

National Park Service  
Department of the Interior

# 1998 Wildland Fire Report

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### 1998 Servicewide Fire Statistics

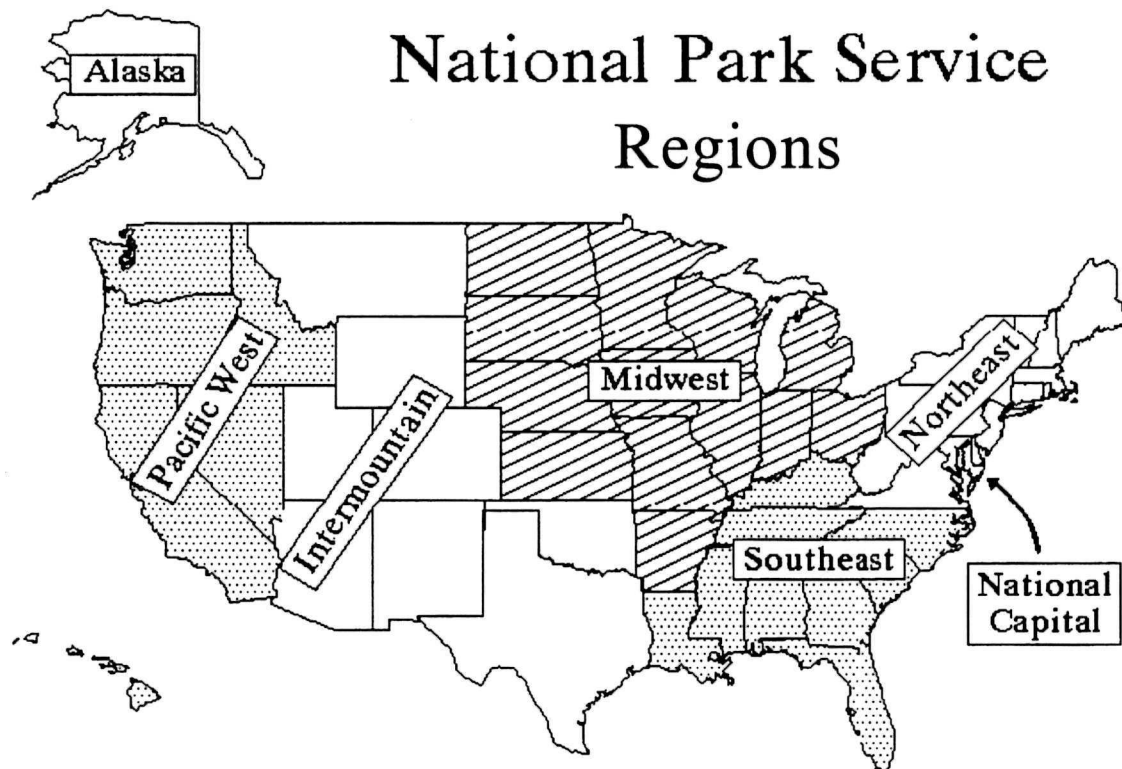
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The map pictured above depicts the National Park Service Regions and the following list identifies the corresponding park clusters serviced by Support Offices (SO's). Not all SO's are staffed with fire management personnel. Support Office fire management staff may support parks from other clusters.

Alaska Region (AKR)

Alaska Support Office (AKSO)

Intermountain Region (IMR)

Colorado Plateau Support Office (CPSO)

Rocky Mountain Support Office (RMSO)

Southwest Support Office (SWSO)

Midwest Region (MWR)

Midwest Support Office (MWSO)

National Capital Region (NCR)

National Capital Support Office (NCSO)

Northeast Region (NER)

Allegheny Support Office (ALSO)

Chesapeake Support Office (CHSO)

Boston Support Office (NESO)

Pacific West Region (PWR)

Columbia Cascades Support Office (CCSO)

Pacific Great Basin Support Office (PGSO)

Pacific Islands Support Office (PISO)

Southeast Region (SER)

Appalachian Support Office (APSO)

Atlantic Coast Support Office (ATSO)

Gulf Coast Support Office (GCSO)



## ***WILDLAND FIRE ACTIVITY SUMMARY***

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### **Alaska Region**

National Park Service units in the Alaska Region experienced an extremely low level of wildland fire activity. A total of five wildland fires burned approximately 22 acres. This low level of wildland fire activity was reflected throughout Alaska. Only 407 wildland fires occurred, the lowest level since 1988, burning approximately 119,000 acres. The Karla Lake fire accounted for almost one-half of the statewide total of burned acres.

The Chilkoot trail, an historic gold rush era trail in Klondike Gold Rush Historic National Park, was closed for three days due to the proximity of a wildland fire. Restrictions on trail use were in place for an additional five days. The fire did not burn into the park but NPS personnel managed the trail closure and restrictions, disseminated information and provided input to the incident commander. The Dyea campground was closed for ten days and was used for incident command post and base camp. The Alaska Division of Forestry managed the suppression response. Alaska NPS provide personnel to incidents in Texas and the Karla Lake fire in Alaska.

Marsha Lutz, from Rocky Mountain National Park, arrived in June as the Area Fire Management Officer for Wrangell-St. Elias National Park & Preserve, Gates of the Arctic National Park & Preserve and Yukon-Charley Rivers National Preserve. She is duty-stationed at Wrangell-St. Elias headquarters and is supervised by the Chief of Resource Management.

### **Midwest Region**

The Midwest Region is making a transition from a wildfire suppression program to a Wildland Fire Use Program. We had 70 wildland fire suppression incidents, two natural outs, 88 support actions, 47 prescribed burns, one fire use action and 12 false alarms.

The Region has two parks, Voyageurs and Isle Royale, with approved Fire Management Plans that permit natural fires to be used to achieve natural resource objectives. One successful fire-use incident occurred at Voyageurs this summer. It lasted a short time, accomplished an acre of ecosystem maintenance, and provided an opportunity to use the new Wildland Fire Situation Analysis.



## National Capital Region

The fall fire season in and around the National Capital Region (NCR) was relatively active. Four parks experienced two or more fires. NCR mobilized 182 firefighters on 24 fire assignments during the course of the year. The fire activity taxed cooperator resources. Under a memorandum of understand, NCR provided support for eight fires on state of Maryland property near C&O Canal NHP and Catoctin Mountain Park. Firefighter support was also provided to National Park Service's Northeast Region, USFS and other agencies in the states of Virginia, Florida and Texas.

## Northeast Region

The weather within the region during 1998 was as varied as the parks within the region. The New England states experienced one of the worst ice storms on record. Several sites in the northeast documented record levels of annual precipitation; the Shenandoah Valley documented the second wettest winter and spring on record, only to be followed by a severe drought that lasted until Christmas; and both the Delaware Valley and West Virginia experienced fall droughts. These extremes in the weather were a driving force in fire activity, both wildland and prescribed.

The Northeast Region suppressed 50 wildland fires for a total of 1,531 acres and managed 23 prescribed fires covering 176 acres. The largest wildland fire in the region was the Calvary Fire at Shenandoah National Park, which was managed under a Type II Incident Management Team. The fire burned from late October through late November and was the second largest wildland fire in the park's history, burning 1,431 acres. The drought conditions were not the only factor in fire behavior this season. New River Gorge experienced a 50-acre fire during a period of moderate fire danger mainly due to steep terrain.

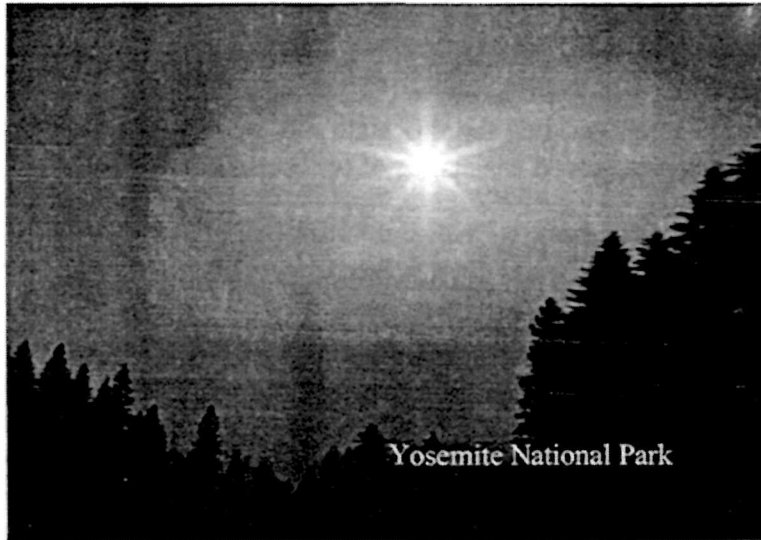
## Pacific West Region

The influence of El Nino resulted in very wet conditions in California, while parts of the Northwest and Hawaii experienced very dry conditions. The west side of North Cascades National Park received the lowest amount of summer precipitation in 37 years. This park as well as Hawaii Volcanoes National Park received severity funds.

The desert parks had a similar problem due to above annual precipitation and subsequent increases in fine fuels. Lake Mead asked for and received severity funding. Campfire

restrictions, trail and road closures, and extra prevention patrols successfully mitigated the threat of wildland fire in these parks, as well as in others. Large fires did occur on lands outside the parks, but not in national parks, and this should be viewed as the result of successful fire prevention programs.

The largest wildland fire occurred in Pinnacles National Monument. On August 3, arcing power lines outside the park ignited a fire that quickly spread to 2,800 acres, 1,642 of which were inside the park. The Park's Superintendent and his staff efficiently worked with a Type II Incident Management Team to control the fire within a week, much of which occurred in wilderness. The park requested and received Burned Area Emergency Rehabilitation funds.



Yosemite National Park established a ten-person fuels crew and conducted a 2,350 acre prescribed fire in Aspen Valley. Support was allocated for GIS vegetation mapping, cultural resource survey and protection, and smoke monitoring. A fire management Internet site was established.

### Southeast Region

In 1998, Natchez Trace Parkway firefighters and cooperators suppressed a total of 16 wildfires that burned 5.2 acres of park land and 15.2 acres of other land within the protection zone.

Big Cypress had 86 wildland fires for a total of 3,840 acres. The largest suppression fire this year was the 75 East fire at 1,129 acres. Big Cypress responded to a number of mutual assistance fires with the Florida Division of Forestry, Fakahatchee Strand State Preserve and with the Florida Panther National Wildlife Refuge.

Cape Hatteras National Seashore had six In Park wildland fires for 13.9 acres and two Out of Park support actions in Florida and Texas.

Great Smoky Mountains National Park (GRSM) managed its first wildland fire managed for resource benefits in April. The fire, Forney Creek, burned actively for three days covering 370 acres. Additionally, the Park had 9 wildland fires covering 47 acres,

conducted 11 prescribed fires for endangered species, rare plant, and meadow restoration management for 699 acres and assisted other agencies on approximately 34 incidents sending out an estimated 120 employees.

The Oconaluftee Job Corps Fire Crew had four interagency fire assignments during which they worked on many fires in South Carolina, Texas, Virginia and Tennessee. In addition, they assisted GRSM for approximately one week while working on the Ski Mountain and Cades Cove prescribed fires.

Everglades National Park had 57 fires in 1998. Human caused fires that were suppressed totaled 23 fires covering 1,887 acres. Everglades had 11 prescribed burns totaling 3,573 acres. There were 23 natural fires managed as Wildland Fire Use (WFU) that totaled 2,844 acres. The Park also responded to 11 wildland fires that were in mutual aid assistance zones for a total of 1,137 acres; assisted federal, state and local agencies on 3 prescribed fires totaling 103 acres; and provided assistance of two personnel on a western WFU at Glacier NP.

Despite drought conditions that stayed in the High and Very High range most of the winter, there were relatively few suppression fires that lasted more than one operational period. Prescribed burning was hindered by the overall drought condition that predominated Florida during the summer months. The prescribed burn ban that was implemented statewide hindered prescribed burning activities in Everglades both early in the summer (mid-June) and early in the "late summer" burning season (July). Prescribed burns in August met with mixed success. However, Everglades did have a very active year for wildland fire use strategies. These fires burned primarily in June, July and August and totaled nearly 3000 acres for the second year in a row.





## ***PROGRAM ACCOMPLISHMENTS***

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### **Fire Management Program Center**

The year 1998 brought several changes to the Fire Management Program Center. The first to occur was the retirement of Doug Erskine. In January 1998, Doug retired as the NPS Fire Director at National Interagency Fire Center (NIFC). Rick Gale assumed those duties along with his ranger activity duties. Steve Botti served as acting NPS Fire Director until Rick was able to make the transition from Washington Office to Boise in March.

In May, Jim Farrel retired from the Structural Fire Program after 8 years of service. With the absence of Jim, the Structural Fire Program is being reviewed to determine which direction the program will take in the National Park System.

Due to restructuring, central office downsizing, staff reassignments and retirements, Maureen Finnerty, Associate Director of Operations and Education, commissioned a review team to determine where these changes influenced mission accomplishments. The review team consisted of Bill Wade, retired Shenandoah National Park Superintendent; Scott Erickson, Deputy Superintendent, Santa Monica Mountains National Recreation Area; Deb Liggett, Management Assistant, Alaska Region, Brad Cella, Fire Management Officer, Alaska Region; and Roger Trimble, Senior Fire Specialist, Bureau of Land Management, Washington D.C. The team interviewed various individuals to include all levels of NPS personnel and NIFC staff members. This review resulted in a 61-page report with recommendations to be implemented endorsed by Maureen Finnerty.

One of the first recommendations addressed by the review team was the concern of losing the Fire Director at the Fire Center. With Rick's collateral duties and extensive travel, there was widespread concern of losing the day to day operations effectiveness of the program center; therefore a National Fire Management Officer (FMO) position was established. At the end of 1998, Sue Vap was selected as the National FMO. She comes to the center from the Wenatchee National Forest, where she served as the Group Leader for Protection.

Other recommendations from the review team were to bring assistance to the Fire Program Planning and Administration sections. Mike Warren was brought on to take over the Working Capital Fund and Facilities programs. Mike has been part of the National Park Service family for many years and comes to the center after a hiatus from Sequoia Kings Canyon NP. Herminia (Mina) Ramos was hired as our secretary. Mina is currently seeking her degree from Boise State University and was hired under the Student Career Experience Program.

As a result of the review done for the Program Center, a position description was developed for an Information/Fire Education Specialist; it is currently being classified and will be recruited in the near future.

In addition to the review, the National Park Service and the US Forest Service jointly funded a Fire Planner position. Sarah Robertson accepted this position. She joins us from Redmond Air Center where she served as an Interagency Fire Planner.

Prevention and fire education programs continued with funding being provided for the materials to be put into the Cooperative Fire Prevention Program catalog along with Smokey Bear products. NPS employees were active in the Fire Prevention Teams that were assigned to Texas and Florida during the fire season. In addition, one training session was held with three NPS employees participating and NPS provided two members on the cadre and funding.

National training was supported by the FMPC through participation on the Training Working Team, the Technical Fire Management Steering Committee, and other steering groups. The coordination of subject management experts included: NPS students participating in local, geographic area, and national training exceeded 2,050 personnel trained in FY-98. Two video productions were initiated covering minimum impact strategies and tactics and wildland fire use. FMPC staff instructed and supported training sessions throughout the year.

The Department of the Interior (DOI) Incident Qualifications and Certification System was supported by the Fire Management Program Center, including instructing one training session and revision of the User's Guide. Program modifications were initiated to change two courses (S-131 and S-230) from "suggested" to "mandatory" courses. Other changes were made to the system tables to reflect the Incident Commander Type 5 positions and additional national and agency requirements. An engineering study of the System was initiated, which will continue into the Fall of '99. Analysis of the work processes associated with qualifications and certifications, information requirements, and design criteria will result in a report presented to the Interior Fire Coordinating Council (IFCC) with recommendations for future actions concerning the System.

The NPS Administrative Payment Teams were not dispatched during FY 98. FMPC staff participated with the Forest Service Incident Business Management Coordinators nationwide. In addition, the DOI fire agencies and IFCC worked extensively with Department and Bureau of Reclamation on the issue of withholding of income tax from emergency workers pay. Incident business management questions from the field were resolved by FMPC staff and general support provided in this area.

The Federal Fire & Aviation Leadership Council's Ad Hoc Fire Program Management Competencies and Qualifications Task Group was chaired by the National Fire Operations Program Lead. Extensive competency descriptors for 11 key fire management positions were finalized (National, Geographic, Unit Program Managers; Prescribed Fire & Fuels Specialist; Fire Operations Specialist; Prevention & Education

Specialist; Helicopter Manager; Interagency Hotshot Superintendent; Senior Firefighter and Supervisory Engine Operator). Fire program complexity descriptors were drafted and tested for the NPS. As well as draft qualifications for each of the 11 positions were finalized.

As part of the above project, work was initiated with three universities (Colorado State, Montana State, Univ. of Idaho) to identify standard credit hours for selected National Wildfire Coordination Group (NWCG) fire courses, which will be used to support supplemental standards for the GS-401 series. A task group will be developing those combination work experience and educational credit supplemental standards, then working with the Office of Personnel Management to formally adopt them into the federal classification system.

Three interns from the first Fire Management Intern Program session continued their respective developmental curricula. The first graduate successfully completed her program September 31<sup>st</sup>. Lisa Elenz was assigned to Grand Teton National Park as Operations Specialist/Assistant Fire Management Officer.

The program center worked with staff from the Office of Personnel Management, Public Health Service and the Department, fire medical standards were drafted for positions requiring arduous fitness.

Extensive time was spent in working with the Tri-Data Corporation completing the Phase III report of the Firefighter Safety Culture study. Following the release of that report, program center staff assisted in establishing priorities for the 287 "implementation strategies" proposed by the report. The Safety Awareness in the Fire Environment (SAFE) Initiative is the long-term action response to the extensive Report recommendations. To manage this Initiative, a Program Manager position was funded by the five federal agencies, utilizing an FTE contributed by the NPS. Steve Holder, the Chief Ranger from Zion National Park, was selected as the program manager.

The "Fire Fatalities Case Study" course was completed late in the year, and will be available through the Publications Management System in early 1999.

To assist Regions in developing fire preparedness review teams (responsive to the recently adopted interagency standard for preparedness reviews), five workshops were sponsored with training contracted through The Firehouse, a contractor in Clovis, California. Over 50 employees were trained at sessions held at Everglades/Big Cypress, Buffalo National River, Grand Canyon, Sequoia & Kings Canyon, and Olympic. Participants utilized a computerized version of the draft Interagency Fire Preparedness Review Guide, and presented final reports to park management at each site.

An extensive Wildland Fire Work Capacity Test Implementation Package was developed and distributed Service wide, providing guidance in implementing the new work capacity tests authorized by NWCG and adopted January 1, 1998. This included a Job Hazard Analysis, and a video produced by the US Forest Service.



Much time and effort went into the revision of NWCG 310-1 "Incident Management Qualifications Guide" and to a satellite-training broadcast which explained the use of the NWCG qualification system. The revised 310-1 and supporting training package should be available in the spring of 1999. A draft interagency "Initial Response Pocket Guide" was developed by FMPC staff and others, then field-tested throughout the year. The final product will be put into the NWCG Publications Management System in early 1999.

Program center staff instructed at several national and regional courses, including "Fire Management Leadership", "Safety Officer" and "Operations Section Chief" sessions. Also, a member of the program center served on the steering committee for "Senior Level Aviation Management", and transitioned steering committee responsibilities on "Fire Management Leadership" and "Fire Program Management" to other NPS employees.

The FIREPRO Working Capital Fund (WCF) Program purchased new equipment to replace 12 engines, two water tenders and four hotshot crew carriers. In addition, three new crew carriers were purchased for Prescribed Fire Support Modules duty-stationed at Great Smoky Mountains, Buffalo River and Saguaro. A total of \$1,683,634 was expended on FY 98 WCF procurement. In the three years of its existence the WCF has purchased a total of 44 engines and six water tenders, in addition to crew carriers for the Alpine and Arrowhead hotshot crews and the seven Prescribed Fire Support Modules.

The FIREPRO Steering committee met twice in 1998 and based on nominations received from the field, two changes were made in the committee membership. Paul Head, Northeast Region Fire Management Officer (FMO) replaces Dan O'Brien (Intermountain Region FMO) who announced his scheduled retirement in early 1999. Dan was an original charter member of the committee, which first met in the spring of 1991 and coincidentally occupied the same FMO position then that Paul now occupies. Bill Adams, another charter member of the committee, transferred to a term appointment at the Fire Management Program Center in 1998 which necessitated his replacement in order to maintain the balance of park representatives on the committee. Caroline Lansing, Prescribed Fire Specialist at Glacier National Park was selected as Bill's replacement.

FIREPRO program audits were conducted in Whiskeytown National Recreation Area, Hawaii Volcanoes and Rocky Mountain National Parks. Program Center staff accompanied the Midwest Region's FMO on a site visit to Sleeping Bear Dunes National Lakeshore to review and provide recommendations regarding structural and wildland fire concerns on North and South Manitou Islands. Site visits were conducted to Saguaro and Guadalupe Mountains National Parks and Chiricahua National Monument.

The Department of the Interior started a Fire Facilities Construction initiative for the FY 2000 – 2004 budget years. A call went out to the parks, which resulted in their input of proposals into a request program developed in the Internet. These proposals were reviewed and ranked at the regional level. All of these projects were then taken before an interagency group composed of members of the Bureau of Land Management, Fish and

Wildlife Service, Bureau of Indian Affairs and the National Park Service. This group then ranked all the projects and came up with a unified submission to the Department for inclusion in the Departmental budget for FY 2000.

During FY 1999, money was earmarked for a contract to finish the construction of the fire facilities on the South Rim of Grand Canyon National Park and to fund the Architecture & Engineering (A&E) work on projects in Saguaro, Grand Teton, Lassen Volcanic, Redwood, Grand Canyon National Parks, Mojave National Preserve, Dinosaur National Monument and Buffalo National River.

A Program Center employee participated as a member of the Fire Use Working Team (FUWT) and the National Advisory Group for Fire Danger Rating (NAGFDR). During the year, the FUWT continued to support course development and maintenance for the prescribed fire curriculum. A test course of Advanced Fire Effects, RX-540, was offered. Development efforts continued on Prescribed Fire Monitoring and Analysis, RX-290. Program Center staff was involved in the consolidation of RX-590 and Fire Behavior Analyst, S-590 into a single course, S-590, Advanced Fire Behavior Interpretation. Training courses were implemented at the national level to cover Long Range Fire Behavior Assessment (S-492) and Large Fire Growth Simulation (S-493).

