	15	4	2	0
Railroads	18	151	2	1
Children	23	9	3	0
Miscellaneous	160	9,191	20	49
TOTAL	779	18,764		

Table 10. Large Wildfires

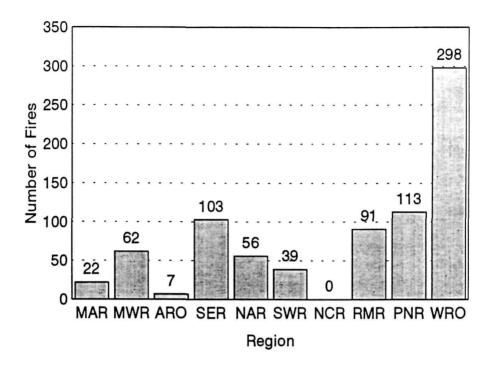
Region	Park	Strategy	Fire Name	NPS Acres	Total Acres
Pacific Northwest	Crater of the Moons	Control	Little Prairie	1,900	1,900
Southwest	Big Bend	Control	Gap	2,412	2,412
Western	Hawaii Volcanoes	Control	Napau	4,700	4,700
	Hawaii Volcanoes	Control	Laeapuki	1,566	1,566

Table 11. Large Management Ignited Prescribed Burns

Region	Park	Fire Name	Acres	Fuel Type	Cost/Acre
Rocky Mtn.	Wind Cave	Norbeck	1,000	Pine/grass	\$8.00
Southeast	Big Cypress	Airplanerx	8,404	Sawgrass	.80
		11Milewest	5,721	11	.86
		Catlelease	2,900	II	.58
		Windmillrx	7,547	11	.56
		Wooten Rx	2,607	II .	1.17
		Looppraire	6,796	II .	1.34
		Ochprairie	3,514	II .	1.99
		Thomas Rx	1,974	II .	1.13
		Loop 2 Rx	5,949	ш ,	1.25
	Everglades	West Bndry	250(1,419 total)	**	.93
		East Ever	1,336	H .	1.92
	Natchez Trace	Witchdance	41 (1,041 total)	Grass	9.99

There were 170 management ignited prescribed burns completed during 1992 for a total of 62,051 acres treated. The largest burn program was conducted at Big Cypress National Preserve, where over 47,243 acres were burned.

Table 12. Wildfires by Region



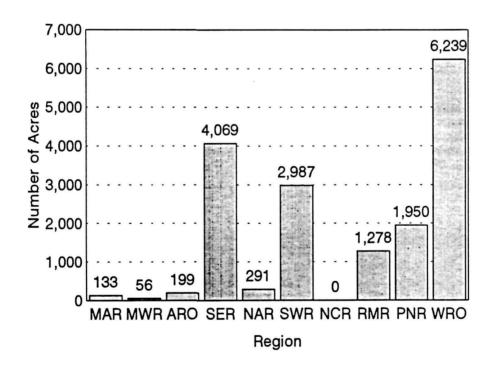
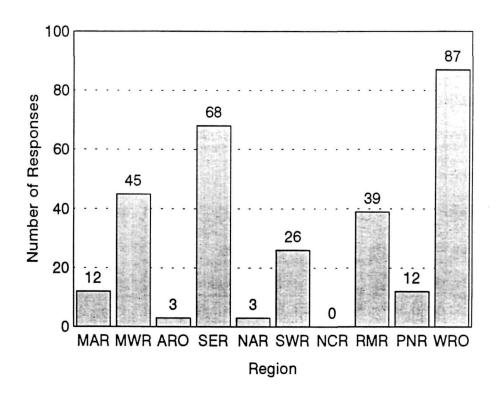


Table 13. Mutual Aid Responses by Region



KEY:

MAR - Mid-Atlantic Region

MWR - Midwest Region ARO - Alaska Region SER - Southeast Region

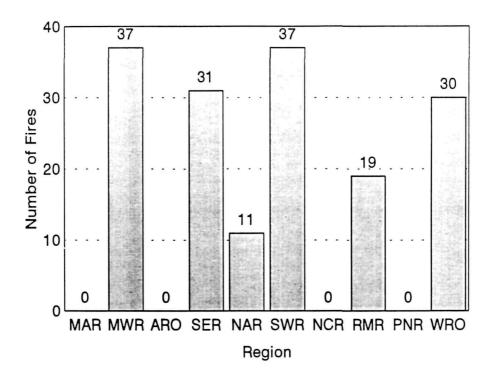
NAR - North Atlantic Region

SWR - Southwest Region

NCR - National Capital Region RMR - Rocky Mountain Region PNR - Pacific Northwest Region

WRO - Western Region

Table 14. Management Ignited Prescribed Burns by Region



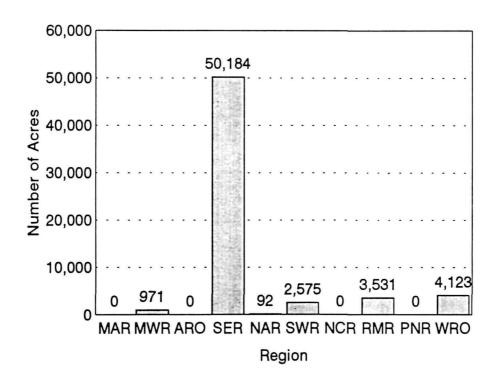
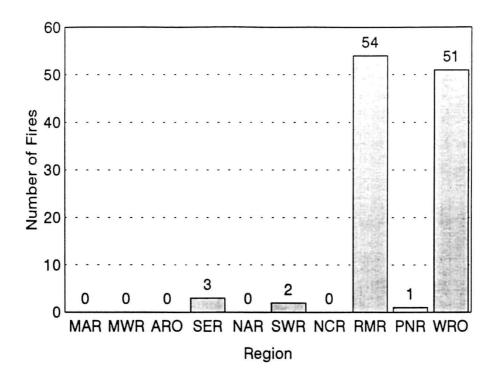


