U.S. Fish and Wildlife Service
Fire Activity Report

2004

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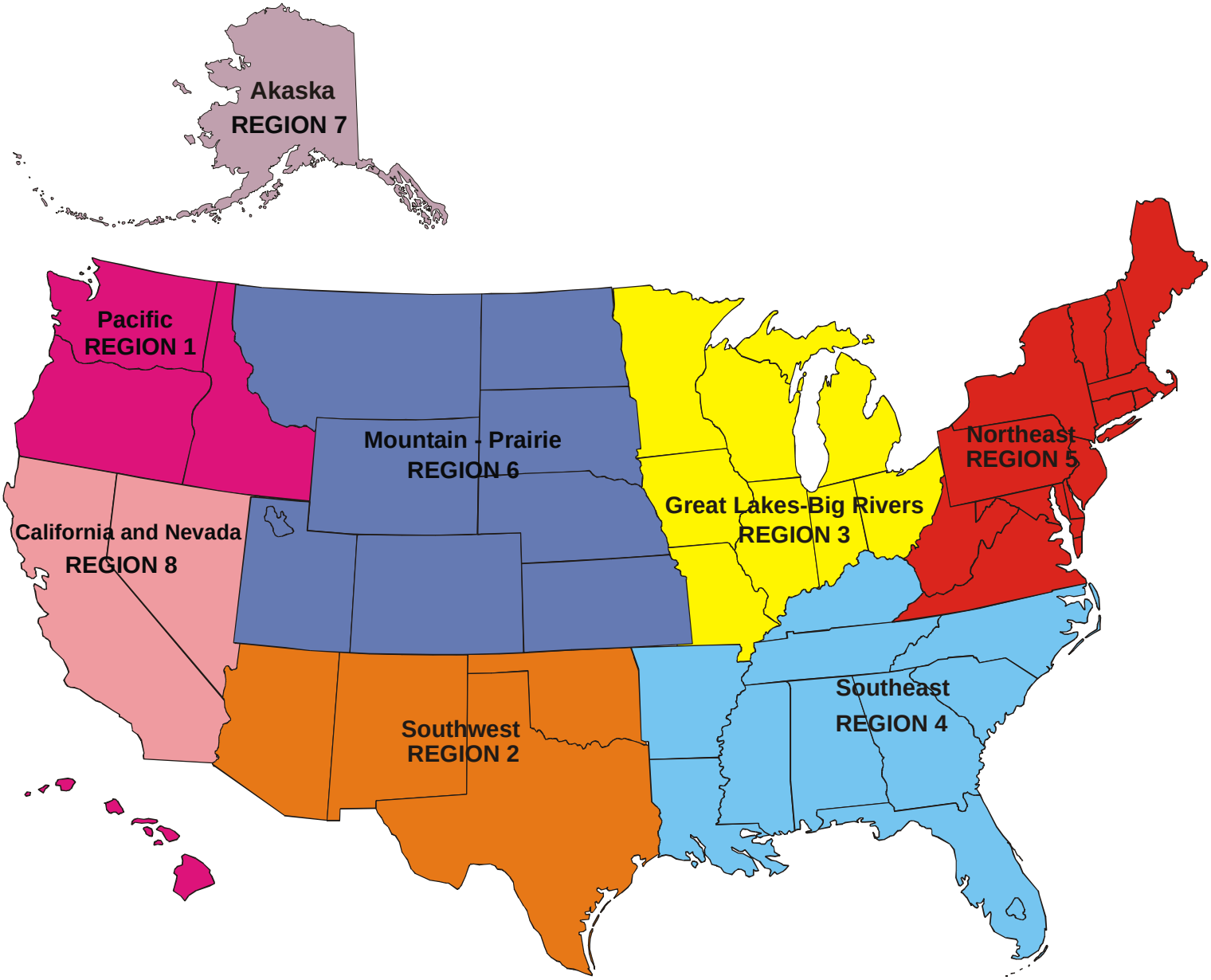
U.S. FISH & WILDLIFE SERVICE
Regional Map



PACIFIC REGION

The 2003 fire season lasted into the 2004 fiscal year as the San Diego Fire Storm consumed portions of the San Diego and Hopper Mountain National Wildlife Refuges, with Hopper Mountain burning over twice in the same year. However, despite continuing drought and predictions of another severe season, the 2004 fire season turned out to be average in California and the Great Basin. The State of Washington, however, experienced an extremely busy fire season; 36 Type I and Type II Incident Management Teams were briefed, transitioned, and utilized during the season.

Due to the large fires in central Washington, the Leavenworth National Fish Hatchery had to be evacuated twice, and the ES office outside of Wenatchee, Washington, was evacuated once. The Leavenworth Fish Hatchery was used as an ICP for several Type I Incident Management Teams.

Severity requests were received and processed beginning in June, and some stations remained in severity for the duration of the fire season.

The Region experienced three large fires on different refuges requiring Interagency Incident Management Teams. Our refuge firefighters and field personnel were instrumental in protecting structures and resources during these incidents.

In 2004 the Region funded a Single Engine Air Tanker (SEAT) based out of Richland, Washington. The SEAT worked solo on several fires on Federal (FWS, BLM, and USFS) and State protected lands. The SEAT worked piggy-back with a USFS-funded SEAT on many other Federal fires. During the 2004 fire season, the SEAT, which has a 500-gallon capacity, dropped an estimated 10,000 gallons of fire retardant during fire suppression operations.

The Region hired two employees to help staff an interagency engine and fill out several interagency 20-person hand crews based on Federal lands in Washington and Oregon. Our employees responded to over 20 fire calls on Federal and State protected lands.

For the second year in a row, the Region provided rotating crew members to staff and train with an interagency Helitack crew based in Las Vegas, Nevada.

This has been a year of transition for the Region. The Regional Office and the California/Nevada Operations Office (CNO) are in the midst of a re-organization. Functions such as fire management planning, fire ecology, prescribed fire oversight, and fire technical support will probably still serve the entire Region, but the details have not been worked out yet.

Region 1 accomplished approximately 32,000 acres of fuel treatments in Hazardous Fuels Reduction (HFR) and approximately 15,800 acres of fuel treatments in Wildland Urban Interface (WUI). These projects were conducted on refuge and hatchery lands, as well as on adjacent private property.

Contracting fuels treatments continued to be a major emphasis and the Region

continued to streamline the process. However, budget reductions threaten to limit contracting opportunities.

Approximately 90 percent of all WUI projects and 30 percent of HFR were accomplished through contracting. Region 1 continues to exceed the National Fire Plan (NFP) goal of contracting 70 percent of the fuels reduction project workload. The Region has identified additional projects, but they remain on the table waiting funding.

The Idaho State Fire Plan Working Team, which includes active participation from Region 1, received the 2004 National Fire Plan Award for Excellence in Collaboration. This is the second year in a row that regional fire employees were recipients of a NFP award.

The Rural Fire Assistance Program (RFA) continued being a big success that was well received by rural communities throughout Region 1. The Region distributed $150,000 to 18 fire organizations in Washington, Idaho, Oregon, and California.

Emergency stabilization and rehabilitation (ESR) plans were submitted for the damaging fires on refuge lands. ESR funding continued on nine fires from the previous two years. Progress in prior-year ESR plans in support of severely damaged resources resulted in completing multi-year rehabilitation efforts. The resource damage continues to be of concern for refuge managers throughout the Region.

Three additional refuge complexes were added to the Regional Fire Effects Monitoring Program in 2004. Frontier Natural Resource Consulting was contracted to assist refuge staff with plot installation and data collection. Regional Office staff assisted with program planning, prescribed burn monitoring, and post-burn data collection.

Region 1 completed approximately 30 Fire Management Plans in 2004. All 126 administrative units which require a Fire Management Plan are now covered under a total of 90 plans. The Regional Office is currently developing a detailed template which will be used to begin converting the older plans into the new Interagency Fire Management Plan format beginning in 2005. Other challenges facing the Region for 2005 include the continued and intensified integration of FPA into fire management planning.

Region 1 personnel continued serving on numerous interagency fire teams and working groups including the following: Pacific Northwest Wildfire Coordinating Group (WCG); Great Basin WCG; Big Island WCG; Pacific Northwest Wildfire Training Working Team; Idaho State Fire Plan Working Team; LIFC Training Team; PNW Prevention Working Team; NWCG Ops Standards Working Team; Great Basin Ops Working Team; National Fire Plan Grants Working Team; Washington Incident Management Team GEO Board; NFLT; National Firebase Working Team; National WUI Module Working Team; FWS Fire Mgt GIS Subcommittee; FPA Working Team; Fire Ops. Group Working Team; and the Fuels Working Team.

Additionally, the Region continues to represent the Service on the Technical Fire Management (TFM) national steering committee. The first Region 1 student successfully completed TFM in 2004. Through Region 1 efforts the Service now has six fire-funded people attending TFM.

The Region experienced several vacancies in key positions in 2004. The Regional Fire Management Officer (FMP), the Regional Prescribed Fire Specialist, the Regional Fire Ecologist, and three field FMOs left the Region. One field FMO position and the Fire Ecologist position remain unfilled. The Regional Office suffered the loss of their fire administrative assistant to cancer. Although the position has been refilled, the loss has not been replaced.

Staffing, recruitment, and retention continue being of concern throughout Region 1; loss of key individuals and finding qualified replacements continues to be a challenge. As with other Regions, certain locations are more difficult to staff with qualified personnel.

The challenges in fire program management continue to grow in Region 1. Fallout from recent fire fatalities, contracted resource issues, shortages of highly qualified fire personnel, training needs, continued drought, interagency planning, and decreasing budgets combine for a rigorous, demanding situation in the West. Safety of the public and our firefighters is still the primary issue to keep in focus.

SOUTHWEST REGION

The 2004 fire season started in January with wildfire activity continuing through the winter months in the Southern and Eastern most areas of the Region along the Lower Rio Grande River and Oklahoma. Arizona, New Mexico, and West Texas continued to be affected by extended drought, yet wildfire occurrence was low in 2004. In total, Southwestern State and Federal agencies responded to less than 1000 fires burning 156,000 acres; 50 percent of the wildfire activity experienced in 2003. Region 2 personnel assisted national firefighting efforts filling 213 assignments with employees from Texas, Oklahoma, Arizona, and New Mexico totaling 1,957 person days on large fire support. In addition, Region 2 provided leadership in safety, logistics, and operational oversight assisting Southern area refuges with recovery efforts following the historic hurricane season of 2004. Region 2 employees filled 42 positions, providing more than 350 person days of support in the recovery effort. While these interagency support actions are notable, Region 2 Refuges were also busy with wildfires on Service lands. With fires threatening our boundaries, these suppression actions totaled 399 fires with 18,975 acres burned.

The Service requested 30 days of severity funding in 2004. Request for severity covered the month of August, supplementing local suppression resources with helicopter support along the Lower Rio Grande in Texas. This helicopter was invaluable in controlling new starts in the first burning period thus reducing extended commitment of suppression resources needed for ongoing initial attack. Severity use was off-set in 2004 with the reprogramming of Burned Area Rehabilitation funds to the Readiness and Program Management funds authorized by the Office of Wildland Fire Coordination. Region 2 received $194,159 of the available funds allowing the staging of additional firefighting and equipment to provide seven-day staffing in high fire danger areas such as South Texas, New Mexico, and Arizona.

Refuges suppressed 31 wildfires fires in Arizona, 4 in New Mexico, 27 in Oklahoma, and 231 in Texas. The largest fires on or threatening Service lands were the 5,150-acre Unit 1 fire on McFaddin NWR, 300-acre Island fire on Imperial NWR, and the 2,000-acre Fort Sill fire on the boundary of Wichita Mountains NWR.

Despite above average rainfall on the Gulf Coast of Texas and dry conditions in Arizona and New Mexico, the hazardous fuels and wildland urban interface programs exceeded targets taking every opportunity to complete prescribed burns and mechanical projects. Region 2 treated 91,545 acres of hazardous fuels and 28,425 acres in the wildland urban interface that reduced the fire threat to local communities in FY 2004. Region 2 also provided considerable support to our neighboring jurisdictions and other Regions in the planning and execution of prescribed fires. The Region hosts a prescribed fire module located at Balcones NWR outside of Austin, Texas that completed 22 projects on their home refuge and assisted with an additional 44 projects across 6 states totaling more than 48,000 acres.

Region 2 had 3 Burned Area Emergency Stabilization projects in 2004; 1 in Texas at the Lower Rio Grande NWR and 2 in Arizona on the Havasu NWR and Cibola NWR. The Burned Area Emergency Stabilization program has proven an

invaluable tool for both the immediate stabilization of fire areas and rehabilitation of fire damaged habitats on refuge lands.

A continued emphasis was placed on research and monitoring in the Region in 2004. Research projects in the Region include Fire Effects on Marshland Elevation Change, Fire Risk Assessment for Golden Cheeked Warbler, Induced Heterogeneity on Oklahoma/Texas Rangelands: Effects on Fuels, Fire Behavior and an Invasive Species, and Fire Effects on the Yuma Clapper Rails and California Black Rails. Two fire program monitoring plans were approved in Region 2 in 2004 at Texas Chenier Plains NWRC and Texas Mid-Coast NWRC; an additional four plans are in draft for Aransas/Matagorda Island NWR, Buenos Aires NWR, Attwater Prairie Chicken NWR, and the New Mexico NWRs. The commitment of Refuges supporting research and development monitoring programs represents the dedication of Region 2 to evaluate the effectiveness of fuels treatments to improve habitats on Refuge System lands.

Rural fire assistance continued to play a critical role in providing needed training and equipment to local fire departments in 2004. The Region distributed over $149, 000 to 34 fire departments in Arizona, New Mexico, Oklahoma, and Texas. Refuges in Region 2 are remotely located and are dependent on small rural fire departments for wildfire suppression assistance. These departments often have insufficient funds to provide needed safety equipment and required training which limits their use on refuge wildfires. The funds granted to the fire departments were prioritized for buying personal protective equipment and providing training which led to recruitment and hiring opportunities from motivated volunteer firefighters. Funding for this program limited grants to only a small percentage of our cooperators. Future funding increases to the program will improve firefighter safety, increase suppression capabilities, and provide avenues for cooperation and collaboration with our local governments.

Region 2 remains active with interagency support and cooperation in the Southwest Area. We cost share the Southwest Coordination Center Manager position with the Bureau of Indian Affairs, Bureau of Land Management, National Park Service, and Forest Service and fund the Chief of Predictive Services at the Southwest Coordination Center. Region 2 also hosts the Interior Coordinator at the Texas Interagency Coordination Center and provides funding for shared dispatch positions in four coordination centers in New Mexico and Arizona.

Training continues to be a great success in Region 2 in 2004. In Texas, the Service partnered with the Texas Forest Service, US Forest Service, National Park Service, and local fire departments to present two fire training academies. Combined these academies trained more than 1,000 firefighters in 40 subject areas of operational and fire support position. The Service plays a critical role in providing instructors for operations courses bringing instructors with the depth of experience in multiple fuel types and geographic areas to provide quality training. Region 2 also partnered with Federal and State partners in Arizona and New Mexico to present a similar academy in Prescott, Arizona, providing training for the interagency fire community. Region 2 Service fire staff continues to participate as instructors at zone fire academies, interagency sponsored courses, and provided the annual refresher and developmental training to Refuge System employees.

Additions to the regional fire management staff in 2004 included Jason Cole, Wildland Urban Interface Coordinator, Texas

Midcoast NWRC; Russ Babiak, Prescribed Fire Specialist; and Mike Bland, Fire Operations Specialist, Arizona Fire Management District. Personnel moving on in 2004 included Jeff Whitney, Regional Fire Management Coordinator; Mike Davis, New Mexico District Fire Management Officer; and Mike Hayes, Texas MidCoast Fire Management Officer.

GREAT LAKES - BIG RIVERS REGION

The Great Lakes and Big Rivers Region, Region 3, experienced a year of excellent fire program growth and accomplishment in 2004. It was a year highlighted by key changes in multiple areas of the fire program.

The Regional Fire Management Coordinator position was filled with the selection of Dave Lentz. Dave joined the Region from the National Park Service in February. He quickly settled in and has been actively growing and consolidating the many program accomplishments, goals, and objectives of the regional fire program.

Weather was the major factor affecting all fire operations during the spring, summer, and fall. Last fall, a continued drought in the upper Midwest created Red Flag warnings in many areas, including Southern Minnesota, prompting a warning by the Minnesota Interagency Fire Center on October 20, 2003. These warnings are taken very seriously as October is historically the most devastating month for catastrophic fire in the Lake States region. After a relatively minor winter snowfall, the drought conditions again persisted into the Spring in the upper Midwest. This caused the Regional Office to curtail prescribed fire activity on April 8, 2004, in a large portion of the Region until adequate precipitation occurred several weeks later. Prescribed fire activity resumed in the Eastern and Southernmost portions of the Region shortly thereafter. However, drought conditions were not the only factor to affect the fire program.

Extreme weather events in Alaska (with the warmest summer on record) coupled with three hurricanes battering Florida and the Southeast contributed to extreme weather conditions in the upper Midwest. An uncharacteristically cool and moist summer was experienced throughout the Region. For example, at the Minnesota Valley NWR and the Regional Office experienced the coolest and wettest summer on record for the period of June through August based upon National Weather Service data. This period was also the coolest on record for Illinois, Indiana, Missouri, and parts of Iowa. The remainder of the Region was below normal for temperature.

The extreme weather behavior did not subside with the onset of September. In fact September 2004 was warmer and drier than normal throughout the Region. For the first time in recorded weather history, September was warmer than August in Minnesota. Michigan and Indiana experienced their second driest September since record keeping began in 1895. Wisconsin also endured a warmer and drier than average September. The remainder of the Region was essentially above normal for temperature for the month. Thus, these conditions challenged our fire managers to accomplish project work and meet targets.

For 2004, there were 100 wildfires burning approximately 3,740 acres within Region 3. Staff from Minnesota Valley NWR, Litchfield WMD, Seney NWR and the Regional Office assisted metro fire agencies with fire suppression efforts on a large (2000 + acre) State of Minnesota and municipality (Eagan, MN) complex interface wildfire located adjacent to the Minnesota Valley NWR. Thankfully, wind conditions remained favorable and the fire never jumped the Minnesota River onto NWR property.

Additional large fire incidents staffed by regional Service employees included the Louisberg Grade Fire (State of Minnesota); a 7,330-acre fire on April 14, 2004 whose

type II Incident Management Team was hosted by the Big Stone NWR and the Sellin Fire (Big Stone NWR); and a 354-acre lightning caused wildfire along the Minnesota River Valley.

The 2004 prescribed burn program was a challenge to implement in most areas of the Region due to the varied weather conditions. Region 3 completed 253 percent of planned Hazardous Fuels Reduction (HFR) Treatments in FY 04. The planned acreage was 24,607 acres while the actual HFR accomplishment was 62,354 acres. These accomplishments included 20,074 acres of prescribed fire treatment of Wildland Urban Interface (WUI) acreage, and 42,280 acres of prescribed fire treatment of HFR acreage. A total of 159 prescribed fires were conducted within the Region in 2004. Assisting the prescribed burn program were National Park Service (NPS) Fire Use Modules. Reciprocal assistance was provided back to the NPS through the use of our engine modules.

One escaped prescribed burn resulted in the Fish Fire wildfire incident on Big Stone NWR during the period May 6-8, 2004. This unfortunate escape was largely due to extremely high winds (gusting to 35-45 mph) that accompanied a weather front passing across the refuge on the day after the prescribed fire. The Service staff working this fire performed admirably under adverse conditions.

Region 3 has joined with Region 5 and the USGS to team on an outstanding refuge fire ecology study to determine the effects of prescribed fire on cattails in marshes along with the effects on invertebrates and subsequently birdlife. The questions to be asked and answered will hopefully provide a windfall of knowledge and treatment protocols and suggestions for fire and refuge managers across the northern United States. This is a tremendous opportunity to utilize the expertise of the USGS staff professionals to help answer some tremendously complex wetland management concerns that will help set a standard for future habitat management incorporating fire and fire ecology.

The continued use of the Indefinite-delivery, Indefinite-quantity (IDIQ) contract as developed in Region 3 enabled the efficient and timely ordering of Marsh Master tracked vehicles for Minnesota Valley NWR and Detroit Lakes WMD. This will be an indispensable vehicle for firefighting purposes on these refuge complexes with enormous WUI concerns on their borders.

More than 140 Region 3 Service fire personnel were mobilized to out-of-state wildfire incidents. Over 20 staff participated in a fire severity engine detail to the Arizona strip with the Bureau of Land Management in St. George, Utah. This provided an excellent opportunity for regional staff to utilize their engine and water handling expertise while gaining additional hands-on training.

Region 3 distributed $239,536 through the Rural Fire Assistance (RFA) Program. This funding purchased personal protective gear, equipment, supplies and fire training, and was distributed to 42 rural fire departments in eight states. This greatly assists the local fire departments adjacent to NWRs and WMDs to expand their fire fighting capabilities. Further, it is a great public outreach educational tool that expands our network of local firefighters available to respond to rural incidents.

Funding was obtained to acquire three permanent Remote Automatic Weather Stations (RAWS) within the Region. The new RAWS will be located at Big Stone NWR, Litchfield WMD and Rice Lake NWR. These three RAWS will greatly assist with weather data collection and weather history at all three sites so critical

for prescribed fire management. The purchase of the three stations is in addition to the ten RAWS currently in operation within the Region.

The new Federal government initiatives of Fire Program Analysis (FPA) and Interagency Fire Program Management (IFPM) have required a shift in emphasis and program priorities. Region 3 is committed to a pro-active approach for both programs to provide the best leadership and direction to the field as possible.

With the exception of Glacial Ridge NWR, fire management plans are in place or near completion for every location within the Region. Only three locations remain in the draft stage, with two of them in the final stages of approval. The third location, Detroit River NWR (a newly created refuge in 2003) has just begun the planning process. Glacial Ridge NWR, the newest refuge within the Refuge System, was just recently christened this fall. It is located in Northwestern Minnesota and is in the developing stages of its planning efforts.

Brian Winters, Prescribed Fire Specialist at Big Oaks NWR, was commended for his participation in being awarded a National Fire Plan Group Award in Reno, Nevada, on March 2, 2004. Congratulations to Brian for his efforts in assisting with the development of an Interagency Coordination Center in Indiana.

In conclusion, 2004 was a year of great accomplishment for the Region 3 fire program. This sets the stage for a challenging year ahead given the tremendous program changes and initiatives at the national level.

SOUTHEAST REGION

The Southeast Region had 82 wildland fires covering 1,455 acres in 2004. The largest fire occurred in the Sabine NWR and totaled 350 acres. A total of 382 treatments were conducted for a total of 144,778 acres (national and regional record). There were 359 prescribed burns accomplished for a total of 142,797 acres.

Extreme wet conditions in the Region affected the timing of certain prescribed burns, but the Region achieved approximately 162 percent of the targeted prescribed burns. These wet conditions continue to provide a management challenge to balance the prescribed burning and the wildland fire suppression programs.

The Region was moderately busy during the spring fire season. The majority of the fires took place in Louisiana, North Carolina, and South Carolina. There were a total of 82 wildland fires, of which only 7 became extended attack fires. There was a slight increase to 2003's amount of fires, but still lower compared to previous years which can be attributed to a historically aggressive prescribed burning program as well as a wetter than normal year.

In previous years during the spring and fall fire seasons, the southeastern states applied for and received FEMA Fire Assistance grants. This year there were no applications for fire, but there were numerous requests for FEMA disaster assistance this year due to the hurricanes.

Seven stations conducted prescribed burns over 77,169 acres even with the extreme wet conditions. These refuges accounted for 53 percent of the Refuge System's prescribed burn acreage and 47 percent of the number of burns, as listed in the table below.

Refuge	# Burns	Acres
Merritt Island NWR	24	17,002
Savannah Coastal Refgs	32	11,491
St. Marks NWR	57	11,035
Loxahatchee NWR	6	9,924
Alligator River NWR	10	9,899
Piedmont NWR	16	9,085
Okefenokee NWR	25	8,733

Region 4 is within the Southern Area Geographical Area and 2004 can be described as a year unlike any other year -- fire or otherwise. Savannah Coastal Refuges firefighters assisted with 34 State fires in March. Due to the magnitude and duration of the fire season, an interagency short team was ordered. This consisted of members from Mississippi Sandhill Crane, Sabine, and Southeastern Louisiana NWRs, as well as the Texas Forest Service, NPS, and United State Forest Service (USFS) individuals. The refuges and the IMT were the lead initial attack force on the State's Racetrack fire. This fire consumed one home in the Levy community. The fire behavior was extreme and not often seen on fires in the South Carolina Low Country. The relative humidity fell to the low teens, and fire activity was strong, frequent, and violent. For the Savannah Coastal NWRC, the fire season endured through the end of December, with the last extended fire being "Joe's fire" which was 100 acres and started by lightning in the Wassaw NWR. This fire occurred in July. Once again, cooperation and assistance was rendered by sister refuges and the USFS Savannah River Fire Crew.

As fire season subsided for the spring and hurricane season was beginning, the fire staff from the Region turned its attention, as did everyone in the southern area, to the incredible hurricane season. Four major hurricanes (Charley, Frances, Ivan, and Jeanne) pounded the Southeastern United States during August, September and October. The next 12 weeks were exclusively devoted to rendering assistance to refuges impacted by the various storms. The majority of employees' time was spent in Florida. Both coasts of Florida were affected by the numerous hurricanes. The South Carolina and North Carolina coasts were also affected. Terri Jenkins served as the IC for the first hurricane (Charley) that struck the Gulf side of Florida, and also the following hurricanes that struck Florida. She and her team devoted approximately 5,000 hours for the aid to other refuges, Bon Secure NWR and Choctaw NWR were devastated by Hurricane Ivan. Tony Wilder and Jim Durrwatcher were the ICs on this incident and had numerous individuals, from their staff, including many other individuals from various refuges, also helping with the clean-up and assistance of both these refuges. Their team consisted of approximately 50 individuals. This team was assembled per the request of the Region 4 Fire Management Coordinator for the possible impacts from Hurricanes Ivan and Jeanne. The team was activated on September 15 for response to Hurricane Ivan, which came ashore east of Gulf Shores, Alabama on September 16. The team worked over 2 weeks removing thousands of cubic yards of debris from Bon Secour NWR and cleaning downed trees from several miles of refuge roads at Choctaw NWR.

At least 20,000 work hours were accomplished by quite a few refuge cities, fish hatcheries, and ecological service stations devastated by the hurricanes. Florida refuges were also aided by other refuge FMOs; i.e., Tony Wilder, Jim Durrwatcher, and numerous other refuge staff from all refuges in Region 4 and other Service Regions. Fire Program Management Technician Bunk Twist and Refuge Administrative Assistant Mary Duden from Mississippi Sandhill Crane NWR served on Terri's Type 3 Team as Plans and Finance/Procurement to support the response efforts. After the fourth hurricane (Jeanne) slammed Florida, Mark Ruggerio served as the IC for a Type II IMT to assist with all the devastation. This team assisted by providing emergency services to building demolition, providing drinking water, and heavy equipment for emergency clean-up.

employees within the Region, as well as some interagency assistance from other Regions. It was an unprecedented effort by all, which will be remembered for a long time.

The western and southwest fire season was very minimal. Alaska was the state that needed the most assistance this year. Fred Wetzel, the Okefenokee NWR FMO, assisted Region 7 on a 10-day detail in Fairbanks, Alaska. Region 4 provided numerous other positions and firefighters that went to Alaska on 14-day assignments. There were other refuge employees who served on 14-day assignments and/or details to Montana, South Dakota, and Idaho. Tony Wilder, FMO at Mississippi Sandhill Crane NWR, went to Cape Romain NWR on an extended attack as ICT3 with Brian Schaffler as trainee ICT3. From there Tony Wilder responded with the SA Type I Red Team as OSC1 to the Apalachicola National Forest. Bailey and Brock saw activity on

both fires with a Type 6 engine. The need for refuge employees was less than previous years due to the need for assistance at the refuges because of the hurricane destruction.

A total of 51 fire departments were awarded Rural Fire Assistance (RFA) grants for a total of $188,075 in 2004. Seven states and Puerto Rico received funding from this program in Region 4. This RFA funding will pay for personal protective gear and basic wildland fire training classes.

The annual FMO meeting was held in Savannah, Georgia, during the month of January. This meeting was a joint meeting/workshop held with the Southern Region FMOs from the Forest Service and National Park Service.

Jennifer Adams transferred from Savannah Coastal Refuges to the Regional Office where she is presently a SCEP student working on a Master of Forestry degree at the University of Georgia. She serves as a GIS specialist and is the Southeast Region's Fire Program Analysis (FPA) representative. Ginger Corbin came to Savannah Coastal Refuges in June as a Career Seasonal Forestry Tech. Kenneth Powell was hired at Pocosin NWR as Forestry Tech/firefighter. Larry Wade from Pocosin NWR transferred to California in a non-fire Wage Grade position. Donald J. Schrieber was hired at St Vincent NWR on a 6-month temporary position. Barton Rye transferred to the St. Marks NWR from the Florida Department of Forestry. Greg Suszek transferred in November from St. Marks NWR to Alligator River NWR as their Prescribed Fire Specialist. Jeremy Loney from St. Marks NWR, was called up to active duty during 2004 and is currently serving in Iraq. Dave Cann, WUI Specialist from Mississippi Sandhill Crane NWR, resigned in March and moved back to the private sector. Greg Askins, PFS at Mississippi Sandhill Crane NWR, transferred to the Savannah Coastal Refuges in July as their PFS. Brian Schaffler left his Wildland Fire Specialist position at Mississippi Sandhill Crane NWR in July and transferred to the Huron-Manistee National Forest as an AFMO. Sami Gray transferred from the S.E. Louisiana Refuges to the Mississippi Sandhill Crane NWR, where she received a promotion to the PFS position. Anthony Snow transferred from the San Juan National Forest in Colorado to the Mississippi Sandhill Crane NWR as Wildland Fire Specialist. Jeremy Keller, Regional WUI Specialist, transferred back to the field where he will be replacing Dave Cann as the WUI Specialist at Mississippi Sandhill Crane NWR. Jeremy is presently in the U.S. Navy Reserve unit that was activated in August 2004 and his orders carry him through April 2005.

Pat Boucher, FWS Assistant Area Coordinator, continues to serve as the ROSS coordinator for the Southeast Region. Pat was extremely busy during the fall months tracking all resources for the Service during hurricane responses were accounted for. Pat also kept track for the Regional Finance staff information regarding FEMA for reimbursable items. She processed 4 FEMA hurricane orders, 16 Type I teams, 6 caterer and shower units, 16 buying teams and IBAs, plus numerous other resources that supported Florida's recovery and distribution of water and food.
She also was lead instructor of Dispatch Recorder D-110 training session in November at Pocosin Lakes NWR.

During the hurricane season, 15 Service Refuge Managers and regional employees went on a community response effort overseen by FEMA. This effort distributed flyers at distribution centers, provided bereavement information and counseling, and assisted folks that were applying for FEMA assistance.

The Okefenokee NWR hosted S-215 Fire in the Urban Interface course in March, and the Pocosin Lakes NWR hosted the S-212 Wildland Power Saws course and the D-110 Dispatch Recorder training.

