

# U.S. Fish and Wildlife Service Fire Activity Report



1999



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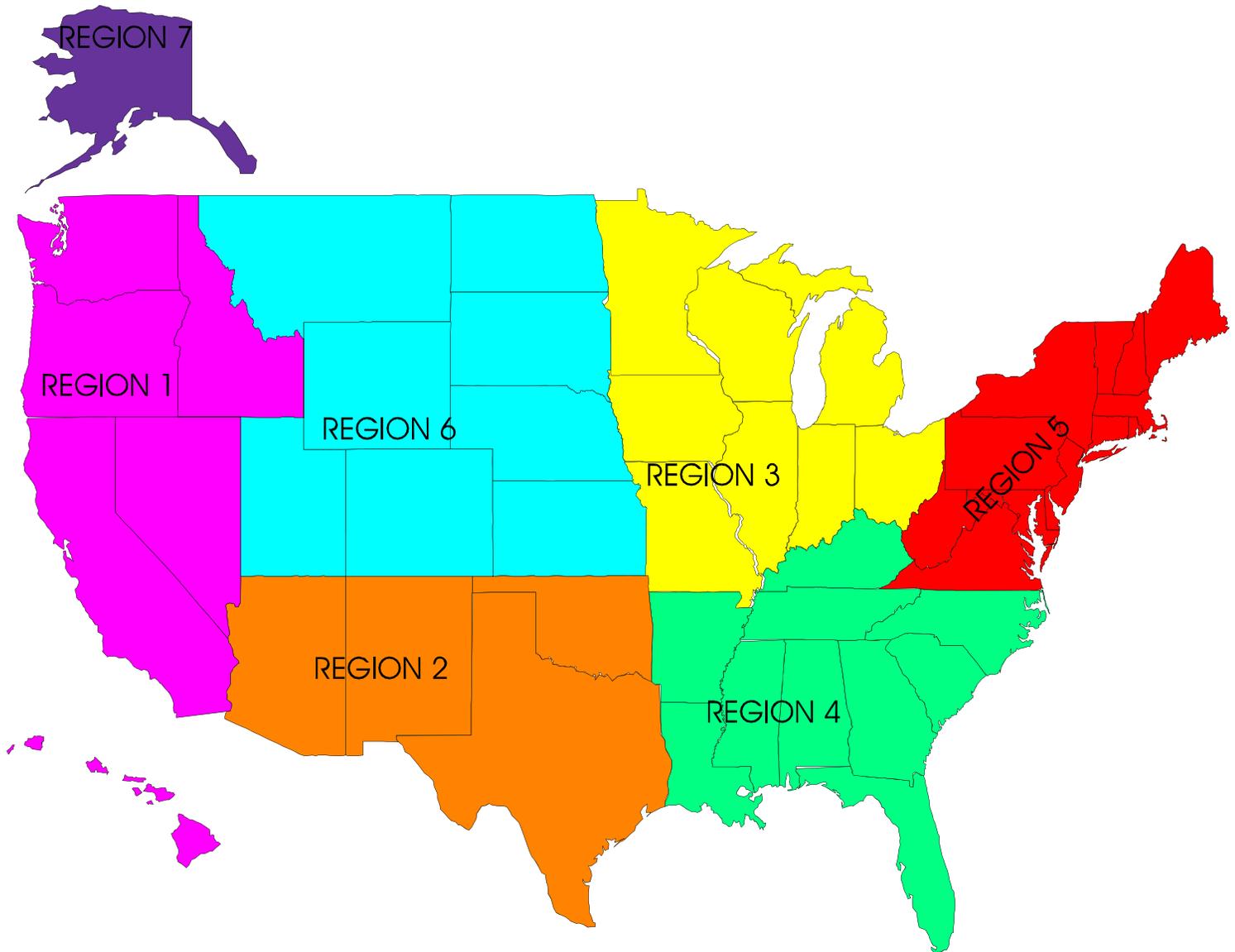
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# U.S. FISH & WILDLIFE SERVICE Regional Map



# NATIONAL

The 1999 fire season was influenced by the La Nina conditions present in the Pacific Ocean. As is normal under these circumstances, the Pacific Northwest States, northern California, northern Nevada, and the Northern Rockies received above average snowfall. Areas to the south experienced moderate winters with below normal snowpack and precipitation. The entire tier of southern States was drier than normal, with moderate to severe drought being noted. In Alaska, winter precipitation was below normal.

During January through March, the southern States experienced seasonal initial attack fires, along with an active prescribed fire workload. Southern States began to experience larger fires during March. Moisture bypassed the Southwest and East, through the southern States to Florida. Significant winter storms were experienced in the central and southern plains into the East. Heavy snows became less frequent late in the month, although snow and cold weather was common in the Intermountain West. Parts of Michigan and Wisconsin had record dry spells, and Alaska continued with cold temperatures and dry conditions in the interior.

Fire season in the South became quite active in April, with large fires occurring in the most southeastern States. Weather patterns changed in April, resulting in precipitation 200% above normal from Southern California northeast to the Midwest. Fire season picked up in May in the East and South, with greater potential for the Southwest.

Large fires began to occur in many States in all regions of the country. A Type I incident occurred on the Osceola NF/Okefenokee Refuge, involving 69,000 acres. Drought persisted in north Florida, but other parts of the State started to see relief with showers. June fire season was active in the western States; however, Arizona and New Mexico did not experience the level of activity which fuel conditions indicated.

July started off with typical fire activity in the Great Basin. Fire activity increased in Alaska and by mid-month, nearly a million acres had been affected but due to protection levels, there was not much demand on resources. Numerous Type II and III incident management team assignments occurred during July. The weather was characterized by record setting heat and moisture deficits in many areas including mid-Atlantic States, northern Nevada, southern Idaho, and northwest Utah. New Mexico and Arizona experienced monsoons. August brought large fires to northern Nevada and California, resulting in massive commitment of resources. Preparedness Level IV was declared on August 24, and lasted until September 4. August weather continued hot and dry in the South, Midwest, Great Basin and California, with fire activity expected to continue through September. By the end of the month, total fires reported to the National Interagency Coordination Center were 76,310 fires for 4.8 million acres. The 10-year average is 65,257 fires for 2.8 million acres. Weather was highlighted by a high pressure ridge over the West, resulting in high

temperatures, low humidity, and seasonal wind events.

October did not see a decline in activity due to dry conditions in many parts of the country. The Big Bar and Kirk complexes remained uncontained throughout the month; these fires lasted for more than 4 months. November saw

several large fires occur in the East, resulting in four Type I incident teams being assigned. December saw fire activity lessen throughout the country.

1999 will be remembered as a persistent fire season, with major commitment of resources reaching deep into November.



# REGIONAL FIRE NARRATIVES

# REGION



This was a somewhat disappointing year for prescribed fire operations in Region 1. Wildland fire occurrence was also down this year, and was very slow in developing. Late spring rains and above-average snow depths kept live fuel moisture high throughout much of the traditional early prescribed fire season. This, however, allowed a number of opportunities to assist other Service geographical areas with prescribed fire work.

As the wildland fire season developed and activity increased, normal fall rains were significantly delayed. Sheldon NWR had the largest fire (Badger) of the year at approximately 40,000 acres. The resulting fire rehab plan was significant and was developed by a BAER Team. The wildfire season continued into November in California. This delayed fall prescribed fire activity and really put a crimp into our project accomplishments. The other issue with such a delayed season was that temporaries ran into 1039-hour problems, and many had to return to college before fall burning opportunities developed. Much post-fire season discussion has centered around term and career seasonal appointment issues, especially with regard to fall/spring prescribed fire activities.

Additional land acquisitions are a high priority in the Region. This puts increased pressure on the fire program as little thought is given to fire concerns before acquisition. We have voiced

those concerns, and continue to do so. It is increasingly difficult to accommodate fire needs in a timely fashion, with funding (at best) being 2 years out. The Service feels it is more important to purchase land, even mothball it if necessary, rather than secure funding to manage it or the land which we administer already. The perception remains that the fire budget, especially the 9263 subactivity, is unlimited. We are attempting to enlighten management at every opportunity that this is not the case.

Personnel changes have been significant. Dennis Macomber retired as RFMC on October 1. He is missed; the Region benefitted greatly from his integrity. Pam Ensley, a District FMO with Gifford Pinchot NF in Washington State, replaced Dennis in January 2000. Pam is learning the Region at a frantic pace. She is currently an Operations Section Chief with a Type 1 Incident Management Team in the Pacific Northwest. Roddy Baumann is the new Regional PFS. He came to us from Malheur NF in Oregon and is a welcome addition to the Regional staff. He brings a wealth of knowledge about prescribed fire, fire behavior, safety, planning and field operations. Thomas Skinner came to us from Region 2, and is Zone FMO for Mid-Columbia NWRC. He stepped into a busy fire program, with many challenges awaiting his attention. Maybe turnabout is fair play as Region 3 "stole" Dan Dearborn from us and we are waiting to fill that FMO position at



Sheldon/Hart Mountain Complex. Lance Roberts was selected as the PFS for Malheur NWR and hit the ground running in July. He finally arrived back at the refuge in Mid-November, after being on the road conducting site preparations and prescribed burning almost all that time. Due to the “modernization and reorganization” of the National Weather Service, the Pacific Northwest required a fire weather meteorologist and Paul Werth was selected. It is a Service FTE, but funded on an interagency basis and located at the Pacific Northwest Coordination Center.

Air quality issues are increasingly important in Region 1. Nevada developed a smoke management program and is charging for emissions.

The central valley of California has restricted burn unit size on most days. This has complicated the burn program there by having most single units divided up into smaller units, thereby increasing the number of days to accomplish them. The air quality in California during the past burn season was negatively affected by large wildland fires, further complicating burn programs. In the Willamette Valley of western Oregon, burning for endangered species is increasing in spite of the State charging both for burn permits (whether you burn or not) and for emissions. Idaho has initiated a “voluntary” smoke management program. It is used similarly to and modeled after the existing program in Montana.



# REGION



The 1999 fire season within Region 2 was a continuation of the 1998 fire season. Due to La Nina and the extended drought, wildland fire suppression operations occurred during each month of the year. Despite predictions for a very severe wildland fire season, well-timed spring and summer rains helped to keep large wildland fire occurrence down across the southwest.

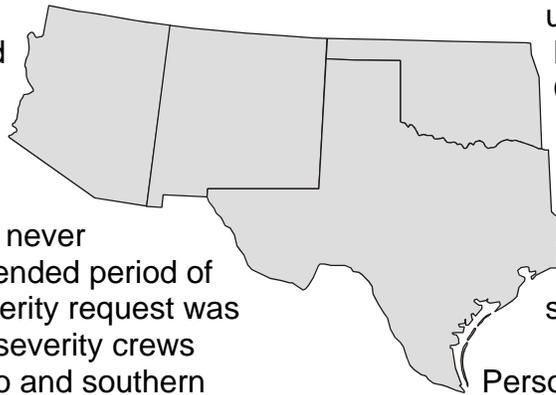
However, fire season never really quit for any extended period of time. A Regional severity request was initiated in April, and severity crews arrived in New Mexico and southern Texas in early May. These crews remained until July. In September, another severity request placed crews along the Texas Gulf Coast. The September request was a coordinated effort among Region 2, Region 4 and the Texas Forest Service, who placed two Type II helicopters at Balcones Canyonlands National Wildlife Refuge for almost 2 months.

A total of 102 wildland fires occurred on FWS lands within the Region in 1999. These fires burned 19,458 acres. The most wildland fire activity occurred on McFaddin National Wildlife Refuge, which had 23 fires for 4,199.5 acres. In addition, Regional fire crews responded to 132 other fires for a total of 265,809 acres.

Prescribed fire accomplishments during 1999 exceeded the 10-year average. A total of 142 prescribed fires covering 68,712 acres was conducted. Of note

were prescribed burns conducted on Aransas National Wildlife Refuge to improve winter habitat for endangered whooping cranes. Approximately 15,000 acres of degraded savannah grasslands were burned during July and August. These prescribed fires helped open areas for the whooping cranes to use as foraging grounds. National Whooping Crane Coordinator Tom Stehn credits the burns with helping to keep the whooping cranes on the refuge, where they have a better chance of survival.

Personnel actions, and in some cases the lack of personnel actions, kept the Regional Fire Program in a state of flux most of the year. FMO vacancies at Anahuac, Brazoria, and Lower Rio Grande National Wildlife Refuges and AFMO vacancies at Buenos Aires and McFaddin National Wildlife Refuges were not filled during 1999, in spite of multiple vacancy announcements. This number of vacancies in key fire management positions required that the Texas refuges pool resources in order to safely accomplish their wildland and prescribed fire objectives. RFMC Mike Phillips became part of the Fire Management Branch at NIFC as the Service Safety Awareness in the Fire Environment Coordinator. In turn, Mike Bencoter became Region 2 RFMC. In September Rod Bloms, Regional Wildland Fire Operations Specialist, moved to NIFC as the Service Fire Planning and Operations Specialist.



The Region entered in to an interagency agreement with the Bureau of Land Management and the Bureau of Indian Affairs to manage the fire program along the Lower Colorado River. By agreement, the BLM FMO located in Yuma, Arizona administers the overall

program with on-the- ground responsibilities delegated to FWS and BIA FMO's. The FWS FMO is located at Havasu National Wildlife Refuge and is responsible for the northern half of the Fire



# REGION



The Region to date has had a reasonably good year for Fire Management activities. While not coming close to last year's record for prescribed fire, it was still a respectable effort. All field stations in the Region have safely prescribed burned over 20,000 acres.

The successes this year were due in part to some new and innovative use of extra resources. The Buffalo River Fire Use Module from the National Park Service assisted the wetland districts in Western Minnesota. We hope to schedule assistance from this highly professional and effective group in the coming years as well. In addition, the Mingo Job Corps Center in Puxico, Missouri, which is a Fish and Wildlife Service related center, has formed two 20-person fire crews that are trained and outfitted to assist with both fire suppression and prescribed fire activities. The Service experimented with that resource this year at Horicon NWR and Leopold WMD with great success, and plans to support and use the personnel from Mingo in future years.

Hats off to Fergus Falls Wetland Management District for the most acreage burned. An important point to remember is that prescribed fire activity on Wetland Management Districts requires more effort, because the many small land parcels involved in burning units may mean a significantly greater number of miles of perimeter fireline.



With the retirement of Wendel Olson as Fire Management Officer at Fergus Falls Wetland Headquarters, the FMO position was moved to Big Stone National Wildlife Refuge. Big Stone is the headquarters for the Northern Tallgrass Prairie Habitat Preservation Area in western Minnesota and Iowa. The new FMO filling this job is Dan Dearborn, who comes to us from Sheldon/Hart Mountain National Wildlife Refuge Complex in Oregon. Dan has extensive experience and qualifications in both fire suppression and prescribed fire. He will serve on a MNICS Working Team.

Eleven Service personnel, combined with ten from Voyageurs National Park, were sent on a western fire assignment to California. Also, a person from Agassiz NWR accepted an assignment to California as a Helicopter Crewman Trainee.

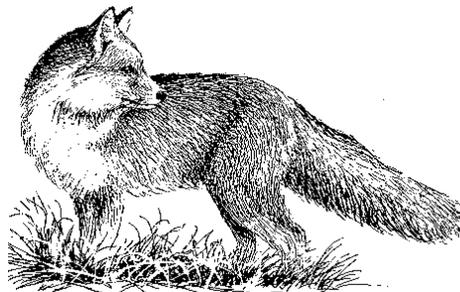
On the July 4<sup>th</sup> weekend a devastating windstorm hit the Boundary Waters Canoe Area Wilderness on the Superior National Forest in Northeastern Minnesota. It is estimated that over 2.5 million trees, covering a half million acres (or half the entire BWCAW) was flattened by straight line winds. Some say it is the largest blowdown to ever occur in the United States. While the FWS has no direct involvement in the area damaged, personnel from FWS are involved in the MNICS Working Teams that are developing plans for dealing with the fire potential that will affect the area for years to come. Worse-case scenario fire behavior predictions indicate a catastrophic fire

event that will affect both the U.S. and Canada.

Region 3, working closely with the Bureau of Indian Affairs Midwestern Regional Office staff, was instrumental in the relocation of the Eastern Area Coordination Center to Ft. Snelling. The EACC has historically been split between the Northeast Area State and Private Forestry office in Radnor, Pennsylvania, and the U.S. Forest Service (Systems) Northeast Regional Office in Milwaukee,

Wisconsin. The new home of the combined EACC was formally opened on November 3, 1999, on the ground floor of the Whipple Federal Building.

The Service has had the position description for the MNICS Coordinator in process, and it was advertised the beginning of January of 2000. The intent is to have the position filled by the beginning of the spring fire season. It has been advertised at the GS-10/11 level.



# REGION



Region 4 had 178 wildfires covering 84,085 agency acres in 1999. The Friendly Fire was the largest and burned 27,340 acres on Okefenokee NWR in southern Georgia.

A National Type 1 Team was used on the Friendly Fire. This is the second year in a row a Type 1 team has been needed on a Region 4 refuge.

Once again, significant presuppression and suppression assistance for Florida refuges was needed, but nothing to compare to 1998.

Region 4 provided assistance to other Regions, especially Region 2, in the form of FMO detailers.

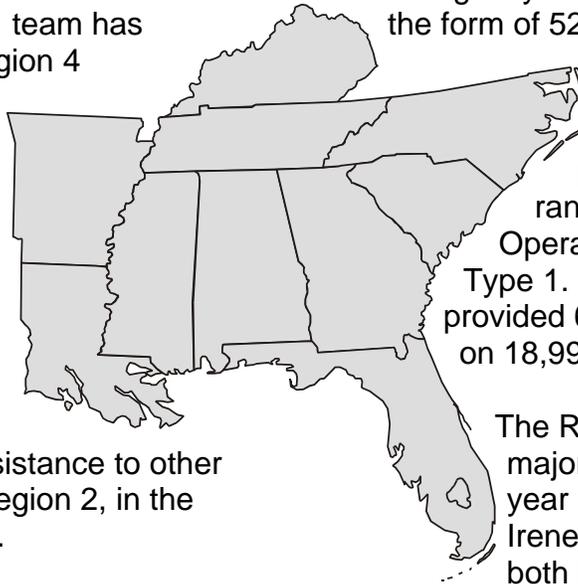
In spite of the wildfires, there were 308 prescribed burns conducted involving 100,437 agency acres. This was only about 70% of the burning planned for the year, but the severity of the '99 season precluded burning during much of the year. The fire season started in January (actually, it continued in January as it never stopped in 1998) and went on until early December. Historically, when Region 4 said we had a year-round fire season, we meant that we could experience dry conditions and therefore fires at any time of the year. For the past 2 years, we have had a year-round fire season. Detailers were needed in the Southern Area Coordination Center to handle the number of orders the entire year. Drought conditions continue throughout much of the Region with selected areas,

such as the Big Bend Area of Florida, ending the year 20 inches below normal rainfall. KBDIs averaged 200 points above normal across the Region the entire year.

Interagency assistance was provided in the form of 52 overhead details and many more FFT2 assignments being filled by Region 4 personnel. Positions ranged from firefighters to Operations Section Chief Type 1. The Region also provided 66 local support actions on 18,997 acres.

The Region was hit by three major hurricanes late in the year - Dennis, Floyd, and Irene, and responded with both Interagency Overhead Teams in the Region. During this period, much of the Region was still experiencing wildfires. The combination of all-risk assignments and wildfire needs saw six National Interagency Overhead Teams dispatched within the Region at one time, an all-time record for the Region. Damage estimates/requests sent to Congress for Region 4 stations totaled 53,000,000, also an all-time record for the Region.

Ron Phernetton retired as FMO for Okefenokee Refuge and we ended the year awaiting his replacement. Kevin Walsh was selected as the FMO for Merritt Island Refuge, and with the Florida fire season this year hit the ground running. Thanks to Kevin's experience, Merritt Island is in good hands.



Of our seven FMO positions, three are now on Regional Type 1 or 2 teams, two are on the trainee list, and one is vacant. Two members of the Regional fire staff, John Fort and David Brownlie,

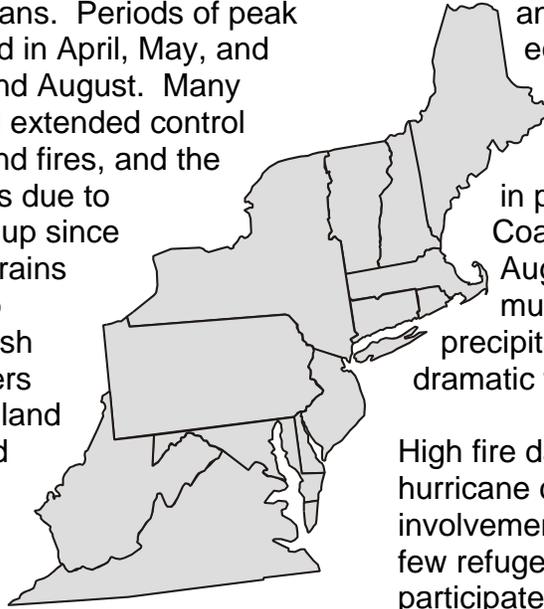
are also on Regional teams. Tony Wilder (FMO, Mississippi Sandhill Crane Refuge) is OSC1 qualified, and is now working his way through the Plans branch on his way to ICT2 qualification.



# REGION



1999 was characterized by extreme drought conditions throughout the Northeast. Above normal Burn Index and Keetch-Byram Drought Index values were noted in New England beginning in April and persisting throughout the summer months, forcing several States to initiate burning bans. Periods of peak fire danger occurred in April, May, and again in late July and August. Many States experienced extended control problems on wildland fires, and the number of fire starts due to lightning were also up since the normal wetting rains were not enough to completely extinguish ignitions. Firefighters within the New England District were moved to Moosehorn, Sunkhaze Meadows, and Long Island Refuges to bolster preparedness based on staffing class plans (Long Island NWR experienced higher NFDRI indices than those recorded during the large 1995 fires). Refuge staff also assisted the Maine Forest Service on nine wildland fires.



In the southern part of the Region, dry weather began in earnest in May, but escalated to near-record highs in the summer months when KBDI values exceeded 600.

