

U.S. Fish and Wildlife Service Fire Activity Report



2009

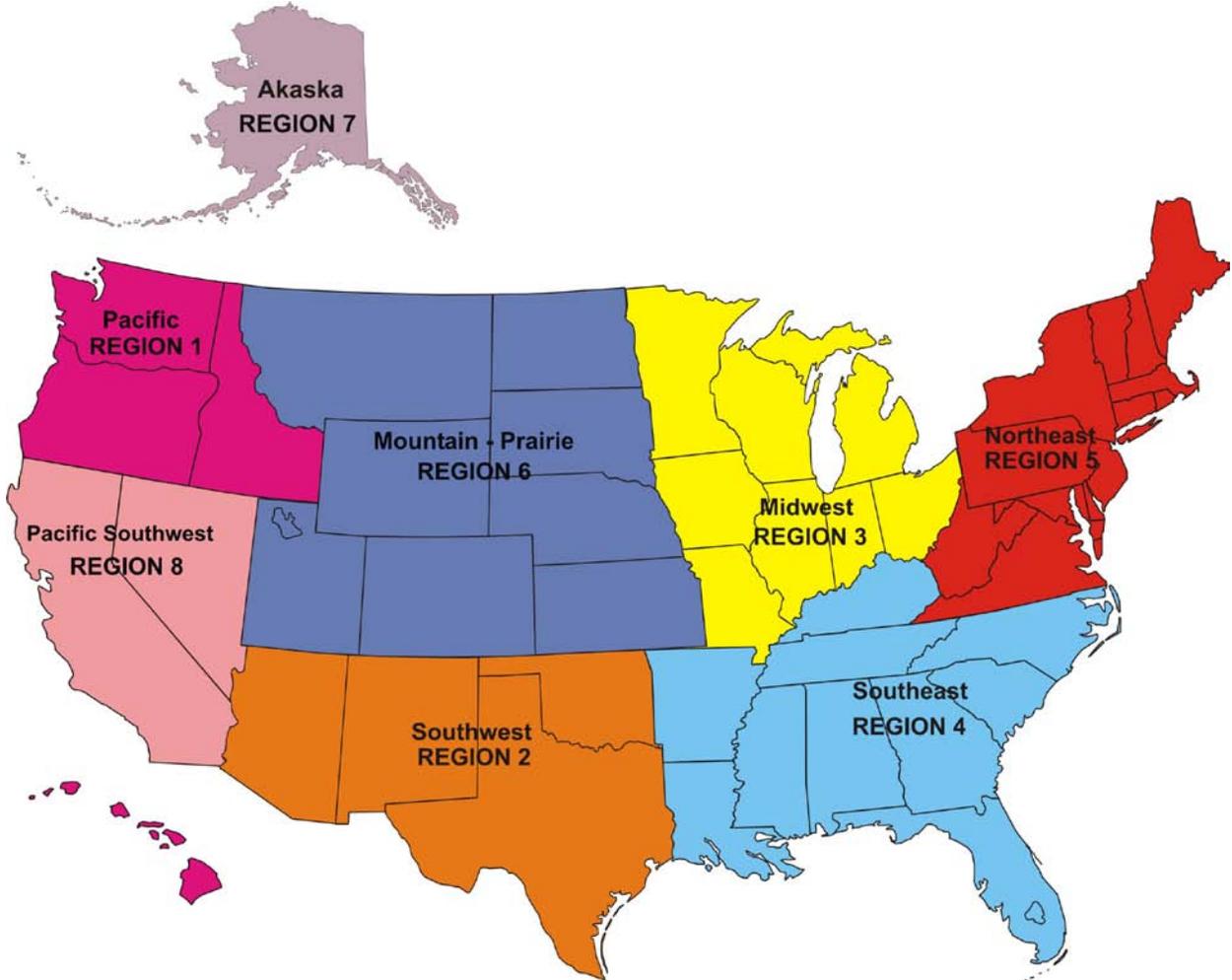
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US FISH & WILDLIFE SERVICE Regional Map



PACIFIC REGION



Season Overview

The Pacific Northwest experienced an average number of Type II incidents in Oregon and Washington. The Great Basin experienced a low number of large fires compared to recent years. Numerous Type 3, 4 and 5 fires occurred on FWS lands within the Region. In addition to suppressing fires on Service-managed lands, the Region actively provided interagency assistance both in and out of Region.

Wildland Fire Management

The heaviest area of suppression occurred at Mid-Columbia River NWRC with 12 on Refuge fires and 42 support or threat responses. These fires were all managed at the Type II level or lower complexity and contained after several burning periods.

The PNW Multi-agency Coordinating (MAC) Group was activated for several weeks this summer conducting daily conference calls. Regional Office staff continued to participate on the Great Basin Coordinating Group and took part in conference calls and meetings. Region 1, 6, and 8

continued to work together to have an FWS presence on many of the Great Basin working teams to efficiently represent the need of the FWS in the geographic area.

Severity funds were requested on an inter-agency basis for Refuges in Washington and Oregon. Extended staffing levels were implemented for Sheldon-Hart Mountain, Malheur, Mid-Columbia, Little Pend Oreille, and Turnbull Refuges. A single engine air tanker (SEAT) was contracted to service Mid-Columbia, Columbia, and Hanford/Saddle Mountain NWRs and was stationed at Richland, Washington. Sheldon/Hart NWRC also requested a SEAT to be stationed at Lakeview Oregon.

Fuels Management

Fuels treatment accomplishments for Oregon, Washington, Idaho and Hawaii totaled 16,748 acres for Wildland Urban Interface (WUI) and 20,214 acres for Hazard Fuels Reduction (HFR). The Regional Fuels Program was significantly aided by the flexibility of the Region's

FMOs lending their engines and crews to each other's Refuge as the need arose.

The Region's Prescribed Fire Module, based out of Turnbull NWR, was again used extensively throughout the Region and once more proved to be a valuable asset completing mechanical and prescribed fire projects on various refuges.

FPA/Planning

The Regional Fire Planner continued as the geographic area lead in FPA for the five Federal land management agencies in the Pacific Northwest Area. The planner coordinated Fire Management Plan updates throughout the Region using the new Inter-agency FMP template.

Interagency and FWS Cooperation

Region 1 personnel filled critical positions on both National and Area IMT. The teams were dispatched to numerous fires throughout the west. In addition to IMT members, the Region was able to fill numerous orders for single resources, engines and hand crew members.

Region 1 personnel continued to serve on numerous national working groups as well as local working groups throughout the Pacific Northwest, Great Basin and Hawaiian Islands.

The Region assisted the Fire Branch with several detailers filling the vacant operations program lead position.

The Region continued funding and supervising the chief meteorologist position at the Pacific Northwest Coordination Center in Portland, Oregon. This position has been a benefit to all of the wildland fire organizations in Washington and Oregon.

The Pacific Region Refuges continued to be very active participants in Interagency

Dispatch Offices throughout the Region. The Region assisted in staffing or funding five dispatch locations in Washington, Idaho, and Oregon.

Significant Personnel Changes

The Region established a shared PFS position with the BLM and USFS as a final step to have a fully integrated interagency fire zone in the north central part of Oregon.

Outreach

The outreach coordinator was successful in highlighting many of the accomplishments of the Region's fire management program. Many of these success stories were showcased on FWS intranet web links.

Training and Development

The Region continued to host the nationally funded Blue Goose Crew. The crew had its third successful year providing a training venue for the professional development of FWS fire personnel in crew operations, fire suppression, and introductory leadership. The crew was assigned to 12 incidents in two different states. The majority of the incidents were initial attack with 4 extended attack assignments. The crew hosted 25 Agency detailers and facilitated training opportunities to work on position taskbooks for the following positions; FFT1, CRWB, ICT5, HECM, and FALB. In addition, the Columbia Basin Job Corps students received training and experience that could potentially aid in future employment. The crew was given great reviews by interagency partners.

Regional personnel remained active cadre members for various training courses including S-620/S-520, RX-310, S-490, S-430, numerous 200 level local area courses, and High Reliability Organizations.

Fire Management Leadership

The annual Project Leader/FMO meeting was a large success in 2009 continuing to make strides at fully integrating the fire program into Refuges. The group came together to evaluate the current fire management structure, identify roles and responsibilities, and develop strategic goals for future success.

Hawaiian Islands Support

In 2009 the region conducted prescribed fire operations on three islands and accomplished more treatments than any previous year. In September, the fire branch conducted chainsaw training for the Pacific Island Refugees. New partnerships were established with Schoefield Barracks Wildland Fire Division and Hawaii Volcanoes National Park expanding fire management support to the islands.

Firefighter Safety

The 2009 firefighter safety and operations workshop was highlighted by an interagency case study to the Oregon Trail fire, highlighting the importance of “being prepared to manage unexpected events”. This rapidly expanding incident involved multiple jurisdictions, consisted of many hazards and safety concerns, and was adjacent to several sub-divisions. This experience was an excellent learning opportunity for many of our developing incident commanders.

Looking Ahead

In 2010 the Region will refocus efforts to support the firefighter at the ground level. By reducing our national commitments and getting The fire management program will also continue to develop fuel treatment priorities with existing fire programs, strengthen collaboration with Federal, State, and private partners, and remain dedicated to firefighter and public safety.

SOUTHWEST REGION

Introduction

The 2009 wildfire season in the Southwest Region was overall below average. The eastern portions of the region (Texas and Oklahoma) had an active season due to hot dry conditions. Both the South Texas and Balcones Fire Districts were in fire severity for several weeks. The western portion of the region (Arizona and New Mexico) generally experienced below average fire seasons due to cooler temperatures, late spring moisture events, and a strong monsoon season. As in years past, personnel from R-2 Refuges provided assistance to both our in region neighbors and to national fire suppression efforts throughout the year.

Personnel

This past year was a challenge with many changes in the Regions fire management staffing. The Regional Fire Operation Specialist was filled with Patrick Pearson, the former FMO from the South Texas Fire District. The Regional prescribed Fire Specialist and Regional Fire Planner positions have been vacated by Don Kearney and Cameron Tongier respectively. The developmental Fire Management Specialist position is still vacant. Recruitment to fill these positions is under way.

Operations

Brief dry spells in Arizona, New Mexico, and Oklahoma provided conditions for accelerated wildfire activity, but relatively favorable weather and fuel conditions across these states resulted in limited need for additional preparedness resources in 2009. Texas, however, was in a record drought for much of the year. All Refuges in Texas dealt with extreme drought conditions from January through August. The South Texas Refuge Complex was approved for severity funds in February. Severity resources

included engine crews from the U.S. Fish and Wildlife Service, Bureau of Land Management and the U.S. Forest Service as well as a Single Engine Air Tanker that was on contract until May. Balcones Fire District also received severity funding to assist the local resources during these conditions with engine crews from Refuges in New Mexico and Arizona providing assistance. Fortunately, there were only a few significant fires on Refuge lands and crews were released as conditions moderated in September.

Refuge fire personnel responded to 95 wildfires on Service lands totaling over 28,141 acres. Fire personnel also responded to an additional 68 wildfires that threatened adjacent FWS refuge lands amounting to 6,698 acres. FWS personnel also assisted our partner jurisdictions with controlling another 155 wildfires for over 11,965 acres.

The most notable wildfires on Refuges were the 2,696 acre Elkhorn Fire on the Buenos Aires NWR in Arizona, the 2,548 acre Dolphin Fire on the Matagorda Island NWR in Texas, and the Black Butte Fire on the Sevietta NWR in New Mexico. The Elkhorn fire was a great success due to prior interagency planning in this area for a prescribed burn in Brown Canyon. The wildfire was managed under the new wildfire policy and due to rugged terrain and firefighter safety indirect control lines were established. Resource objectives for restoring Sonoran desert grasslands were achieved across the majority of this wildfire, while keeping fire costs to a minimum. Some patches of the Endangered Kearney Blue Star plants were also burned over by this wildfire, surprisingly they resprouted quickly with flowering stalks.

RX Fire/WUI

The Southwest Region-2 had an exceptional year in completing prescribed fires and fuel reduction projects. Burn conditions were favorable throughout the region most of the year. The region accomplished a total of 96,704 acres in FY09 (71,367 acres in National Fire Plan, 27,328 acres in Non-National Fire Plan). Total WUI acres for FY09 were 39,335. Total Hazard Fuels acres for FY09 were 32,041. There was one escaped prescribed burn, the V-5, at Aransas NWR. An interagency review was conducted and the findings are being implemented at the unit and region wide. There were no loss time accidents associated with RX fire in the region during FY09. In addition over 50% of project funds were obliged to contracts.

To better account for the true costs of fuels projects, the regional fire districts utilized the non-National Fire Plan portion of the NFPORS data base. Prescribed fire acres were divided between the national fire plan and non-national fire plan portions of the data base at respectively about a 70/30 split. This reporting technique was intended to better capture the contributions of refuges and non-national fire plan funding that is present in all RX burns.

The Southwest Regional Office continued to support the use of multi-year multi-unit burn plans. Many of the burn plans across Region-2 are multi-unit plans. A number of fire districts in the region also have a multi-year programmatic burn plan in operation. Multi-year multi-unit burn plans will provide the fire districts greater operational flexibility and streamline the review and signature process. The current R-2 guidance and continued review will assure we are meeting minimal acceptable requirements and the current policy for prescribed fire planning as stated in the Interagency

Prescribed Fire Planning and Implementation Procedures Guide.

Burned Area Rehabilitation (BAR)

Six R-2 BAR projects were funded this fiscal year (2009) at the Lower Rio Grande Valley (2), Bosque Del Apache (1), Kofa (1), Havasu (1), and Cibola (1), NWRs for approximately \$2,074,110 dollars. This year was the final year of BAR funding for the larger projects at Bosque and Cibola NWRs. These two projects however will be continued with refuge support to bring these restoration projects to fruition. These BAR projects are helping to reduce future wildfire threats, control non-native invasive species, and restore native wildlife habitat.

Located along the United States and Mexican border, the Lower Rio Grande Valley (LRGV) National Wildlife Refuge Complex sees more wildfire starts than just about any other refuge in the nation. Because of the frequent fire activity, the LRGV has developed a novel wildfire rehabilitation and restoration program to help areas affected by wildfire to return to their native vegetation. One specific habitat the refuge has worked hard to maintain post-fire is the rare Tamaulipan thornscrub forest, characterized by dense native brushland and forest. Thornscrub vegetation is native across southern Texas into Mexico and Central America, providing home for many unique and endangered species. Here the thornscrub provides important habitat for rare and endangered plant and animal species including the ocelot (*Leopardus pardalis*), jaguarundi (*Felis yaguaroundi*), speckled racer (*Drymobius margaritiferus*), Gray-crowned Yellow-throat (*Chaemathlypis poliocephala*), and the Yellow-green Vireo (*Vireo flavoviridis*).

After a fire, the thornscrub forests become exposed to several fire-adapted exotic grass species. These non-native species such as

buffelgrass, a prolific fire-loving grass from Africa, become established in the area choking out the vegetation which would naturally occur leaving the area more vulnerable to future fires. Most of the tree and shrub species associated with the thornscrub are not adapted to fire like the grasses, and as a result these habitats are becoming increasingly rare. Habitat loss and degradation in this area has also occurred from the clearing of land for agricultural uses and urbanization. The little remaining habitat is becoming increasingly more important for rare plants and animals.

To address hazardous fuel and habitat concerns, the LRGV has used special Burned Area Rehabilitation funding to help reduce the risk of future wildfires by restoring native vegetation. Once the thornscrub forest is restored (3-10 years), it begins to naturally hinder the growth of exotic grasses because the exotics are increasingly shaded out and out-competed, thus fire is no longer as imminent a threat. They eventually become sustainable functioning thornscrub forests that are a much lower wildfire threat to communities in south Texas. The refuge complex has helped restore over 1000 acres of thornscrub forests over the last 5 years.

Outreach

A fire brochure was completed for Balcones NWR and one is in final draft for the Oklahoma NWRs.

Research and Monitoring

Fire effects monitoring data collection and analysis continue at most of our larger fire districts. Several research proposals are in development for the Joint Fire Science Program and through the regional Science Support Program and Global Climate Change initiative. New prescribed fire effects and climate change research was initiated at San Andres NWR in colla-

boration with the University of New Mexico Albuquerque. Fire history and ecology research is ongoing at Witchita Mountains NWR in collaboration with the University of Missouri. Fire effects on oak recruitment and future habitat for Endangered Golden Cheeked Warbler and Black Caped Vireo research was initiated by Texas A&M University in Austin at Balcones NWR.

Fire Planning

In the interest of incorporating many changes in interagency fire programs, including Fire Program Analysis (FPA), a new interagency Fire Management Plan (FMP) template was developed in late 2008. This proved to be timely for R-2 in that the majority of our FMPs were outdated and in need of the 5 year revision required by the National Fire Plan. The region contracted out the reformatting of FMPs into the new interagency template, and these have been passed on to the field for final revisions and approval. Several of these plans including the Lower Rio Grande Refuge Complex, Witchita Mountains NWR, Washita/Optima NWRs, Hagerman NWR, and Tishomingo NWR and NFH have been approved. The remaining FMPs should be completed in early 2010.

FPA has been redeveloped and implemented in a phased deployment and deadline system. All Fire Planning Units (FPU) have been engaged as of the end of the year and are on schedule for meeting the proposed deadlines. The method of deployment of FPA has proven to be very frustrating for the field and perceived to be poorly handled at the national level. It is clearly not a completed product but is being implemented and pushed into the field causing a great deal of time trying to negotiate a system still under development with the inherent threat of affecting our budget.

FY09 Budget

Region 2 is an active partner with many interagency groups. Region 2 contributes funds and participates with other federal and state agencies through interagency smoke management agreements. Contributions through regional support allowed for the purchase of two Type 6 Engines, a transport vehicle, a rolligon, two trailers, and a UTV.

In FY09 22 separate RFDs throughout TX, OK, NM and AZ were funded out of the RFA program. Total RFA funding for R-2 was \$184,404. The Region also exceeded the 50% target goal for project dollars being contracted. The region closed the FY09 fire accounts at 99% spent.

International Assistance

During the spring 2009, U.S. Fish and Wildlife Service Fire Ecologists Mark Kaib (R-2) and Tim Hepola (R-3) traveled to the Republic of Georgia on a DOI Interior Technical Assistance (ITAP) short-term detail. They were joined by fire ecologist Robin Wills and park superintendent Ken Mabery both from the NPS. Their goal was to assist Georgian National Park managers assess their needs to rehabilitate large burned areas and to provide training in planning and suppression strategies to prepare for wildfires in the future. This technical assistance has provided Georgian Managers with a new understanding of forest fire ecology, suppression tactics, burned area rehabilitation treatments, and the value of good planning from which to develop and expand their wildfire management program.

MIDWEST REGION

Within Region 3 fire program, 2009 was a year of great accomplishment. We accomplished more acres of hazardous fuels treatments along with sensitive habitat maintenance and restoration than in any previous year. This improvement to fuels reduction and our habitat through the use of prescribed fire and mechanical fuels treatments was augmented by more regional fire staff completing training assignments than in previous years.

As always, weather was the constant variable determining what we would accomplish. The Spring season was punctuated by yet another record flood event in the Red River valley separating MN (R3) from North Dakota (R6). The Minnesota zone fire personnel assisted many refuge employees in combating the flood, providing emergency relief efforts and trained equipment operators to the battle against the rising flood waters. On March 26, 2009, the President signed Emergency Declaration FEMA-3304-EM for the State of Minnesota, as a result of the severe storms and flooding. Thankfully, no fatalities, injuries or missing individuals were reported from this enormous flood event.

The effects of climate change have been direct and visible here in the upper Midwest. Continued drought conditions in one area are punctuated with excessively wet and flooded conditions in another. This ebb and flow of extreme weather conditions makes for challenging conditions to operate within.

In Minnesota, the flood conditions described along the Red River of the North gave way to unseasonably dry conditions throughout much of the State in April and May. The State only received 64% of the normal rainfall in this period according to National

Weather Service (NWS) records. According to the MN DNR State Climatology office, portions of East Central and Southeast Minnesota have been under the influence of long-term dry conditions since mid-June of 2008. Compounding the problem, the 2009 growing season precipitation has been 3 to 8 inches short of historical averages across a large part of central Minnesota. Much the same in Wisconsin, where the NWS, reported below normal precipitation for this same reporting period.

While the Spring was dry in the North, the remainder of the region was excessively wet. The NWS reported rainfall records for the following States in the period April 1 to May 30th. Iowa (107% of normal), Illinois (128%), Indiana (131%), Missouri (111%) and Ohio (95%). This made it challenging to complete prescribed burns and hazardous fuel treatments. Extremes in weather continued into the Fall, with the NWS reporting that the period September 1-20, was the driest on record for East Central Wisconsin (Eau Claire) and Central MN (St. Cloud and Mpls).

With patience and diligence the region exceeded burn targets. A total of 599 fuel treatments were conducted totaling 94,414 acres within Region 3. The zone breakdown for accomplishments is as follows: West Zone (MN) completed 319 prescribed burns for 53,964 acres. Interagency cooperation and sharing of resources contributed greatly to the accomplishments of these large targets. Assisting were prescribed fire detailers and equipment from FWS stations in Alaska, Oregon, Texas, New Mexico, California (BLM), Florida, Montana, and the NPS Fire Use Module from Buffalo River. The FWS also hosted an RXB2 trainee from the BLM Prescribed Fire OJT program. The

East Zone (IN, Lower MI, OH and WI) completed 68 prescribed burns for 10,221 acres. There were also 8 mechanical fuels projects completed for an additional 1457 acres. The South Zone (IA, IL and MO) completed 142 prescribed burns totaling 14,316 acres. Of this total, 5,349 acres were WUI acres and 8,967 acres non-WUI. In the Upper Peninsula of Michigan, Seney NWR, accomplished 11 prescribed burns for 5,558 acres. Additionally, Seney NWR entered into a Reimbursable Agreement with the USFS Hiawatha NF, for prescribed fire assistance. It was a most productive year of accomplishing burn targets safely and effectively for reducing hazardous fuels and restoring and maintaining critical habitats within the region.

For 2009, there were 41 wildfires which burned approximately 891 acres within Region 3. It was a very quiet year for wildfire activity throughout the region given the abundant soil moisture and precipitation that was received through the normal fire season. Additional regional FWS resources were mobilized to fire assignments in Alaska, California, New Mexico, Texas, Nevada, Idaho, Oregon, and Washington. Region 3 once again actively supported and participated in the Blue Goose Type 1 FWS fire crew stationed in Moses Lake, WA by detailing eight personnel to this crew for an excellent fire training experience. This has proven to be an outstanding crew program for the FWS and one that Region 3 has strongly supported.

Region 3 continues to make great progress and accomplishment in the Private Lands Burning Program. This program requires a great amount of coordination with private landowners and NGO's in order to be successful. We are fortunate to have dedicated personnel working within the Private Lands program that are building a viable prescribed burning program that

strengthens the entire regional effort in educating the public to the need for and benefits of prescribed fire.

Region 3 has been a leader and proactive in biomass and bio-fuels utilization for many years. In 2009 a successful Indefinite Delivery – Indefinite Quantity Contract for Tree Cutting and Habitat Clearing was implemented at the large Wetland Management Districts in MN including; Detroit lakes, Fergus Falls, Litchfield and Morris along with Big Stone NWR. This contract removed hazardous fuels from many management units that otherwise would not have been able to be treated. Most importantly, this woody biomass was utilized for energy production and secondary product utilization contributing to reduction of greenhouse gases and contributing fuel from a renewable resource. With our wealth of forested refuges and Wetland management Districts, within the region, this is a significant accomplishment in removing unwanted woody fuel while providing for economic gain.

Excellent progress continues to be made on our fire ecology studies within the region. At Big Oaks NWR, the dendrochronology study entitled “The Effect of Fire on Multiple Arboreal Species in the Eastern Deciduous Forest” was completed with preliminary results. This is an important research project for the mixed deciduous forest environment and has been extended with the opportunity to utilize fire scars and tree ring history from an enlarged sample of the refuge due to the previous year storm damage. This study will help decipher the burn history on Big Oaks NWR by modeling and testing the reconstruction of the fire history for the refuge along with documenting the historical range of variability of fire to settlement times in a deciduous forest. Additionally, we are continuing with the research on our other fire ecology studies;

“ Influence of fire in grassland areas on the herpetofaunal communities of Big Oaks NWR” along with the Joint Fire Science project on fire effects on *Mycrostegium* or Japanese Stiltgrass. We look to completing these studies in the coming year with some impressive research results and papers to further our science based fire management within the region. The oak savanna study at Sherburne NWR entitled “Age Structure of a remnant oak savanna in the Sherburne NWR” was completed and the final report received in June, 2009. This was a great project and we thank Dr. Kurt Kipfmüller, University of MN, for an outstanding job.