The Southeast Region continues to support the National Incident Management Teams (IMT) and has several employees that are on the two Southern Area Type I IMTs. The individuals that serve on these teams are: Bob Eaton (DIVS and SOF1(T)); Tony Wilder (OSC1 and ICT2); Jim Durrwachter (OSC1); Glen Stratton (DIVS); and, Dave Brownlie (SITL and PSC1(T)).

In closing, there were three individuals that were recognized for their outstanding contributions to the Southeast Region=s Fire Management Program during 2004. The following Regional Awards were presented at the annual FMO Meeting in February 2005: Tony Wilder - Regional Fire Management Leadership Award; Terri Jenkins - Regional Prescribed Fire Management Award; and, Kelley Van Druten - Regional Fire Prevention Award.

NORTHEAST REGION

The calendar year started quickly with several marsh wildfires on or adjoining Blackwater NWR. Refuge staff fought a total of 21 fires from January through March with a combined area of almost 6,800 acres. Most fires were on adjacent Maryland State lands, with some in the wildland urban interface (WUI). Service staff also assisted the State of Delaware in suppressing a woodland fire.

An unusually early lightning strike on North Carolina Dismal Swamp State Park resulted in a 300-acre timber fire which burned from May 21 to June 15. This fire started on State land but quickly burned on to the Great Dismal Swamp NWR. Control was difficult due to the pond pine pocosin fuel type, extensive blowdown from Hurricane Isabel in September 2003, and the prevalence of deep organic soils. This fire provided an unusually high degree of complexity due to two ownerships (the Service and the State of North Carolina), two State jurisdictions (Virginia and North Carolina), potential critical species habitat (red-cockaded woodpecker), and proximity to the Hampton Roads metropolitan area. The fire was managed first as a Type 4 initial attack, then progressed to a Type 3 managed by the local North Carolina Forest Service District, and finally as a Type 2 managed by two successive North Carolina Forest Service Incident Management Teams (Hendrick and Pearson). Control and final extinguishment was accomplished only through the use of high volume lift pumps and complete flooding of the area. This was a first for the Refuge in several respects, including hosting a Type 2 IMT, hosting an incident base camp, and use of a CL-215 air tanker scooping from Lake Drummond. The incident was a beneficial learning experience for Refuge staff, and the IMT was very complementary to the Refuge for the assistance and hospitality provided.

Although the Northeast experienced dry conditions through the winter and early spring, by late spring regular and abundant rainfall returned, which prevented a summer or fall fire season. Unfortunately the precipitation dampened prescribed burning accomplishments, particularly in New England. A total of 25 burns for 175 acres were done in the zone, which was only half the anticipated burn target. The zone turned to mechanical methods and managed to treat an additional 320 acres to maintain shrub-grass community habitats, and another 37 acres were chemically treated at the Rhode Island NWRC to curtail Phragmites. Prescribed burn assistance went to The Nature Conservancy, where personnel from Rachel Carson NWR participated in two burns at Kennebunk Plains (82 acres) benefiting the morning blazing star, a State of Maine endangered species. New York and New Jersey refuges conducted 14 burns for a total of 337 acres, but as in New England mechanical treatments were employed which enabled the central zone to exceed its treatment target for the second year. Blackwater NWR fire staff managed to burn approximately 10,500 acres of marsh between January and March 15. In the south zone, grassland burns totaling 510 acres were conducted at Rappahannock, Back Bay, and Patuxent NWRs in February and March. Additional grassland burns were completed in the fall at Canaan Valley NWR, and 200 acres of marsh and impoundment burns were implemented at Back Bay NWR and the adjoining False Cape State Park. Burn assistance was provided to Mackay Island NWR throughout the year, and to Nature Conservancy and Virginia Department of Conservation and Recreation burn projects.

The WUI program treated approximately 9,371 acres with a combination of prescribed fire, mechanical and herbicide

treatments. Approximately $436,000 in project funds were executed to accomplish these treatments, as well as several planning efforts and equipment acquisitions to support future WUI projects. Work took place at Blackwater, Forsythe, Cape May, Rachel Carson, Great Dismal Swamp, Prime Hook, Eastern Virginia Rivers, Long Island, Great Swamp, and Canaan Valley NWRs. The WUI program exceeded the 50 percent contract performance measure by contracting approximately 95 percent of its project dollars. In addition to using commercial vendors, work was contracted with U.S. Geological Survey, The Nature Conservancy, New Jersey Forest Fire Service, and the Canaan Valley Fire Department in West Virginia.

The Rural Fire Assistance (RFA) program awarded 38 grants worth $149,401 to fire departments in Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New Jersey, New York, Pennsylvania, Delaware, and Virginia. WUI Specialists Gerald Vickers and Bob Harris conducted eight post-grant compliance visits to fire departments in New Jersey, West Virginia, Virginia, and Maryland, and 8 to fire departments in Maine and New York respectively. Within the Region, 172 fire departments have been identified as eligible to participate in the RFA program.

Regional Fire Ecologist Gary Kemp transferred in May to work as FMO with the National Park Service at Bandolier National Monument in New Mexico. The Region replaced Gary with Mike Davis, formerly with Bosque Del Apache NWR in Region 2, under the new position title of Regional Prescribed Fire Specialist. Mike started work in October and his experience both in fire ecology and prescribed fire operations will be a great asset to the Region. Other personnel changes included hiring Jim Forsythe as a GS-5 career seasonal Technician at Great Dismal Swamp NWR, James Adams in a similar position at Blackwater NWR, Blair Mace at Wallkill River NWR, Chad Becker at Sunkhaze Meadows NWR, and Brandon Harriman at Moosehorn NWR. Stephanie Fournier was hired as a permanent full-time Dispatcher at the Northeast Coordination Center in Augusta, Maine.

WUI Specialist Gerald Vickers served as a member of a Northern Rockies Type 2 IMT as Safety Officer, and was dispatched to assist with Hurricane Frances recovery efforts. Gerald also received assignments as a Type 1 Safety Officer Trainee on the Fischer Complex in Washington and Hurricane Ivan recovery efforts. Central zone FMO Mike Durfee worked in Alaska on two Division Supervisor assignments which were later converted to Field Observer, Fire Behavior Analyst Trainee, and Task Force Leader assignments. Blackwater NWR FMO Joe Krish went on two Helibase Manager assignments to the Northwest and Southwest. Regional WUI/RFA Coordinator Steve Hubner participated in Hurricane Ivan recovery efforts as COTR. Region 5 mobilized two 3-person engine crews to Ruby Lake NWR in Nevada on severity details thanks to the efforts of North Zone FMO Vollick. WUI Specialist Bob Harris was detailed to Boise as EDSD for the Dollar Fire.
Gerald Vickers led the Region in training initiatives, serving as Lead Instructor for four S-215 sessions for the Delaware Forest Service, West Virginia Forest Service, Mid River Fire Academy in Missouri, and the New York Fire Academy. Gerald was also Lead Instructor for S-190 in Maryland and served as Coach and Simulation Operator for S-420 Command and General Staff in Harrisburg, Pennsylvania. Central Zone FMO Durfee served as instructor for M-410 Facilitative Instructor in Wisconsin, S-215 at the Missouri Academy, and was a sponsor and coordinator for the New York Wildland Fire and Incident Management Academy. In

New England, FMO Vollick and PFS John Meister served as chainsaw instructors for three separate sessions in Region 5. Fire staff participated as Lead or Unit Instructors for National Park Service sponsored training at Acadia and Cape Cod National Parks, teaching Basic Firefighter and Wildfire Powersaws. Annual refresher training was provided by all FMOs, including six in New England, three in the Central Zone, one at Blackwater NWR, and one in the South Zone.

Three Region 5 FMOs provided subject matter expert input for NWCG course development. Joe Krish served on the Helibase Manager revision team, Mike Durfee is on the S-244 Field Observer team, and Rick Vollick serves on the S-290 Intermediate Fire Behavior team. Several FMOs also serve on regional, geographic area, or FWS-specific training or working teams.

Regional Fire Biologist Laura Mitchell assisted the Region 5 fire program in a number of areas including development of a Long Island fuels treatment and pine barrens restoration plan, information transfer to refuge biologists and fire staff as needed for various technical issues, input and review of refuge Fire Management Plans and Comprehensive Conservation Plans, and prescribed burn project evaluation.

The process of developing or updating station Fire Management Plans continued throughout 2004, bringing the Region closer but not quite attaining the Department goal of completing 100 percent of all plans by the end of the year. Nearly all stations had draft plans completed, but several were still waiting on final approval at the end of 2004. Refuge Program Specialist Catherine Hibbard provided invaluable assistance by writing Fire Management Plans for all Region 5 Fish Hatcheries (10 Plans covering 12 Hatcheries).

MOUNTAIN-PRAIRIE REGION

Early in 2004 it appeared that the Region would be looking at another big fire season. However, most parts were blessed with wetter weather once May rolled around. Areas in the Northern Rockies went into the spring with record breaking ERCs, but at the end of the year the Montana/Wyoming/Utah zone experienced one of the mildest fire seasons on record -- only 10 wildfires for roughly 713 acres.

The exception to the Region's damp weather was the North Dakota/South Dakota zone. The fire season was challenging for most of the refuges in the zone due to the continuation of an unusually dry fall and winter. Drought conditions have dominated much of the area since 2002 and resulted in the need for significant increases in holding resources, numerous county wide burning bans, additional contingency forces, more intensive drought monitoring and reduced prescribed fire activity. The ND/SD zone responded to 24 Service wildfires burning a total of 923 acres of Refuge System lands.

No major severity needs were incurred in the Region, which allowed personnel the opportunity to enhance their training and experience by serving on agency and interagency details to the rest of the country for a change. There were two highlights of the year in this regard:

- The formation of the Mid-Plains Interagency Type 2 IA Handcrew. Formal agreements as to its staffing and management were developed, and all partner agencies contributed funding to equip the crew. Partners in this effort included the refuges in the Colorado/Kansas/Nebraska zone plus Federal and State partners in Kansas, Nebraska, and Colorado. The purpose of the crew is to serve as a varied experience platform as well as developing leadership skills for Region fire fighters. They were dispatched three times in 2004 and received rave reviews.
- Development of a "Call When Needed" Fire Use Module (CWN Module) put together by FMOs in the ND/SD Zone. This module was developed in anticipation of the new IFPM standards and was designed to maximize the prescribed and wildland fire experience and training opportunities for fire management program personnel while assisting other agencies. The primary mission of the Dakota 12 CWN Module is to meet the goals of the National Fire Plan by providing hazardous fuel reduction in the Wildland Urban Interface (WUI), Wildland Fire Use for Resource Benefits support, and assistance for restoring fire-adapted ecosystems.

Most of the Region was exceptionally active and productive in prescribed fire this year. An early dry spring with good burning conditions was in favor for most of the Region, while the ND/SD zone showed a significant decline in burns due to the prolonged drought conditions. Over 48,616 acres were treated with prescribed fire throughout the Region in 283 different treatments. Highlights included several "in-season" summer burns at Quivira and Rainwater Basin NWRs; several large scale bottomland/upland hardwood burns in Eastern Kansas; a large fall burn using aerial ignition at Alamosa NWR in

Colorado and fall burning was conducted at Lee Metcalf and Fish Springs NWRs for the first time.

The Region as a whole moved its resources throughout the zones and the Region to assist in meeting regional prescribed fire targets and fire management goals. Staff also assisted several other agencies and regions with prescribed fire projects in Florida, Nebraska, Colorado, Texas, Wyoming and North Carolina. Over 5,000 acres of assists were recorded.
A variety of mechanical projects were completed in the Region to remove fuels in WUI areas. Eighteen projects were accomplished for 875 acres.

WUI projects in the Region continue to focus on community assistance, wildland fire information and education. Activities completed this year include: the completion and distribution of the "Living with Wildfire on The Prairie" newspaper publication. This project involved the creation of a publication geared towards the prairie fire environment, which was then distributed by the thousands in newspapers throughout the Great Plains. The WUI Fuel Break Project at the DC Booth Fish Hatchery was completed, as were the Brown, McPhearson, Day, and McLean County Fire Management Plans which provided assistance to over 34 rural communities in the Dakotas.

A contract was awarded this year to complete WUI and Hazard Fuels Assessments (HFA) for all refuges and hatcheries in Colorado. This was a very successful effort and resulted in the identification of 30 projects for the future, many of which qualified as WUI projects based on regional and National Fire Plan criteria. These assessments will assist refuges in developing fuels management programs for the next 10-20 years.

2004 saw several organization changes within the Region. For the first time in several years the Region had all the FMO positions filled. Fenn Wimberly left the NPS at Lake Meredith National Recreation Area in April to become the District Fire Management Officer for the Eastern Kansas Fire Management District, a position that had been vacant for two years. Mike Smith became the Fire Management Officer at Huron, and Joseph Flores left the BLM in northern Idaho to serve as the Region's new Assistant District Fire Management Officer for the Colorado, Wyoming, and Utah Fire Management Districts based at Brown's Park National Wildlife Refuge. Brice Krohn was hired as a Lead Firefighter for Rainwater Basin WMD. Todd Schmidt was moved into a vacant Fire Program Technician position at Quivira NWR. Colby Crawford left the NPS at Buffalo River National Scenic River to serve as the new Fire Program Technician at Crescent Lake NWR. Other filled vacancies for the Region include: Darrick Ystaas accepting the Fire Program Technician position at Upper Souris NWR and Tom Zick as the new Fire Program Technician at Sand Lake NWR. A seasonal engine crew was hired for the Red Rock Lakes NWR after the Region received additional preparedness funding. Detailers from Region 4 and Region 3 helped staff the Type 6 engine from July through September. The Region greatly appreciated this help.

Angie Braun -- a mainstay in the Regional Office -- resigned in order to go back to school in the fall. Her knowledge and dedication to providing assistance to the field will be missed by everyone in the Region, but wish her success in her

pursuit of her new career. Steve Stoll, the Northern Rockies Meteorologist, retired in June leaving big shoes to fill in the Northern Rockies Coordination Center Predictive Services unit.

Two developments this year will probably have an impact on the Region's fire program workload in the future. An "Annual Funding Agreement" was signed between the Confederated Kootenai and Salish tribes and the National Bison Range in Montana. If implemented, the tribes will completely take over fire management and nearly every other management activity at the refuge. In Colorado, the regional Fish and Wildlife Assistance Office took on land management responsibilities, including prescribed fire and wildfire suppression assistance, for the Air Force Academy. The Refuge System fire program will be providing technical assistance for this arrangement, and a Memorandum of Understanding and Annual Operating Plan were developed to clarify the roles and responsibilities of each party.

A renovation of a bunkhouse at the Marais Des Cygnes NWR was completed this year, which removed a number of safety concerns for their fire crews and detailers. Much effort was spent working with interagency partners to find the best option for relocating the North Dakota Dispatch Center next year.

As with all the other regions and agencies, the Fire Program Analysis was a huge impact to interagency planning efforts in 2004. The Region continued to participate in a number of activities related to the implementation of the National Fire Plan, including the updating of refuge Fire Management Plans.

Over $250,000 was distributed to rural fire departments through the Rural Fire Assistance Program. The zones within the Region continue to provide training and PPE for a number of rural fire departments.

Zones within the Region hosted, coordinated, and taught several courses this past year, including S-130/190, S-211, S-212, S-390, I-300, I-200, S-491, S-270, S-260, S-131, Terra-torch training, LCES, Standards for Survival, ATV training, CPR/Advanced First Aid, annual fire refreshers and IQCS. Many of the Region's employees assisted with training in other agencies and parts of the country as well.

Paul Chamberlin, the Northern Rockies Fireline Safety Specialist, was invited by the government of the State of Rio de Janiero in Brazil to train Brazilian firemen ("bombeiros") in the Incident Command System (ICS). Paul traveled with Bob Mutch, USFS (retired) in September, and by the end of the two weeks they had the bombeiros well-versed in ICS to the point that they were teaching their own sand table exercises in Portuguese.

The year was capped off with a very successful regional FMO meeting in Billings, Montana. There was good representation of line officers as well as fire staff, allowing good discussion of the many issues affecting the Service fire program right now.

ALASKA REGION

The 2004 fire season was a banner year for fire occurrence in Alaska - 706 fires burned over 6,699,023 acres in Alaska. Although the season started out like a lamb with a rainy spring, it ended as being the third driest year on record in Alaska. The unusual weather pattern brought multiple lightning strikes to the State resulting in many simultaneous fires. At one point, over 2,000 fire related personnel were here from outside of Alaska. It was the first year that engines where brought from the lower-48. At the height of the fire activity all 70 Alaska EFF village crews where committed to assignments. More than 60 percent of the fires in Alaska were human caused.

Smoke became a health risk during the summer and the State of Alaska issued several health alerts. At times, smoke prevented resources from getting to or from a fire. Detection also became a problem due to thick smoke, some fires where not discovered until they were 1,000 acres or more in size. Burning permits were canceled by the State of Alaska and resources were unavailable for prescribed fire activities.

The season's first fire was reported May 9 on the Kenai National Wildlife Refuge. Many fires were not declared out until mid-October. Due to extreme fire indices, smoke issues and a state-wide shortage of suppression resources, FWS Refuge staffs were unable to implement many planned prescribed burns and fire-related monitoring activities.

Nearly one-third of the total Alaska acreage burned this year was Refuge System lands. Wildfires occurred on 10 of Alaska's 16 refuges. A total of 89 fires burned on refuge lands encompassing 1,808,883 acres. There were 4 fires originating off of refuge lands contributing 73,044 acres and three false alarms. The US Forest Service and State of Alaska requested initial attack support on several off-refuge fires.

Humans caused 25 percent of the 89 fires on refuges. Fires occurred on the Kenai, Yukon Flats, Innoko, Kanuti, Nowitna, Arctic, Koyukuk, Yukon Delta, Selawik, and Tetlin NWRs. Of these, the Region's only critical suppression fire was on the Kenai Refuge. This fire was human caused and involved 0.1 acre. 22 fires were in the Full Suppression Option, 44 burned in the Modified Suppression Option and 16 burned in the Limited Suppression Option. A great deal of effort by refuge staff was put into the management, monitoring, and aerial surveillance of wildland fires in 2004. Arctic NWR had 2 fires with 19,872 acres burned, Innoko NWR had 3 fires with 364,340 acres burned, Kanuti NWR had 7 fires with 107,299 acres burned, Kenai NWR had 16 fires with 8,653 acres burned, Koyukuk NWR had 11 fires with 2,628 acres burned, Nowitna NWR had 1 fire with 22,193 acres burned, Selawik NWR had 4 fires with 47 acres burned, Tetlin NWR had 1 fire with 15 acres burned, Yukon Delta NWR had 9 fires with 676 burned, and Yukon Flats NWR had 29 fires with 1,210,115, acres burned -- 6 of the fires where over 100,000 acres. The largest single fire was lightning started on July 7 at Yukon Flats NWR, encompassing 338,278 acres, and was declared out in mid-October. All of the 16 Kenai NWR fires were confirmed or suspected human-caused fires, with the exception of 1 which remains undetermined.

The Multi-Agency Coordinating (MAC) Group coordinated on a daily basis from late June through early August on interagency fire management issues, priorities, and resource allocations.

The Region encountered some difficulties with medical clinics and test procedures during this first year implementation of the Fire Medical Standards. Most issues have been resolved and more clinics are now available.

This year was a first for getting a Burn Area Emergency Response (BAER) team to Alaska. The team came late in the fall an assessed several of the larger fires and identified several stabilization and rehabilitation projects for 2005. These projects include cultural resource assessments, trail, and invasive species assessment and treatment.

Type 1, several Type 2 and fire use teams rotated thorough Alaska. Many fires where combined and managed as a fire complex. Region 7 Service employees provided support to the Solstice Complex, Central and Taylor Complex fires. Tetlin NWR fire staff provided equipment, crew spike camps at Service campgrounds, and office space for the Taylor Complex fire which burned more than 1.3 million acres.

56 Region 7 employees participated on interagency fire assignments in Alaska and the lower 48. The following positions were held in 2004: Incident Commander-trainee, Strike Team Leader, Strike Team Leader-Engines, Incident Commander Type 4, Aircraft Base Radio Operator, Task Force Leader, Task Force Leader-trainee, Prescribed Fire Burn Boss 1, Ignition Specialist Type 2, Firefighter, Radio Operator, Situation Unit Leader, Dispatcher, Engine Boss, Engine Crew, Radio Tech, Task Force Leader, Infra Red Interpreter, Incident Commander, Division Supervisor, and Dozer Boss, and Personnel Time Recorder. One FMO from Region 4 and one employee from Region 6 were detailed to the Region to assist with support.

Region 7 employees attended the following fire management and related courses in 2004: Advanced Fire Use Applications, Applied Fire Effects, Fire Management Leadership, Wildfire Power Saws, Intermediate Wildland Fire Behavior, Crew Boss, Engine Boss, Advanced Firefighter Training, PREMO Mark III Sphere Dispenser Operator, Incident Qualifications and Certification System, GIS Introduction for Conservation Professionals, Collateral Duty Safety Officer, Casual Pay Specialist, Fire Regime Condition Class, Prescribed Fire School, Interagency Helicopter Crew, Wildland Fire Situation Analysis, Fire Program Historical Analysis, and Fire Program Analysis Preparedness Module. In addition, the following annual training was attended: Fire arms, bear, aviation, and boating safety, CPR/First Aid, blood-borne pathogens, ATV Instructor and Operator, Contracting Officer Representative, Safety Refresher and Pack Testing.

Region 7 Service employees provided fire management and related training courses: B3 Aviation Safety, Interagency PREMO Mark 3 refresher, Interagency Helicopter Crew, Project Helicopter Manager, Wildfire Power Saws, Fire line Safety Refresher, Pack Testing, and ATV Operator. The PREMO Mark 3 was sponsored by the Kenai NWR.

Refuge staff conducted fire prevention and education efforts for more than 1,700 individuals on the Kenai, Tetlin, Koyokuk, Innoko, Selawik, and Yukon Delta, Yukon Flats, Kanuti, and Arctic NWRs areas. Program topics included: "Role of Fire" curriculum, wildland fire prevention, mitigation, safety, adapted species, effects, research, monitoring and mapping. Participants included: Benzulnethas Culture Camp, Tok High School Environmental Literature Class, Alaska Natural Resources and Outdoor Education Workshop, NCTC School's Out Class, Nature Buddies, Nature

Exploration through Art, Outdoor Days, Teacher In-Service, Youth Conservation Corps (YCC), Student Conservation Association (SCA), Discovery Hikes, campfire talks, and the Arctic Interagency Visitor Center. Other educational media included newspaper articles, radio spots, prevention patrols and information on bulletin boards at visitor centers, campgrounds, boat launches, trailheads, Alaska Highway pullouts, and cafes.

Refuge newsletter rewrites discussed Service sponsored Wildland/Urban Interface (WUI) projects. Koyukuk NWR staff gave an update on the Bonanza Creek Fire to the CEO and Board of Directors of Gana 'A Yoo Corporation. Kenai NWR fire staff gave formal presentations at the 1st Annual Moose Symposium, describing moose habitat and fire management activities.

The Region's National Fire Outreach Team (NFOT) representative presented programs at the Arctic Interagency Visitor Center on the Benefits of Wildland Fire in Interior Alaska and how fires are managed in the State. The Alaska Wildland Fire Coordinating Group (WFCG) held a series of 12 community meetings giving an overview of the 2004 fire season and discussed the Alaska Interagency Wildland Fire Management Plan.

Region 7 staff presented a poster on the "Role of Fire in Alaska" curriculum at an international fire ecology conference. Presentations were given to the Alaska WFCG and interagency Alaska fire personnel on fire regime condition class procedures. Staff also provided instruction to 8 refuge personnel in composite burn index sampling procedures. Other presentations and assistance to universities and communities included: "Fire Hazard Reduction – Northway Village Case Study," fire effects on subsistence activities, Joint Fire Science caribou/fire.

The Kenai NWR ecologist authored two major manuscripts on fire history and the spruce bark beetle that will be part of a special issue of the journal: *Forest Ecology and Management*. A third manuscript on sedimentary charcoal record of fire history was submitted to the *Journal of Ecology*.

The Kenai NWR fire staff completed the Kenai Forest Wildfire and Fuels Management Memorandum of Understanding (MOU) and the implementation plan: All Lands/All Hands 5-year Action Plan (2005-2009). Prescribed Burn Plans were approved for Kenai and Tetlin NWRs. Draft Fire Management Plans where completed for the Koyukuk, Innoko, Selawik, Kanuti, Arctic NWRs. Refuge fire staffs have helped develop Comprehensive Conservation Plans (CCP).

Many of the WUI projects involved collaboration with Native village council and leaders, other Federal and State agencies. Firewise defensible space treatments were completed on 12.8 acres on the Kenai NWR. On the Tetlin NWR, 34 acres were thinned and 55 acres burned through a cooperative agreement with the Northway Village crew. The Koyukuk NWR treated 1 acre for hazardous fuels reduction, and 4 acres were treated around Service administrative cabins on the Selawik NWR. The Allakaket Fuels Reduction Project was completed, totaling 45 acres.

Kenai NWR staff completed 2,000 acres of pre- and post-burn fuels inventories. Staff also collected and analyzed post-burn Forest Monitoring Health plot data in prescription units. The Burned Area Emergency Rehabilitation (BAER) team worked to prepare a fire effects rehabilitation/restoration project proposal. Kenai NWR staff assisted the Pacific Northwest Research Station (U.S. Forest Service) with pre-burn weather and fuels data collection in support of a Joint Fire

Science Project. For the first time in Alaska, the Service developed a contract with the Student Conservation Association for fuels treatments and fire effects monitoring.

Koyukuk NWR staff established 10 permanent pre-burn plots. Koyukuk staff also assisted the University of Alaska Fairbanks (UAF) with a workshop on a National Science Foundation study: "Fire Mediated Changes in the Arctic System..

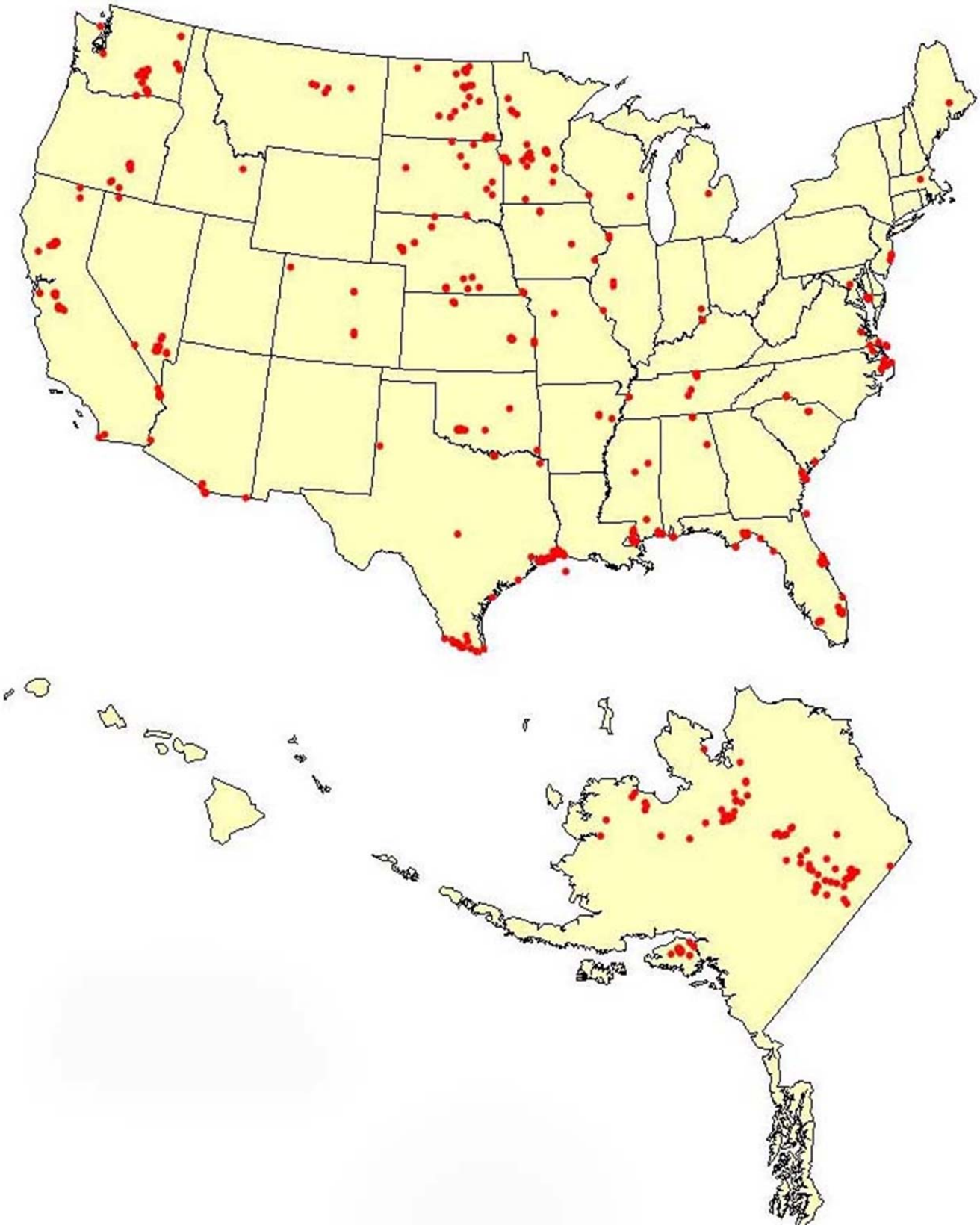
Region 7 employees participated with the following interagency committees and work groups:
Alaska Wildfire Coordination Group (AWFCG), Casual Pay Specialist, Incident Qualification Certification System, Fuels Management Conference, Helicopter Operations Working Group, National FWS Wildland Fire Operations and Safety Team, National DOI Chain Saw Operator Qualification and Certification, Alaska Interagency Fall Fire Review, AWFCG Fire Effects Task Group, Research Committee, Fire Effects Task Group, Safety Committee, Wildland Fire Use Implementation Guide interagency development, Fire-Climate-Human Interactions Research Group at UAF, Integration of fire use fires into Alaska Interagency Wildland Fire Management Plan, Fire and GIS national working group, Alaska Smoke Management Group, Alaska Fire Program Analysis Prototype Fire Planning Unit Interagency group, Alaska MAC group, AWFCG Training committee, AWFCG Fire Education, Prevention, Awareness Committee.

Rural Fire Assistance grants where provide to Tok, Nikiski, Anchor Point, and Funny River volunteer fire departments.