A Maryland burning ban was put into effect on August 4. Blackwater Refuge began emergency preparedness fire staffing on July 6, and continued this precaution into August based on step-up plan guidelines. A total of four wildland

fires burned three acres on the Refuge, and staff responded to another 24 fires on private or State land under the terms of a cooperative agreement for fire control with the Maryland Forest Service. Private residences were threatened during various fires and specialized refuge equipment such as the Marsh Master, M548, and Bombardier tracked engine units played a significant role in protecting these structures. Coastal hurricane activity from August to October dropped as much as 28 inches of precipitation, ending the drought in a dramatic fashion.

High fire dangers at home (and hurricane clean-up) precluded much involvement in interagency details, but a few refuge personnel did manage to participate in out-of-area assignments. A Type 6 engine and crew from Blackwater NWR assisted Okefenokee NWR from April 13-19 during the Hickory Island fire. Six individuals from New York/New England refuges went to California on an interagency (NPS/FWS) crew, and a Moosehorn NWR firefighter returned to California late in the season, where he was certified as a Staging Area Manager. An individual from St. Lawrence Wetlands office filled a prescribed fire detail request to Mississippi Sandhill Crane NWR.

While much attention and preparedness were focused on the heightened fire danger, refuges were attempting to get some prescribed burning done. Burns were accomplished only with careful tracking of storms and igniting just prior

to or shortly after a precipitation event. Early State restrictions shut down the spring window in New Hampshire, followed by Maine 2 weeks later. Woodland burns at Blackwater NWR were terminated on May 30 due to high temperatures and drought conditions. Staff at Long Island NWR continued their support of the Central Pine Barrens Joint Planning and Policy Commission. Deputy Refuge Manager Robert Parris developed a Fire Management Plan for the pine barren region of Long Island, and served as the prescribed burn boss on the three burns conducted. Montezuma, Iroquois, Long Island, Rachel Carson, Great Bay, Moosehorn, and Sunkhaze Meadows assisted The Nature Conservancy with burns and training in New York, New Hampshire, and Maine. Blackwater NWR staff performed ignition and control on a prescribed burn at the Soldier's Delight Natural Area, owned by the Maryland DNR, for restoration of a federally listed species. This project was an interagency effort involving FWS Ecological Services and Refuges, several Maryland State agencies, The Nature Conservancy, and local fire departments.

FMO Rick Vollick spent 2 weeks working with the New England Forest Fire Compact Commission, and wrote a prescribed burn plan for 6,000 acres on the Gagetown Military Training Center, New Brunswick. From August 26 to September 3 he participated in executing the aerial and ground ignition portions of the plan, but due to environmental conditions only 700 of the proposed 6,000 acres were treated. The purpose of the exercise was to bring Compact members together as an overhead team, introduce Canadian members to ICS, and achieve fuel

modification on a weapons impact training area.

FMO Vollick coordinated several interagency training sessions this year. S-130/190 was held in April at Great Bay NWR. S-211/212 Pumps and Saws was held in May at the same location, and S-390 Fire Behavior Calculations was given in Portsmouth, New Hampshire in June. Vollick assisted the Maine Forest Service with two sessions of Basic Firefighter. RFMC Carter coordinated a Prescribed Fire Planning and Implementation session at the National Conservation Training Center in October, with National Fire Training Specialist Joette Borzik serving as Lead Instructor and FMO Vollick helping out as a unit instructor. Twenty-eight students from six Regions attended.

The June departure of Dave Brownlie (FMO at Great Dismal Swamp NWR) for Tallahassee, Florida, as Region 4 Fire Ecologist left a large hole in the Region 5 fire program which is still unfilled. The FMO vacancy was advertised in June, but the preferred candidate decided to retract his application and the decision was made to readvertise in December. As of this writing, the position is still vacant and we are awaiting the results of the readvertisement. Dave provided assistance not only to other refuges in Virginia, but also the interagency effort through participation on the Southern Area Type 1 team and the Virginia MAC Group. He is sorely missed.

RFMC Carter continued to nag refuges about completing fire management plans. Slowly but surely, progress continues. Region 5 adopted the desperate measure of hiring private consultants to develop drafts for refuges. Carlos Mendiola worked with

Eastern Neck NWR staff in writing a draft, which after editing by the RFMC was approved by the Regional Director. Carl Douhan, another consultant formerly of Region 6, was hired to develop drafts for New Jersey refuges including Walkill River, Forsythe, and Cape May. These plans are currently being edited by the RFMC and refuge staffs. Chincoteague NWR completed a draft on its own, which was edited by Carter and is currently back at the refuge for further revision. Staff at Blackwater NWR continued to work with the RFMC in preparing their lengthy FMP for submission to the Regional Office. Staff at Patuxent, James River, Iroquois, Long Island and Occoquam neared completion of their drafts. FMO Vollick initiated drafts for Aroostook and Missisquoi, provided technical assistance to Long Island and Iroquois, and participated in the CCP process at Great Meadows and Petit Manan.

The RFMC continued to serve on national projects including the FireBase development committee, and was FWS representative on the interagency Joint Fire Science Plan Governing Board for research pertaining to fuels management. These endeavors involved many hours of meetings, assignments, and conference calls. Carter also participated in lieu of former FMO Brownlie in meetings of the Virginia Multiagency Coordinating Group. Highlights of interagency cooperation in the Northeast included dedication of new coordination centers, one in Minneapolis for the new headquarters of the Eastern Area Coordination Center and another in Charlottesville, Virginia for the Virginia Interagency Coordination Center.



# REGION



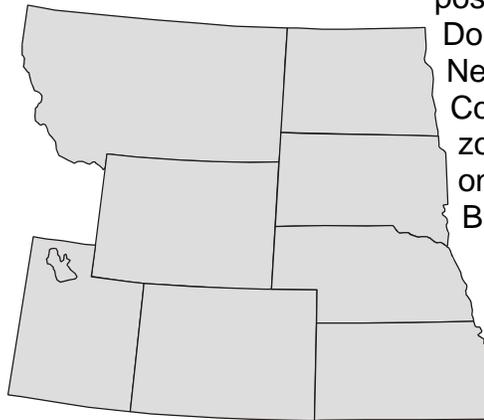
One of the more noteworthy highlights for the year in Region 6 was that 1999 was another record setting year for prescribed burning, in spite of poor weather that prevented many planned burns from taking place. 41,361 acres were burned on 307 prescribed fires in 1999, up from 33,624 acres on 270 burns in 1998, which had been the previous record high year for burning in the Region. Another 1,501 acres of hazard fuels were treated in three mechanical projects.

Several key personnel actions occurred in Region 6 this year. After 4½ years of dedicated service in this Region and 30 years overall with the Federal Government, Carl Douhan received his fire retirement and left Government service on March 31. Carl's professional leadership and high standards will have a positive impact on the Region for years to come.

The Regional Office staff decreased by another third in the spring when Hallie Locklear left FWS to join the ranks of the BLM as Assistant Coordinator at the Southwest Coordination Center. Region 6 would like to acknowledge and extend our appreciation to Regions 1, 2, and 4 for their support with detailers to help us get through the Regional Office vacancies. Permanent help finally arrived in the fall when Jim Kelton reported as the Regional Fire Management Specialist. Angie Braun, the new Fire Program Assistant,

reported for duty shortly afterwards, bringing a strong background in fire operations from the Forest Service, Black Hills NF, South Dakota.

Jim Kelton, Zone FMO for the Nebraska/Kansas zone, accepted a reassignment as the Regional Fire Management Specialist, filling the position vacated when Carl Douhan retired. The Nebraska/Kansas and Colorado/Utah fire management zones were then combined into one zone under Zone FMO Lou Ballard.



Significant progress was made on Fire Management Plans during the year. Seventeen Fire Management Plans were submitted and approved in 1999. This leaves only 9 out of 38 Fire Management Plans still to be finalized in 2000 to complete the FMP process for Region 6.

Brian McManus, Zone FMO for the Dakotas, played a critical role not only with the development of FireBase as a steering committee member, but in the implementation of this budgeting program in Region 6. Thanks to Brian's leadership and support with FireBase development and implementation, Region 6 has made significant progress with this new budget program and has provided considerable feedback to the Fire Management Branch in Boise on improvements to and fine tuning of FireBase.

Another highlight of the year was a successful Fire Management Staff meeting in Jackson, Wyoming, in April with a full room needed to seat all the participants. It has been amazing to see the increase in the staff and the level of professionalism in fire management in the Region over the past 5 years, and the increasing accomplishments in the Region reflect the dedication of fire personnel.

### **North Dakota/South Dakota**

1999 was again a year of growth in the fire program of the Dakotas, with new records in numbers of prescribed burns conducted and acres treated. A total of 203 prescribed burn units were treated this year totaling 28,763 acres. This represents a 28% increase in acres treated and a 20% increase in number of burns over 1998 figures. The zone experienced an above-normal year in wildfire occurrence with 65 wildfires burning 2,455 acres. The majority of these fires occurred at Devils Lake WMD, and were predominantly caused by arson or escaped agricultural burns next to WPAs.

Although the year saw a marked increase in prescribed burning within the zone, at least 12,000 planned acres were not accomplished due to extremely wet conditions in the spring. South Dakota stations completed 39 burns for 7,011 acres, triple the number of acres burned in any previous year on record. Of the 21 major units in the ND/SD zone, all but one utilized prescribed fire for management purposes in 1999.

Fire staff within the zone also increased this year, with FMO positions established at Arrowwood (Lee Blaschke) and Devils Lake (Gary

Lindsay), and a term Prescribed Fire Specialist (Shane Del Grosso) at Huron WMD in South Dakota.

The Dakotas would likely have reached 40,000 acres burned in 1999 if weather conditions had cooperated. Much of the fall season was lost due to weather conditions as well. By the time sufficient frost had cured the fuels, the zone was in a dry spell with no early snow coverage, causing North and South Dakota to issue burning bans due to extreme fire danger.

Efforts to share prescribed fire resources across agency boundaries intensified this year, with Service fire personnel assisting the National Park Service with five prescribed burns in the Dakotas. A three-person crew from J. Clark Salyer NWR spent a month in New Mexico this summer assisting FWS and BLM stations with prescribed burning and emergency presuppression operations. Five zone fire staff attended the Prescribed Fire Training Center in 1999, helping with approximately 45 prescribed burns totaling over 17,000 acres. The zone also contributed three engines to the January and February PFTC sessions.

Zone fire staff managed the North Dakota Interagency Dispatch Center (NDC) located at J. Clark Salyer NWR in 1999, providing assistance to all North Dakota State and Federal agencies in support of prescribed burn, wildfire suppression and emergency preparedness operations. Operational support provided by the NDC assisted interagency cooperators in conducting and documenting 52 prescribed burns totaling 7,308 acres. The NDC was the second Zone dispatch center in the Northern Rockies Geographic Area to

go on line, establishing a web page to facilitate interagency coordination that was up and running in May. In October the NDC was awarded the Northern Rockies Coordinating Group 1999 Zone Award for outstanding achievement in furthering interagency cooperation within the Northern Rockies Geographic Area.

### **Nebraska/Kansas**

The prescribed fire season was slightly more active in the Nebraska/Kansas Zone as it had been in 1998.

Abnormally wet weather during much of the spring burning window, coupled with a number of personnel moves early in the year, reduced the amount of burning that could be done. The Zone still managed to accomplish 8,768 acres on 86 burns. Now that the staff is in place, bigger and better things are expected in 2000! The Rainwater Basin WMD made substantial improvements in their program to lead the way in the zone, burning 3604 acres on 16 well-planned burns. Prescribed burns were conducted for the first time at the Marais des Cygnes NWR in Kansas.

By late summer, the spring rains were just a memory. Unusually dry weather that persisted through the end of the year elevated fire dangers and had many of the refuges scrambling to request emergency presuppression resources as a preventative measure. No large fires occurred on refuge land; however, FWS personnel assisted with a 75,000 acre wildfire south of the Valentine refuge in March that forced the evacuation of one town and served as a reminder of how volatile burning conditions can be in the Great Plains.

Much of the activity to report in the Region's two southern fire management

zones in 1999 was in personnel changes. Besides Jim Kelton transferring to the Regional Office, Bill Waln was promoted to the FMO position at Quivira NWR and reported for duty at his new station in February, just in time to get his Nomex out of the packing boxes and plunge in to the Kansas burn season. Rich Sterry was promoted into the new FMO position at the Flint Hills/Marais des Cygnes complex in June. Matt Plagenz transferred to the Charles M. Russell NWR career seasonal position late in the year. Tim Klukas was selected as the new station FMO for the Ft. Niobrara/Valentine Complex. Tim, who comes to Region 6 from Wichita Mountains WR, reported for work just before Christmas and will be a welcome addition to the Complex program.

Inter- and intra-agency cooperation on prescribed burning and wildfires continued, with some of the highlights being hosting the Balcones Canyonlands burn crew for prescribed burn work, assisting other zones in R-6 in prescribed and wildfire, instructing S-290 for the National Weather Service, and having Dale Bitner travel from the National Office to the zone to lead several training courses.

### **Montana/Wyoming**

The highlight for the Zone was the number of prescribed burns completed. Prior to this year, prescribed burning was used sparingly throughout the Zone. This year 25 burns were completed burning approximately 2,388 acres. This was the first time the number of acres treated with prescribed fire exceeded the number of acres

burned in wildfires! Even more burns are planned for the year 2000.

The fire season in Montana and Wyoming never materialized. Fire danger was severe to extreme during much of the latter part of summer, but relatively few ignitions occurred. Charles M. Russell NWR averages 22 fires and 2,200 acres per year, but this year had only six for 245 acres. Two of these fires (175 acres) were on satellite refuges. This is rather remarkable, considering the number of hunters using the refuge when fire danger was very high.

Mike Granger continued his participation on the East Zone Type II Overhead Team, and was dispatched to one fire. Several firefighters were dispatched to assist other Regions with prescribed burning, as well as wildfire assignments to Florida, North Dakota, Texas and California.

Zone fire personnel taught or assisted in teaching several courses, including: Introduction to Fire Behavior, Fire Operations in the Urban Interface, Basic Aviation Safety, Portable Pumps and Water Use, Prescribed Fire Planning and Implementation, and the Prescribed Fire Training Center.

The Service was asked to participate in the 50th Memorial of the Mann Gulch fire in an event that received nationwide media coverage. Zone FMO Mike Granger was selected to lay a wreath on the marker where Philip McVey died, and Regional Fire Management Coordinator Phil Street attended as the Service representative at the Memorial

Service held at the State Capitol.

### **Colorado/Utah**

The zone continued to progress in its use of prescribed fire. Eleven prescribed burns were completed for 4,491 acres in 1999, compared to 12 prescribed burns and 687 acres in 1998. Ouray NWR returned to the prescribed fire world in 1999 after being absent for several years, and is planning to continue the use of prescribed fire as a management tool.

Wildfire season was low throughout the zone in 1999. Only the Ouray Refuge was involved in any wildfire activity. Ouray responded to two off-refuge fires that had potential to spread to the refuge and one fire that was an escaped refuge prescribed fire. Browns Park provided an engine and crew to assist Charles M. Russell NWR. The zone also provided assistance to interagency wildfire assignments in New Mexico.

Lou Ballard traveled to Florida as a field coordinator for the Prescribed Fire Training Center and also provided assistance to a crew in burning in Mississippi and Texas. In between being the agency representative for rapidly developing smoke management programs in Colorado and Utah, Lou will be taking on two additional States as Zone FMO for all four States in the southern part of the Region.

Zone personnel assisted with courses in Intermediate Fire Behavior, Introduction to Fire Effects, and Smoke Management Techniques.

# REGION



The 1999 Fire Season was a relatively active one in Alaska. Interagency wildland fires accounted for more than one million acres burned in Alaska for the tenth time in the past 45 years (1957, 1968, 1969, 1971, 1977, 1988, 1990, 1991, 1997, 1999). The largest fire in the State occurred on FWS land. Despite the active year Statewide, the acres burned on National Wildlife Refuges in Alaska were below the 10-year average.

The first refuge fire of the year occurred on Kenai NWR on May 9, and the last refuge fire of the year occurred on Tetlin NWR on September 9. Wildland fires occurred on 11 of the 16 National Wildlife Refuges in the Region, including 2 on Arctic NWR, 2 on Innoko NWR, 2 on Kanuti NWR, 5 on Kenai NWR, 1 on Kodiak NWR, 4 on Koyukuk NWR, 6 on Nowitna NWR, 2 on Selawik NWR, 1 on Tetlin NWR, 1 on Yukon Delta NWR, and 7 on Yukon Flats NWR. In all, 33 fires burned over 163,000 acres. Two were natural outs totaling 6 acres that had no suppression action taken. The other 31 fires were all managed under the guidance of the Alaska Interagency Fire Management Plan. Of those 31 fires, 9 burned 37 acres in Full Management Option Areas, 3 burned 1,426 acres in Modified Management Option Areas, and 19 burned 158,615 acres in Limited Management Option Areas. The fires in Full and Modified areas received initial attack; one fire in Limited Areas had some suppression action taken to protect permitted cabins. The rest of the fires in Limited Areas received periodic

surveillance action only. The largest fire burned on two refuges--145,152 acres on Yukon Flats NWR and 490 acres on Arctic NWR. Including BLM and Native lands, that fire burned a total of 232,828 acres. Smoke from the rapid growth of several fires along the Canadian border including the large one on Yukon Flats NWR in early July did impact air quality in Fairbanks and Anchorage for a brief period.

Region 7 FWS personnel participated on interagency responses to wildland fire incidents in Alaska and California, totaling over 90 person-days.

Prescribed fires were accomplished on three National Wildlife Refuges in Alaska, including 3 on Kenai NWR for 455 acres, 1 on Tetlin NWR for 176 acres, and 3 on Yukon Flats NWR for 930 acres. Prescribed burns on refuges were accomplished largely with refuge resources. However, BLM, USFS, the State of Alaska and local villages also provided assistance. Region 7 FWS personnel reciprocated and provided assistance to BLM, USFS, and the State of Alaska for prescribed burns those agencies were initiating. Mechanical hazard reduction preparation work was accomplished on Kenai NWR. Two defensible space projects were completed at Tetlin NWR.

Trainee assignments were completed by Region 7 FWS personnel in 1999, including DIVS, RXI1, and CRWB. Assignments in qualified positions included ICT3, RXB2, RXB3, RXI2,

STLC, CRWB, TFLD, FELB, HECM, FINV, PLDO, FFT1 and FFT2.

Region 7 FWS personnel participated as instructors in S-130, S-190, Standards for Survival and Fireline Safety Workshops.

Fuels inventory and mapping data was collected at Kanuti, Kenai, Koyukuk and Yukon Flats NWRs. Post-burn monitoring plots were revisited on Kenai, Tetlin and Yukon Flats NWRs. Fuel moisture sampling continued at Tetlin NWR. Region 7 FWS fire management personnel cooperated on nationally-funded research projects that involve Alaska, including Wildland Fire Impacts on Caribou, Fuel Treatment Tradeoff Modeling, a Natural Photo Series for Hardwoods, and Fuel Characteristics Class Development. The Kenai NWR ecologist presented papers at the Wilderness Science Symposium in Missoula, Montana, and the Society of American Foresters Convention in Portland, Oregon, on relationships between climate, fire and bark beetles on the Kenai Peninsula.

Participation of Region 7 FWS Fire Management personnel on national and geographic area committees and working groups included the NWCG Wildland Fire Education Working Team and Alaska GACG Committees on Firefighter Safety and Health, Fire Prevention, Education and Awareness, Air Quality, Research and Applications Development, and Training.

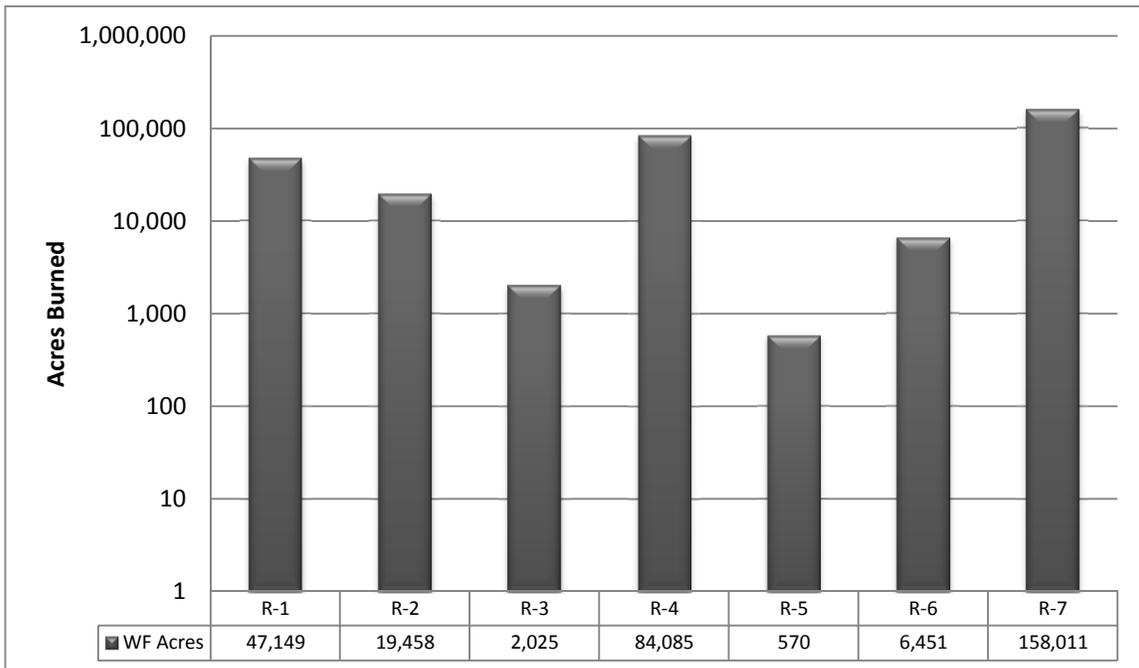
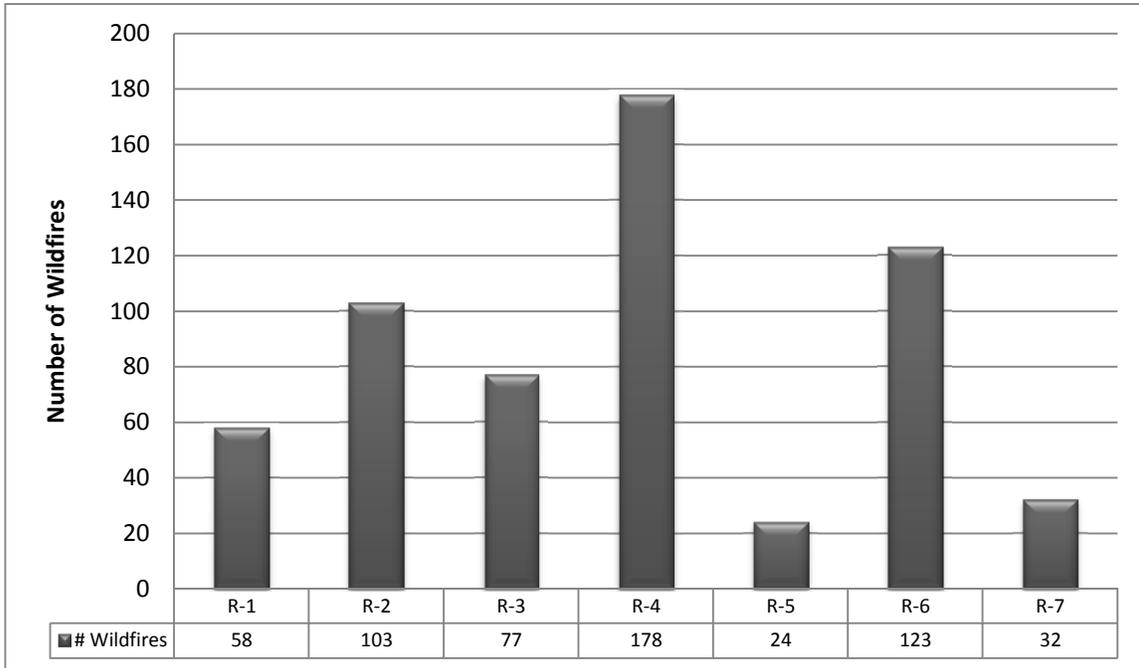
Support was continued by the Region for an interagency fire prevention coordinator position. The Firewise

Community Action Program for Alaska was implemented, and homeowner and educator packets were printed and distributed to supporting agencies. Personnel from Kenai NWR and the Regional Office participated in FEMA Project Impact activities. Kenai NWR is hosting two neighborhood Firewise Demonstration Projects.