Table 15. Prescribed Natural Fires by Region



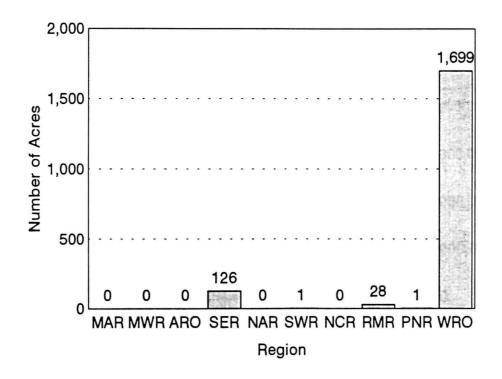


Table 16. Support Action Personnel by Region

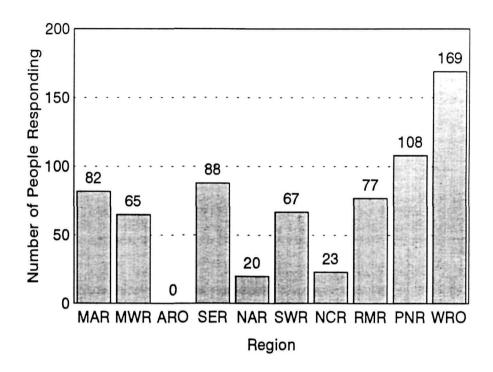
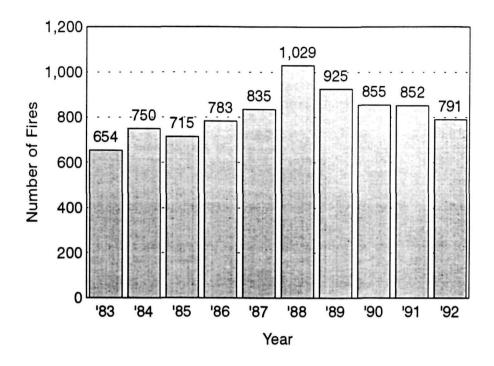


Table shows the maximum single-day commitment of people to interagency fire suppression in 1992.

1983 - 1992 FIRE STATISTICS SERVICEWIDE

Table 17. NPS Wildfires, 1983 - 1992



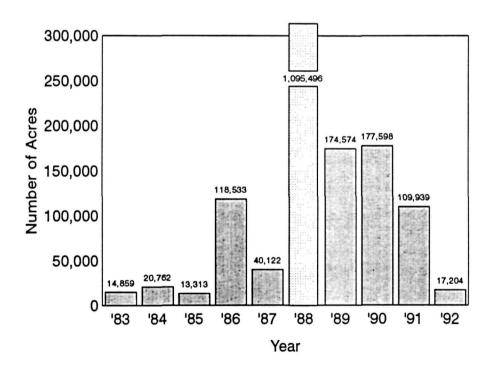


Table 18. NPS Mutual Aid Responses, 1983 - 1992

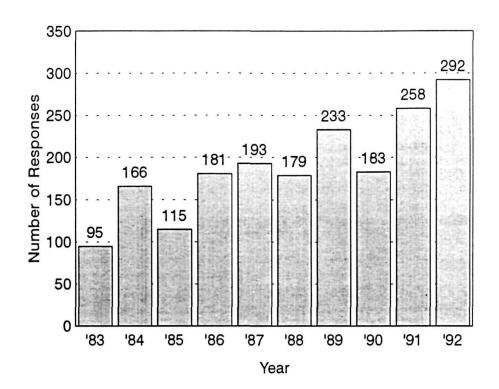
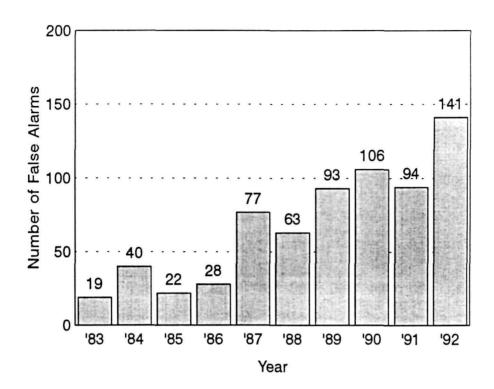
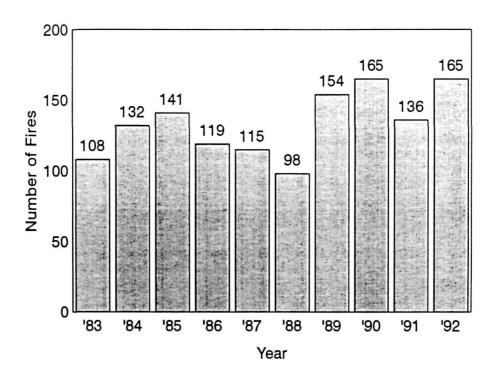


Table 19. NPS False Alarms, 1983 - 1992



The number of false alarms reported in 1992 reached an all-time high of 141.

Table 20. NPS Management Ignited Prescribed Burns, 1983 - 1992



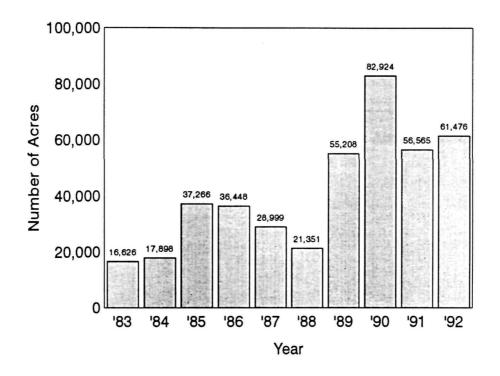
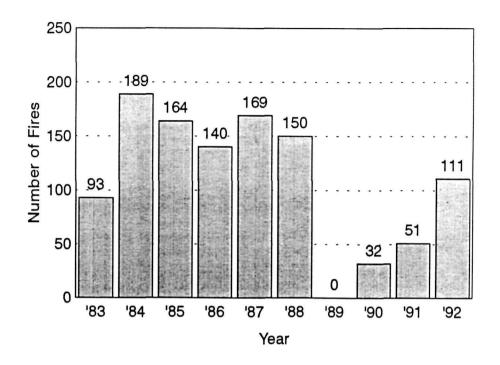