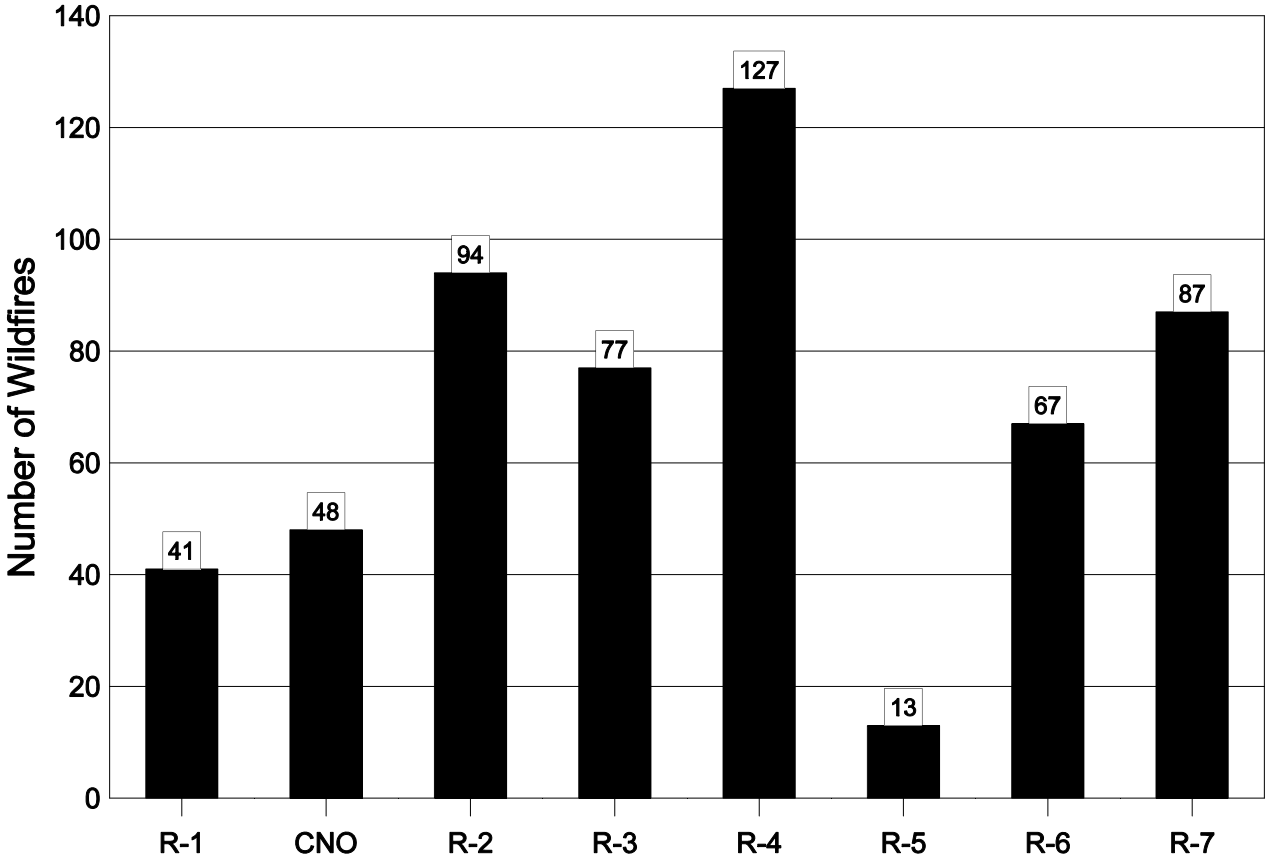
The following equipment was acquired by Region 7 in 2004: PREMO Mark III Sphere Dispenser, Polaris 500 4x4 ATV, Polaris 500 6x6 (tracked) ATV, Western Helitorch (retrofitted), Narrowband digital radio system, Two Tri-Max foam extinguishers to support aerial ignition operations, GENTEX helicopter flight helmet and accessories, 2 EBam smoke monitors.

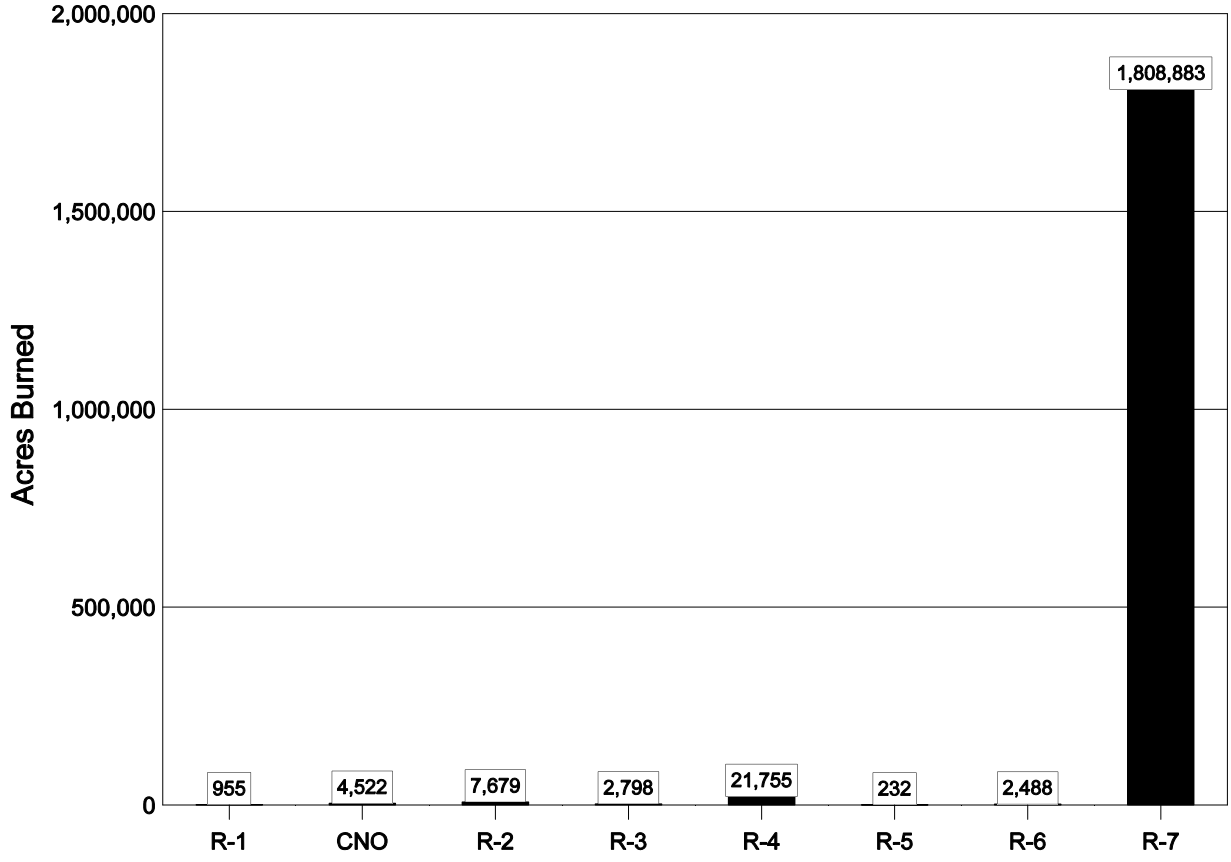
Staff changes in the Regional Office included Mary Kwart selected as Wildland Urban Interface Coordinator and Laurie Thorpe selected as Fire Program Specialist.

2004 WILDFIRE ACTIVITY



WILDFIRES
2004





WILDFIRES
by State
2004

STATE	# FIRES	FWS ACRES
Alaska	87	1,808,882.9
Alabama	3	60.2
Arkansas	5	16.2
Arizona	14	327.2
California	35	1,785.5
Colorado	3	0.9
Florida	29	3,001.8
Georgia	10	104.7
Iowa	6	42.6
Idaho	1	0.1
Illinois	7	43.4
Indiana	2	354.1
Kansas	15	280.0
Louisiana	46	17,247.7
Massachusetts	1	8.5
Maryland	3	0.7
Maine	1	0.1
Michigan	1	0.1
Minnesota	52	2,284.9
Missouri	4	32.2
Mississippi	6	59.2
Montana	7	716.4
North Carolina	15	492.2
North Dakota	22	678.9
Nebraska	10	364.8
New Jersey	3	6.8
New Mexico	1	0.5
Nevada	13	2,736.7
Oklahoma	28	258.1
Oregon	13	868.7
Puerto Rico	1	12.1
South Carolina	10	757.2
South Dakota	8	386.4
Tennessee	2	3.8

Texas	51	7,093.0
Utah	2	60.9
Virginia	5	216.1
Washington	27	85.3
Wisconsin	5	41.1
Total	**554**	**1,849,312.0**

WILDFIRES
Pacific Refuges

REFUGE	# FIRES	FWS ACRES
Camas NWR	1	0.1
Columbia NWR	5	12.4
Hanford Reach NM/Saddle Mtn	8	40.7
Hart Mtn Natl Antelope Refuge	2	0.2
Little Pend Oreille NWR	2	14.3
Malheur NWR	7	861.8
McNary NWR	6	2.7
Nisqually NWRC	1	12.0
Protection Island NWR	1	1.0
Sheldon NWR	1	3.5
Sheldon-Hart Mountain NWRC	1	3.0
Turnbull NWR	4	2.2
Umatilla NWR	2	0.6
Total	**41**	**954.5**

WILDFIRES
California/Nevada Operations Refuges

REFUGE	# FIRES	FWS ACRES
Ash Meadows NWR	2	1,671.0
Desert NWRC	9	1,061.4
Klamath Marsh NWR	1	3.1
Ruby Lake NWR	1	0.8
Sacramento NWRC	2	0.6
Sacramento River NWR	9	9.8
San Diego Bay NWR	1	1.0
San Diego NWR	2	8.0
San Francisco Bay NWRC	3	2.3
San Joaquin River NWR	1	1.2
San Luis NWRC	11	1,727.5
Sutter NWR	1	0.1
Tijuana Slough NWR	2	0.2
Tule Lake NWR	3	34.8
Total	**48**	**4,521.8**

WILDFIRES
Southwest Refuges

REFUGE	# FIRES	FWS ACRES
Anahuac NWR	5	32.6
Aransas/Matagorda Island	1	0.1
Balcones Canyonlands NWR	1	1.0
Bitter Lake NWR	1	0.5
Buenos Aires NWR	6	5.7
Deep Fork NWR	1	234.0
Hagerman NWR	2	0.3
Havasu NWR	6	5.2
Imperial NWR	1	300.0
Laguna Atoscosa NWR	1	0.5
Little River NWR	2	0.7
Lower Rio Grande Valley	20	253.7
McFaddin NWR	16	6,752.2
Muleshoe NWR	1	0.9
San Bernard NWR	1	7.0
San Bernardino NWR	1	16.3
Santa Ana NWR	1	0.2
TX Point NWR	2	44.5
Wichita Mtns Wildlife Refuge	25	23.4
Total	**94**	**7,678.8**

WILDFIRES
Great Lakes-Big Rivers Refuges

REFUGE	# FIRES	FWS ACRES
Big Muddy National Fish and Wildlife Refuge	1	10.0
Big Oaks NWR	2	354.1
Big Stone NWR	3	1,135.0
Crab Orchard NWR	2	2.0
Crane Meadows NWR	1	350.0
Detroit Lakes WMD	3	206.0
Emiquon WMD	2	34.0
Great River NWR	1	0.1
Horicon NWR	3	20.0
Iowa WMD	1	9.3
IL River National Wildlife & Fshry Rfgs	2	0.4
Litchfield WMD	10	69.1
Minnesota Valley NWR	23	85.0
Morris WMD	3	289.0
Necedah NWR	1	0.1
Port Louisa NWR	2	1.3
Sherburne NWR	7	1.3
Shiawassee NWR	1	0.1
Squaw Creek NWR	2	22.1
Tamarac NWR	1	1.5
Union Slough NWR	1	1.0
Upper Mississippi River - La Crosse District	1	21.0
Upper Mississippi River - McGregor District	1	30.0
Upper Mississippi River - Savanna District	2	8.0
Windom WMD	1	148.0
Total	**77**	**2,798.4**

WILDFIRES
Southeast Refuges

REFUGE	# FIRES	FWS ACRES
Ace Basin NWR	1	3.0
Alligator River NWR	5	249.1
ARM Loxahatchee NWR	4	681.0
Bayou Sauvage NWR	2	0.3
Big Branch Marsh NWR	7	175.5
Blackbeard Island NWR	1	0.2
Bogue Chitto NWR	5	112.0
Bon Secour NWR	2	5.2
Cabo Rojo NWR	1	12.1
Cache River NWR	4	14.2
Cameron Prairie NWR	1	1,012.0
Cape Romain NWR	1	720.0
Carolina Sandhills NWR	4	29.8
Cedar Island NWR	4	65.0
Chickasaw NWR	1	1.8
Cross Creeks NWR	1	2.0
Central Arkansas Refuges	1	2.0
Currituck NWR	2	140.0
Florida Panther NWR	4	10.3
Grand Bay NWR	3	28.1
Hobe Sound NWR	1	1.0
Lacassine NWR	1	2.4
Lower Suwannee NWR	1	2.5
Mackay Island NWR	1	36.0
Mattamuskeet NWR	1	1.0
Merritt Island NWR	6	2,011.1
Mississippi Sandhill Crane NWR	1	0.1

Mountain Longleaf NWR	1	55.0
North Mississippi Refuges	1	30.0
National Key Deer Refuge	3	0.3
Noxubee NWR	1	1.0
Okefenokee NWR	6	1.5
Pocosin Lakes NWR	2	1.1
Sabine NWR	29	15,942.5
Savannah-Pinckney National Wildl Rfgs	4	4.4
Southeast Lousianna Refuges	1	3.0
St. Johns NWR	3	292.0
St. Marks NWR	5	3.4
St. Vincent NWR	2	0.2
Wassaw NWR	3	103.0
Total	**127**	**21,755.1**

WILDFIRES
Northeast Refuges

REFUGE	# FIRES	FWS ACRES
Back Bay NWR	3	18.0
Chesapeake Marshlands NWR	1	0.1
Edwin B Forsythe NWR	3	6.8
Eastern Massachusetts NWRC	1	8.5
Great Dismal Swamp NWR	2	198.1
Patuxent Research Refuge	2	0.6
Sunkhaze Meadows NWR	1	0.1
Total	**13**	**232.2**

WILDFIRES
Mountain-Prairie Refuges

REFUGE	# FIRES	FWS ACRES
Arrowwood NWR	1	0.1
Arrowwood WMD	1	44.0
Browns Park NWR	1	0.1
Charles M Russell NWR	7	716.4
Chase Lake Prairie Project WMD	1	5.1
Crescent Lake NWR	4	13.0
Des Lacs NWR	1	0.1
Devils Lake WMD	11	414.4
Flint Hills NWR	8	110.0
Fort Niobrara NWR	1	1.0
J Clark Salyer NWR	1	5.0
Kirwin NWR	3	169.1
Lake Andes NWR	1	1.0
Long Lake NWR	2	29.0
Madison WMD	3	57.7
Marais Des Cygnes NWR	4	0.9
Ouray NWR	2	60.9
Rainwater Basin WMD	3	17.1
Rocky Mountain Arsenal NWR	2	0.8
Sand Lake NWR	4	327.7
Tewaukon NWR	4	181.2
Valentine NWR	2	333.7
Total	**67**	**2,488.3**

WILDFIRES
Alaska Refuges

REFUGE	# FIRES	FWS ACRES
Arctic NWR	2	19,872.0
Innoko NWR	3	364,340.3
Kanuti NWR	8	131,117.9
Kenai NWR	16	8,653.0
Koyukuk NWR	11	2,627.9
Koyukuk/Nowitna NWR	1	22,193.0
Selawik NWR	4	46.9
Tetlin NWR	1	15.0
Yukon Delta NWR	10	678.2
Youkon Flats NWR	31	1,259,338.7
Total	**87**	**1,808,882.9**

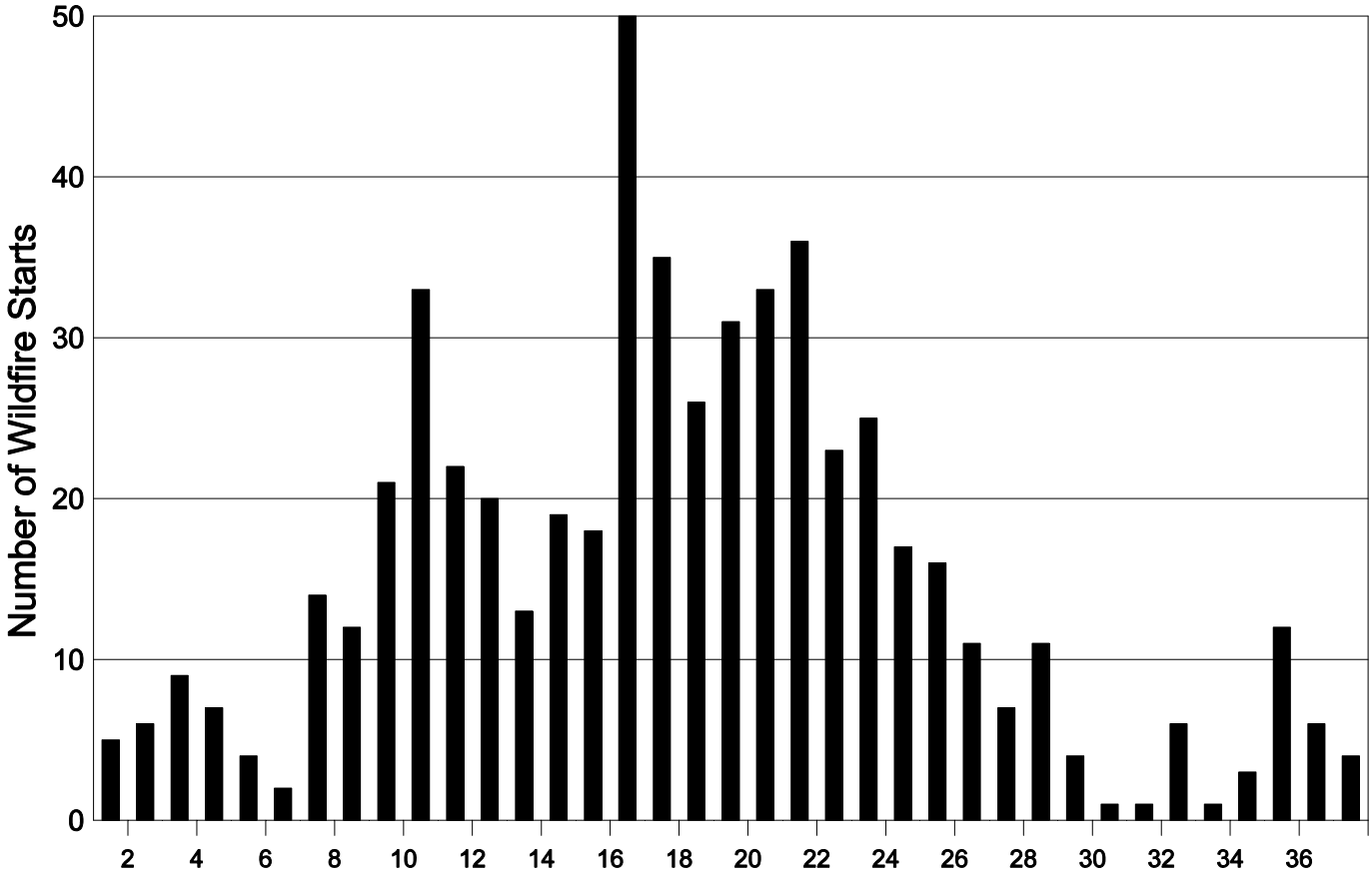
WILDFIRES by CAUSE
2004

CAUSE	# FIRES	# ACRES
Natural	191	1,814,309.8
Debris/Vegetation Burn	52	1,123.8
Equipment Use	29	844.3
Exceeded RX (prescription)	7	4,275.6
Incendiary	62	9,103.2
Misuse of Fire	27	1,801.7
Open or Outdoor Fire	82	10,130.1
Smoking	26	951.5
Structure	7	15.0
Other Causes	2	2.1
Undetermined	69	6,754.9
TOTAL	**554**	**1,849,312.0**

WILDFIRES by SIZE CLASS
2004

SIZE	# FIRES	# ACRES
A (0 - .2)	155	16.8
B (.3 - 9.9)	229	541.9
C (10 - 99.9)	93	2,903.6
D (100 - 299.9)	25	4,731.5
E (300 - 999.9)	16	8,160.0
F (1000 - 4999.9)	15	28,849.9
G (5000 +)	21	1,804,108.3
TOTAL	**554**	**1,849,312.0**

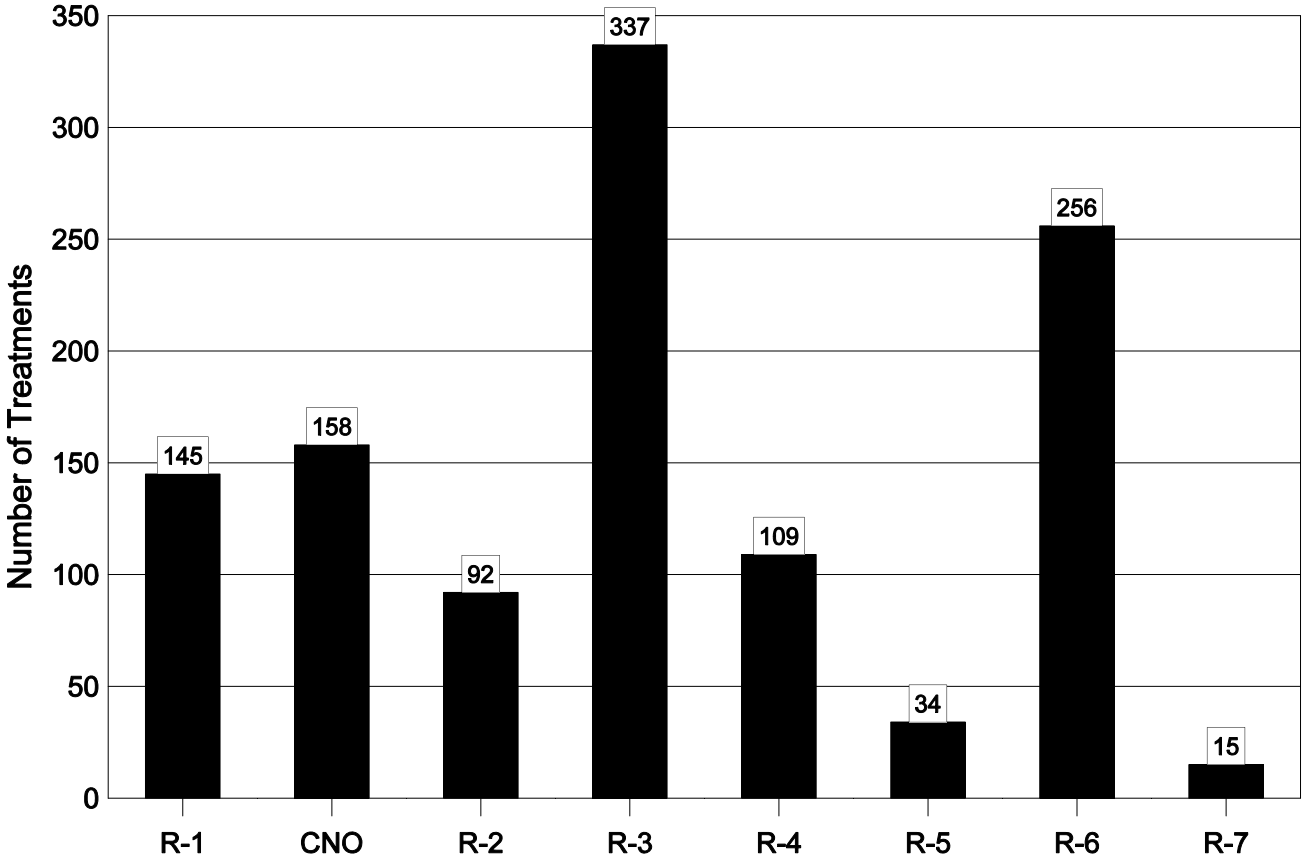
WILDFIRE STARTS - 2004
10-Day Period

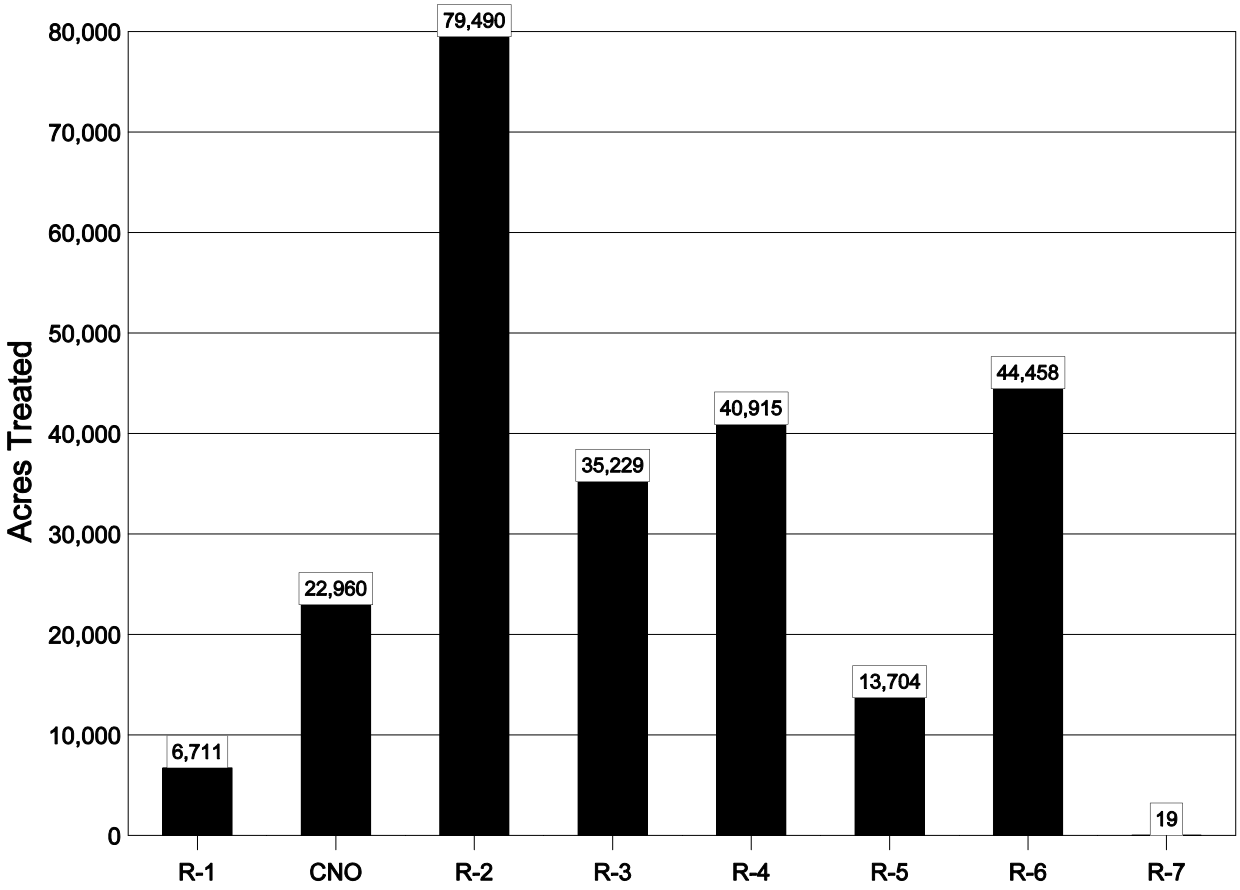


Period	Dates	Period	Dates	Period	Dates
1	Jan 01 - Jan 10	**13**	May 01 - May 10	**25**	Aug 29 - Sep 07
2	Jan 11 - Jan 20	**14**	May 11 - May 20	**26**	Sep 08 - Sep 17
3	Jan 21 - Jan 30	**15**	May 21 - May 30	**27**	Sep 18 - Sep 27
4	Jan 31 - Feb 09	**16**	May 31 - June 09	**28**	Sep 28 - Oct 07
5	Feb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

2004 Non-WUI TREATMENTS

NON-WUI TREATMENTS
2004





Non-WUI Treatments
by State
2004

State	Number	RX Acres	Mech Acres	Other Acres	Total Acres
Alaska	15		19.0		19.0
Arizona	7	12,805.0			12,805.0
California	148	21,311.7	315.0		21,626.7
Colorado	6	1,064.3	10.0		1,074.3
Delaware	1	20.0			20.0
Florida	51	9,122.0	20.0		9,142.0
Georgia	21	9,755.0			9,755.0
Idaho	3	492.0			492.0
Illinois	15	508.7	10.0		518.7
Indiana	9	4,641.0			4,641.0
Iowa	64	6,357.5	33.0		6,390.5
Kansas	40	9,077.0	130.0		9,207.0
Louisiana	5	4,035.0			4,035.0
Maine	5	120.0	73.0		193.0
Maryland	10	11,716.0	36.0		11,752.0
Massachusetts	1	2.0			2.0
Michigan	17	2,760.3			2,760.3
Minnesota	176	17,416.3	132.1		17,548.4
Mississippi	12	2,203.0			2,203.0
Missouri	14	513.3			513.3
Montana	11	3,107.5			3,107.5
Nebraska	48	6,378.0			6,378.0
Nevada	11	587.0	325.0		912.0
New Jersey	4	39.0		204.0	243.0
New Mexico	2	24,248.0			24,248.0
New York	6	113.0	413.0	86.0	612.0
North Carolina	16	10,243.0	102.0		10,345.0
North Dakota	113	18,216.7			18,216.7
Ohio	1	39.0			39.0

Oklahoma	14	2,149.4			2,149.4
Oregon	44	2,626.1	627.0	80.0	3,333.1
Pennsylvania	1		53.0		53.0
Rhode Island	1	3.0			3.0
South Carolina	4	5,435.0			5,435.0
South Dakota	38	4,416.0	575.0		4,991.0
Texas	69	39,037.2	1,250.5		40,287.7
Utah	3	1,622.2			1,622.2
Vermont	1	24.0			24.0
Virginia	4	742.0		60.0	802.0
Washington	97	2,913.3	393.0		3,306.3
Wisconsin	38	1,668.6	589.0	421.0	2,678.6
Total	**1,146**	**237,528.1**	**5,105.6**	**851.0**	**243,484.7**

Non-WUI TREATMENTS
Pacific Region

Refuge	Number	RX Acres	Mech Acres	Other Acres	Total Acres
Ankeny NWR	8	542.0	270.0		812.0
Baskett Slough NWR	6	13.0	90.0		103.0
Bear Lake NWR	1	350.0			350.0
Columbia NWR	9	125.0	18.0		143.0
Conboy Lake NWR	1	15.0			15.0
Hanford Reach /Saddle Mtn	3	660.0			660.0
Hart Mtn Natl Antelope Refuge	5	211.0	197.0		408.0
Kootenai NWR	1	75.0			75.0
Little Pend Oreille NWR	9	669.0			669.0
Malheur NWR	2	762.5			762.5
McKay Creek	1	11.3			11.3
McNary NWR	3	3.8			3.8
Oxford Slough WPA	1	67.0			67.0
Sheldon NWR	4	44.0	294.0		338.0
Turnbull NWR	72	1,440.5	375.0		1,815.5
Umatilla NWR	7	185.5			185.5
Willamette Valley NWRC	1	48.0			48.0
William L Finley NWR	11	94.0	70.0	80.0	244.0
Total	**145**	**5,316.6**	**1,314.0**	**80.0**	**6,710.6**