The new initiative of Regional Fire Consortiums developed by the Joint Fire Science Program was offered in mid-2009. The region successfully collaborated with two funded consortiums. “Development of a Fire-Science Network and Delivery System for the Northern Lake States” and “The Consortium of Appalachian Fire Managers and Scientists” covering our Eastern most areas. These regional consortiums will provide an ever increasingly important venue for fire science information dissemination.

The region successfully completed the first Burned Area Rehabilitation (BAR) project utilizing National 9262 BAR funding. The Hughes Tract Fire BAR project at Patoka River NWR, consisted of reforestation and rehabilitation of a bottomland hardwood forest area.

In April and May, 2009, Regional Fire Ecologist, Tim Hepola, was a member of a four person DOI Burned Area Assistance Team that traveled to the Republic of Georgia, to assist with post fire rehabilitation of areas burned from the 2008 conflict with Russia. The team also conducted S-130/190 training course for 47 park rangers from the Georgian park system.

US Aid provided line gear and PPE for equipping a 20-person crew. The Caucasus Protected Areas Fund, provided two fully equipped wildland firefighting trucks to Borjomi National park. This was an excellent example of the International Technical Assistance Program (ITAP) and was an outstanding success for all participants.

The popular Rural Fire Assistance (RFA) Program was again a successful avenue to fund rural fire departments within the region in 2009. \$306,642.00 was distributed to 40 individual rural fire departments. This has been a wonderful program for assisting our local fire departments adjacent to NWR’s and WMD’s in expanding their fire fighting capabilities along with providing equipment that otherwise would be unattainable due to no other funding source available. The public outreach and education that we also attain through this program expands our network of local firefighters knowledgeable to the FWS mission.

Region 3 has long maintained a strong public outreach program and this continued in 2009. Fire staff participated in numerous events including staffing an impressive fire management program display at the Pheasants Forever Sport show and convention in Madison, WI during January, 2009. This has proven to be an excellent venue for public outreach.

Region 3 personnel have continued to participate nationally and regionally in FPA and LANDFIRE workshops. The Southern Wisconsin FPU is the only FPA FPU with FWS participating as an Early Adopter. It has been challenging with program changes and modifications but excellent progress continues to be made in advancing, testing and troubleshooting map inputs in refining fire risk and contributing to more accurate model outputs. Regional personnel participated in the LANDFIRE calibration

workshops for our region and contributed greatly to improving the model inputs and data.

In conclusion, 2009 was an outstanding year of accomplishment. We welcome the New Year along with the new challenges and opportunities it offers us in 2010.

SOUTHEAST REGION

General

Region 4 (Southeastern Region) had 90 wildland fires covering 31,056 acres in 2009. The largest fire occurred on the Sabine NWR and totaled 6,365 acres. There were 499 mechanical fuel treatments for 9,120 acres and 364 prescribed fire treatments for 145,246 acres. This totaled 863 treatments for 154,382 acres.

With the extreme wet conditions in parts of the southeast region and large fire activity in Texas, Louisiana, and parts of Florida, resources were scarce due to severity conditions or assisting with fires in the Southeastern Region. These conditions continued to provide an increased challenge for management to balance the prescribed burning and the wildland fire suppression programs.

The majority of wildfires took place in LA during the spring fire season which was enough to keep us moderately busy. The Sabine NWR had a total of 11 wildfires for 18,028 acres.

The number of wildland fires was 90. 20 of the 90 became project fires, all the others were fires below 100 acres, initial attack, or support to other federal agencies and states. The amount of fires in 2009 was a significant decrease over the 151 fires in 2008. This can be attributed to a historically aggressive prescribed burning program and the abundance of precipitation that occurred within the Southern Area.

In previous years the southeastern states applied and received FEMA fire assistance grants, in the spring and fall fire seasons. This year there was only one state that applied for a fire grant. That state was Texas.

Southeast Region Refuge Update

The Southeastern Region is within the Southern Area Geographical Area. 2009 will best be remembered as the year with precipitation and having lower temperatures in the southeast and floods and ice storms in the Geographical Area. The fires that did occur within Region 4 were mainly in the Louisiana and Texas areas, with large fire activity occurring in South Carolina on state lands

The Gulf Coast NWR Complex had a good year for growing season prescribed burns at the Mississippi Sandhill Crane NWR (MS-MSR). This was followed by an unusually prolonged stretch of dry weather in June, with record setting KBDI values by the end of the month. The rains returned in July and have continued through the year, placing the fall season burns on hold. FMO Tony Wilder served as ICT2 at the Stoney Ridge Fire in North Carolina and Rebecca Goosman was able to go to the August Lightning fires in California as a CRWB(t). The Blue Hole Fire burned over 300 acres and was one of the most serious wildfires in Jackson County since the early 2000's. Flames were leaping across Interstate 10 onto the Refuge and blocking traffic for several hours. Excellent Interagency cooperation between Mississippi Forestry Commission, Jackson County VFDs and the Refuge joined forces to suppress the fire. With the guidance of FMO Wilder and AFMO Sami Gray Interagency cooperation has become strong in MS. Over one hundred employees from six agencies participated in Annual Fireline Safety Refresher Training, Work Capacity Test, Annual Chainsaw Refresher, and the second Jackson County FM Cooperators meeting. Tony Wilder is recognized as a national authority on fire management. This year he worked with Bennie Thatcher from

Ecological Services to provide guidance to a forest management consortium in northern LA in using fire to improve habitat for the endangered Louisiana pine snake, served as a member of the Mississippi Prescribed Fire Council, attended an FPA meeting at Kisatchie NF, participated in a committee to rewrite the State of Mississippi Prescribed Burn Short Course, and gave a talk on Fire in Habitat Management for the Wildlife Society in Jackson, MS. Tony continues as IC of the Southern Area Type 2 team. Sami Gray attended three meetings on air quality, sponsored by the MS Department of Environmental Quality. Sami is a member of the committee on Smoke Management. Sami Gray and Bunk Twiss attended Prescribed Fire pre-season meeting with the NWS and other federal cooperators. Bunk Twiss also participated in a Medical Standards Program workshop in Boise, ID. James Bates coordinated a Muskeg Demonstration for employees of MS and AL Forestry Commission, purchased two new trailer-mounted electronic message boards for highway traffic alerts during prescribed burns and wildfires. Nine MS-MSR employees took a total of 23 training courses. Fire effects intern Lori Weingartner, sponsored by Regional Ecologist Sue Wilder, assisted with four Fuel Load plots, five CBI plots, and several SFRAS maps for FMP. Biological Interns assisted with eight Vegetation Cover plots.

As Zone Prescribed Fire Specialist, Sami Gray reviewed over 50 Prescribed Burn Plans.

With two Visitor Services Specialists on staff, the Refuge provided environmental education programs for 706 schoolchildren this year.

North Carolina Refuges saw a return to more seasonal rainfall events, however the lingering effects of the 2008 drought

affected both Rx burning and wildfire activities earlier in the year. The following accomplishments were achieved this year: managed 15 wildfires for 948 acres, assisted cooperators with five burns on their lands. We had the first successful burn in the Roanoke Marshes Woodlands, (Units 2.2.6 and 2.2.7) which lies in the Manns Harbor conflagration barrier. In June, conducted the first growing season pocosin burn since 1997, in the Northwest Mashoes unit, a vital WUI burn. Two burns at Pocosin Lakes required extensive mop-up as result of ground fire burning in the organic soils. One burn had to be converted to a wildfire after frontal passage caused the extensive ground fire and smoke production. Ground-work was laid for greater cooperation between agencies to manage wildland fires across the landscape as a result of continued planning effort. A new four-mile-long Chip Road was established as a firebreak. This was in response to one of the findings in the Alligator River NWR Pre-attack Planning Meeting. FMP's were completed at all refuges with-in the fire district.

Merritt Island N.W.R. assisted with the creation of an Educational Video titled *Managing Fire to Benefit Wildlife and People*. Longtime Merritt Island NWR volunteers Kerry and Betty Salter, and Bill Nunn, are assisting as smoke monitors during RX burns, as well as creating a photojournal documenting the logistics of Prescribed burning. Utilized two SCA interns to help implement fuels monitoring program. We established fuels monitoring points on Merritt Island and Lake Wales Ridge NWR. Detailed two SCA interns to Lower Suwanee and Piedmont NWR to assist with implementing their fire effects monitoring program. Conducted annual fire refresher training for 25 personnel. Hosted S-130 / S-190 training for 12 personnel from FWS, NPS and private sector. Hosted Fire Effects workshop. Hosted Helicopter

Refresher. Conducted PLDO training. Five Personnel attended academies and other trainings for a total of 56 staff days spent off district. FL-MIR had 13 personnel spend 334 staff days working off district on fire assignments in areas such as TX, AK and WA.

Southwest Louisiana units 1, 2, and 3 had the largest fires of the season. Unit 2 had the Dog House fire which came to 6,365 acres. Larry Smith and Jon King instructed PLDO (Plastic Sphere Dispenser Operator) to contract helicopter pilots and USFWS personnel. Conducted S-211 locally to USFWS personnel, S-212 at Felsenthal NWR. Both had off-unit assignments that consisted of One Ten fire at Southeast Louisiana Refuge Complex and Snake Head fish eradication project in southern AR Fire position filled August 31 by Robert Harris. Forestry Technician Daniel Davis promoted to a non-fire position on the refuge September 14, creating another vacancy

Lower Suwanee NWR assisted Egmont Key with developed plans, prescribed burns, and worked with many state, local, and private cooperators to achieve 65 acres of most critical areas, Completed Fire Bunkhouse acquisition and set-up. FL-LSR also completed one WUI boundary clearing project for 6.15 acres or 8,923 linear feet of forested boundary. Completed draft of station's Fire Management Plan, Cooperator Operating Plans with State DOF, and good progress on implementing station Fire Monitoring Plan: FL-LSR also set up new interpretive signs and displays throughout refuge about refuge prescribed burn fire program. Received good PR – several news stories in local newspapers about benefits of refuge prescribed fire program. Worked with many prescribed fire cooperators: PFTC, AD's, State. We accomplished progress in GIS mapping of special concerns in and around refuge. Had a near perfect

safety record, no major injuries or equipment damaged (one minor eye injury on an Rx fire). FL-LSR Fire Staff assisted many refuge projects (road and parking area resurfacing, kiosk construction, road and facility maintenance, exotic plant control, gate construction, and Refuge Biological Review. Staff assisted instructing fire trainings (S-230, S-234, L-280, I-200, RT-130, S-214 So. Area Engine Academy) and various staff completed numerous fire trainings (S-215, S-270, S-211, S-214, S-230, S-234, L-280, I-200, S-212 refresher, S-372, S-341, B-3, GIS Training, Fire Monitoring Workshop, Heavy Equip, First Aid & CPR, Defensive Driving). Two personnel went on out-of-area assignments. J. Farmer LPR Severity ENGB/ICT4 detail, USFWS Washington State, 14 days, August 2009 and J. Solodovnick LPR Severity ENGB detail, USFWS Washington State, 14 days, August 2009 Minnesota Zone Rx Assist detail, USFWS Minn., 14 days, April 2009.

Florida Panther NWR completed FMP. Organized and participated in the AAR for the DEEP Fire. Assembled for District-wide use a Type 6 engine. Upgraded both RAWS stations to GOES. Conducted two prescribe burns on the Key Deer NWR for 12 acres with great success agency-wide and with the community. In severity for 22 days in May.

Okefenokee NWR fire staff and exclusive use helicopter assisted other refuges and agencies with prescribed burning in FL, GA, and AL. Cahaba River NWR completed 1,066 acres of prescribed fire treatments. This prescribed burn was the first one conducted at Cahaba River NWR under USFWS direction. Burn would not have been possible without the support and assistance of staff from Piedmont, Noxubee, Southeast Louisiana, Mountain Longleaf and Okefenokee NWRs. Post fire rehab projects continued throughout the year

including road repair and invasive species surveys. Two fires reported on the refuge for approximately 393 acres, was a significant difference from previous years. Seven different responders from Okefenokee and Piedmont assisted with interagency wildland fire suppression assists in FL, TX, CA and NV for over 300 staff days. Personnel received the following training in FY 2009; S-490, M-581 and S-260. Refuge staff assisted in the delivery of several training courses in FY 2009. These courses include S-230, S-231 and S-270 delivered at the Tennessee/Kentucky Wildland Fire training Academy in Bell Buckle, TN.

District 4 had a near perfect safety record. Over 27,040 hours were accomplished, with one CA-1 for a minor eye injury. Ten individuals went to 39 training sessions. Eight task books were completed. Five FMPs were in various stages of completion. Egmont Key FMP was finalized. St. Marks FMP sent to the Regional Office in Atlanta for final signatures. Lower Suwannee FMP going through final edits. St. Vincent and Chassahowitzka FMPs are in draft. Although the fire season was light this year Trixie Smith did a detail with the Blue Goose crew this summer. New crew quarters completed at St. Marks & Lower Suwannee NWRs. Outreach projects to get out the wildland fire message include reusable cloth grocery bags with a FireWise message, use of traffic message boards, and installation of several new kiosks and signs throughout the District. Several Fire Awareness Days hosted. Refuge personnel from Lower Suwannee NWR worked the Florida Forest Festival, attended by 10,000 people. St. Marks personnel worked Society of American Foresters National convention in Orlando, FL made contact with 3,000 people. Many of the contacts were students interested in natural resource careers.

Regional staff experienced several changes. Roger Boykin retired as Chief, RFMC January 2009. Robert (Bob) Eaton selected as the RFMC. Pete Kubiak selected as Deputy, RFMC in August. June, Jennifer Adams transfer to Everglades NP as Prescribed Fire Specialist. Josh O'Connor accepted Fire Management Specialist position, Jim Durrwachter retired January 2, 2010 as Director, PFTC. Dave Brownlie accepted a Refuge Manager position at Monomoy NWR in Massachusetts. Pat Boucher of SACC instructed five courses of ROSS. Detailed to Eastern Area Coordination Center as Acting Center Manager for two weeks. The Center Manager was out of country. Pat has worked with the Eastern Area and Jon Skeels, ROSS Production Manager to place all specialized equipment that FWS uses on coastal areas, added into ROSS catalog. These pieces of equipment include: Soft Trac into three categories: Marsh Buggy/Swamp Buggy (Amphibious); March Buggy/Swamp Buggy (Non-Amphibious); Ground Base Buggy. Also included Skidsters, Air Boats, and Portable Bridges.

Hurricane Season

2009 will go into the record books as a very uneventful hurricane season, except for late season Ida. which turned into a Nor'easter along the East Coast. Only Tropical Storms Claudette and Ida made landfall in the U.S. thus far (1 in the Florida Panhandle and the other in southern AL near the FL border). 8 of the 11 tropical cyclones lasted less than four days and 5 of these lasted two days or less. Only Ana and Bill lasted more than 5 days; Bill being the only true "long-track" Atlantic hurricane of 2009 lasted about 9 days.

Rural Fire Assistance Grants

District 4 completed eleven Rural Fire Assistance projects were completed this year.

Personnel Update

Ryan Sharpe, formerly with State of Florida DOF, hired at Merritt Island NWR as Forestry Technician.

Chris Wright, formerly at Okefenokee NWR, transferred to Lake Woodruff NWR as Lead Forestry Technician.

Jeff Schardt, formerly Wildland Fire Operations Specialist at Merritt Island NWR, transferred to FS as District FMO on the Conasauga District of the Chatahoochee-Oconee NF in GA.

Lisa Borel at Alligator River and Tracy Troumbley at Pocosin Lakes were hired as Forestry Techs. Pocosin Lakes NWR FMO Vince Carver and District PFS Greg Suszek both were certified as type 2 burn bosses.

David Murphy moved to a Law Enforcement position at North Mississippi Refuge Complex in July 2009. Bert Rager was hired as a Forestry Technician/Firefighter in August, 2009. Sami Gray's position title changed to Assistant FMO. MS Sandhill Crane Fire Management still has three vacant positions: Wage Grade Equipment Operator/ Firefighter, Forestry

Technician/Firefighter, and Prescribed Fire Specialist. Sami Gray completed college-level coursework to meet the IFPM requirements. Tony Wilder received an All-Risk Management Award for 2009 at the annual Region 4 FMO Workshop. Others receiving awards; Brad Bailey, James Bates, Sami Gray, Tony Wilder, Jeff 'Bunk' Twiss (also received an award from the FWS National Fire Management Office for his work at the Medical Standards Workshop).

The SWLA Fire Crew had a vacancy for much of the year. This position was filled August 31 by Robert Harris. Forestry Technician Daniel Davis was promoted to a non-fire position on the refuge September 14, creating another vacancy. This position is expected to be filled January 2010.

Wage Grade Supervisor Doug Nuss retired from Okefenokee NWR in April 2009 and his knowledge and experience will be sorely missed. Forestry Technician Chris Wright transferred to Lake Woodruff NWR in September 2009. Forestry Technicians Sarah Sorenson and Nathan Gilmore arrived as new hires in October 2009. Welcome aboard. Travis Pollard was hired in a temporary fire technician position.

NORTHEAST REGION

After three successive busy fire years, 2009 brought a welcome break in activity at Great Dismal Swamp NWR, and the zone as a whole. While dry conditions persisted through mid-summer, there were no fire starts detected. A distinct shift in weather patterns in late summer brought multiple rain events, which began recharging a system that had been stricken by drought conditions for over two years. Consistent and heavy rainfall continued through the end of the year, ultimately making 2009 one of the wettest years on record for the area. This rainfall pattern extended northward into New England, with only two small initial attack wildfires reported at Moosehorn NWR. Great Swamp NWR in northern New Jersey reported the only wildfire activity in the mid-Atlantic zone, with a series of four small arson starts resulting in the apprehension and conviction of the guilty party. Wildfire activity was also minimal at Chesapeake Marshlands Complex in Maryland, with two wildfires documented on the refuge proper for 25 acres of marshland burned. Refuge staff assisted the Maryland DNR in monitoring and suppressing 2 large fires (2,124 acres and 709 acres) on January 25 at Fishing Bay Wildlife Management Area. In addition to these areas the refuge provided assistance to DNR for 5 wildfires adjacent to the refuge totaling 15.5 acres. These were arson starts that were ignited adjacent to County roads.

Implementation of the approved South 1 Burned Area Rehab Plan was underway in 2009, including site assessments and contracting with a nursery for seedling production. The plan calls for replanting many areas of Atlantic White Cedar burned over in the wildfire. Additional rehabilitation and restoration work may be initiated

in the future, as well as continued survey and monitoring.

11,931 acres (target 11,500 acres) were treated within the Region with a combination of prescribed fire, mechanical, and herbicide treatments at a cost of \$863K in projects funds. The Virginia-West Virginia Zone fire program conducted prescribed fire projects on four refuges, one national forest, one TNC preserve, three state natural areas, one state park, and two private properties in 2009. Over 3800 acres were treated over 38 burn days. Burns were conducted in habitats ranging from marsh to grasslands, pine and hardwood understory. A whole tree chipping operation at Great Dismal Swamp NWR concluded in the southeastern part of the refuge. Hardwood was removed from pine areas to reduce hazard fuels while creating habitat suitable for Red-cockaded Woodpecker reintroduction. A total of approximately 1800 acres were treated. The project resulted in a significant reduction in wildfire potential, while achieving habitat improvement and restoration and providing large-scale biomass utilization.

Poor burning conditions and high tides at Blackwater NWR hindered prescribed burning operations during the marsh burning period of January 1 thru April 1. A total of 1,784 acres of marshlands on the Refuge were burned during the period. It was determined that the Blackwater/ MD DNR Cooperative Fire Agreement was outdated and invalid, so only the 283 acres of the joint prescribed fire burn rotation study areas on Fishing Bay WMA were burned in 2009. These state acres were treated utilizing a DNR burn boss and crew assisted by Blackwater fire crew personnel. The inability to burn the cooperative state marshes resulted in a huge reduction of the

accomplished burn acres for the Complex in 2009. Other fuels treatments within the Maryland-Delaware Zone included 55 acres of Phragmites burning at Eastern Neck NWR, 44 acres of grasslands and woodlands burning at Patuxent Research Refuge, and 20 acres of firebreak mowing along the perimeter of several beach communities adjacent to Prime Hook NWR. In addition, Blackwater provided assistance to the Maryland Chapter of The Nature Conservancy in conducting 3 days of burning 240 acres of pine plantations on Conservancy woodlands in Worcester County. These burns encouraged the growth of numerous long dormant native plants on the areas including a rare hybrid orchid that had only been found in Maryland once before.

Burning was difficult in the Mid-Atlantic Zone due to wet weather conditions, but staff did manage to burn 184 acres in seven burns at Montezuma, Long Island, Forsythe, Supawna Meadows, and Cape May Refuges. An additional 711 acres were treated mechanically. The New England Zone treated 582 acres on refuge lands and an additional 190 acres as assistance to The Nature Conservancy in Maine.

Implementation of a Community Wildfire Protection Plan for communities adjacent to Mashpee NWR in eastern Massachusetts was underway in 2009. Nine different partners are involved, and treatments (total of 49 acres) focused on clearing roads that provide firefighter safe access, serve as fuel breaks, and in some cases provide defensible space to protect identified high value resources. WUI Specialist Gerald Vickers facilitated the completion of a contracted CWPP for the Timberline community adjacent to Canaan Valley NWR in West Virginia.

Out of region assignments were limited in 2009 due to the very slow fire season

throughout the nation. Catherine Hibbard (R5 outreach rep) served as Public Information Officer on one IMT assignment, the Stony Ridge/Laurel Falls fire in North Carolina. Two Blackwater NWR firefighters transported a Marsh Master to Huron Wetland District in South Dakota for a prescribed burning detail.

Calvin Miller, FWS Logistics Dispatcher and Assistant Center Manager at the Northeast Interagency Coordination Center (NECC) in Maine, had a number of notable achievements in 2009 including mobilization of three 21-person crews to Quebec, Canada under the Northeast Compact; mobilization of five Type 2 IA crews to Alaska; facilitation of the Eastern Area Dispatcher Workshop and Center Manager Meeting at NCTC; representation of FWS Regions 3 and 5 on the Eastern Area Dispatch Working Team; development of standard operating procedures for the NECC; and selection for the 2009 Eastern Area Excellence in Dispatch award and nomination for the 2009 National Excellence in Dispatch award. Calvin's contribution to the Eastern Area dispatching community has been noted and acknowledged by the entire interagency and state community in the Eastern Area.

Gerald Vickers, as a member of Bennett's Type 1 IMT, participated in organizing and acting as Unit Lead in the simulation portion of the S-520 Advanced Incident Management training held at NAFRI. Catherine Hibbard assisted with instruction of H337 Command and General Staff Functions for Local Incident Management Teams at NCTC and S-403 Information Officer for the Northeast Compact. Steven Hubner coordinated and served as Lead Instructor for an informal Firefighter Timekeeping workshop held at the Regional Office. Individual fire program staff served either as lead or unit instructors for various other

courses including S-130/190, S-131, S-211, S-290, S-215, RX-340, RX-301, S-440, and numerous RT-130 firefighter refresher sessions throughout the Region.

Steven Hubner trained and red-carded 37 FFT2 from the AmeriCorps program. AmeriCorps firefighters participated on numerous prescribed fires both on and off Service lands. Salary savings associated with using AmeriCorps firefighters was \$17K.

Fire management plan development or update continues to be a major area of concern and focus. 11 FMPs were completed and approved under contract in 2009, and at least seven additional plans are near completion or waiting on approval. Gerald Vickers worked with NCTC staff, the Region 9 liaison, and several interagency partners to begin the draft Fire Management Plan and Environmental Assessment for the NCTC land management program.

Regional Fire Planner Rick Vollick continued to serve as FPU lead for New Jersey and New England-New York Fire Planning Units (FPU), and as principal editor for the VA-MD-DE FPU. Given this workload, Fire Program Analysis occupied the majority of Rick's time when not involved in oversight of the New England Zone. In addition, Rick served as the focal point for the Region's RAWS program, ensuring databases were edited and station maintenance requirements met. There are 15 "fixed" RAWS stations scattered throughout the region, and 3 portables (or QD) units. Servicing and maintenance requirements continued to be met via annual contractual agreement with Forest Technology Systems. This contract was renewed in October for the 2010 maintenance cycle.

Regional Fire Biologist Laura Mitchell was involved in a number of fire science

initiatives in 2009, including co-presenting a poster at the Tall Timbers Fire Symposium, and co-authoring a paper published in the *Wilson Journal of Ornithology*, on the effects of prescribed fire on secretive marsh bird nesting activity on Blackwater NWR, Chesapeake Bay, Maryland; continuing to guide an adaptive management project at Blackwater NWR, in partnership with the MD DNR (Fishing Bay Wildlife Management Area), to assess the effects of prescribed and wildland fire on tidal wetland deterioration and loss; contributing spatial and fuels data to the LANDFIRE "Refresh" process, to correct/update fuels and vegetation layers in LANDFIRE; and assisting refuges in executing a multi-refuge contract to spray large-scale Phragmites infestations via helicopter for FY2009. Phragmites poses a significant hazardous fuels threat at the wildland urban interface at coastal refuges in the Northeast.