Table 21. NPS Prescribed Natural Fires, 1983 - 1992



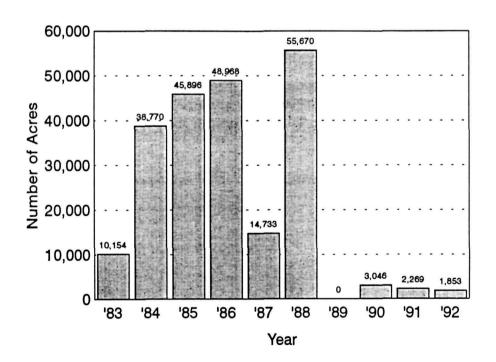
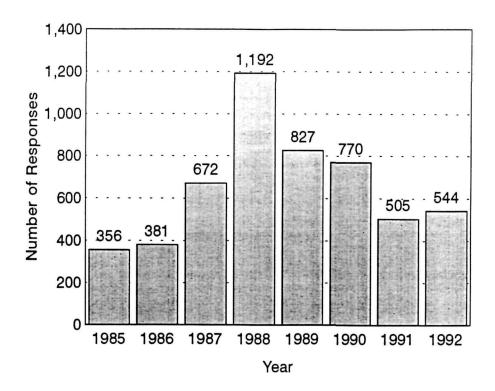


Table 22. NPS Support Actions, 1985 - 1992



Support actions are primarily wildfire suppression assists to non-local areas. They do not include local mutual aid responses. National mobilizations of National Park Service personnel for interagency wildfire suppression efforts were unheard of until 1985. Since that time many agency personnel, including those whose regular job assignments are not fire-related, have been trained and dispatched to fire assignments.

The above table displays the number of support action dispatches reported for the past eight years. The actual number of individuals dispatched is substantially greater. These figures do not include people who were involved in mutual aid or local suppression activities, or the people involved in fire-related support positions at their home units.

In addition to personnel, NPS helicopters, engines, and other equipment were used during mobilizations.

1983 - 1992 FIRE STATISTICS BY REGIONS



National Park Service Regions

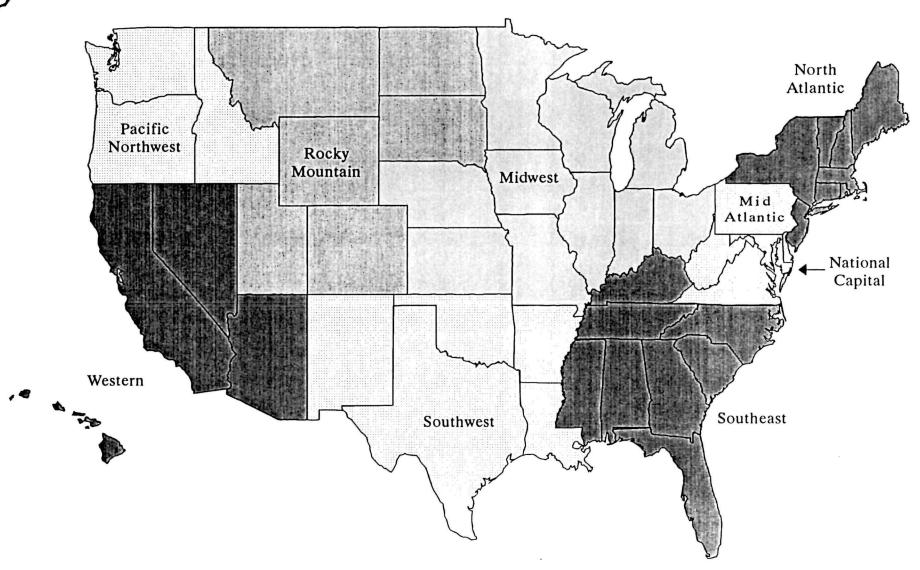
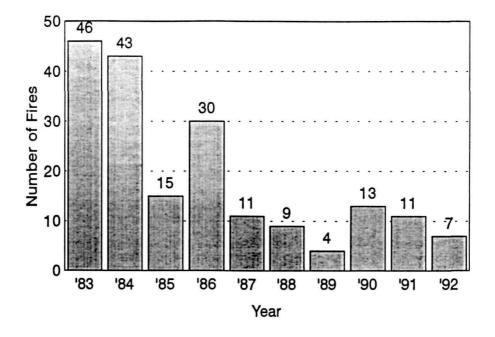


Table 23. Alaska Region Wildfires, 1983 - 1992



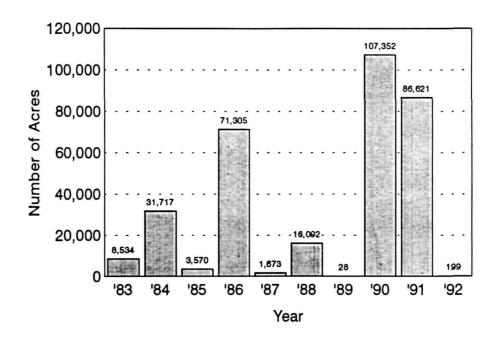
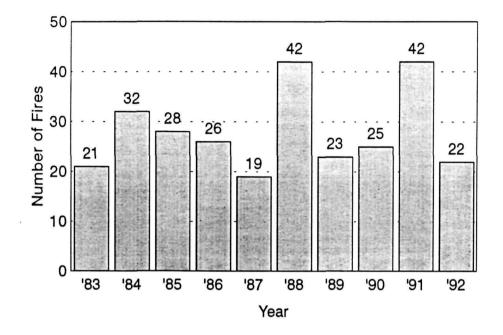