A plethora of fire program outreach and education activities was accomplished in 1999. Role of fire topics were incorporated in the Innoko NWR Science Camp for high school students. Kenai NWR staff presented role of fire in the ecosystem activities for local elementary and middle school groups. Campfire programs were presented by Kenai NWR staff which incorporated fire prevention themes at refuge campgrounds. A Kenai NWR fuels reduction project was highlighted in Wildfire Magazine. Koyukuk NWR utilized a kiosk to display fire occurrence and fire effects information to the community of Galena. A high school credit "Fire Science" course was presented by Tetlin NWR staff in Tok, which included classroom study, field work, and tours of fire management facilities in Fairbanks. Fire effects topics were included in Habitat Camps hosted by Tetlin NWR staff. Fire sites were visited and fire ecology topics were discussed by Tetlin NWR staff with elementary, middle school, and high school student groups. Several villages and village schools were visited by Yukon Flats NWR staff to highlight planned prescribed burning activities, fire ecology topics and fire management career information. Yukon Flats NWR helped to staff an interagency fire

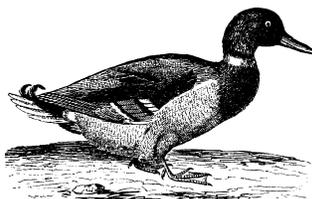
# WILDLAND FIRE STATISTICS 1999

# WILDFIRES 1999



## WILDFIRES BY CAUSE 1999

CAUSE	# FIRES	# ACRES
Lightning	138	259,710.7
Campfire	42	5,666.4
Smoking	37	3,036.2
Fire Use	127	26,811.6
Incendiary	107	10,427.1
Equipment Use	52	3,320.8
Railroads	5	223.0
Juveniles	10	48.1
Miscellaneous	77	8,504.8
<b>TOTAL</b>	<b>595</b>	<b>317,748.7</b>



## WILDFIRES BY SIZE CLASS 1999

SIZE	# FIRES	# ACRES
A (0 - .2)	162	18.2
B (.3 - 9.9)	232	639.5
C (10 - 99.9)	123	4,256.5
D (100 - 299.9)	33	5,382.0
E (300 - 999.9)	21	10,714.5
F (1000 - 4999.9)	17	32,288.0
G (5000 +)	7	264,450.0
<b>TOTAL</b>	<b>595</b>	<b>317,748.7</b>

# WILDFIRES

## by State

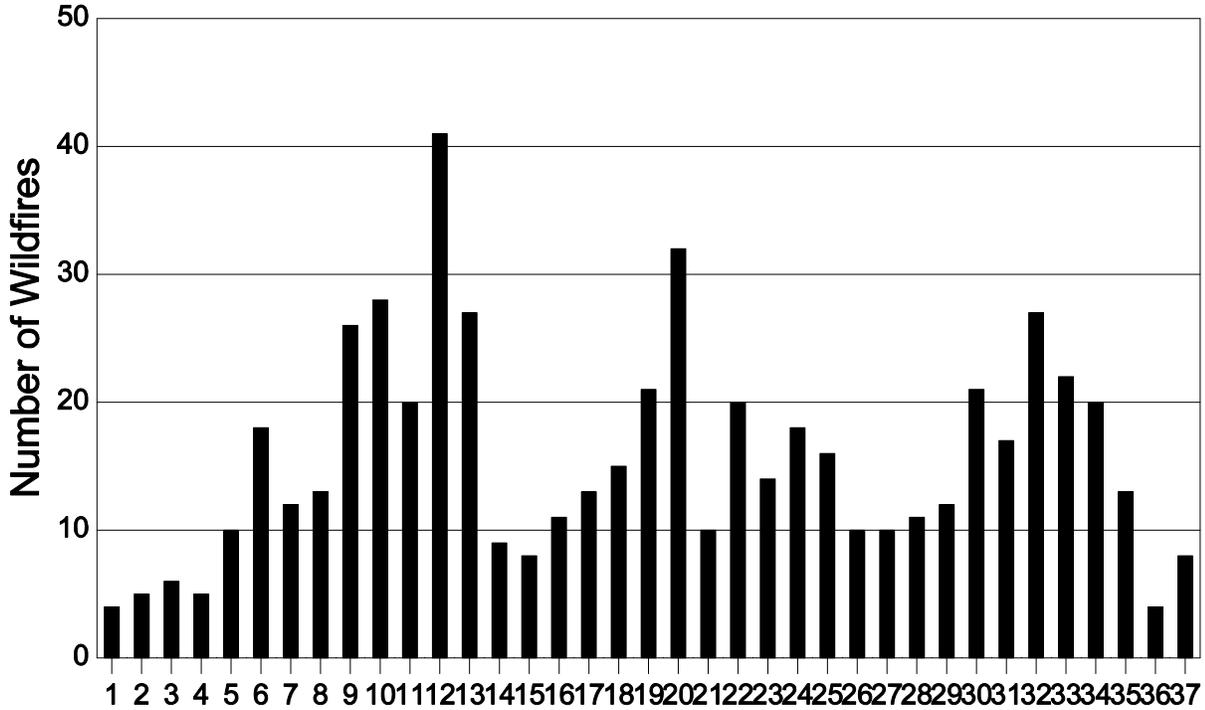
### 1999

STATE	FIRES	FWS ACRES
Alabama	18	102.2
Alaska	32	158,010.8
Arizona	11	498.5
Arkansas	12	215.9
California	23	357.2
Colorado	0	0.0
Connecticut	0	0.0
Delaware	2	507.0
Florida	71	3,265.2
Georgia	10	68,814.0
Hawaii	0	0.0
Idaho	2	2.2
Illinois	27	306.7
Indiana	0	0.0
Iowa	8	128.1
Kansas	21	300.8
Kentucky	0	0.0
Louisiana	31	8,738.5
Maine	4	.7
Maryland	7	7.9
Massachusetts	0	0.0
Michigan	0	0.0
Minnesota	35	1,549.6
Mississippi	13	433.6
Missouri	2	13.0
Montana	11	280.3
Nebraska	13	2,899.7
Nevada	5	40,186.2
New Hampshire	0	0.0
New Jersey	1	1.0
New Mexico	5	7.8
New York	4	33.8
North Carolina	15	2,233.9
North Dakota	70	2,678.2

<b>Ohio</b>	<b>0</b>	<b>0.0</b>
<b>Oklahoma</b>	<b>19</b>	<b>62.4</b>
<b>Oregon</b>	<b>8</b>	<b>5,255.5</b>
<b>Pennsylvania</b>	<b>4</b>	<b>19.1</b>
<b>Puerto Rico</b>	<b>0</b>	<b>0.0</b>
<b>Rhode Island</b>	<b>0</b>	<b>0.0</b>
<b>South Carolina</b>	<b>2</b>	<b>214.0</b>
<b>South Dakota</b>	<b>6</b>	<b>75.5</b>
<b>Tennessee</b>	<b>4</b>	<b>55.1</b>
<b>Texas</b>	<b>68</b>	<b>18,889.3</b>
<b>Utah</b>	<b>2</b>	<b>216.7</b>
<b>Vermont</b>	<b>0</b>	<b>0.0</b>
<b>Virgin Islands</b>	<b>0</b>	<b>0.0</b>
<b>Virginia</b>	<b>4</b>	<b>13.1</b>
<b>Washington</b>	<b>20</b>	<b>1,347.9</b>
<b>West Virginia</b>	<b>0</b>	<b>0.0</b>
<b>Wisconsin</b>	<b>5</b>	<b>27.3</b>
<b>Wyoming</b>	<b>0</b>	<b>0.0</b>
<hr/>		
<b>TOTAL</b>	<b>595</b>	<b>317,748.7</b>

# WILDLAND FIRES - 1999

## 10 - Day Period



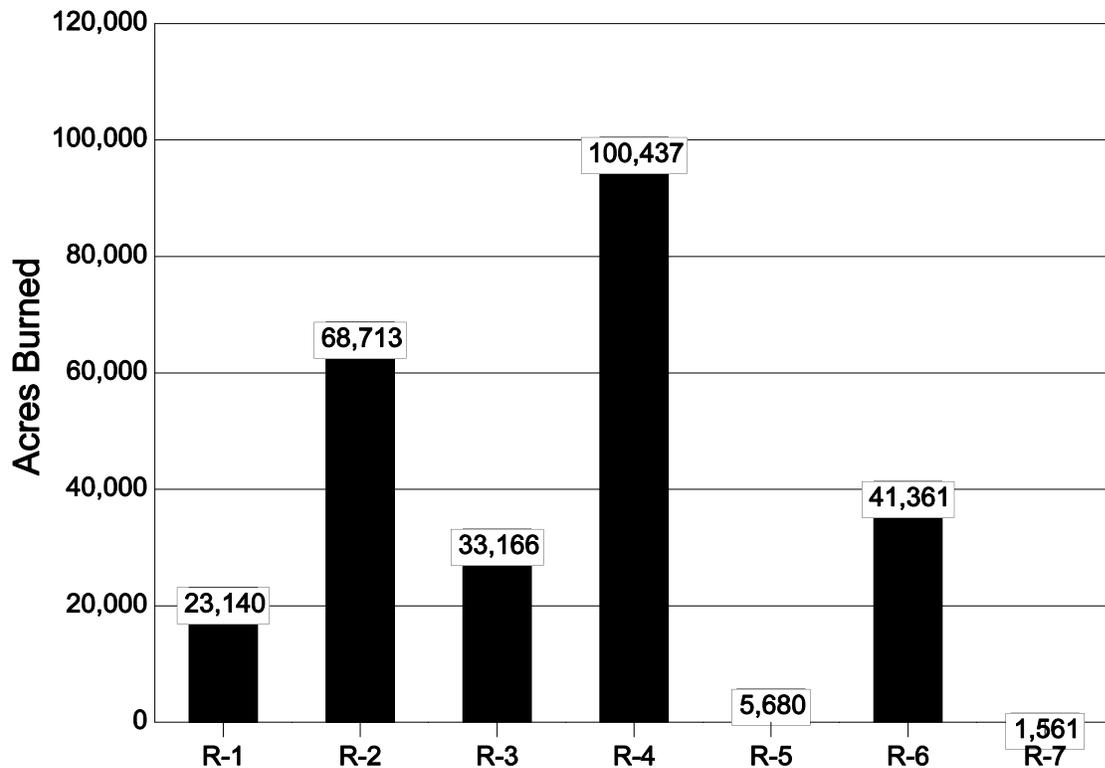
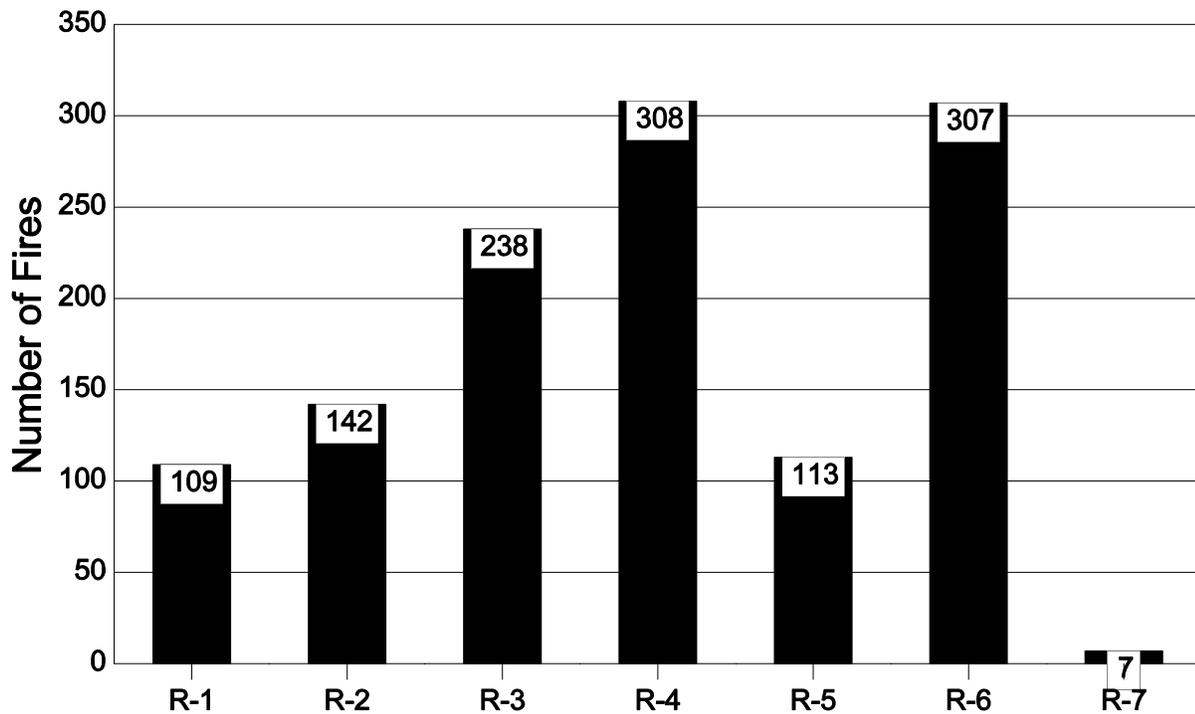
<u>Period</u>	<u>Dates</u>	<u>Period</u>	<u>Dates</u>	<u>Period</u>	<u>Dates</u>
1	Jan 01 - Jan 10	12	Apr 21 - Apr 30	26	Sep 08 - Sep 17
2	Jan 11 - Jan 20	13	May 01 - May 10	27	Sep 18 - Sep 27
3	Jan 21 - Jan 30	14	May 11 - May 20	28	Sep 28 - Oct 07
4	Jan 31 - Feb 09	15	May 21 - May 30	29	Oct 08 - Oct 17
5	Feb 10 - Feb 19	16	May 31 - June 09	30	Oct 18 - Oct 27
6	Feb 20 - Mar 01	17	June 10 - June 19	31	Oct 28 - Nov 06
7	Mar 02 - Mar 11	18	June 20 - June 29	32	Nov 07 - Nov 16
8	Mar 12 - Mar 21	19	June 30 - July 09	33	Nov 17 - Nov 26
9	Mar 22 - Mar 31	23	Aug 09 - Aug 18	34	Nov 27 - Dec 06
10	Apr 01 - Apr 10	24	Aug 19 - Aug 28	35	Dec 07 - Dec 16
11	Apr 11 - Apr 20	25	Aug 29 - Sep 07	36	Dec 17 - Dec 27

# RX BURN STATISTICS

## 1999

# FWS

## PRESCRIBED FIRES - 1999



# RX BURN STATISTICS BY REFUGE

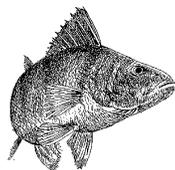
## PRESCRIBED BURNS by Refuge - R1

<u>ORG.</u>	<u>REFUGE</u>	<u># BURNS</u>	<u># ACRES</u>
11646	Antioch Dunes NWR	1	30.0
13592	Baskett Slough NWR	1	16.0
14613	Bear Lake NWR	4	685.0
11666	Bear Valley NWR	1	40.0
13510	Columbia NWR	4	378.0
11621	Colusa NWR	4	134.5
11622	Delevan NWR	2	225.0
11643	Ellicott Slough NWR	1	150.0
14612	Grays Lake NWR	3	830.0
12516	Hakalau Forest NWR	1	15.0
14622	Hart Mountain	2	460.0
11610	Kern NWR	1	1,000.0
11662	Klamath Marsh NWR	1	5.0
11663	Lower Klamath NWR	14	2,681.0
13570	Malheur NWR	3	6,742.4
13520	McNary NWR	5	381.0
11652	Merced NWR	1	30.0
13580	Mid-Columbia River NWR Complex	9	713.0
14570	Ruby Lake NWR	5	1,965.0
11620	Sacramento NWR Complex	5	232.0
11627	Sacramento River NWR	9	582.0
11720	San Diego NWR	1	5.0
11650	San Luis NWR Complex	6	950.0
14621	Sheldon NWR	1	5.0
14590	Stillwater NWR	5	106.5
11710	Stone Lakes NWR	1	14.0
13521	Toppenish NWR	5	175.0
11664	Tule Lake NWR	8	3,878.0
13560	Turnbull NWR	2	330.0
13590	Western Oregon NWR Complex	3	381.0
	<b>TOTAL</b>	<b>109</b>	<b>23,139.4</b>

# PRESCRIBED BURNS

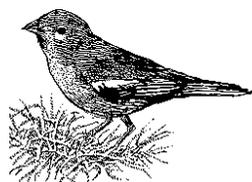
## by Refuge - R2

<u>ORG.</u>	<u>REFUGE</u>	<u># BURNS</u>	<u># ACRES</u>
21520	Anahuac NWR	10	5,975.0
21530	Aransas NWR	32	16,461.0
21560	Attwater Prairie Chicken NWR	4	1,428.0
21561	Balcones Canyonlands NWR	19	3,306.0
21542	Big Boggy NWR	1	750.0
22510	Bitter Lake NWR	7	3,824.2
22520	Bosque Del Apache NWR	5	200.1
21540	Brazoria NWR	6	2,002.0
22530	Buenos Aires NWR Complex	10	14,386.0
21570	Buffalo Lake NWR	2	0.2
22540	Cibola NWR	1	2.0
22220	Dexter NFH	3	96.2
21580	Hagerman NWR	3	469.8
22560	Imperial NWR	1	15.0
22580	Las Vegas NWR	1	50.0
21525	McFaddin NWR	3	6,048.5
21590	Muleshoe NWR	3	0.3
21630	Salt Plains NWR	3	120.0
22521	San Andres NWR	1	1,500.0
21541	San Bernard NWR	6	3,114.0
21640	Sequoyah NWR	3	199.5
22522	Sevilleta NWR	2	190.1
21660	Washita NWR	6	716.0
21670	Wichita Mountains WR	10	7,858.9
	<b>TOTAL</b>	<b>142</b>	<b>68,712.8</b>



## PRESCRIBED BURNS by Refuge - R3

<u>ORG.</u>	<u>REFUGE</u>	<u># BURNS</u>	<u># ACRES</u>
32510	Agassiz NWR	7	3,455.0
32640	Big Stone NWR	17	1,590.0
33610	Crab Orchard NWR	6	266.0
32555	Crane Meadows NWR	3	90.0
33510	Desoto NWR	14	212.8
32586	Detroit Lakes WMD	13	2,183.0
32596	Driftless Area NWR	2	25.0
32585	Fergus Falls WMD	22	3,688.7
32520	Horicon NWR	9	551.9
33653	Illinois River NWR	2	37.0
32525	Leopold WMD	14	838.7
32588	Litchfield WMD	13	2,478.0
33630	Mark Twain NWR-Wapello	7	1,767.0
33640	Mark Twain NWR-Annada District	5	740.0
32590	Minnesota Valley NWR	6	116.0
32581	Morris WMD	15	1,596.0
31530	Muscatatuck NWR	4	641.0
30147	Neal Smith NWR	6	832.0
32530	Necedah NWR	12	2,776.0
32550	Sherburne NWR	6	4,074.0
31520	Shiawassee NWR	2	60.0
32577	St. Croix WMD	2	76.0
32560	Tamarac NWR	16	1,420.5
33580	Union Slough NWR	6	512.0
32595	Upper Mississippi River NWR	5	123.1
32587	Windom WMD	24	3,016.4
	<b>TOTAL</b>	<b>238</b>	<b>33,166.1</b>