Program Center staff served in support of work groups that addressed action plan items identified in the Implementation Action Plan for the Federal Wildland Fire Management Policy and Program Review, chartered by the Secretaries of the Interior and Agriculture. Staff participated on interagency task groups responsible for developing presentations/lessons describing implementation of the new policy. Staff members prepared and published an interagency guide to policy implementation, Wildland and Prescribed Fire Management Policy, Implementation Procedures Reference Guide. Staff members completed 15 individual presentations detailing policy implementation.

Staff participated on the IFCC Research Working Team and served as project coordinator for two research projects. Establishment of the Joint Fire Sciences Program Governing Board necessitated NPS participation. A FMPC staff member represented the service on this group.

Program Center staff participated as team members on national interagency Area Command and assisted in management of the Interagency Fire Use Management Teams. FMPC staff members completed Area Command assignments in Florida, and Fire Use Management Team assignments on the Salmon-Challis National Forest and Glacier National Park. Staff members also coordinated four long-range assessments for Florida, and the Great Basin, Pacific Northwest, and Northern Rockies Geographic Areas under the direction of the National Multi-Agency Coordination Group, Boise.



Significant support was provided to national and regional training in the form of course coordinators, lead instructors, or unit instructors for the following courses:

- National Park and Wilderness Fire Management
- Fire Ecology and Ecosystem Management
- Fire Management Leadership for Local Line Officers
- RX-340, Introduction to Fire Effects
- Fire Technology Workshop

Staff members also served as NPS representatives on the following steering committees:

- National Park and Wilderness Training Course Cadre
- S-590 Steering Committee
- Fire Behavior Committee

Program Center staff provided review of manuscripts and served as Associate Editor for the International Journal of Wilderness. Publications produced by FMPC staff members wholly or in part include:

Zimmerman, G.T., and P.N. Omi. 1998. Fire restoration options in lodgepole pine ecosystems. Pages 285-297 in Teresa L. Pruden and Leonard A. Brennan (eds.). *Fire in Ecosystem Management: Shifting the Paradigm from Suppression to Prescription*. Tall Timbers Fire Ecology Conference Proceedings No. 20 Tall Timbers Research Station, Tallahassee, FL.

Bunnell, D. L., and G. T. Zimmerman 1998. Fire management in the North Fork of the Flathead River, Montana: an example of a fully integrated fire management program. Pages 274-279 in Teresa L. Pruden and Leonard A. Brennan (eds.). *Fire in Ecosystem Management: Shifting the Paradigm from Suppression to Prescription*. Tall Timbers Fire Ecology Conference Proceedings No. 20 Tall Timbers Research Station, Tallahassee, FL.

Interagency Fire Use Management Teams, Operating Guide 1998. National Park Service, Boise, ID. 213 pages.

Wildland and Prescribed Fire Management Policy, Implementation Procedures Reference Guide. 1998. NPS/USFS. Boise, ID. 190 pages.



## Intermountain Region

The past year was very busy and productive for the Intermountain Region (IMR) Fire Management Program. The Denver Office welcomed Cliff Chetwin, Regional Aviation and Safety Specialist, when Cliff relocated from Santa Fe. The office also welcomed Tim Sexton to the staff. He is one of two deputy Regional Fire Management Officers. Tim came to the IMR from the Winema National Forest in Oregon. The Denver Fire Management Program was officially reorganized into the Branch of Fire and Aviation Management.

During the course of the last year, a number of the parks within the region explored opportunities to implement the Federal Wildland Fire Policy. Several variations emerged, but overall, it was found that the policy worked well, allowing flexibility in decision making and implementing strategies. Notable examples occurred at Grand Canyon National Park, Dinosaur National Monument and Glacier National Park. The Kootnai Complex of wildland fires at Glacier National Park had international border implications as well.

Prescribed fire productivity within the region doubled in 1998 over previous years. Multiple landscape scale treatments were implemented, several crossing interagency boundaries. These included projects at Chiricahua National Monument, Saguaro National Park, Guadalupe Mountains National Park, El Malpais National Monument, Grand Canyon National Park, Bandelier National Monument, Zion National Park and Grand Teton National Park. It appears that park programs around the region are scaling up to take on increasingly more sophisticated and complex projects involving large project management organizations, advanced prescription development and refined treatment objectives. This has been greatly facilitated by the greater availability of fuels funding.

## Midwest Region

We had a very successful prescribed burn season. We had 48 prescribed burns totaling 11,260 NPS acres. Fewer projects than in 1997, but an increase of 4,000 acres, over 1997 levels in the number of treated acres. We are moving more to landscape type of burn projects. Several of our park areas were in a transition period with some new fire management personnel coming on board and missed the spring burn season.

The Prescribed Burn Program was highlighted with the first season of Buffalo Prescribed Fire Module. The Module consists of two subject to furlough leaders and three seasonal crewmembers. They participated in numerous prescribed burns and completed several hazard fuel reduction projects for parks throughout the Midwest region. They also helped

several of our interagency partners in completing projects and the crew proved to be very good ambassadors for the National Park Service.

The Alpine Hotshot Crew paid the Midwest a visit this year and helped complete several hazard fuels projects. Pipestone was a grateful recipient of the Hotshot's work. The crew was able to complete a remarkable amount of work in just a few days that would have taken the park and some seasonal staff several long hard weeks.

The Region has four employees who are primary members of the Fire Use Overhead teams. These teams had several assignments this past season that were very successful. Individuals from the Midwest participated in both the Hotshot and Prescribed Fire Module detailer programs. Both programs provide a very valuable service in expanding our fire management expertise throughout the Service.

The year 1998 brought several new folks into the Fire Management Program for the Midwest Region:

- Dave Soleim, Fire Management Officer and Robert Klein, Fire Effects at Ozark;
- Connie Burns, Fire Program Assistant at Midwest Regional Office;
- Bruce Fields, Fire Use Module (FUM) and Bobby Bloodworth, FUM at Buffalo National River;
- Dave Allen, Fire Management Officer; Donna Wright, Fire Program Assistant; Mike Armendarez, Fire Captain; Hardin Delafield, Fire Effects; Larry Clark, Engine Captain at Indiana Dunes;
- Bill Gabbert, Fire Management Officer; Mike Beasley, Prescribed Fire Specialist; and Kara Paintner, Fire Effects Leader at Wind Cave

We are continuing to organize and support interagency zone dispatch centers throughout the region. The Ohio Interagency Coordination Center was a big success this season and our resources within that geographical area participated on several different dispatches to both Florida and Texas. Sleeping Bear Dunes provided resources throughout the summer to their interagency cooperators. They also have two employees on the Region 9 Type I Overhead Team. The Type I overhead team participated in an assignment in Florida this past summer.

The Minnesota Interagency Fire Center continues to be a highlight of our coordination efforts taking the lead in supporting the park units in Minnesota, Wisconsin, and Iowa. The efforts in Missouri with the coordination from Ozark and the support from Jefferson National Expansion Memorial helped support the Mobilization site at Saint Louis and the interagency dispatch with the Wayne Hoosier National Forest. Arkansas has always functioned very well with all of the efforts going through an interagency state coordination center. The park units in Nebraska and South Dakota are coordinated out of



the Custer National Forest dispatch center in South Dakota. The parks in Kansas will be going through Pueblo Dispatch Center in Colorado. The North Dakota parks are working with the Fish and Wildlife Service at the J. Clark Salyer Refuge.

### National Capital Region

Training and interagency cooperative efforts continue to be focus points of the National Capital regional fire management program. The region hosted an S-205 Wildland fire in the Urban Interface course, an S-212 Wildfire Powersaws course, three basic fire courses and five safety refreshers. In an effort to reestablish an old program and as part of the region's youth initiative, basic fire course participants included students from the Harpers Ferry Job Corps and the Americorps DC Campus. Trained Americorps students were subsequently mobilized by National Capital Region on seven fires within or near the region and were mobilized by Federal Emergency Management Agency to work with Florida State fire crews.

### Northeast Region

The Northeast region continues to develop its prescribed fire and fuels reduction program. Prescribed fire was reintroduced after a 20-year hiatus at Shenandoah National Park. Delaware Water Gap conducted six resource management burns; Cape Cod Seashore continued its fire research project on oak-pine fuels; and Acadia National Park treated seven miles of park boundary. The prescribed fire program was reviewed in September at New River Gorge. The outcome was improved fire effects monitoring and better defining the use of fire in eastern deciduous forest. Assistance was provided to Gateway National Recreation Area, Saratoga National Historical Park and Richmond Battlefield on hazard fuel and prescribed fire projects.

Along with fires on agency lands, resources from the region supported the interagency effort on large fires in Virginia, Florida, Texas and Montana. Resource orders processed at the coordination center at Shenandoah, which services the Northeast Region, reflected this in their final numbers. The dispatch center processed 555 overhead, 32 crews, 17 aircraft and 172 equipment orders.

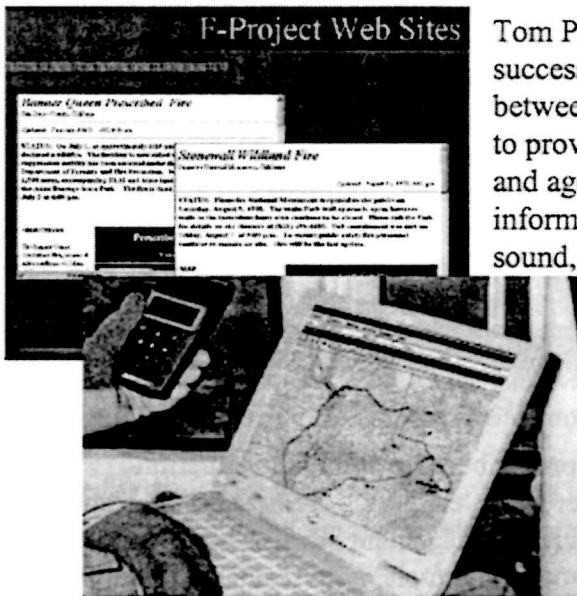
There are several in-park test sessions of the new *Lessons Learned*, wildland fire refresher course taught within the region, with the Delaware Water Gap FMO taking the lead for presentation. New River Gorge conducted a successful Engine Academy; the Cape Cod FMO assisted in the New York Fire Academy; and Shenandoah conducted a wildland seminar to educate the public on wildfire's role in the environment.



Facilities improvements included engine storage and headquarters fire cache development at Shenandoah, new fire management facilities at New River Gorge and relocation of the Cape Cod fire management office. Much of the funding for these projects came from non-FIREPRO accounts.

## Pacific West Region

Many parks made progress in implementing the new federal fire policy, utilizing a variety of strategies.



Tom Patterson of Joshua Tree National Park successfully tested the "F-Project," a joint effort between California BLM and the NPS. Its purpose is to provide the media, public, coordination centers, and agency administrators with up-to-date fire information through the World Wide Web. Images, sound, and maps using Tactical Mapping System software can be relayed directly from the fireline.

Lassen Volcanic National Park, in part due to recommendations from the 1997 Huffer fire review, established a fuels crew to update the old fuels map, as well as to provide information on fuel moisture conditions around the park. The park resource and fire management staffs, along with counterparts from Sequoia & Kings Canyon, Yosemite, and Crater Lake National Parks, have made a strong effort to link resource management and fire management objectives.

Hawaii Volcanoes continues to work with research and resource managers to identify native species suitable for seeding following wildland fires. The employment of a revegetation strategy appears to be a promising method to mitigate the invasion of burned areas with alien species.

Lake Mead National Recreation Area has rapidly progressed over the past four years, from a simple suppression program to a multi-dimensional and interagency player. This park in particular is a good example of the use of FIREPRO funds in the development of a program that meets both suppression and resource management objectives. Other parks in the region have likewise benefited significantly from the FIREPRO program.

Fire management personnel throughout the region are engaged with a variety of issues in support of fire management planning and operations. These include readiness inspections,

air quality, cultural resources, sensitive species, vegetation mapping, Geographical Information System (GIS), fire behavior and risk assessment, and public education and involvement. The integration of adequate planning with safe and efficient operations will continue to be a challenge for all the parks in this region.

## Southeast Region

The Southeast Region Fire Management Staff completed six Fire Program Audit/Reviews at Everglades National Park, Big Cypress National Preserve, Jean Lafitte National Park and Preserve, Gulf Islands National Seashore, and Blue Ridge Parkway.

This was the first year for the Great Smoky Mountains Prescribed Fire Module. They were able to hire four individuals and used detailers as needed for the fifth position. The module will expand from five to seven individuals next season. The module officially became available for assignment on February 24<sup>th</sup>. Much of their time was spent working at Great Smoky Mountains (GRSM), Everglades National Park (EVER), and Congaree Swamp (COSW). They assisted GRSM with burn plans, fire effects monitoring, burn preparation, prescribed fire operations (ignition, holding, monitoring), hazard fuels projects, and Wildland Fire Use. At EVER, they assisted with prescribed fire operations, their soil and fuel moisture sampling program, prescribed fire preparation, and Wildland Fire Use. At COSW, they wrote burn plans, did fire effects monitoring and put in fire line. Other NPS units that the module provided assistance were Saguaro National Monument, Big Cypress, Guilford Courthouse, Guadalupe Mountains National Park, and Glacier National Park.

Eleven prescribed burns were accomplished on 169 acres of Natchez Trace Parkway land. One was a resource management burn and ten were hazard fuel reduction burns. Park firefighters helped with two prescribed burning operations on the Noxubee National Wildlife Refuge and three at Vicksburg National Military Park. Fire management staff provided technical assistance to Gulf Islands National Seashore in completion of a hazard fuel analysis of hurricane damage.

Big Cypress accomplished 37,000 + acres (total pending mapping of recent burns) of treatment in 22 prescribed burns. The largest prescribed burn was the Little Deer Rx, which treated 11,826 acres. This burn included an area with a high concentration of backcountry private in-holdings. Big Cypress assisted the Division of Forestry and the Florida Panther NWR on prescribed burns.

Big Cypress participated in the SW Florida Urban Interface committee and with the local interagency Fire Prevention committee. We assisted in conducting a burn in the interface near Naples as a demonstration for the media of the benefits of burning to reduce fuels.

## ***INTERAGENCY HOTSHOT CREWS***

The National Park Service presently manages two 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 natural resource projects.

The NPS crews are assigned to duty stations at hosting parks. The ***Arrowhead*** crew is permanently based at Sequoia and Kings Canyon National Parks, and the ***Alpine*** crew is permanently based at Rocky Mountain National Park.

The Arrowhead Hotshot Crew worked 19 wildland and prescribed fire assignments in 1998. At the Grand Canyon National Park, the crew assisted in the 2000+ acre Topeka prescribed burn, burned 10+ acres of handpile including intensive saw work; worked on the Bright Angel mechanical fuels

reduction project; and assisted rangers in a complex pack-out operation of an injured visitor. At Point Reyes National Seashore, the crew constructed hand line around the Johnson and Deerpark #3 prescribed burn units in the coastal Redwood fuel type; built hand line on the McDonald Rx unit; and assisted Marin County on the 35 acre Panoramic Highway prescribed burn.

During 1998, the majority of the Alpine Hotshot crew's time was spent on wildland fire suppression. In addition, the crew accomplished a variety of projects for the Rocky Mountain National Park including debris pile burning, prescribed burn prep and burning, hazard tree removal and dorm landscaping. Projects for other parks and agencies included debris pile burning and prescribed burn prep at Zion National Park, hazard fuel reduction at Isle Royale and Pipestone NM; and prescribed burn prep and burning for Craig BLM.

**Interagency Hotshot Crew Workload Distribution, 1989 – 1998**

Year	Number of Fires	% Time Wildfire Suppression	% Time Prescribed Fires	% Time Other Projects
1989	32	68	10	6
1990	26	54	9	12
1991	30	51	5	20
1992	29	54	5	29
1993	22	51	14	13
1994	46	82	2	9
1995	23	60	9	10
1996	48	72	3	14
1997	22	41	20	24
1998	30	63	9	19

## Interagency Hotshot Crew Wildland Fire Assignments, 1998

### ALPINE IHC:

FIRE NAME	LOCATION/AGENCY	DATES
Mitsue Lake	State of Florida	5/7-27
Suwaannee Complex	State of Florida	6/23-24
Woodstock	State of Florida	6/25-29
Jacksonville Complex	State of Florida	6/30-7/2
Jacksonville 2 Complex	State of Florida	7/3-13
Parkside	Custer NF, MT	7/18-22
Cluster	Craig BLM, CO	8/8
Swift Creek	Bitterroot NF, MT	8/13-18
Sheepeater	Salmon-Challis NF, ID	8/18-30
IA Standby	Boise NF, ID	9/4-8
Bowl Mountain	Flathead NF, MT	9/8-18

### ARROWHEAD IHC:

FIRE NAME	LOCATION/AGENCY	DATES
Oso	Santa Fe NF	6/30-7/6
Condor	Los Padres NF	7/7-20
Snake	Sierra NF	7/26-29
White Pass	Gifford Pinchot NF	7/30-8/2
North 25	Wenatchee NF	8/5-11
Eye	Umpqua NF	8/12-13
Gorge	Willamette NF	8/14-19
Reservation	Tule Reservation	8/23
Lucas	Sequoia NF	8/24
Tom	Inyo NF	8/30-31
Juniper	Riverside RU	8/31-9/2
Boyer	Lolo NF	9/4-12
Buck	Six Rivers NF	9/15-19
Edna	Riverside RU	10/5-7
Ogilvy	Los Padres NF	10/19-24
Topeka Rx	Grand Canyon NP	5/27-6/5
N. Rim Tower Rx	Grand Canyon NP	6/10-11
Panoramic Rx	Marin County	10/14
Vista Piles Rx	Kings Canyon NP	10/26-27



## ***PRESCRIBED FIRE SUPPORT MODULES***

The National Park Service (NPS) established the Prescribed Fire Support Modules (PFSM) in 1995. The primary mission of the program had been to assist with wildland fire use (WFU) in the areas of holding, monitoring, mapping, and fire behavior predictions. Secondary priorities have been to assist with ignition, holding, and monitoring of prescribed fires (Rx Fires); prepare all aspects of the Rx Fires, including control line locations and construction, writing burn plans, establishing and reading fire effects plots, archeological surveys, etc; and perform hazard fuel reduction projects.

The program consisted of 36 people, divided into six modules of 4-7 individuals, in 1998. Module locations were Bandelier National Monument, Buffalo National River, Great Smoky

National Park, Whiskeytown National Recreation Area, Yellowstone National Park and Zion National Park. In 1999, the program will have two new modules located at Wind Cave and Saguaro National Parks.



The PFSM's provided assistance to 48 NPS units in 21 states encompassing four regions in 1998. Modules also provided prescribed fire assistance to the

Bureau of Land Management, US Forest Service, US Fish and Wildlife Service, California Department of Forestry and California State Parks. Modules spent an average of 20% of their work hours on wildland fire use, 20% on prescribe burns and 13% on Rx Fires preparation, planning on hazard fuel. The primary quantifiable accomplishments of the program are summarized in the table below.

MODULE NAME	WFU		Rx FIRE IGNITION		Rx FIRE PREP.		HAZARD FUEL	
	#	ACRES	#	ACRES	#	MILES	#	ACRES
BANDELIER	3	5,688	12	18,124	12	9.51	4	27.0
BUFFALO RIVER	3	2,331	20	5,613	3	1.13	7	25.6
GREAT SMOKY	4	1,789	15	2,709	6	2.96	2	5.0
WHISKEYTOWN	2	6,812	27	10,419	16	4.76	3	8.0
YELLOWSTONE	2	13,751	12	5,727	14	16.43	5	24.0
ZION	3	12,410	11	3,920	4	4.25	1	15.0
TOTAL FY98	17	42,781	97	46,512	55	39.04	22	104.6
TOTAL FY97	9	23,242	73	17,218	34	22.00	4	15.0
TOTAL FY96	15	47,779	45	10,590	41	20.30	9	35.0
TOTAL FY95	6	2,165	44	13,250	42	27.10	9	147.0

## ***FIRE EFFECTS MONITORING***

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The Park Service has been monitoring fire effects for more than a decade at some level or another. Some parks have done very little, while others have extensive programs. Three years ago the Park Service created a nationally funded policy for monitoring. The main goals of this program are to:

- Verify that burn objectives are met.
- Document immediate postfire effects of prescribed fires.
- Follow trends in plant communities where fire effects are known.
- Facilitate the sharing of fire-related information.

### **Intermountain Region**

The regional fire effects program advanced over the course of the last year as well. A total of 243 plots were installed in 1998, bringing the total of plots within the region to 1458 (this includes 891 Non-FMH Plots).

### **Midwest Region**

The fire effects program in the Midwest Region is currently divided into five groups covering the entire region. This organization represents an adequate division of the regional ecological types and workload capability that can be managed by the respective teams. We recognize that the staffing levels for each of the programs will continue to vary as additional units are added and burn schedules stabilize. The regional program remains flexible in adjusting staffing to meet unit and program needs by shifting seasonal employees when seasonal changes in the burn program are identified. This year three seasonal positions from the Ozark Group were transferred to each of the other groups to supplement their ability to install plots.

Indiana Dunes National Lakeshore remains the only active program in the Great Lakes Group. However, site visits to begin fire effects monitoring programs were made to Lincoln Boyhood National Memorial and Sleeping Bear Dunes National Lakeshore.

The Border Waters Group consists of Voyageurs and Isle Royale National Parks and Apostle Islands National Lakeshore. Only Voyageurs is active at this time with Isle Royale working to complete their multi-year burn program. Apostle Islands is working toward a new Fire Management Plan.

The Lead Fire Effects Monitor position in the Ozark Group remained vacant due to timing of the announcement and the number of applicants applying.

The Northern Great Plains Group is comprised of Agate Fossil Beds, Devils Tower, Jewel Cave, Mount Rushmore, and Scotts Bluff National Monuments; Badlands, Theodore Roosevelt and Wind Cave National Parks; Fort Union Trading Post and Knife River Indian Villages. This group presented its own challenges. Because of geographic distance, burn schedules, and vegetation diversity, this program will need expanding to have the ability to field two crews simultaneously.