Table 24. Mid-Atlantic Region Wildfires, 1983 - 1992



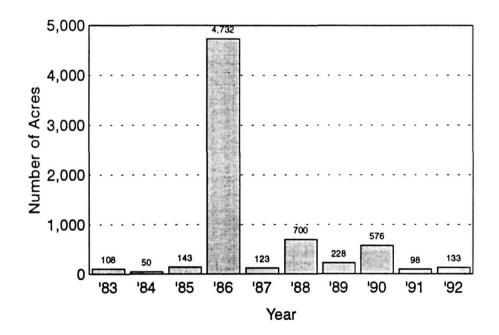


Table 25. Mid-Atlantic Region Mutual Aid Responses, 1983 - 1992

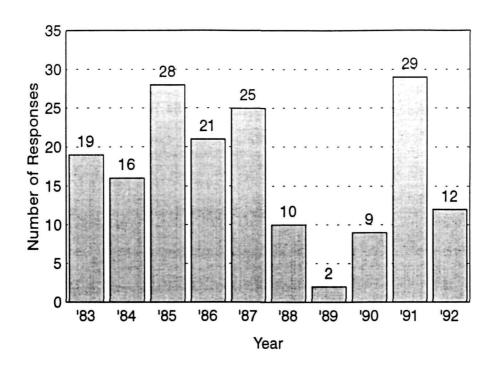
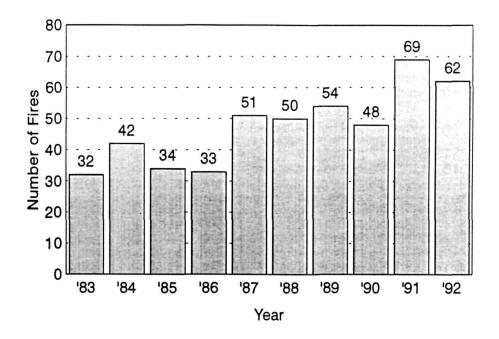


Table 26. Midwest Region Wildfires, 1983 - 1992



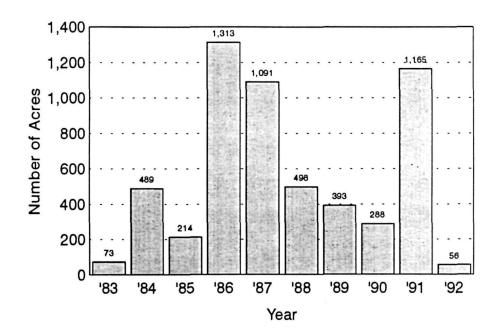


Table 27. Midwest Region Mutual Aid Responses, 1983 - 1992

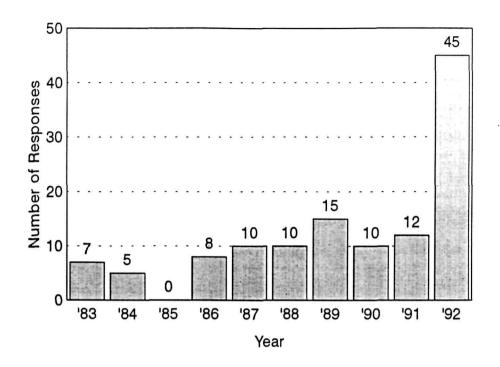
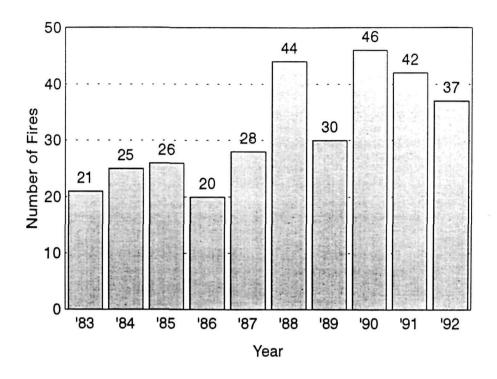


Table 28. Midwest Region Management Ignited Prescribed Burns, 1983 - 1992



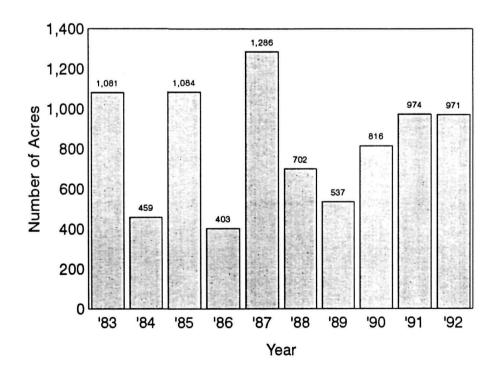
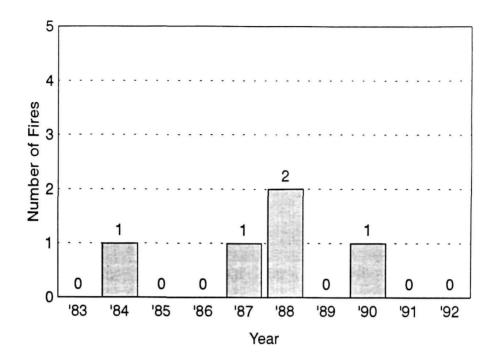


Table 29. Midwest Region Prescribed Natural Fires, 1983 - 1992



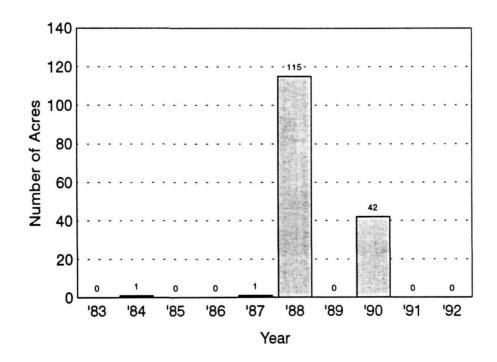
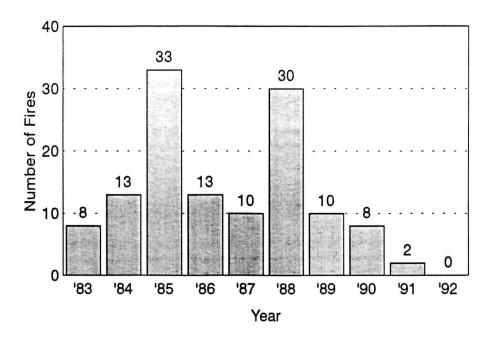


Table 30. National Capital Region Wildfires, 1983 - 1992



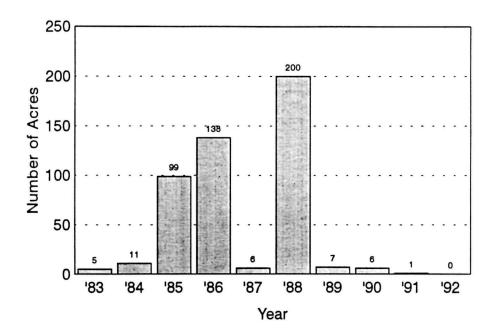
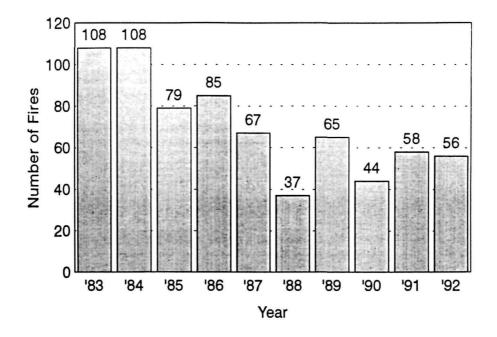