## PRESCRIBED BURNS by Refuge - R4

<u>ORG.</u>	<u>REFUGE</u>	<u># BURNS</u>	<u># ACRES</u>
42511	Ace Basin NWR	10	1,741.0
41630	Alligator River NWR	13	10,237.0
43558	Big Branch Marsh NWR	4	551.0
41626	Blackbeard Island NWR	4	430.4
43616	Bogue Chitto NWR	1	40.0
42520	Carolina Sandhills NWR	33	11,400.0
43545	D'Arbonne NWR	3	117.0
43570	Felsenthal NWR	10	2,355.0
41545	Florida Panther NWR	8	3,252.0
41627	Harris Neck NWR	6	190.8
41540	J.N. Ding Darling NWR	2	76.0
43610	Lacassine NWR	13	17,412.1
41550	Lake Woodruff NWR	13	3,969.0
41515	Lower Suwannee NWR	7	1,029.0
41660	Mackay Island NWR	5	1,825.0
41570	Merritt Island NWR	15	2,065.0
43615	Mississippi Sandhill Crane NWR	14	2,975.0
41580	National Key Deer Refuge	2	10.0
43620	Noxubee NWR	41	6,210.2
41590	Okefenokee NWR	29	17,778.7
42550	Pee Dee NWR	3	154.0
41680	Piedmont NWR	9	3,615.0
41629	Pinckney Island NWR	1	73.2
42535	Pocosin Lakes NWR	1	132.0
42570	Santee NWR	2	297.0
41625	Savannah NWR	10	1,520.5
41640	St. Marks NWR	39	8,638.2
41650	St. Vincent NWR	2	1,278.0
41573	St. Johns NWR	2	460.0
43645	Tallahatchie NWR	1	557.0
43660	Wheeler NWR	5	48.8
	<b>TOTAL</b>	<b>308</b>	<b>100,437.9</b>

# PRESCRIBED BURNS

## by Refuge - R5

<u>ORG.</u>	<u>REFUGE</u>	<u># BURNS</u>	<u># ACRES</u>
51510	Back Bay NWR	1	25.0
51530	Blackwater NWR	55	4,547.6
51550	Bombay Hook NWR	3	47.0
52511	Edwin B. Forsythe NWR-Brigantine	5	173.0
52520	Erie NWR	3	16.8
51580	Great Dismal Swamp NWR	5	292.0
53570	Great Bay NWR	5	49.0
52540	Iroquois NWR	3	140.0
53520	Missisquoi NWR	2	39.0
52550	Montezuma NWR	6	138.8
53530	Moosehorn NWR	15	134.0
53553	Rachel Carson NWR	3	13.1
53560	Sunkhaze Meadows NWR	3	37.6
52561	Wertheim NWR	4	26.8
	<b>TOTAL</b>	<b>113</b>	<b>5,679.7</b>



## PRESCRIBED BURNS by Refuge - R6

<u>ORG.</u>	<u>REFUGE</u>	<u># BURNS</u>	<u># ACRES</u>
65510	Alamosa/Monte Vista NWR	2	1,300.0
62510	Arrowwood NWR	25	3,467.0
62554	Audubon WMD	4	310.0
62540	Audubon NWR	1	24.0
61510	Benton Lake NWR	9	1,102.1
65550	Browns Park NWR	3	620.0
64510	Crescent Lake NWR	6	190.0
62570	Des Lacs NWR	19	3,760.0
62580	Devils Lake WMD	26	2,630.9
65540	Fish Springs NWR	2	1,860.0
64580	Flint Hills NWR	25	506.3
64520	Fort Niobrara NWR	10	523.0
64110	Huron WMD	10	1,773.0
62620	J. Clark Salyer NWR	29	3,310.0
64610	Kirwin NWR	11	729.5
64540	Lacreek NWR	5	1,812.0
62571	Lake Ilo NWR	2	70.0
64550	Lake Andes NWR	6	2,023.0
62522	Long Lake NWR	16	2,441.0
64560	Madison WMD	1	16.0
64630	Marais Des Cygnes NWR	9	233.8
61530	Medicine Lake NWR	10	951.4
61540	National Bison Range	4	309.0
65570	Ouray NWR	3	696.0
64620	Quivira NWR	10	2,897.0
64530	Rainwater Basin WMD	16	3,603.0
64570	Sand Lake NWR	6	219.0
62524	Slade NWR	1	0.2
62660	Tewaukon NWR	23	2,261.0
62680	Upper Souris NWR	6	1,022.0
64590	Waubay NWR	7	701.0
	<b>TOTAL</b>	<b>307</b>	<b>41,361.2</b>

# PRESCRIBED BURNS by Refuge - R7

<u>ORG</u>	<u>REFUGE</u>	<u># BURNS</u>	<u># ACRES</u>
7452	Kenai NWR	3	455.0
7563	Tetlin NWR	1	176.0
7563	Yukon Flats NWR	3	930.0
	<b>TOTAL</b>	<b>7</b>	<b>1,561.0</b>



# PRESCRIBED FIRES

## Burn Plan Objective

### 1999

OBJECTIVE	# FIRES	# FWS ACRES
<b>Cultural Scene Maintenance</b>		
Historical Scene Maintenance	3	145.0
Other Cultural Site Maintenance	2	16.0
<b>Natural Systems</b>		
Exotic or Undesirable Species Control	156	35,791.1
Habitat Maintenance	596	121,745.0
Research	28	1,598.3
<b>Hazard Reduction</b>		
Fuel Reduction - Activity Fuels	51	5,407.3
Fuel Reduction - Natural Fuels	298	97,503.2
Real Property Protection	1	2.0
Boundary Protection	1	4.5
Fuel Break Maintenance	4	128.0
<b>Maintenance</b>		
Debris Removal	38	1,214.4
Right-of-way Maintenance	4	22.0
<b>Silvicultural</b>		
Seed Bed Preparation	15	613.2
Vegetative Type Manipulation	22	4,391.1
<b>Not Identified</b>	5	5,477.0
<b>TOTAL</b>	<b>1,224</b>	<b>274,058.1</b>

## Prescribed Fires By State 1999

STATE	FIRES	FWS ACRES
Alabama	5	48.8
Alaska	7	1,561.0
Arizona	12	14,403.0
Arkansas	10	2,355.0
California	52	9,645.5
Colorado	5	1,920.0
Connecticut	0	0.0
Delaware	3	47.0
Florida	90	20,777.2
Georgia	51	22,301.1
Hawaii	1	15.0
Idaho	7	1,515.0
Illinois	8	303.0
Indiana	4	641.0
Iowa	28	3,257.3
Kansas	55	4,366.6
Kentucky	0	0.0
Louisiana	21	18,120.1
Maine	20	175.1
Maryland	55	4,547.6
Massachusetts	0	0.0
Michigan	2	60.0
Minnesota	143	23,797.6
Mississippi	56	9,742.2
Missouri	5	740.0
Montana	23	2,362.5
Nebraska	40	4,412.5
Nevada	11	2,076.5
New Hampshire	6	58.6
New Jersey	5	173.0
New Mexico	19	5,860.6
New York	13	305.6
North Carolina	23	12,383.0
North Dakota	152	19,296.1

Ohio	0	0.0
Oklahoma	24	9,328.4
Oregon	21	8,462.4
Pennsylvania	3	16.8
Puerto Rico	0	0.0
Rhode Island	0	0.0
South Carolina	53	14,745.5
South Dakota	35	6,544.0
Tennessee	0	0.0
Texas	87	39,120.8
Utah	5	2,556.0
Vermont	2	39.0
Virgin Islands	0	0.0
Virginia	5	282.0
Washington	17	1,425.0
West Virginia	0	0.0
Wisconsin	40	4,270.7
Wyoming	0	0.0

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<b>TOTAL</b>	<b>1,224</b>	<b>274,058.1</b>
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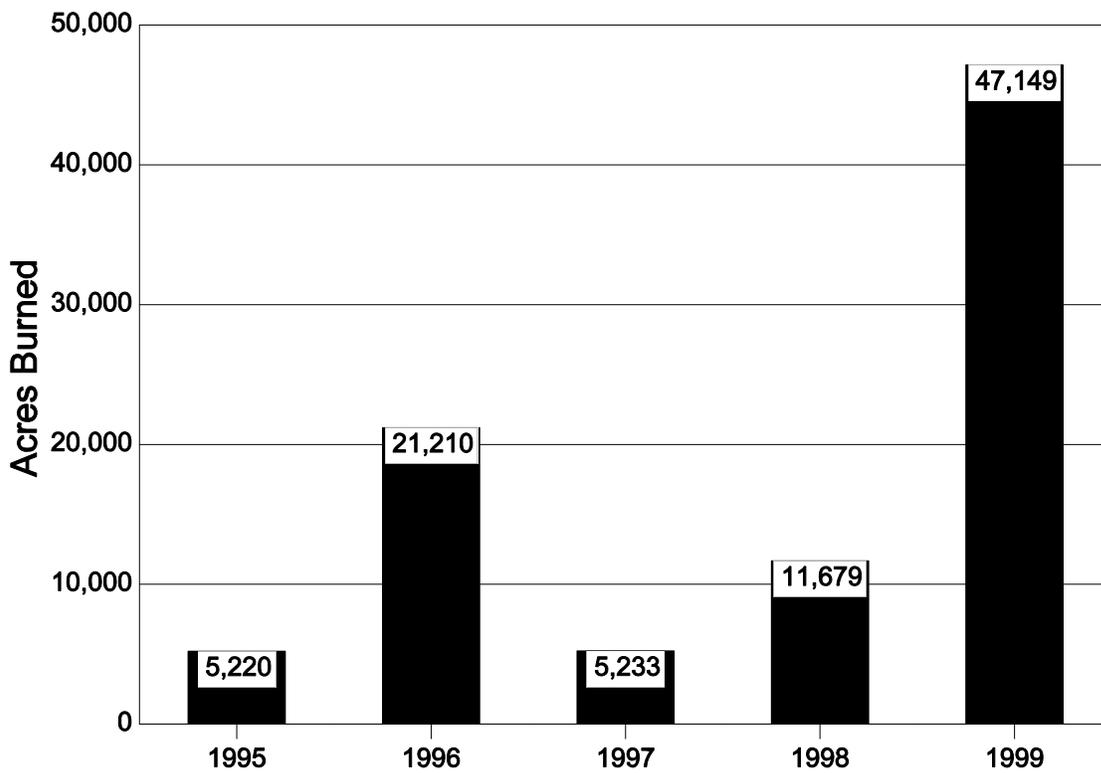
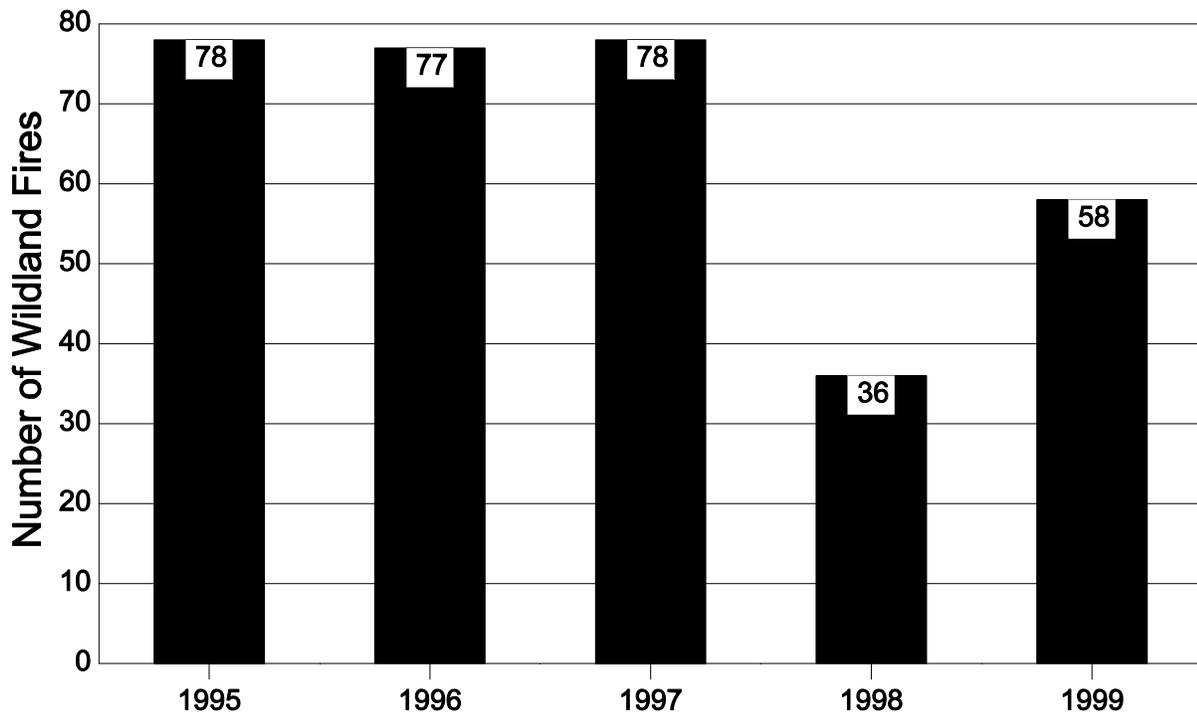
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# 1995 - 1999 STATISTICS

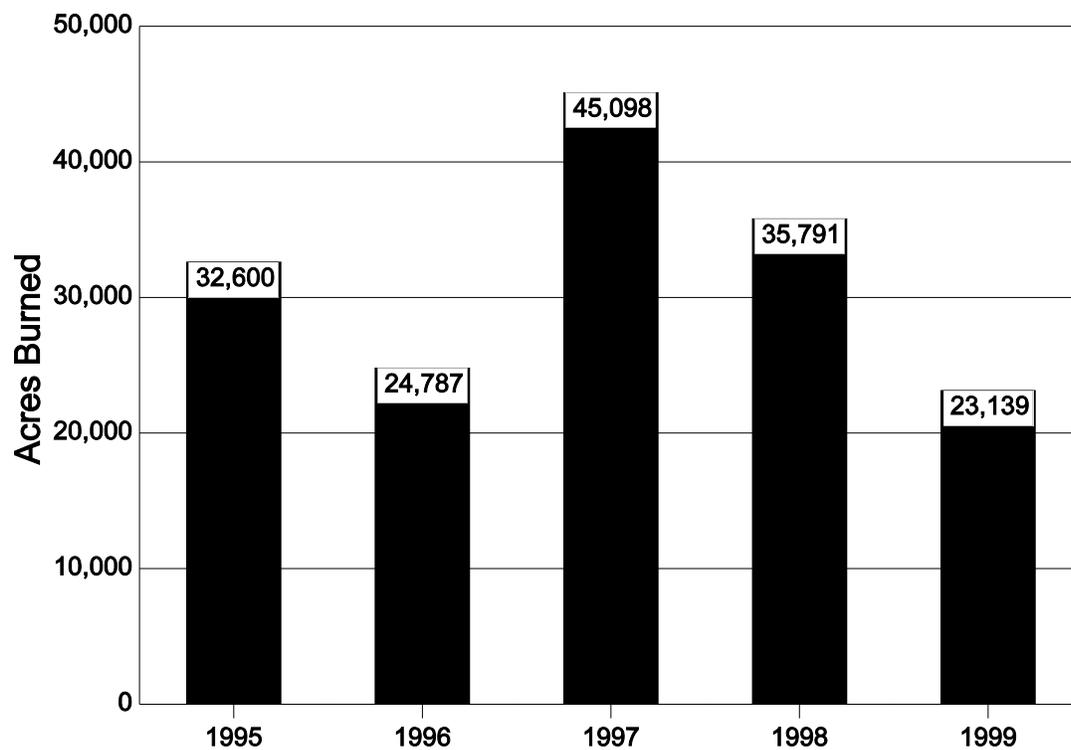
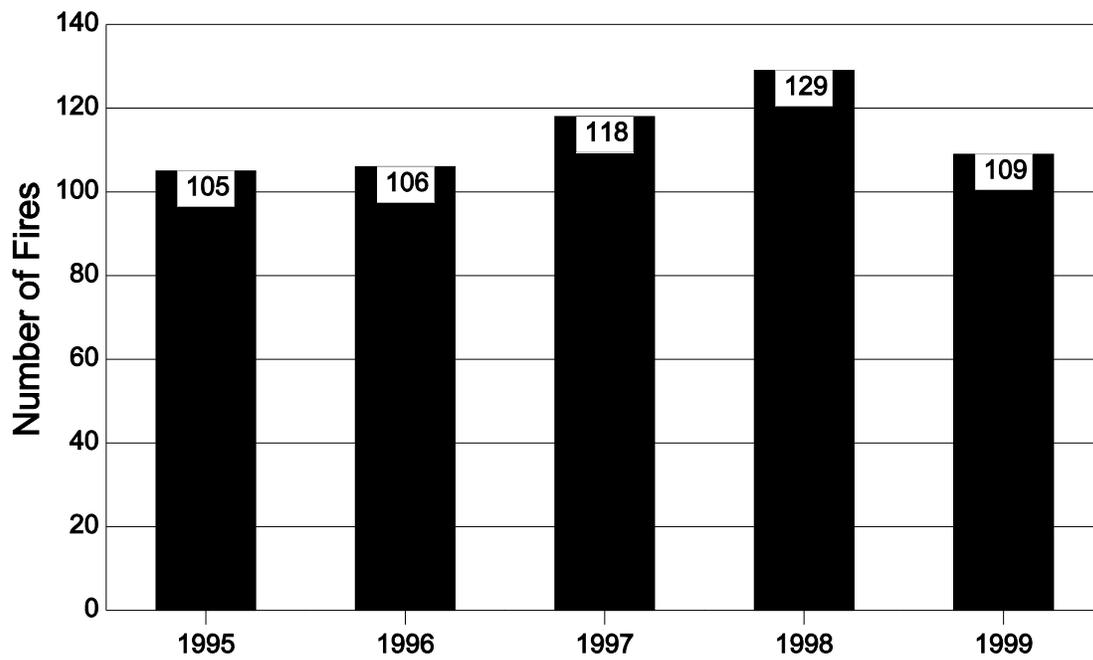
# REGION 1

## WILDLAND FIRES 1995 - 1999



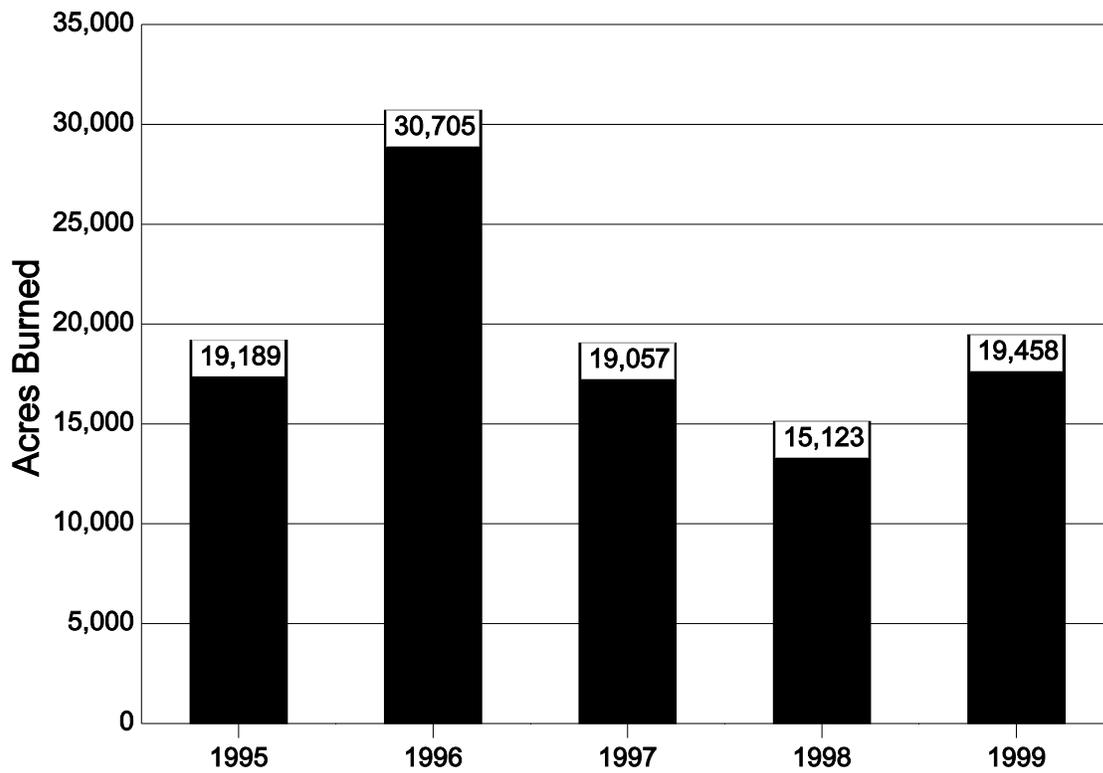
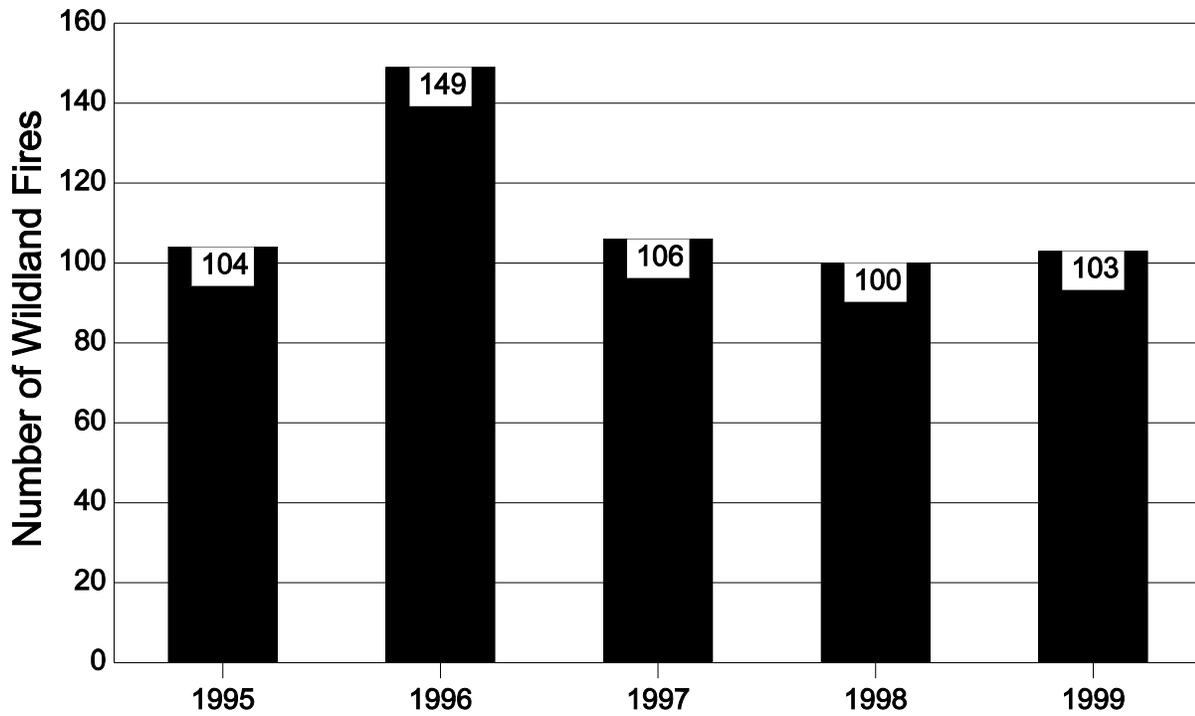
# REGION 1