Non-WUI TREATMENTS
California/Nevada Operations

Refuge	Number	RX Acres	Mech Acres	Total Acres
Ash Meadows NWR	1		31.0	31.0
Colusa NWR	1	50.0		50.0
Delevan NWR	3	119.0		119.0
Lower Klamath NWR	9	5,031.8		5,031.8
Merced NWR	7	701.0	100.0	801.0
Modoc NWR	1	348.0		348.0
Red Bluff Fish and Wildlife Office	1	1.0		1.0
Ruby Lake NWR	3	6.0		6.0
Sacramento NWRC	7	79.0		79.0
Sacramento River NWR	10	234.0	3.0	237.0
San Joaquin River NWR	5	344.5	50.0	394.5
San Luis NWR	8	524.0	150.0	674.0
San Luis NWRC	8	331.0	12.0	343.0
Stillwater NWR	3	537.0		537.0
Stone Lakes NWR	1	25.0		25.0
Tule Lake NWR	90	14,282.2		14,282.2
Total	**158**	**22,613.5**	**346.0**	**22,959.5**

Non-WUI TREATMENTS
Southwest Region

Refuge	Number	RX Acres	Mech Acres	Total Acres
Anahuac NWR	12	10,430.3		10,430.3
Aransas/Matagorda Island NWRC	12	3,161.0	1,248.0	4,409.0
Attwater Prairie Chicken NWR	8	2,976.0		2,976.0
Balcones Canyonlands NWR	7	691.9	2.5	694.4
Big Boggy NWR	2	813.0		813.0
Brazoria NWR	5	3,135.0		3,135.0
Buenos Aires NWR	5	11,731.0		11,731.0
Hagerman NWR	3	438.0		438.0
Havasu NWR	1	460.0		460.0
Imperial NWR	1	614.0		614.0
Inks Dam NFH	1	4.0		4.0
Little River NWR	3	258.2		258.2
McFaddin NWR	5	9,943.0		9,943.0
Salt Plains NWR	1	163.0		163.0
San Andres NWR	1	10,639.0		10,639.0
San Bernard NWR	6	1,387.0		1,387.0
San Marcos NFH	1	84.0		84.0
Santa Ana NWR	1	40.0		40.0
Sevilleta NWR	1	13,609.0		13,609.0
South Texas Refuges Complex	1	26.0		26.0
Texas Chenier Plain Refuges Complex	1	477.0		477.0
Texas Midcoast Refuges Complex	1	400.0		400.0
Texas Point NWR	2	4,990.0		4,990.0
Tishomingo NWR	6	418.0		418.0
Uvalde NFH	1	41.0		41.0

Washita NWR	2	280.2		280.2
Wichita Mtns Wildlife Refuge	2	1,030.0		1,030.0
Total	**92**	**78,239.6**	**1,250.5**	**79,490.1**

Non-WUI TREATMENTS
Great Lakes - Big Rivers Region

Refuge	Number	RX Acres	Mech Acres	Other Acres	Total Acres
Agassiz NWR	19	2,806.0	17.3		2,823.3
Big Oaks NWR	9	4,641.0			4,641.0
Big Stone NWR	12	1,439.1			1,439.1
Big Stone WMD	1	100.0			100.0
Crab Orchard NWR	8	276.0			276.0
Cypress Creek NWR	1	25.0			25.0
Desoto NWR	10	579.0			579.0
Detroit Lakes WMD	25	2,471.0			2,471.0
Driftless Area NWR	1	1.0			1.0
Fergus Falls WMD	28	2,261.0			2,261.0
Fox River NWR	4	107.8			107.8
Great River NWR	9	389.0			389.0
Hamden Slough NWR	3	364.0			364.0
Horicon NWR	6	238.5			238.5
Illinois River Refuges	1		10.0		10.0
Iowa WMD	2	270.0			270.0
Leopold WMD	23	1,142.3			1,142.3
Litchfield WMD	19	1,405.0	114.8		1,519.8
Mingo NWR	1	11.0			11.0
Minnesota Valley NWR	8	417.0			417.0
Morris WMD	17	1,308.0			1,308.0
Neal Smith NWR	21	2,861.5	20.0		2,881.5
Necedah NWR	1	150.0			150.0
Ottawa NWR	2	59.0			59.0
Port Louisa NWR	30	2,808.0			2,808.0

Rice Lake NWR	4	1,854.0			1,854.0
Seney NWR	14	2,709.0			2,709.0
Shiawassee NWR	2	31.3			31.3
Squaw Creek NWR	6	135.0			135.0
St Croix WMD	4	30.0	589.0	421.0	1,040.0
Tamarac NWR	16	578.2			578.2
Union Slough NWR	5	123.0	13.0		136.0
Upper MS River-Savanna Dist.	1	40.0			40.0
Windom WMD	24	2,413.0			2,413.0
Total	**337**	**34,043.7**	**764.1**	**421.0**	**35,228.8**

Non-WUI TREATMENTS
Southeast Region

Refuge	Number	RX Acres	Mech Acres	Other Acres	Total Acres
Ace Basin NWR	1	4,485.0			4,485.0
Alligator River NWR	4	7,312.0			7,312.0
Cape Romain NWR	1	500.0			500.0
Carolina Sandhills NWR	1	200.0			200.0
Harris Neck NWR	9	649.0			649.0
Lake Woodruff NWR	5	2,324.0			2,324.0
Lower Suwannee NWR	4	929.0			929.0
Mackay Island NWR	2	150.0			150.0
Mattamuskeet NWR	8	855.0			855.0
Merritt Island NWR	4	1,491.0			1,491.0
MS Sandhill Crane NWR	1	480.0			480.0
Noxubee NWR	11	1,723.0			1,723.0
Okefenokee NWR	4	1,179.0			1,179.0
Piedmont NWR	4	2,056.0			2,056.0
Pocosin Lakes NWR	1		102.0		102.0
Sabine NWR	3	3,900.0			3,900.0
Santee NWR	1	250.0			250.0
Savannah Costal Refuges	4	5,871.0			5,871.0
Southeast Louisiana Refuges	2	135.0			135.0
St Marks NWR	23	2,445.0	20.0		2,465.0
St Vincent NWR	15	1,933.0			1,933.0
Swanquarter NWR	1	1,926.0			1,926.0
Total	**109**	**40,793.0**	**122.0**	**0.0**	**40,915.0**

Non-WUI TREATMENTS
Northeast Region

Refuge	Number	RX Acres	Mech Acres	Other Acres	Total Acres
Back Bay NWR	1	200.0			200.0
Chesapeake Marshlands NWRC	9	11,666.0	36.0		11,702.0
Eastern Massachusetts NWRC	1	2.0			2.0
Erie NWR	1		53.0		53.0
Great Dismal Swamp NWR	2	115.0		60.0	175.0
Iroquois NWR	2	79.0			79.0
Missisquoi NWR	1	24.0			24.0
Montezuma NWR	3	34.0	86.0	86.0	206.0
Moosehorn NWR	3	65.0	73.0		138.0
Patuxent Research Refuge	1	50.0			50.0
Petit Manan NWR Complex	1	33.0			33.0
Prime Hook NWR	1	20.0			20.0
Rappahannock River Valley NWR	1	427.0			427.0
Rhode Island NWRC	1	3.0			3.0
Shawangunk Grasslands NWR	1		327.0		327.0
Sunkhaze Meadows NWR	1	22.0			22.0
Supawna Meadows NWR	3	39.0		187.0	226.0
Wallkill River NWR	1			17.0	17.0
Total	**34**	**12,779.0**	**575.0**	**350.0**	**13,704.0**

Non-WUI TREATMENTS
Mountain-Prairie Region

Refuge	Number	RX Acres	Mech Acres	Total Acres
Alamosa	1	1,019.0		1,019.0
Arrowwood NWR	6	1,649.0		1,649.0
Arrowwood WMD	2	315.0		315.0
Audubon NWR	20	1,444.1		1,444.1
Benton Lake NWR	1	905.0		905.0
Bowdoin NWR	4	1,920.0		1,920.0
Boyer Chute NWR	4	262.0		262.0
Browns Park NWR	1	2.0		2.0
Charles M. Russell NWR	2	170.0		170.0
Chase Lake Prairie WMD	6	1,204.6		1,204.6
Crescent Lake NWR	13	1,287.0		1,287.0
Crosby WMD	8	848.0		848.0
Des Lacs NWR	12	2,097.0		2,097.0
Devils Lake WMD	18	2,613.0		2,613.0
Fish Springs NWR	1	1,480.0		1,480.0
Flint Hills NWR	13	468.0	50.0	518.0
Fort Niobrara NWR	1	22.0		22.0
Huron WMD	9	778.0	270.0	1,048.0
J Clark Salyer NWR	10	1,431.0		1,431.0
Kirwin NWR	5	1,744.0		1,744.0
Kulm WMD	2	74.0		74.0
Lacreek NWR	13	2,523.0		2,523.0
Lake Andes NWR	4	336.0	45.0	381.0
Long Lake NWR	8	1,239.0		1,239.0

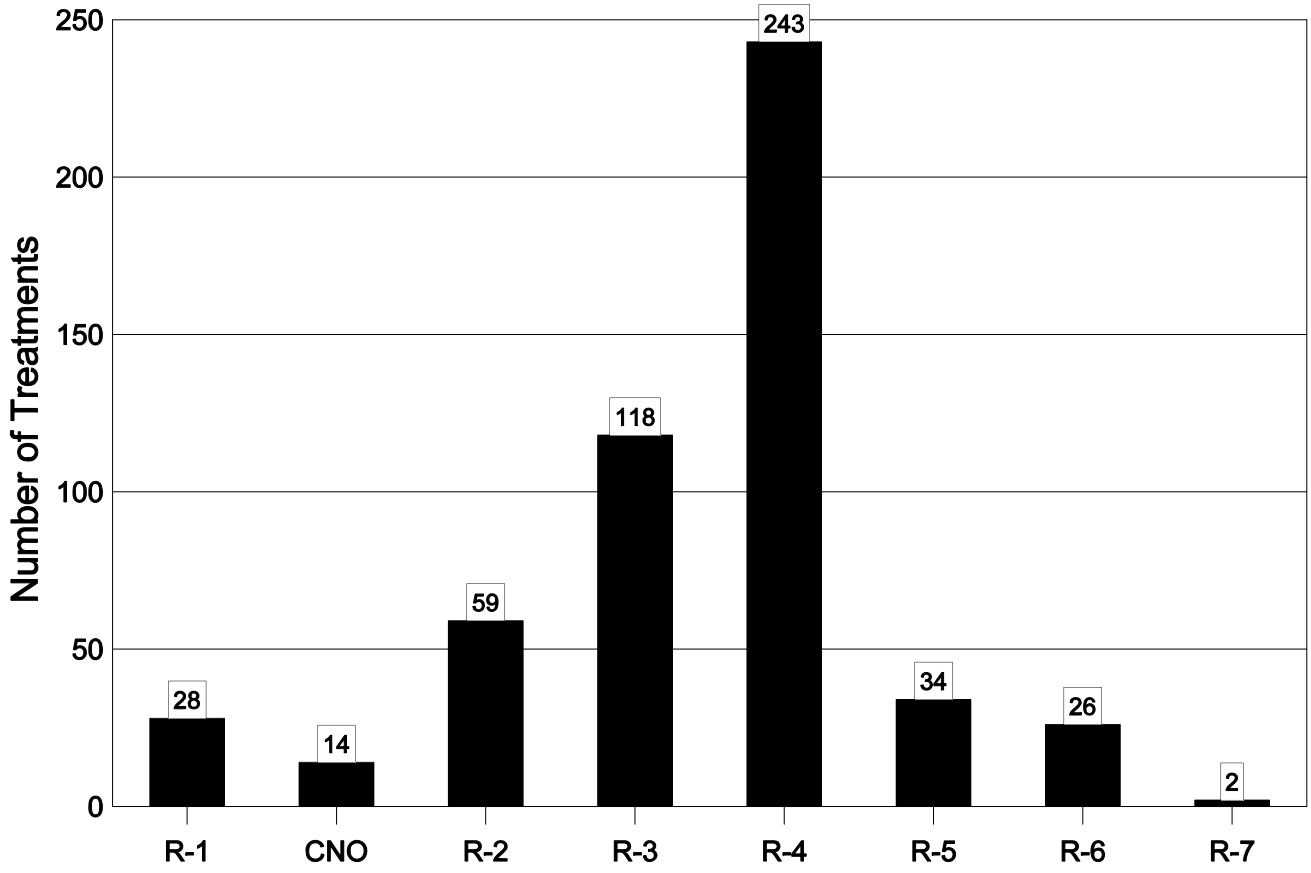
Lostwood NWR	3	2,186.0		2,186.0
Lostwood WMD	4	681.0		681.0
Madison WMD	9	4.0	260.0	264.0
Marais Des Cygnes NWR	14	1,199.0	80.0	1,279.0
Medicine Lake NWR	2	28.5		28.5
National Bison Range NWR	2	84.0		84.0
Ouray NWR	2	142.2		142.2
Quivira NWR	8	5,666.0		5,666.0
Rainwater Basin WMD	26	4,318.0		4,318.0
Rocky Mtn Arsenal NWR	4	43.3	10.0	53.3
Sand Lake NWR	1	180.0		180.0
Slade NWR	1	198.0		198.0
Tewaukon NWR	6	815.0		815.0
Upper Souris NWR	5	1,045.0		1,045.0
Valentine NWR	1	350.0		350.0
Valley City WMD	2	377.0		377.0
Waubay NWR	2	595.0		**595.0**
Total	**256**	**43,742.7**	**715.0**	**44,457.7**

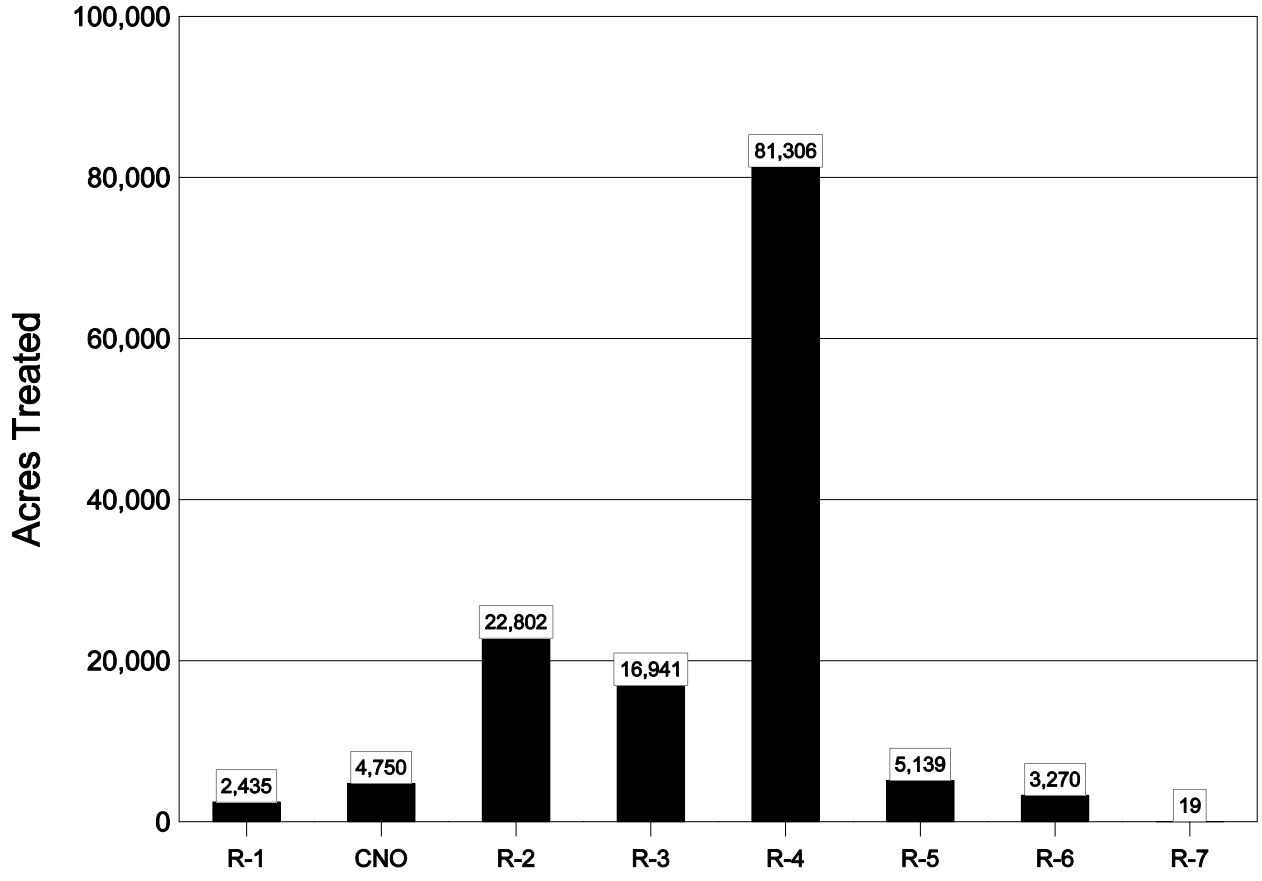
Non-WUI TREATMENTS
Alaska Region

Refuge	Number	RX Acres	Mech Acres	Total Acres
Innoko NWR	2		6.0	6.0
Koyukuk/Nowitna NWR	11		11.0	11.0
Selawik NWR	2		2.0	2.0
Total	**15**	**0.0**	**19.0**	**19.0**

2004 WUI TREATMENTS

WILDLAND URBAN INTERFACE
Treatments - 2004





WUI TREATMENTS
by State
2004

State	Number	RX Acres	Mech Acres	Other Acres	Total Acres
Alabama	2	320.0			320.0
Alaska	2	6.0	13.0		19.0
Arizona	5	1,320.0	24.0		1,344.0
Arkansas	8	2,170.0			2,170.0
California	14	80.0	3,570.0	1,100.0	4,750.0
Colorado	2	217.0	73.0		290.0
Delaware	2	465.0		2,450.0	2,915.0
Florida	107	37,272.0	505.0		37,777.0
Georgia	52	13,819.0	595.0		14,414.0
Idaho	2		32.0		32.0
Indiana	7	5,349.0			5,349.0
Iowa	17	1,554.0	11.0		1,565.0
Kansas	10	815.0	30.0		845.0
Louisiana	6	1,931.0	55.0		1,986.0
Maine	5	99.0	289.0		388.0
Maryland	2	590.0	20.0		610.0
Minnesota	70	5,219.0	84.0		5,303.0
Mississippi	27	5,875.0	344.0		6,219.0
Montana	2	4.0			4.0
Nebraska	10	1,935.0			1,935.0
Nevada	2	920.0			920.0
New Jersey	15	154.0	855.0		1,009.0
New Mexico	12	2,237.0	447.0	114.0	2,798.0
New York	4		58.0		58.0
North Carolina	19	8,776.0	262.0		9,038.0
North Dakota	1	36.0			36.0
Oklahoma	9	8,853.6			8,853.6
Oregon	11	25.0	395.0	30.0	450.0
South Carolina	22	9,327.0	55.0		9,382.0

South Dakota	1			160.0	160.0
Texas	33	9,500.8	151.8	154.0	9,806.6
Virginia	6	45.0	114.0		159.0
Washington	13	373.0	660.0		1,033.0
Wisconsin	24	4,326.5	300.0	97.0	4,723.5
Total	**524**	**123,613.9**	**8,942.8**	**4,105.0**	**136,661.7**

WUI TREATMENTS
Pacific Region

Refuge	Number	RX Acres	Mech Acres	Other Acres	Total Acres
Baskett Slough NWR	5		290.0	30.0	320.0
Conboy Lake NWR	5	45.0	160.0		205.0
Deer Flat NWR	1		30.0		30.0
Hagerman NFH	1		2.0		2.0
Hanford Reach NM/Saddle Mtn	1		500.0		500.0
Hart Mtn Natl Antelope Refuge	1		10.0		10.0
Little Pend Oreille NWR	7	328.0			328.0
Sheldon NWR	2	920.0			920.0
William L Finley NWR	5	25.0	95.0		120.0
Total	**28**	**1,318.0**	**1,087.0**	**30.0**	**2,435.0**

WUI TREATMENTS
California/Nevada Operations

Refuge	Number	RX Acres	Mech Acres	Other Acres	Total Acres
Don Edwards SF Bay NWR	1		60.0		60.0
Ellicott Slough NWR	1		10.0		10.0
Hopper Mountain NWRC	2		55.0		55.0
Merced NWR	1	80.0			80.0
San Diego NWRC	7		3,415.0	1,100.0	4,515.0
San Francisco Bay NWRC	1		20.0		20.0
Tijuana Slough NWR	1		10.0		10.0
Total	**14**	**80.0**	**3,570.0**	**1,100.0**	**4,750.0**

WUI TREATMENTS
Southwest Region

Refuge	Number	RX Acres	Mech Acres	Other Acres	Total Acres
Aransas/Matagorda Island NWR	8	5,367.0	12.0		5,379.0
Attwater Prairie Chicken NWR	1			129.0	129.0
Balcones Canyonlands NWR	17	1,872.8	137.8		2,010.6
Bitter Lake NWR	1	690.0			690.0
Bosque Del Apache NWR	6	909.0	340.0	114.0	1,363.0
Brazoria NWR	3	1,991.0			1,991.0
Buenos Aires NWR	5	1,320.0	24.0		1,344.0
Hagerman NWR	1	270.0			270.0
Las Vegas NWR	1	259.0			259.0
Lower Rio Grande Valley NWR	1			25.0	25.0
Maxwell NWR	2	259.0	25.0		284.0
Mora NFH & Tech. Center	1		82.0		82.0
Salt Plains NWR	1	530.0			530.0
Santa Ana NWR	2		2.0		2.0
Sevilleta NWR	1	120.0			120.0
Tishomingo NFH	2	65.0			65.0
Tishomingo NWR	1	584.0			584.0
Wichita Mtns Wildlife Refuge	5	7,674.6			7,674.6
Total	**59**	**21,911.4**	**622.8**	**268.0**	**22,802.2**

WUI TREATMENTS
Great Lakes-Big Rivers Region

Refuge	Number	RX Acres	Mech Acres	Other Acres	Total Acres
Big Oaks NWR	7	5,349.0			5,349.0
Big Stone NWR	1	47.0			47.0
Detroit Lakes WMD	6	1,374.0			1,374.0
Fergus Falls WMD	18	728.0	58.0		786.0
Horicon NWR	8	348.5		97.0	445.5
Iowa WMD	6	810.0			810.0
Litchfield WMD	1	150.0			150.0
Minnesota Valley NWR	19	843.0			843.0
Morris WMD	2	120.0			120.0
Necedah NWR	9	2,652.0	300.0		2,952.0
Port Louisa NWR	11	744.0	11.0		755.0
Rydell NWR	11	137.0			137.0
Sherburne NWR	4	1,531.0	6.0		1,537.0
St Croix WMD	7	1,326.0			1,326.0
Windom WMD	8	289.0	20.0		309.0
Total	**118**	**16,448.5**	**395.0**	**97.0**	**16,940.5**

WUI TREATMENTS
Southeast Region

Refuge	Number	RX Acres	Mech Acres	Total Acres
Ace Basin NWR	6	2,722.0	15.0	2,737.0
Alligator River NWR	3	714.0	12.0	726.0
Arthur R Marshall Loxahatchee NWR	5	7,924.0		7,924.0
Bayou Sauvage NWR	1	1,500.0		1,500.0
Bon Secour NWR	2	320.0		320.0
Cape Romain NWR	1		15.0	15.0
Carolina Sandhills NWR	14	6,605.0		6,605.0
Cedar Island NWR	7	4,637.0	100.0	4,737.0
Currituck NWR	2	367.0		367.0
D'Arbonne NWR	1	112.0		112.0
Felsenthal NWR	8	2,170.0		2,170.0
Florida Panther NWR	8	4,885.0		4,885.0
Grand Bay NWR	1	238.0		238.0
Harris Neck NWR	1		20.0	20.0
J N Ding Darling NWR	12	177.0		177.0
Lake Woodruff NWR	16	1,107.0		1,107.0
Lower Suwannee NWR	3	935.0		935.0
Mackay Island NWR	2	1,480.0		1,480.0
Merritt Island NWR	20	8,008.0	500.0	8,508.0
Mississippi Sandhill Crane NWR	12	2,418.0	344.0	2,762.0
National Key Deer Refuge	7	215.0	5.0	220.0
Noxubee NWR	14	3,219.0		3,219.0
Okefenokee NWR	11	3,500.0	500.0	4,000.0
Pee Dee NWR	1	435.0		435.0
Piedmont NWR	11	5,998.0		5,998.0

Pinckney Island NWR	8	555.0		555.0
Pocosin Lakes NWR	4	1,143.0	150.0	1,293.0
Santee NWR	1		25.0	25.0
Savannah Coastal Refuges	6	2,180.0	10.0	2,190.0
Savannah NWR	15	1,586.0	65.0	1,651.0
SE Lousianna Refuges	1		55.0	55.0
St. Johns NWR	3	1,558.0		1,558.0
St Marks NWR	33	12,463.0		12,463.0
Upper Ouachita NWR	3	319.0		319.0
Total	**243**	**79,490.0**	**1,816.0**	**81,306.0**

WUI TREATMENTS
Northeast Region

Refuge	Number	RX Acres	Mech Acres	Other Acres	Total Acres
Back Bay NWR	3	45.0	8.0		53.0
Cape May NWR	2		53.0		53.0
Chesapeake Marshlands NWRC	1	590.0			590.0
Eastern Virginia Rivers NWRC	1		50.0		50.0
Edwin B Forsythe NWR	5	128.0	142.0		270.0
Great Dismal Swamp NWR	2		56.0		56.0
Great Swamp NWR	1		112.0		112.0
Long Island NWRC	4		58.0		58.0
Patuxent Research Refuge	1		20.0		20.0
Prime Hook	2	465.0		2,450.0	2,915.0
Rachel Carson NWR	4	99.0	245.0		344.0
Sunkhaze Meadows NWR	1		44.0		44.0
Wallkill River NWR	7	26.0	548.0		574.0
Total	**34**	**1,353.0**	**1,336.0**	**2,450.0**	**5,139.0**

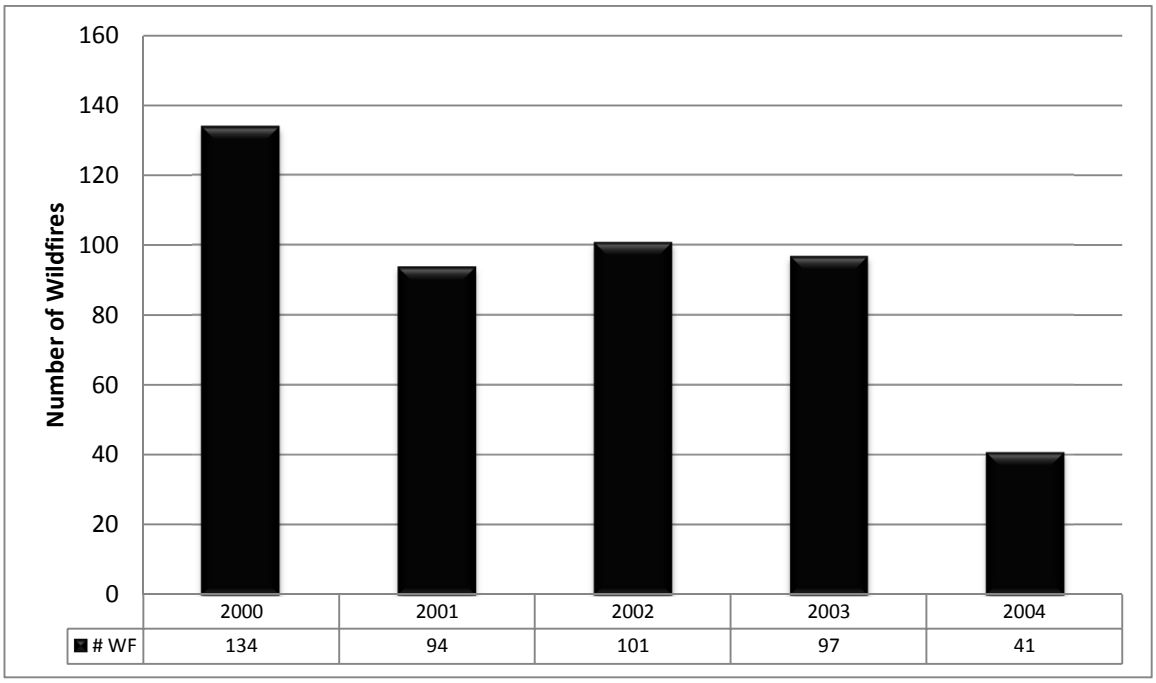
WUI TREATMENTS
Mountain-Prairie Region

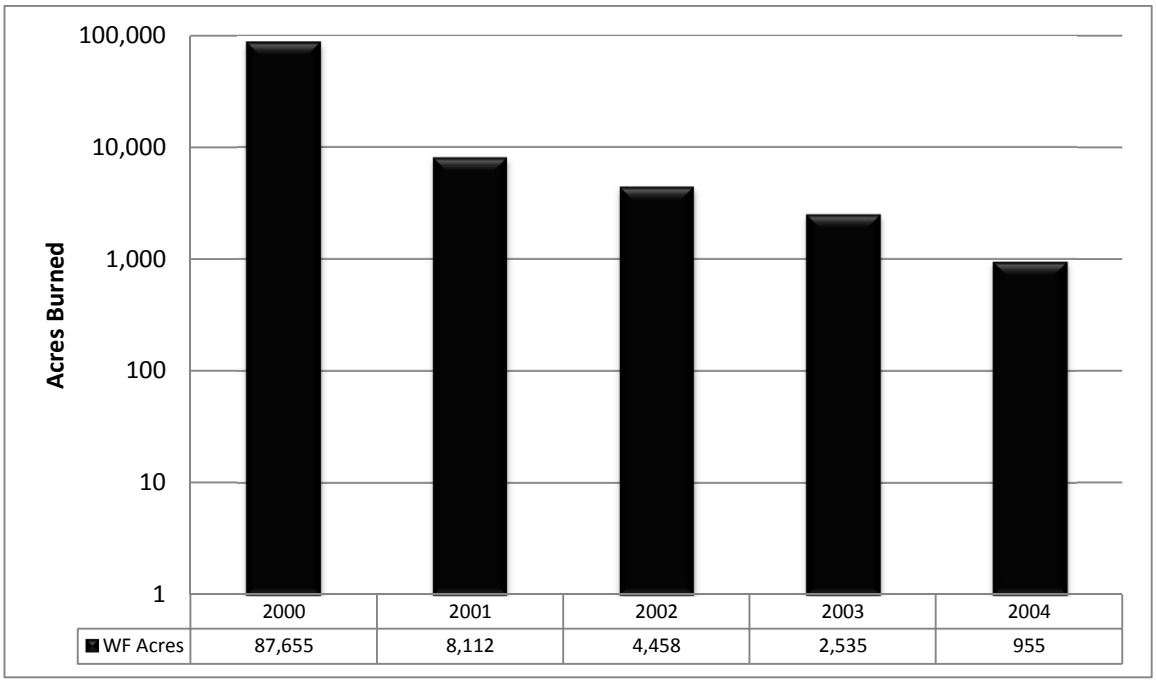
Refuge	Number	RX Acres	Mech Acres	Other Acres	Total Acres
Boyer Chute NWR	3	235.0			235.0
Crosby WMD	1	36.0			36.0
Kirwin NWR	8	228.0			228.0
Lake Andes NWR	1			160.0	160.0
Lee Metcalf NWR	2	4.0			4.0
Marais Des Cygnes NWR	1		30.0		30.0
Quivira NWR	1	587.0			587.0
Rainwater Basin WMD	7	1,700.0			1,700.0
Rocky Mtn. Arsenal NWR	2	217.0	73.0		290.0
Total	**26**	**3,007.0**	**103.0**	**160.0**	**3,270.0**