Table 31. North Atlantic Region Wildfires, 1983 - 1992



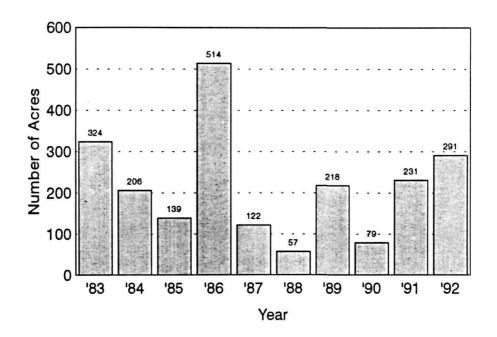


Table 32. North Atlantic Region Mutual Aid Responses, 1983 - 1992

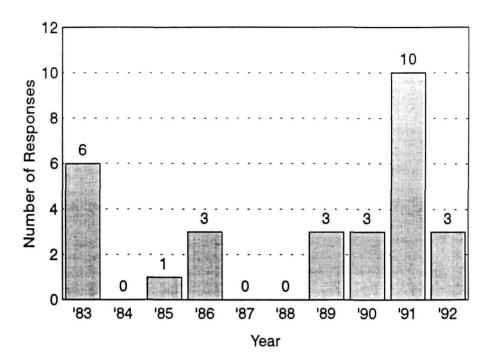
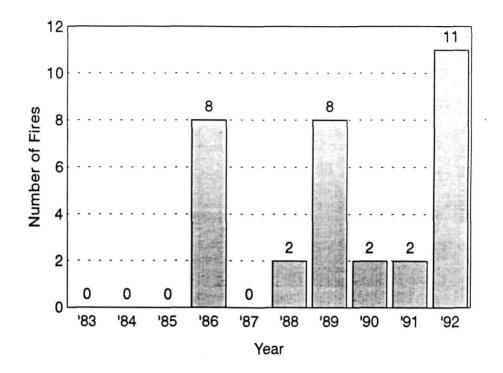


Table 33. North Atlantic Region Management Ignited Prescribed Burns, 1983 - 1992



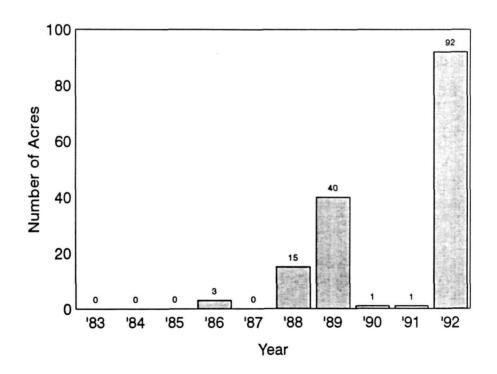
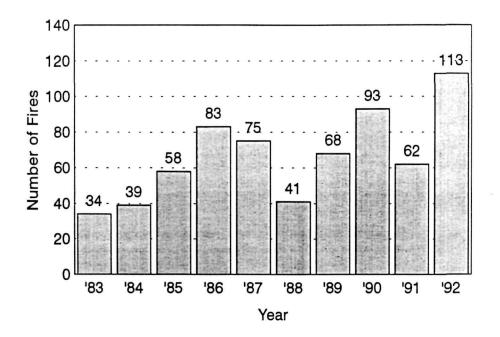


Table 34. Pacific Northwest Region Wildfires, 1983 - 1992



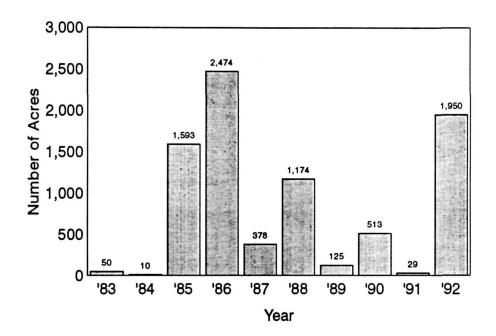


Table 35. Pacific Northwest Region Mutual Aid Responses, 1983 - 1992

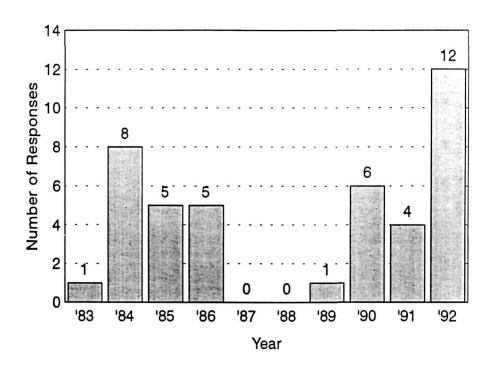
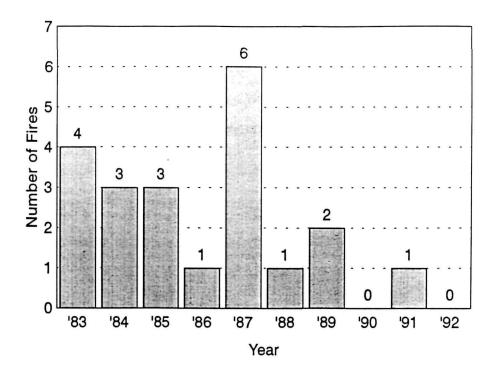


Table 36. Pacific Northwest Region Management Ignited Prescribed Burns, 1983 - 1992