Catherine Hibbard is the new Region 5 representative on the FWS National Fire Outreach Team, coordinator of fire outreach and communication initiatives within the Region. Catherine also represents FWS on the NWCG Communication, Education, and Prevention Committee and hosted their fall 2009 meeting in Suffolk, Virginia. She served as coordinating editor for the Winter 2009 issue of *Fire Management Today*, and worked with Boise staff to produce a national FWS fire video; assisted numerous refuges with fire press releases, accomplishment reports, interpretive panels, and door hangers; distributed outreach materials to refuges and hatcheries; set up the regional fire display at various meetings and workshops; worked with a contractor on the regional fire internet site; and wrote and submitted stories on refuge fuels projects for the Friends Group Newsletter, Fish and Wildlife News, and Refuge Update.

MOUNTAIN/PRAIRIE REGION

Regional Highlights

2009 will not be remembered for fire, but instead for ice – specifically for snow, ice, rain and flooding in North Dakota and eastern South Dakota. The year turned out to be an unusually slow fire season, both within the region and around the country as a whole, and it started with the deep snowpack in North Dakota melting rapidly in the spring, resulting in major flooding in Fargo, Jamestown, Valley City, and other areas of the state. Region 6 fire program personnel were highly involved in the response efforts, including formal taskings by FEMA to assist communities in the state. Many of the Regional Office fire staff participated in the incident support organization that assisted operations in the field, and a number of fire employees in the field participated in on-the-ground efforts. The Region suffered major damage to several facilities, notably to the Arrowwood National Wildlife Refuge headquarters compound, which was almost completely inundated by high water.

Opportunities for Service personnel to support national suppression efforts were very limited this year due to the wet cool fire season across the lower 48 states. Very early in the year however, Doug Downs was dispatched to Australia to assist with a variety of fire operations during an intense “down under” fire season. Alaska also offered wonderful training opportunities for fire personnel in the Region. Shane Del Grosso served as the Acting Regional Fire Management Coordinator for Region 7 on a 30-day detail, and was able to bring in detailers from North Dakota to serve as AFMOs in Fairbanks, Alaska.

The slower fire season gave us a chance to work through some organizational issues in

the region, culminating in the creation of the new Rocky Basin District in Utah and Wyoming. To help improve communication between the fire program and the Project Leaders in the region, the Region 6 “Fire Advisory Council” (FAC) was formed. This group consists of a small group of line officers representing all the Project Leaders in the region who work together with the Regional fire staff as advisors on fire management issues. The FAC was modeled on the national “Line Officer Team” and its initial activities are very promising.

In other organizational issues, the use of Business Teams and fire districts as the basis for supporting field stations started this fiscal year continued. Fire money was fund targeted to the fire districts rather than to individual field stations for the first time. These districts each have their own organizational code, and the intent is that by pooling the money and putting it under control of the district FMO, fire management within the District will operate more efficiently. However, after a year of experience with having dedicated “Fire Administrative Officers”, the Fire AO function was eliminated and support will be provided to the district fire programs the same way it is to all other programs. These changes and others were all discussed at another successful FMO meeting, again held at Regional Office in December.

The year was filled with additional planning requirements, and District FMOs and Prescribed Fire Specialists throughout the region spent much of their time completing fire management plans and working with Fire Program Analysis (FPA).

Zone Highlights -- Prairie Zone (Kansas, Nebraska, South Dakota, and North Dakota)

2009 brought unseasonably cool and very wet weather across the Great Plains states which caused the flooding described above. The rising flood waters and continuous rain showers significantly limited the opportunity of many stations to implement spring prescribed burning. However, with fall burning opportunities, almost all the Districts still or slightly exceeded their annual targets. Approximately 15,470 acres of Service lands were treated in the zone in 97 fuels treatments.

The Northern Great Plains Fire Use Module was used again to assist other refuges, the National Park Service, and other agencies with prescribed fire projects in Missouri, Arkansas, and Kansas. The interagency module successfully contributed to the support and implementation of 5 prescribed fuel treatments for the Ozark National Scenic River; 1600 acres of site preparation at Buffalo National River; and training opportunities for crewmembers to work on various taskbooks. The Mid-Plains Inter-agency Handcrew was mobilized twice this year and was again recognized for its outstanding performance.

The "Service First" Agreement between the National Park Service and the Mid Plains District continues to serve both agencies well and a new MOU was signed this year. The agreement and annual operating plan allow each agency to avoid duplicating resources and promotes the interagency sharing of technical fire staff personnel. Under this MOU, the Mid Plains Fire District provided fire management services to five different National Parks Service units in Kansas as part of this cooperative effort, including the completion a 5,000 acre prescribed burn for the Tallgrass Prairie Preserve.

FWS Partners program again teamed up with The Nature Conservancy in a cooperative fire reintroduction effort to restore native tall grass prairie on private lands. A total of 13 treatments totaling 876 acres were treated on private lands in northeastern South Dakota.

National Fire Plan fuels treatment accomplished this year in the included the completion of 219 treatments, totaling 39,033 acres. Service personnel responded to a total of 34 wildfires which consumed a total of 3,076 acres of refuge lands in KS, NE, SD, and ND.

At the North Dakota Dispatch Center, 2009 began with turnover of staff as Lily Huskey left the position of Lead Dispatcher in February to take a position as an Incident Business Specialist for the US Forest Service in Montana. But like everyone else, the fire season never materialized for North Dakota or the Dispatch Center. The Zone reported minimal activity: 198 Human caused fires for 1,866 Acres; 5 Lightning caused fires for 168 Acres, and a total of 95 fuel treatments for 22,732 acres. Only a handful of resource orders were processed for fires in other parts of the country.

Personnel moves in the Zone included: Jason Wagner relocated to Waubay Refuge, Jeff Meadows filled the prescribed fire specialist position in Madison, SD; Jeremiah Philips accepted the prescribed fire specialist position at Crescent Lake NWR, Chris Masson filled the fire program technician position at Crescent Lake NWR, and Jerry Bahn left J. Clark Salyer NWR to join the ND Reality staff in Bismarck, ND; Jeff Dunlap filled the fire program technician position at Kirwin NWR; and Blake Stewart filled the Fire Program Technician position at Sand Lake Refuge.

A beautiful new fire cache and engine storage building took shape at the Rainwater Basin Wetland Management District. This building was part of the District headquarters move out of substandard facilities in Kearney, Nebraska. It was funded and planned in FY 2008, and construction was nearly complete by the end of December, 2009.

Zone Highlights -- Mountain Zone (Colorado, Utah, Wyoming, and Montana)

2009 started with good moisture that continued through the fire season. No extended severity requests were necessary for the Zone this year. All three geographic areas within the Zone (the Northern Rockies, Eastern Great Basin, and Rocky Mountain) generally experienced a mild fire season with near average numbers for fire occurrence but fire sizes smaller than normal. There were 31 wildfires for a little over 200 wildfire acres on FWS lands in the Zone. There were 200 FWS and 67 mutual aid/assist wildfire acres burned this year in the Mountain zone.

This could be described as a normal year for prescribed fire within the Mountain Zone. Roughly 7,338 acres were treated in twenty seven burns on nine refuges in 2009. A wet spring with late burning conditions allowed for a late prescribed fire season and subsequent fall burning. All burns were spring or early summer burns except for three burns (one each) at Alamosa, Benton Lake, and

Bear River Migratory Bird Refuge where fall burning was utilized.

Of these treatments, WUI accomplishments included the completion of seven prescribed burns for roughly 2366 acres treated, while planning continued for at least eight additional projects. The Firewise Nature Trail/Education project was completed at Creston National Fish Hatchery with some final tree clearing by the fire crew from Lee Metcalf NWR.

Personnel moves included filling a new Prescribed Fire Specialist position at the Alamosa/Monte Vista complex with Darwin Schultz. This position serves both the Colorado District and is part of the San Luis Valley Interagency effort. The Colorado District was further impacted as both the District FMO Todd Richardson and the Assistant FMO Joe Flores vacated their jobs for positions with other agencies. The Colorado District FMO position was filled by William Briggs in early December, who came from the BLM, Pocatello area. Other major developments in the Mountain Zone included splitting the Mountain West District into two Districts to facilitate better fire support for the area. Tracy Swenson was re-promoted in place as the District FMO for the newly formed Rocky Basin District. Louis Hartjes remains as the Mountain West District FMO. The Region hopes to fill additional fire support positions in the future.

ALASKA REGION

General

2009 was an active Fire Year for Region with approximately one million acres on FWS lands being burned. The clarification of Federal Fire policy to manage fires for multiple objectives was implemented with the Wildland Fire Decision Process (WFDSS) utilized as the decision documentation system. The primary objective for Refuge fires in Alaska were for resource benefits. Suppression actions were implemented on fires to protect native allotments, point protection on cabins and to prevent fires from burning into higher suppression options.

The Eastern 1/3 of Yukon Flats NWR and the SE portion of Arctic south of the Brooks Range experienced extended drought conditions. Indices remained above the 90th percentile for over a 60 day time period. The lightning occurrence was relatively low however the number of acres burned (400,000 acres) was double the historic annual average (190,000 acres).

There were several key vacancies in the fire staff filled this year. The region welcomed the arrival of Doug Alexander, Regional Fire Management Coordinator, located in Anchorage, Kristi Bullock, Fire Management Officer (FMO) for Innoko, Togiak, and Yukon Delta refuges located in McGrath, Brian Haugen, Assistant FMO for Arctic, Yukon Flats and Kanuti located in Fairbanks and Adam Horton, Fire Technician at Tetlin NWR located in Tok.

We once again relied heavily on assistance from detailers from other FWS regions to support the fire program. Three detailers were utilized as Acting Regional Fire Coordinator for 30 days and during the fire season Refuge FMO's relied on detailers to

support them with Fire Management Activities. Yukon Flats utilized five detailers to support the FMO each for a 15-day detail. The Regional Office brought up five additional detailers to assist with the workload of WFDSS and large fire support.

Personnel

The region implemented 33 medical exams either utilizing CHS or utilizing the interim guidance after the contract expired. Region wide 29 employees were arduous rated, 5 moderate and 1 carded for light fitness.

Training

The regional fire program supported fire training on a national, local and geographic scale. We supported Fire Program Management at NAFRE with a steering committee member as well as unit instructor. Out of Geographic Area Coordination Center (GACC) classes included instructor support for S-495, Geospatial Fire Analysis. In the Alaska GACC, we supplied unit instructors for S-341. At the refuges, we conducted several S130/S190 classes, fire fighter refreshers and well as pumps and saws classes.

Committees and Working groups

Region 7 continued support of National and Geographic interagency committees by providing personnel from the fire program.

Chair for the National Interagency Helicopter Operations Guide (IHOG) Committee.

Service wide we supplied R7 representatives on the FWS National Fire Operations and Safety Team (NFOST), FWS National Fuels Committee, FWS Fire Ecology Committee

In the Geographic area, R7 provided representatives and alternatives on the following Alaska interagency committees, and task groups: Fire Research Development and Application Fire Effects Task Group, Fire Research Development and Application Fire Effects Task Group, Wildland Fire Education and Prevention, Fire Weather, Fire Operations – Chair, Fire Training and Qualifications, WFDSS working Group, Interagency Master Agreement, DOI Committee, Fuels, Prescribe Fire and Community Assistance, Air Quality and Smoke Management, Safety and Health, and GIS.

Locally we participated the Kenai Peninsula Interagency Forests, Fuels and Fire (All Lands All Hands) Working Group; the Kenai Peninsula Borough – Local Emergency Planning Committee (LEPC); and, the Kenai Peninsula Fire Chiefs Association

Planning

Work continues region wide on revision of Comprehensive Conservation Plans (CCP). Arctic Refuge began the CCP process with public scoping meetings this year while the combined CPP for Koyukuk/Nowitna Refuge was completed as well as the final EIS and CCP for Kenai Refuge.

Several interagency planning efforts were initiated in 2008 and continued through 2009, including: a Master Cooperative Wildland and Fire Management and Stafford Act Response Agreement between all Federal Agencies and the State of Alaska along with exhibits for a Statewide Annual Operating plan. These plans should be finalized in 2010.

Tetlin Refuge and State of Alaska collaborated to change Fire Management Options along the Alaska Highway from the Yukon Border to near MP 123. A mile buffer of Full protection was added on both sides of the highway to compensate for new homes

and businesses in the area.

Kenai Refuge continued its collaborative membership in the interagency Kenai Peninsula Wildland Fire Forests and Fuels Management working group, and is actively participating in the revision of the All Lands All Hands 5-Year Action.

Fire Management Plans

The 2001 Kenai Refuge Fire Management Plan (FMP) is being revised to incorporate guidance and objectives from the Revised CCP. Koyukuk and Nowitna FMPs are being revised and combined into one plan. Yukon Flats NWR FMP was reviewed for currency and annual updates for the Arctic and Kanuti FMP's were completed.

Equipment

This year's equipment purchased focused on the replacement and upgrade of our data loggers on 23 fire RAWS stations. The Data loggers will be installed in 2010 during the routine maintenance of the stations. We also purchase one portable RAWS to be installed on Wildland fires as needed.

Maintenance

The Bobcat Skid Steer and Fecon Tree Shear that was purchased in 2008, continues to have repairs to hydraulic and electrical connections between the Bobcat and the tree shear attachment. Design flaws are still causing occasional breakdowns, especially during winter operations. Kenai Refuge mechanics are working with the distributor to correct deficiencies.

Fire Education, Prevention & Mitigation

The Tetlin Refuge fire personnel worked with the Alaskan Division of Forestry to disseminate prevention messages throughout the area. Tetlin Refuge Visitor Center personnel maintained a Fire Danger Indicator sign at the center.

There were three human-caused wildfires on the Kenai NWR in 2009, all of which could be classified as misuse or mismanagement of an outdoor fire (e.g., escaped or abandoned campfire, debris burning, etc). This statistic continues the short-term trend of a reduction in human-caused fire starts on the Refuge. Prevention efforts continue Refuge-wide with support from Visitor Services, law enforcement, firefighters as well as campground volunteers.

Outreach

Kenai Refuge fire managers participated in outreach activities at special events, including the Kenai Peninsula Sports Show in Soldotna, the Kenai Peninsula State Fair in Ninilchik, and the National Wildlife Refuge Week festivities. The Tetlin Refuge FMO spoke at a career fair at the Tetlin School and assisted with map making for the Tetlin Village Moose Management Project and for the Tok Area Dispatch Office. He also provided input for fire management messages in several new interpretive exhibits and panels. A Refuge sponsored Movie Night in Tok feature fire management documentaries as well as “Red Skies Over Montana.” Refuge fire personnel assisted with the Airs Hill Trail project near Port Alcan.

As a committee member of the Alaska Interagency Prevention and Education Committee we supported by staffing the Interagency booths at the Anchorage 2009 Alaska Forum on the Environment Education conference. This conference reaches out to our village neighbors.

Fire Effects / Monitoring / Ecology

A Joint Fire Science Wildland Fire Science Consortium for Alaska was partially funded with the full proposal being developed in 2010. The intended focus of the consortium, is to: 1) communicate the results of existing and on-going northern latitude and boreal

forest fire science to federal and state land and fire managers, 2) work with land and fire managers to optimize modes and methods of fire science communication so that the information is both useful and usable. The consortium has already held one workshop and a webinar in 2009.

Tetlin Refuge assisted in monitoring snow depth, density, and water content on two 2 snow courses from November through April. Data was submitted monthly to the Natural Resources Conservation Service to assist in efforts to model and predict spring run-off and flood potential. Tetlin also assisted BLM researchers with post-treatment fuels monitoring in Tanacross.

Region 7 hosted the Regional Fire Effects meeting and workshop in Anchorage. A focus of the workshop was climate change and its possible effect on the fire program. Each region was able to share their current research and well as discuss service wide issues regarding climate.

Wildland Fire

The 2009 fire season was relatively active with most activity centered in Interior Alaska. There were close to 50 individual fires on refuge lands for over one million acres burned within our boundaries. The Kenai area had large early season fires with one fire on the Kenai Refuge burning 13,000 acres. Rain and wetter weather patterns moved into that area in mid-July ending their fire season. The interior refuges remained in extreme indices well into August. Drought conditions remained not the fall with cooler temperatures and shorter days having extinguishing effects on the fires. Fire continued to burn or smolder into the fall. Smoke was seen on the fires as late as December.

Alaska Support Fires Wildland Fire

The Alaska fire management staff supported the Alaskan Type 2 team with 3 personnel who went on assignment in state. The Kenai Refuge hosted a type 1 NIMO team on the Shanta Creek Fire that grew to 13,221 acres.

All Hazard Incidents

We did not respond to any All Hazard incidents. We did experience ash fall from Mt. Redoubt Volcano in March when it erupted. Kenai Refuge in conjunction with the Alaska Volcano Observatory installed one of our EBAM for measuring air quality from the Volcano.

Fuels Reduction Projects

There were no large broadcast prescribe burns in the region however pile burning was conducted on numerous fuel treatments to remove the debris from mechanical thinning.

Mechanical treatments include creating defensible space around Refuge assets as well as in native villages that are either within or adjacent to our boundaries. Through agreement with the village we are able to complete FireWise treatments around communities and create defensible space for fires burning in the Refuge for resource benefits. Before treatments take place, we assist the village with Community Wide Protection Plans.

Skilak Loop Vegetation (ARRA) Project

Refuge firefighters laid-out and marked the boundaries and leave trees in 10 treatment units totaling 122 acres. Spruce and hardwood trees will be cut and crushed for subsequent broadcast burning, cut and piled for pile burning, or cut, yarded and decked for biomass utilization, through a service contract in 2010. This habitat management project is phase one of a multi-phased project to improve wildlife-oriented recreation opportunities (wildlife-viewing and small-game for youths), per the Skilak Wildlife Recreation Area Management Plan (EA and FONSI 12/07/2006)

Community Wildfire Protection Plans for the communities of Dry Creek and Mentasta were completed and signed during FY09.

Kenai Refuge completed fire line rehabilitation on the Shanta Creek Fire. Fire crews and Refuge firefighters burned hundreds of slash piles on 39 acres, along the south side of the Refuge boundary which was created during the Shanta Creek Fire while creating a fire break to protect the community. Another 71 acres cleared by heavy equipment and hand crews also cut and piled was burned as well as piles at one remote site to protect an historic cabin.

PACIFIC SOUTHWEST REGION

Fire Season Overview

Overall, the 2009 calendar saw a moderate fire year, with approximately 8,550 wildfires in California and Nevada (over 433,000 acres burned).

The largest fire was on the Angeles National Forest burning over 160,000 acres. A number of regional and zone fire personnel assisted on the fire suppression efforts.

The Region helped with numerous state, national, and international fire incidents as well as suppressing 49 fires on refuge properties. Firefighter and public safety has and continues to be priority number one.

Regional Highlights

2009 can best be described as a year of fire science partnerships and learning. The region has hired a new climate change coordinator and regional fire staff has been involved in developing new collaboration opportunities in climate change, fire ecology, landscape management, and fire learning initiatives throughout the region.

Fire program and collateral staff have supported local prescribed fire efforts and numerous statewide, national and international wildfire incidents.

The Region continued its strong interagency involvement including participation on the California Wildfire Coordinating Group, California Fire Alliance, California Fire Safe Council, California Interagency Prevention Committee, Great Basin Coordinating Group, North East Air Alliance, Southern Oregon Fuels Committee, Nevada Fire Board and other task groups and committees.

New partnerships were developed with The Nature Conservancy's Fire Learning Network, the University of California's Extension Program, and the UC Berkeley Fire Research Center to enhance fire science dissemination and education efforts for agency partners and the public.

Outreach and education efforts were supported at the regional and local level through numerous partnerships with refuge, community and interagency partners. Highlights include a large fire program display at the California State Fair, a new fire program website, and new social media products.

Region 8 had another successful year in fuels management including the treatment of approximately 32,600 acres of hazardous fuels and wildlife habitat, mostly through the use of prescribed fire.

Regional Summary

- 49 wildfires on refuge lands (529 acres)
- Prescribed fire treatments (31,240 acres)
- All treatments (32,648 acres)
- 43 permanent and 12 temporary fire employees
- 2 new fire engines
- 1 new fire facility, nearly completed (1/09)
- 55% of Project Leaders/Managers have taken fire management leadership training
- 50 personnel attended geographic or national training courses
- \$1.3 million ESR/BAR funding
- \$2.2 million HFR funding
- \$64,000 RFA funding to 8 rural fire departments
- \$23,060 and 39,465 severity funding, (regional & national funds)
- Supported 6 new CWPPs

- 1 new fire learning network (Central Coast)
- Supported 4 private land forestry and or best practice workshops
- New regional fire management webpage including social media products.

FIRE MANAGEMENT ZONE HIGHLIGHTS

Klamath Basin FMZ: *Southern Oregon, northern California's Modoc plateau and north coast.*

Dave Goheen, Fire Management Officer

- 3 wildfires on refuge lands (2 acres)
- Assistance to numerous local, regional, and national fire incidents
- 5 prescribed fire projects (22,513 acres) and 2 mechanical treatments (65 acres)
- Assisted another Service fire management zone, the US Forest Service and Bureau of Land Management on prescribed fire projects
- Bear Valley NWR timber sale awarded (400 acre) and to be completed next year
- 2 outreach events supported by fire personnel

This year was a slow fire season for the zone with only three wildfires on refuge lands (burned less than 2 acres). One fire resulted from an unattended ditch burn while another was a heat holdover from an earlier prescribed fire. Although small incidents, this provided a great learning opportunity and management reflection.

Klamath Zone fire personnel and collateral employees assisted in various capacities to incident management teams. Prescribed Fire Specialist, Ruth Johnson, worked with local Type III teams and as a Resource Unit Leader. Assistant Fire Management Officer, Greg Zeppetti and Fuels Technician Justin Pyle were assigned to the Kenai National Wildlife Refuge in support fire suppression efforts in Alaska. The Arcata Fish &

Wildlife Office Biologist, John Hunter, worked as a Field Observer for the Southern Oregon/North Eastern California Task Force with fires on the Fremont-Winema and Modoc National Forests.

The zone treated over 22,500 acres with prescribed fire on five different refuges and implemented a wildland urban interface project at the Bear Valley National Wildlife Refuge removing 65 acres through mechanical treatments.

Fire personnel also assisted the North Central Valley Fire Management Zone, The US Forest Service and Bureau of Land Management with their prescribed fire projects.

Klamath Zone fire personnel supported numerous cooperators on fire planning, air quality and fire suppression teams. Fire personnel assisted with several refuge Comprehensive Conservation Plans, worked with the Bureau of Reclamation on addressing lease land burning issues and participated on the North East Air Alliance to address smoke issues.

Zone fire personnel work closely with refuge public affairs staff in getting fire messages out to the public and provided outreach materials and assistance during the Tulelake Migratory Bird Festival in May and the Tulelake Fair in September.

California North Central Valley FMZ: *Northern California Sacramento Valley.*

Dale Shippelhoute, Fire Management Officer

- 10 wildfires on refuge lands (4.7 acres)
- 25 threat fires (652 acres)
- Assisted with local, regional and national fire incidents
- Hired 4 new firefighter positions
- Sponsored 4 annual fire refresher courses
- Completed 9 NWCG courses

- 27 prescribed fire projects (1,072 acres)
- Assisted on 4 state and local prescribed fires and completed a 50 acre prescribed fire project for US Bureau of Reclamation
- Goat grazing used on WUI projects (134 acres)
- Participated at 2 Junior Firefighter Events and several refuge and local outreach events
- 6 RFA grants coordinated

It was a moderate fire season for the zone. Although still waiting on a fire engine bay, they hired four new career-seasonal positions to fully staff the program. They had a successful year in training and experience completing nine NWCG training courses and providing four fire refresher courses in-house. There were ten wildfires on refuge lands and 25 threat fires burning approximately 657 acres.

The zone was able to support a number of incidents outside of the zone and region. Fire Management Officer, Dale Shippelhouse, had three division supervisor assignments and Assistant Fire Management Officer, Kipp Morrill, took a one-month detail as the Regional Fire Management Coordinator for Alaska. And, Engine Captain, Tony Arendt, had a trainee assignment as a Type 3 Incident Commander. Approximately nine collateral fire staff assisted on a number of fire incidents and prescribed burns.

It was another successful year for the Sacramento Zone's prescribed fire program. A total of 27 prescribed fires were completed for over 1,072 acres. Fire personnel were also able to assist with four other partner prescribed fires including Cal Fire Tehama-Glenn Unit, Mendocino National Forest and the Hamilton City Volunteer Fire Department.

The zone has continued the successful contracts and agreements for goat grazing and hand thinning in the wildland urban interface treating at least 65 acres of hazardous fuels.

Sacramento Zone fire personnel were involved with many intragency and interagency fire planning, training and outreach efforts. Fire staff participated in refuge comprehensive conservation plan efforts, the national environmental policy act process and in fire planning analysis workshops.