## PRESCRIBED FIRES 1995 - 1999



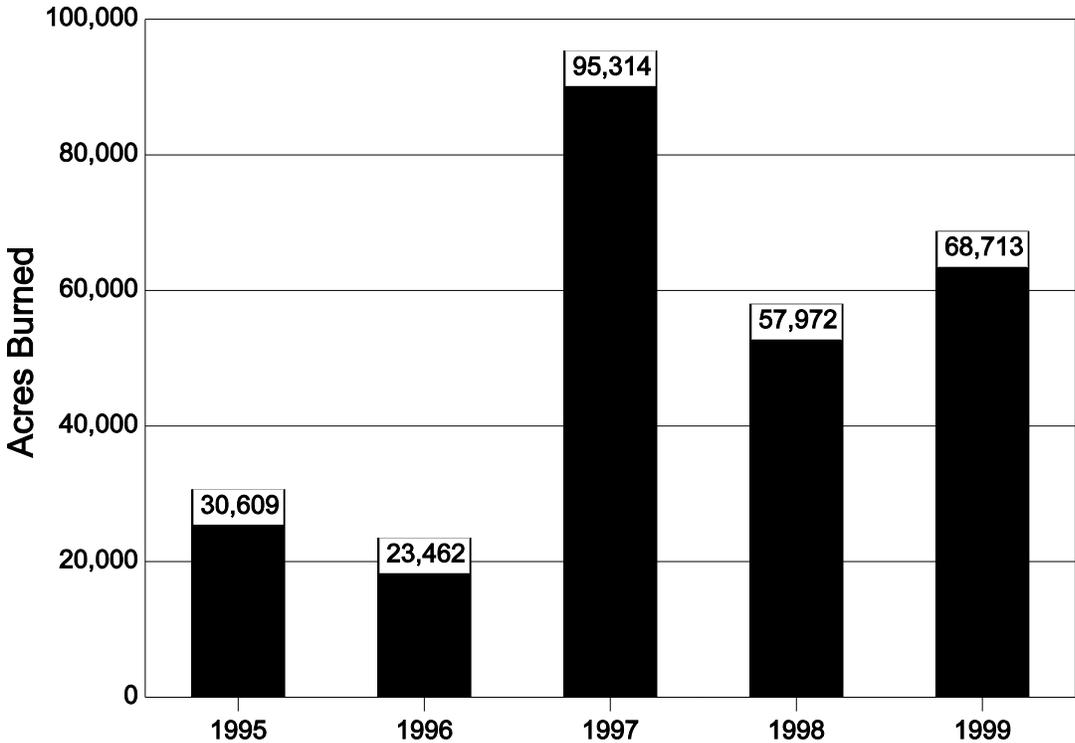
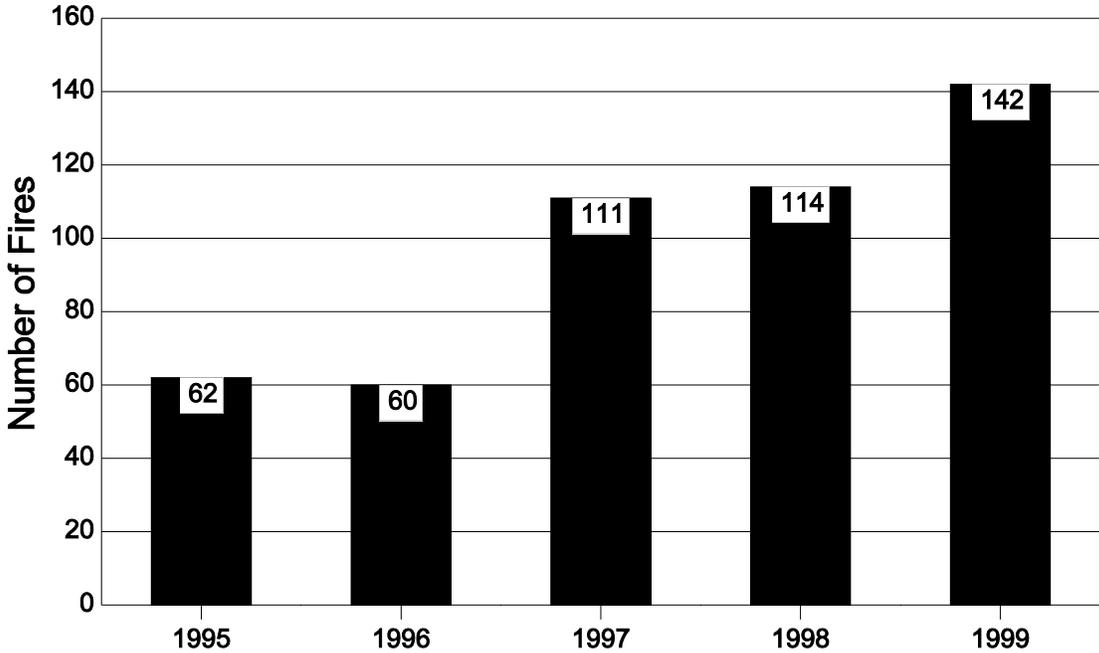
# REGION 2

## WILDLAND FIRES 1995 - 1999



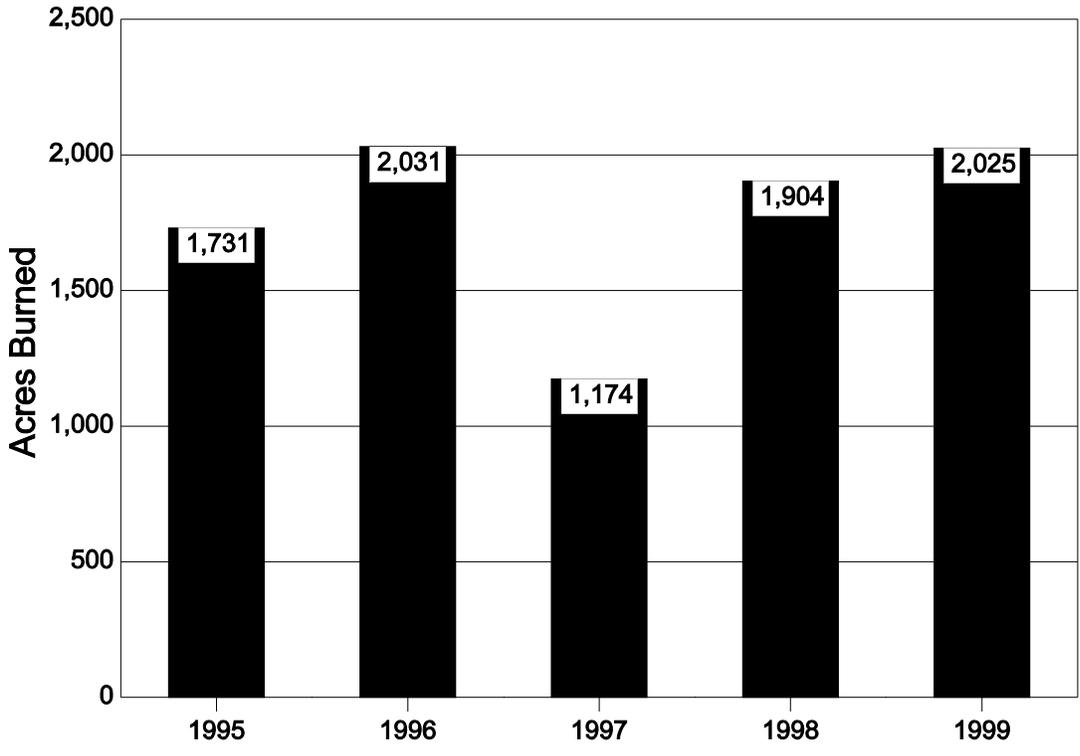
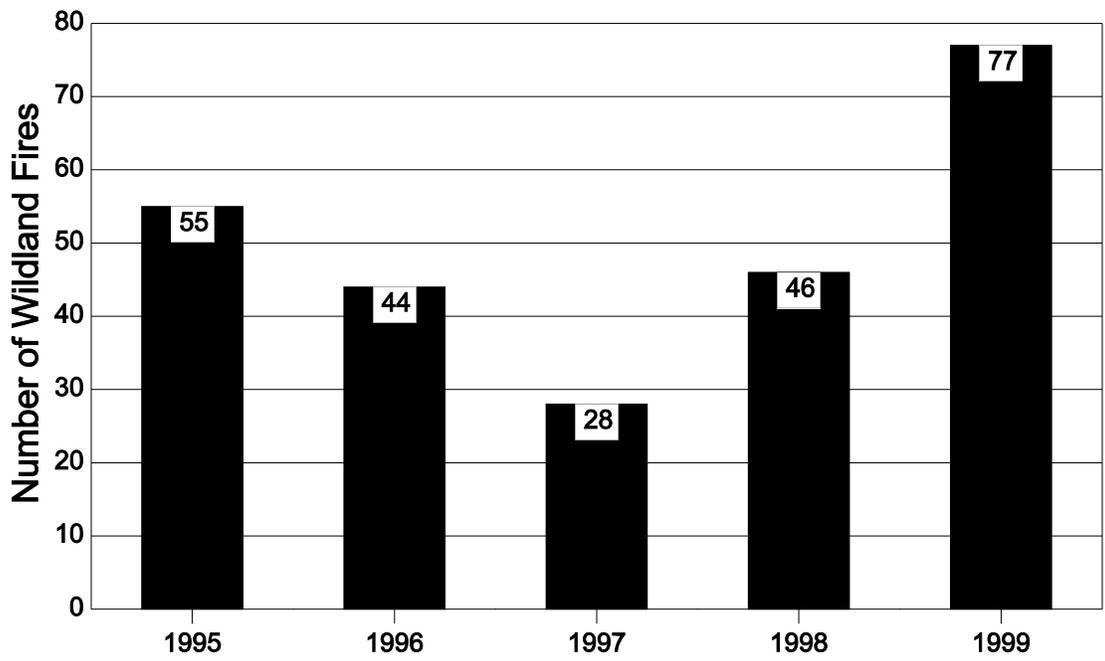
# REGION 2

## PRESCRIBED FIRES 1995 - 1999



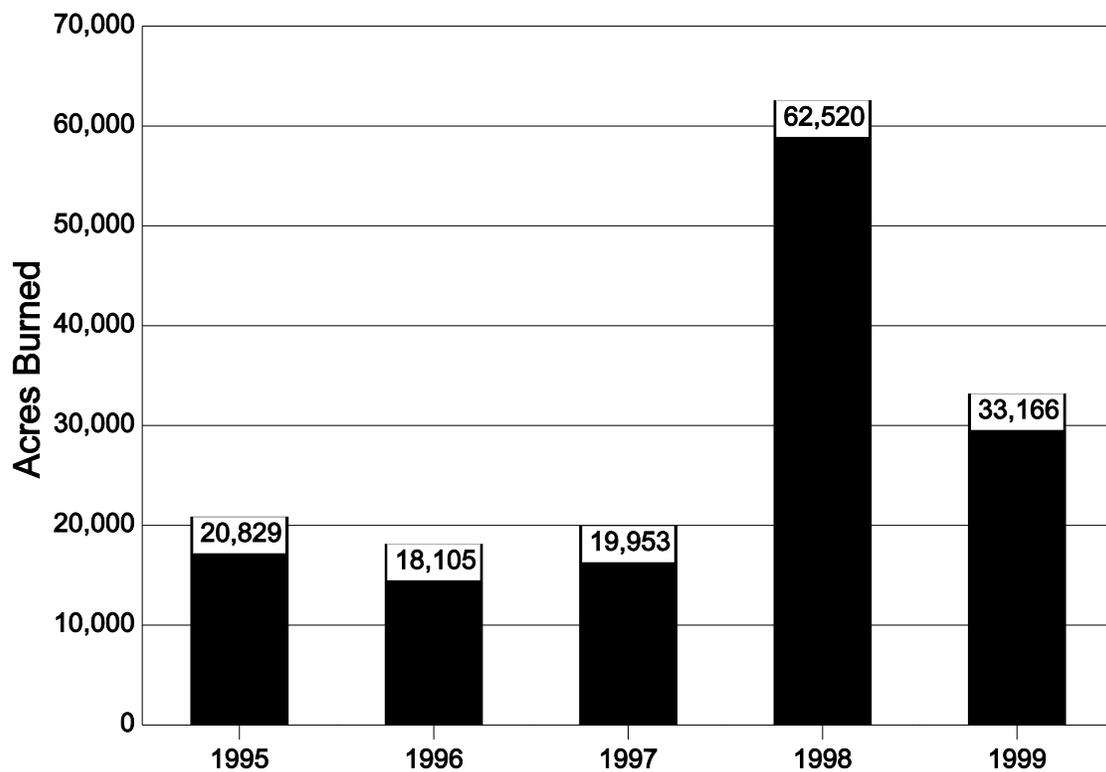
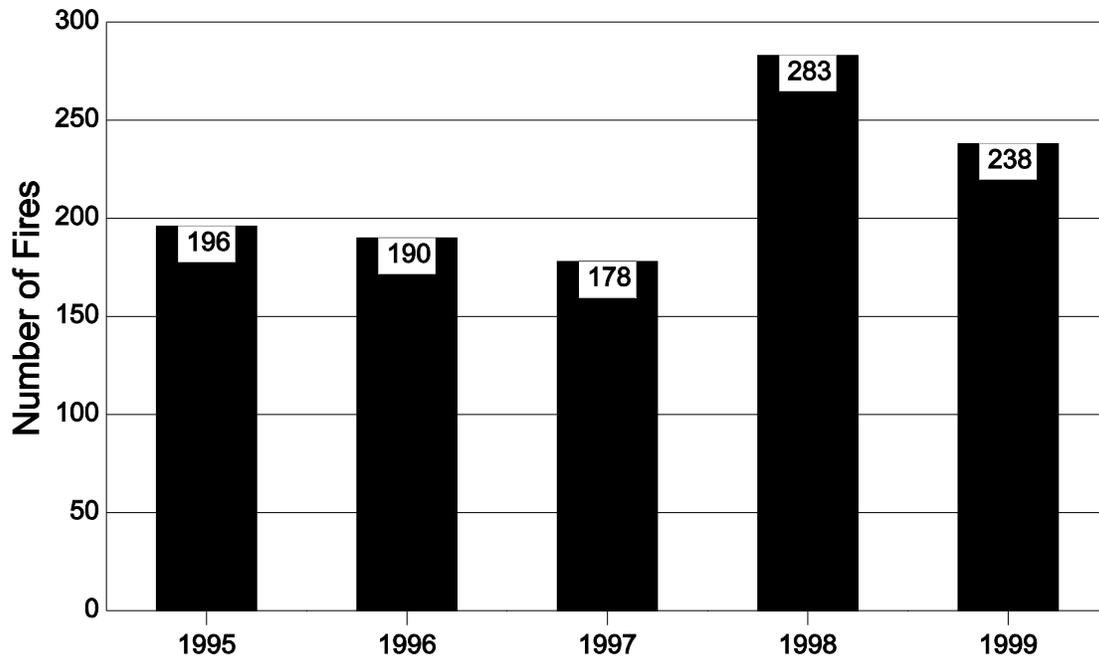
# REGION 3

## WILDLAND FIRES 1995 - 1999



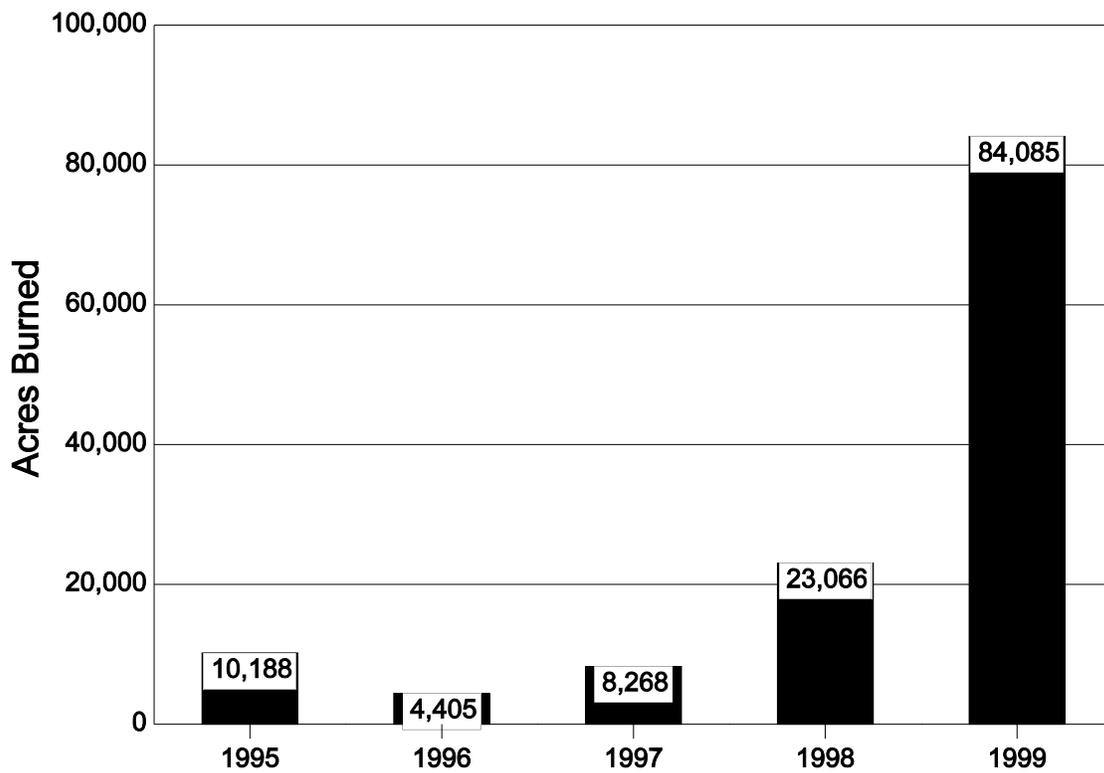
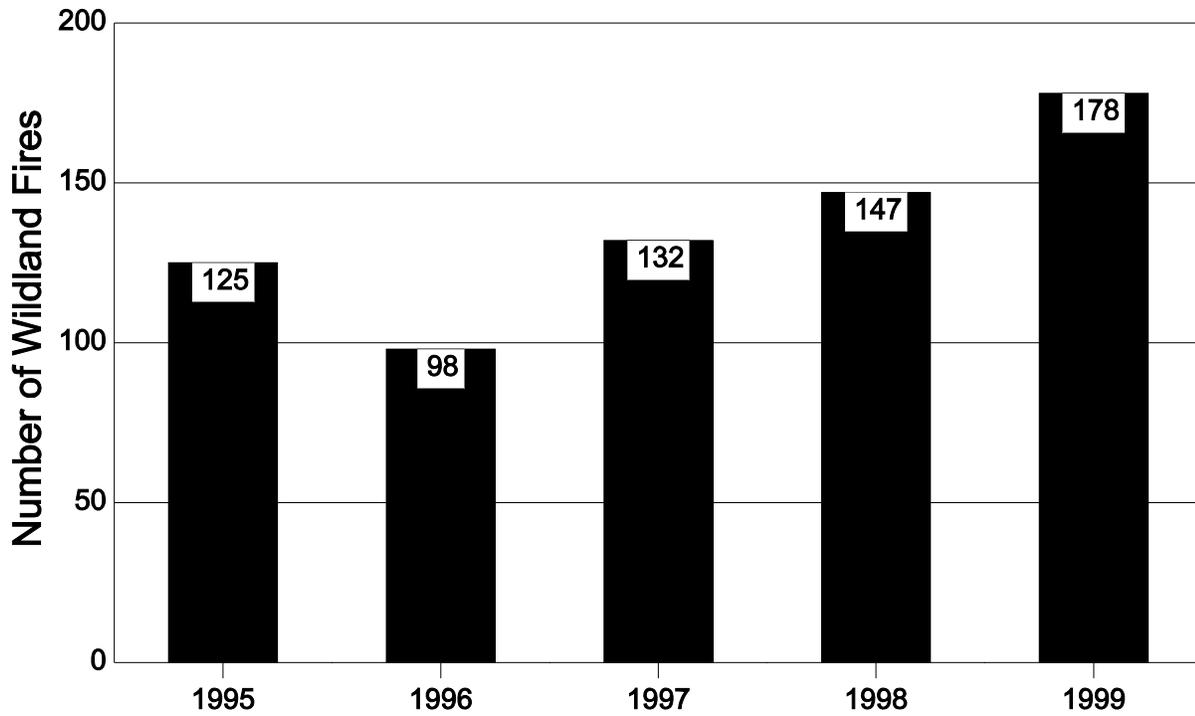
# REGION 3