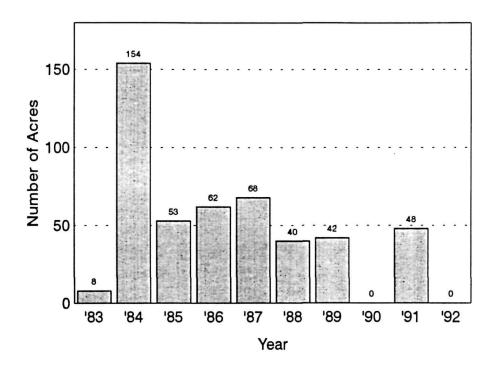
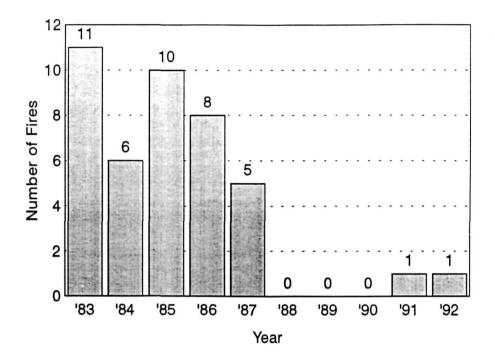


Table 37. Pacific Northwest Region Prescribed Natural Fires, 1983 - 1992



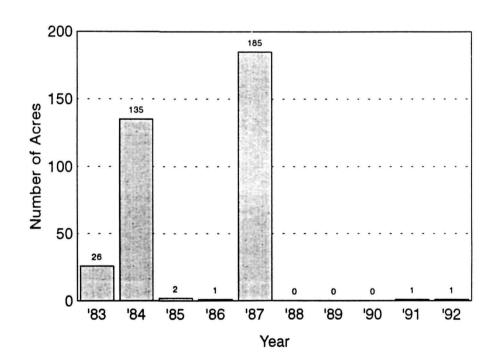
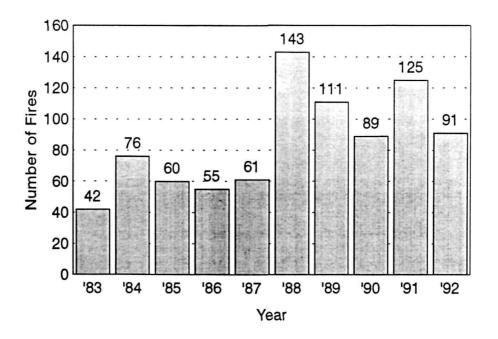


Table 38. Rocky Mountain Region Wildfires, 1983 - 1992



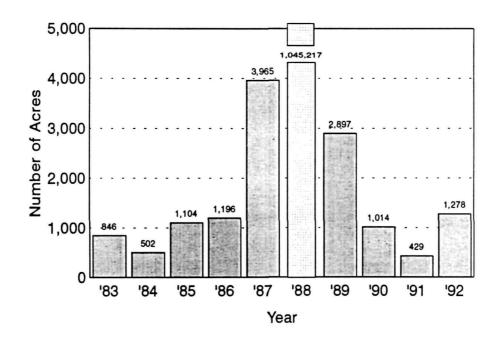


Table 39. Rocky Mountain Region Mutual Aid Responses, 1983 - 1992

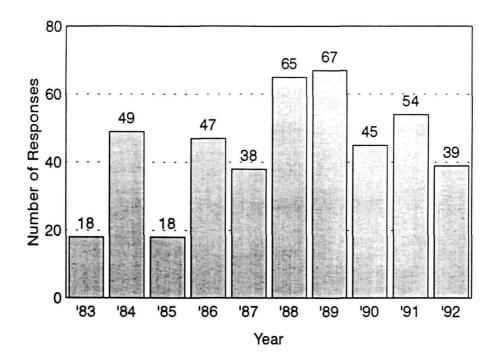
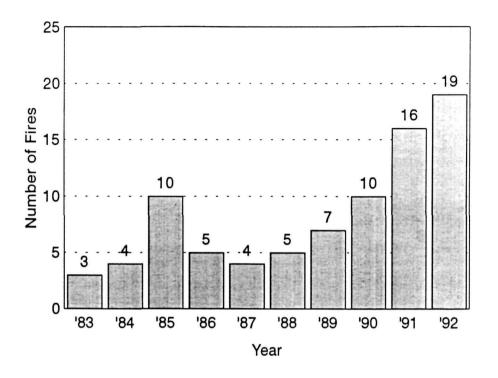


Table 40. Rocky Mountain Region Management Ignited Prescribed Burns, 1983 - 1992



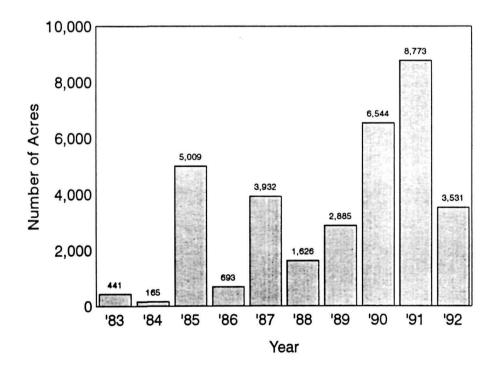
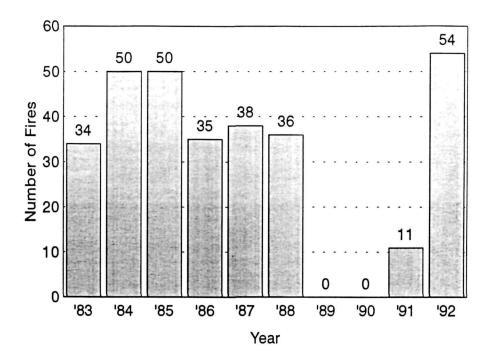


Table 41. Rocky Mountain Region Prescribed Natural Fires, 1983 - 1992



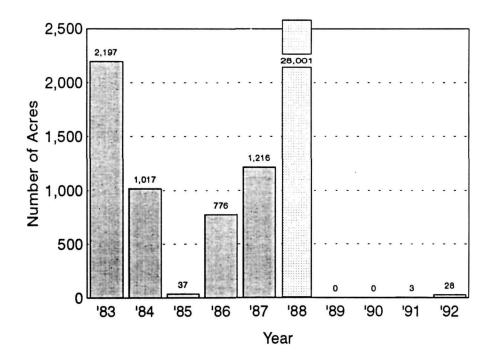
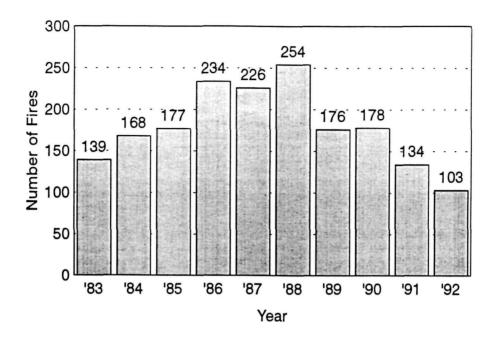