The Zone was very active in supporting rural fire department training and preparedness throughout zone with special recognition to Fire Captain Mark Rakestraw. A total of six different rural fire departments were funded this year through Rural Fire Assistance grants.

Fire personnel also supported a number of outreach and education effort such as the Sacramento National Wildlife Refuge's Junior Firefighter events, a community safety fair near Stone Lakes National Wildlife Refuge and other community events.

California South Central Valley FMZ: San Joaquin Valley, Bay Area and California Central Coast. Peter Kelly, Fire Management Officer

- 14 initial attack responses (83 acres) on or threatening refuge lands
- Bob Parris, Deputy Project Leader, new fire rep for LOT Team
- Ken Griggs, Biologist (collateral fire) was dispatched with BAER team to Australia
- 31 fuels projects (3236 acres); 18 prescribed fire projects (2,582 acres) and 13 mechanical or other projects (654 acres).
- 3 prescribed fire sites monitored
- 51 fire courses attended and 4 Position Task Books completed

- 1 RFA grant coordinated

This was the third year of a drought in California's San Joaquin Valley which began earlier this year with some small wildfires in the local area and continued through the summer into autumn.

The zone experienced a slight reduction of fire starts this year. However, more engine assignments and a greater number of task books were completed. The zone had nine red-carded fire-funded personnel and 10 red-carded collateral fire fighters this year and maintained two type-6 engines, two type-3 engines and one tactical water tender. Engines were dispatched to 13 off-station fire assignments and overhead to six off-zone fire assignments. Ken Griggs, a wildlife biologist (and collateral firefighter) at the complex was dispatched on a BAER team assignment to Australia.

The Complexity rating for the zone was upgraded to "high" after a new program review. This resulted in the FMO position increasing in grade, the hiring of an AFMO, a new Supervisory Range Technician, a new lead firefighter, and adding one additional permanent seasonal firefighter position to the organizational chart.

Historic prescribed fire perimeters were added to the existing GIS database and acquired new aerial photos for Stanislaus County which aid in the planning and implementation of fuels projects and wild-fire suppression. The zone monitoring program continued at three sites including (Lone tree unit, Elk Pasture and the Colusa Unit) on the San Luis NWR Complex.

The zone completed 31 fuels projects totaling 3236 acres. 18 projects were prescribed fires ranging in size from 10 to 400 acres and totaling 2,582 acres. Thirteen projects were mechanical fuel reductions

involving mowing, disking and spraying totaling 654 acres. Fire personnel continued to help plan and implement both prescribed fires and mechanical fuels treatments at the Kern and San Francisco Bay NWR Complex and provided support on 1 fuels project (Rx burns) totaling 12 acres on cooperator's lands in Central California.

The zone took delivery of a new 2000 gallon diesel tank for the fire cache, a Caterpillar Skid-steer, and a new Command/Utility vehicle. They maintained one WIMS station and made use of a portable WIMS station on a number of fuels projects.

Southern California FMZ: *Southern California Inland and Coast. Bill Molumby, Fire Management Officer (retired November 2009)*

- 2 wildfires on refuge lands (1 acre)
- Supported 31 local, regional or national incidents
- Bill Molumby and Type 1 Team support Canada wildlife suppression efforts
- 8 Single Engine Assignments
- Supported 4 interagency training programs
- 6 refuges treated in the WUI (2,302 acres)
- 1 Salton Sea NWR Prescribed fire (18 acres)
- Assisted on 5 prescribed fire projects with state and local partners
- Supported numerous fire safe council planning, project and outreach efforts.
- Coordinated 1 RFA grant
- Continued ESR and BAR efforts from previous year wildfires at San Diego and Hopper Mountain NWRs

It was a moderate fire season for the zone with little wildfire activity on refuge lands (2 fires, one acre burned) but a number of local and regional support efforts (31 mutual aids incidents). Fire Management Officer,

Bill Molumby, and his Type I Incident Management Team supported wildfire efforts in Canada. Engine Captain, Gordon Tamplin, took three Type II Division Supervisor assignments and Regional Fire Operations Specialist, Jessica Wade, supported three different incidents in southern California.

The zone supported a number of interagency fire training efforts including the San Diego County Wildland Fire Drill, DOI Engine Academy, Southwest College Wildland Firefighter Academy, and Swift Water Rescue training.

It was a busy year for the fuels program with over 2,300 acres treated, primarily in the wildland urban interface. There was one prescribed fire at the Sonny Bono Salton Sea National Wildlife Refuge (18 acres) and zone fire staff also assisted on five partner prescribed fires. The largest part of the program is creating and maintaining fuel breaks and includes discing and mowing, roadside clearing, invasive species removal, and goat grazing. A successful collaboration has been the roadside fuel break along Blue Ridge National Wildlife Refuge which was implemented by the Tulare County Resource Conservation District.

The zone coordinated one Rural Fire Assistance grant with its largest rural fire partner and supported a number of interagency committees and teams including the Border Agency Fire Council and Forest Area Safety Taskforce. The zone continues to support numerous fire safe council activities and in 2009 helped with development of four different community wildfire protection plans.

Nevada FMZ: State of Nevada
Glenn Gibson, Fire Management Officer

- 12 wildfires on refuge lands; largest was 100 acres at Pahranaagat NWR

- Had a severity engine to cover Pahranaagat NWR for six weeks
- Supported the Las Vegas Interagency Helitack Program with two positions that supported over 25 wildfire incidents
- Assisted in training 40 entry level firefighters for the Clark County Fire Explorer Program
- 33 fuel treatment projects (4,400 acres)
- Mechanical fuels reduction projects on 6 NWRs
- Assisted in revamp of the National Fire Danger Rating System Operating Plan for southern Nevada.

This year the zone had twelve fires on refuge lands. The largest fire was at Pahranaagat National Wildlife Refuge and was about 100 acres in size. The zone partnered in interagency fire restrictions that went into effect for southern Nevada refuges starting in May and ending in September. In addition, we brought a severity engine to Pahranaagat NWR for approximately six weeks this year to enhance interagency capability in an area where there was an increased fuel load. The severity engine worked on five fires during the six weeks.

The zone assisted with entry level wildland fire training for approximately 40 firefighters, primarily from Clark County's Fire Explorer program.

The zone, assisted by interagency partners, was able to conduct around 33 fuels treatments (4,400 acres) meeting hazardous fuels and habitat improvement objectives on refuge lands. One of the fuel treatment projects consisted of catching-up on an eight year backlog of canal burns (over 23 miles). Tools used to achieve fuels objectives included prescribed fire, slashing, chipping, lop and scatter, herbicide application, and goat grazing.

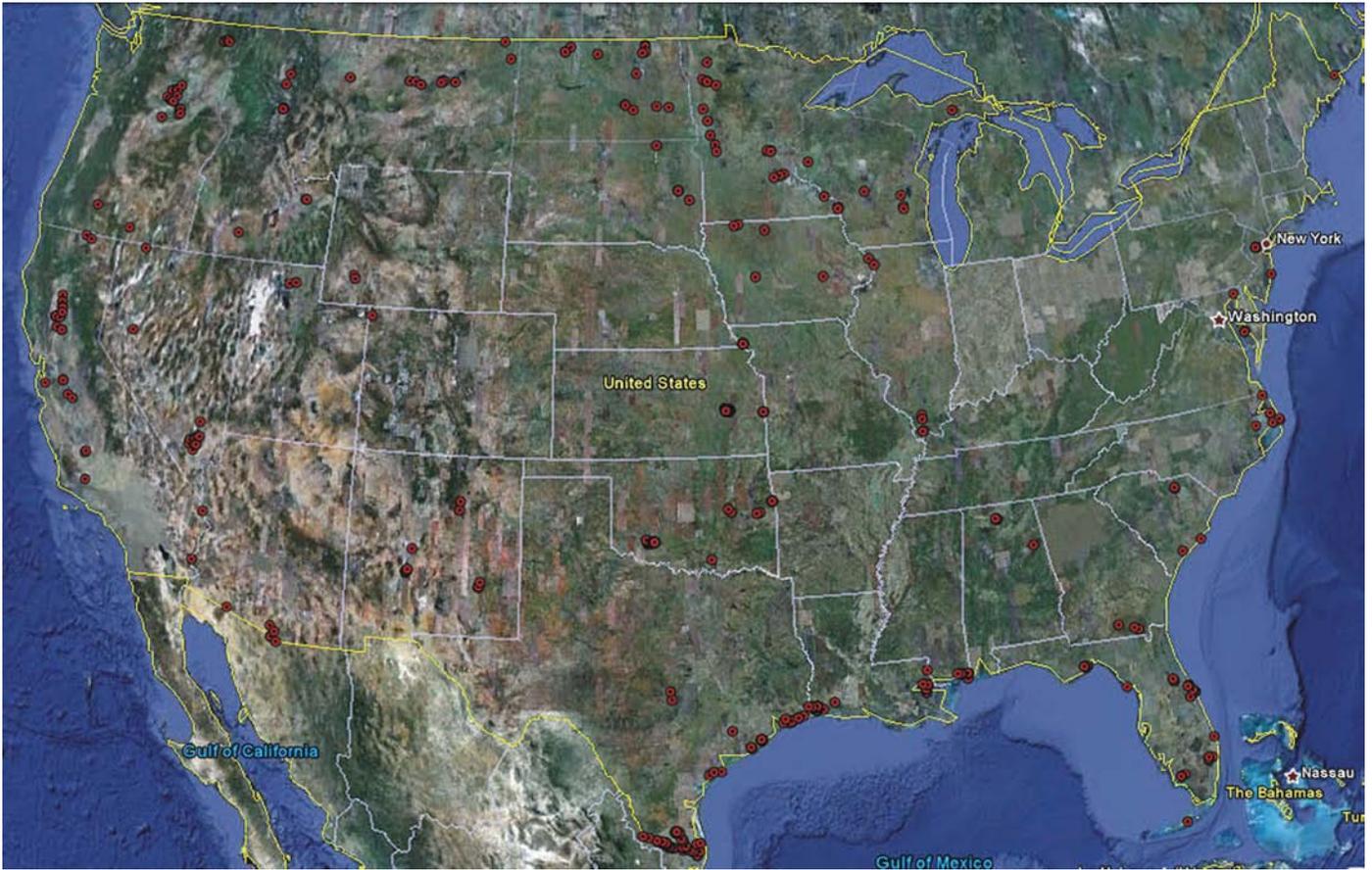
This year, mechanical hazard fuels reduction projects were conducted on the Moapa Valley, Ash Meadows, Ruby Lake, Desert, and Pahrnagat NWRs this year. One of these projects was at the Desert Pass Campground on Desert NWR. The project consisted of slashing and removing encroaching Pinion pine and Juniper from under 25 acres of rare Ponderosa Pine. The work was conducted by the Southern Nevada Interagency hand crew at no cost to the Service.

Our support for the interagency helitack program stationed in Las Vegas remained constant at two positions for the summer. Five Service funded detailers were able to take advantage of this great opportunity to improve their helitack skills. They directly or indirectly supported over 25 fires in the interagency initial attack area.

Nevada zone personnel supported inter-agency partners by editing and improving National Fire Danger Rating System (NFDRS) Operating Plan for Southern Nevada, as well as by participating in interagency preparedness exercises.

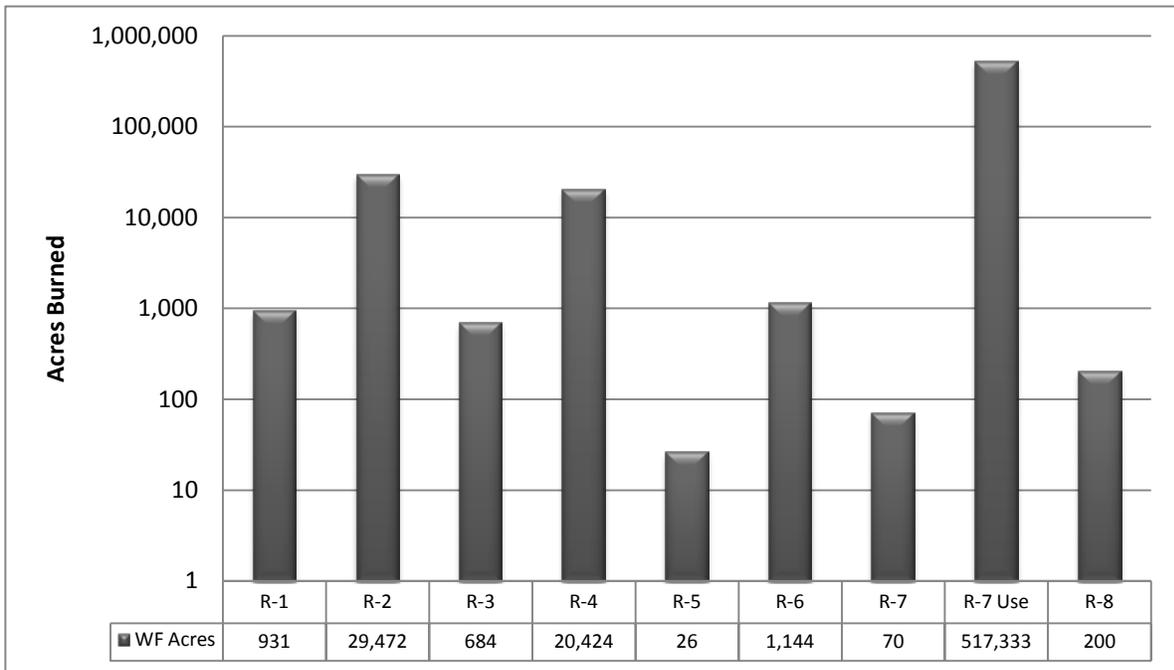
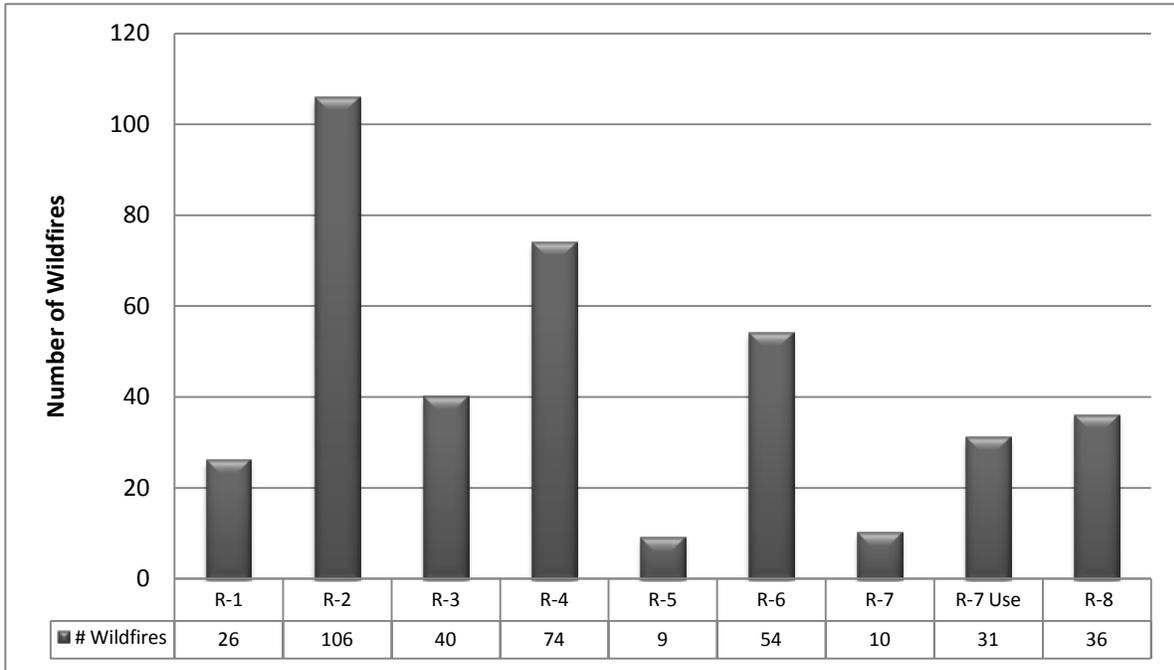
The zone helped host the National Fire Outreach Team's annual meeting located outside the Desert National Wildlife Refuge in Boulder City where a presentation was given on Nevada and regional fire outreach efforts. A number of fire and local refuge staff attended and helped build new fire outreach connections.

2009 WILDFIRE ACTIVITY



- Wildfires
- Fire Use Fires

WILDFIRES 2009



WILDFIRES

by State

2009

<u>State</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Alabama	4	10.4		10.4
*Alaska	41	517,403.1	284,172.0	801,575.1
Arizona	8	2,818.5		2,818.5
California	24	32.2		32.2
Colorado	1	0.1		0.1
Florida	26	2,448.5	28,575.1	31,023.6
Georgia	3	393.5		393.5
Idaho	3	226.1		226.1
Illinois	6	36.5		36.5
Iowa	5	133.6		133.6
Kansas	16	291.1	2,131.2	2,422.3
Louisiana	17	16,270.0	86.0	16,356.0
Maine	1	0.1		0.1
Maryland	3	25.2		25.2
Michigan	1	1.0		1.0
Minnesota	18	396.7	172.0	568.7
Mississippi	8	244.9	62.0	306.9
Missouri	3	26.0		26.0
Montana	16	225.5	20.0	245.5
Nevada	12	167.1		167.1
New Jersey	5	0.7		0.7
New Mexico	11	7,854.7		7,854.7
North Carolina	6	892.1		892.1
North Dakota	13	624.3	25.0	649.3
Oklahoma	21	1,431.6		1,431.6
Oregon	2	1.1		1.1
Puerto Rico	6	31.0	3.0	34.0
South Carolina	4	133.1		133.1
South Dakota	4	2.6		2.6
Texas	66	17,367.4	2,356.0	19,723.4

Utah	2	0.2		0.2
Washington	21	705.0	86.7	791.7
Wisconsin	7	90.3		90.3
Wyoming	2	0.2		0.2
Total	386	570,284.4	317,689.0	887,973.4

* Fire use fires have been added to Alaska totals. 31 use fires for 517,332.7 acres
Natural outs have been included for all regions.

WILDFIRES Pacific Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Camas NWR	2	226.0		226.0
Columbia NWR	1	11.0		11.0
Hagerman NFH	1	0.1		0.1
Hanford/Saddle Mtn. NWR	10	528.9	73.7	602.6
Hart Mtn. Natl. Antelope Refuge	1	0.1		0.1
Little Pend Oreille NWR	5	0.8		0.8
McNary NWR	4	164.2	13.0	177.2
Sheldon NWR	1	0.1		0.1
Umatilla NWR	1	0.1		0.1
Total	26	931.3	86.7	1,018.0

WILDFIRES

Southwest Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Anahuac NWR	2	1.5		1.5
Aransas/Matagorda Island NWRC	2	3,504.0		3,504.0
Attwater Prairie Chicken NWR	1	82.7		82.7
Balcones Canyonlands NWR	2	9.6	18.0	27.6
Bitter Lake NWR	3	17.0		17.0
Bosque Del Apache NWR	5	0.9		0.9
Brazoria NWR	3	1,116.0		1,116.0
Buenos Aires NWR	5	2,708.4		2,708.4
Cabeza Prieta NWR	1	8.0		8.0
Cibola NWR	1	102.0		102.0
Deep Fork NWR	2	70.0		70.0
Havasú NWR	1	0.1		0.1
Laguna Atascosa NWR	2	20.2		20.2
Las Vegas NWR	2	0.6		0.6
Lower Rio Grand Valley NWR	43	523.8	38.0	561.8
Matagorda Island NWR	1	2,548.0		2,548.0
McFaddin NWR	6	3,089.6	2,248.0	5,337.6
Ozark Plateau NWR	3	360.0		360.0
San Bernard NWR	1	2.0		2.0
Sequoyah NWR	2	591.0		591.0
Sevilleta NWR	1	7,836.2		7,836.2
Tishomingo NWR	1	10.0		10.0
Texas Midcoast Refuges Complex	3	736.0		736.0
Texas Point NWR	1	5,926.0	52.0	5,978.0
Wichita Mountains Wildlife Refuge	12	208.6		208.6
Total	106	29,472.2	2,356.0	31,828.2

WILDFIRES Midwest Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Agassiz NWR	1	2.5		2.5
Crab Orchard NWR	2	0.3		0.3
Cypress Creek NWR	2	0.2		0.2
Detroit Lakes WMD	4	161.0	172.0	333.0
Fergus Falls WMD	3	220.0		220.0
Glacial Ridge NWR	1	10.0		10.0
Horicon NWR	2	13.1		13.1
Iowa WMD	3	62.0		62.0
Leopold WMD	1	47.5		47.5
Minnesota Valley NWR	3	0.7		0.7
Morris WMD	1	1.0		1.0
Necedah NWR	1	14.5		14.5
Port Louisa NWR	1	71.0		71.0
Rice Lake NWR	1	1.0		1.0
Seney NWR	1	1.0		1.0
Sherburne NWR	3	0.0		0.0
Squaw Creek NWR	3	26.0		26.0
St. Croix WMD	1	6.0		6.0
Union Slough NWR	1	0.6		0.6
Upr MS River-La Crosse District	2	9.2		9.2
Upr MS River-Savanna District	2	36.0		36.0
Upr MS River-Winona District	1	0.5		0.5
Total	40	684.1	172.0	856.1

WILDFIRES

Southeast Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Alligator River NWR	2	741.0		741.0
ARM Loxahatchee NWR	4	230.0		230.0
Banks Lake NWR	1	0.1		0.1
Bayou Sauvage NWR	4	12.3		12.3
Big Branch Marsh NWR	2	0.2		0.2
Bogue Chitto NWR	1	0.1		0.1
Cabo Rojo NWR	1	5.0		5.0
Cameron Prairie NWR	1	48.0		48.0
Carolina Sandhills NWR	2	132.5		132.5
EF Hollings Ace Basin NWR	1	0.1		0.1
Florida Panther NWR	4	1,893.1	28,554.0	30,447.1
Grand Bay NWR	2	0.6		0.6
Hobe Sound NWR	1	0.3		0.3
Lacassine NWR	1	25.0	86.0	111.0
Lake Woodruff NWR	3	1.2		1.2
Lower Suwannee NWR	1	2.0		2.0
Mackay Island NWR	1	0.5		0.5
Merritt Island NWR	7	308.2		308.2
MS Sandhill Crane NWR	5	244.2	62.0	306.2
Mtn. Longleaf NWR	1	8.5		8.5
National Key Deer Refuge	1	1.0		1.0
Okefenokee NWR	2	393.4		393.4
Pea Island NWR	2	0.6		0.6
Pocosin Lakes NWR	1	150.0		150.0
Sabine NWR	8	16,045.5		16,045.5
SC Lowcountry Refuge Complex	1	0.5		0.5
Southeast Louisiana Refuges	1	139.0		139.0
St. Johns NWR	1	6.0	8.5	14.5
St. Marks NWR	4	6.7	12.6	19.3
Vieques NWR	5	26.0	3.0	29.0
Wheeler NWR	3	1.9		1.9
Total	74	20,423.5	28,726.1	49,149.6

WILDFIRES

Northeast Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Chesapeake Marshlands NWRC	3	25.2		25.2
Edwin B. Forsythe NWR	1	0.2		0.2
Great Swamp NWR	4	0.5		0.5
Moosehorn NWR	1	0.1		0.1
Total	9	26.0	0.0	26.0

WILDFIRES

Mountain-Prairie Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Bear River Migratory Bird Rfg.	2	0.2		0.2
Benton Lake NWR	1	0.1		0.1
Browns Park NWR	1	0.1		0.1
Charles M. Russell NWR	7	37.1		37.1
Chase Lake Prairie Proj. WMD	3	11.1	25.0	36.1
Des Lacs NWR	2	1.1		1.1
Devils Lake WMD	5	276.0		276.0
Flint Hills NWR	14	260.5	2,055.5	2,316.0
J. Clark Salyer NWR	1	0.1		0.1
Lee Metcalf NWR	4	160.4		160.4
Madison WMD	3	2.5		2.5
Marais Des Cygnes NWR	2	30.6	75.7	106.3
Medicine Lake NWR	2	1.8		1.8
National Bison Range	1	0.1		0.1
Pablo NWR	1	26.0	20.0	46.0
Sand Lake NWR	1	0.1		0.1
Seedskadee NWR	2	0.2		0.2
Upper Souris NWR	1	335.0		335.0
Valley City WMD	1	1.0		1.0
Total	54	1,144.0	2,176.2	3,320.2

WILDFIRES Alaska Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Innoko NWR	2	42.0		42.0
Kanutu NWR	2	3,104.6		3,104.6
Kenai NWR	7	13,255.0		13,255.0
Koyuku NWR	2	4.0		4.0
Koyukuk/Nowitna NWR	3	3,178.6		3,178.6
Nowitna NWR	5	57,691.8	284,172.0	341,863.8
Selawik NWR	7	11,982.1		11,982.1
Tetlin NWR	2	1,096.5		1,096.5
Yukon Delta NWR	4	23,618.0		23,618.0
Yukon Flats NWR	7	403,430.5		403,430.5
Total	41	517,403.1	284,172.0	801,575.1

Fire Use is added into the totals. 31 fires, 517,332.7 acres

WILDFIRES

Pacific Southwest Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Bitter Creek NWR	1	0.3		0.3
Colusa NWR	1	3.0		3.0
Desert National Wildlife Range	9	1.0		1.0
Don Edwards SF Bay NWR	1	2.0		2.0
Kern NWR	2	2.0		2.0
Klamath Marsh NWR	1	1.0		1.0
Lower Klamath NWR	1	0.1		0.1
Merced NWR	1	5.0		5.0
Pahranagat NWR	1	150.0		150.0
Sacramento NWR	2	0.3		0.3
Sacramento NWRC	2	0.2		0.2
Sacramento River NWR	7	1.3		1.3
San Joaquin River NWR	2	11.0		11.0
San Luis NWR	1	5.0		5.0
Stillwater NWR	1	16.0		16.0
Sutter NWR	2	1.0		1.0
Tule Lake NWR	1	1.0		1.0
Total	36	200.2	0.0	200.2

WILDFIRES by Cause

Refuge	# Fires	FWS Acres	Other Owner Acres	Total Acres
Natural	122	548,760.9	314,974.0	863,734.9
Debris / Vegetation Burn	70	7,619.0	2,558.8	10,177.8
Equipment Use	23	186.6	0.0	186.6
Exceeded RX Prescription	4	4,097.0	0.0	4,097.0
Incendiary	43	1,446.0	0.0	1,446.0
Misuse of Fire	10	22.2	25.0	47.2
Open or Outdoor Fire	18	49.7	0.0	49.7
Other Causes	16	198.4	9.0	207.4
Smoking	5	8.5	0.0	8.5
Structure	1	1.0	0.0	1.0
Undetermined	74	7,895.1	122.2	8,017.3
Total	386	570,284.4	317,689.0	887,973.4

Includes fire use fires and natural outs.