The Long-Term Environmental Monitoring (LTEM) group consists of the six tallgrass prairie parks: Effigy Mounds, Agate Fossil Beds, Scotts Bluff and Pipestone National Monuments; Wilson's Creek National Battlefield and Homestead National Monument of America, under the National Park Service Inventory and Monitoring program protocol design. In this protocol, fire is recognized as an environmental disturbance occurring through acts of nature, native peoples and occupants of the area at the time of significance and factored in as an influence change to these landscapes. Pipestone, Wilson's Creek and Homestead have adopted this monitoring protocol as it addresses the resource objectives for their units both in fire, hazard fuels, and restoration management.

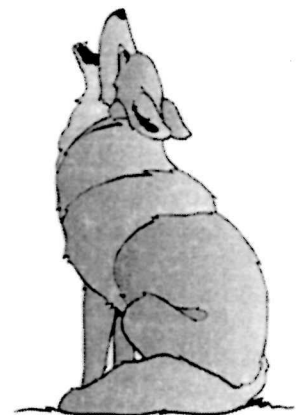
### Southeast Region

This was the first year that a regional fire effects team was utilized in the Southeast Region. The Great Smoky's team established a program at their home park. Under the leadership of Bob Dellinger, they provided assistance to Congaree Swamp, Little River, New River, and Shenandoah.

At Everglades, a Fire Effects Monitoring Plan was drafted. A planning meeting with park staff, cooperators, Paul Reeberg, and Doug Wallner took place. Jen Hooke, who has extensive monitoring experience from Redwoods, filled the Fire Effects Specialist position. No plots were installed due to delays in filling this position.

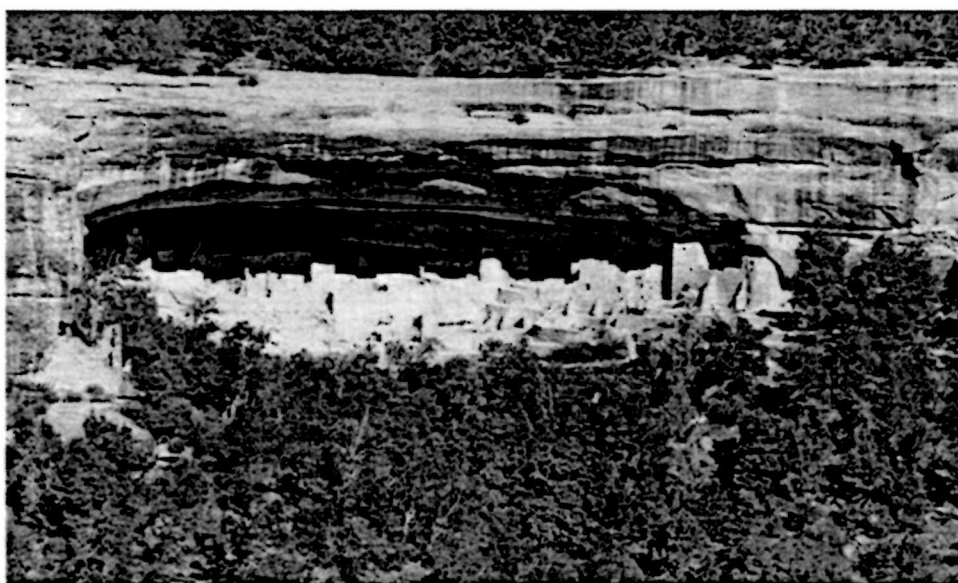
Big Cypress continued Photo-monitoring of fire effects. Marlana Hovorka finalized a draft Effects Monitoring Plan which is under review by the Regional Prescribed Fire Specialist.

A Fire Effects monitoring course (RX-80) was hosted at Great Smoky Mountains. This served regional as well as national needs. Instructors with both eastern and western experience were used.



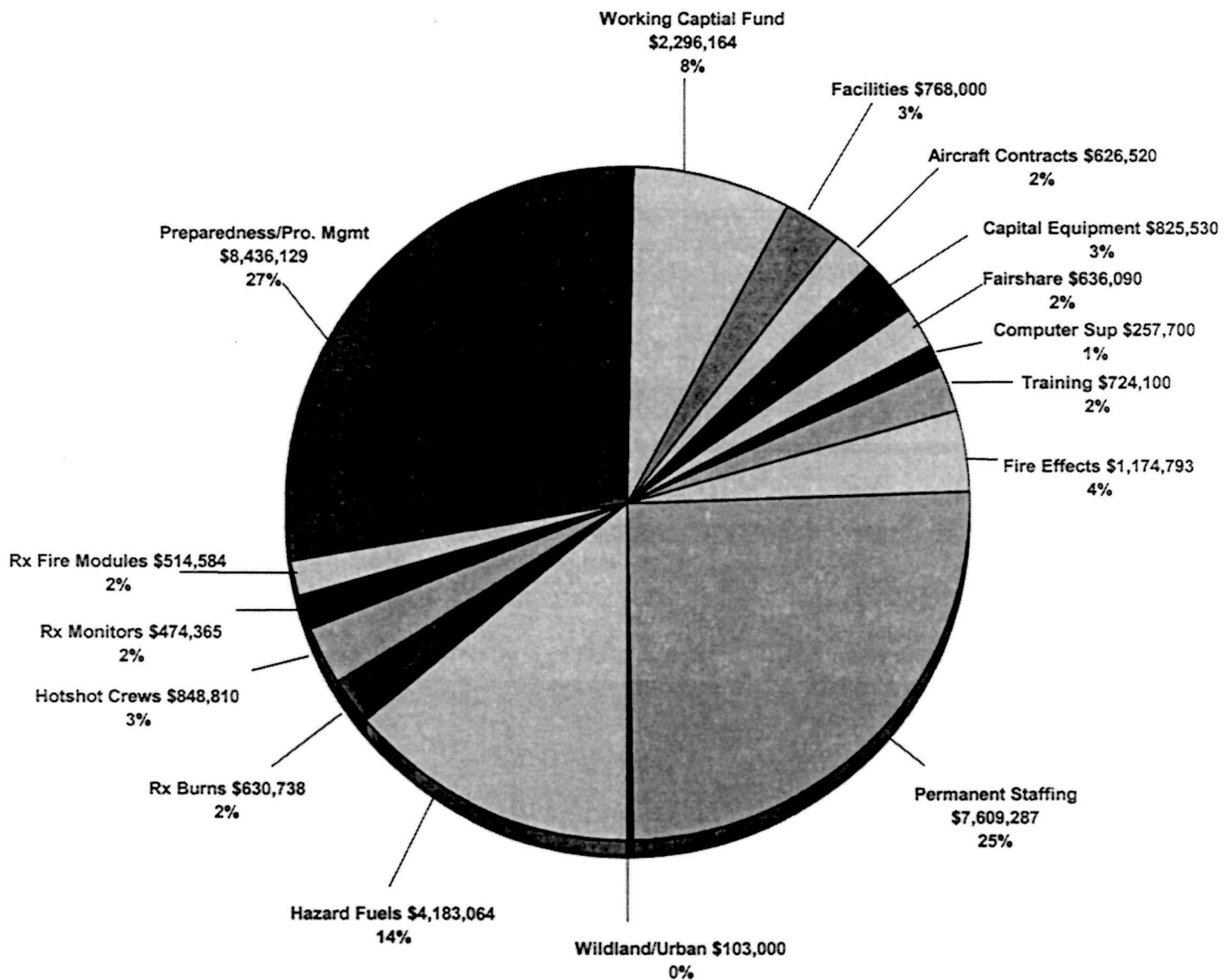
## Workload by Fire Effects Team

Team	# Plots Installed	# Plots Revisited	Total # Plots Visited
Bandelier NM	33	87	120
Big Bend NP	31	11	42
Big Thicket N Pres	7	0	7
Border Waters	6	16	22
Congaree Swamp NM	-	-	4
Glacier NP	6	33	39
Grand Canyon NP	5	31	36
Grand Teton NP	39	10	49
Great Lakes	10	37	47
Great Smoky Mtns. NP	-	-	55
Little River Canyon NP	-	-	2
Northern Great Plains	34	17	51
Rocky Mountain NP	17	1	18
Saguaro NP	17	42	59
Yellowstone NP	3	4	7
Zion NP	24	28	52





# FIRE MANAGEMENT AUTHORIZATIONS, FY 98



## **SEVERITY FUNDING**

Severity funding can be authorized after the Regional Fire Management Officer or his/her designated agent has approved an individual severity plan with a not-to-exceed limit up to \$100,000 for each request. All requests over \$100,000 must be approved through the National Park Service's Fire Management Program Center in Boise, Idaho.

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 conditions.

Severity differs from step-up planning in that step-up plans are approved by the Support Office Fire Management Officer, and 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.

Severity appropriations in 1998 (totaling \$593,150) provided for: increased cooperative prevention activities in the Southwest Geographic Area; rental of call-when-needed helicopters; availability extension of an interagency helicopter and manager, availability of a single engine airtanker station with manager; bring seasonal firefighters on early; preposition engines with crews; emergency hire fire lookout/aerial observer, engine and helicopter crew members; preposition overhead; rental of pickup trucks and cover additional mileage on engines; and purchase of supplies.

REGION	REQUESTING UNIT	AMOUNT
Pacific West	Lake Mead National Recreation Area	\$104,650
	Hawaii Volcanoes National Park	13,000
	North Cascades National Park	100,000
Intermountain	Mesa Verde National Park	42,000
	Lake Meredith National Recreation Area	200,000
	Beg Bend National Park	100,000
	Carlsbad Caverns National Park	30,000
Midwest	Indiana Dunes National Lakeshore	3,500
Total		\$593,150

## ***INTERAGENCY FAIRSHARE PROGRAMS***

REGION	REQUESTING UNIT	DESCRIPTION	AMOUNT
Fire Mgmt. Program Center		NWCG Operations Support, NARTC Support, ADP Contracts, Building & Receptionist, FFTR Mem / Landscape	\$161,000
Pacific West	Columbia Cascades SO	Air Tanker Operations	\$52,210
	Pacific Great Basin SO	North & South Zone Coord Ctrs	\$25,000
	Channel Islands	Helicopter and Crew	\$30,000
	Santa Monica Mtns.	24 hr. Dispatch Angeles NF	\$16,500
	Joshua Tree	Fed Interagency Communication Center	\$5,000
	Lassen Volcanic	Susanville Interagency Coord Ctr	\$15,000
	Lava Beds	Interagency Communication Center	\$7,500
	Whiskeytown	Interagency Coordination Center	\$3,500
Intermountain	Colorado Plateau/Rocky Mountain SO	USFS: N. Rockies; R1/FIDC; RMACC; BLM: WSFCC/CO; WICC/WY. DOI position / Missoula, Eastern Great Basin Coord Ctr, NRCC & Cedar City Dispatch	\$119,500
	Southwest SO	SWA Caches	\$2,500
	Zion	Monument Utility Cost & Maint., Interagency Helicopter	\$19,000
	Saguaro	SO. Arizona Dispatch	\$8,200
	Dinosaur	Interagency Helicopter	\$10,000
	Mesa Verde	Interagency Helicopter	\$15,000
	Rocky Mountain	Interagency Dispatch Center	\$7,500
	SO. AZ Group	Central AZ Dispatch & Position	\$14,000
Midwest	Midwest SO	AR, OH, MO & WICS Coord Ctr	\$4,625
	Voyageurs	MN Interagency Coord Ctr	\$4,000
Northeast	Chesapeake SO	VA Interagency Coord Ctr, EICC & Dulles Module Support	\$23,900
Southeast	Atlantic Coast SO	Interagency Helic; Regional Cache SACC, Hot Shot Crew	\$75,455
National Capital	National Capital SO	Interagency Helicopter GW & J NF, VICC	\$16,700
TOTAL:			\$636,090

# 1998 SERVICEWIDE FIRE STATISTICS





## ***NORMAL FIRE YEAR STATISTICS***

The normal fire year calculation is based on an analysis of National Park Service fire history for 10 years, from 1989 through 1998. "Normal" occurrence is defined as the third worst year in a 10-year analysis period, and the statistics for each size class may be derived from different years.

SIZE CLASS IN ACRES	NUMBER OF WILDFIRES	NUMBER OF WILDLAND FIRE USE
A (0 - 0.2)	613	53
B (0.3 - 9.9)	220	22
C (10 - 99.9)	40	11
D (100 - 299.9)	10	5
E (300 - 999.9)	9	2
F (1,000 - 4,999.9)	5	3
G (5,000+)	1	0
TOTALS:	898	96

Start Days: 328 (Wildfires); 303 (Wildland Fire Use)

Peak number of starts in a day: 27 (WF); 52 (WFU)

## ***NATIONAL FIRE ACTIVITY***

FIRE TYPE	# FIRES	NPS ACRES
Suppressed on NPS lands by NPS full control strategy	446	16,489.8
Suppressed on NPS lands by NPS modified control	21	295.3
Suppressed on NPS lands by other federal agency	5	6.6
Suppressed on NPS lands by non-federal agency	53	76.3
WILDLAND FIRE USE	100	18,838.6
PRESCRIBED FIRES	251	82,412.8
NATURAL OUTS ON NPS LANDS	113	
MUTUAL AID BY NPS ON OTHER LANDS	232	
SUPPORT ACTIONS (NON-LOCAL)	981	
FALSE ALARMS	132	

## **WILDFIRES BY SIZE CLASS**

SIZE CLASS IN ACRES	AGENCY LANDS		ALL LANDS
	FIRES	ACRES	ACRES
A (0 - 0.2)	305	34.0	34.9
B (0.3 - 9.9)	140	271.4	296.3
C (10 - 99.9)	39	1,000.3	1,174.4
D (100 - 299.9)	2	468.5	917.5
E (300 - 999.9)	6	3,025.0	3,025.0
F (1,000 - 4,999.9)	5	6,045.0	9,942.0
G (5,000+)	0	0.0	5,000.0
TOTALS:	497	10,844.2	20,390.1

There were 497 wildfires reported on NPS land in 1998, which is 55 percent of the normal fire year calculation. Approximately 90 percent of the wildfires were controlled at less than 10 acres in total size.

## **WILDFIRES BY CAUSE**

### NATIONAL PARK SERVICE LANDS

CAUSE	# FIRES	# ACRES	% FIRES	% ACRES
Lightning	175	4,266.5	35	39
Campfire	94	1,471.1	19	14
Smoking	32	15.4	6	0
Debris Burning	18	1,151.9	4	11
Incendiary	35	1,209.4	7	11
Equipment Use	39	27.6	8	0
Railroads	9	138.3	2	1
Children	17	4.6	3	0
Miscellaneous	78	2,559.4	16	24
TOTALS:	497	10,844.2		

## ***LARGE WILDFIRES<sup>1</sup>***

REGION	PARK	FIRE NAME	NPS ACRES	TOTAL ACRES
Intermountain	Lake Meredith	Palo Doro	4,000.0	5,000.0
Northeast	Shenandoah	Calvary	1,431.0	1,431.0
Pacific West	Pinnacles	Stonewall	1,642.0	2,797.0
Southeast	Big Cypress	75 West	1,126.0	1,126.0
		75 East	1,129.0	1,129.0
	Everglades	Dead Dog	1,270.0	1,270.0
		Rutski 2	1,089.0	1,089.0



## ***LARGE WILDLAND FIRE USE***

REGION	PARK	FIRE NAME	NPS ACRES	FUEL TYPE
Intermountain	Grand Canyon	NR Complex	4,957.0	Timber/Hardwood Litter
	Glacier	McDonald Cr	8,758.0	Timber/Litter & Understory
Southeast	Everglades	Lostmans 1	1,460.0	Herb/Tall Grass

<sup>1</sup> "Large", for the purpose of these tables, would include any fire totaling over 1,000 acres regardless of land ownership.

## ***LARGE PRESCRIBED FIRES***

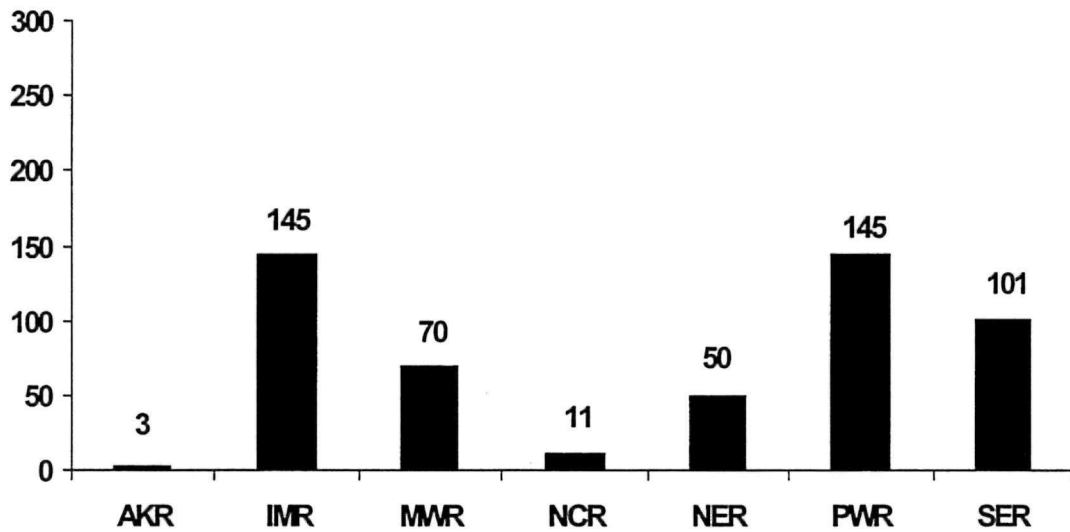
REGION	PARK	FIRE NAME	NPS ACRES	FUEL TYPE
Intermountain	Grand Canyon	Topeka	2,532.0	Timber/Hardwood Litter
		Walhalla	1,012.0	Timber/Hardwood Litter
		Walhalla 2	2,942.0	Timber/Hardwood Litter
	Grand Tetons	Blacktails	1,166.0	Herb/Timber Grass/Understory
	Saguaro	Chimenea	1,969.0	Chaparral/Chapar (6 feet)
	Bandelier	Unit 29	1,100.0	Herb/Timber Grass/Understory
	Carlsbad Caverns	Slaughter	1,000.0	Herb/Short Grass
Midwest	Tallgrass Prairie	Annual Burn	7,000.0	Herb/Tall Grass
	Scotts Bluff	North Bluff	1,113.0	Herb/Short Grass
Pacific West	Lassen Volcanic	Fantastic	1,548.0	Timber/Hardwood Litter
	Redwood	Coyote	1,006.0	Herb/Tall Grass
	Sequoia & Kings	Lewis Cree	1,534.0	Herb/Timber Grass/Understory
	Whiskeytown	Mill Rx	1,010.0	Timber/Hardwood Litter
Southeast	Yosemite	Aspen PW #2	2,300.0	Timber/Closed Litter
	Big Cypress	Cowbell Rx	1,218.0	Chaparral/Southern Rough
		Little Deer	11,826.0	Chaparral/Southern Rough
		Ochospar Rx	1,283.0	Herb/Tall Grass
		40-Mile Rx	1,227.0	Herb/Tall Grass
		40 Mile Rx	2,320.0	Chaparral/Southern Rough
		Litdeer Rx	1,934.0	Chaparral/Southern Rough
		Raccoon Rx	2,591.0	Chaparral/Southern Rough
		Hwy Oasis	1,209.0	Chaparral/Southern Rough
		Skillets Rx	2,412.0	Herb/Tall Grass
		Airplane Rx	1,266.0	Chaparral/Southern Rough
		Pops Dog Rx	2,622.0	Chaparral/Southern Rough
		SkilletWRX	4,530.0	Herb/Tall Grass
	Everglades	Blk E, G, H	1,300.0	Chaparral/Southern Rough

There were 251 prescribed fires completed during 1998 for a total of 82,413 agency acres treated. The largest burn program was conducted at Big Cypress where 22 prescribed fires treated 37,511 acres.