## PRESCRIBED FIRES 1995 - 1999



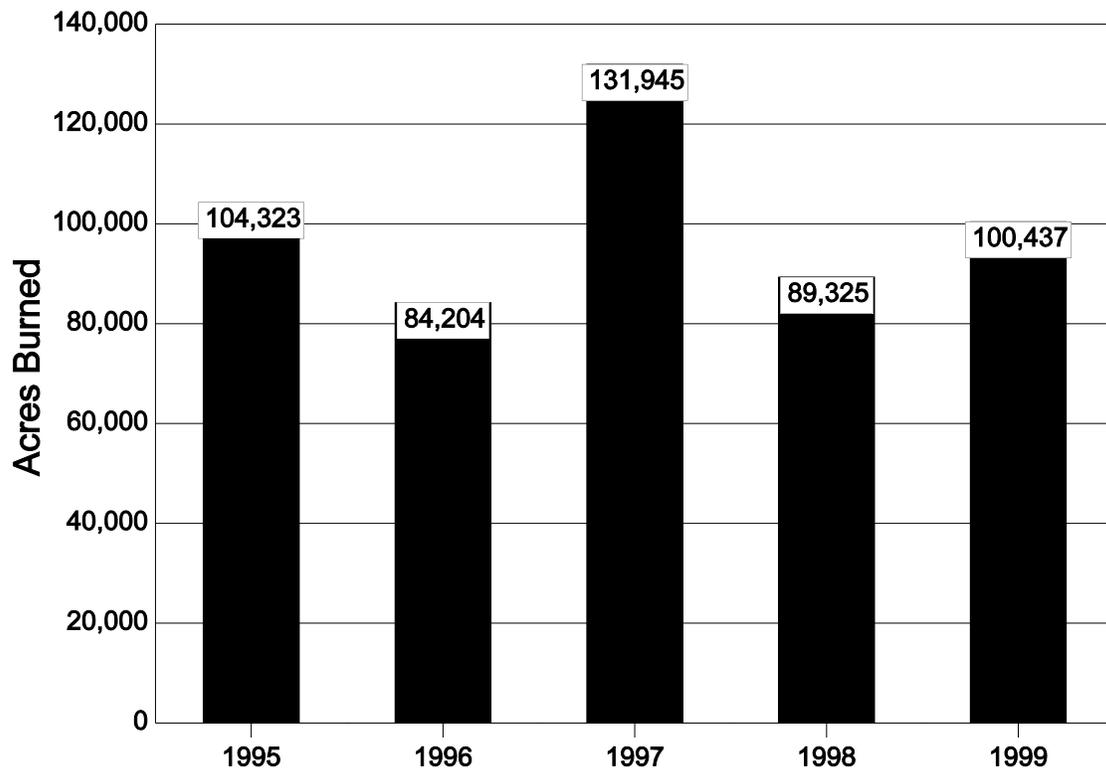
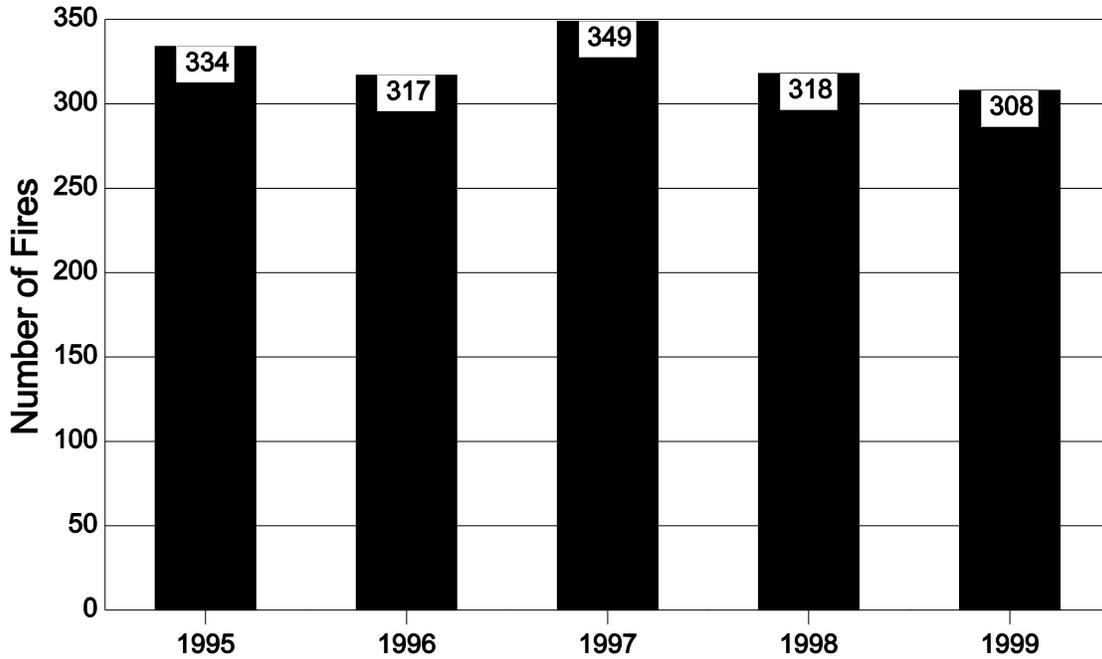
# REGION 4

## WILDLAND FIRES 1995 - 1999



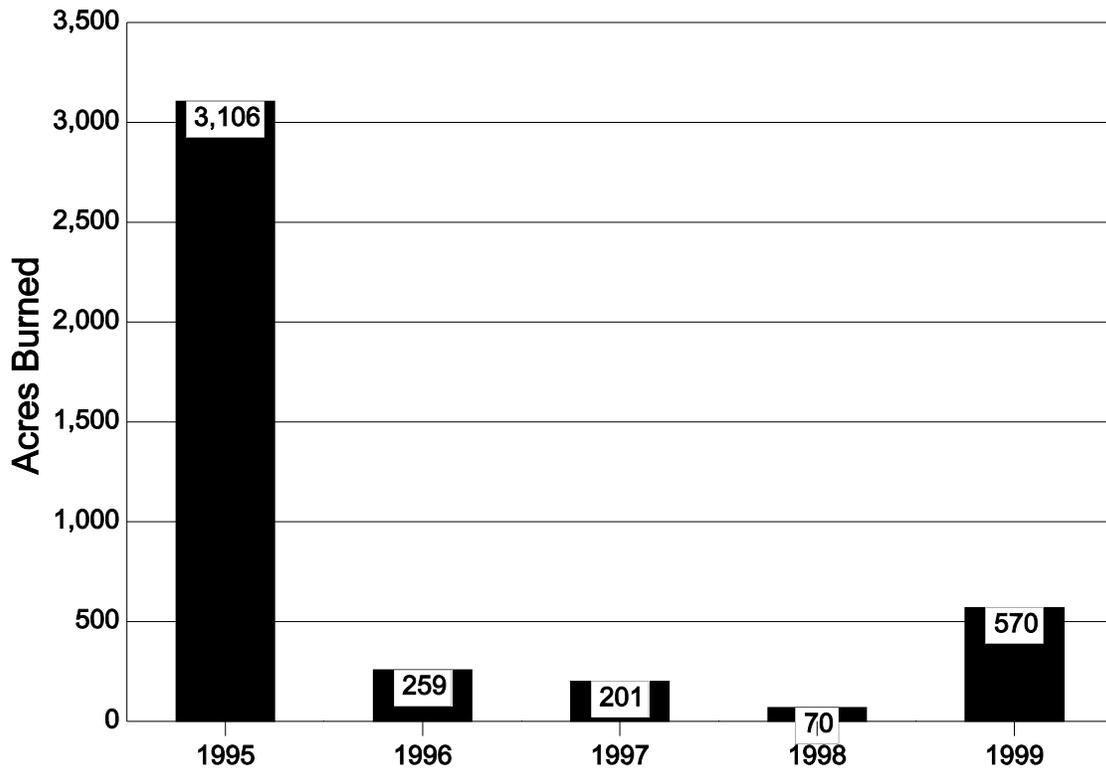
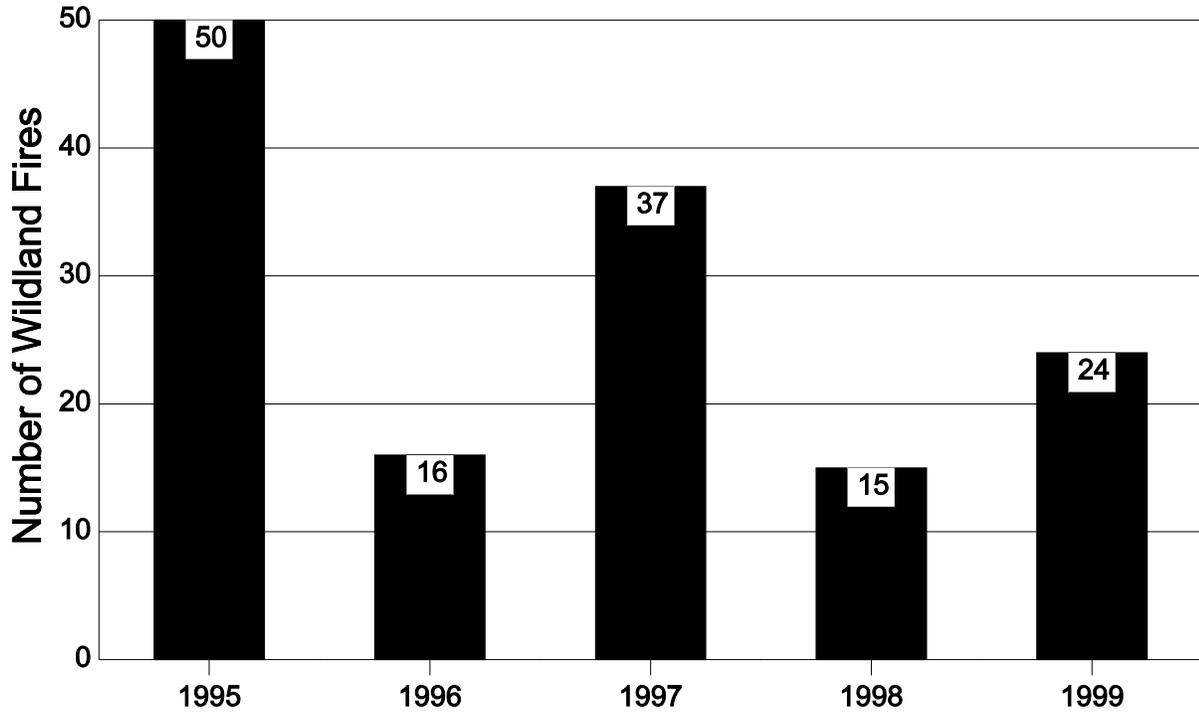
# REGION 4

## PRESCRIBED FIRES 1995 - 1999



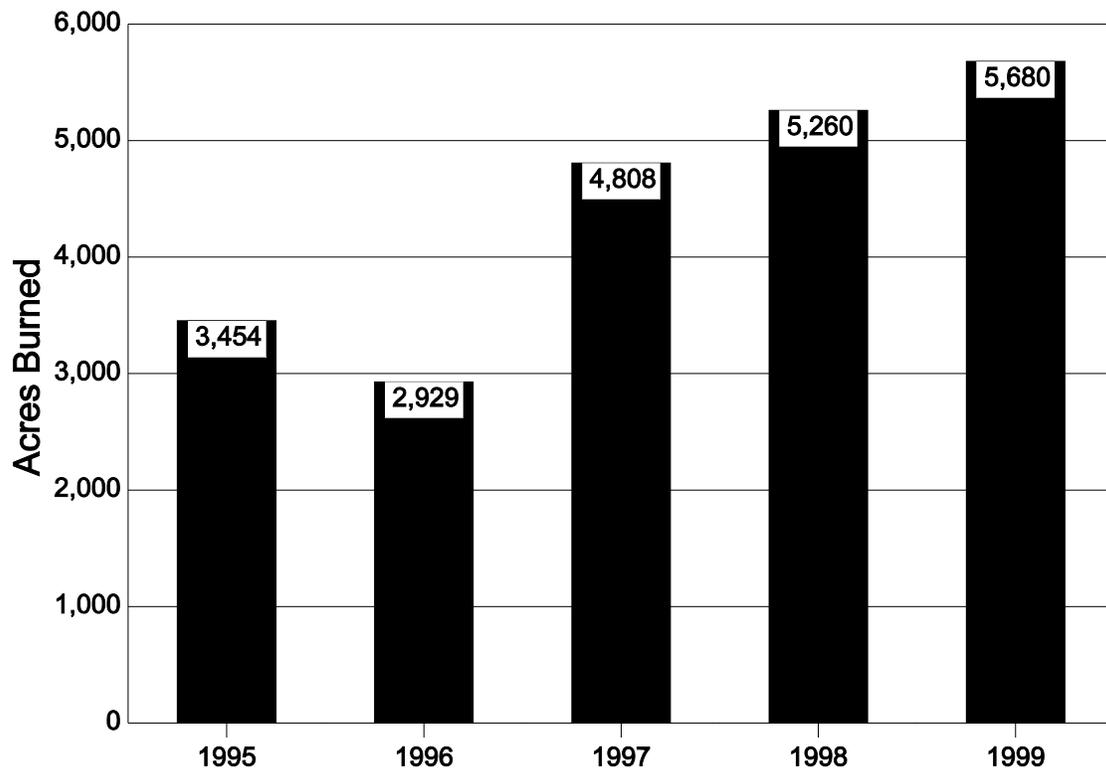
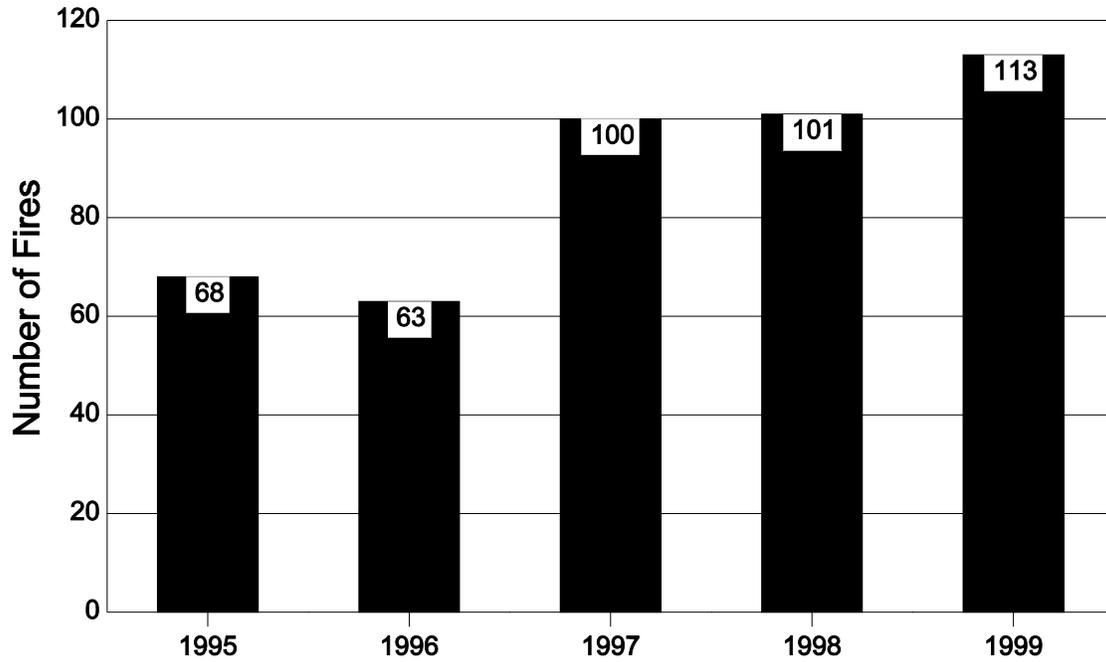
# REGION 5

## WILDLAND FIRES 1995 - 1999



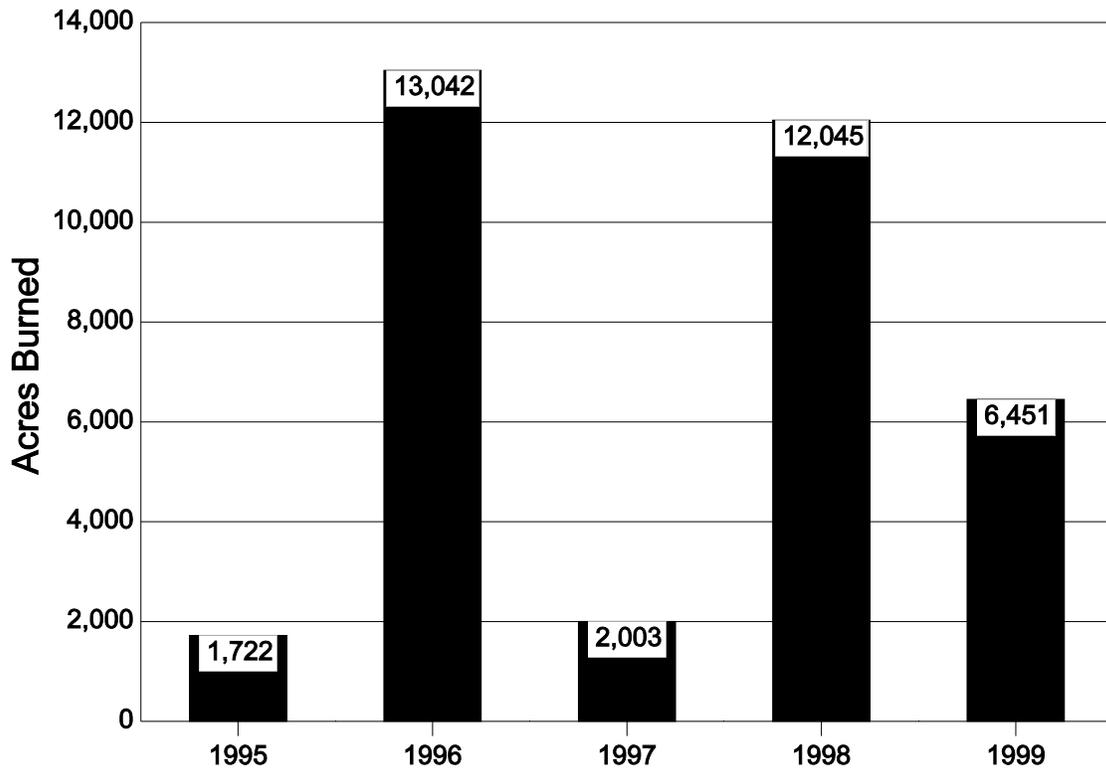
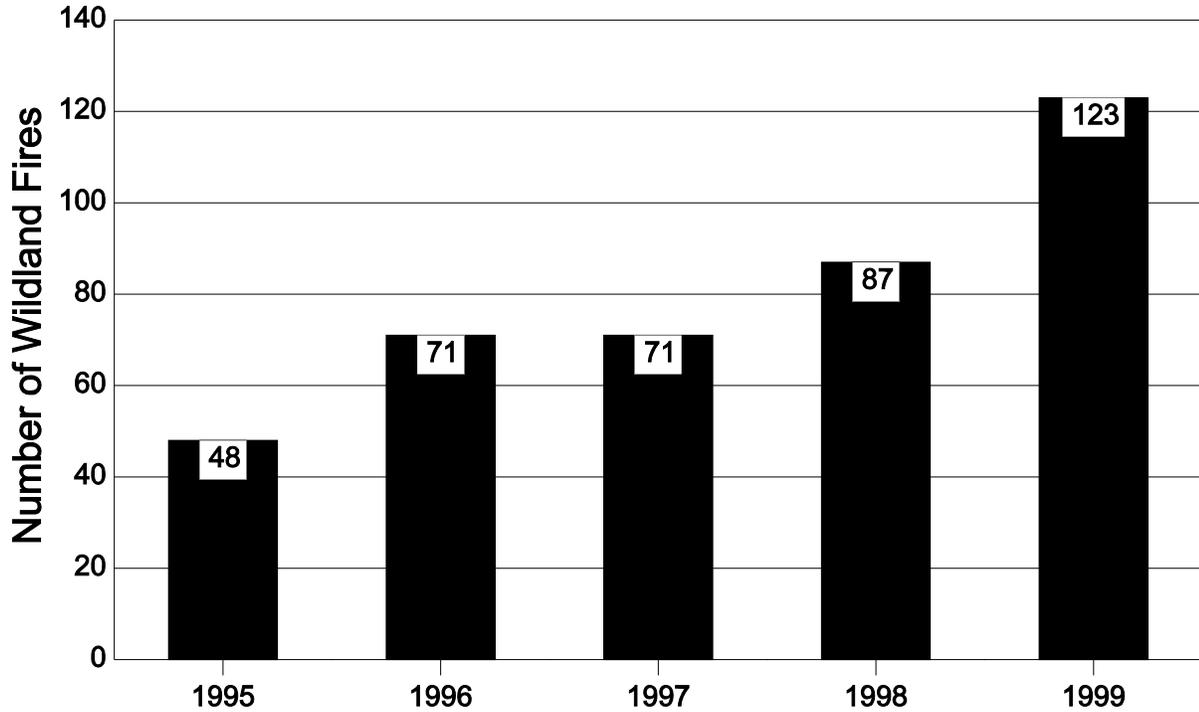
# REGION 5