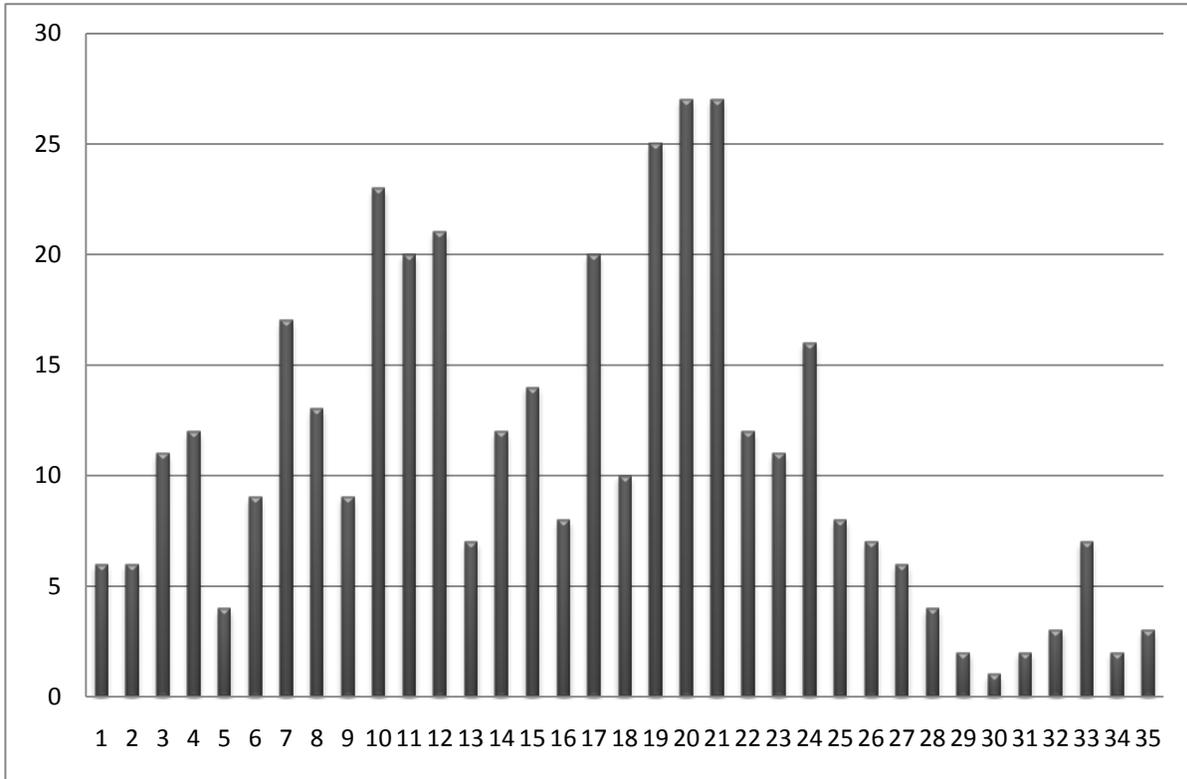
WILDFIRES by Size Class

Size Class	# Fires	FWS Acres	Other Owner Acres	Total Acres
A (0 - .2)	110	12.6		12.6
B (.3 - 9.9)	147	315.2	474.3	789.5
C (10 - 99.9)	71	2,309.9	1,963.7	4,273.6
D (100 - 299.9)	20	3,223.0	164,485.0	167,708.0
E (300 - 999.9)	10	5,002.0		5,002.0
F (1000 - 4999.9)	15	36,566.5	30,802.0	67,368.5
G (5000 +)	13	522,855.2	119,964.0	642,819.2
Total	386	570,284.4	317,689.0	887,973.4

Includes fire use fires and natural outs.

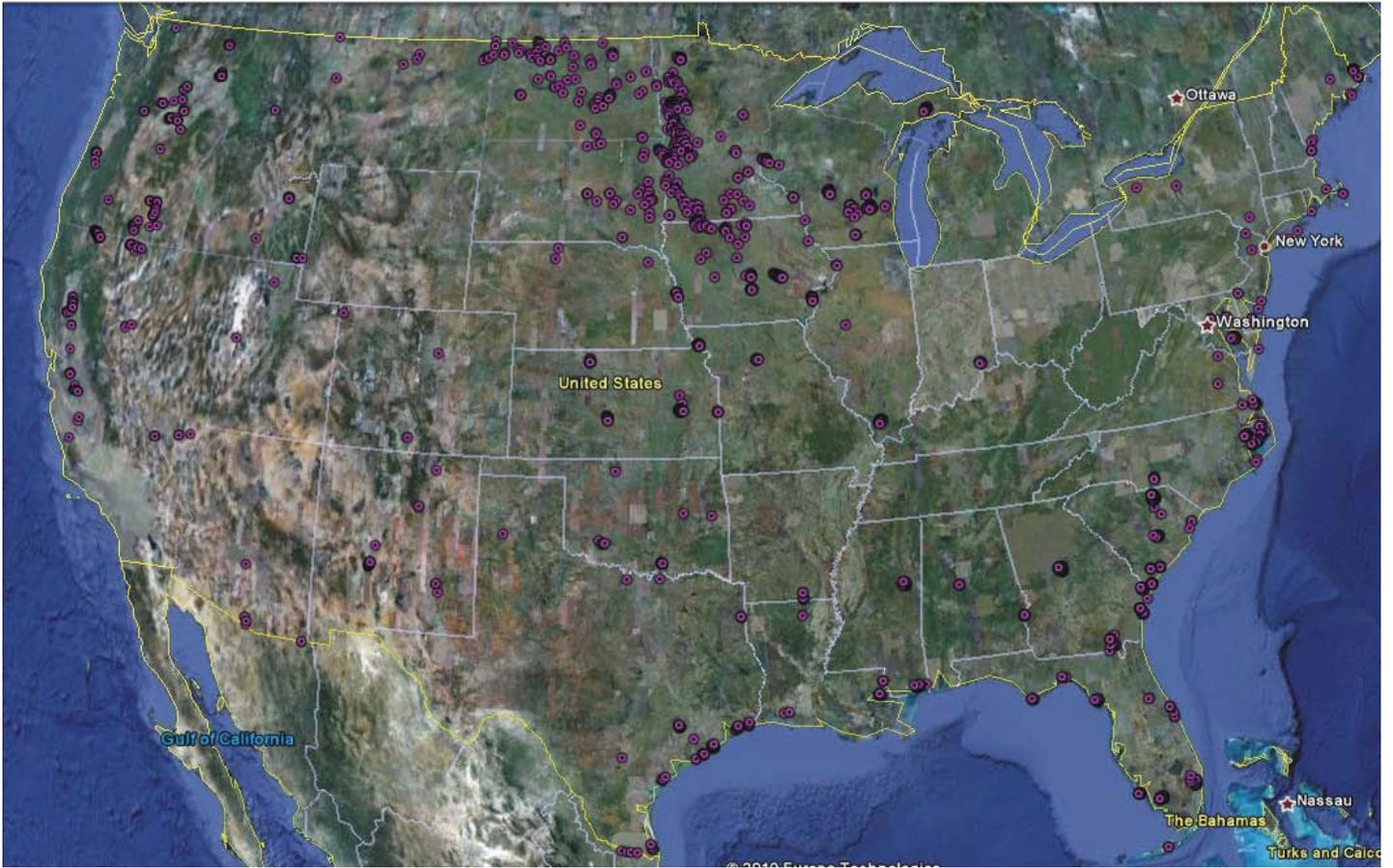
WILDFIRE STARTS - 2009

10 - Day Period

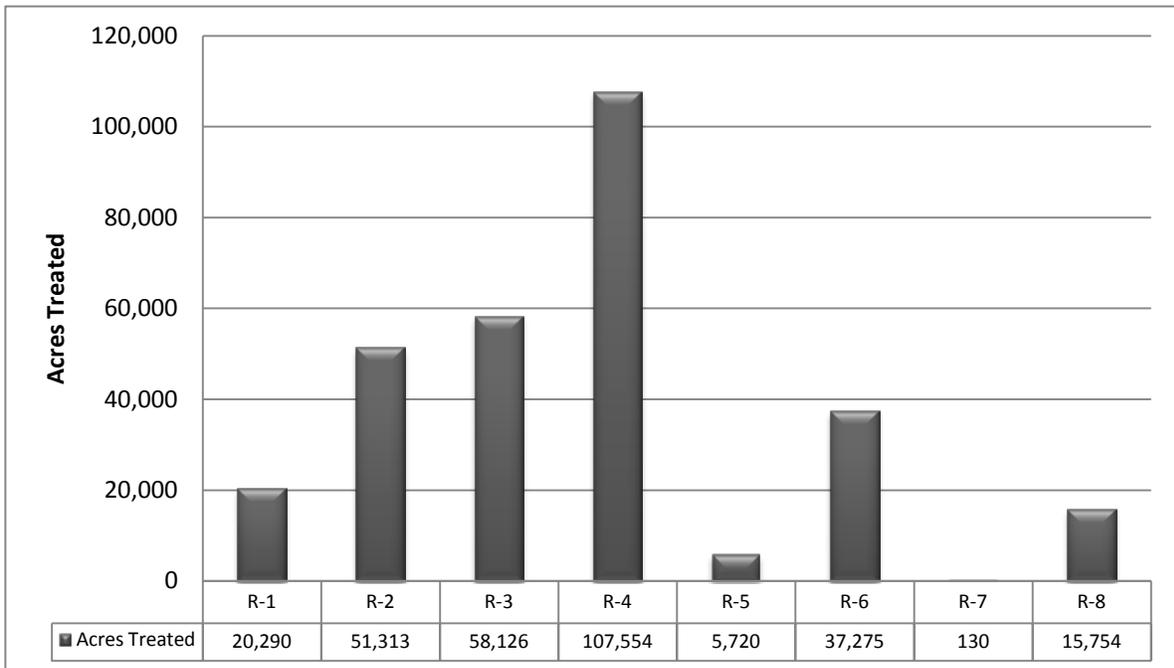
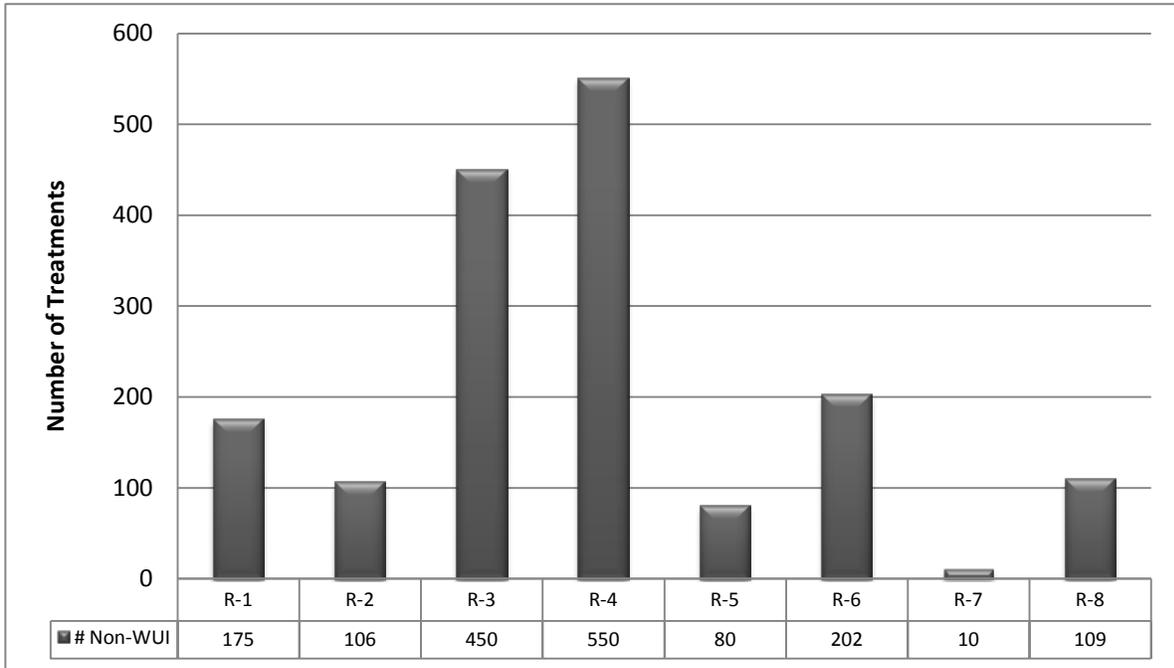


<u>Period</u>	<u>Dates</u>	<u>Period</u>	<u>Dates</u>	<u>Period</u>	<u>Dates</u>
1	Jan 10 - Jan 10	13	May 01 - May 10	25	Aug 29 - Sept 07
2	Jan 11 - Jan 20	14	May 11 - May 20	26	Sept 08 - Sept 17
3	Jan 21 - Jan 30	15	May 21 - May 30	27	Sept 18 - Sept 27
4	Jan 31 - Feb 09	16	May 31 - June 09	28	Sept 28 - Oct 07
5	Feb 10 - Feb 19	17	June 10 - June 19	29	Oct 08 - Oct 17
6	Feb 20 - Mar 1	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

2009 NON-WUI ACTIVITY



NON-WUI TREATMENTS 2009



NON-WUI TREATMENTS by State 2009

<u>State</u>	<u># Fires</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Chem/Other Acres</u>	<u>Total Acres</u>
Alabama	12	1,186.0	765.0	770.0	2,721.0
Alaska	10	25.0	105.0		130.0
Arizona	7	2,452.0			2,452.0
Arkansas	6	2,047.0			2,047.0
California	85	12,922.0	724.0	66.5	13,712.5
Colorado	4	1,192.0			1,192.0
Delaware	2	40.0			40.0
Florida	144	45,876.0	1,061.0	3,296.0	50,233.0
Georgia	105	15,627.0	1,076.0		16,703.0
Idaho	12	483.0	1,291.0		1,774.0
Illinois	14	504.0	398.0		902.0
Indiana	5	3,367.0			3,367.0
Iowa	89	9,998.0			9,998.0
Kansas	55	7,349.0			7,349.0
Louisiana	11	1,277.0	358.5		1,635.5
Maine	32	98.1	238.4		336.5
Maryland	25	2,549.0			2,549.0
Massachusetts	3	36.0	10.0		46.0
Michigan	12	5,520.0	11.0		5,531.0
Minnesota	217	28,038.6	222.0		28,260.6
Mississippi	24	5,710.0	549.0		6,259.0
Missouri	27	1,801.0			1,801.0
Montana	18	3,963.4			3,963.4
Nebraska	10	948.0			948.0
Nevada	23	898.0	755.0	291.0	1,944.0
New Jersey	6	36.0	365.0		401.0
New Mexico	20	568.1	200.0		768.1
New York	6	61.0	437.0		498.0
North Carolina	68	11,940.0	279.6	641.0	12,860.6
North Dakota	92	18,756.0	40.0		18,796.0

Oklahoma	15	2,366.0			2,366.0
Oregon	96	6,234.1	5,226.4	3,582.0	15,042.5
Puerto Rico	67		427.0	24.0	451.0
Rhode Island	1	1.0	50.0		51.0
South Carolina	113	13,663.2	981.0		14,644.2
South Dakota	29	4,429.0			4,429.0
Texas	64	45,635.7	91.5		45,727.2
Utah	2	1,300.0			1,300.0
Virginia	5	190.0	158.0	1,450.0	1,798.0
Washington	68	1,929.0	784.0	858.0	3,571.0
Wisconsin	78	5,340.5	2,224.0		7,564.5
Total	1,682	266,356.7	18,827.4	10,978.5	296,162.6

Total Acres = FWS acres treated.

NON-WUI TREATMENTS Pacific Refuges

<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Basket Slough NWR	1	10.0			10.0
Bear Lake NWR	5	403.0	1,000.0		1,403.0
Camas NWR	6	80.0	202.0		282.0
Cold Springs NWR	5		47.0	210.0	257.0
Columbia NWR	7	110.0			110.0
Conboy Lake NWR	5	77.0	141.0		218.0
Hanford/Saddle Mtn. NWR	3	520.0	269.0	269.0	1,058.0
Hart Mtn. Natl. Antelope Rfg	17	2,019.0	604.0	8.0	2,631.0
Little Pend Oreille NWR	8	171.0			171.0
Malheur NWR	27	2,155.0	3,964.0	2,570.0	8,689.0
McKay Creek NWR	2		5.0	90.0	95.0
McNary NWR	4	140.0	1.0		141.0
Minidoka NWR	1		89.0		89.0
Sheldon NWR	14	831.0	607.0		1,438.0
Sheldon-Hart Mtn. NWRC	1	223.0			223.0
Toppenish NWR	8		373.0	207.0	580.0
Turnbull NWR	33	911.0		360.0	1,271.0
Umatilla NWR	14	8.1	241.8	726.0	975.9
William L. Finley NWR	14	300.0	348.0		648.0
Total	175	7,958.1	7,891.8	4,440.0	20,289.9

Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

NON-WUI TREATMENTS

Southwest Refuges

<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Anahuac NWR	7	10,414.5		0.5	10,415.0
Aransas NWR	4	3,271.0			3,271.0
Attwater Prairie Chicken NWR	11	722.0		58.0	780.0
Bitter Lake NWR	2	342.0			342.0
Bosque Del Apache NWR	13	195.0			195.0
Brazoria NWR	10	5,063.5			5,063.5
Buenos Aires NWR	4	1,634.0			1,634.0
Buffalo Lake NWR	1			5.0	5.0
Caddo Lake NWR	3			28.0	28.0
Cibola NWR	1	244.0			244.0
Deep Fork NWR	1	938.0			938.0
Dexter NFHTC	1	0.1			0.1
Hagerman NWR	2	1,625.0			1,625.0
Laguna Atascosa NWR	5	566.0			566.0
Las Vegas NWR	2	15.0		200.0	215.0
Lower Rio Grand Valley NWR	3	157.2			157.2
Maxwell NWR	1	15			15.0
McFaddin NWR	5	13,117.0			13,117.0
Salt Plains NWR	1	68.0			68.0
San Bernard NWR	7	5,452.0			5,452.0
San Bernardino NWR	2	574.0			574.0
Santa Ana NWR	2	15.5			15.5
Sequoyah NWR	1	2.0			2.0
Sevilleta NWR	1	1.0			1.0
Tishomingo NWR	7	1,326.0			1,326.0
Texas Midcoast Complex	4	5,232.0			5,232.0
Wichita Mtns Wildlife Refuge	5	32.0			32.0
Total	106	51,021.8	291.5		51,313.3

Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

NON-WUI TREATMENTS

Midwest Refuges

<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Agassiz NWR	20	3,450.5			3,450.5
Big Oaks NWR	5	3,367.0			3,367.0
Big Stone NWR	12	1,454.1			1,454.1
Boyer Chute NWR	2	363.0			363.0
Chautauqua NWR	1	10.0			10.0
Crab Orchard NWR	11	382.0	398.0		780.0
Crane Meadows NWR	1		10.0		10.0
Desoto NWR	8	391.0			391.0
Detroit Lakes WMD	41	6,697.0			6,697.0
Fergus Falls WMD	33	3,781.0			3,781.0
Fox River NWR	5	143.0	9.0		152.0
Glacial Ridge NWR	6	1,520.0			1,520.0
Hamden Slough NWR	1	162.0			162.0
Horicon NWR	18	1,367.0	25.0		1,392.0
Iowa WMD	25	2,476.0			2,476.0
Leopold WMD	23	1,194.5			1,194.5
Litchfield WMD	22	2,660.0			2,660.0
Minnesota Valley NWR	9	406.0			406.0
Morris WMD	37	4,626.0			4,626.0
Neal Smith NWR	21	2,305.0			2,305.0
Necedah NWR	15	1,494.0	1,828.0		3,322.0
Port Louisa NWR	37	4,599.0			4,599.0
Rice Lake NWR	2		66.0		66.0
Rydell NWR	1	120.0			120.0
Seney NWR	12	5,520.0	11.0		5,531.0
Sherburne NWR	3		146.0		146.0
Squaw Creek NWR	20	1,537.0			1,537.0
St. Croix WMD	12	971.0	330.0		1,301.0
Swan Lake NWR	7	264.0			264.0
Tamarac NWR	4	165.0			165.0

Trempealeau NWR	4	161.0			161.0
Union Slough NWR	3	531.0			531.0
Upr MS River-McGregor Dist.	2	45.0			45.0
Upr MS River-Savanna Dist.	2	112.0			112.0
Windom WMD	25	2,997.0			2,997.0
Total	450	55,271.1	2,823.0	0.0	58,094.1

Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

NON-WUI TREATMENTS

Southeast Refuges

<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Alligator River NWR	10	2,963.0	33.0	81.0	3,077.0
ARM Loxahatchee NWR	41	25,500.0		3,296.0	28,796.0
Big Branch Marsh NWR	4	1,130.0	348.0		1,478.0
Blackbeard Island NWR	12	145.0	67.0		212.0
Bogue Chitto NWR	2	115.0			115.0
Cabo Rojo NWR	23		170.0	12.0	182.0
Cahaba River NWR	4	1,066.0			1,066.0
Cameron Prairie NWR	1		1.5		1.5
Carolina Sandhills NWR	45	11,855.0			11,855.0
Cedar Island NWR	2		9.0		9.0
Currituck NWR	3	344.0	5.0		349.0
D'Arbonne NWR	1	30.0			30.0
EF Hollings Ace Basin NWR	14	421.0	652.0		1,073.0
Eufaula NWR	8	120.0	765.0	770.0	1,655.0
Felsenthal NWR	6	2,047.0			2,047.0
Florida Panther NWR	55	5,043.0	943.0		5,986.0
Grand Bay NWR	1		6.0		6.0
Harris Neck NWR	13	146.0	179.0		325.0
J.N. Ding Darling NWR	16	24.0	18.0		42.0
Lacassine NWR	1		9.0		9.0
Laguna Cartagena NWR	44		257.0	12.0	269.0
Lake Woodruff NWR	2	701.0			701.0
Lower Suwannee NWR	11	1,317.0			1,317.0
Mackay Island NWR	15	1,229.0	14.0	325.0	1,568.0
Mattamuskeet NWR	7	1.0	62.0		63.0
Merritt Island NWR	6	984.0	100.0		1,084.0
MS Sandhill Crane NWR	12	1,455.0	543.0		1,998.0
National Key Deer Refuge	2	18.0			18.0
Noxubee NWR	10	4,191.0			4,191.0
Okefenokee NWR	14	4,197.0	370.0		4,567.0

Pee Dee NWR	7	1,145.0			1,145.0
Piedmont NWR	52	11,139.0	375.0		11,514.0
Pinckney Island NWR	20	27.0	73.0		100.0
Pocosin Lakes NWR	18	329.0	156.6	235.0	720.6
Santee NWR	19	289.0	208.0		497.0
Savannah-Pinckney Refuges	24	1,033.2	80.0		1,113.2
Southeast LA Refuges	3	66.0			66.0
St. Marks NWR	4	5,872.0			5,872.0
St. Vincent NWR	7	6,417.0			6,417.0
Swanquarter NWR	6	5,929.0			5,929.0
Waccamaw NWR	4	38.0	33.0		71.0
Wassaw NWR	1		20.0		20.0
Total	550	97,326.2	5,497.1	4,731.0	107,554.3

Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

NON-WUI TREATMENTS

Northeast Refuges

<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Back Bay NWR	1			950.0	950.0
Cape May NWR	3	36.0	5.0		41.0
Chesapeake Marshlands NWRC	19	2,374.6			2,374.6
Chincoteague NWR	1	50.0			50.0
Eastern MA NWRC	3	36.0	10.0		46.0
Eastern Neck NWR	3	110.4			110.4
Eastern Virginia Rivs. NWRC	2	140.0	158.0		298.0
Great Dismal Swamp NWR	1			500.0	500.0
Great Swamp NWR	1		15.0		15.0
Iroquois NWR	1		38.0		38.0
Long Island NWRC	3	15.0	99.0		114.0
Maine Coastal Island NWR	2	11.0	11.0		22.0
Montezuma NWR	1	46.0	55.0		101.0
Moosehorn NWR	24	62.9	187.4		250.3
Patuxent Research Refuge	3	64.0			64.0
Prime Hook NWR	2	40.0			40.0
Rachel Carson NWR	5	24.2			24.2
Rhode Island NWRC	1	1.0	50.0		51.0
Shawangunk Grasslands NWR	1		245.0		245.0
Sunkhaze Meadows NWR	1		40.0		40.0
Supawna Meadows NWR	1		120.0		120.0
Wallkill River NWR	1		225.0		225.0
Total	80	3,011.1	1,258.4	1,450.0	5,719.5

Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

NON-WUI TREATMENTS Mountain-Prairie Refuges

<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Alamosa NWR	2	1,175.0			1,175.0
Arrowwood NWR	10	1,540.0			1,540.0
Arrowwood WMD	2	311.0			311.0
Audubon NWR	14	2,613.0			2,613.0
Bear River Migratory Bird Rfg.	1	500.0			500.0
Benton Lake NWR	1	150.0			150.0
Benton Lake WMD	1	267.0			267.0
Bowdoin NWR	3	1,119.4			1,119.4
Browns Park NWR	1	16.0			16.0
Chase Lake Prairie Proj. WMD	7	1,241.0			1,241.0
Crosby WMD	8	1,082.0			1,082.0
Des Lacs NWR	10	1,545.0	40.0		1,585.0
Devils Lake WMD	10	1,684.0			1,684.0
Fish Springs NWR	1	800.0			800.0
Flint Hills NWR	30	2,602.0			2,602.0
Huron WMD	8	1,551.0			1,551.0
J. Clark Salyer NWR	6	3,426.0			3,426.0
Kirwin NWR	12	1,708.0			1,708.0
Kulm WMD	3	376.0			376.0
Lake Andes NWR	2	186.0			186.0
Lee Metcalf NWR	2	18.0			18.0
Long Lake WMD	2	372.0			372.0
Lostwood NWR	3	1,641.0			1,641.0
Lostwood WMD	4	887.0			887.0
Madison WMD	14	1,420.0			1,420.0
Marais Des Cygnes NWR	4	141.0			141.0
Medicine Lake NWR	11	2,409.0			2,409.0
Quivira NWR	9	2,898.0			2,898.0
Rocky Mtn. Arsenal	1	1.0			1.0
Sand Lake NWR	3	950.0			950.0

Tewaukon NWR	3	10.0			10.0
Upper Souris NWR	8	1,825.0			1,825.0
Valentine NWR	2	246.0			246.0
Valley City WMD	2	203.0			203.0
Waubay NWR	2	322.0			322.0
Total	202	37,235.4	40.0	0.0	37,275.4

Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

NON-WUI TREATMENTS Alaska Refuges

<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Kenai NWR	2	8.0	8.0		16.0
Tetlin NWR	8	17.0	97.0		114.0
Total	10	25.0	105.0	0.0	130.0

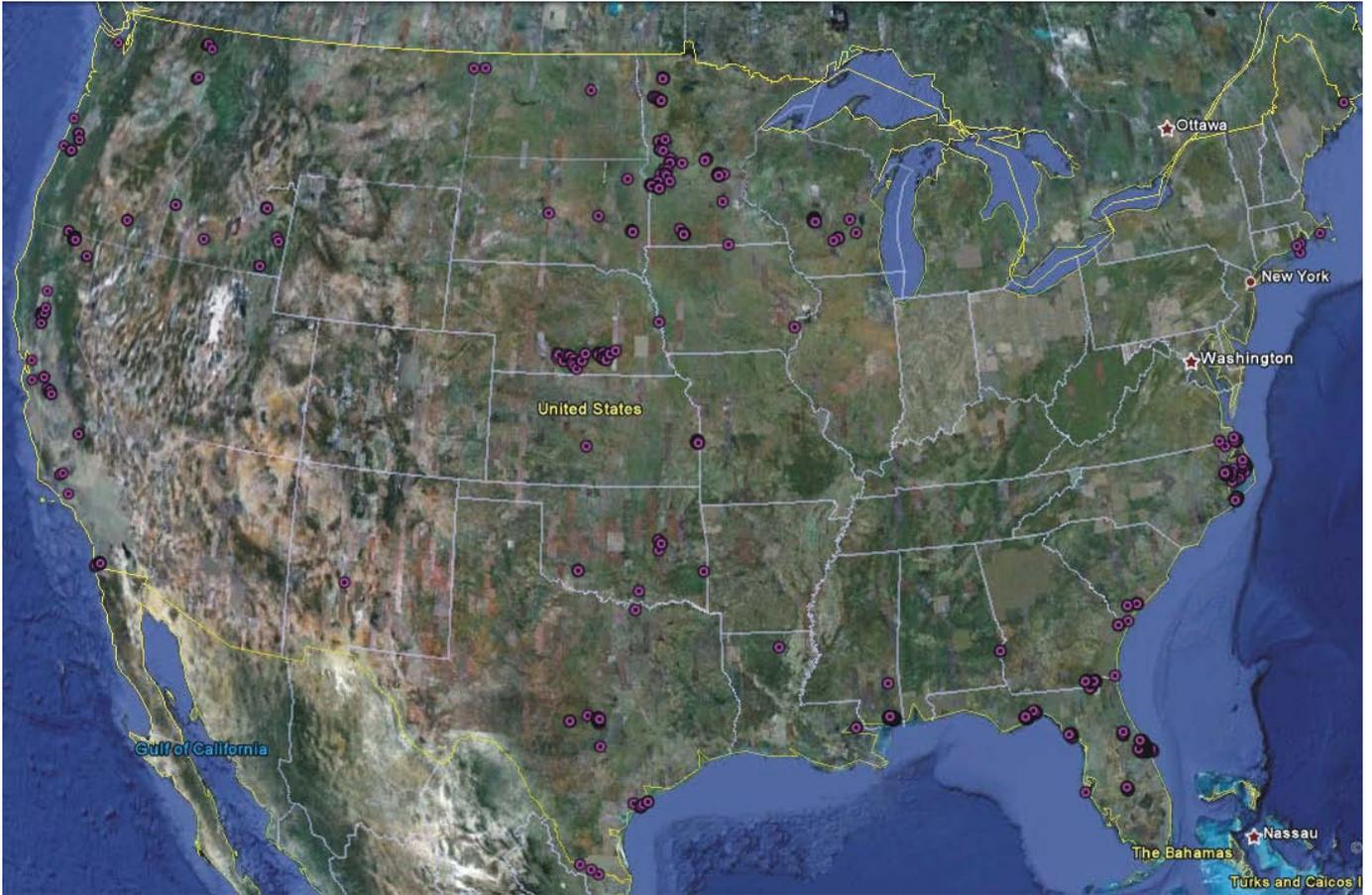
Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

NON-WUI TREATMENTS Pacific Southwest Refuges

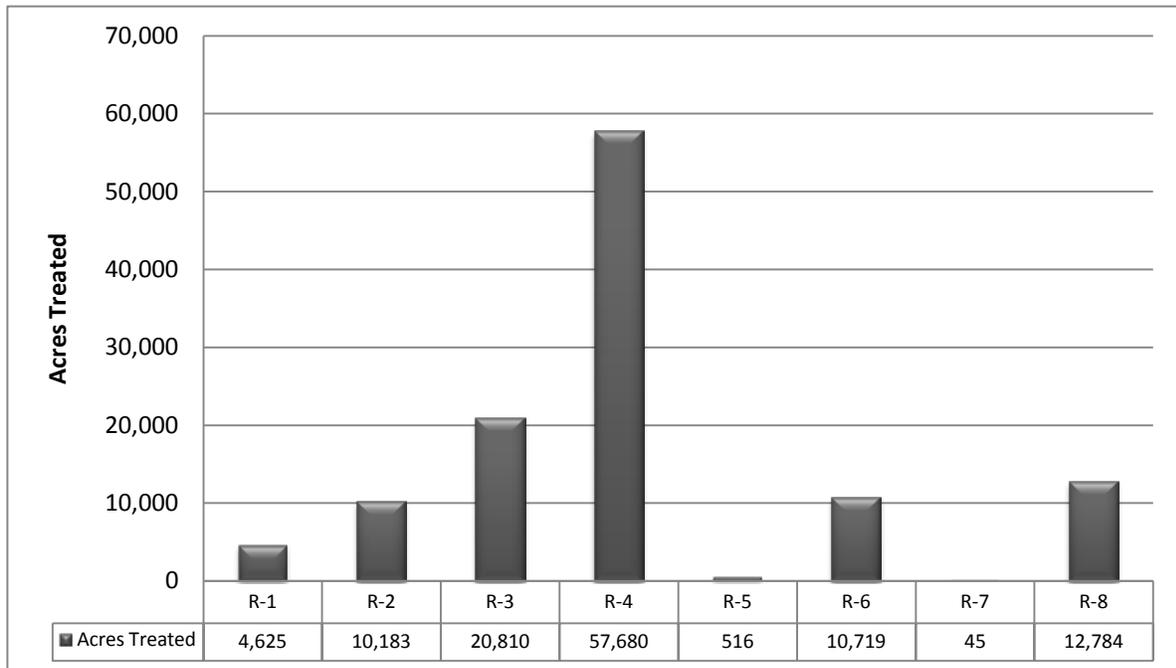
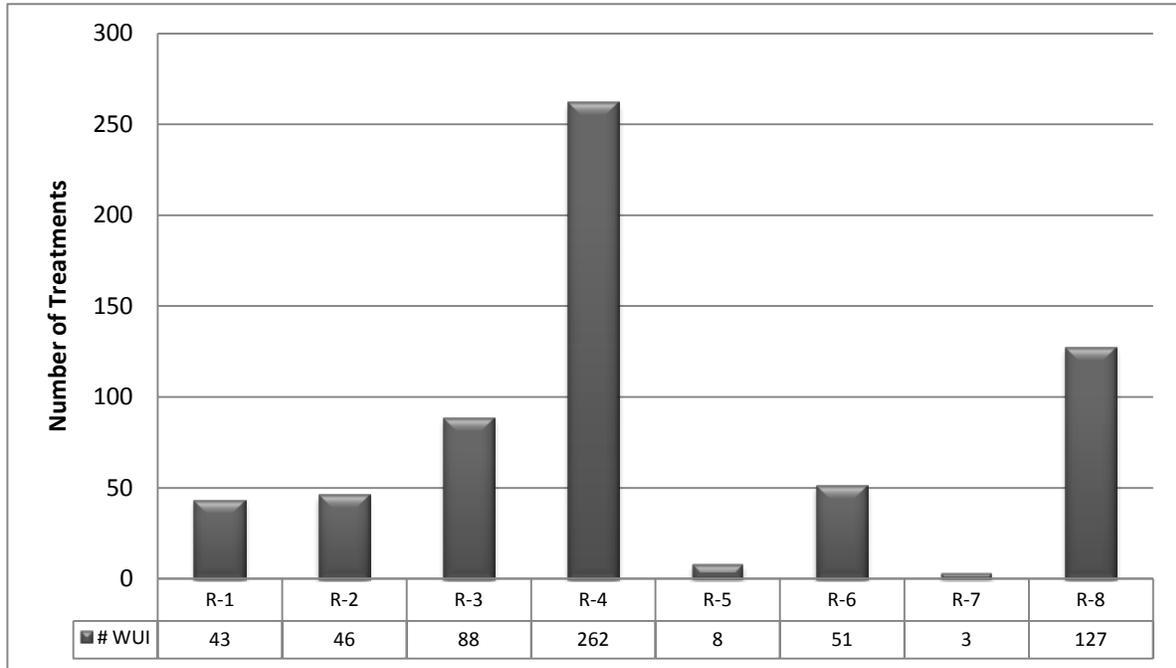
<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Ash Meadows NWR	3	62.0	100.0		162.0
Bear Valley NWR	2	18.0	16.6		34.6
Desert National Wildlife Range	2		48.0		48.0
Kern NWR	1		120.0		120.0
Klamath Marsh NWR	1	210.0			210.0
Lower Klamath NWR	31	9,839.0			9,839.0
Merced NWR	5	87.0	175.0		262.0
Moapa Valley NWR	1	5.0			5.0
Sacramento NWR	5	279.0			279.0
Sacramento River NWR	14	549.0	5.0	66.5	620.5
San Joaquin River NWR	5	33.0	262.0		295.0
San Luis NWR	8	105.0	162.0		267.0
Stillwater NWR	3			291.0	291.0
Stone Lakes NWR	1	15.0			15.0
Sutter NWR	2	8.0			8.0
Tule Lake NWR	25	3,298.0			3,298.0
Total	109	14,508.0	888.6	357.5	15,754.1

Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

2009 WUI ACTIVITY



WUI TREATMENTS 2009



WUI TREATMENTS by State 2009

<u>State</u>	<u># Fires</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Chem/Other Acres</u>	<u>Total Acres</u>
Alabama	2	70.0	375.0		445.0
Alaska	3	42.5	2.5		45.0
California	124	11,419.0	865.0	399.0	12,683.0
Florida	98	38,143.1	23.2		38,166.3
Georgia	24	3,474.0			3,474.0
Hawaii	1	5.0			5.0
Idaho	11	415.0	785.0		1,200.0
Iowa	1	80.0			80.0
Kansas	10	2,998.0			2,998.0
Louisiana	3	675.0			675.0
Maine	2	6.5			6.5
Massachusetts	1		15.0		15.0
Minnesota	68	17,304.0	29.0		17,333.0
Mississippi	55	2,633.0	413.0		3,046.0
Montana	1	666.0			666.0
Nebraska	31	4,836.0			4,836.0
New Mexico	1		10.0		10.0
North Carolina	70	10,001.6	597.5	22.0	10,621.1
North Dakota	2	377.0			377.0
Oklahoma	9	1,615.0			1,615.0
Oregon	23	99.0	2,555.0		2,654.0
Rhode Island	3		49.0	45.0	94.0
South Carolina	10	1,253.0			1,253.0
South Dakota	8	1,873.0			1,873.0
Texas	36	8,131.0	375.9	51.0	8,557.9
Virginia	2	400.0		0.0	400.0
Washington	11	253.0	574.0	40.0	867.0
Wisconsin	18	3,305.8	60.0		3,365.8
Total	628	110,075.5	6,729.1	557.0	117,361.6

WUI TREATMENTS Pacific Refuges

<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Ankeny NWR	3	5.0	185.0		190.0
Baskett Slough NWR	4	16.0	236.0		252.0
Camas NWR	4	415.0	200.0		615.0
Deer Flat NWR	2		140.0		140.0
Grays Lake NWR	2		125.0		125.0
Hagerman NFH	1		20.0		20.0
Huleia NWR	1	5.0			5.0
Little Pend Oreille NWR	6	253.0	40.0	40.0	333.0
Malheur NWR	3		1,378.0		1,378.0
Oxford Slough Waterfowl Area	2		300.0		300.0
Tualatin River NWR	1		11.0		11.0
Turnbull NWR	4		509.0		509.0
Washington Maritime NWRC	1		25.0		25.0
William L. Finley NWR	9	27.0	695.0		722.0
Total	43	721	3,864.0	40.0	4,625.0

Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

WUI TREATMENTS Southwest Refuges

<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Aransas/Matagorda Isl NWRC	1	294.0			294.0
Balcones Canyonlands NWR	23	1,959.0	224.9	46.0	2,229.9
Bosque Del Apache NWR	1		10.0		10.0
Deep Fork NWR	5	451.0			451.0
Hagerman NWR	1	1,200.0			1,200.0
Lower Rio Grande Valley NWR	2		50.0	5.0	55.0
Matagorda Island NWR	7	4,678.0			4,678.0
Ozark Plateau NWR	1	552.0			552.0
San Marcos NFHTC	1		99.0		99.0
Santa Ana NWR	1		2.0		2.0
Tishomingo NWR	1	173.0			173.0
Wichita Mountains Wildlife Rfg	2	439.0			439.0
Total	46	9,746.0	385.9	51.0	10,182.9

Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

WUI TREATMENTS Midwest Refuges

<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Agassiz NWR	4	2,836.0			2,836.0
Big Stone NWR	5	717.0			717.0
Boyer Chute NWR	1	31.0			31.0
Crane Meadows NWR	3	432.0			432.0
Fergus Falls WMD	11	773.0	8.0		781.0
Glacial Ridge NWR	4	768.0			768.0
Leopold WMD	6	364.8			364.8
Minnesota Valley NWR	1	165.0			165.0
Morris WMD	11	1,861.0			1,861.0
Necedah NWR	12	2,941.0	60.0		3,001.0
Port Louisa NWR	1	80.0			80.0
Rydell NWR	9	575.0			575.0
Sherburne NWR	13	8,887.0			8,887.0
Windom WMD	7	290.0	21.0		311.0
Total	88	20,720.8	89.0	0.0	20,809.8

Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

WUI TREATMENTS Southeast Refuges

<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Alligator River NWR	19	8,319.0	14.0	22.0	8,355.0
Big Branch Marsh NWR	2	603.0			603.0
Cedar Island NWR	18		72.0		72.0
Currituck NWR	1	216.0			216.0
D'Arbonne NWR	1	72.0			72.0
Egmont Key NWR	1	65.0			65.0
E. F. Hollings Ace Basin NWR	6	657.0			657.0
Eufaula NWR	2	70.0	375.0		445.0
Lake Wales Ridge NWR	9	973.0			973.0
Lake Woodruff NWR	4	244.0			244.0
Lower Suwannee NWR	9	1,975.0	6.2		1,981.2
Mackay Island NWR	7	1,102.0			1,102.0
Mattamuskeet NWR	5		66.0		66.0
Merritt Island NWR	32	21,026.0			21,026.0
Mississippi Sandhill Crane NWR	55	2,633.0	413.0		3,046.0
Okefenokee NWR	25	3,588.0			3,588.0
Pinckney Island NWR	1	92.0			92.0
Pocosin Lakes NWR	18	364.6	431.5		796.1
Savannah-Pinckney Refuges	3	504.0			504.0
St. Johns NWR	6	3,467.0			3,467.0
St Marks NWR	36	10,279.1	17.0		10,296.1
Swanquarter NWR	2		14.0		14.0
Total	262	56,249.7	1,408.7	22.0	57,680.4

Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

WUI TREATMENTS Northeast Refuges

<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Back Bay NWR	1	200.0			200.0
Eastern MA NWRC	1		15.0		15.0
Great Dismal Swamp NWR	1	200.0			200.0
Moosehorn NWR	2	6.5			6.5
Rhode Island NWRC	3		49.0	45.0	94.0
Total	8	406.5	64.0	45.0	515.5

Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

WUI TREATMENTS Mountain-Prairie Refuges

<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Crosby WMD	1	227.0			227.0
Devils Lake WMD	1	150.0			150.0
Huron WMD	2	1,242.0			1,242.0
Madison WMD	5	322.0			322.0
Marais Des Cygnes NWR	9	1,811.0			1,811.0
Medicine Lake NWR	1	666.0			666.0
Quivira NWR	1	1,187.0			1,187.0
Rainwater Basin WMD	30	4,805.0			4,805.0
Waubay NWR	1	309.0			309.0
Total	51	10,719.0	0.0	0.0	10,719.0

Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

WUI TREATMENTS Alaska Refuges

<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Yukon Flats NWR	3	42.5	2.5		45.0
Total	3	42.5	2.5	0.0	45.0

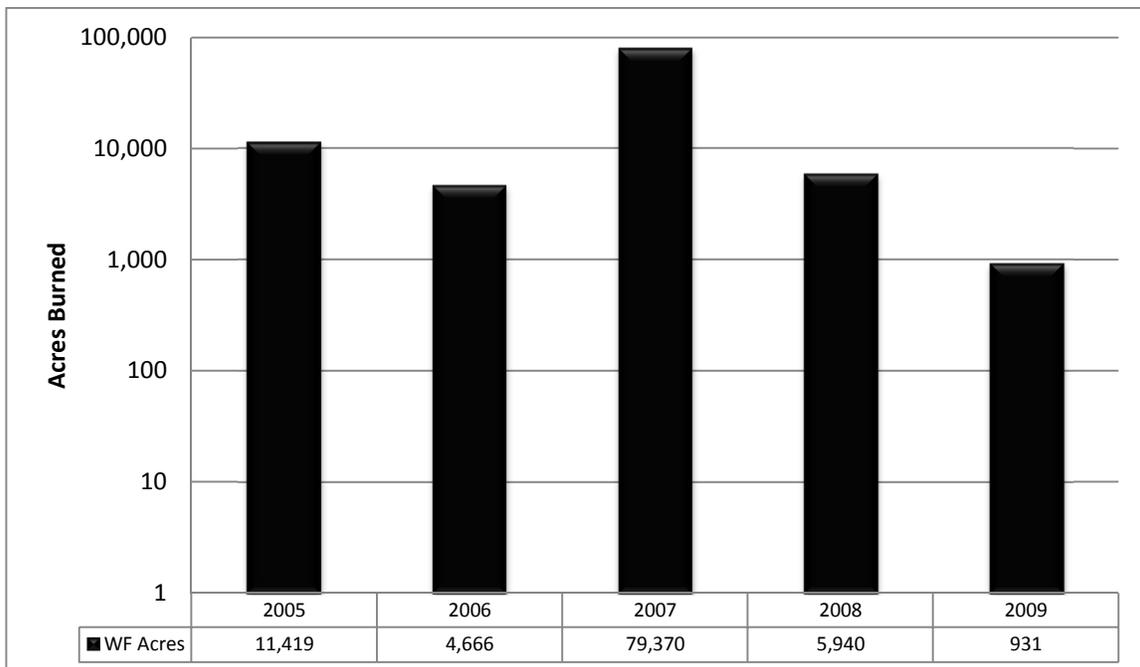
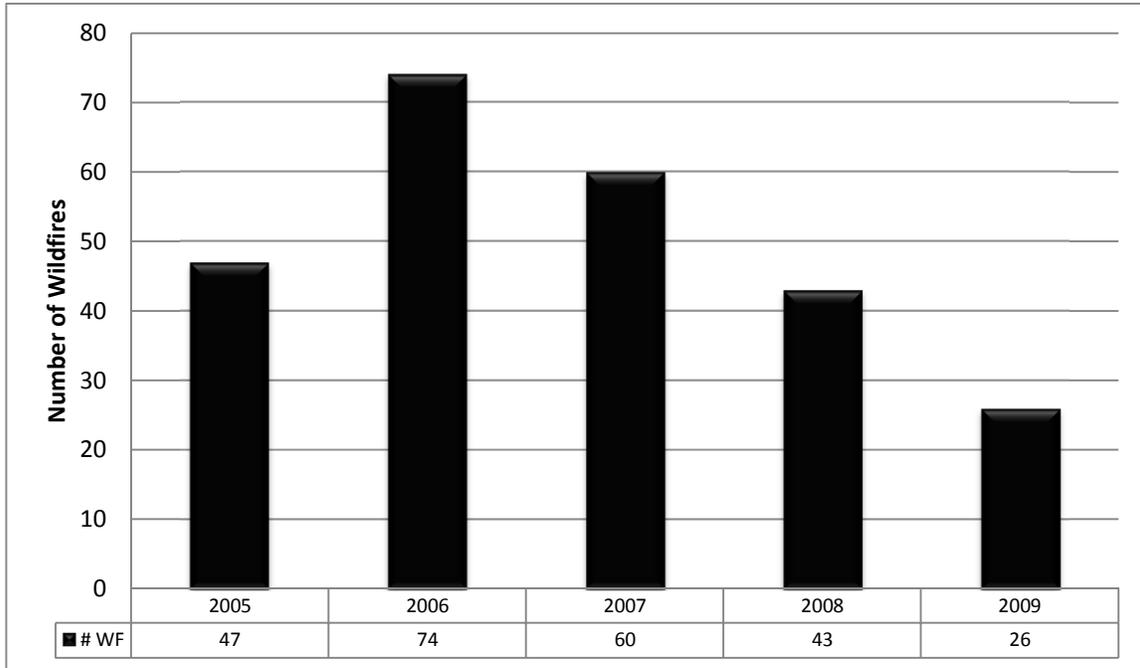
Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