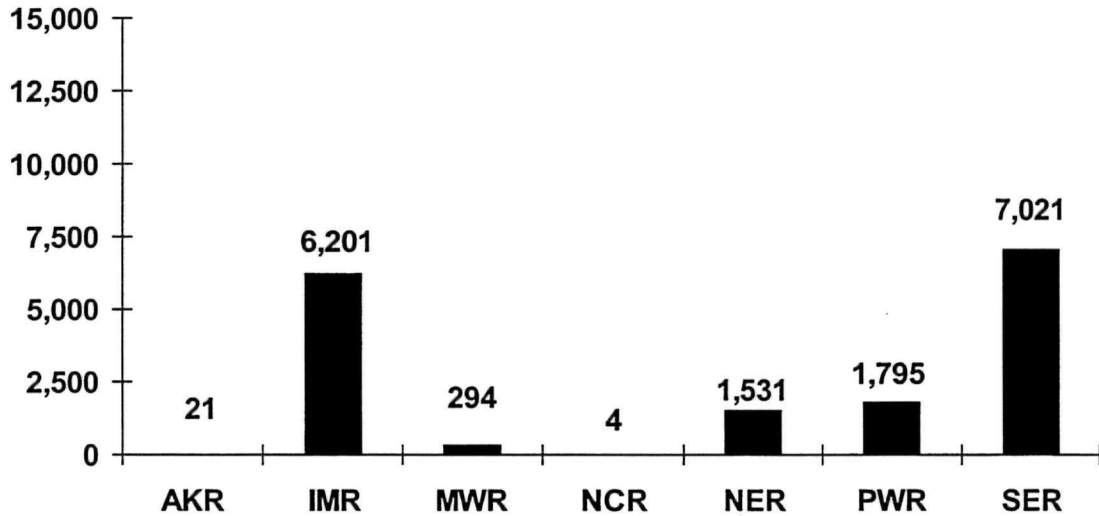


## WILDFIRES BY REGION

Number of Fires

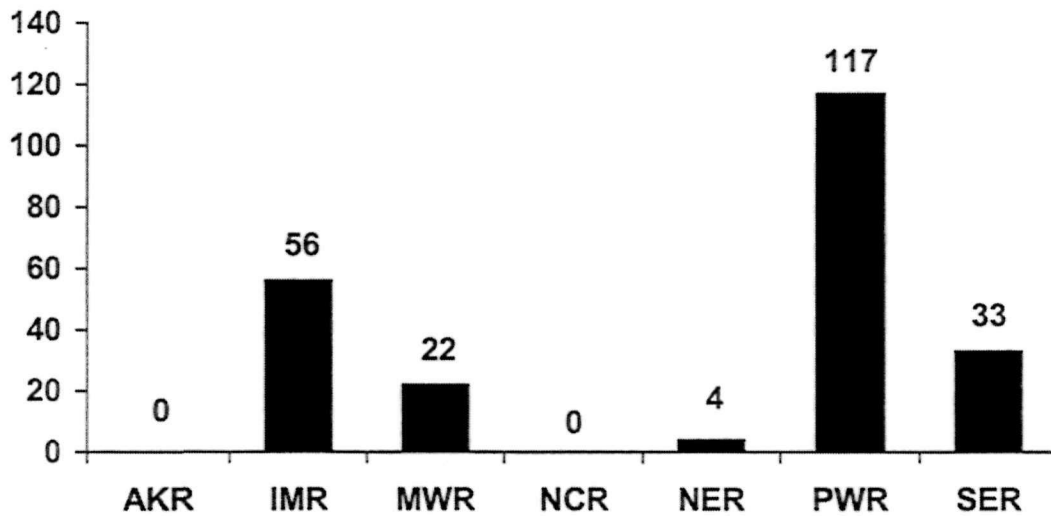


Number of Acres



# MUTUAL AID RESPONSES BY REGION

## Number of Responses



### Key:

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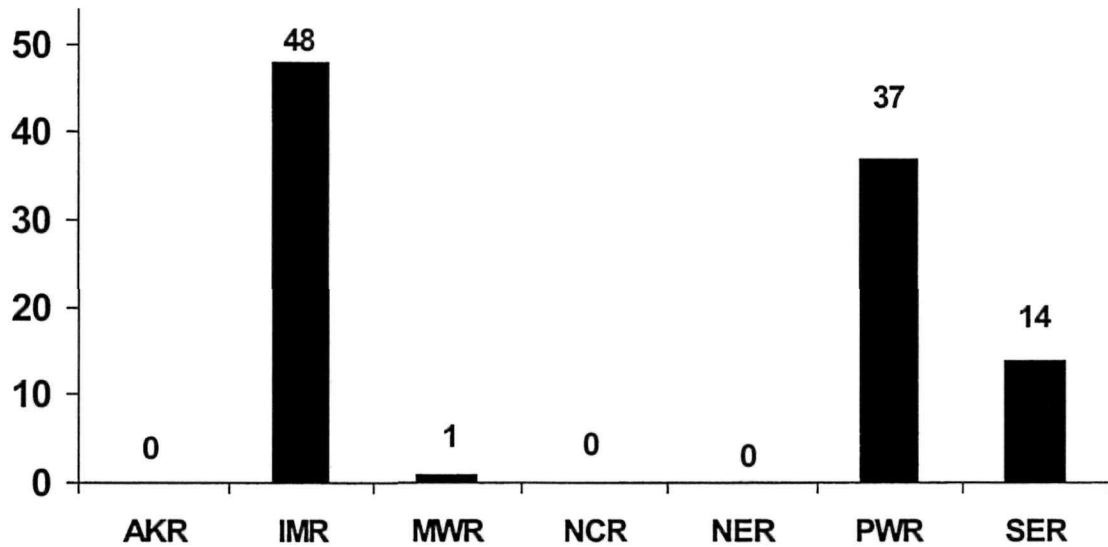
AKR =	Alaska Region	NER =	Northeast Region
IMR =	Intermountain Region	PWR =	Pacific West Region
MWR =	Midwest Region	SER =	Southeast Region
NCR =	National Capital Region		

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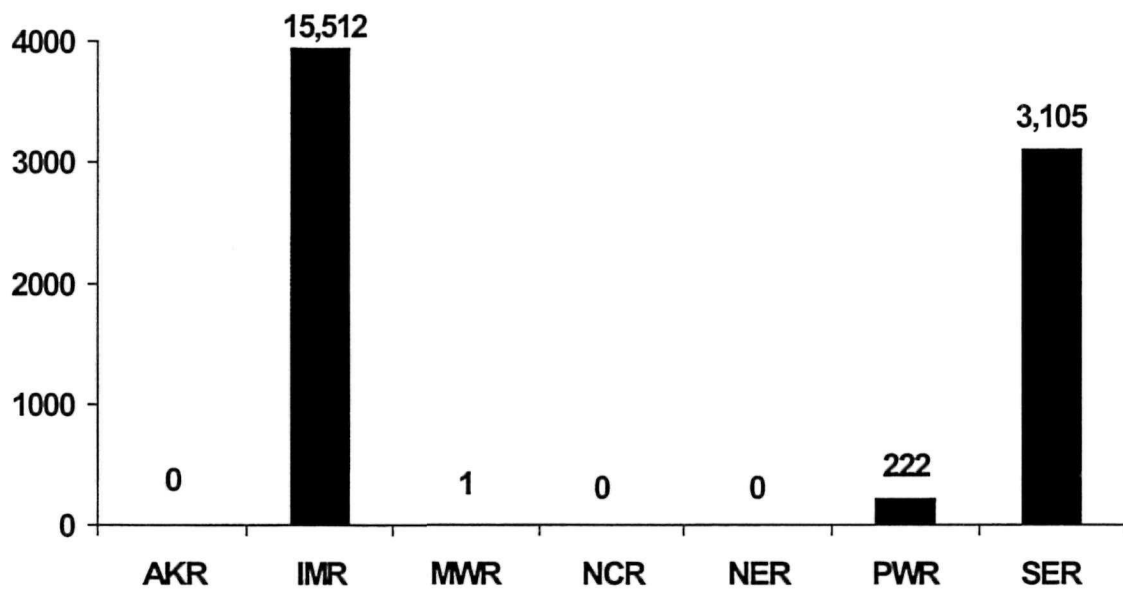


## WILDLAND FIRE USE BY REGION

### Number of Fires

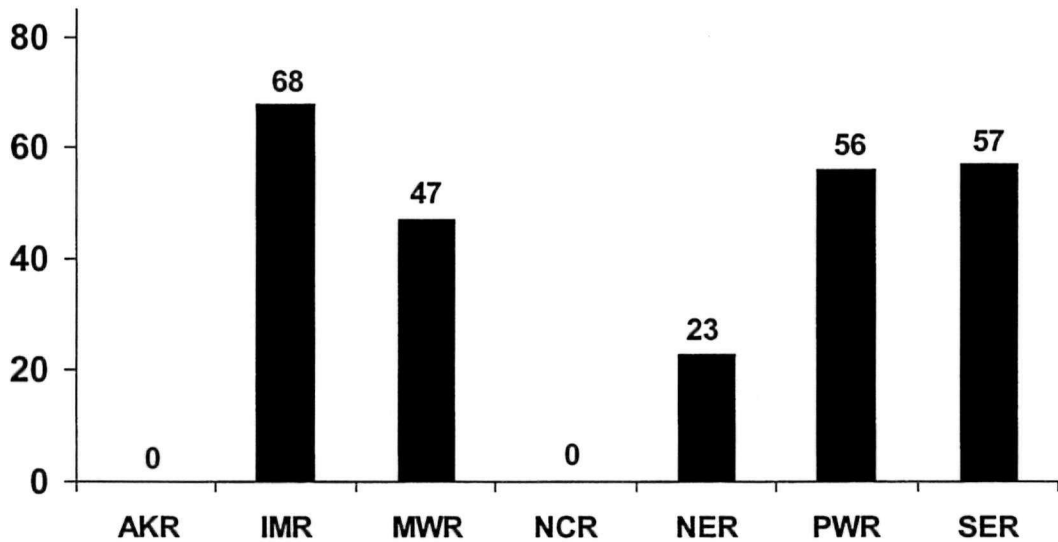


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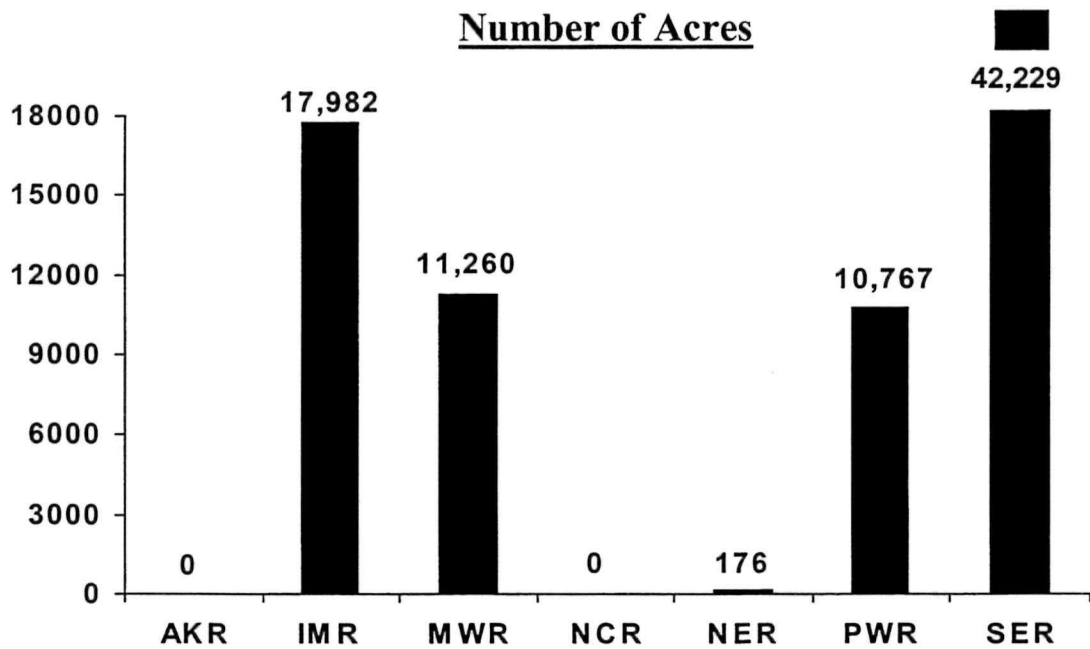