## PRESCRIBED FIRES 1995 - 1999



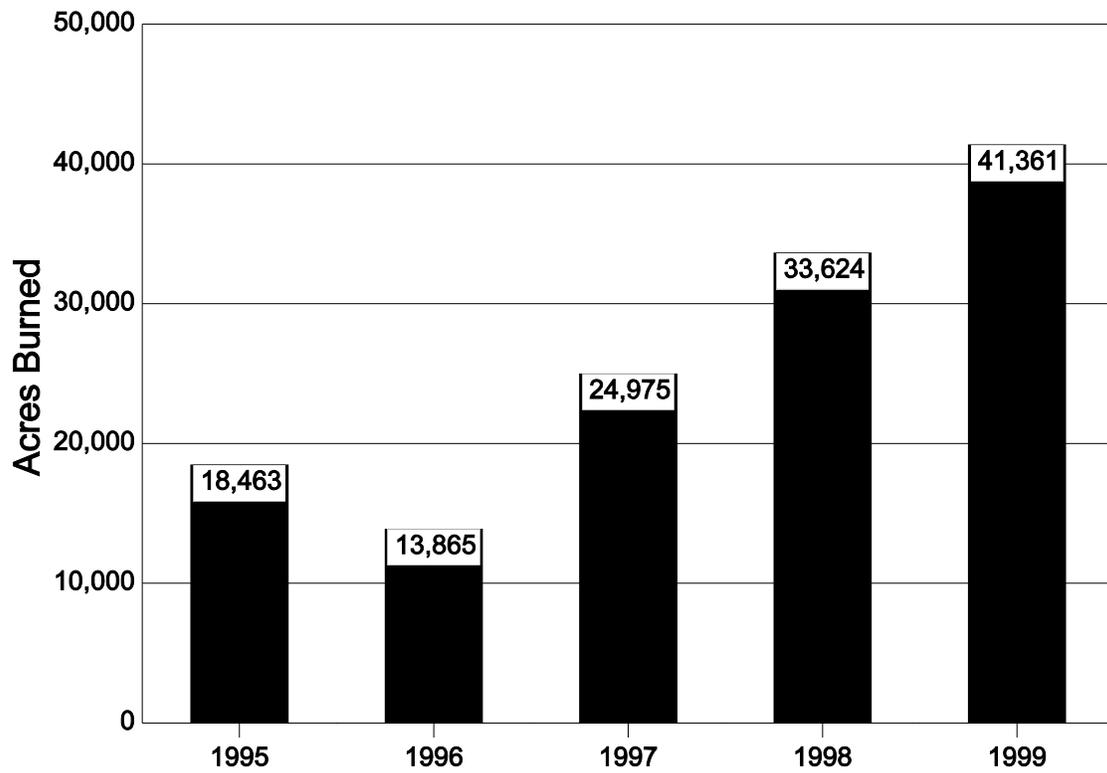
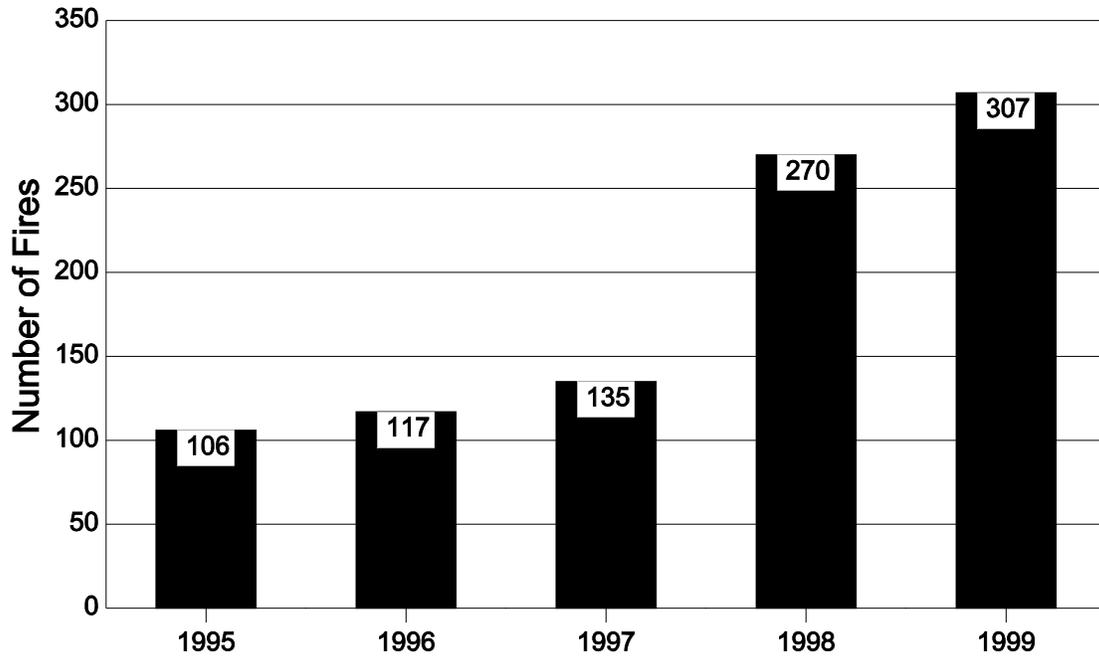
# REGION 6

## WILDLAND FIRES 1995 - 1999



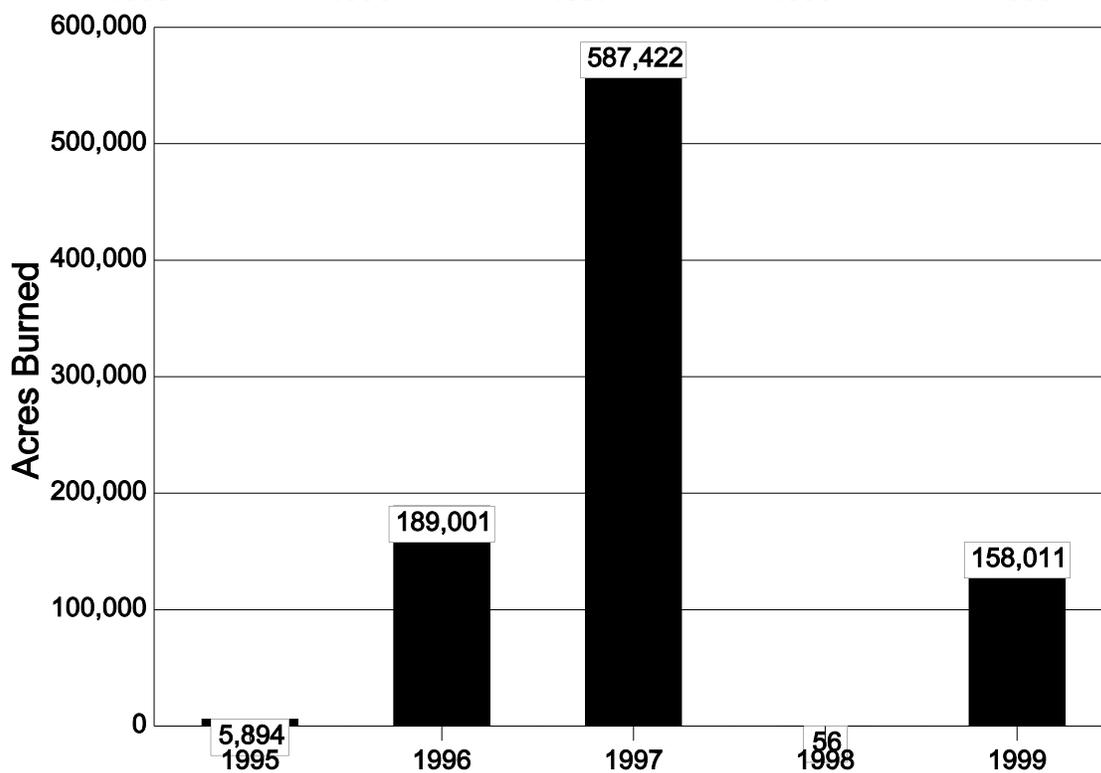
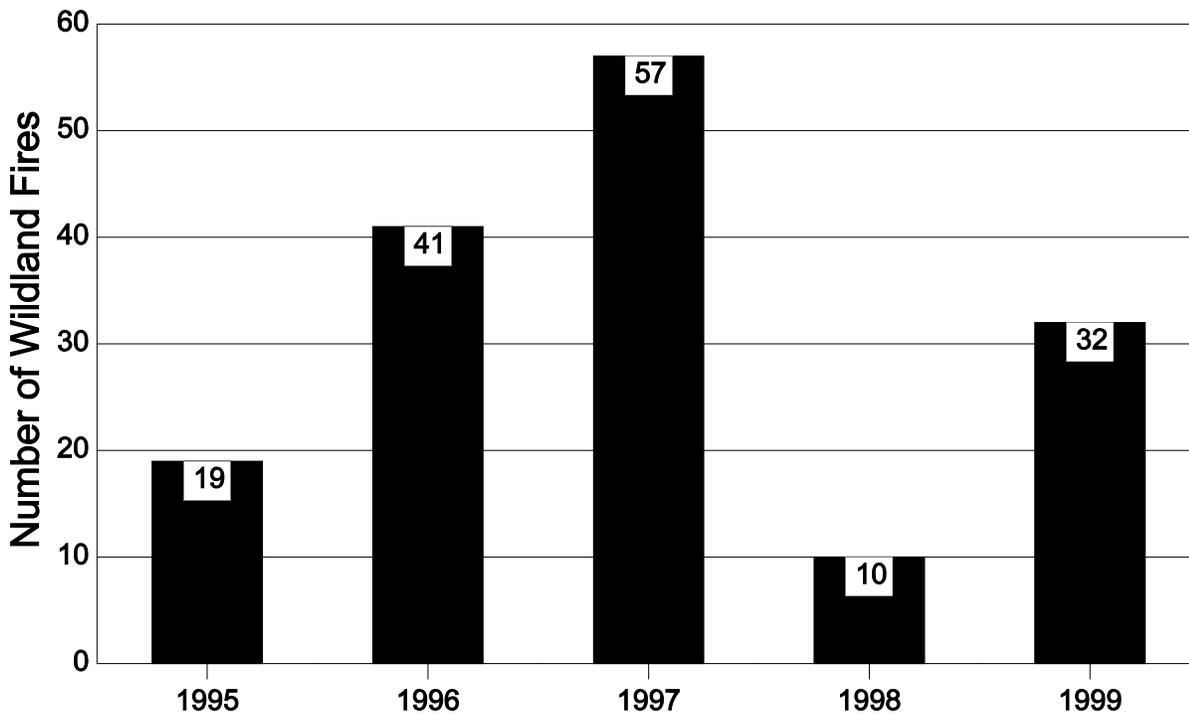
# REGION 6

## PRESCRIBED FIRES 1995 - 1999



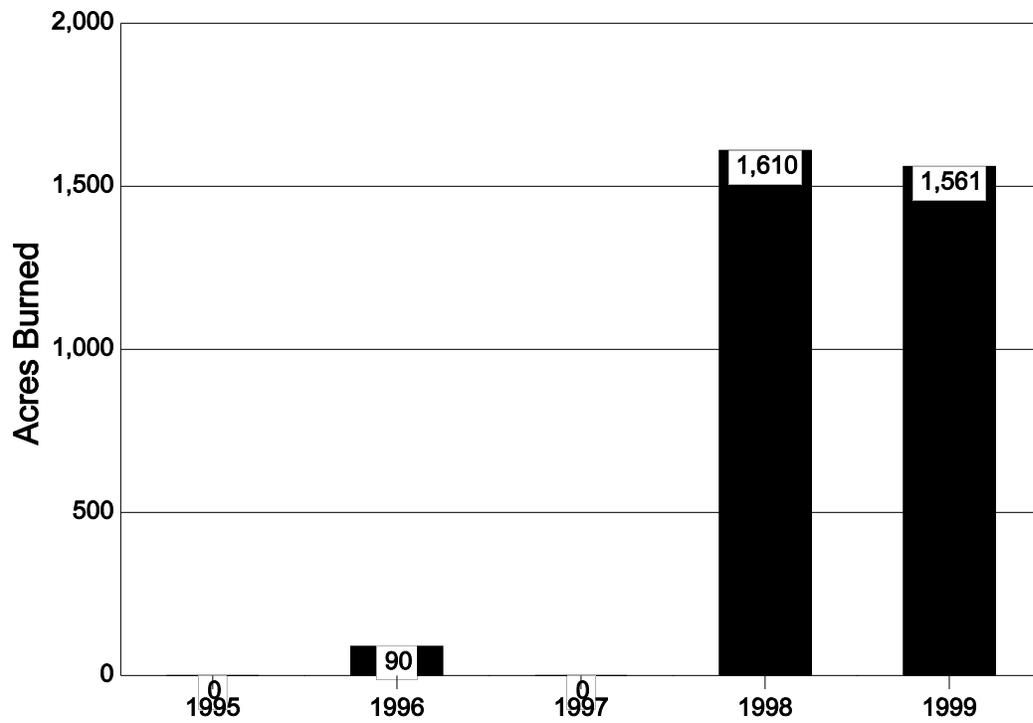
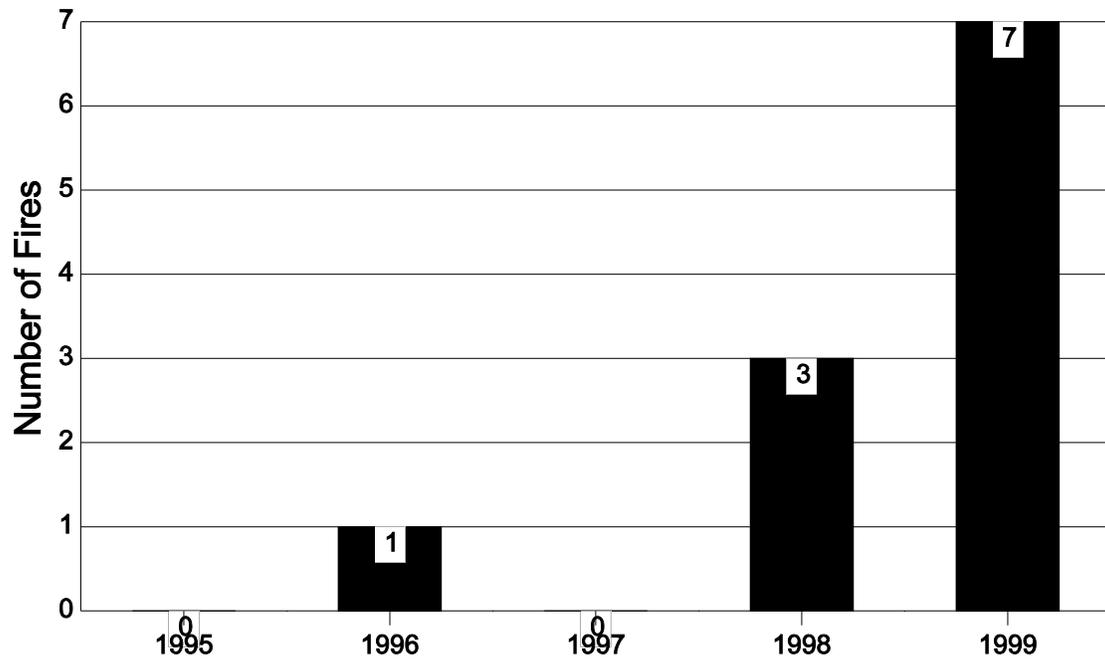
# REGION 7