WUI TREATMENTS
Alaska Region

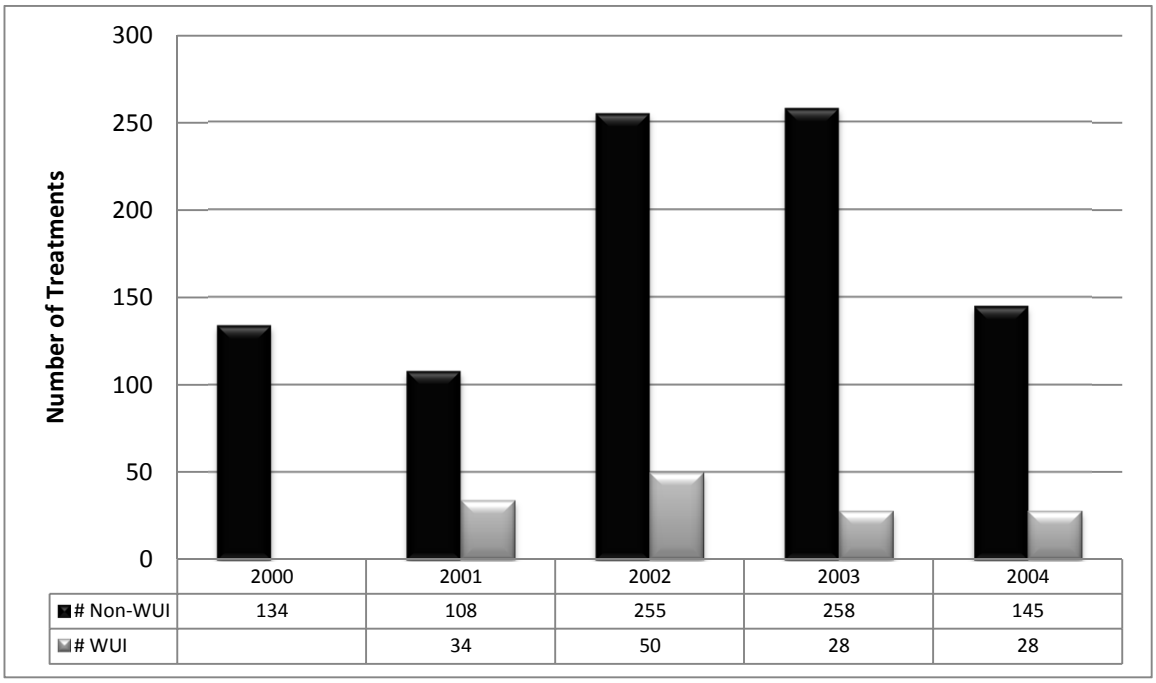
Refuge	Number	RX Acres	Mech Acres	Total Acres
Kenai NWR	1		13.0	13.0
Tetlin NWR	1	6.0		6.0
Total	**2**	**6.0**	**13.0**	**19.0**

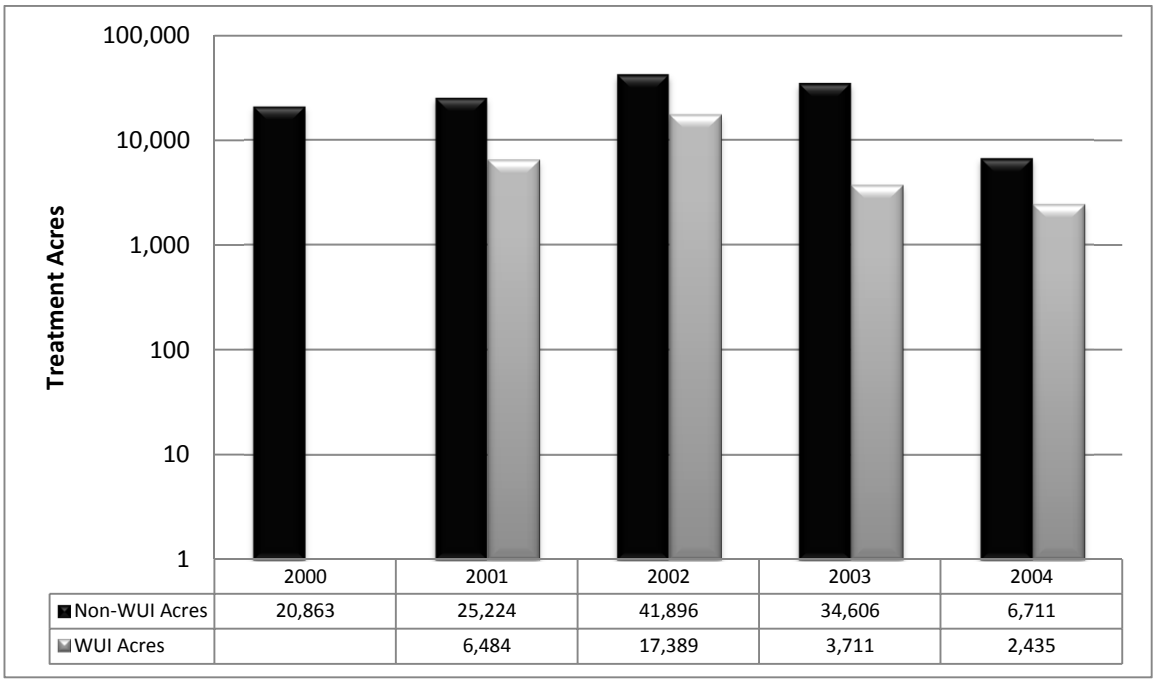
REGION 1
Wildfires
2000-2004





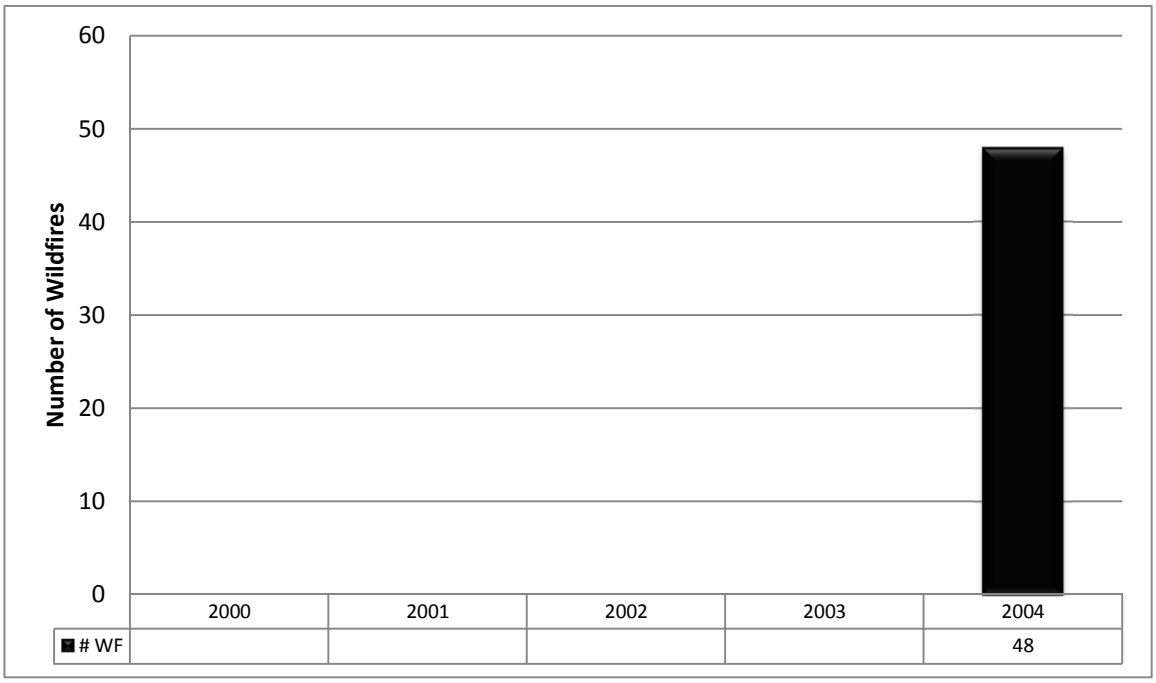
REGION 1
Treatments
2000-2004

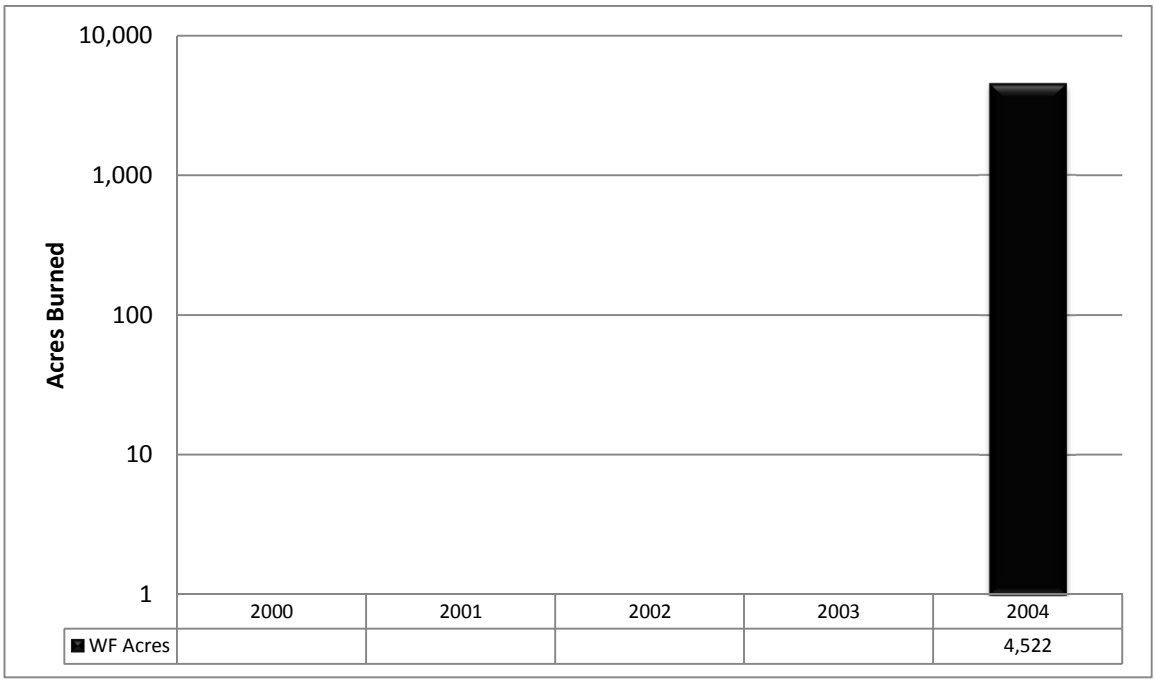




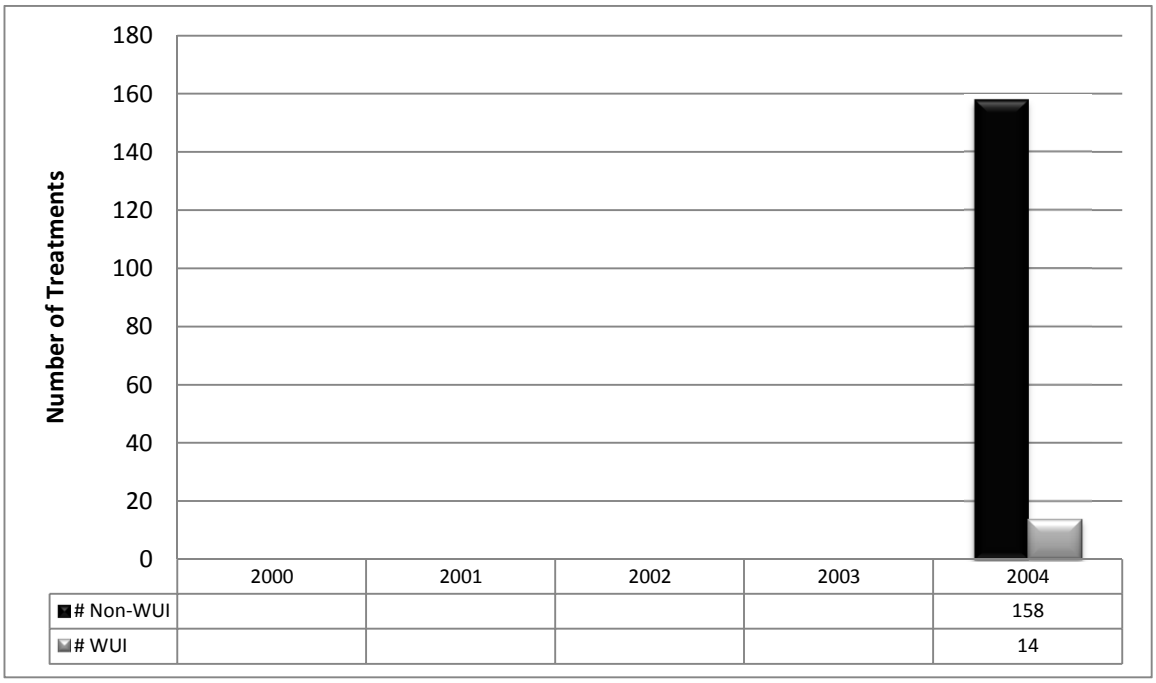
WUI = Wildland Urban Interface

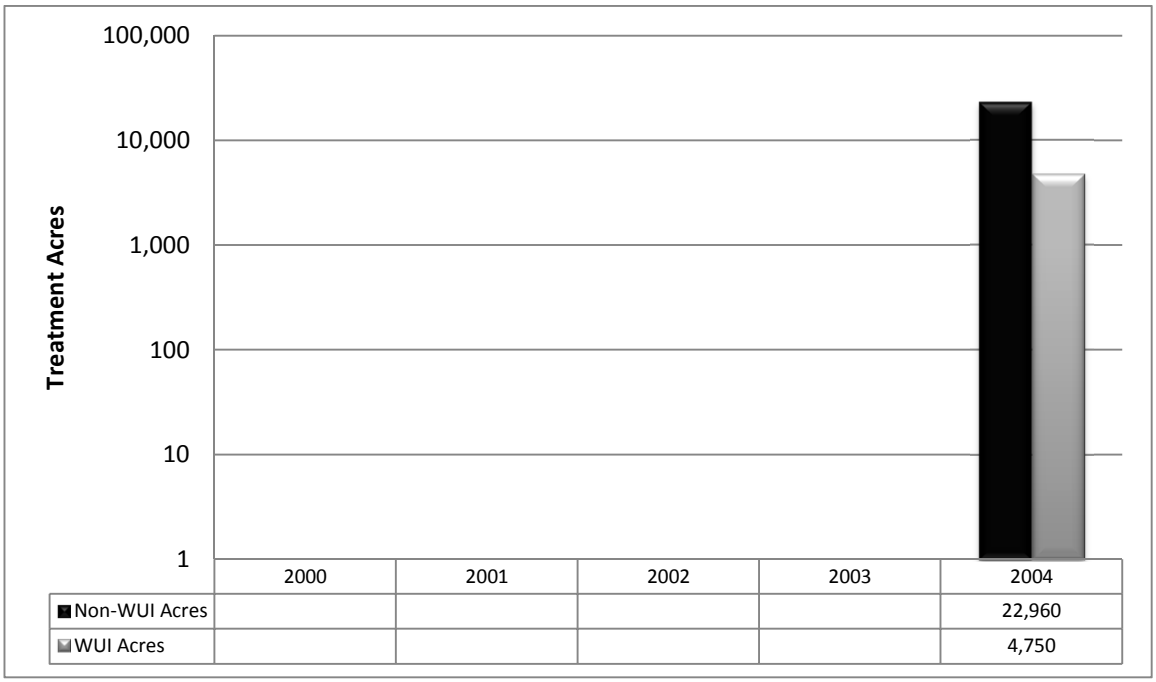
REGION 8
CA/NV Operations
Wildfires 2000-2004





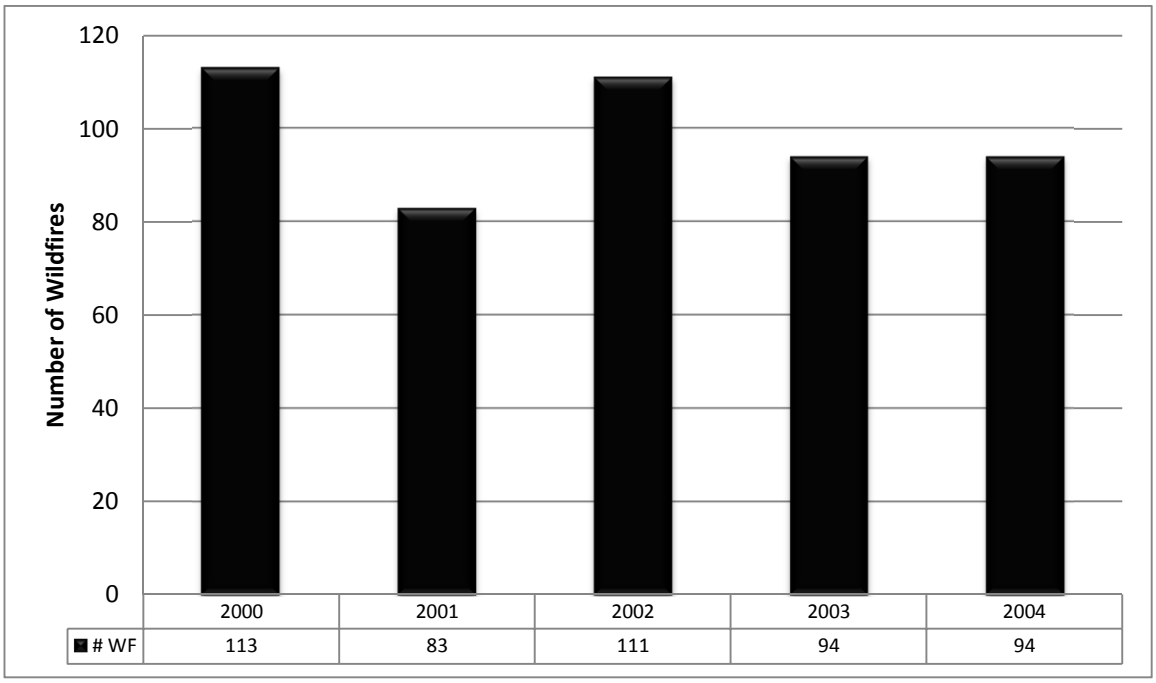
REGION 8
CA/NV Operations
Treatments 2000-2004

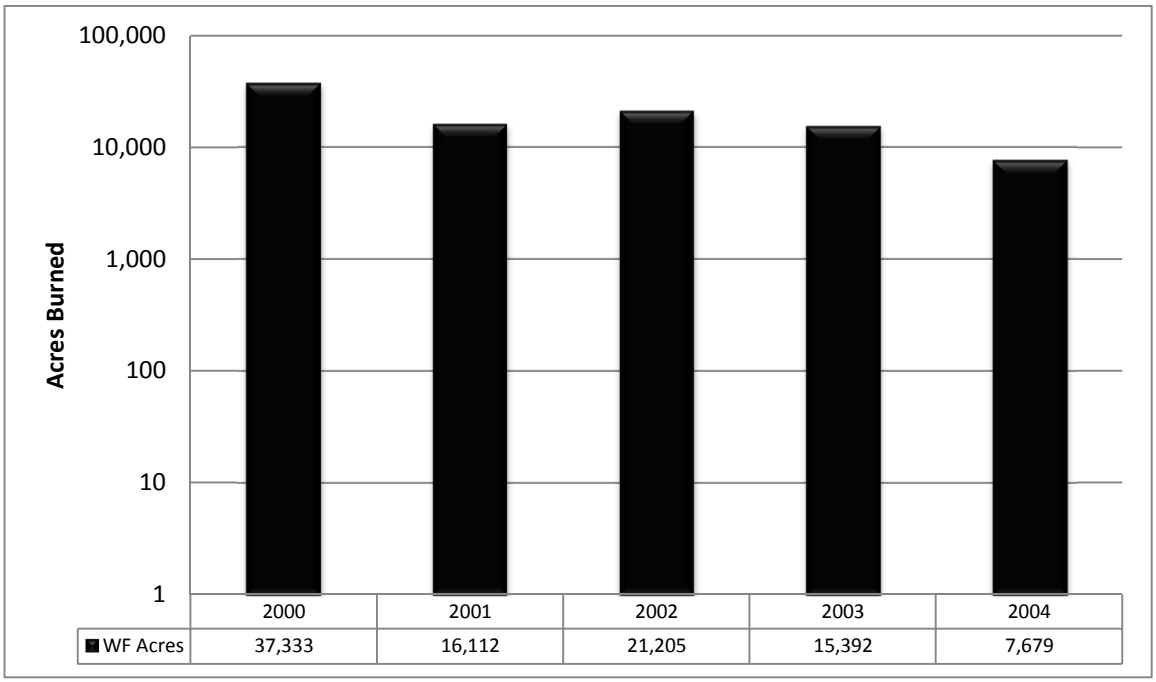




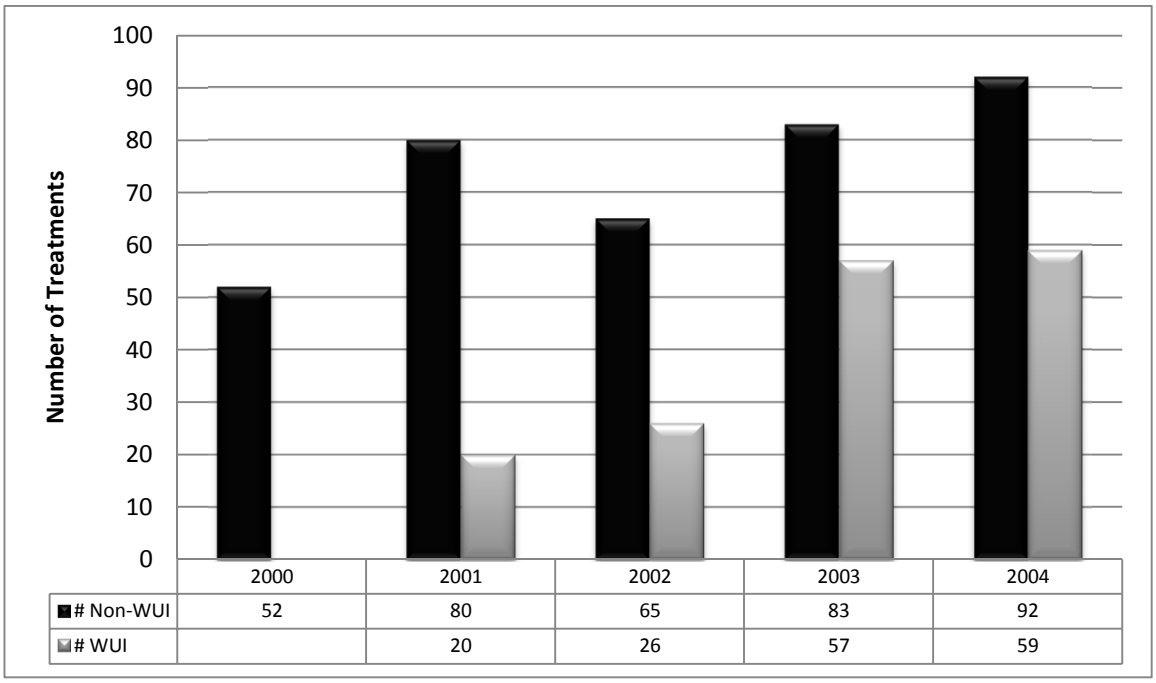
WUI = Wildland Urban Interface

REGION 2
Wildfires
2000-2004

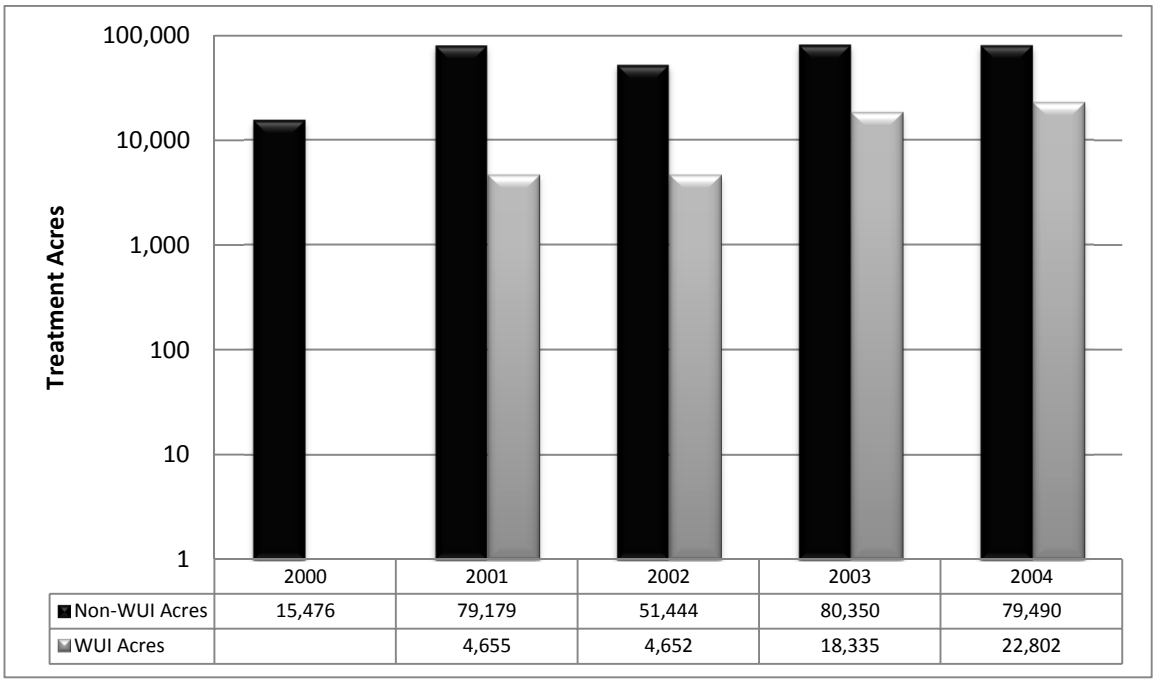




REGION 2
Treatments
2000-2004



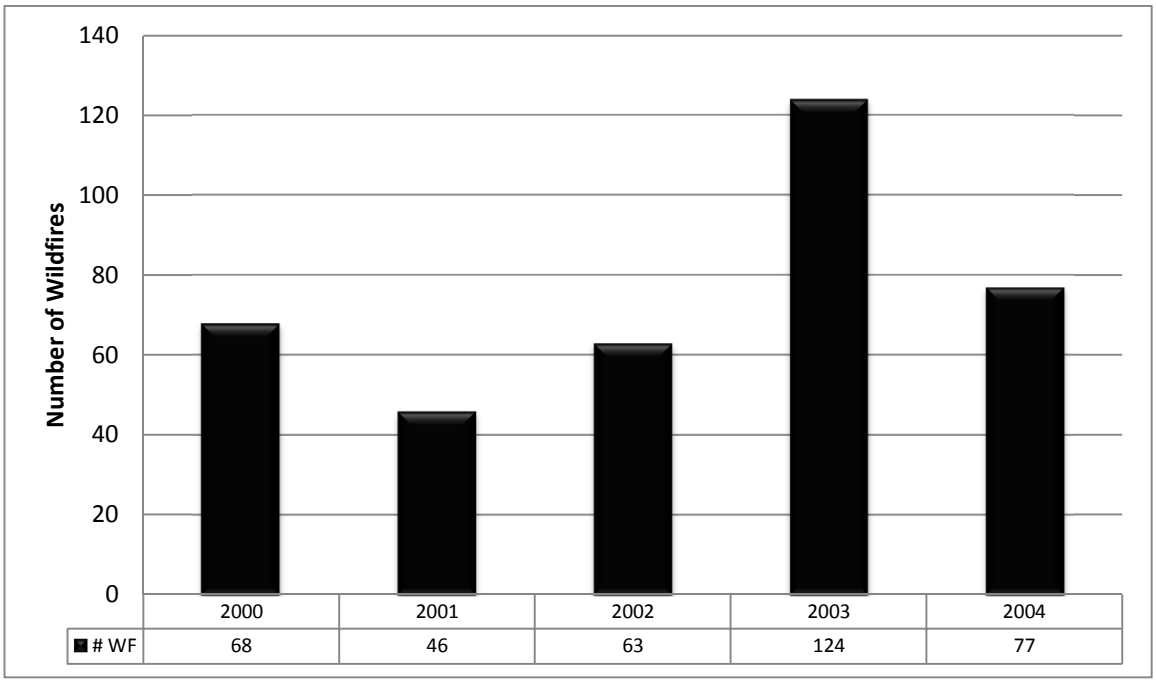
	2000	2001	2002	2003	2004
# Non-WUI	52	80	65	83	92
# WUI		20	26	57	59

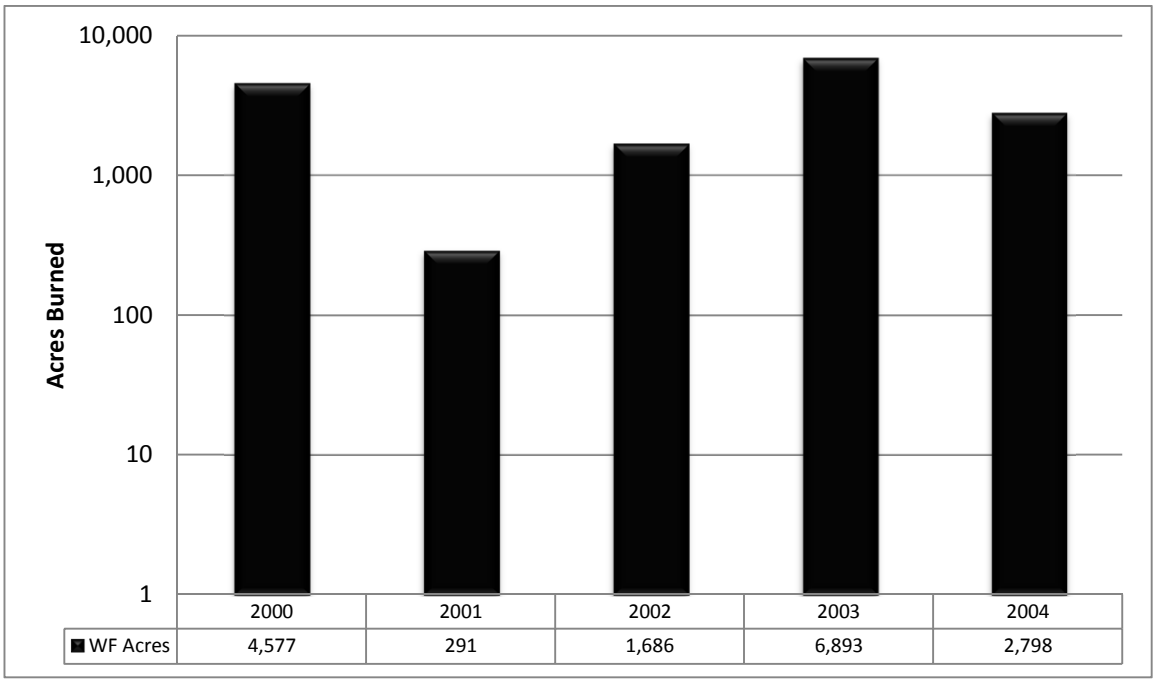


	2000	2001	2002	2003	2004
Non-WUI Acres	15,476	79,179	51,444	80,350	79,490
WUI Acres		4,655	4,652	18,335	22,802