## PRESCRIBED FIRES BY REGION

Number of Fires

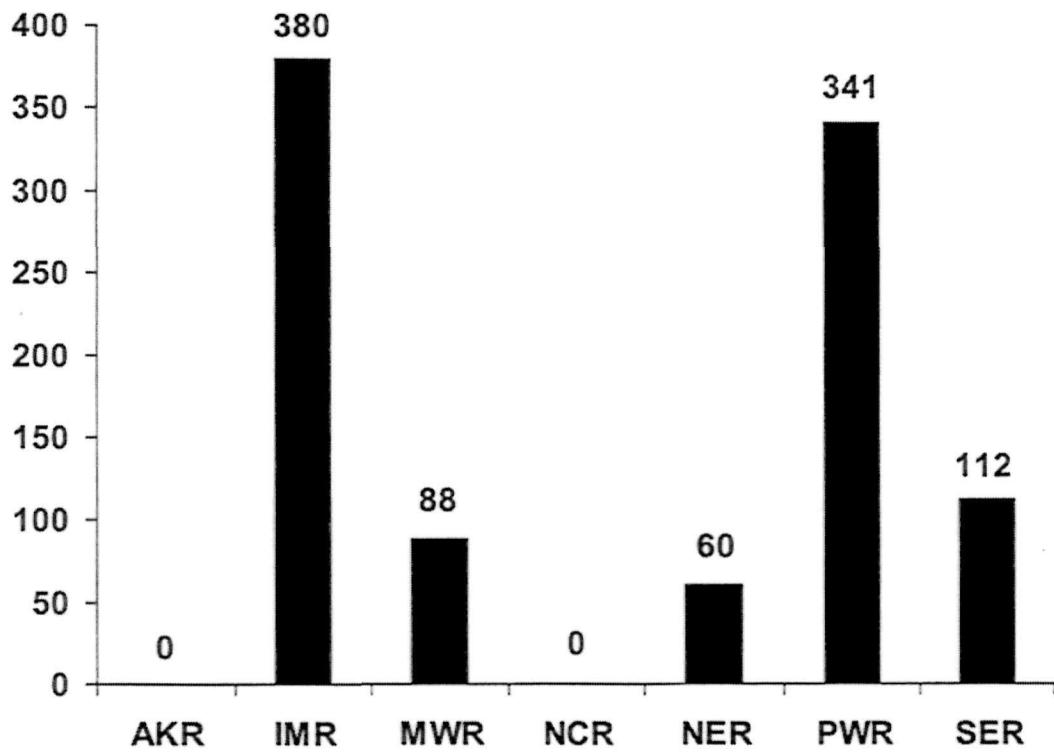


Number of Acres



## SUPPORT ACTIONS BY REGION

Number of Support Actions



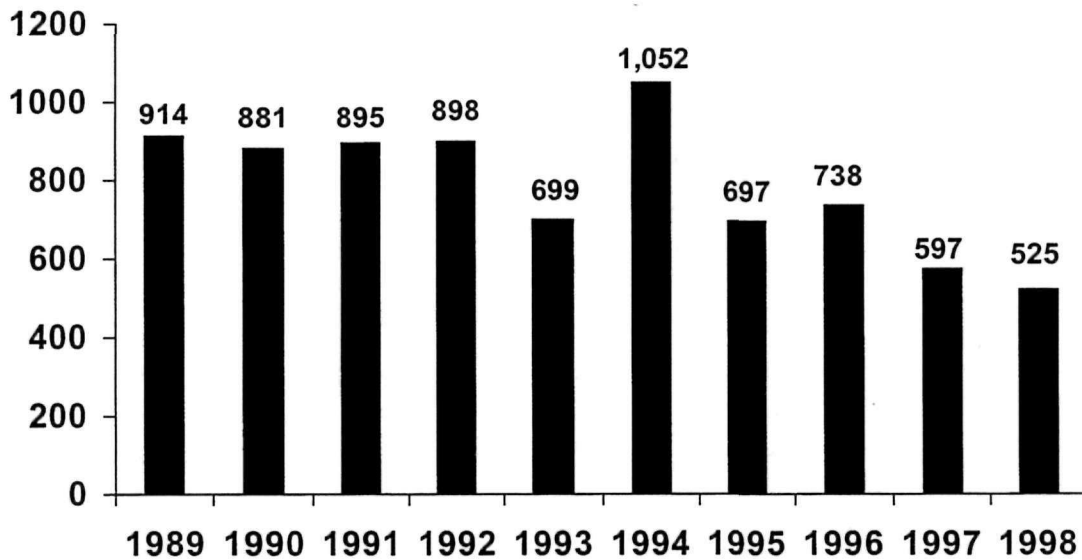


# 1989-1998 FIRE STATISTICS SERVICEWIDE

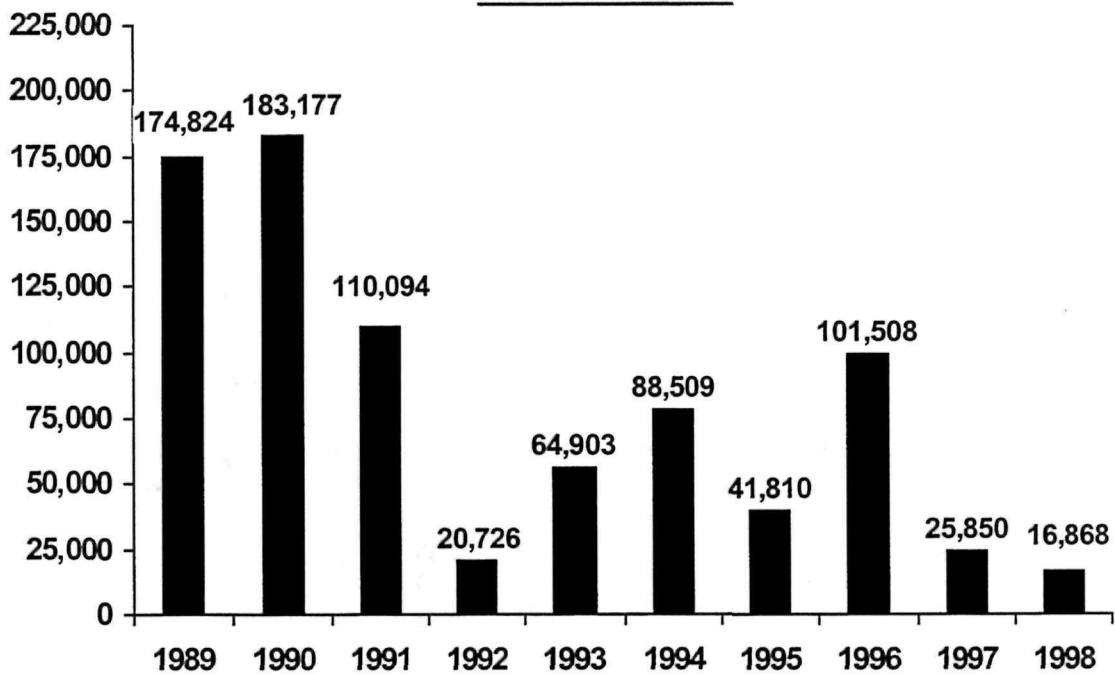


## NPS WILDFIRES, 1989-1998

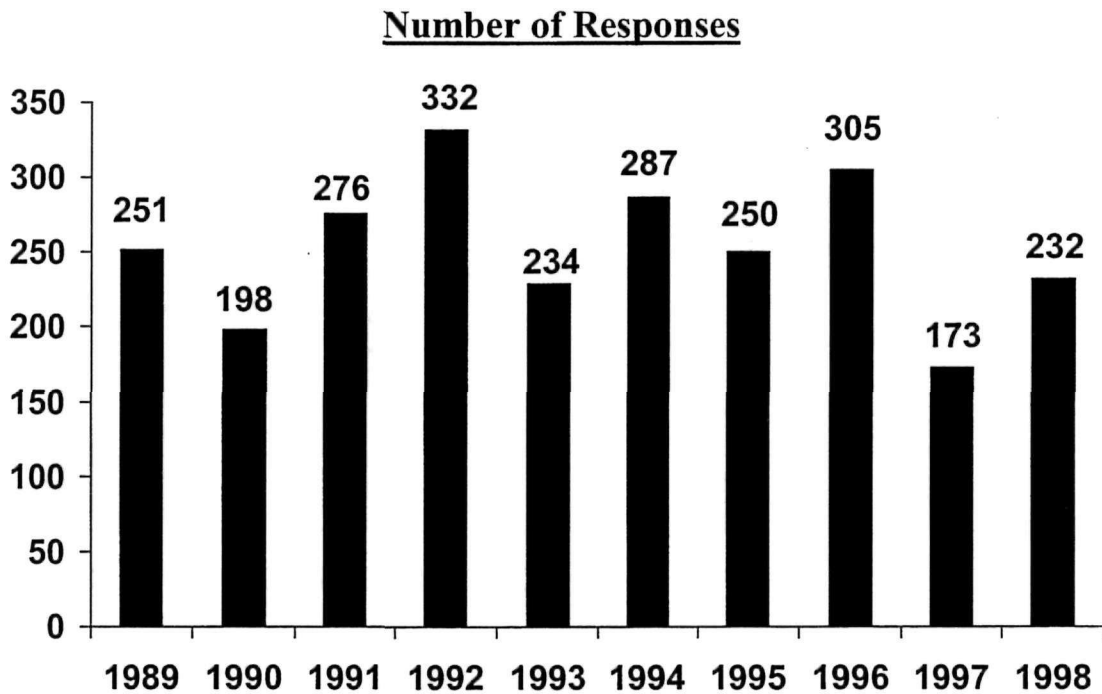
Number of Fires



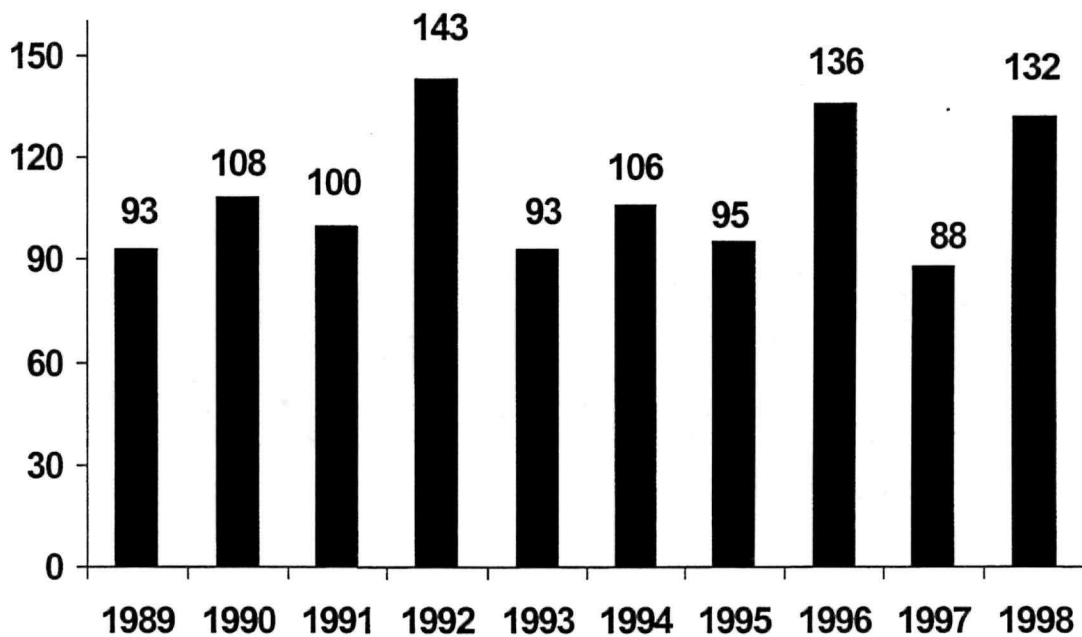
Number of Acres



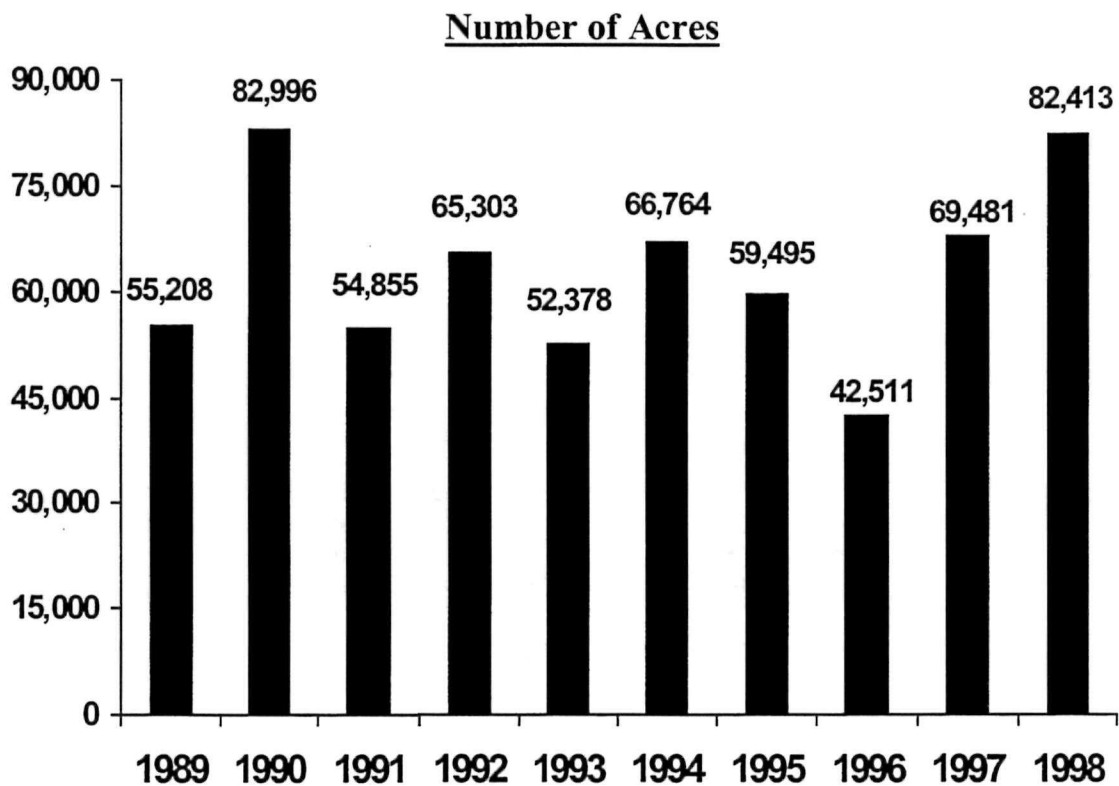
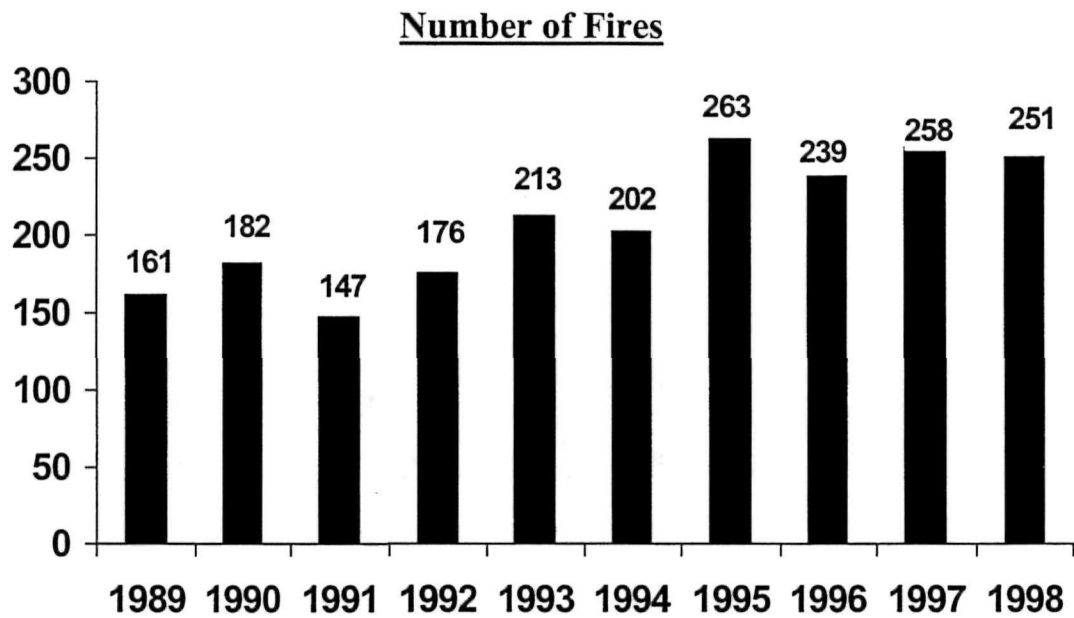
## NPS MUTUAL AID RESPONSES, 1989 - 1998



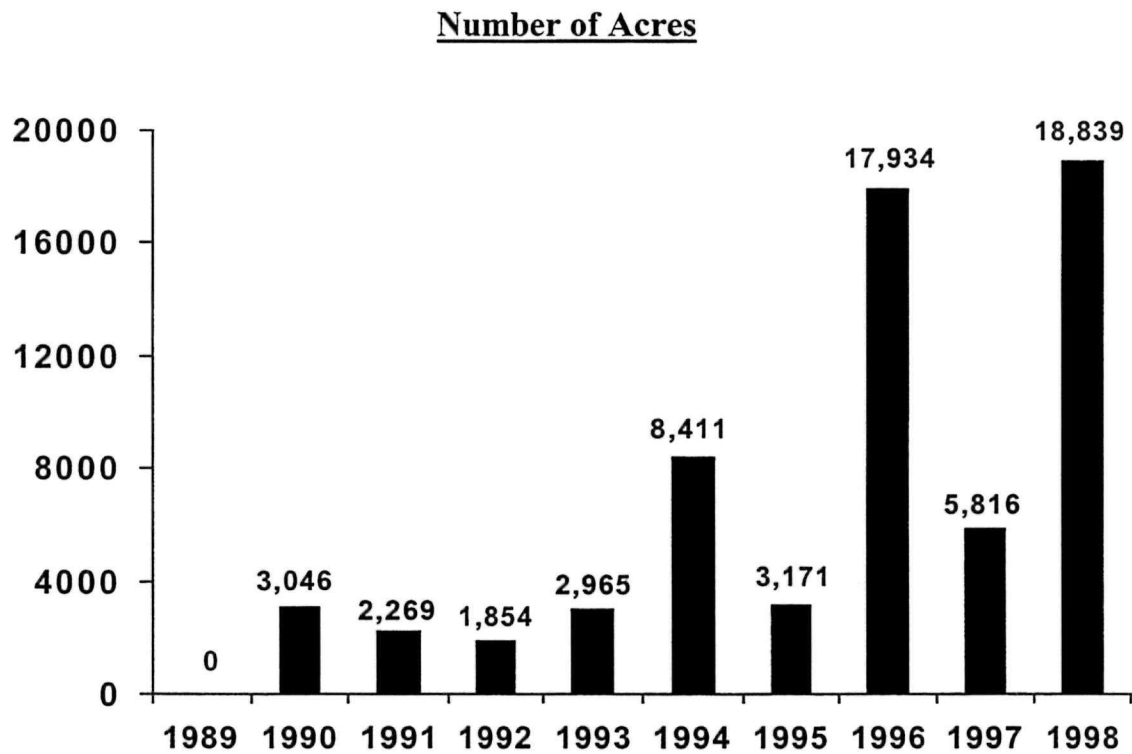
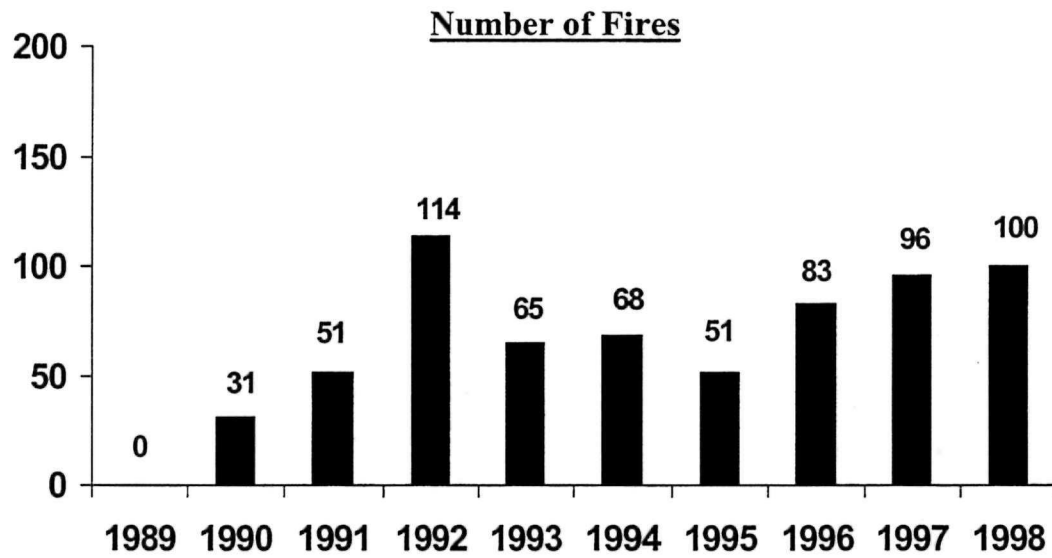
## NPS FALSE ALARMS, 1989-1998



## NPS PRESCRIBED FIRE, 1989 - 1998

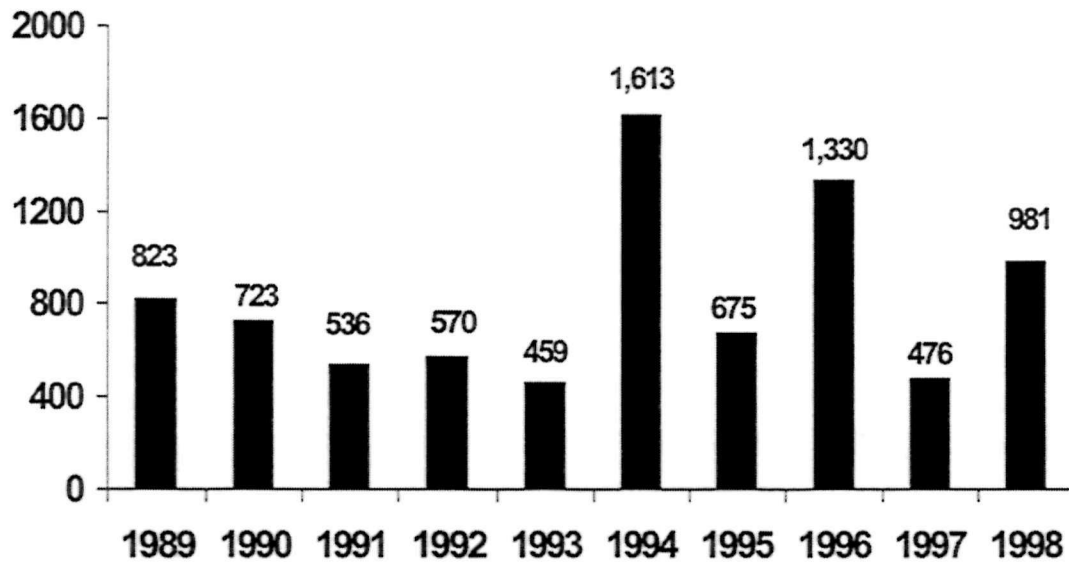


## NPS WILDLAND FIRE USE , 1989-1998





## NPS SUPPORT ACTIONS, 1989-1998



### Number of Support Actions

Support actions are primarily wildfire suppression assists to non-local areas. They do not include local mutual aid responses. Many agency personnel, including those whose regular job assignments are not fire-related, have been trained and dispatched to fire assignments.

The above graph displays the number of support action dispatches, consequently 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 are commonly used during mobilizations.

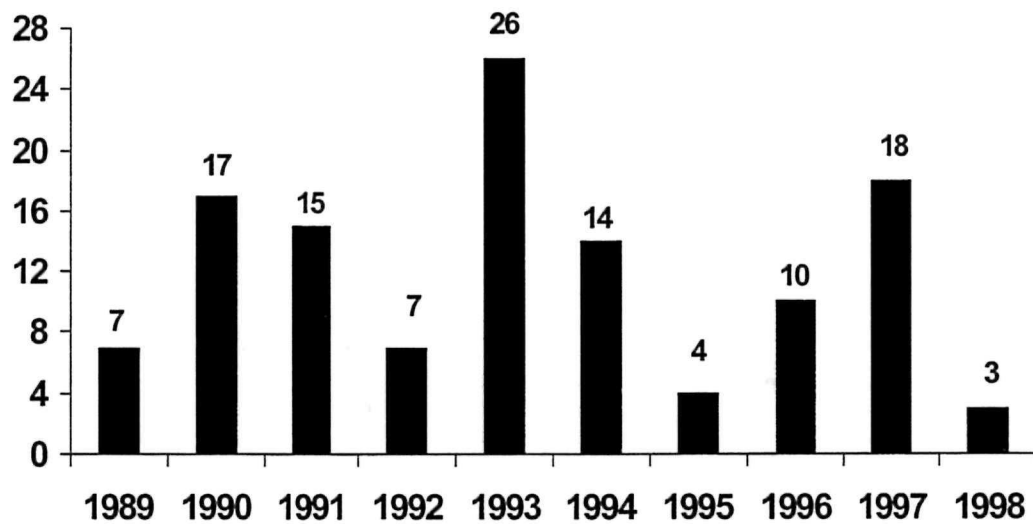


# 1989-1998 FIRE STATISTICS BY REGION

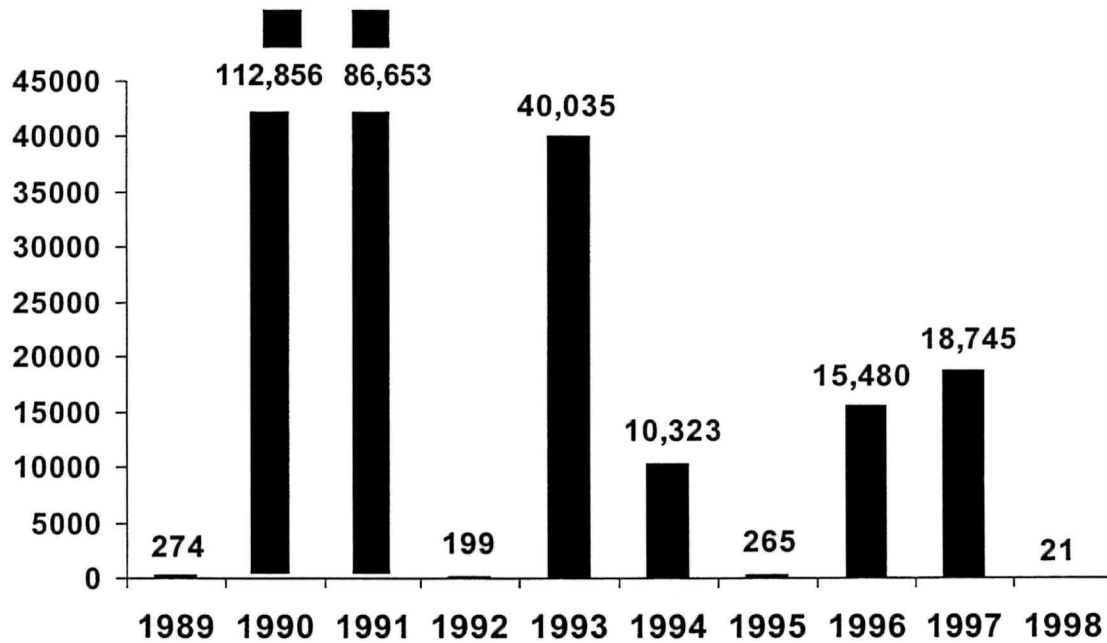


## ALASKA REGION WILDFIRES, 1989 - 1998

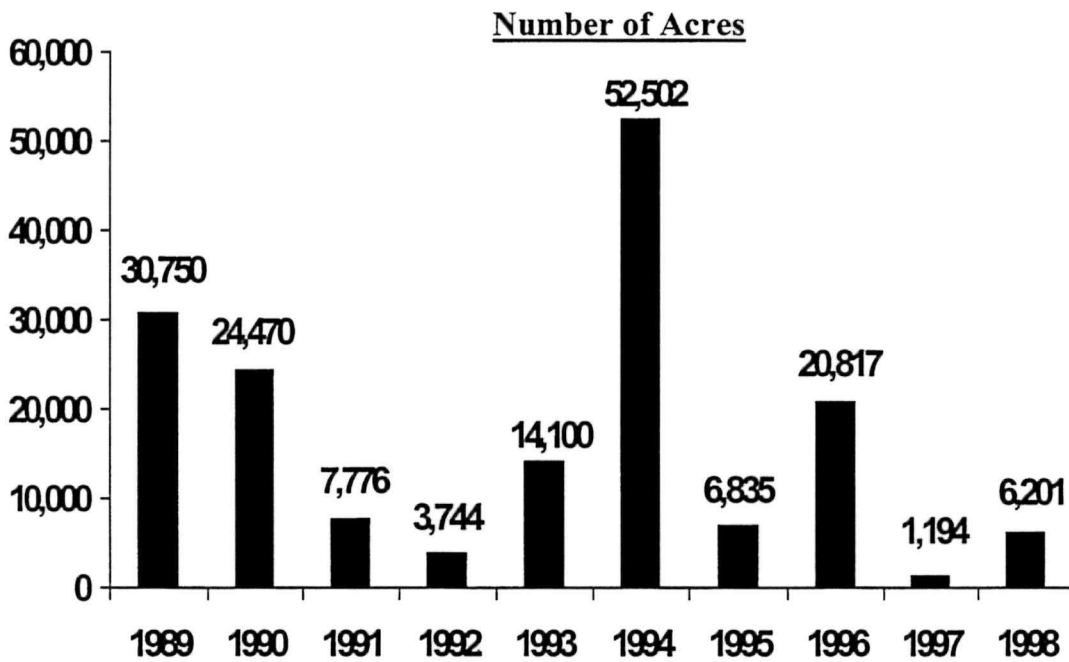
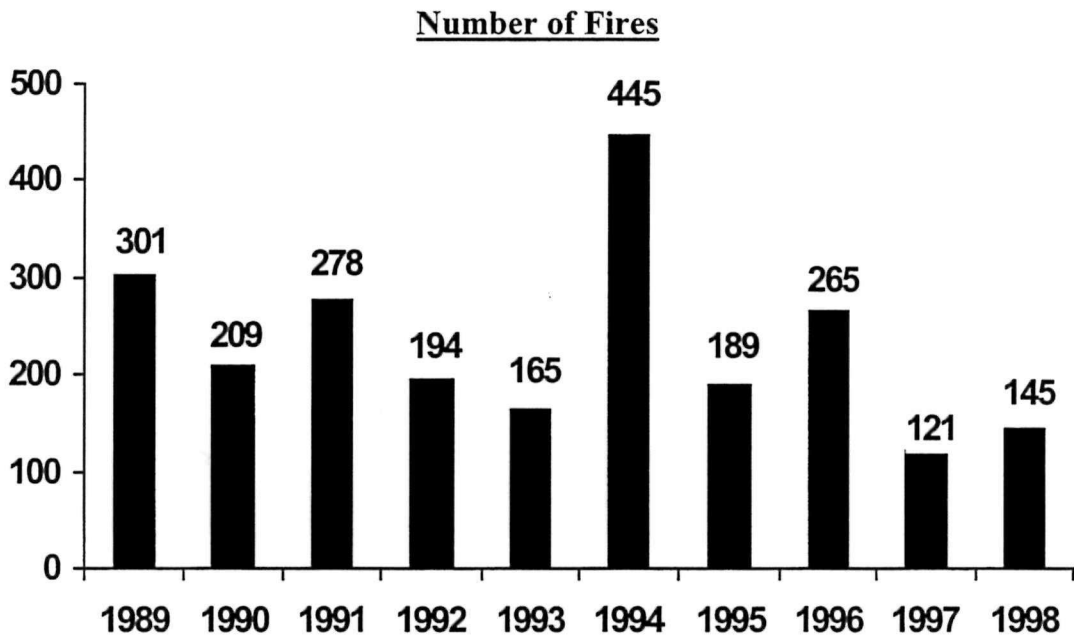
Number of Fires



Number of Acres

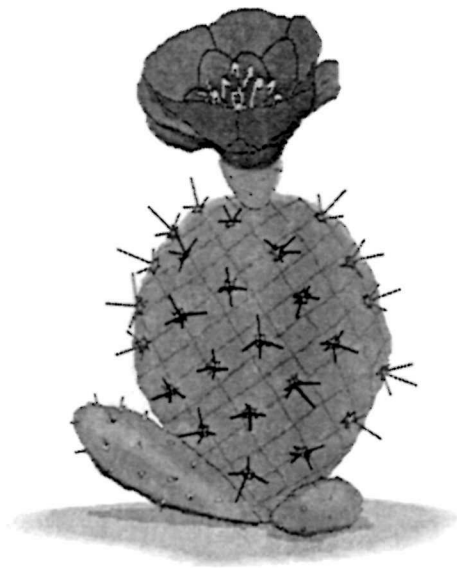
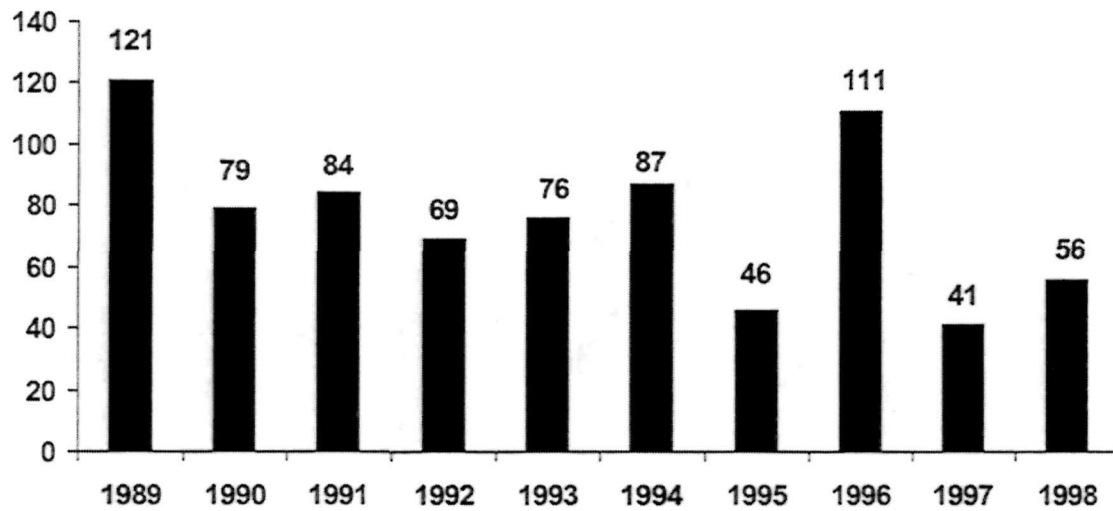