Table 42. Southeast Region Wildfires, 1983 - 1992



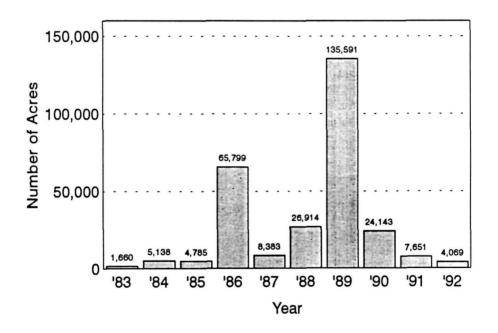


Table 43. Southeast Region Mutual Aid Responses, 1983 - 1992

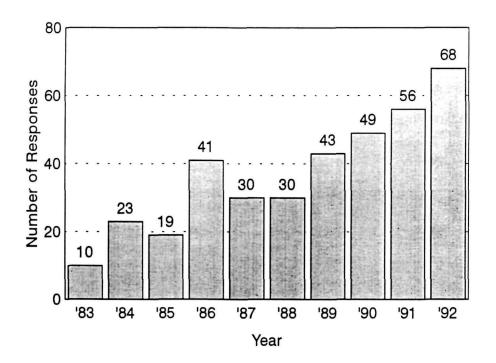
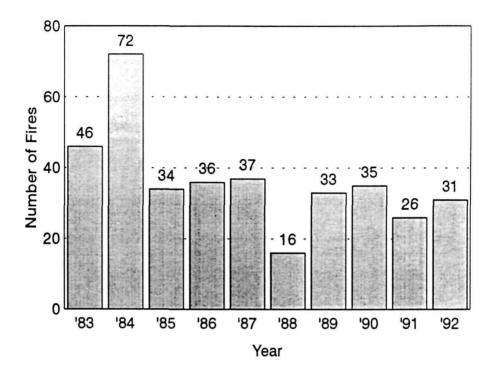


Table 44. Southeast Region Management Ignited Prescribed Burns, 1983 - 1992



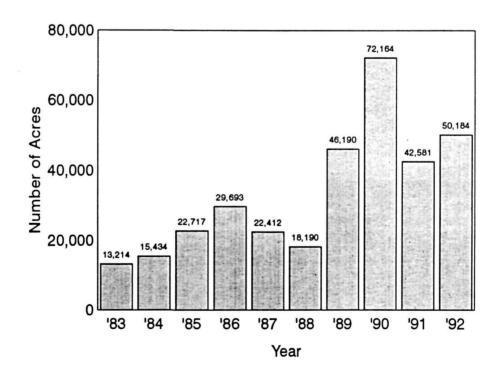
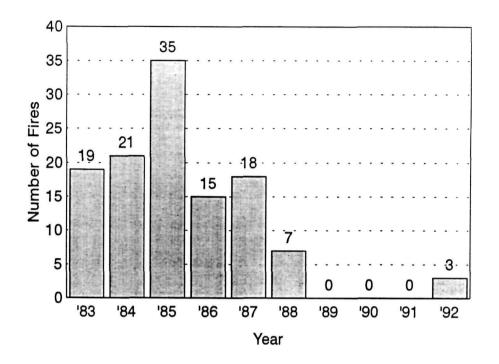


Table 45. Southeast Region Prescribed Natural Fires, 1983 - 1992



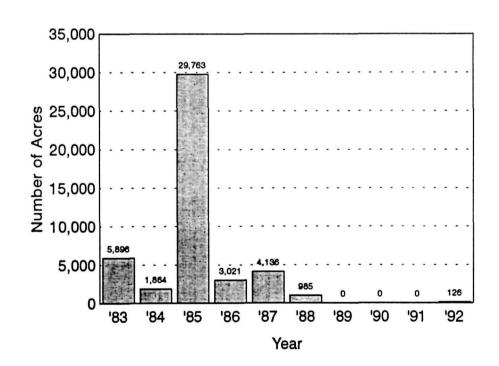
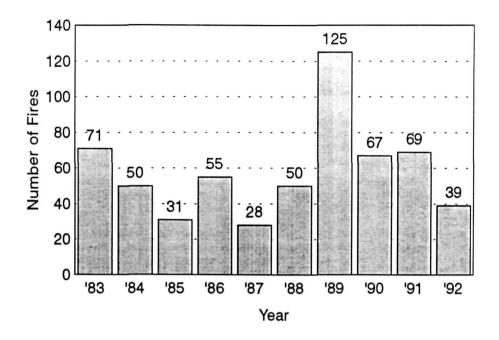


Table 46. Southwest Region Wildfires, 1983 - 1992



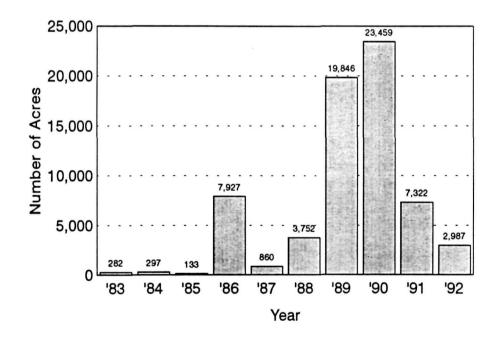


Table 47. Southwest Region Mutual Aid Responses, 1983 - 1992

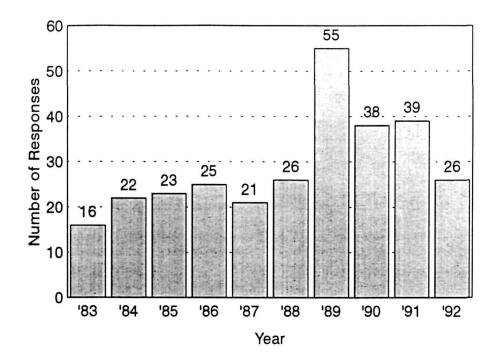
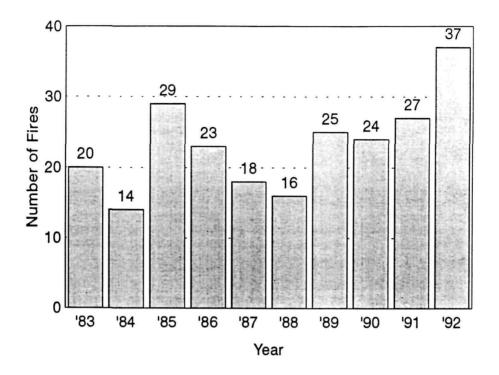