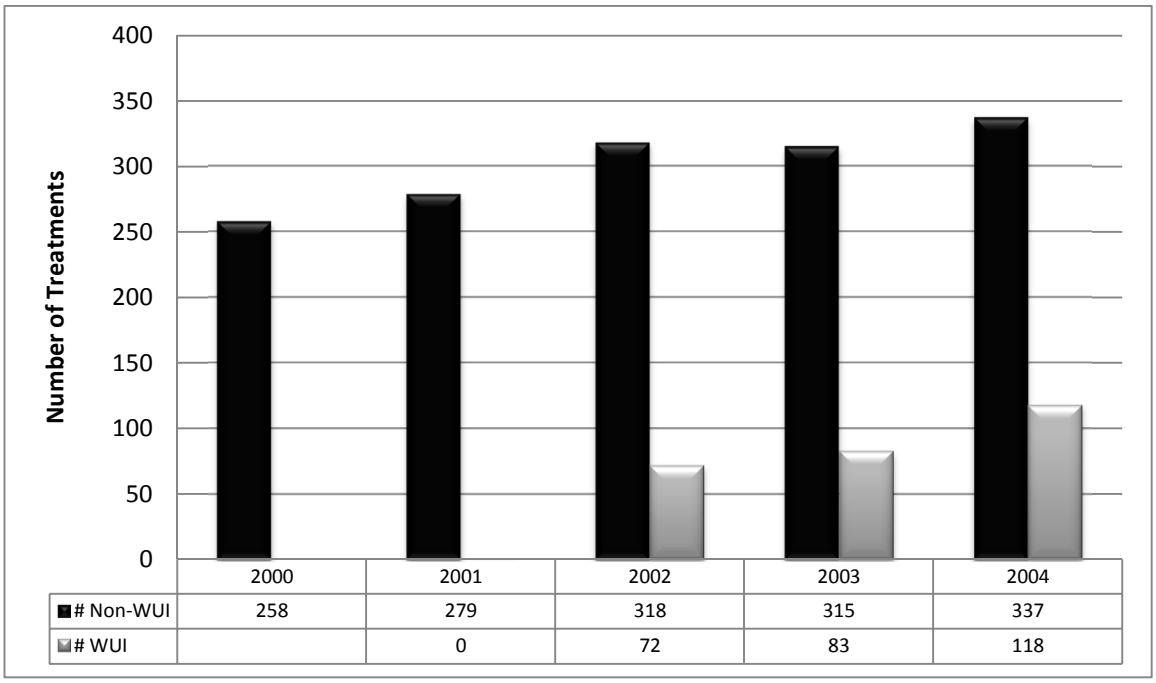
WUI = Wildland Urban Interface

REGION 3
Wildfires
2000-2004

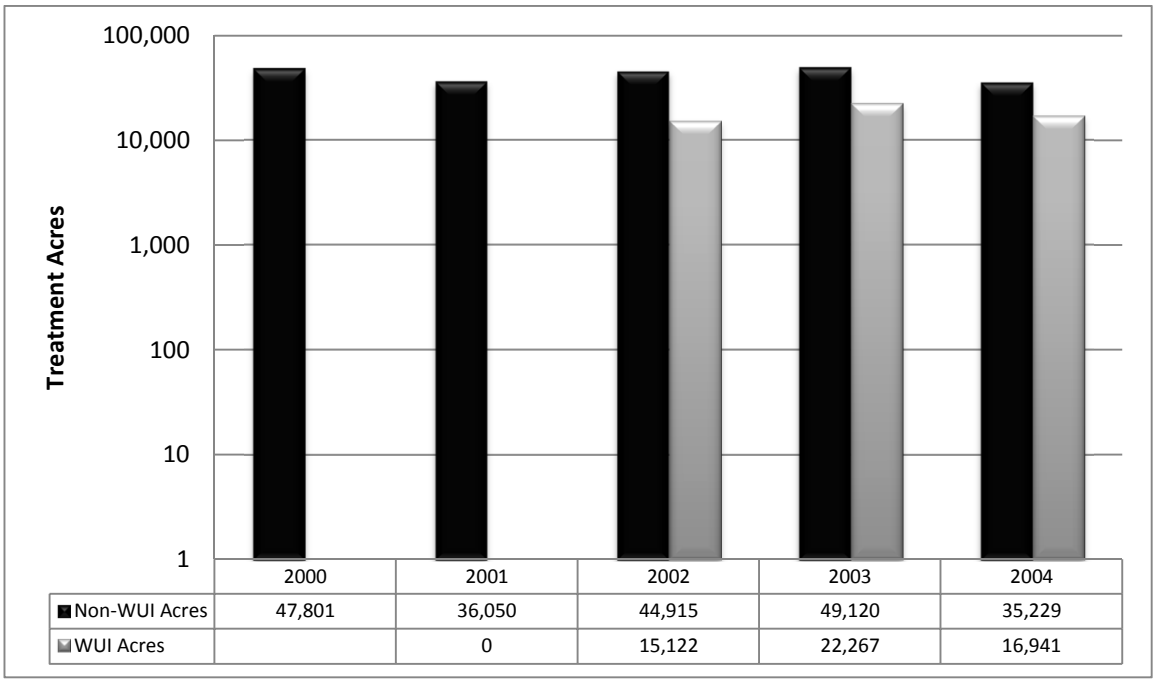




REGION 3
Treatments
2000-2004



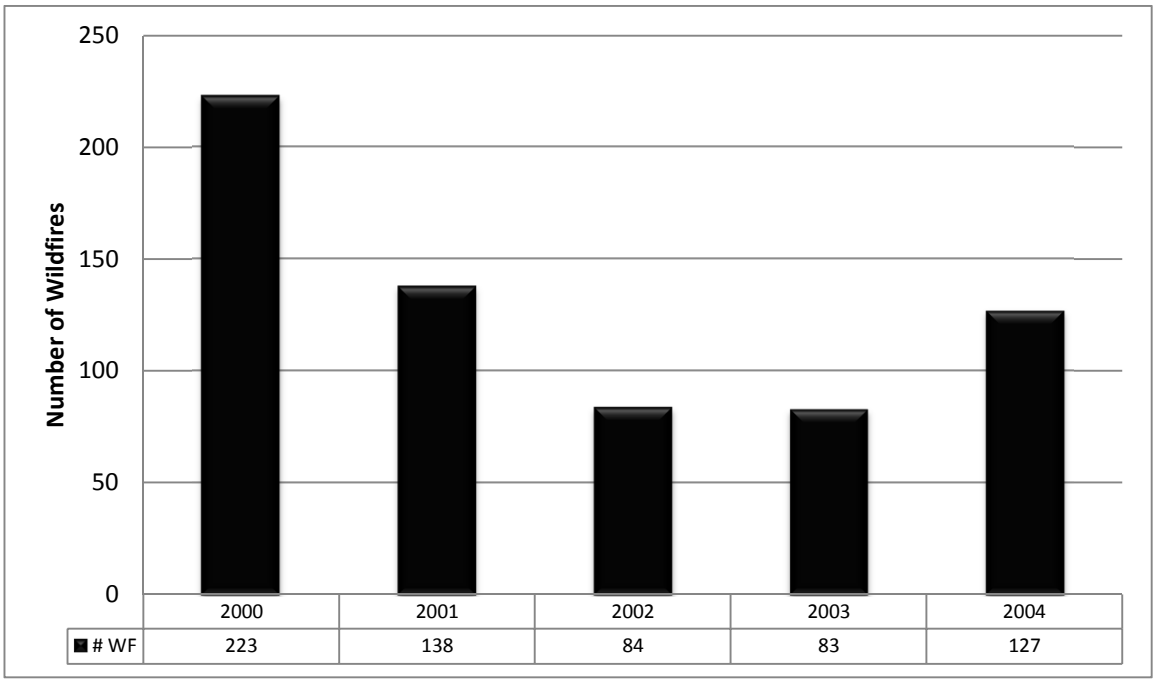
	2000	2001	2002	2003	2004
# Non-WUI	258	279	318	315	337
# WUI		0	72	83	118

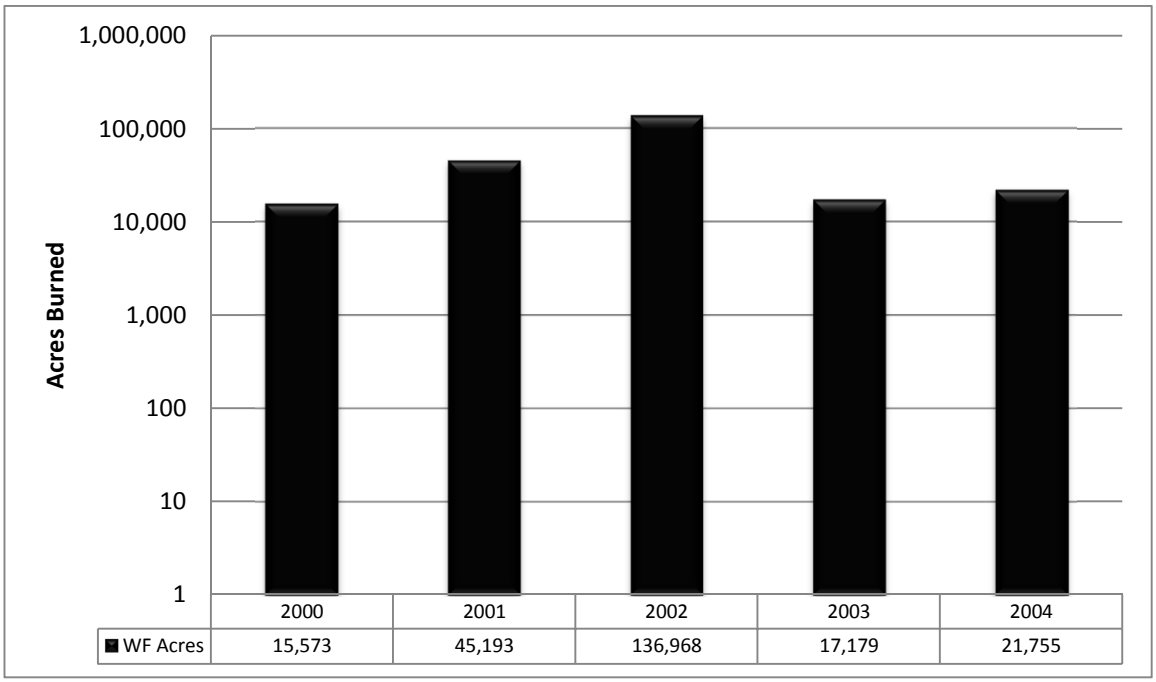


	2000	2001	2002	2003	2004
Non-WUI Acres	47,801	36,050	44,915	49,120	35,229
WUI Acres		0	15,122	22,267	16,941