## INTERMOUNTAIN REGION WILDFIRES, 1989 - 1998



# INTERMOUNTAIN REGION MUTUAL AID RESPONSES, 1989-1998

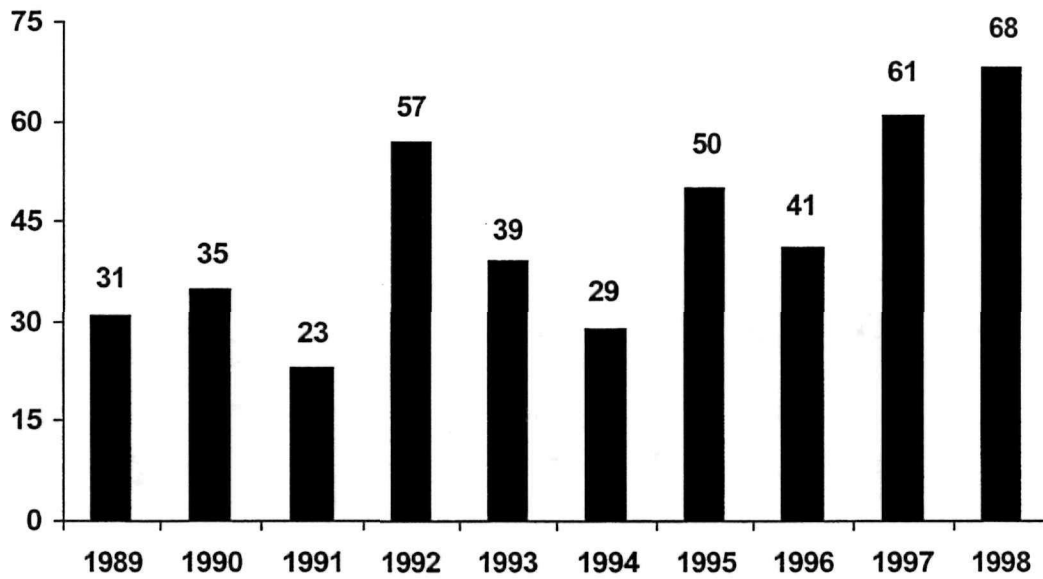
Number of Responses



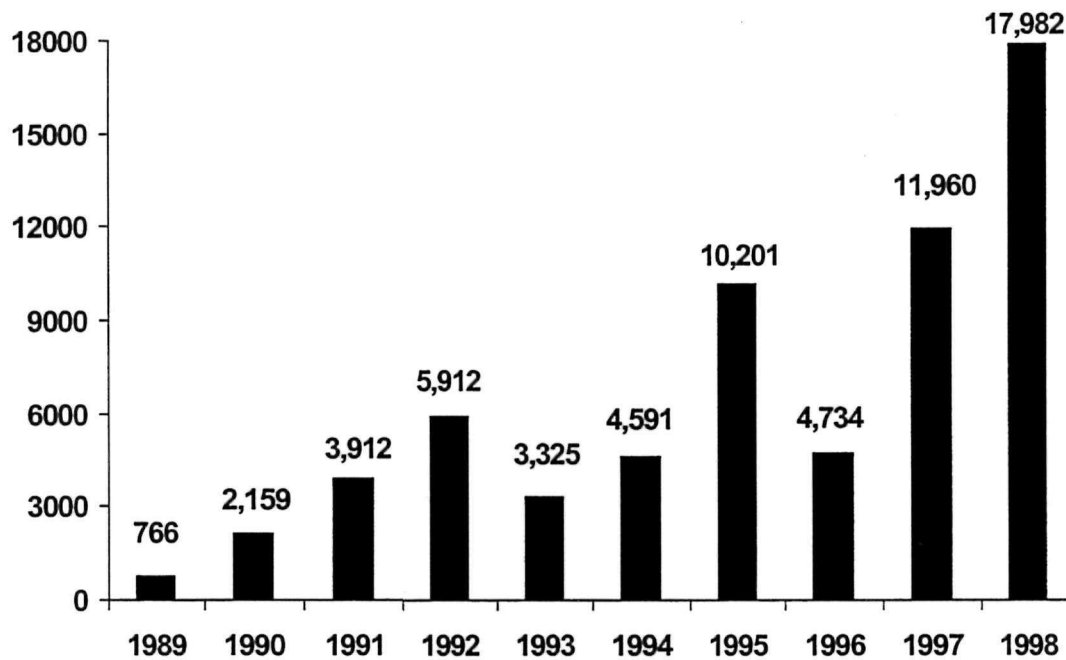


## INTERMOUNTAIN REGION PRESCRIBED FIRES, 1989-1998

Number of Fires

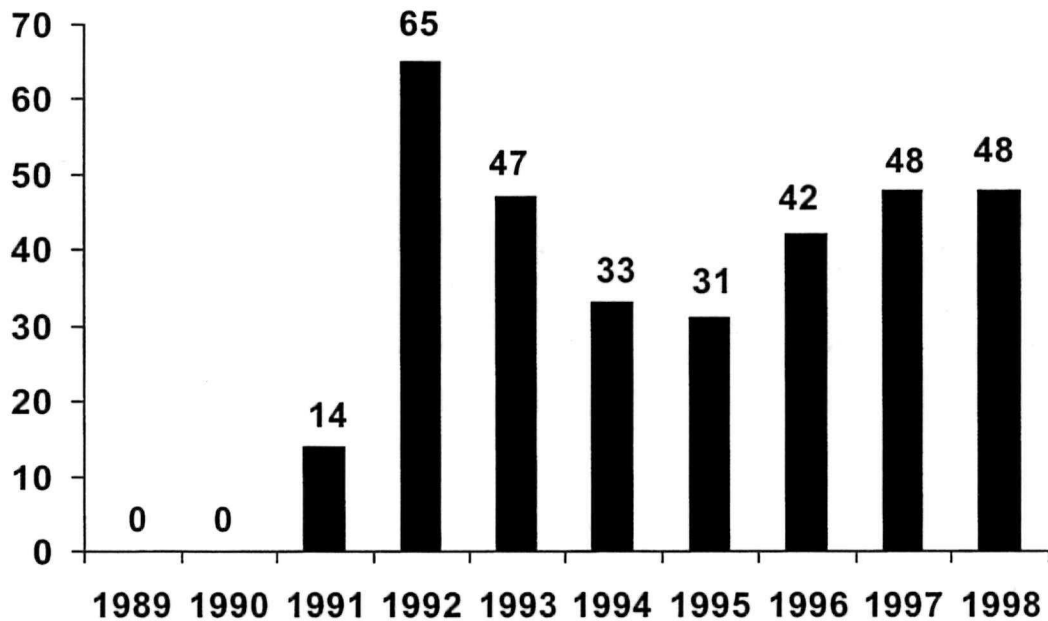


Number of Acres

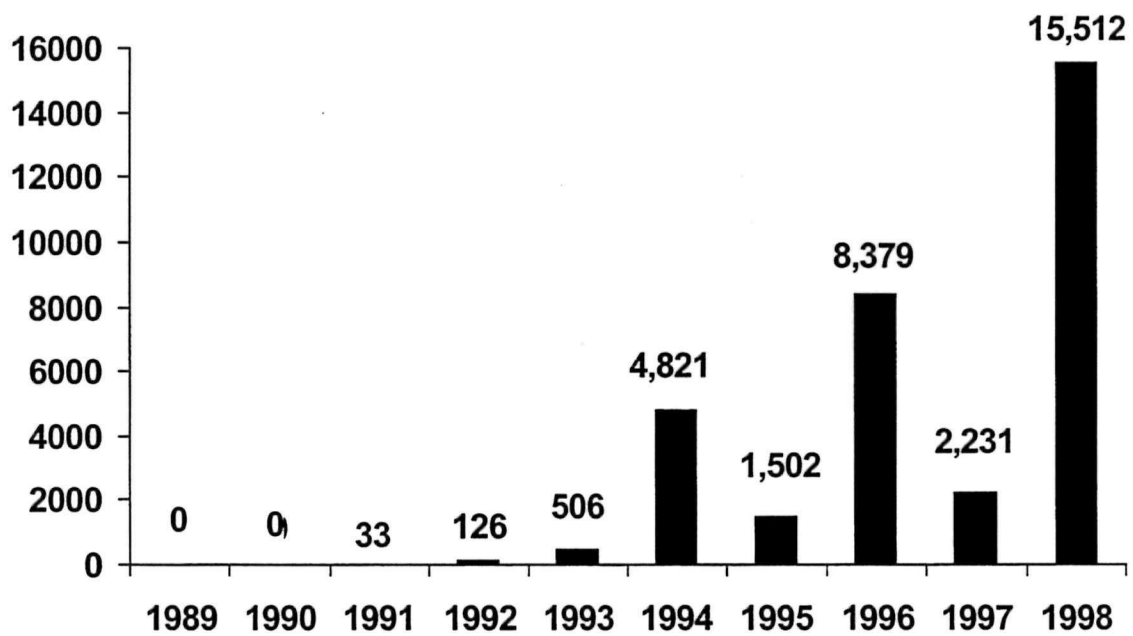


# INTERMOUNTAIN REGION WILDLAND FIRE USE, 1989-1998

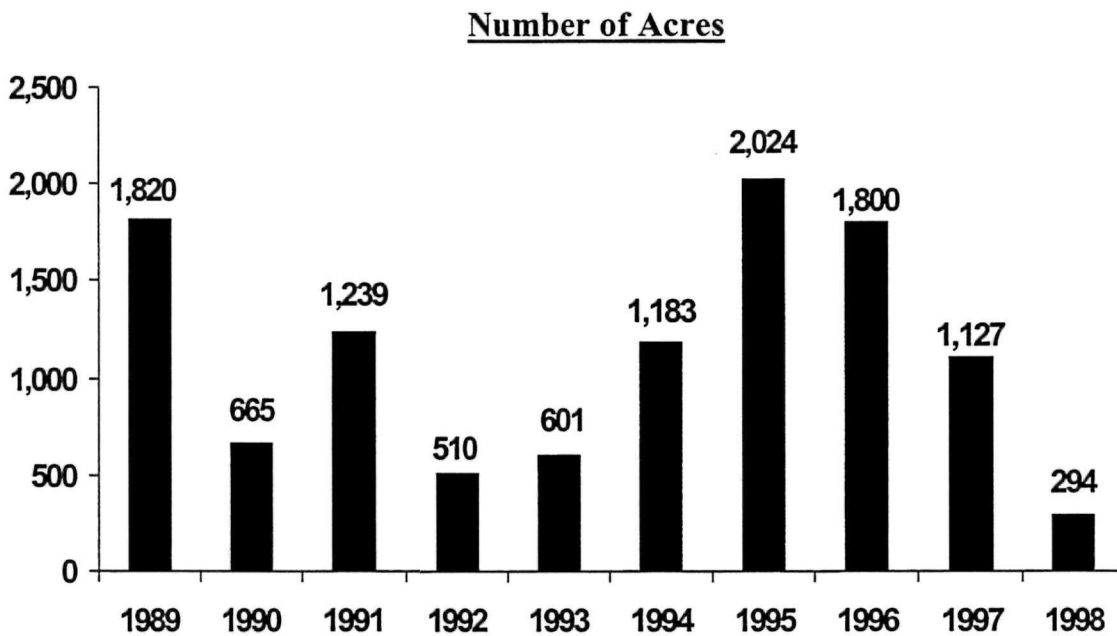
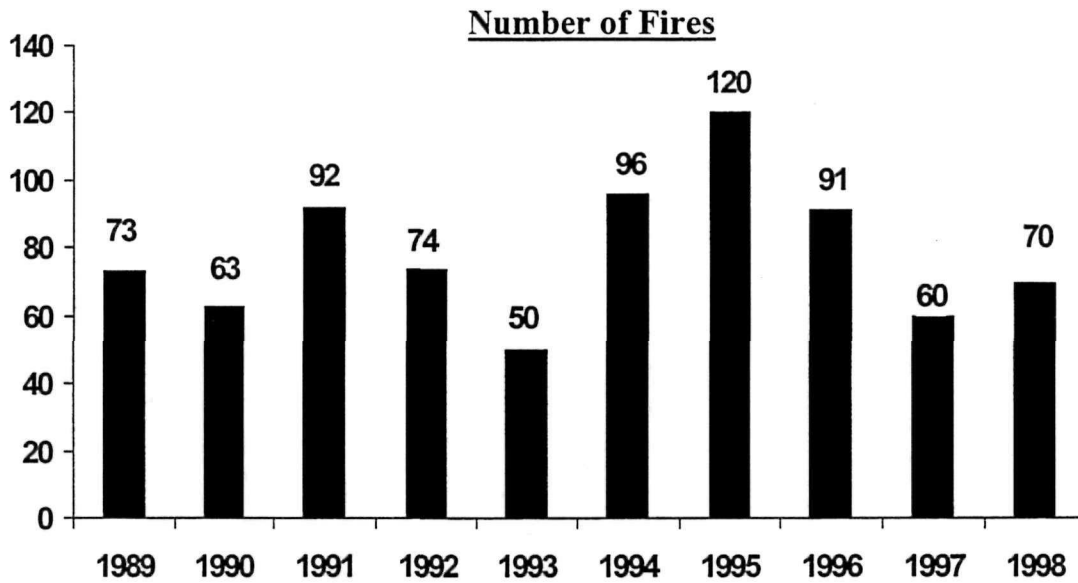
Number of Fires



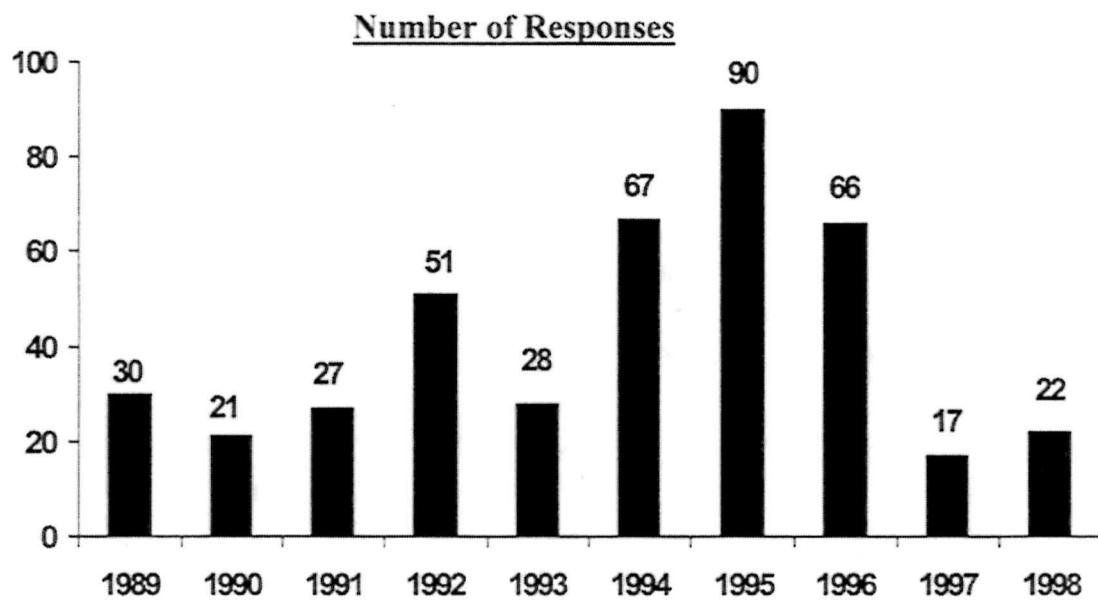
Number of Acres



## MIDWEST REGION WILDFIRES, 1989-1998

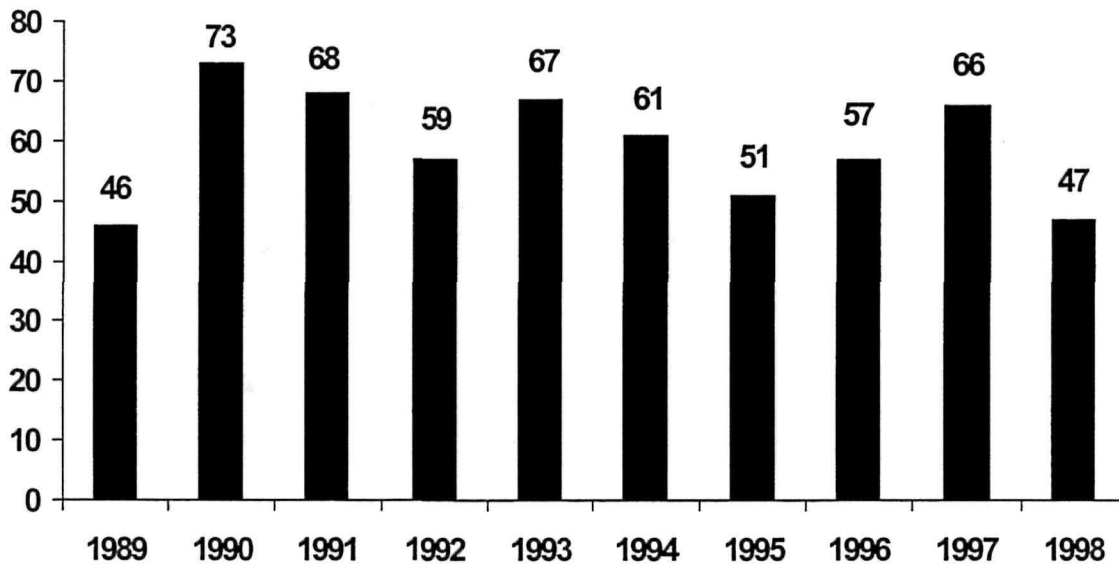


**MIDWEST REGION  
MUTUAL AID RESPONSES, 1989-1998**

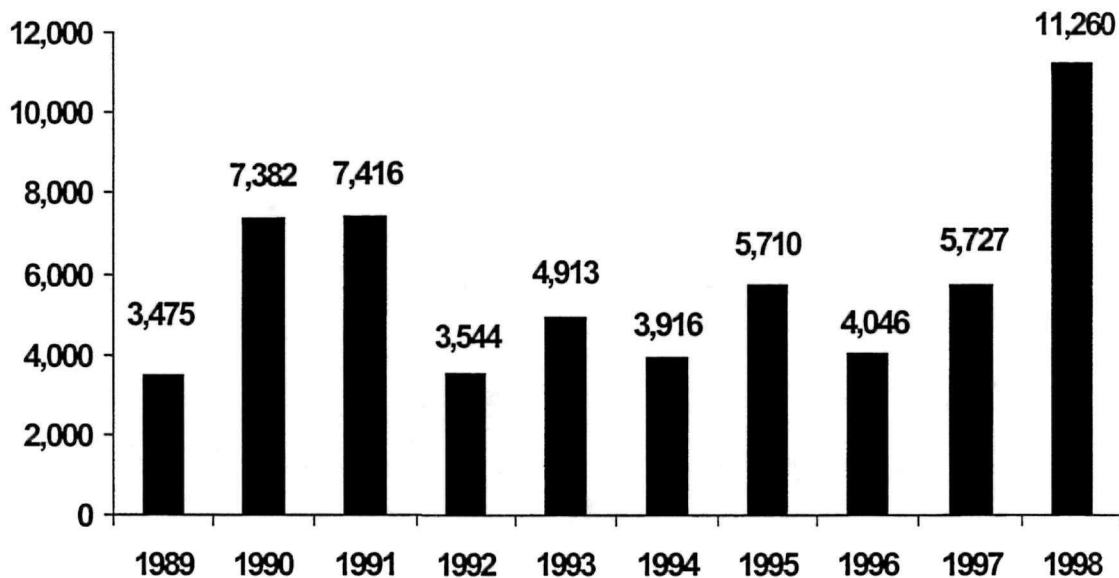


**MIDWEST REGION  
PRESCRIBED FIRES, 1989-1998**

**Number of Fires**

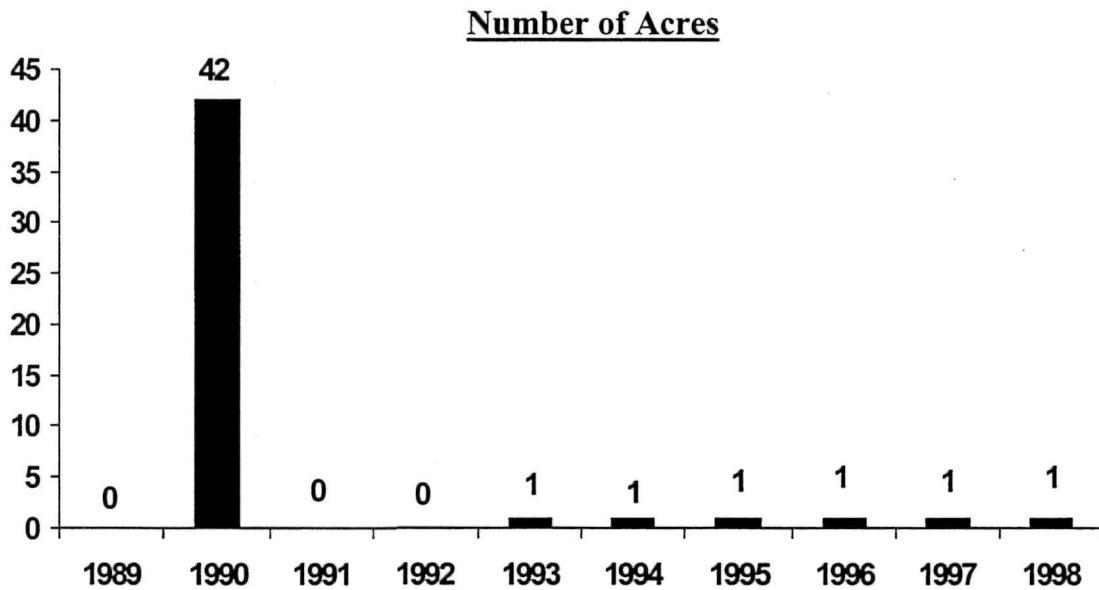
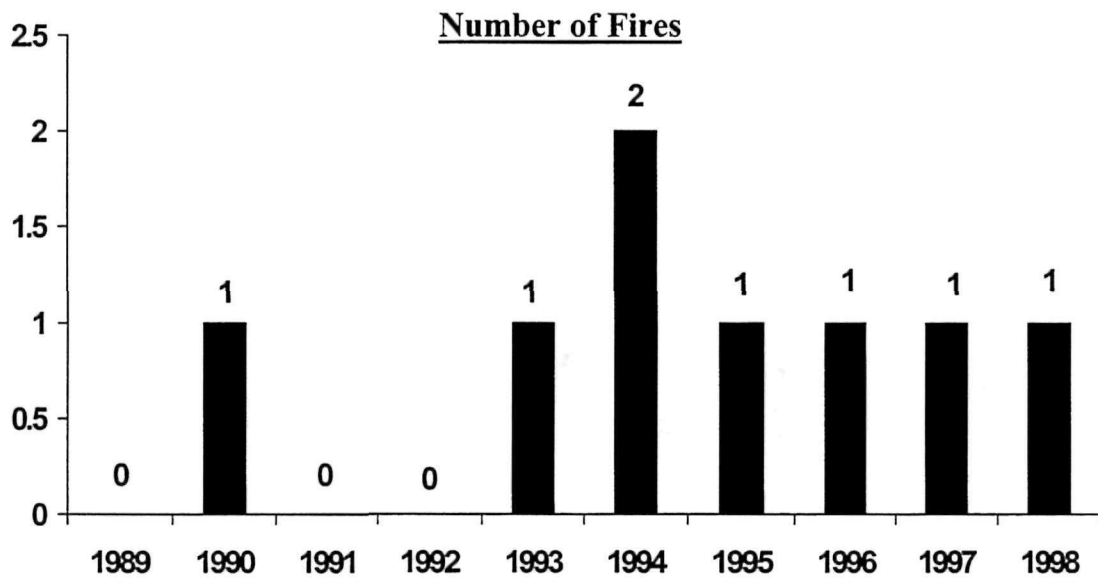