WUI TREATMENTS Pacific Southwest Refuges

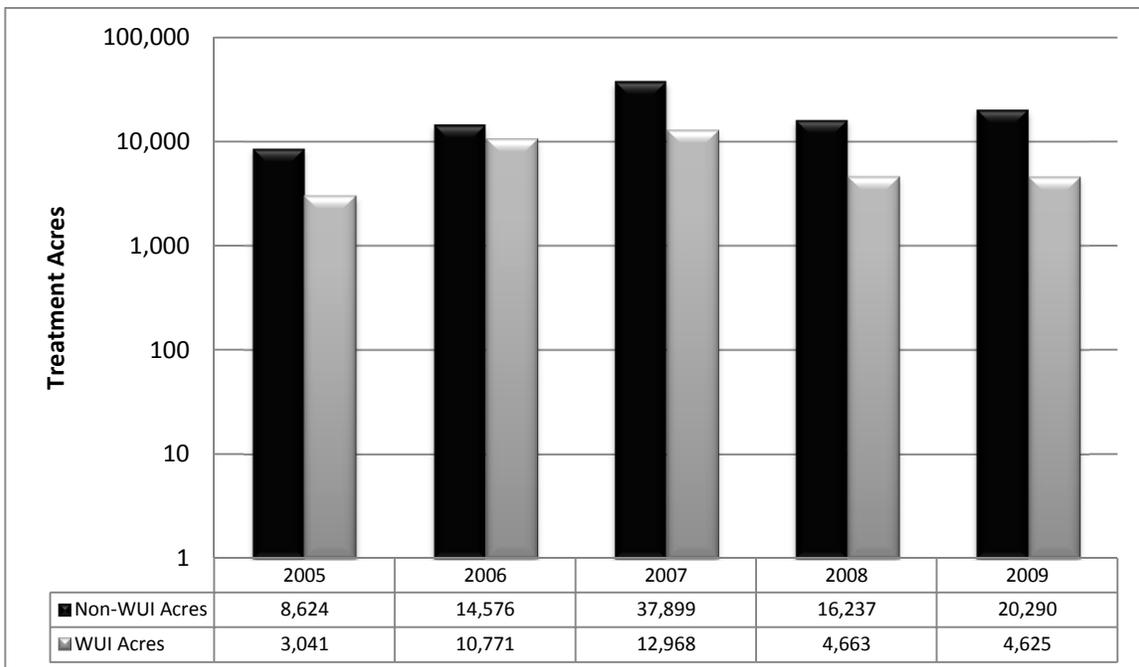
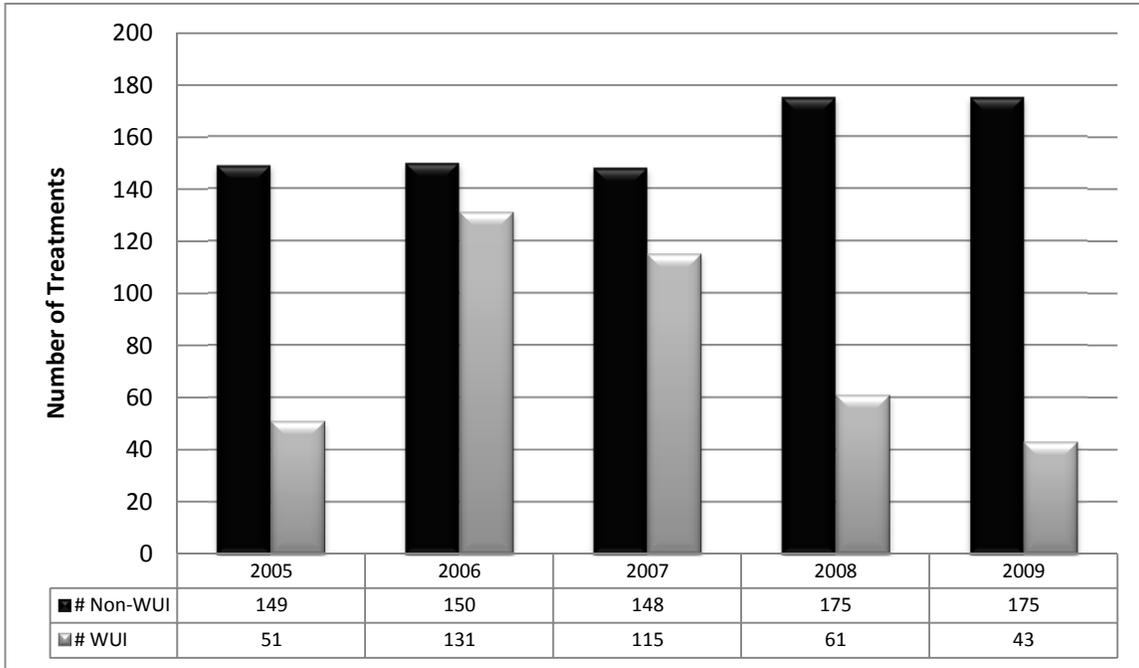
<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Bear Valley NWR	3	51.0	50.0		101.0
Bitter Creek NWR	3		149.0		149.0
Blue Ridge NWR	2		40.0		40.0
Colusa NWR	2	63.0			63.0
Delevan NWR	3	37.0			37.0
Don Edwards SF Bay NWR	2		75.0		75.0
Hopper Mountain NWR	1		10.0		10.0
Merced NWR	5	939.0			939.0
Modoc NWR	2	390.0			390.0
Sacramento NWR	8	149.0			149.0
Sacramento River NWR	5	5.0	26.0	13.0	44.0
San Diego Bay NWR	3		150.0	3.0	153.0
San Diego NWR	24		415.0	383.0	798.0
San Joaquin River NWR	3	590.0			590.0
San Luis NWR	3	567.0			567.0
Tule Lake NWR	58	8,679.0			8,679.0
Total	127	11,470.0	915.0	399.0	12,784.0

Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

PACIFIC REGION Wildfires 2005-2009



PACIFIC REGION Treatments 2005-2009

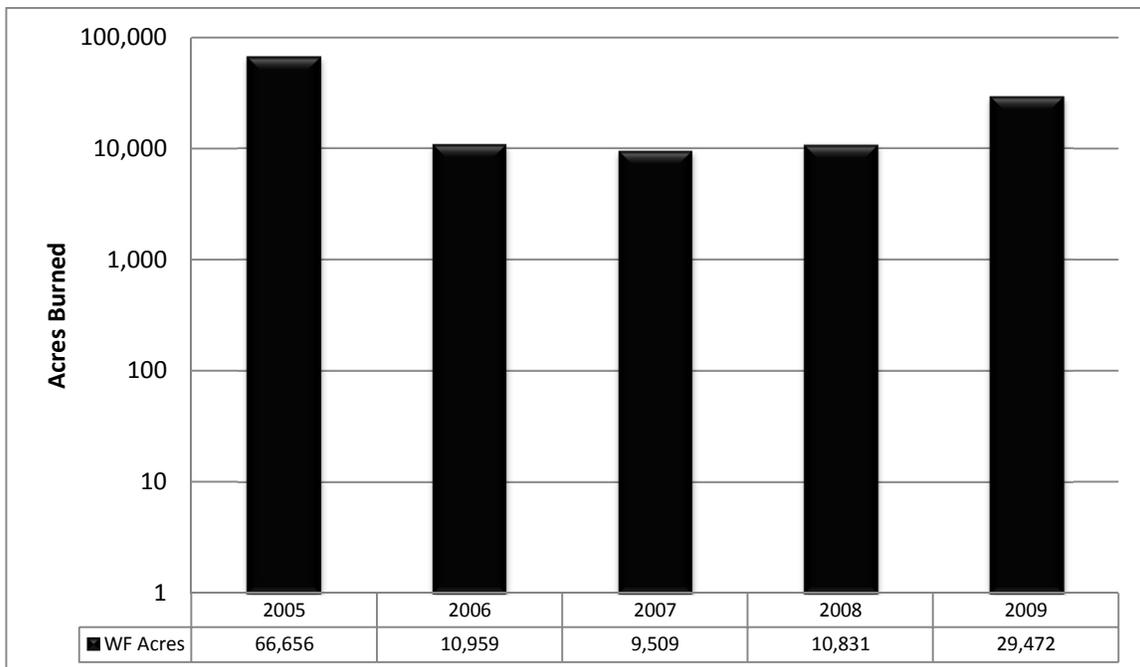
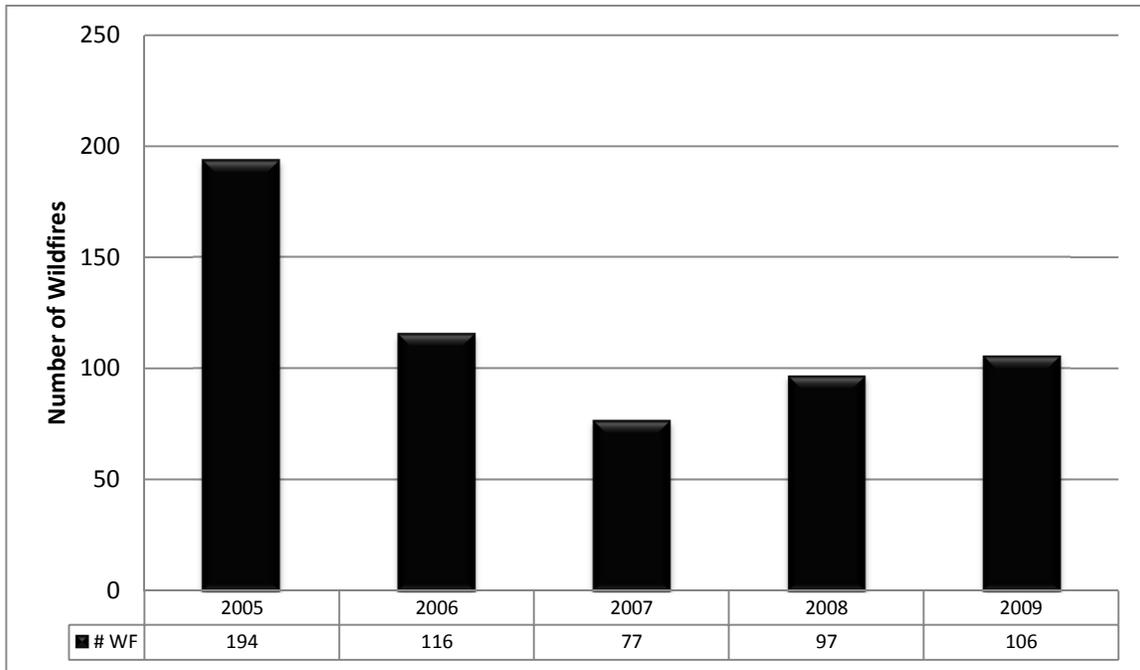


WUI = Wildland Urban Interface

SOUTHWEST REGION

Wildfires

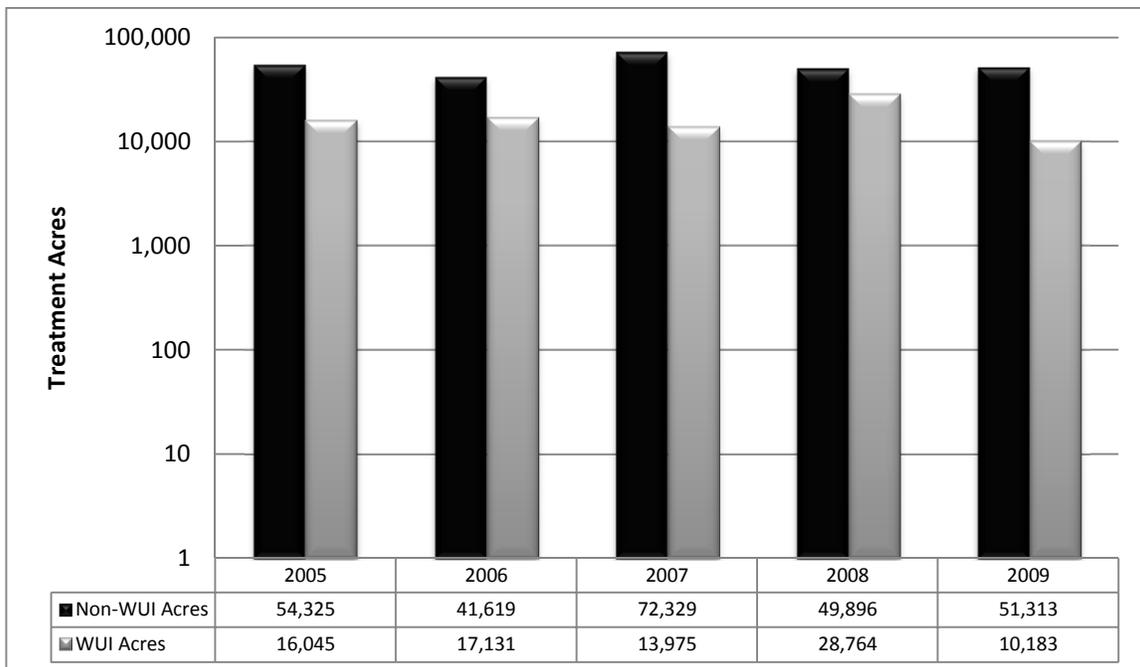
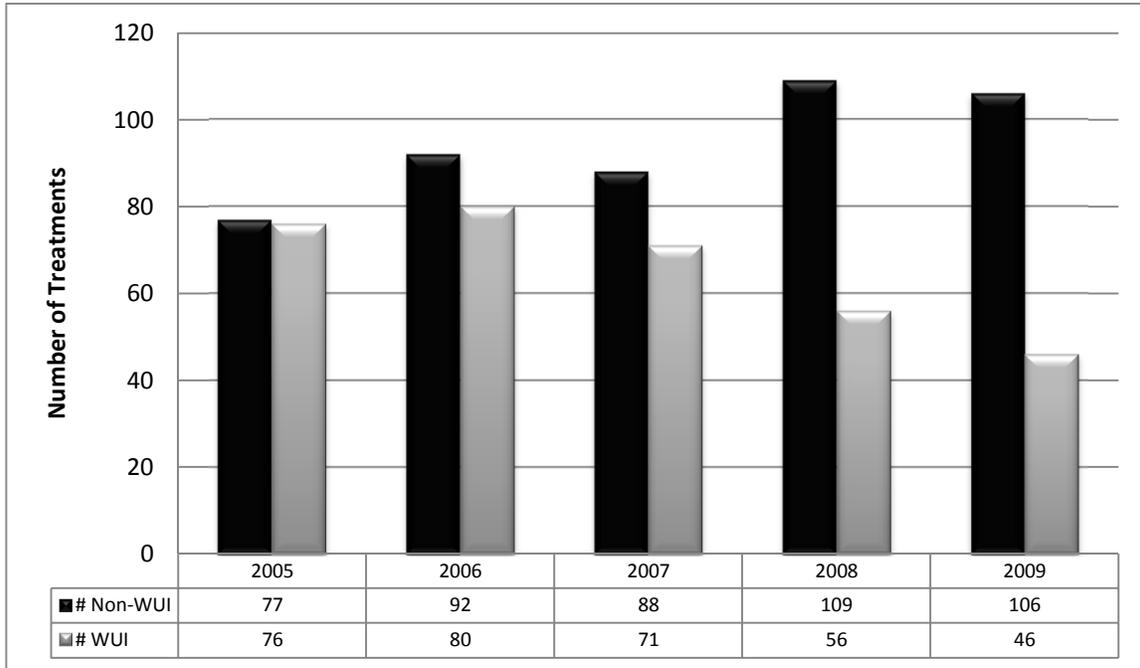
2005-2009



SOUTHWEST REGION

Treatments

2005-2009

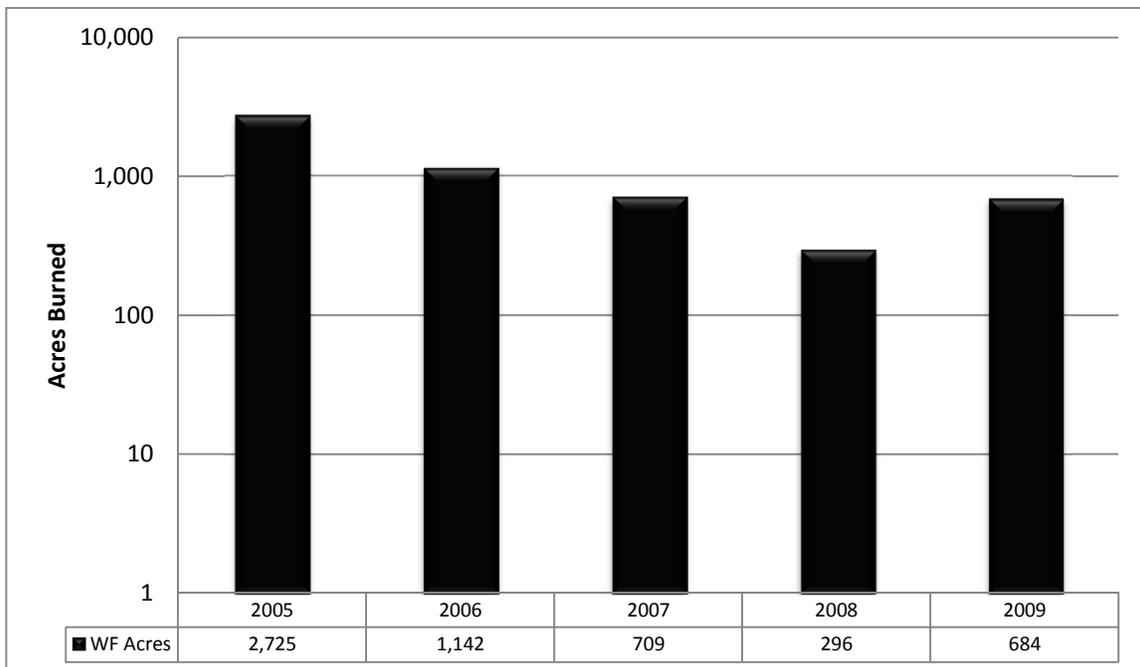
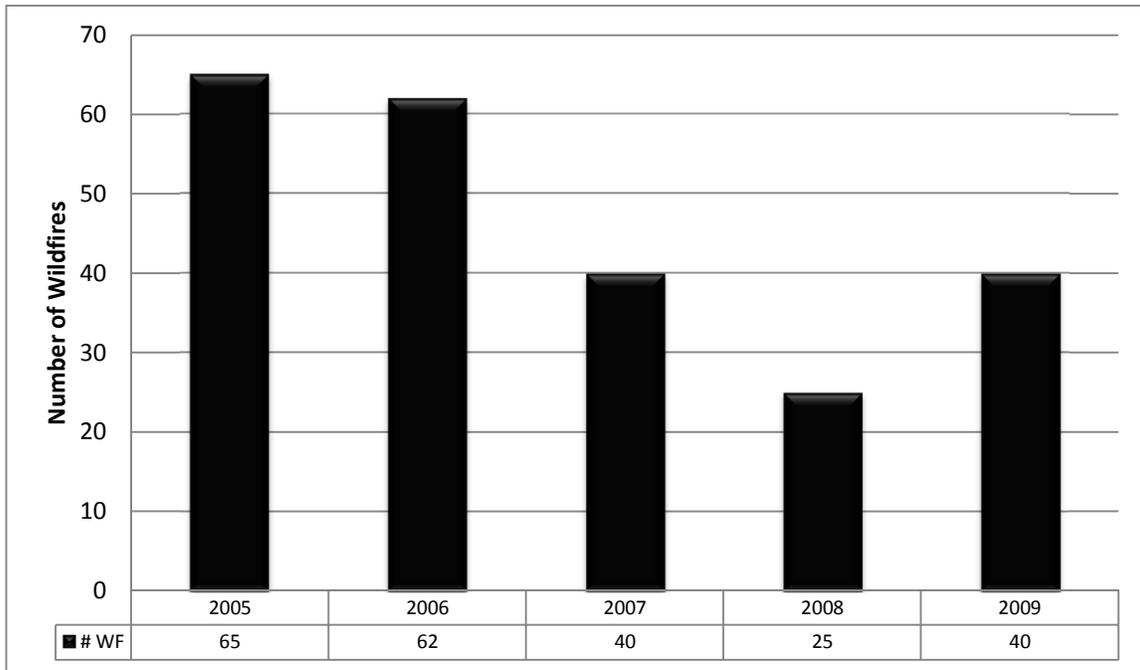


WUI = Wildland Urban Interface

MIDWEST REGION

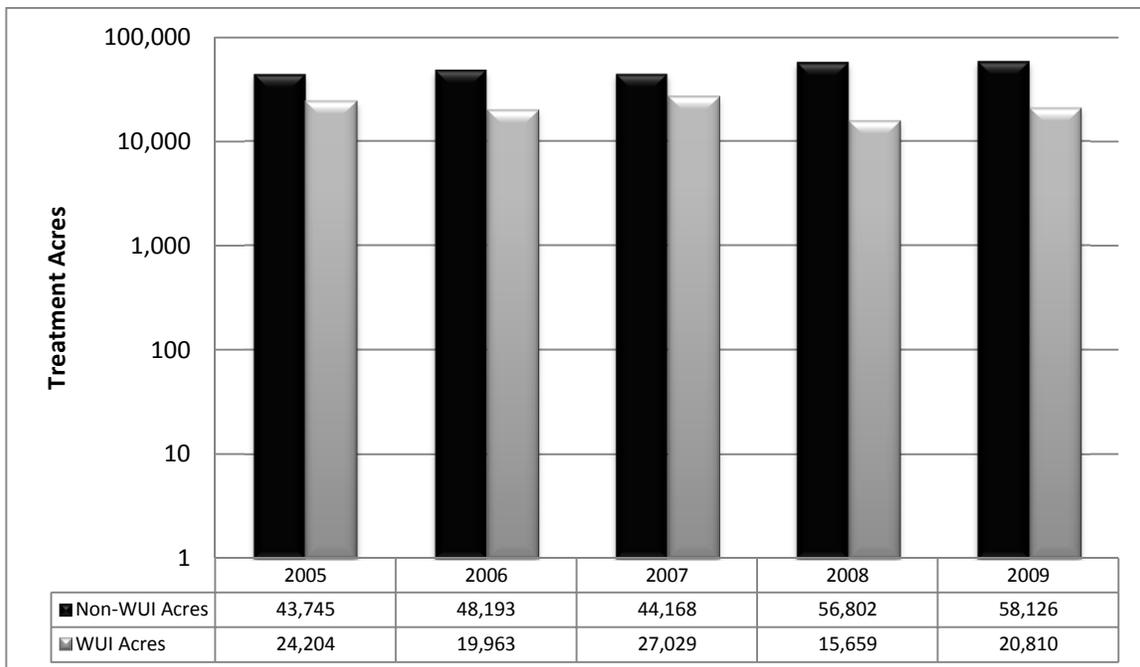
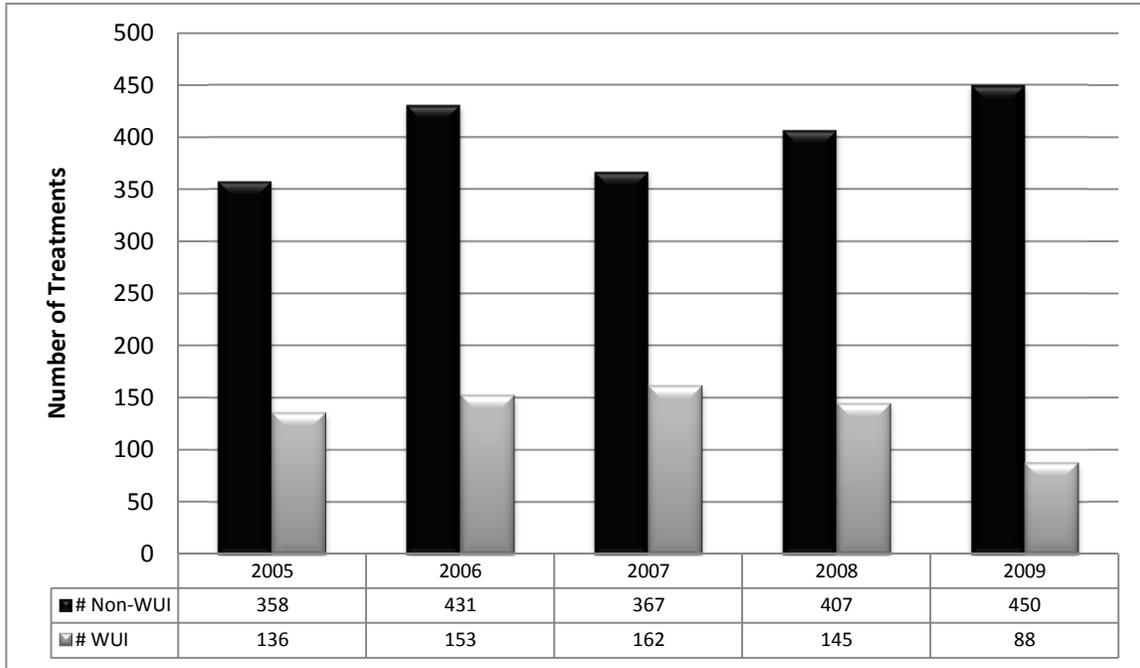
Wildfires