Table 48. Southwest Region Management Ignited Prescribed Burns, 1983 - 1992



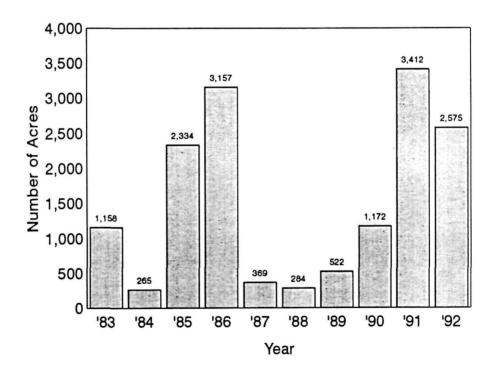
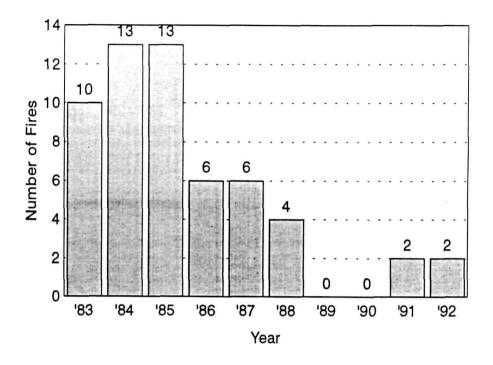


Table 49. Southwest Region Prescribed Natural Fires, 1983 - 1992



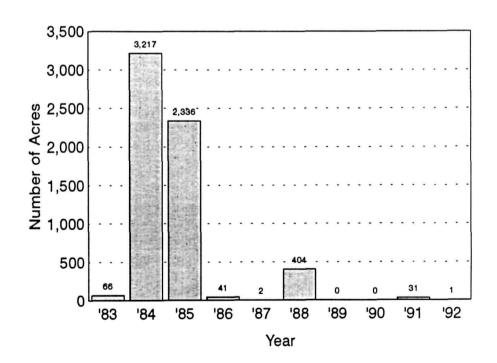
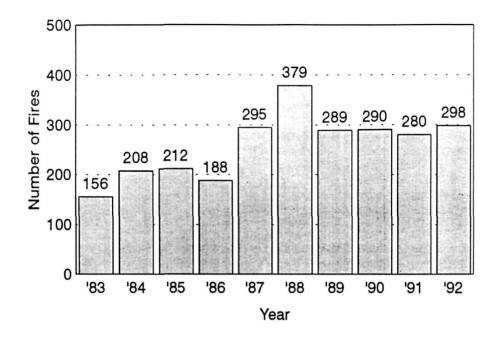


Table 50. Western Region Wildfires, 1983 - 1992



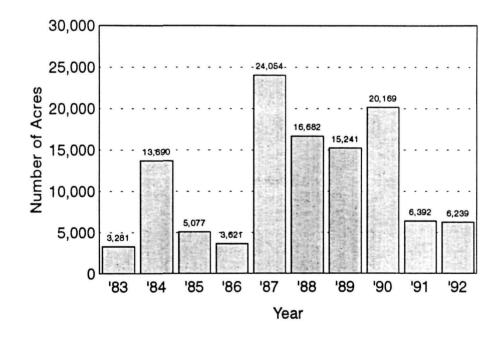


Table 51. Western Region Mutual Aid Responses, 1983 - 1992

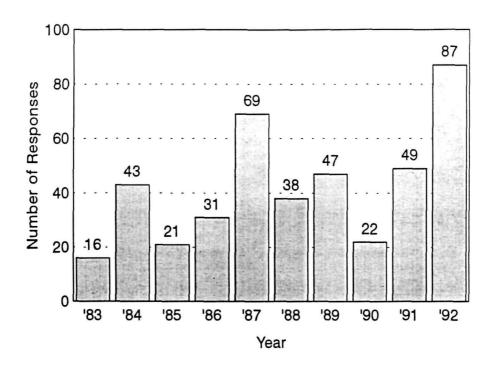
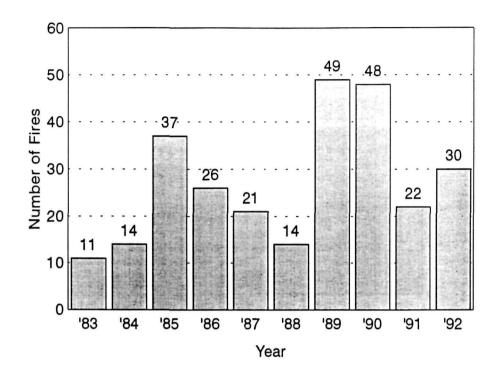


Table 52. Western Region Management Ignited Prescribed Burns, 1983 - 1992



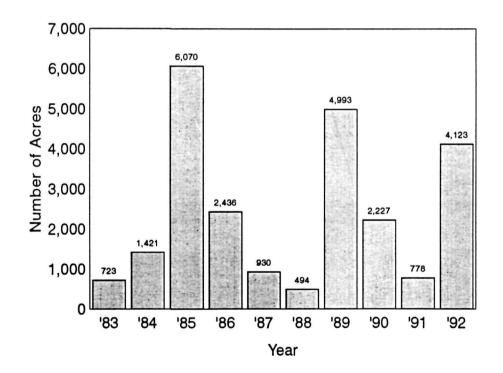


Table 53. Western Region Prescribed Natural Fires, 1983 - 1992