**Number of Acres**



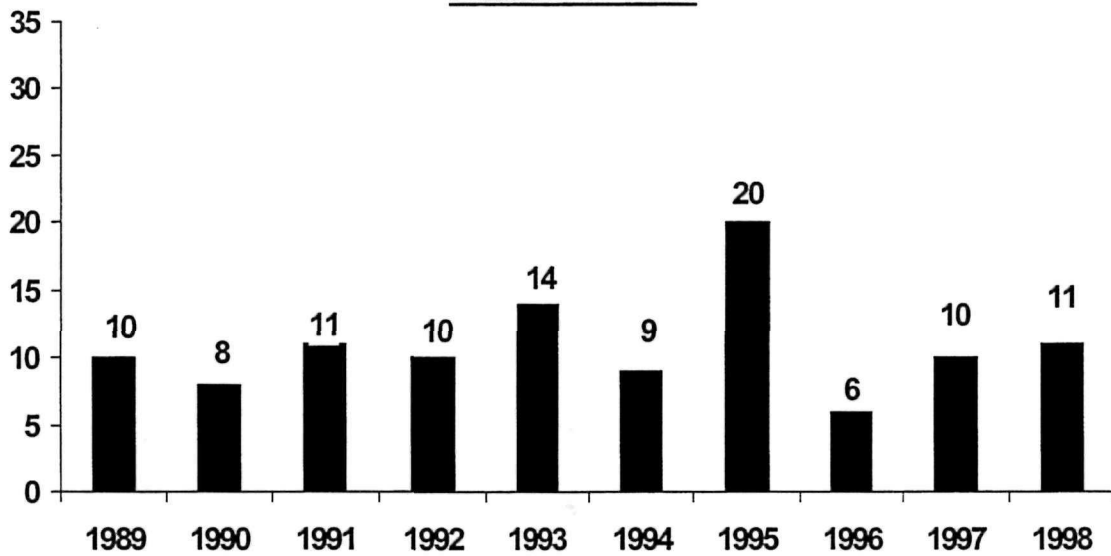


# MIDWEST REGION WILDLAND FIRE USE, 1989-1998

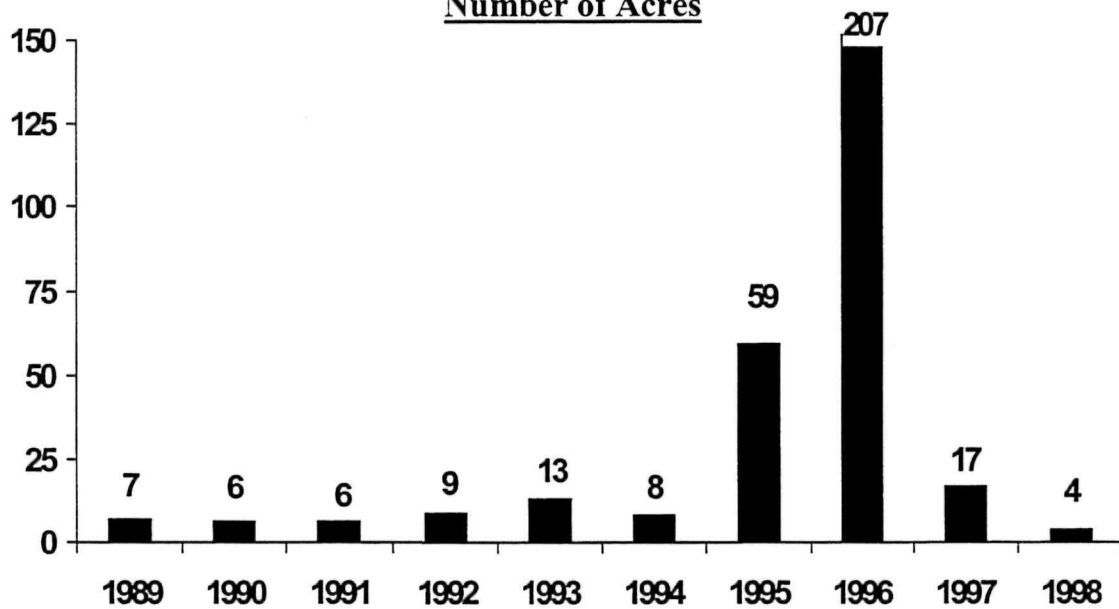


## NATIONAL CAPITAL REGION WILDFIRES, 1989-1998

Number of Fires

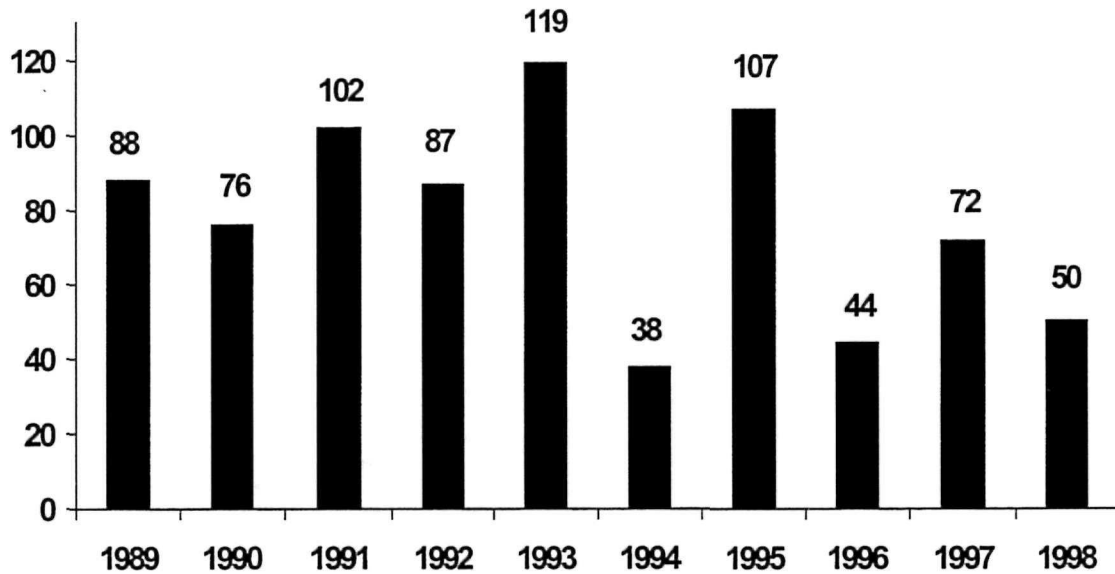


Number of Acres

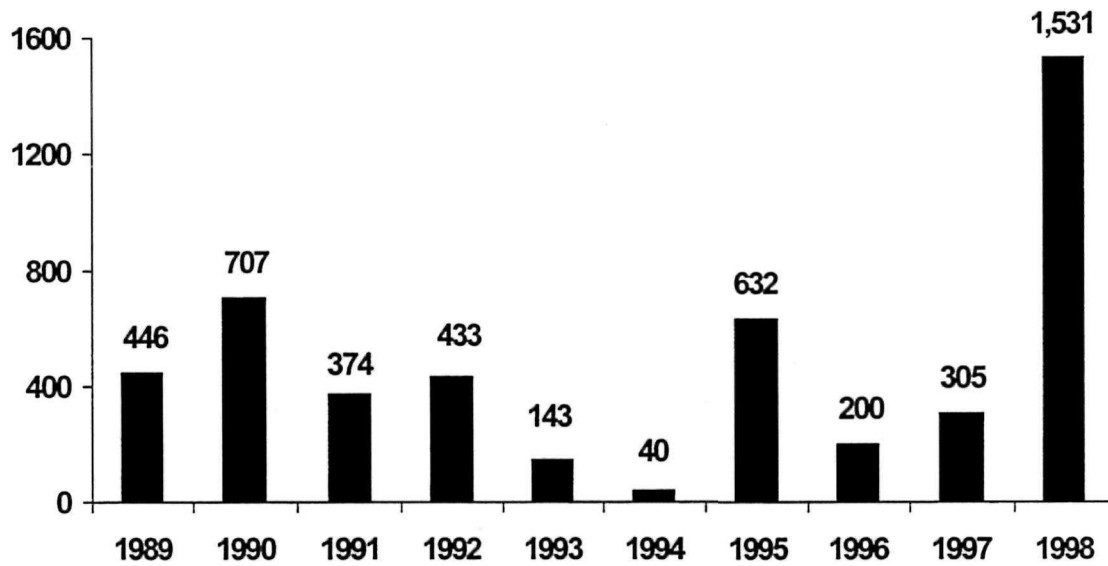


## NORTHEAST REGION WILDFIRES, 1989-1998

Number of Fires

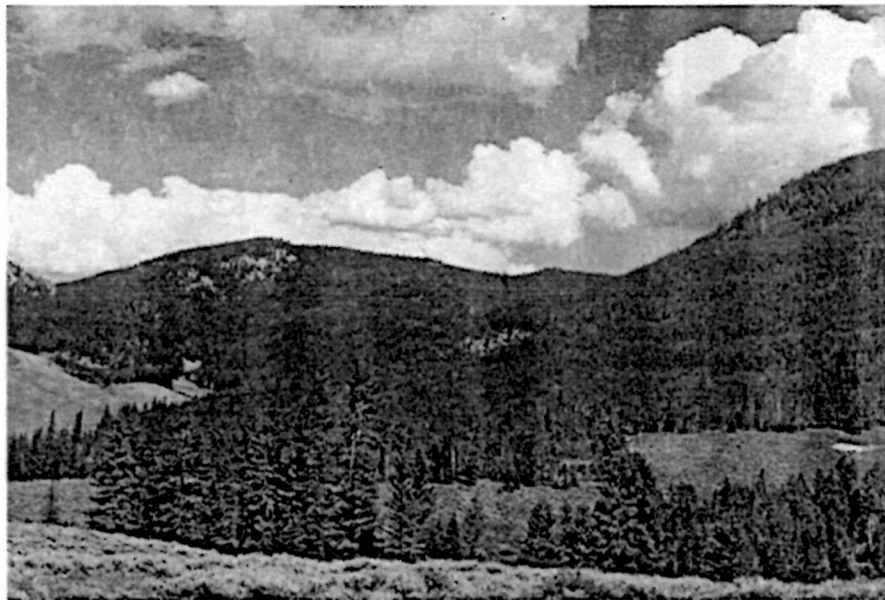
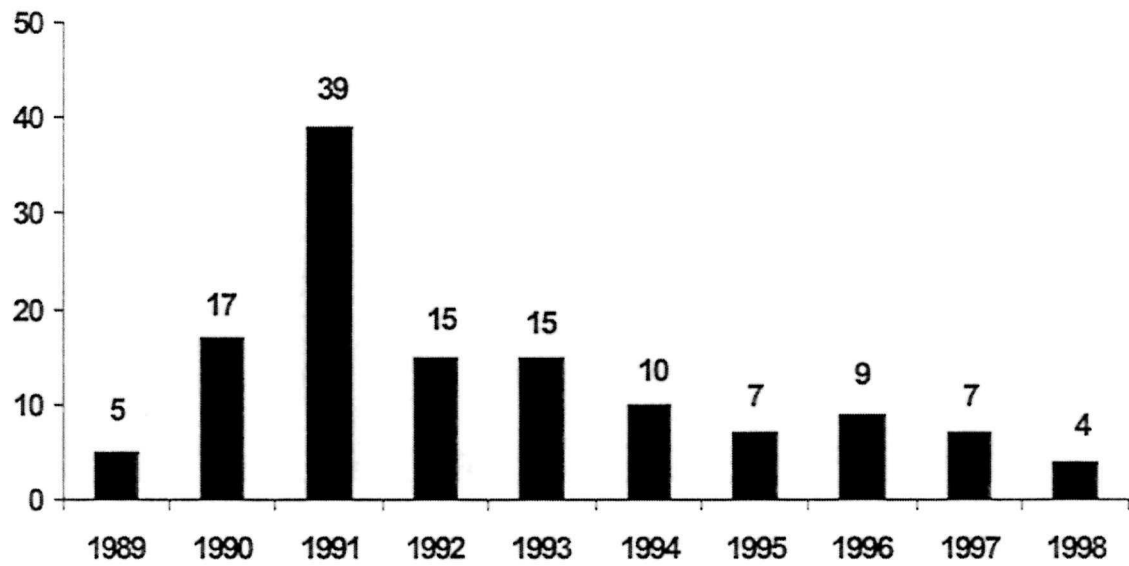


Number of Acres



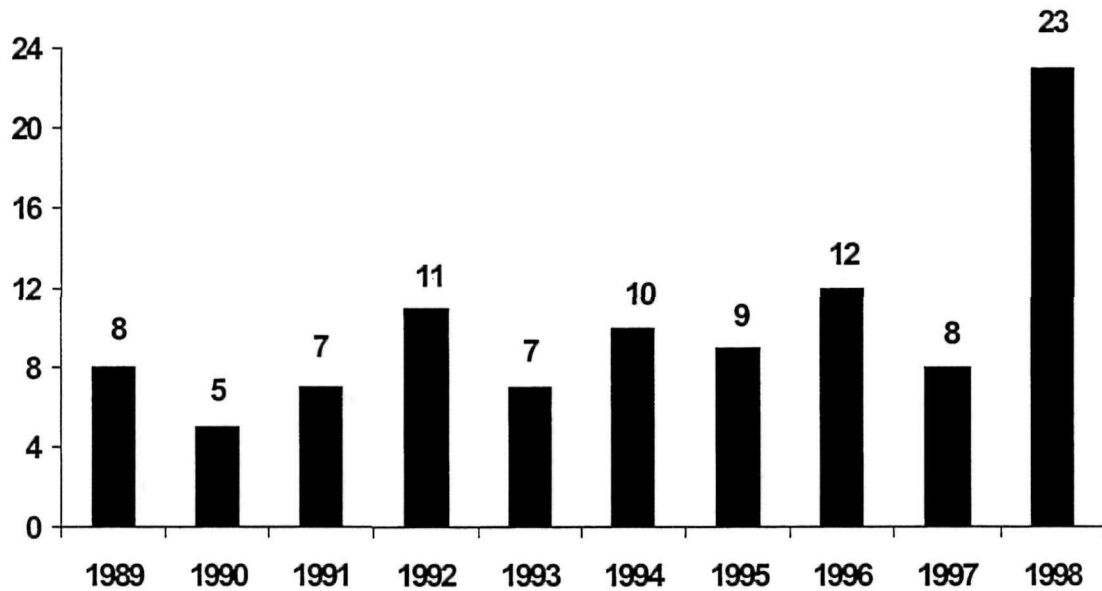
# NORTHEAST REGION MUTUAL AID RESPONSES 1989-1998