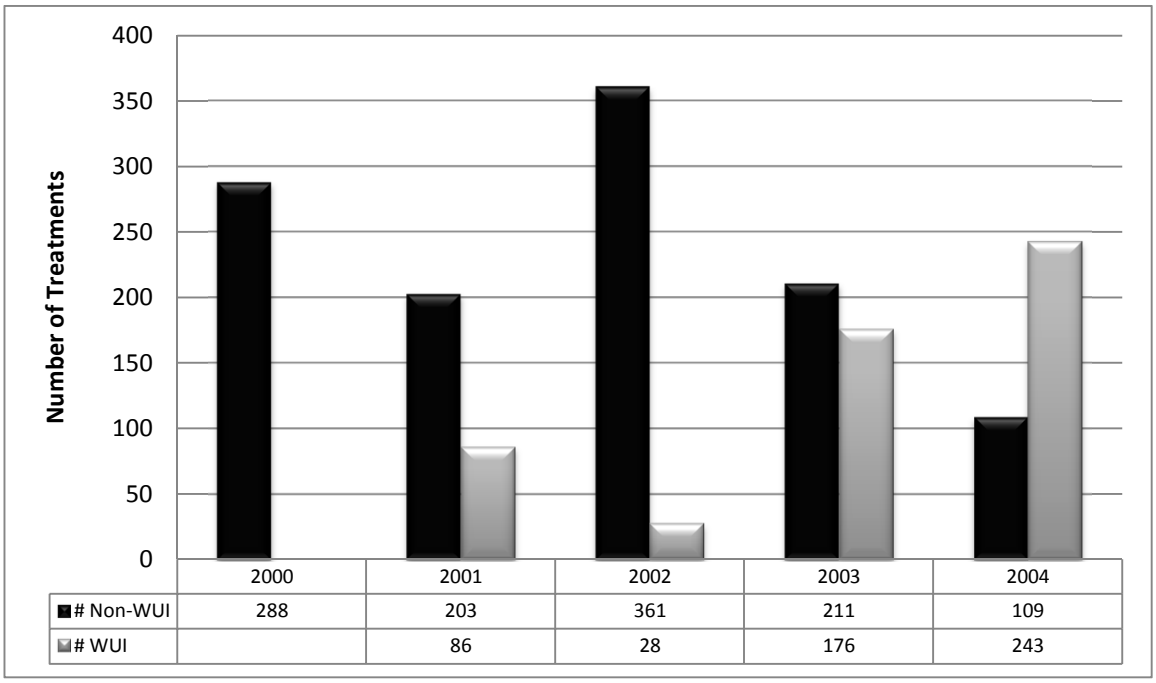
WUI = Wildland Urban Interface

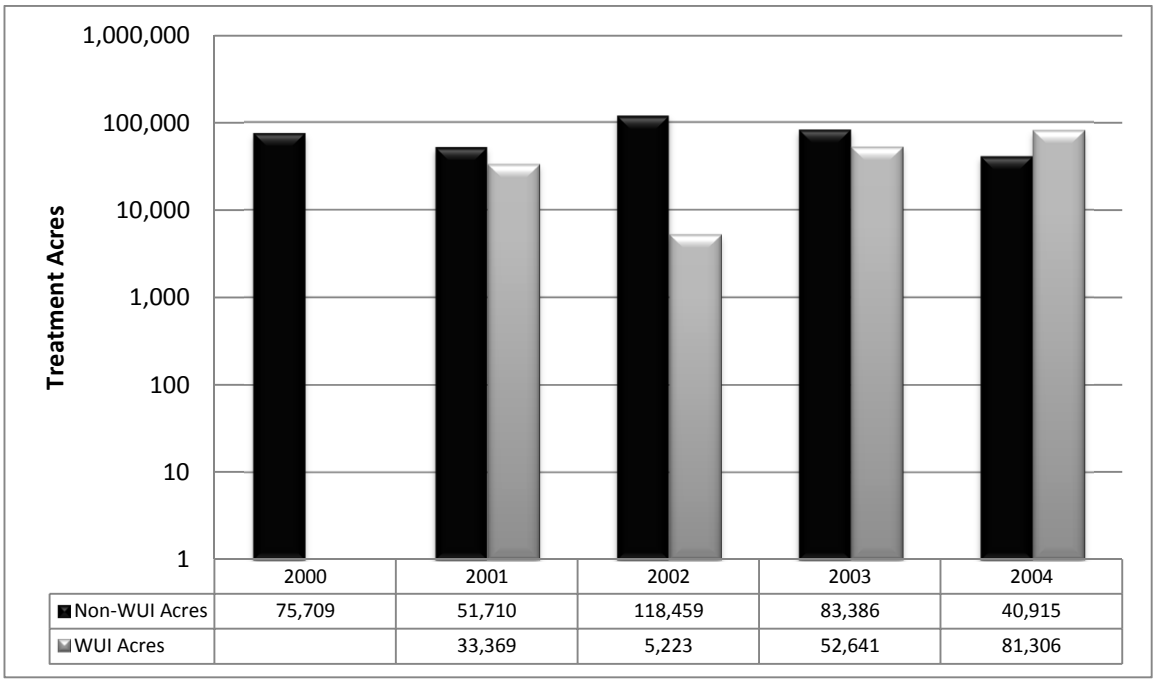
REGION 4
Wildfires
2000-2004





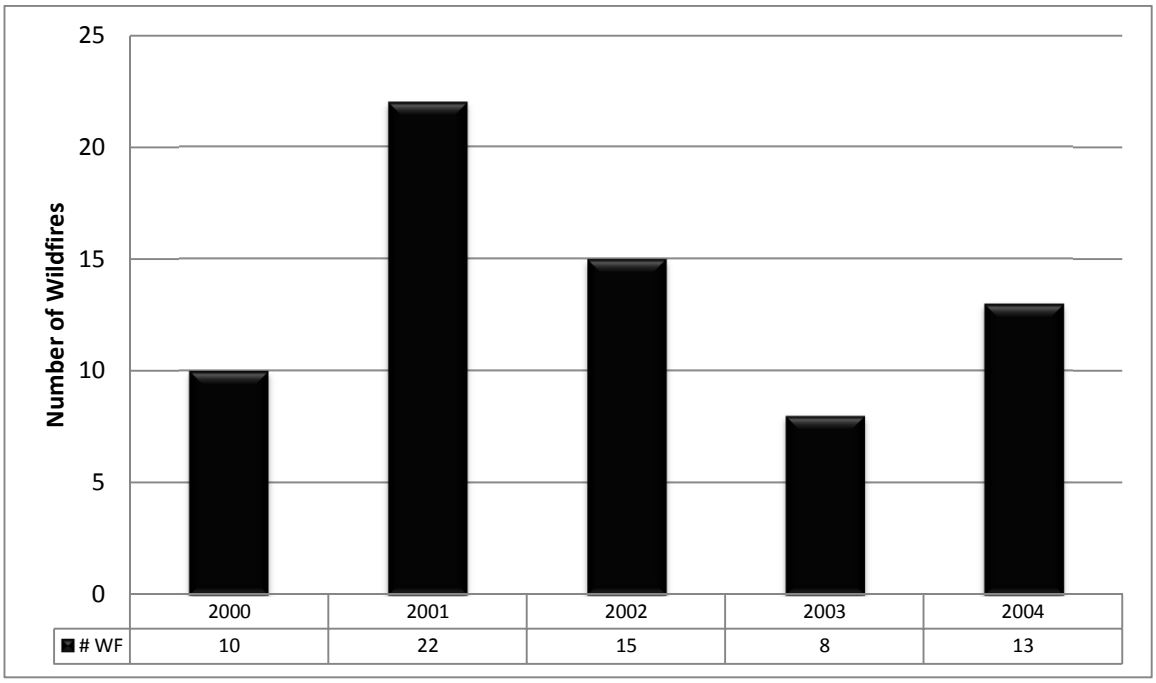
REGION 4
Treatments
2000-2004

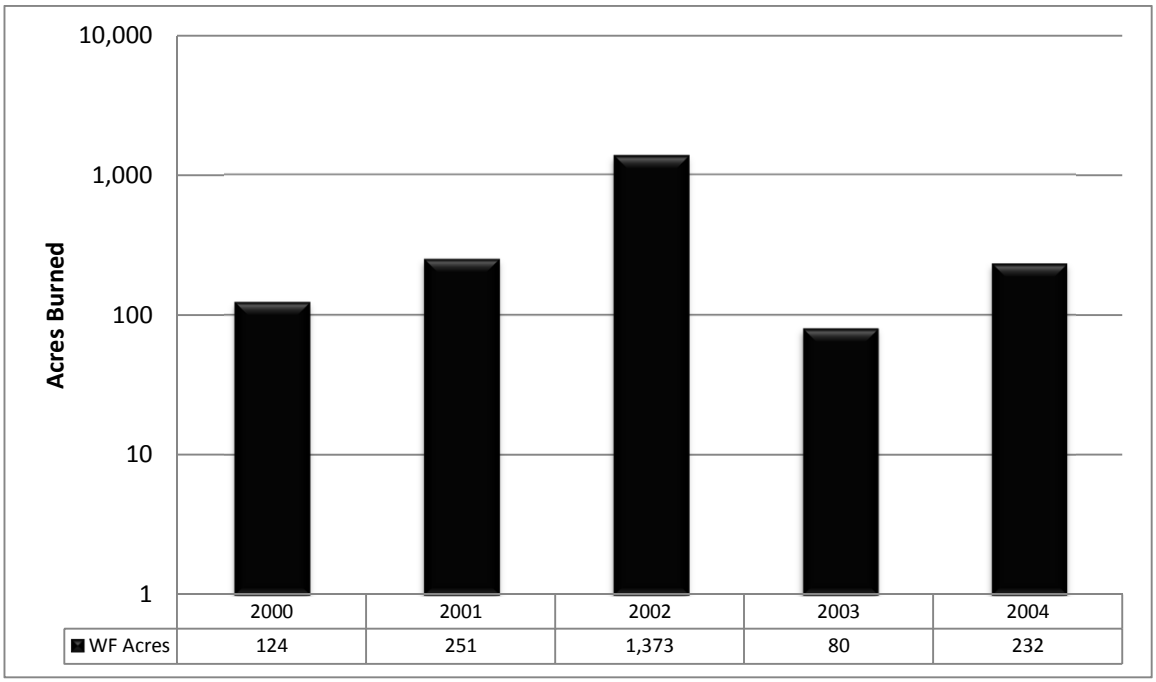




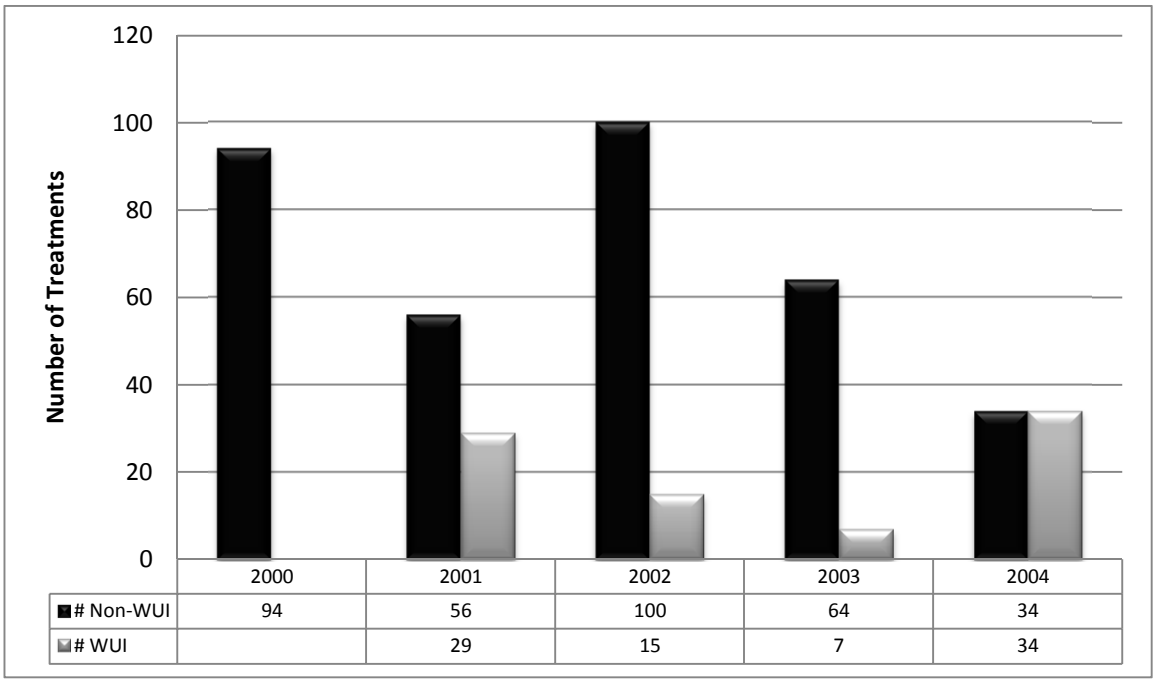
WUI = Wildland Urban Interface

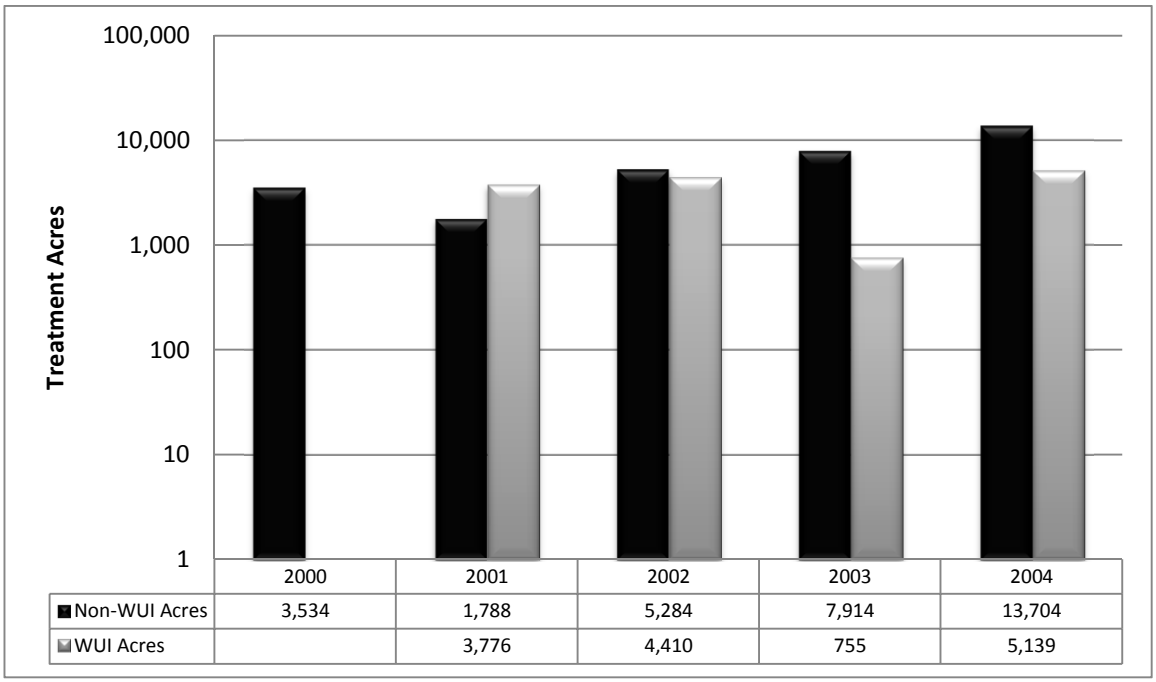
REGION 5
Wildfires
2000-2004





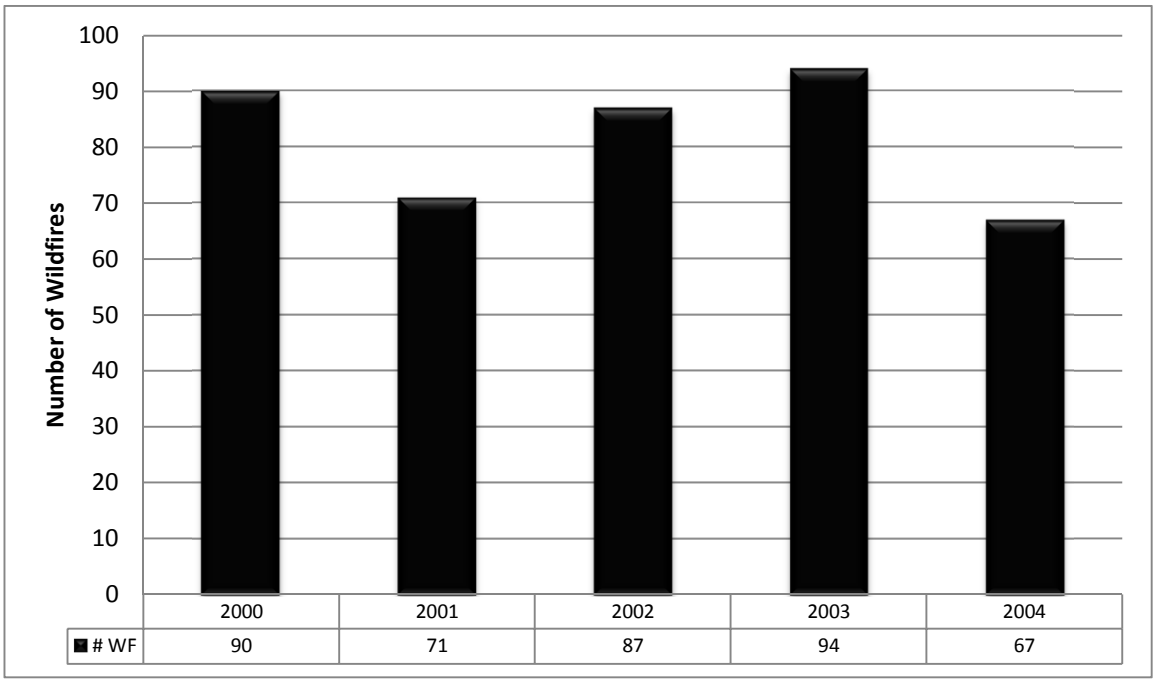
REGION 5
Treatments
2000-2004

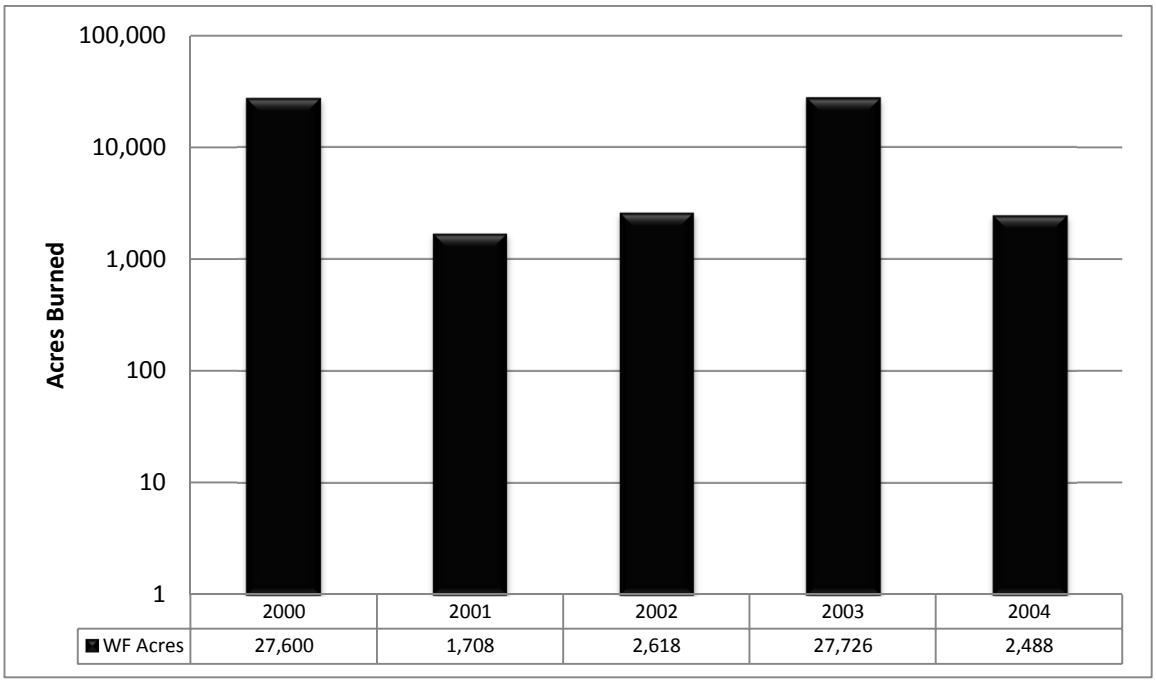




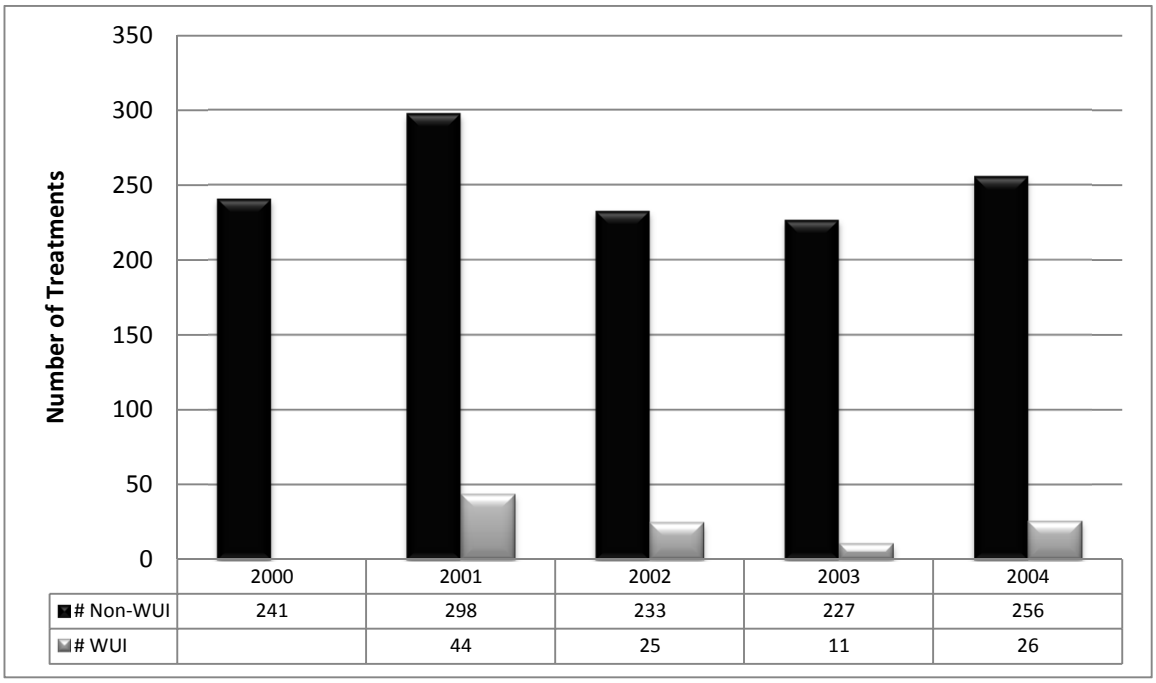
WUI = Wildland Urban Interface

REGION 6
Wildfires
2000-2004

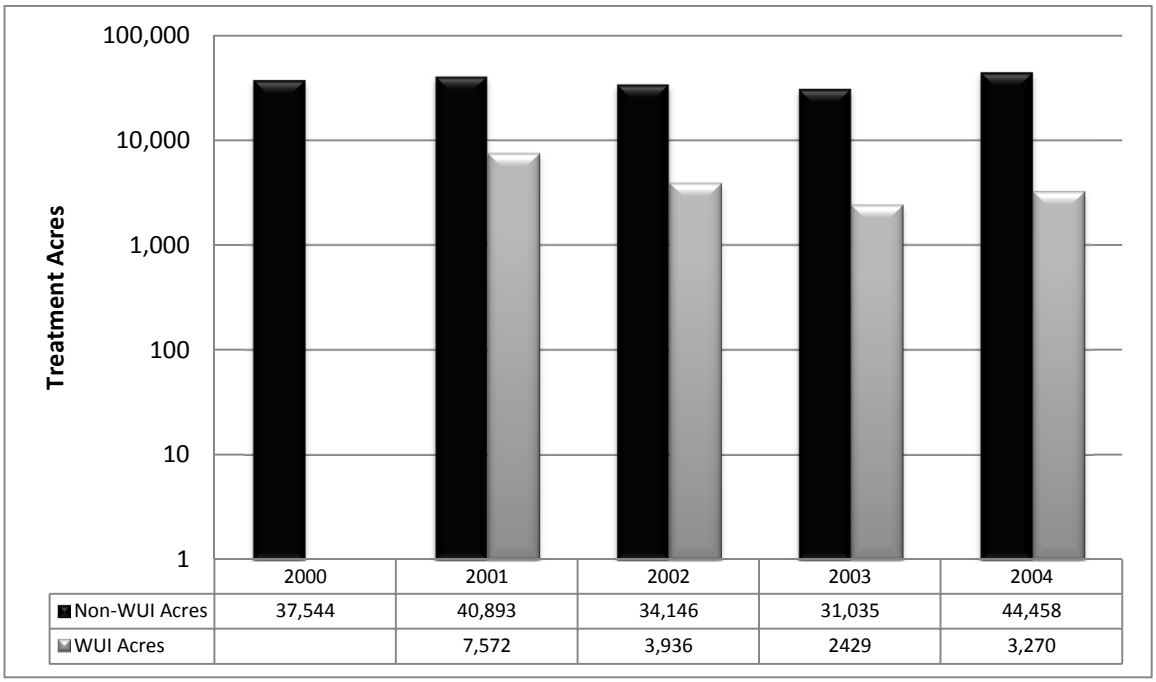




REGION 6
Treatments
2000-2004



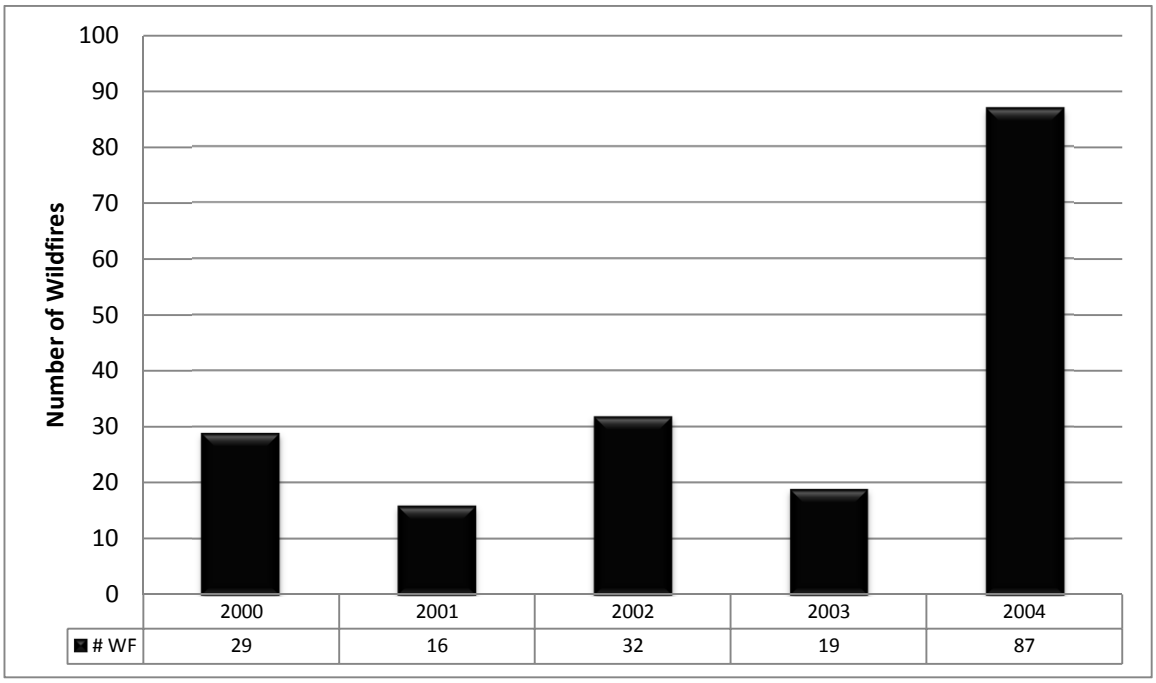
	2000	2001	2002	2003	2004
# Non-WUI	241	298	233	227	256
# WUI		44	25	11	26

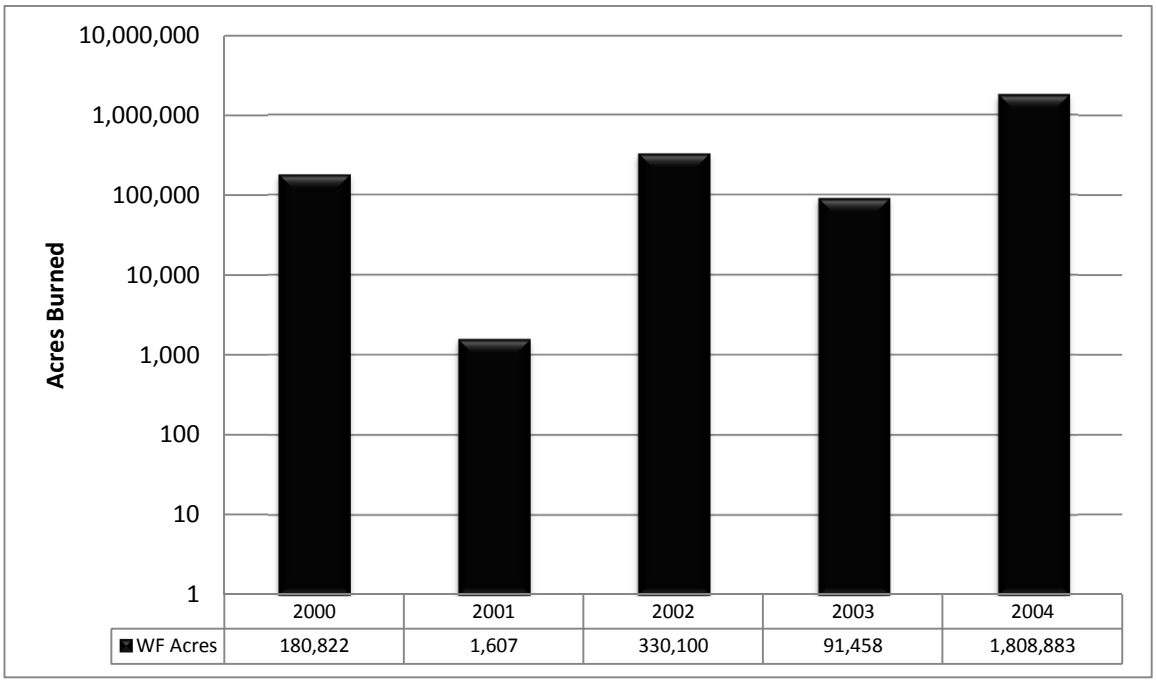


	2000	2001	2002	2003	2004
Non-WUI Acres	37,544	40,893	34,146	31,035	44,458
WUI Acres		7,572	3,936	2429	3,270