## WILDLAND FIRES 1995 - 1999



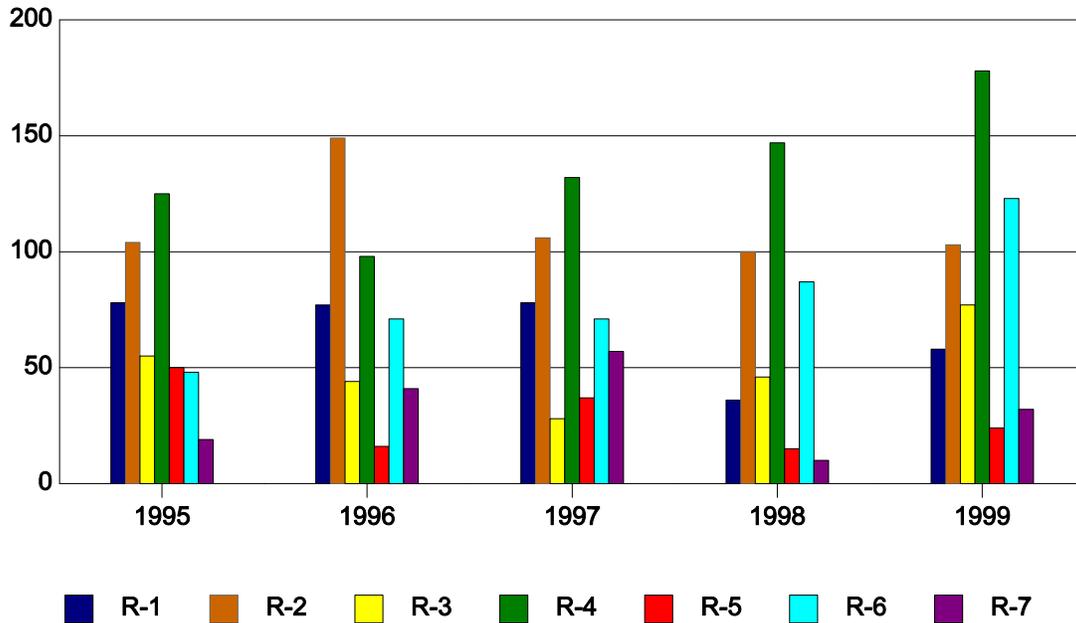
# REGION 7

## PRESCRIBED FIRES 1995 - 1999

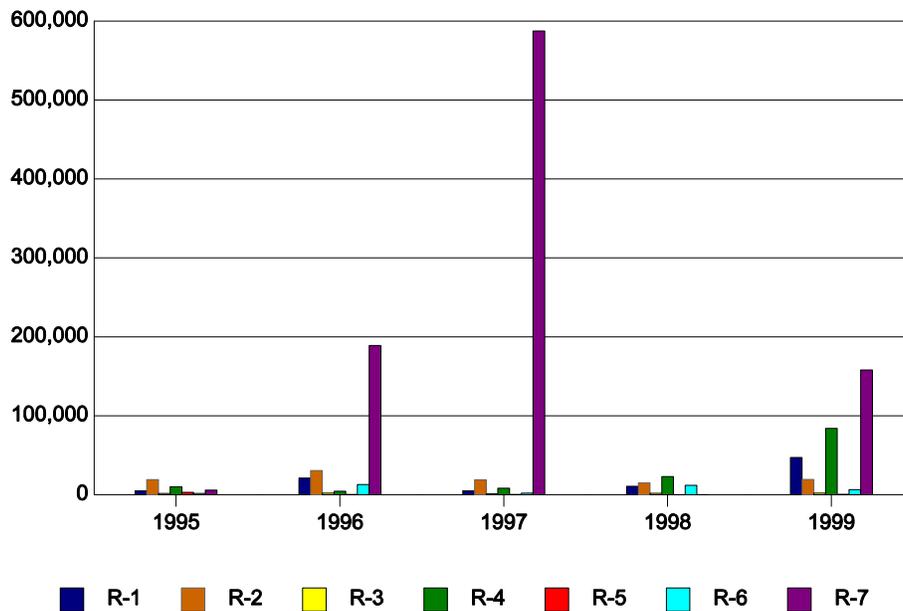


# WILDLAND FIRES 1995 - 1999

## Number of Wildland Fires

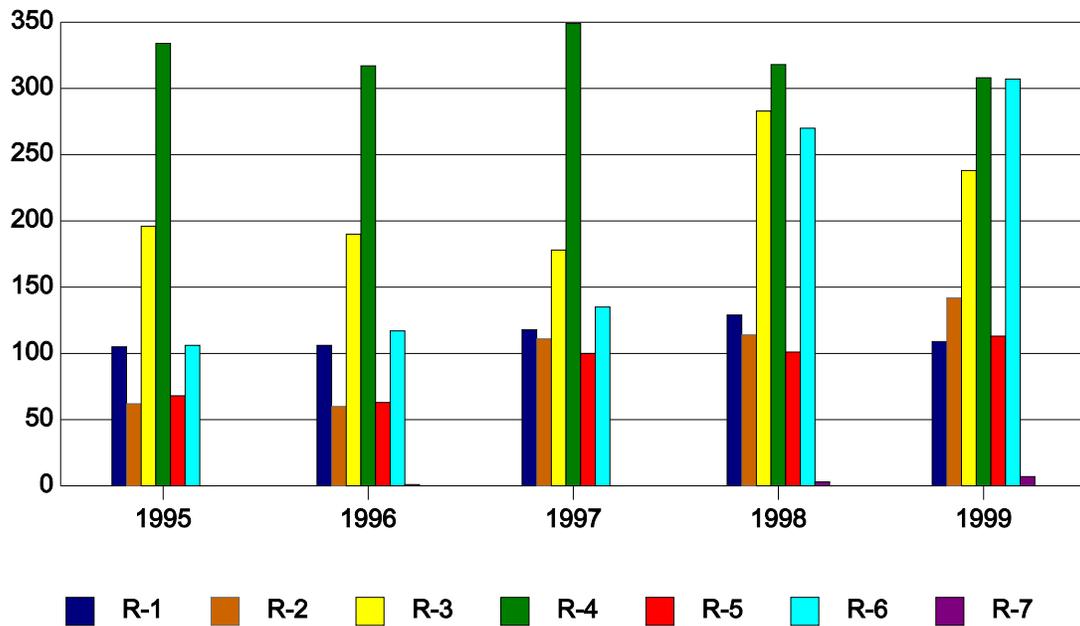


## Number of Acres Burned

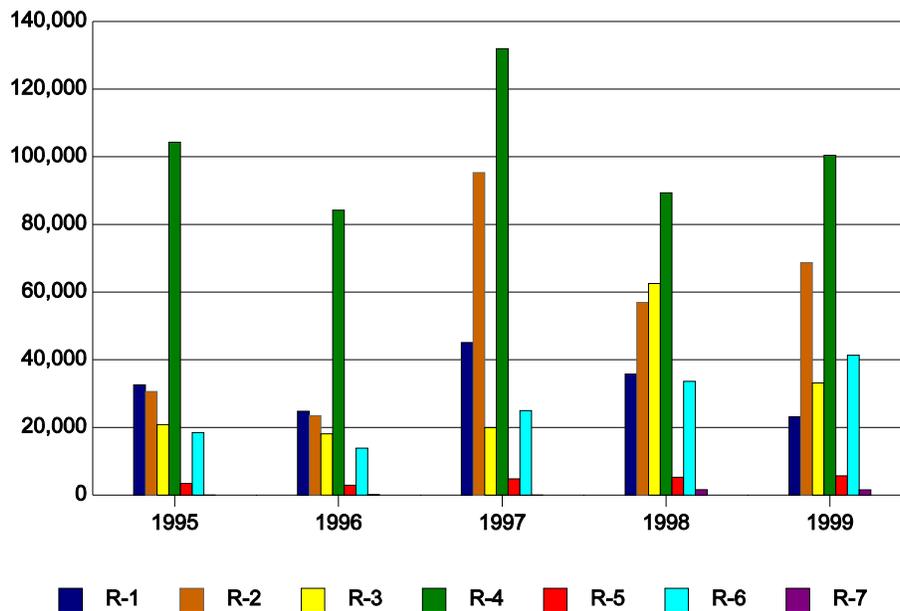


# PRESCRIBED BURNS 1995 - 1999

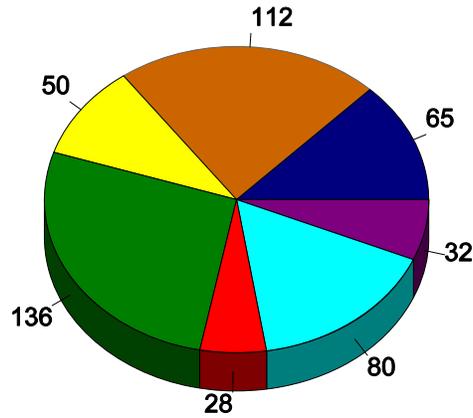
## Number of Burns



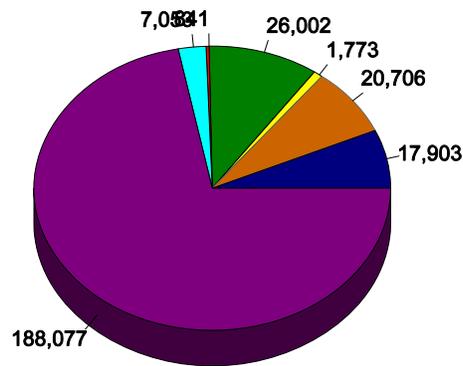
## Number of Acres Burned



# WILDLAND FIRES 1995 - 1999 (Average)



## Number of Fires

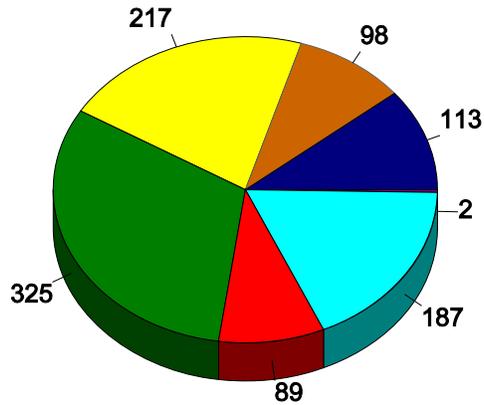


## Acres Burned

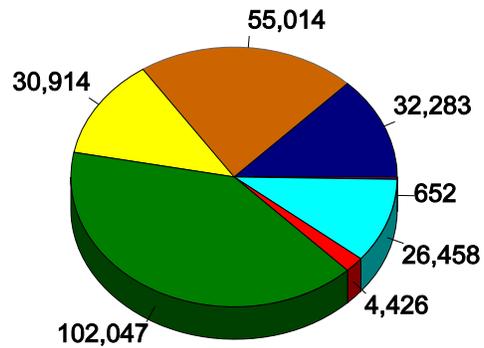


# PRESCRIBED BURNS

## 1995 - 1999 (Average)



### Number of Burns

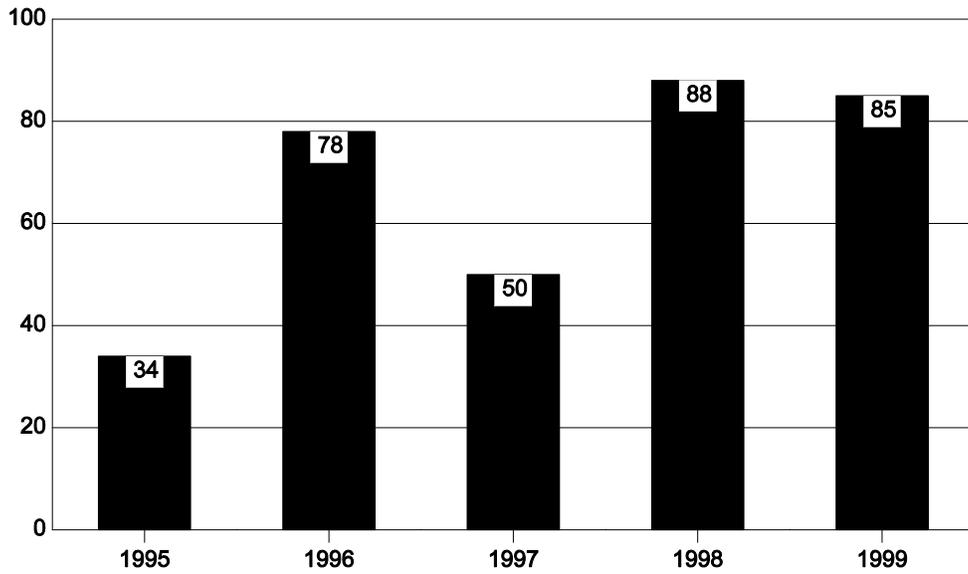


### Acres Burned

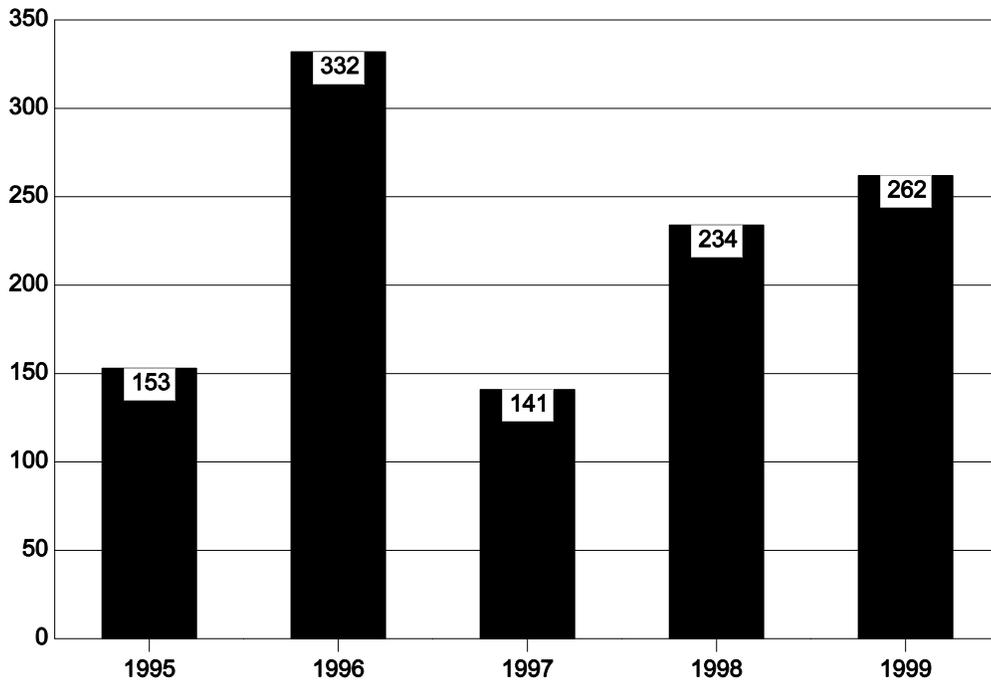


# REGIONS 1 - 7

## FALSE ALARMS 1995 - 1999



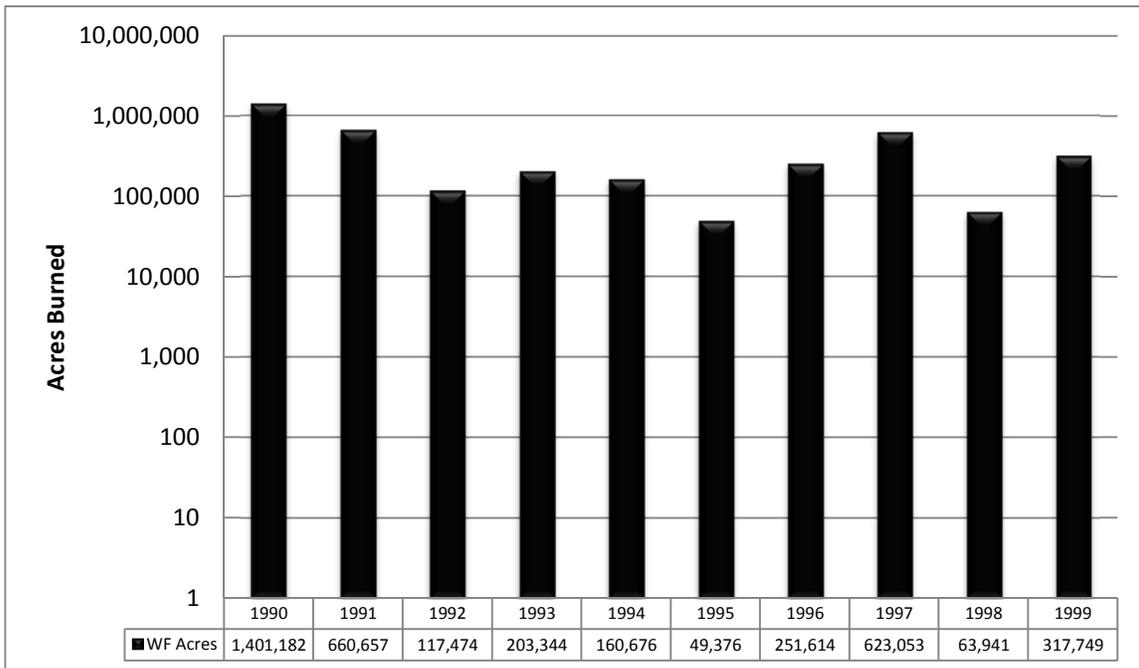
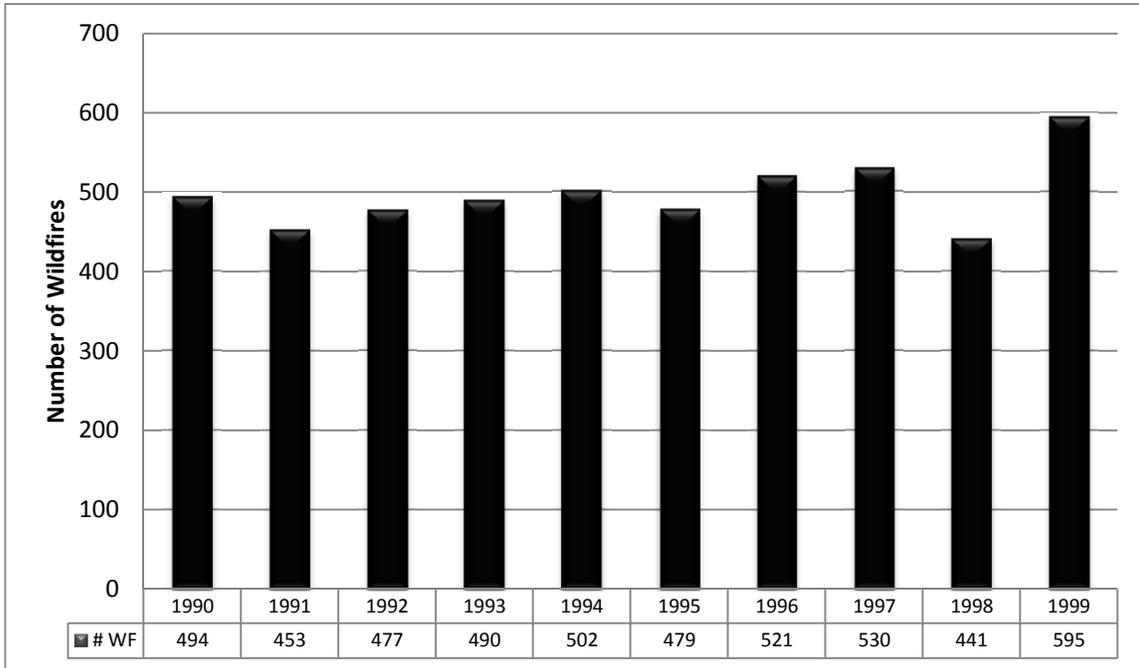
## SUPPORT ACTIONS



# 1990 - 1999 STATISTICS

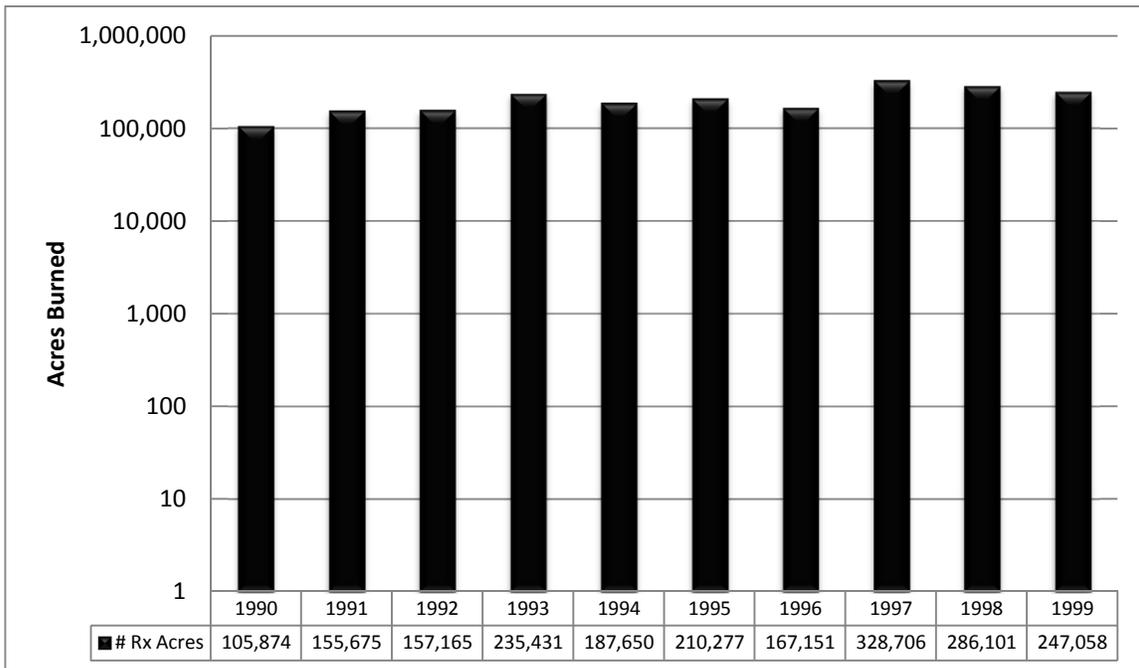
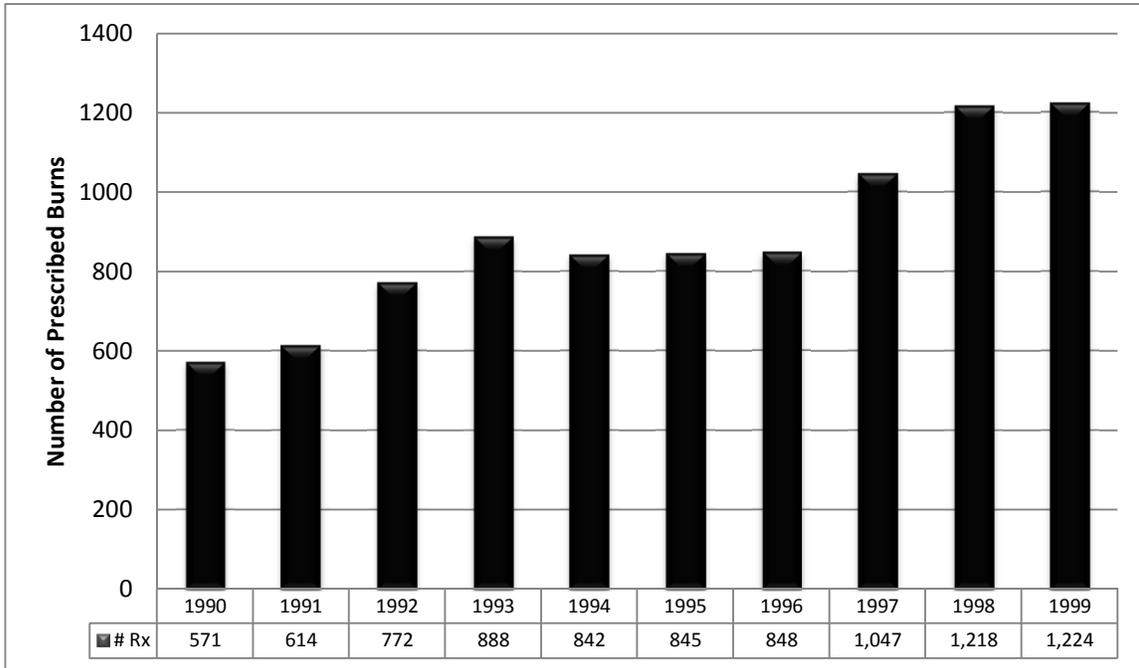
# WILDFIRES

## 1990 - 1999



# PRESCRIBED BURNS

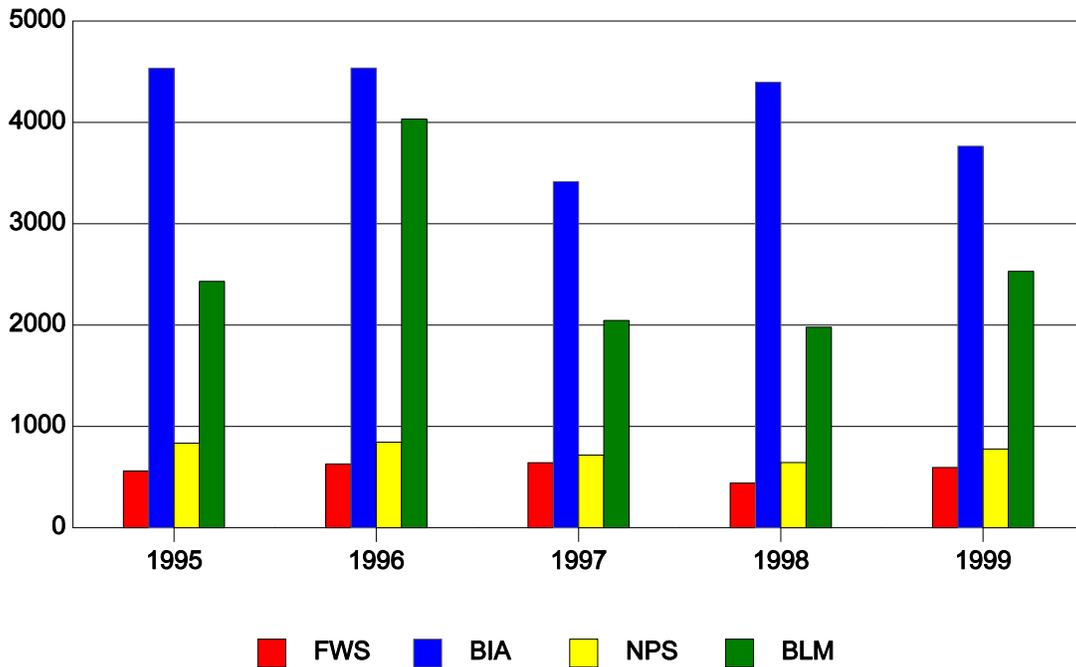
## 1990 - 1999



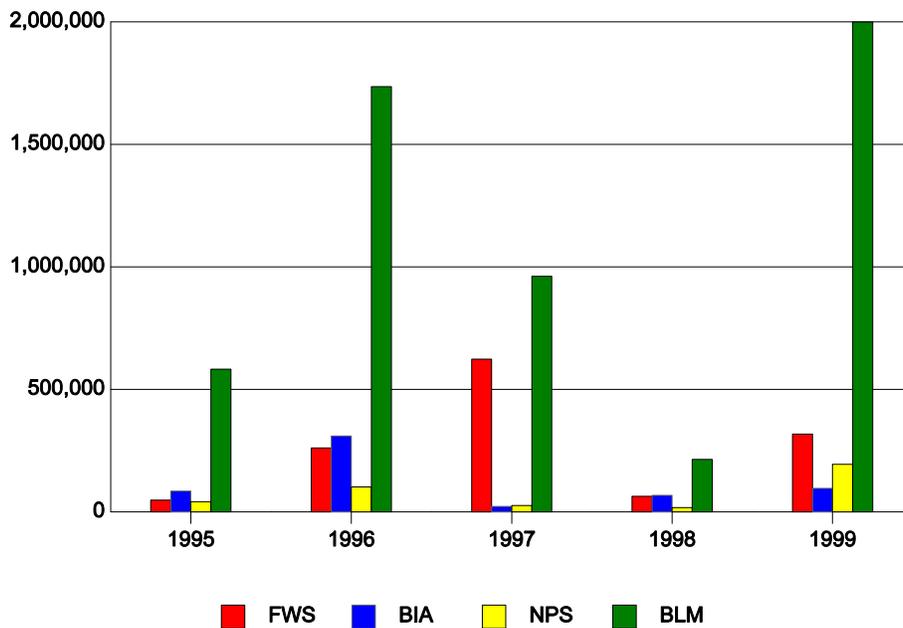
**DEPARTMENT OF THE INTERIOR  
1995 - 1999 STATISTICS**

# DEPARTMENT OF INTERIOR 1995 - 1999

## Number of Wildland Fires

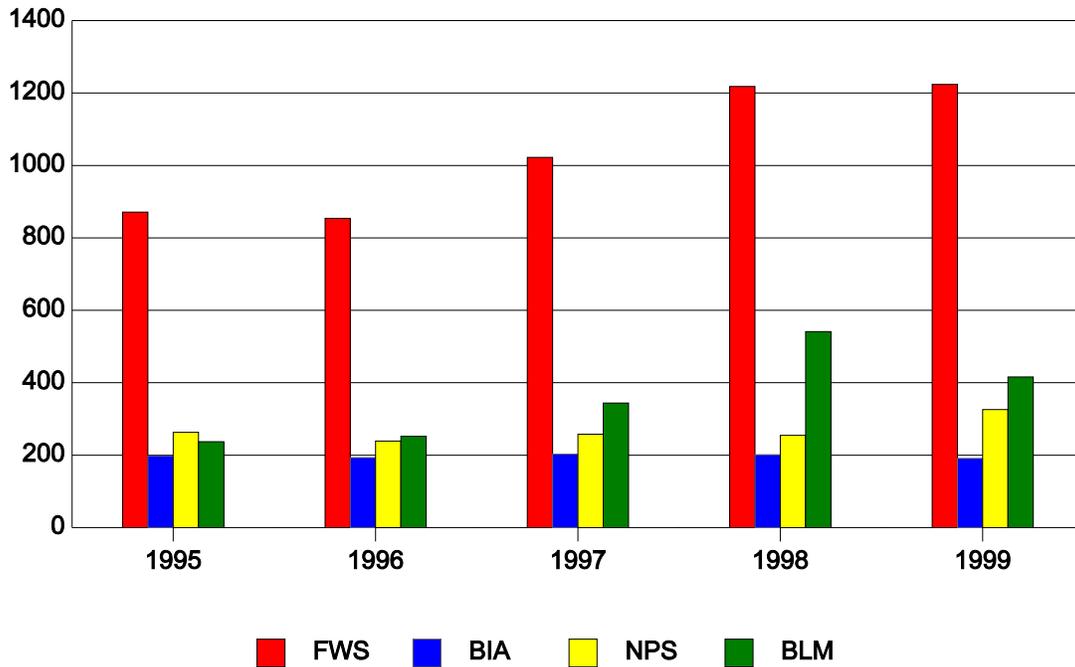


## Number of Acres Burned



# DEPARTMENT OF INTERIOR 1995 - 1999

## Number of Prescribed Fires



## Number of Acres Burned