Number of Responses

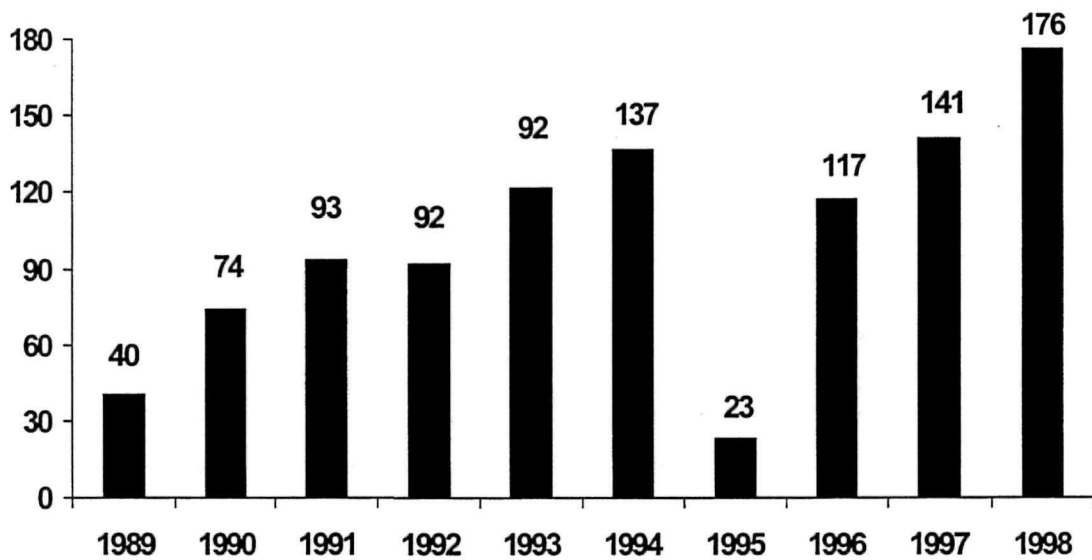


# NORTHEAST REGION PRESCRIBED FIRES, 1989-1998

Number of Fires

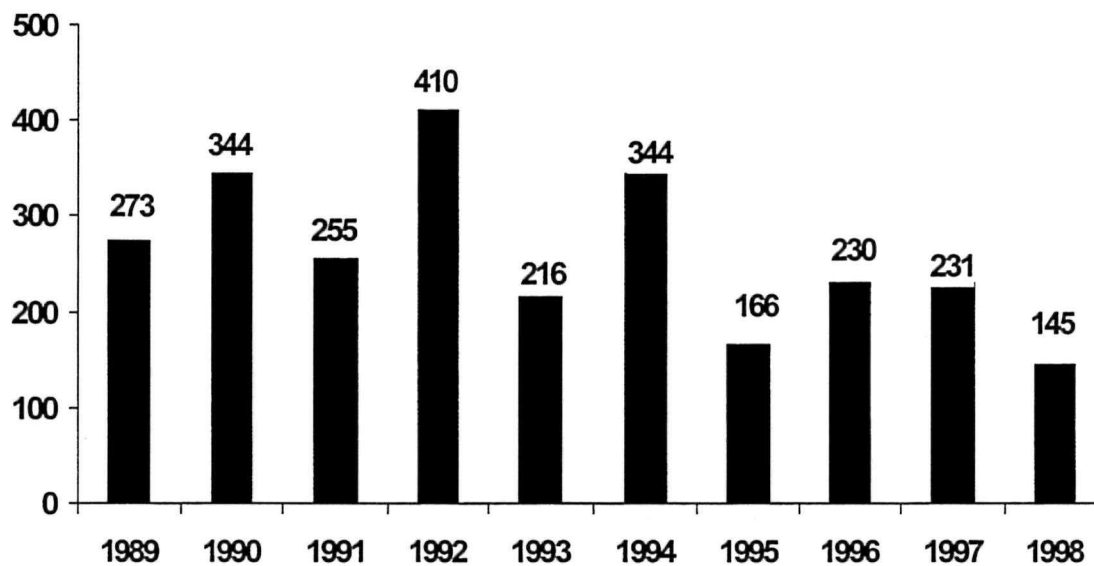


Number of Acres

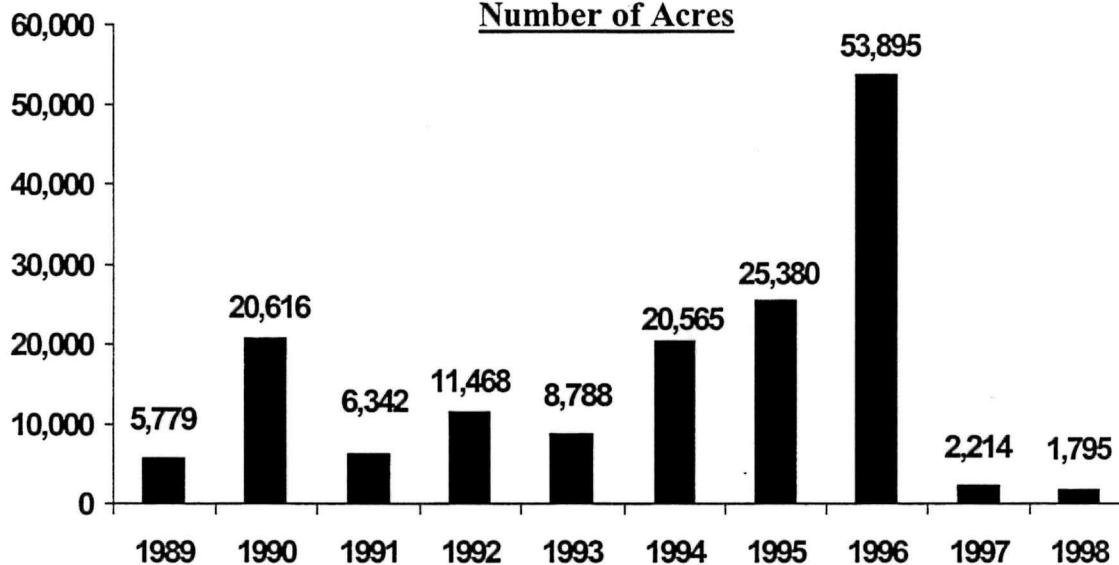


## PACIFIC WEST REGION WILDFIRES, 1989-1998

### Number of Fires



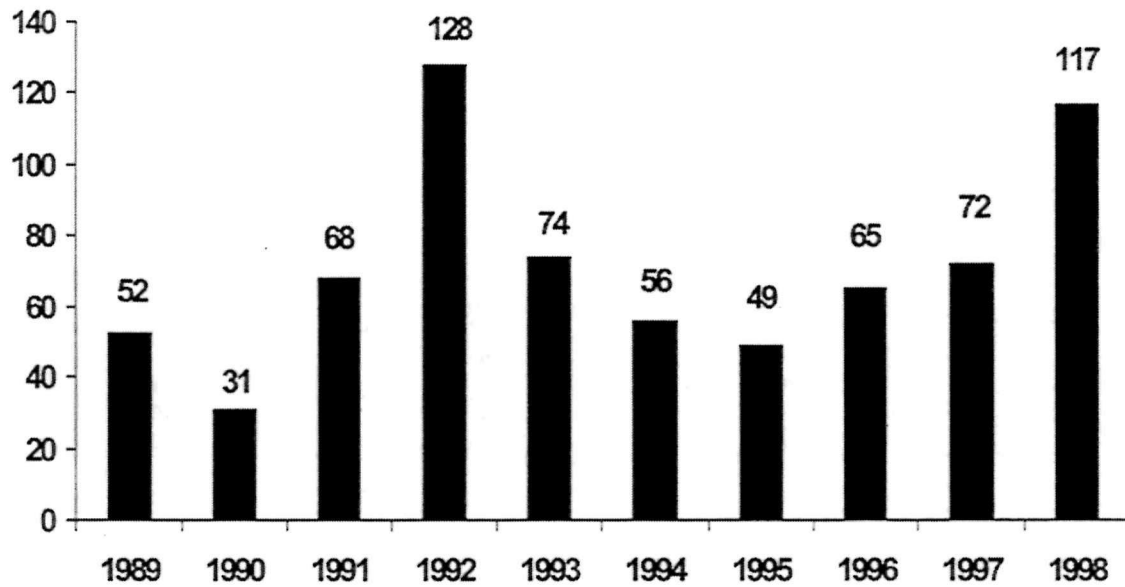
### Number of Acres





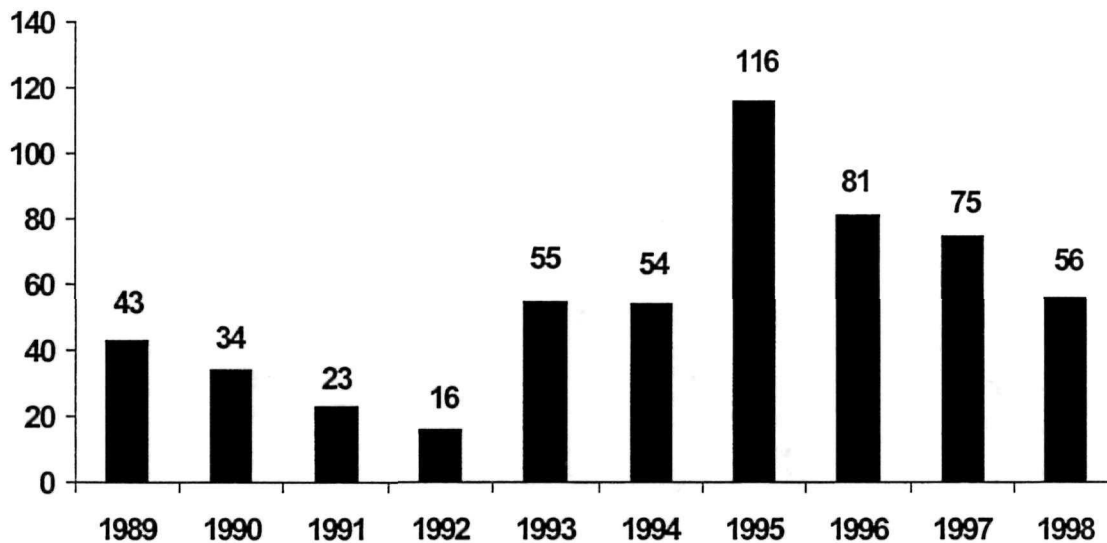
# **PACIFIC WEST REGION MUTUAL AID RESPONSES, 1989-1998**

Number of Responses

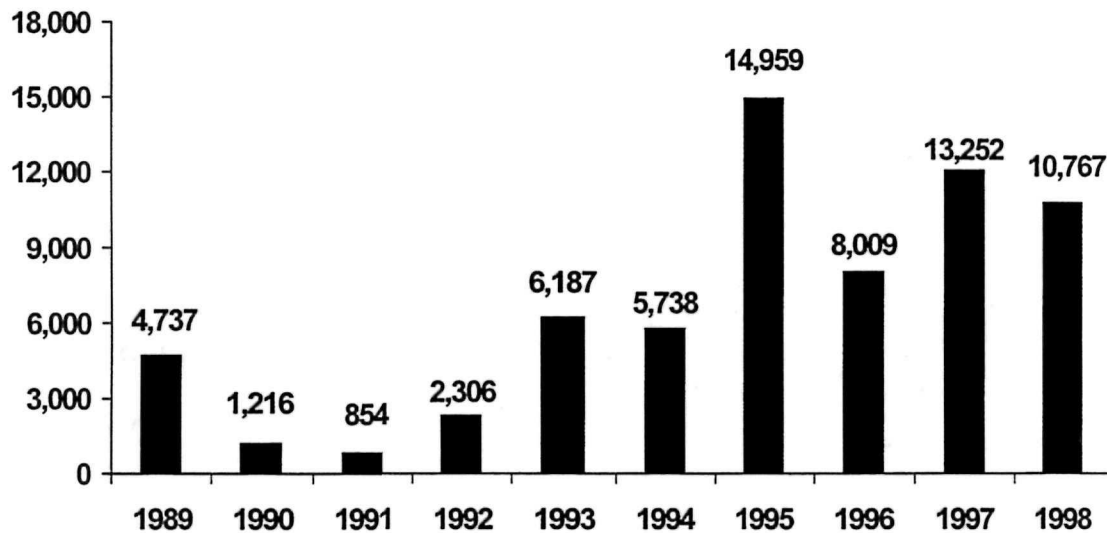


## **PACIFIC WEST REGION PRESCRIBED FIRES, 1989-1998**

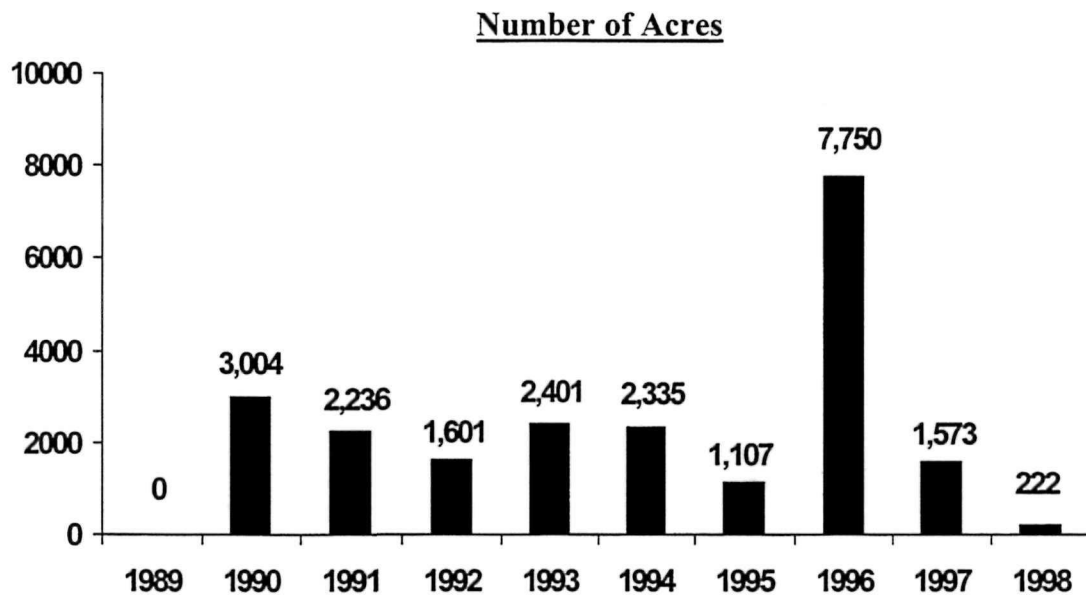
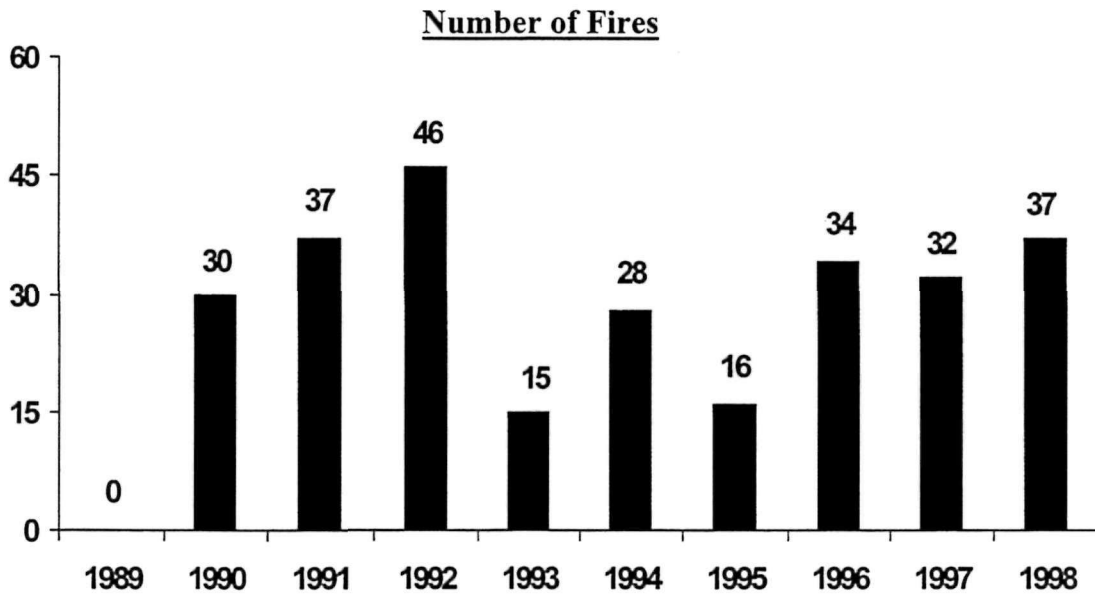
**Number of Fires**



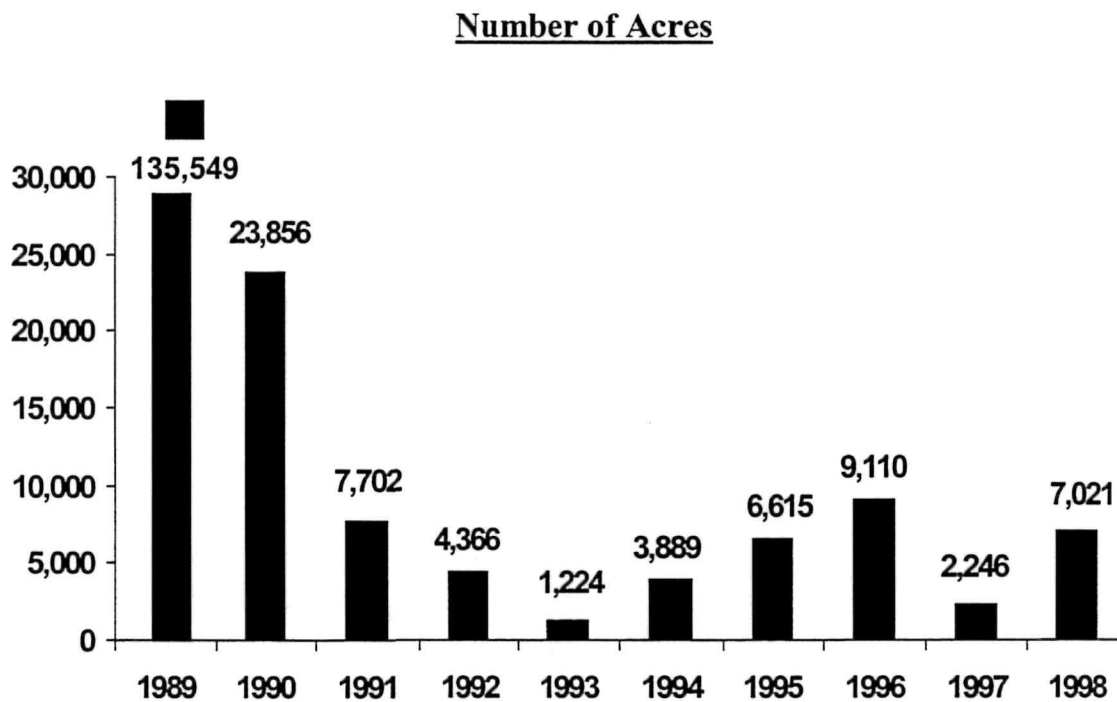
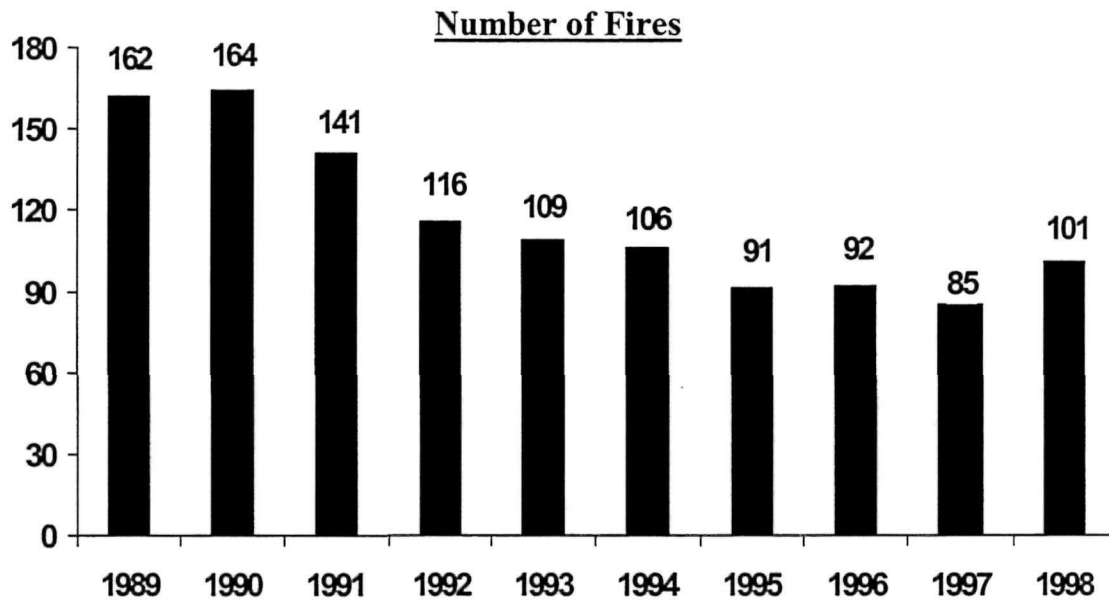
**Number of Acres**



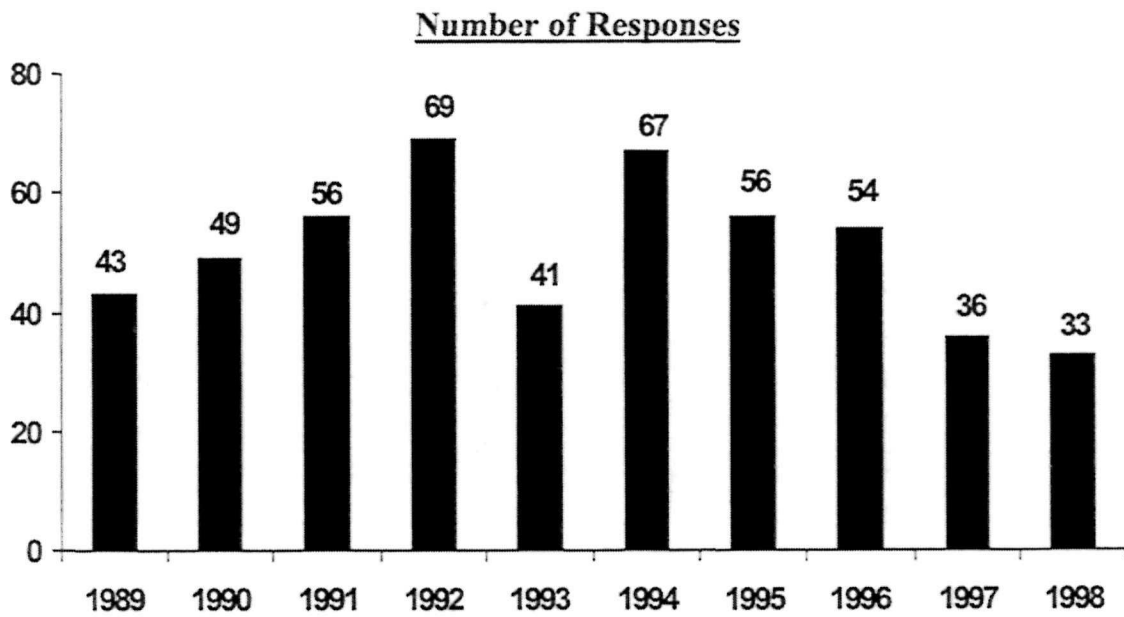
# **PACIFIC WEST REGION WILDLAND FIRE USE, 1989-1998**



## SOUTHEAST REGION WILDFIRES, 1989-1998

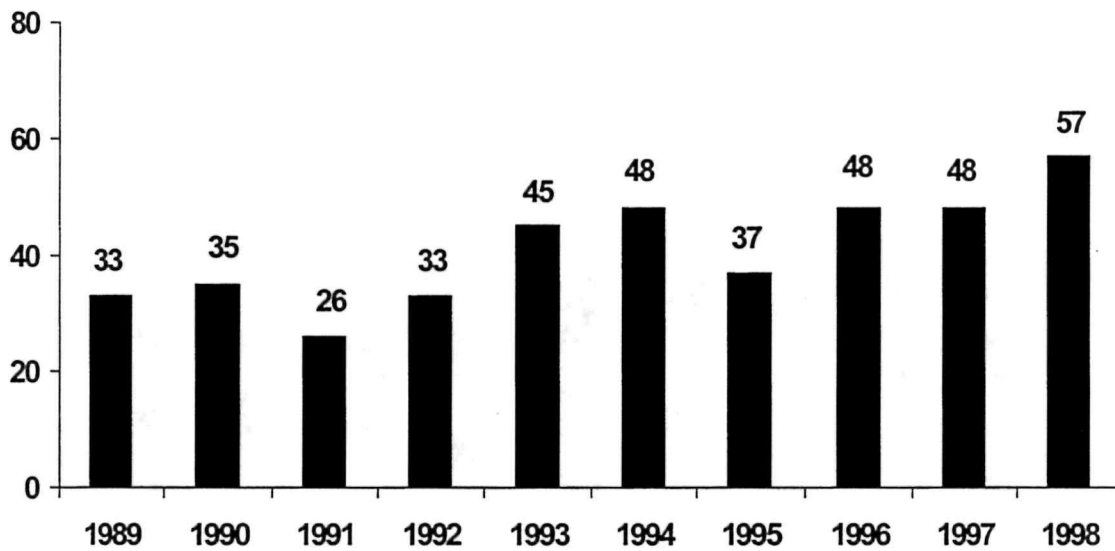


# **SOUTHEAST REGION MUTUAL AID RESPONSES, 1989-1998**

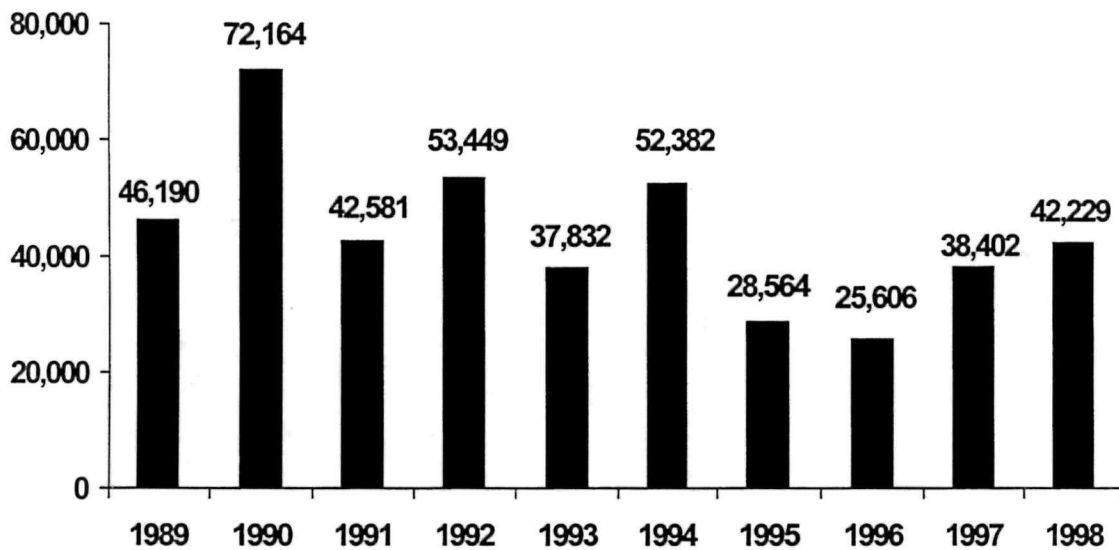


**SOUTHEAST REGION  
PRESCRIBED FIRES, 1989-1998**

**Number of Fires**



**Number of Acres**



# SOUTHEAST REGION WILDLAND FIRE USE, 1989-1998