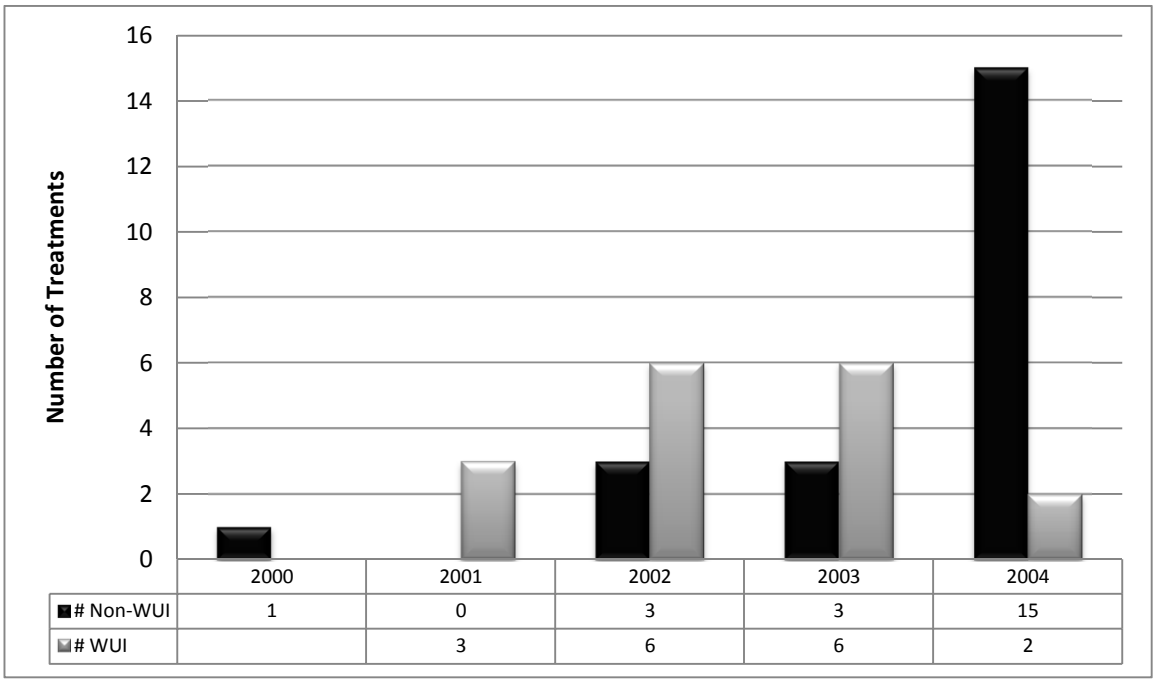
WUI = Wildland Urban Interface

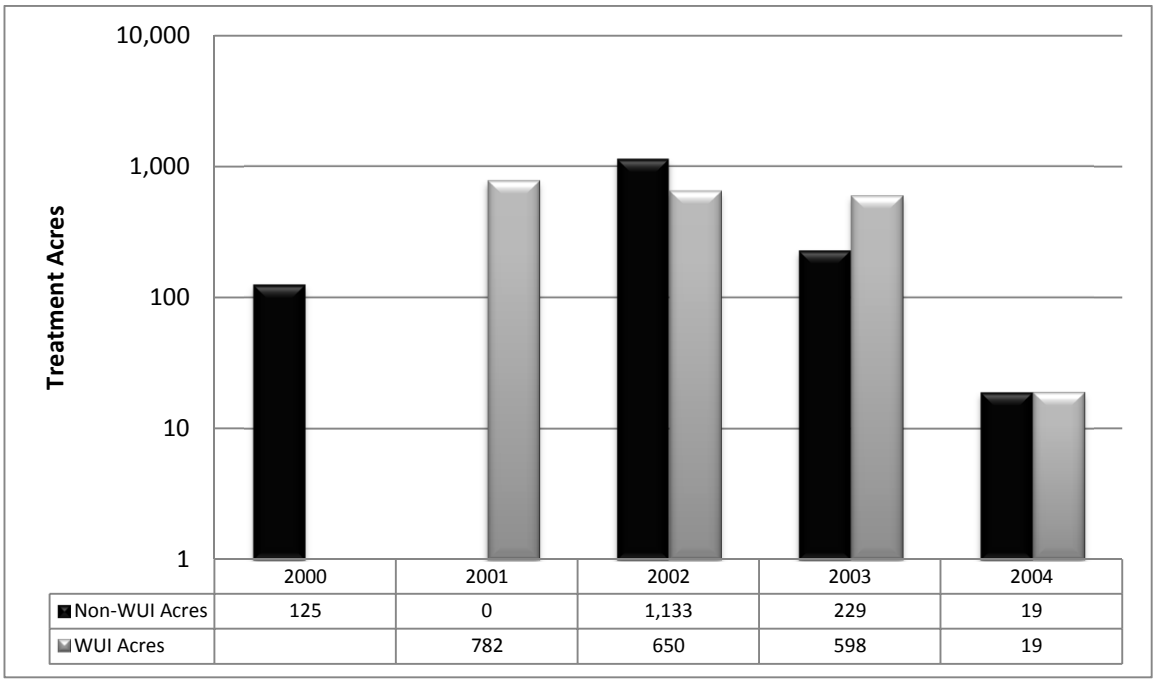
REGION 7
Wildfires
2000-2004





REGION 7
Treatments
2000-2004

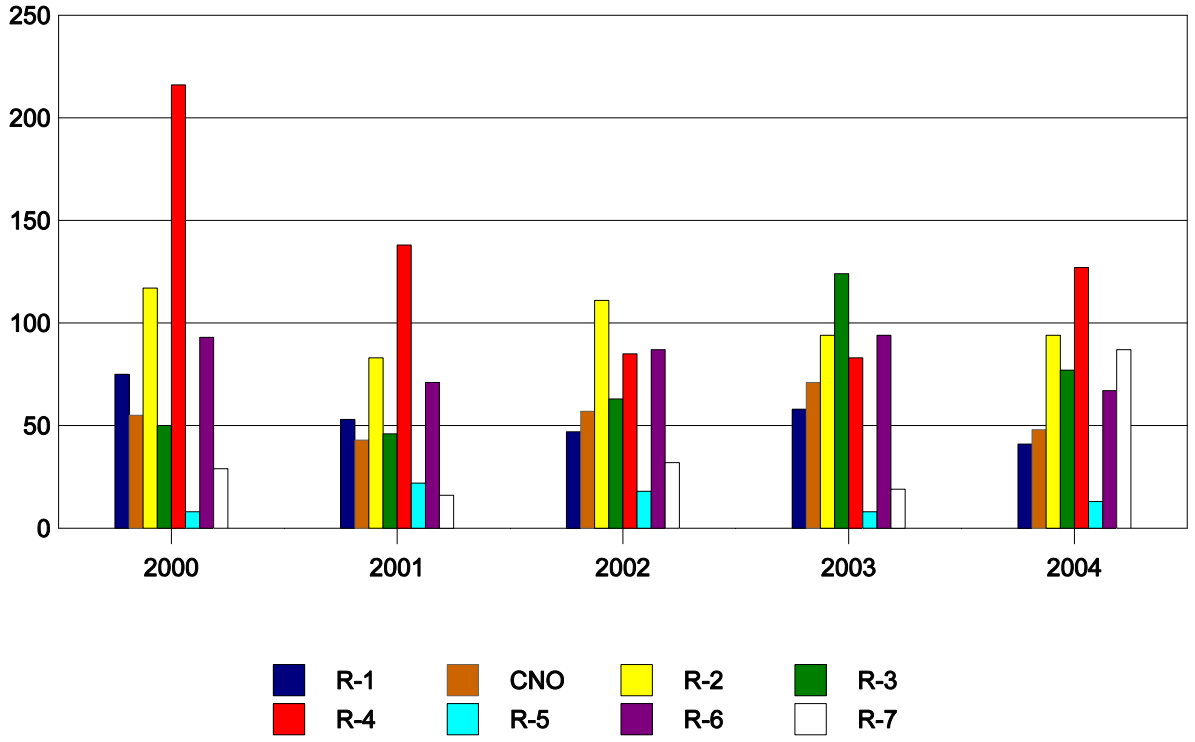




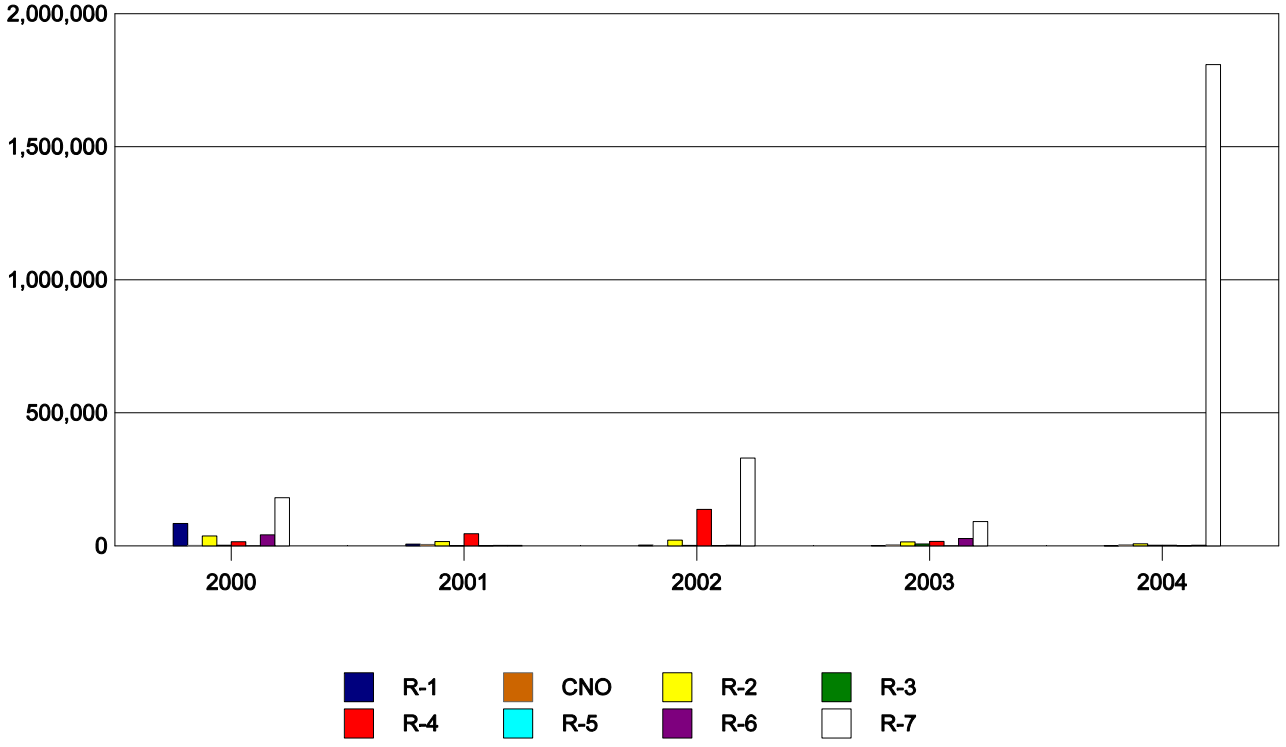
WUI = Wildland Urban Interface

WILDFIRES 2000 - 2004

Number of Wildfires

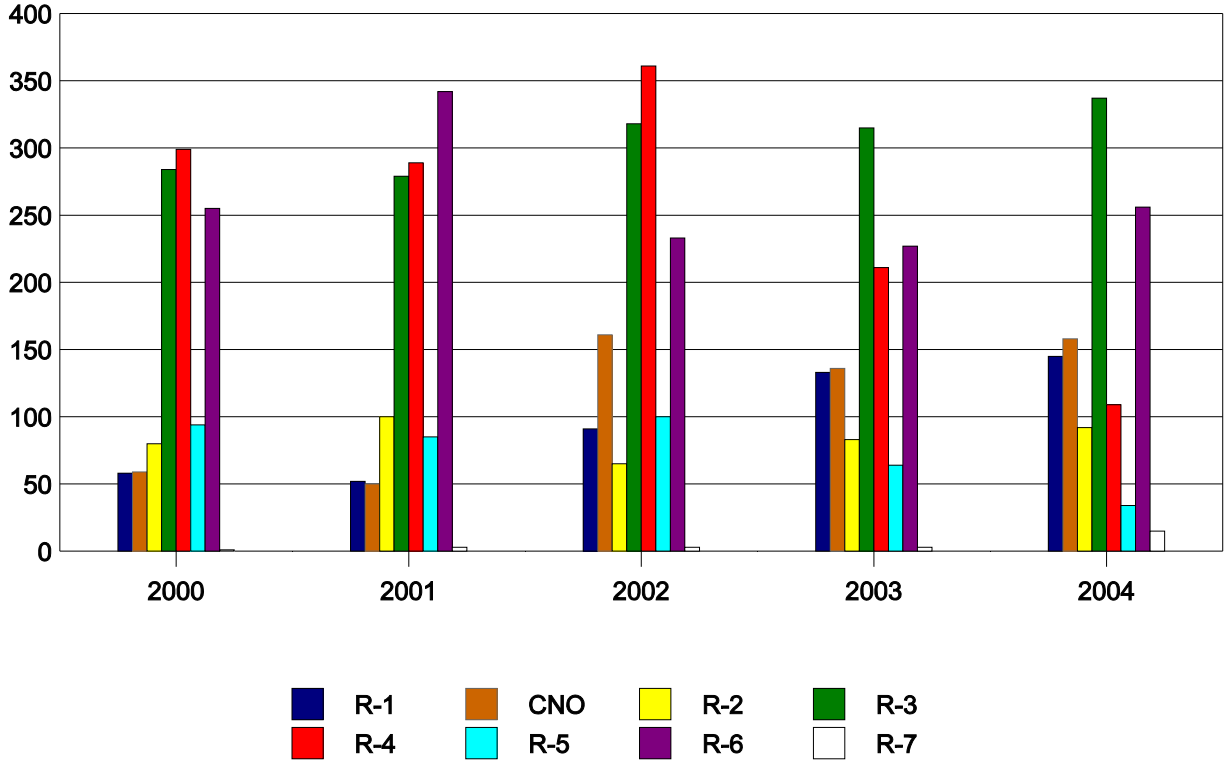


Number of Acres Burned

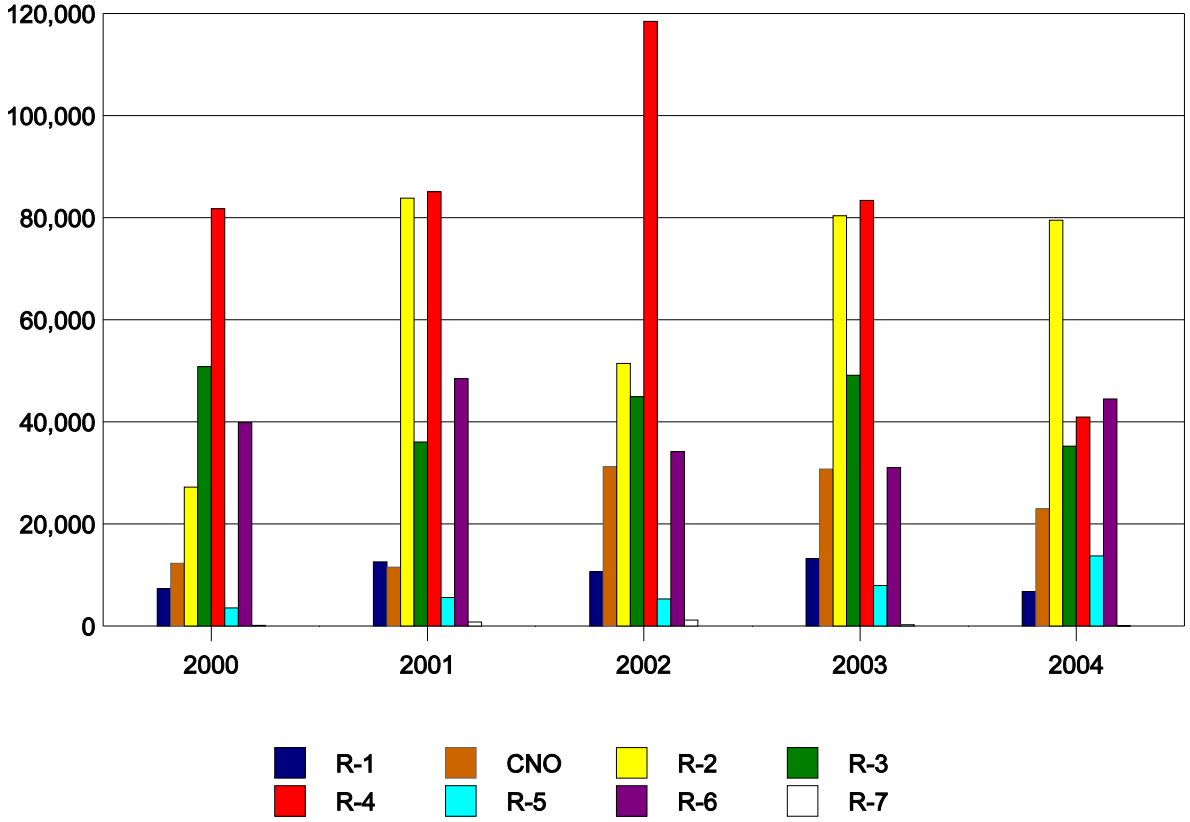


NON-WUI TREATMENTS 2000 - 2004

Number of Treatments

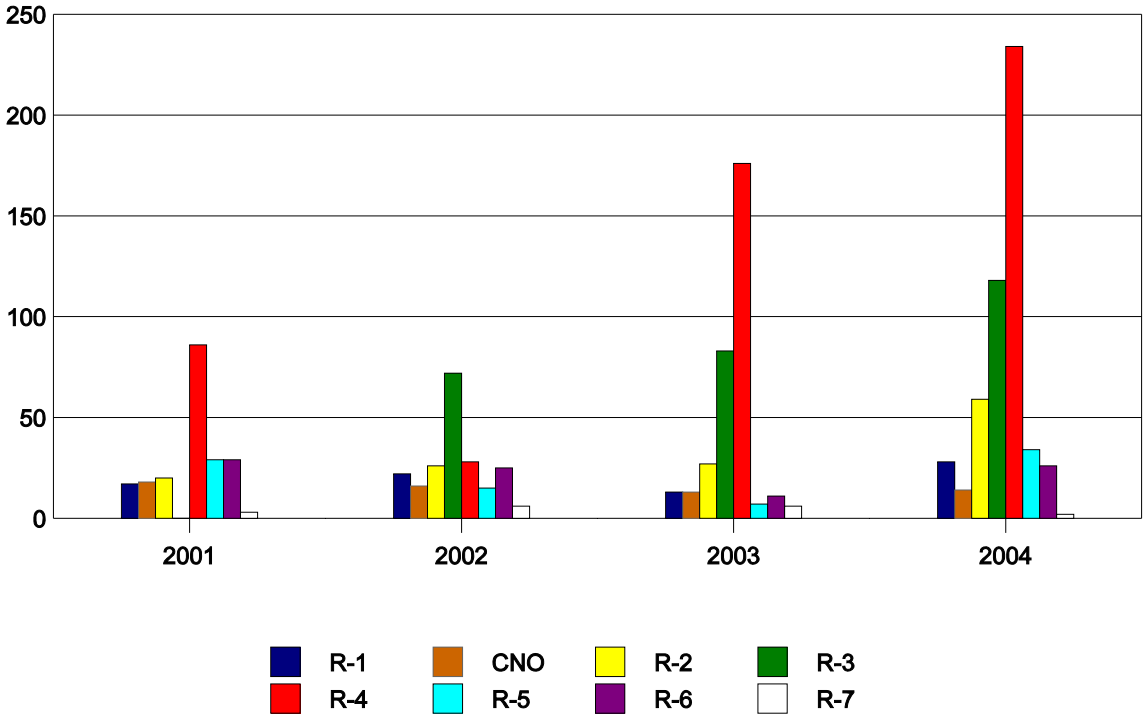


Number of Acres Treated

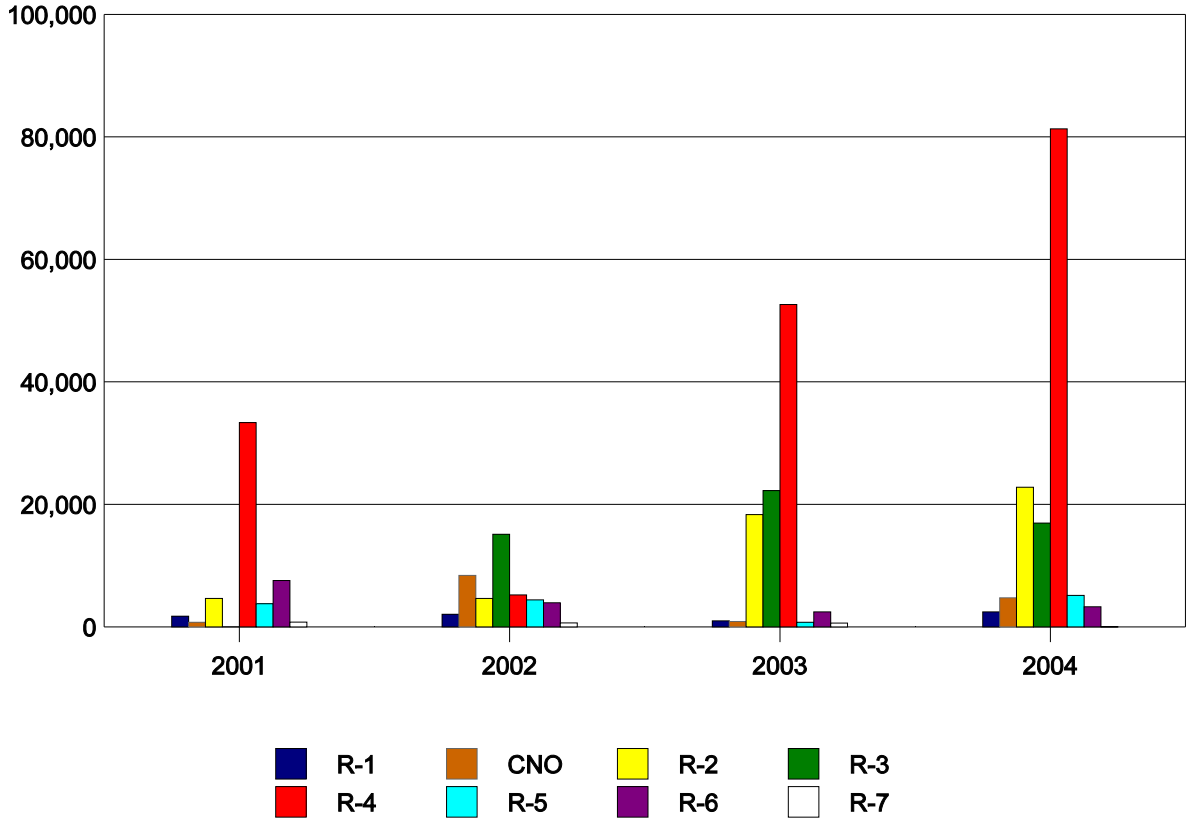


WUI TREATMENTS 2001 - 2004

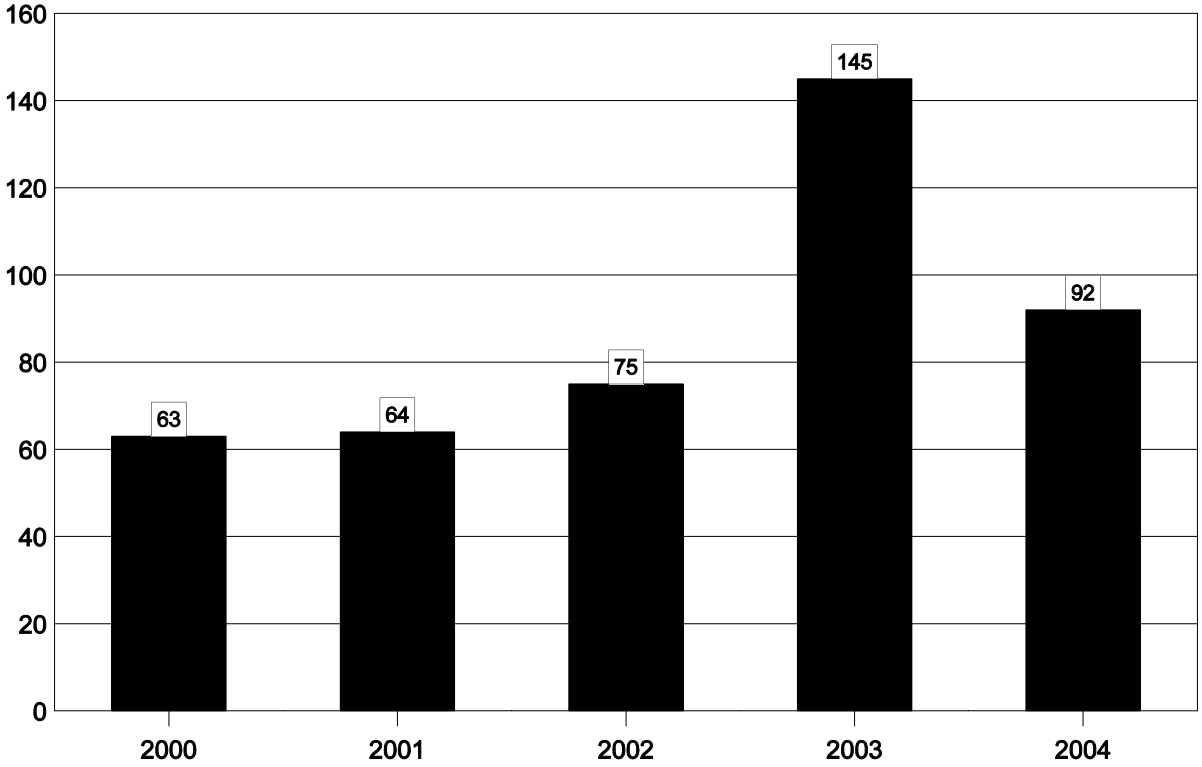
Number of Treatments



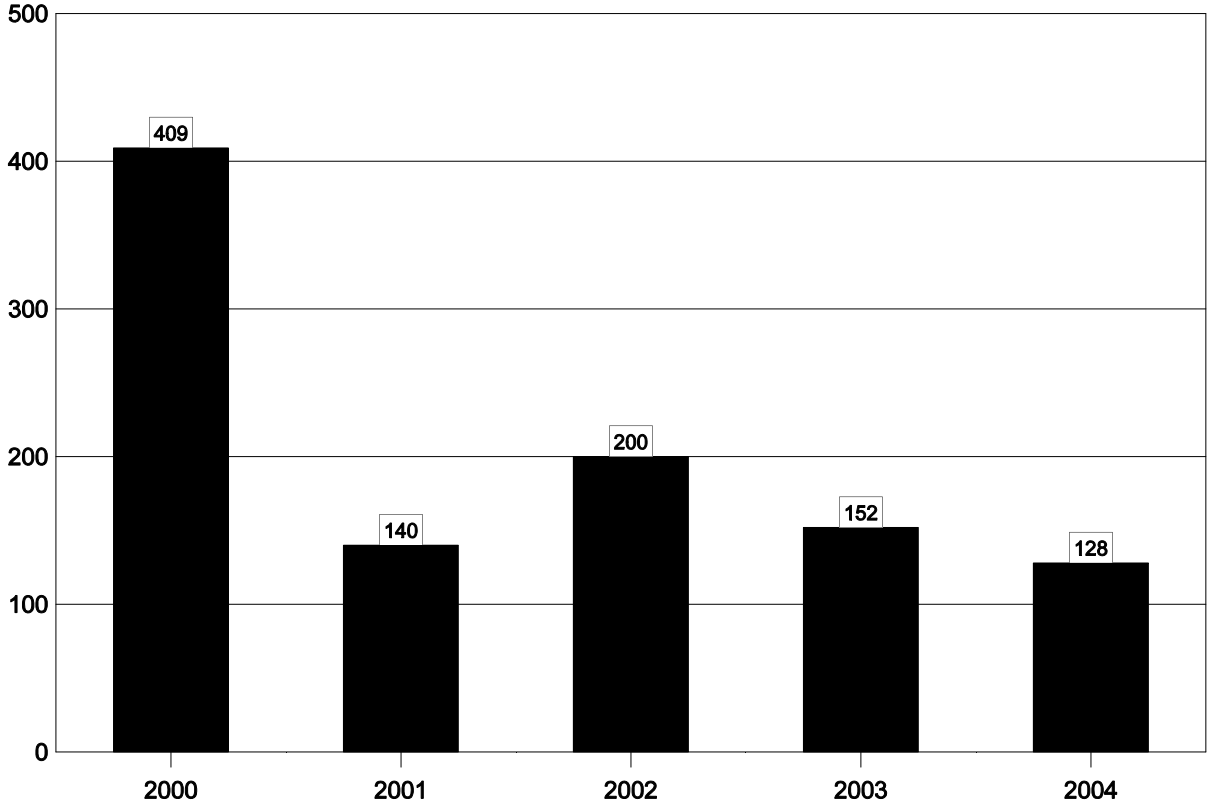
Number of Acres Treated



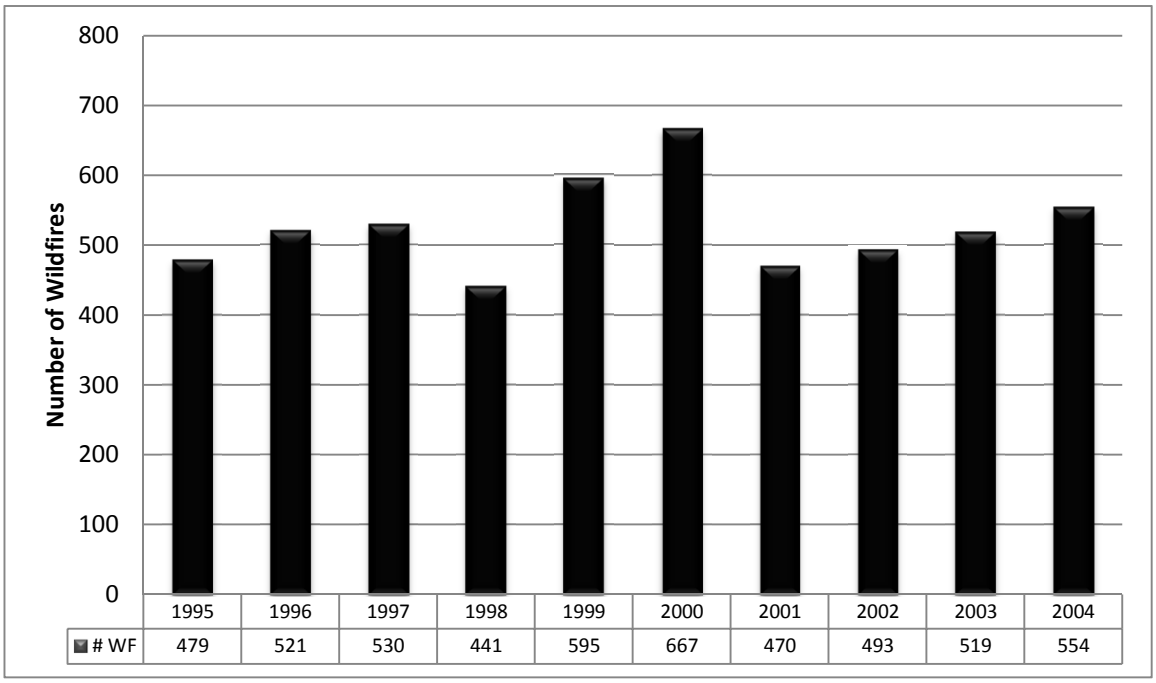
REGIONS 1 - 7
FALSE ALARMS 2000 - 2004

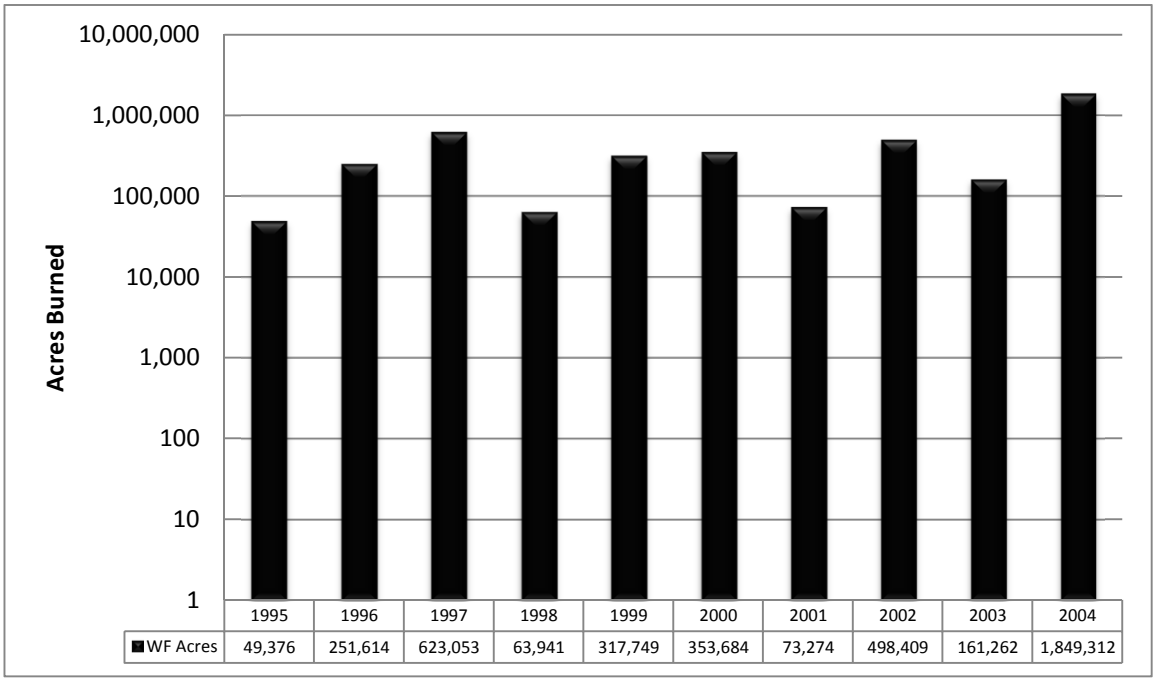


SUPPORT ACTIONS

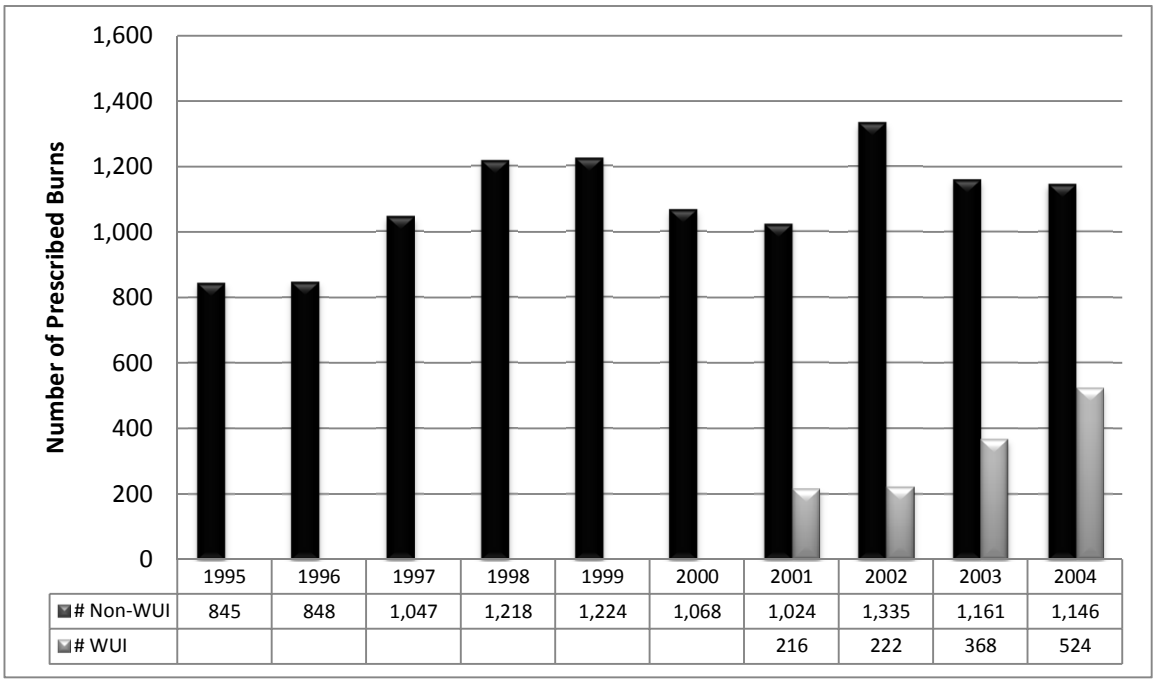


WILDFIRES
1995 - 2004

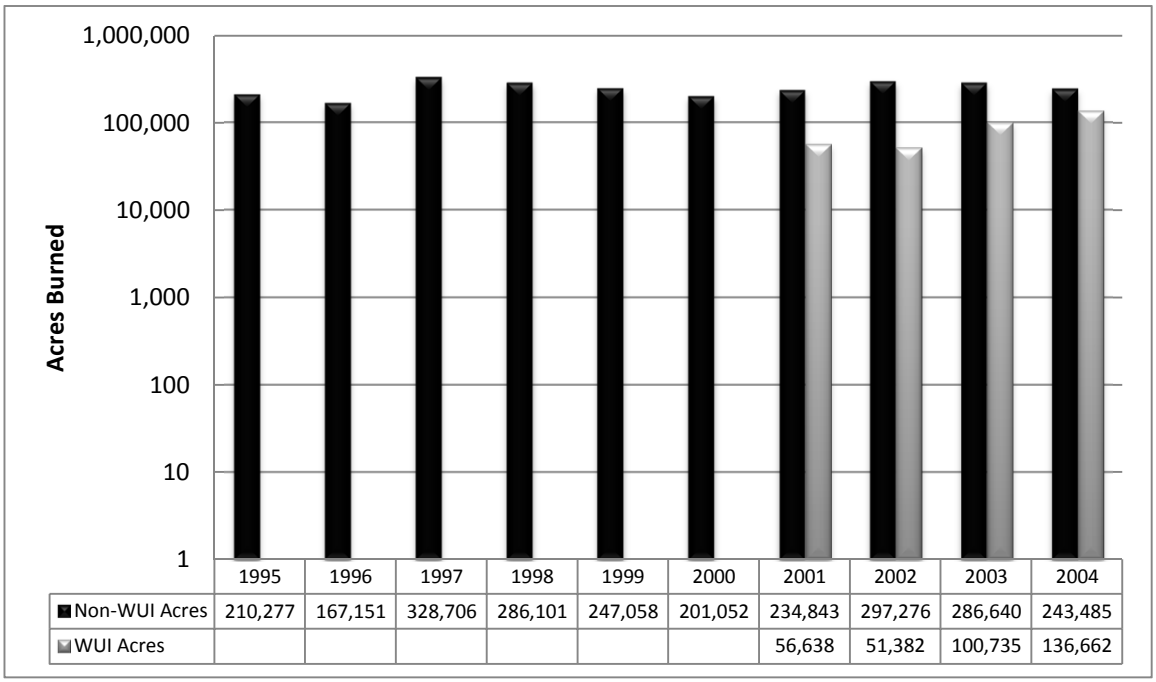




TREATMENTS
1995 - 2004



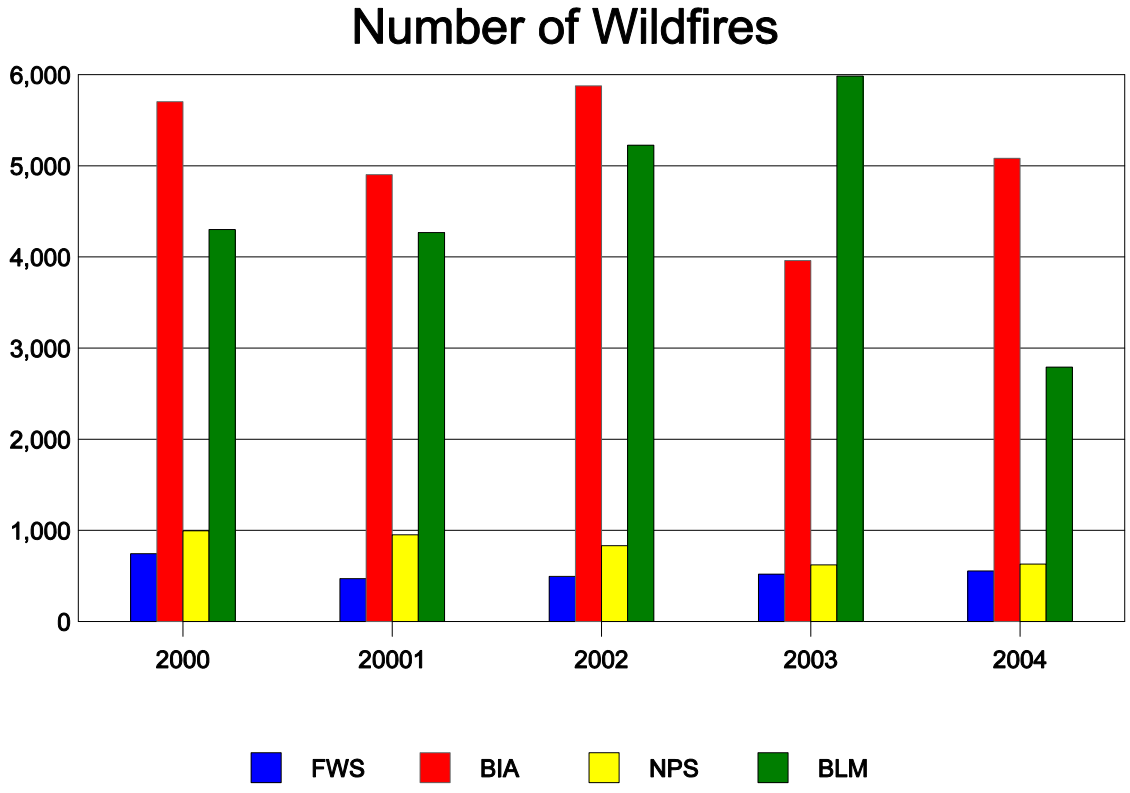
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
# Non-WUI	845	848	1,047	1,218	1,224	1,068	1,024	1,335	1,161	1,146
# WUI							216	222	368	524

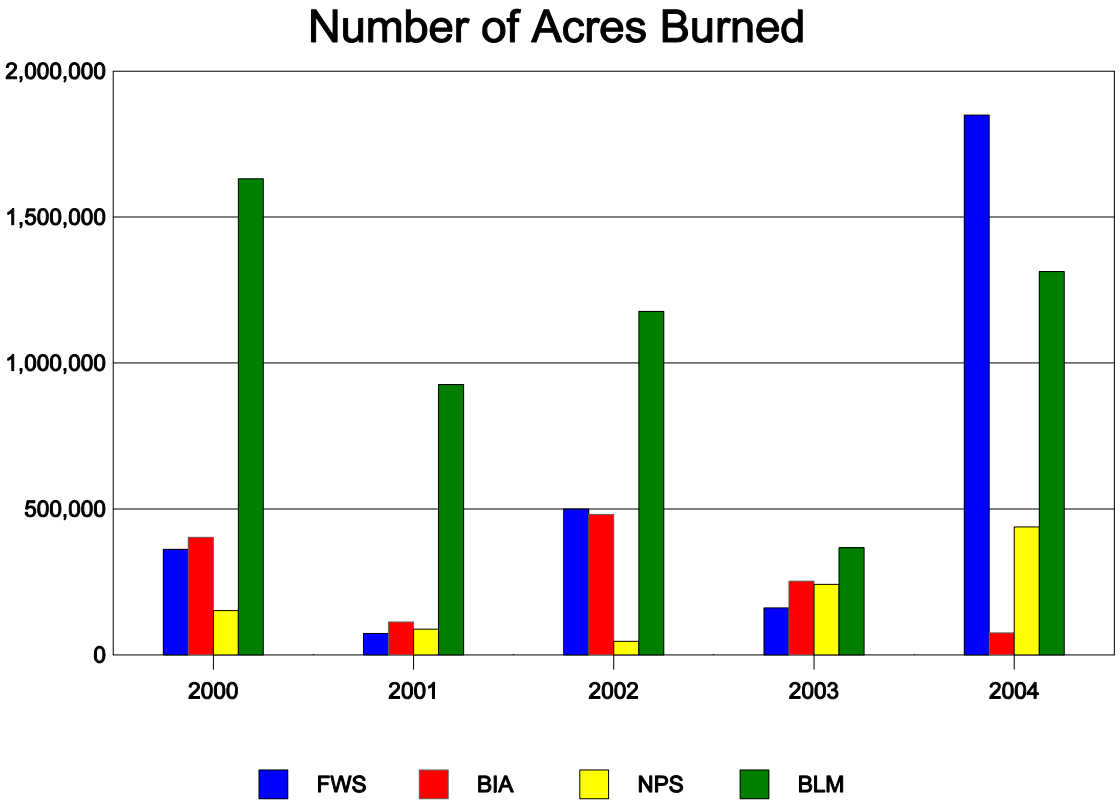


	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Non-WUI Acres	210,277	167,151	328,706	286,101	247,058	201,052	234,843	297,276	286,640	243,485
WUI Acres							56,638	51,382	100,735	136,662

WUI = Wildland Urban Interface

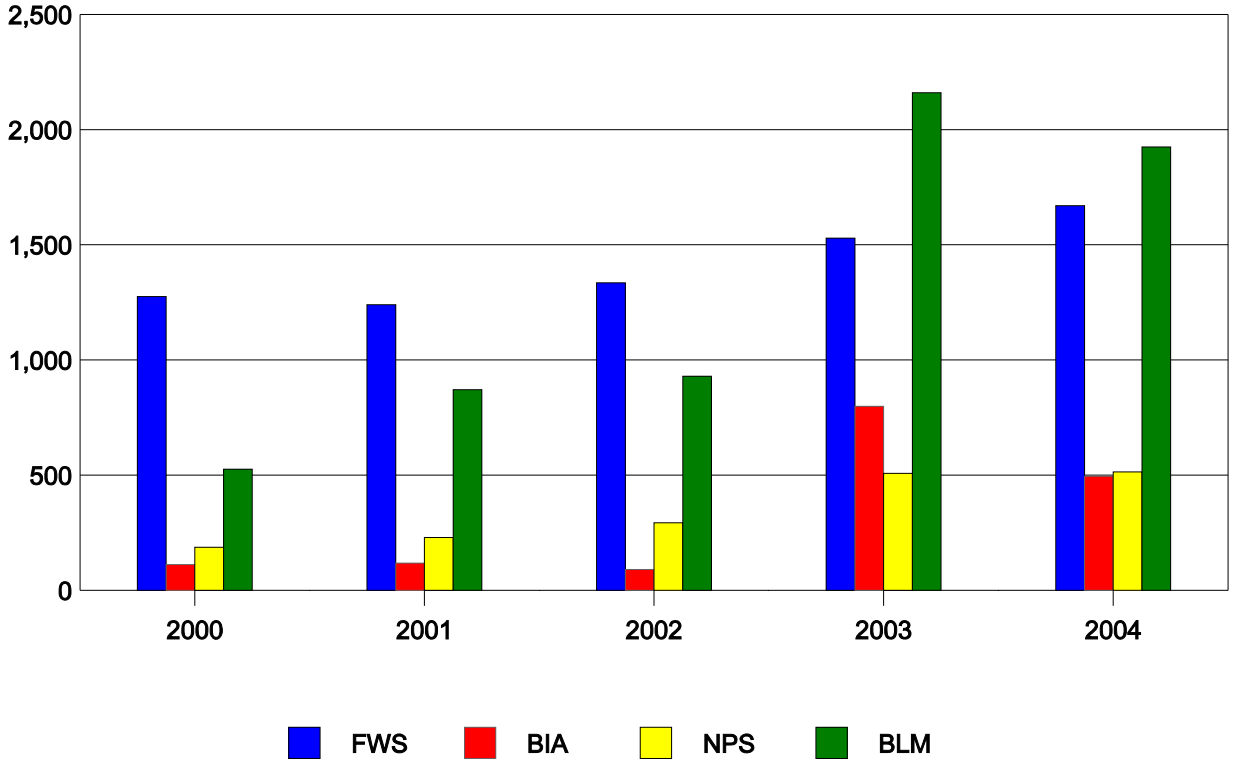
DEPARTMENT OF THE INTERIOR 2000 - 2004



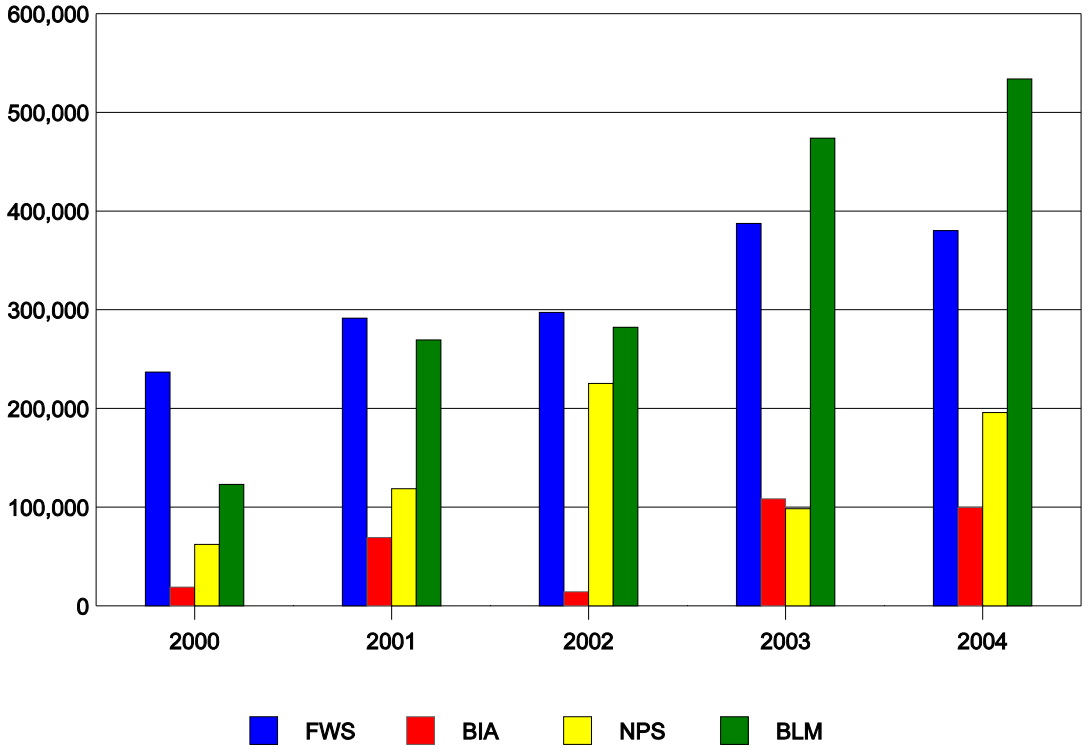


DEPARTMENT OF THE INTERIOR 1999 - 2003

Number of Treatments



Acres Treated



Statistics obtained from NFPORS