2005-2009



MIDWEST REGION

Treatments 2005-2009

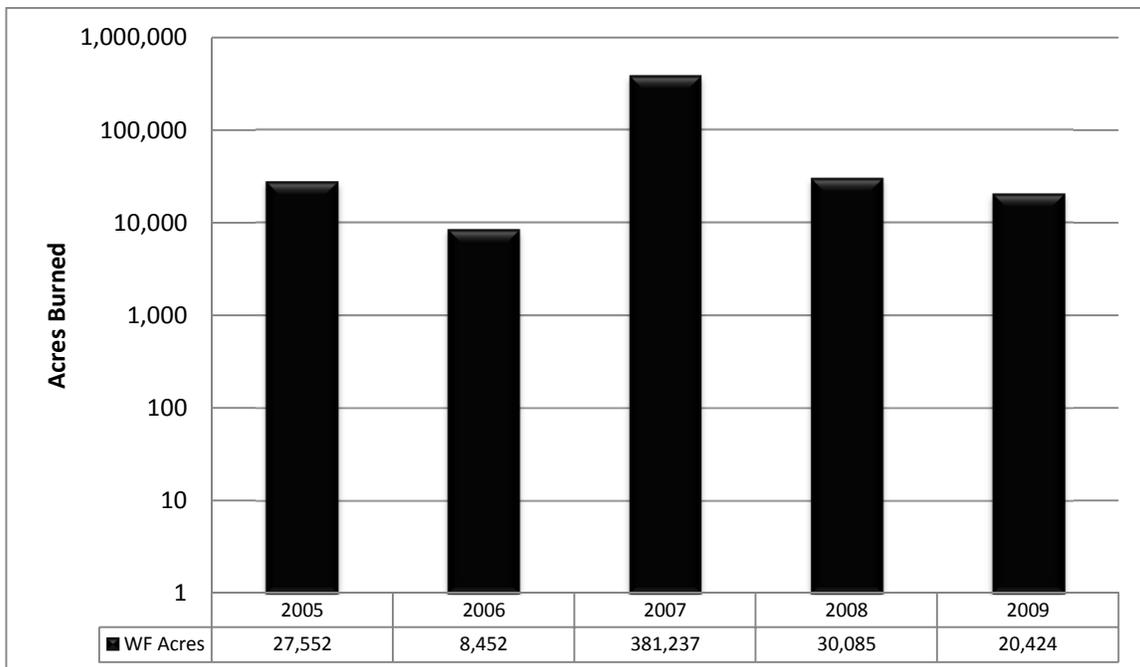
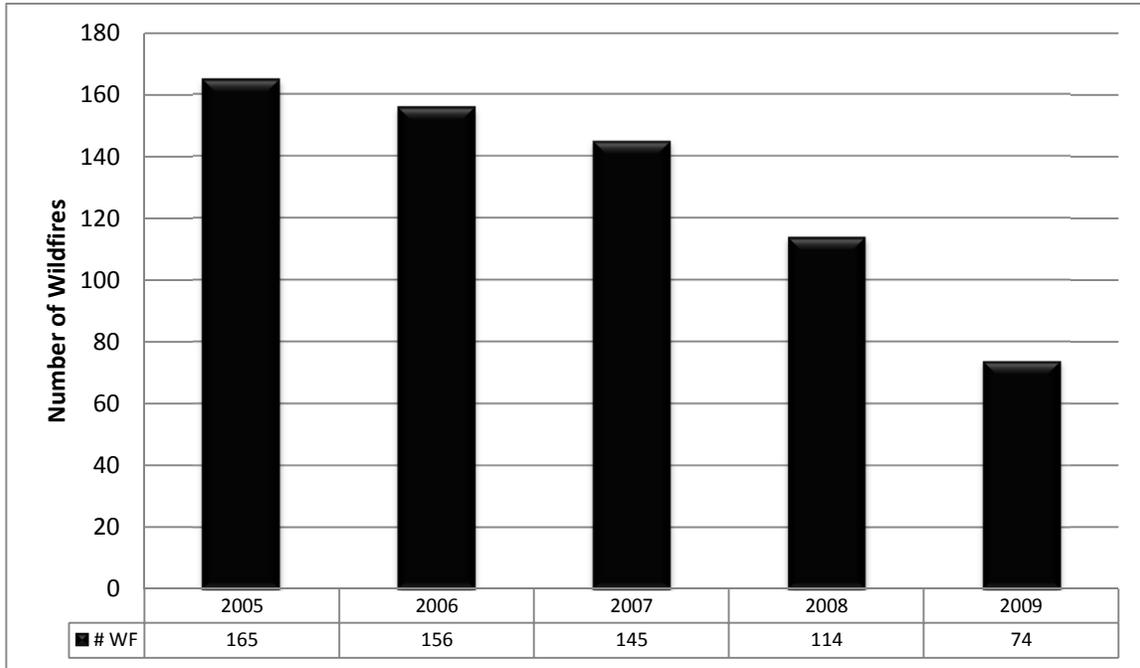


WUI = Wildland Urban Interface

SOUTHEAST REGION

Wildfires

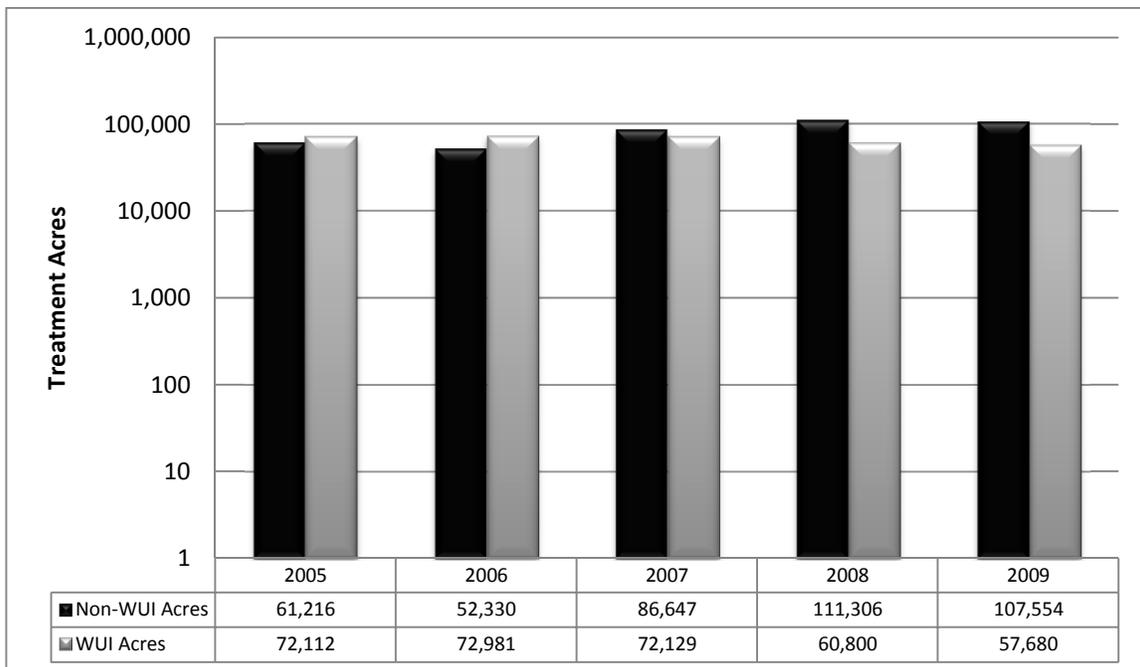
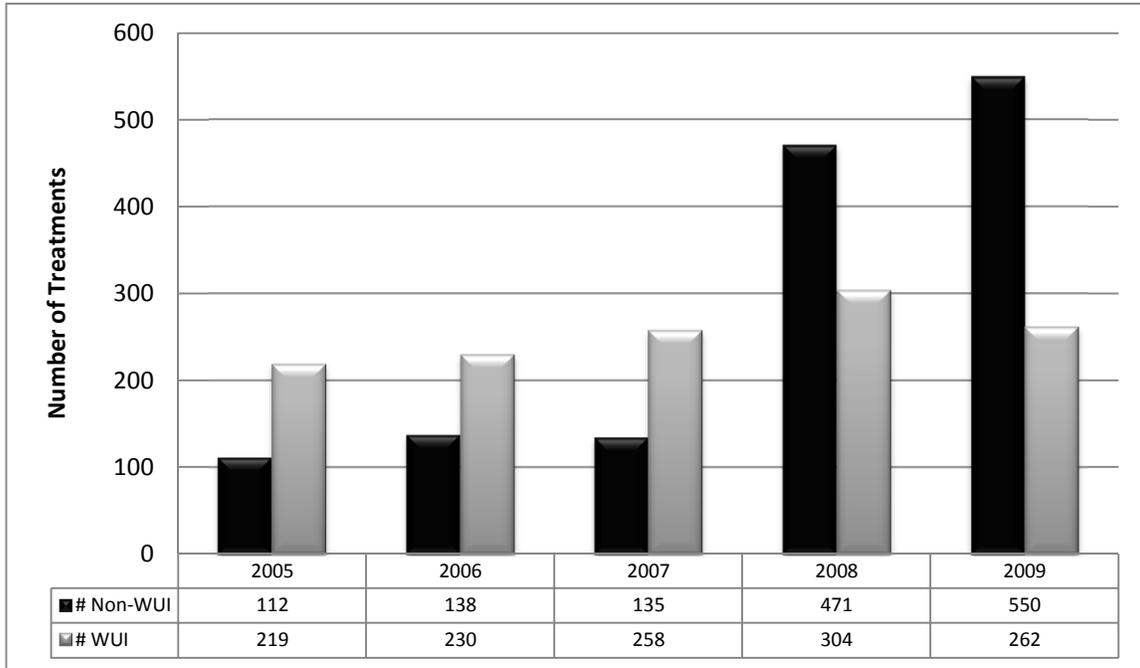
2005-2009



SOUTHEAST REGION

Treatments

2005-2009

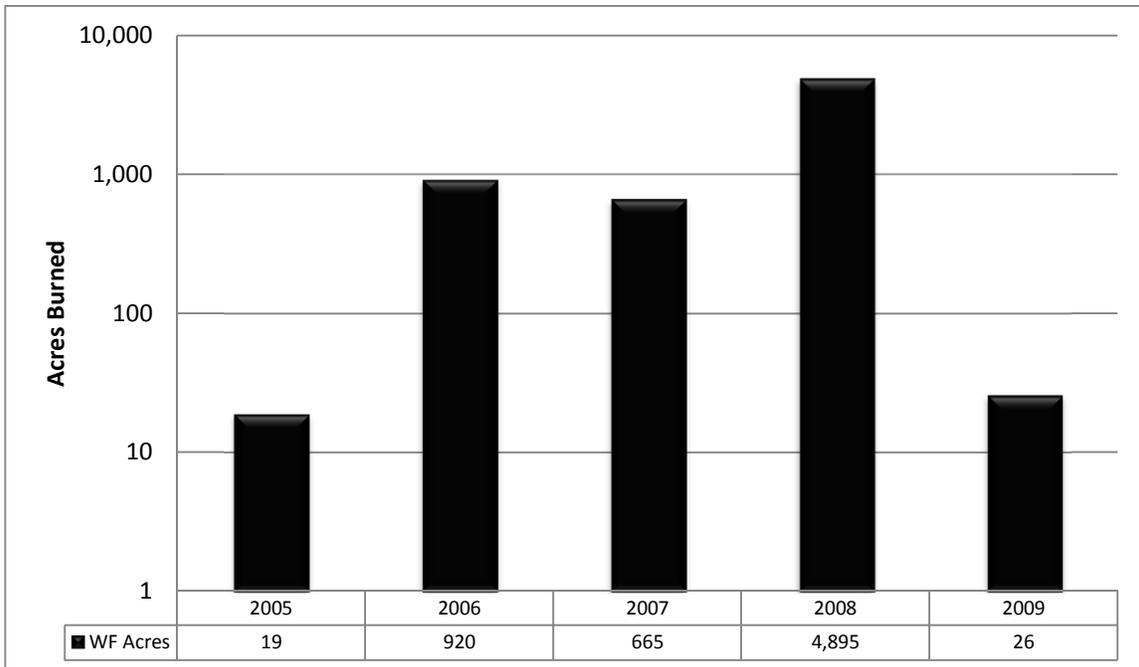
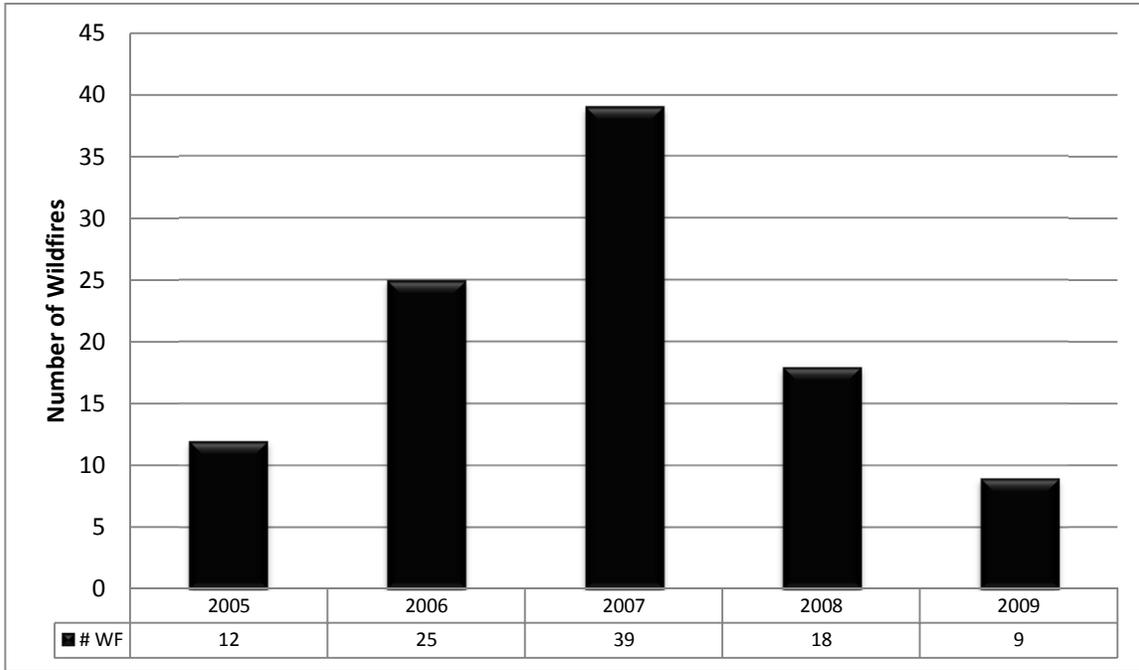


WUI = Wildland Urban Interface

NORTHEAST REGION

Wildfires

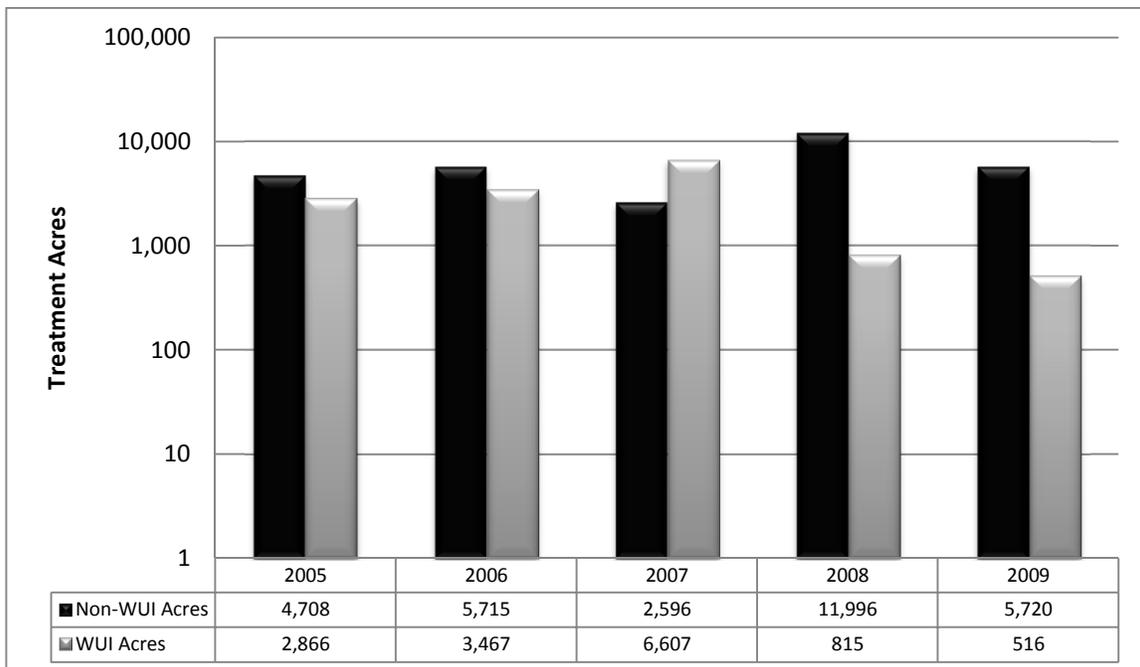
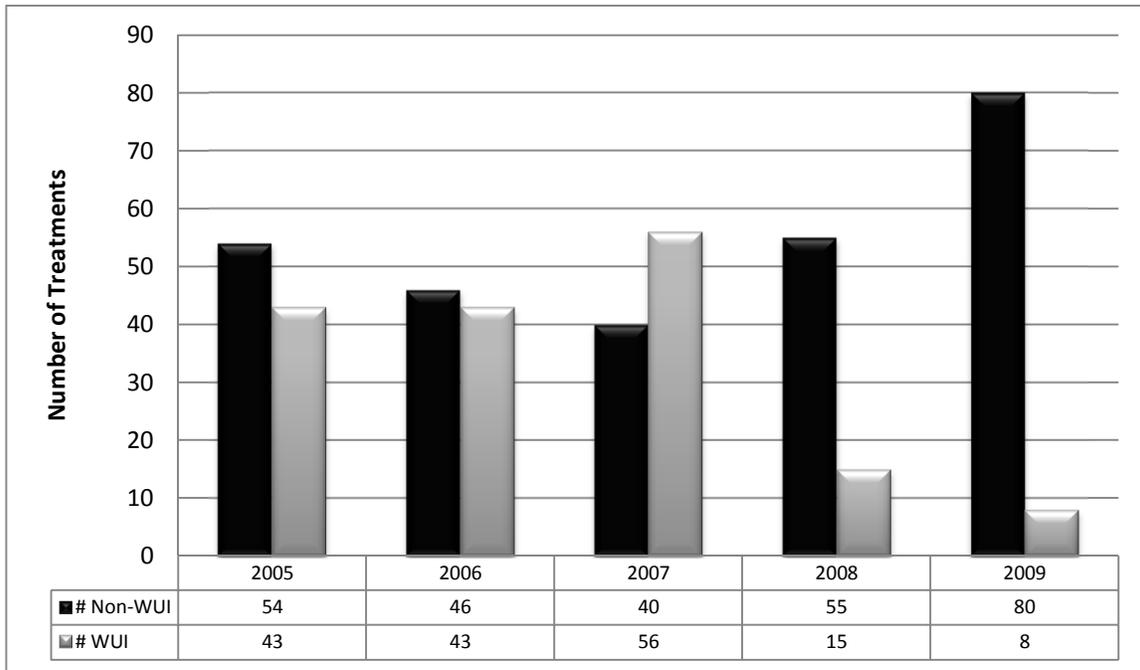
2005-2009



NORTHEAST REGION

Treatments

2005-2009

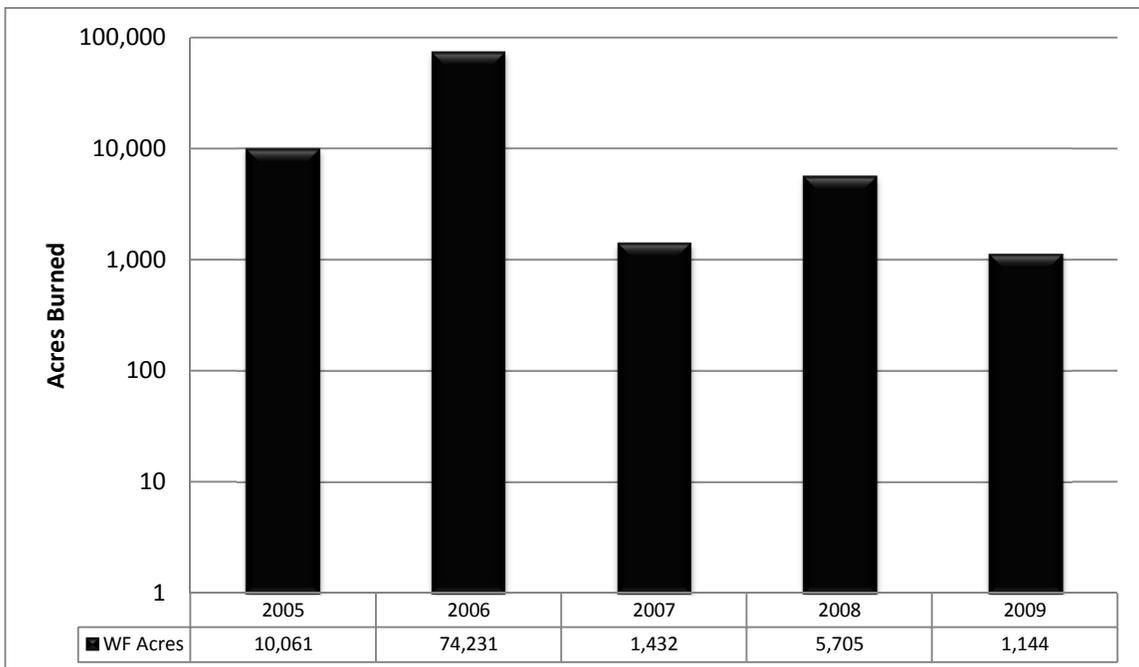
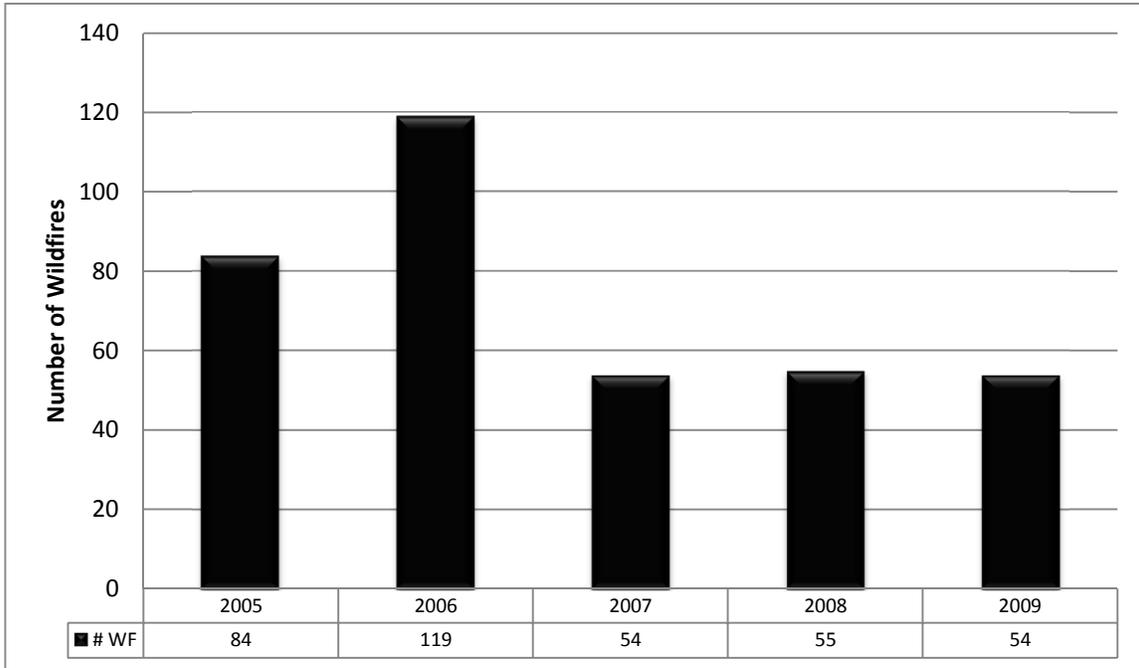


WUI = Wildland Urban Interface

MOUNTAIN - PRAIRIE REGION

Wildfires

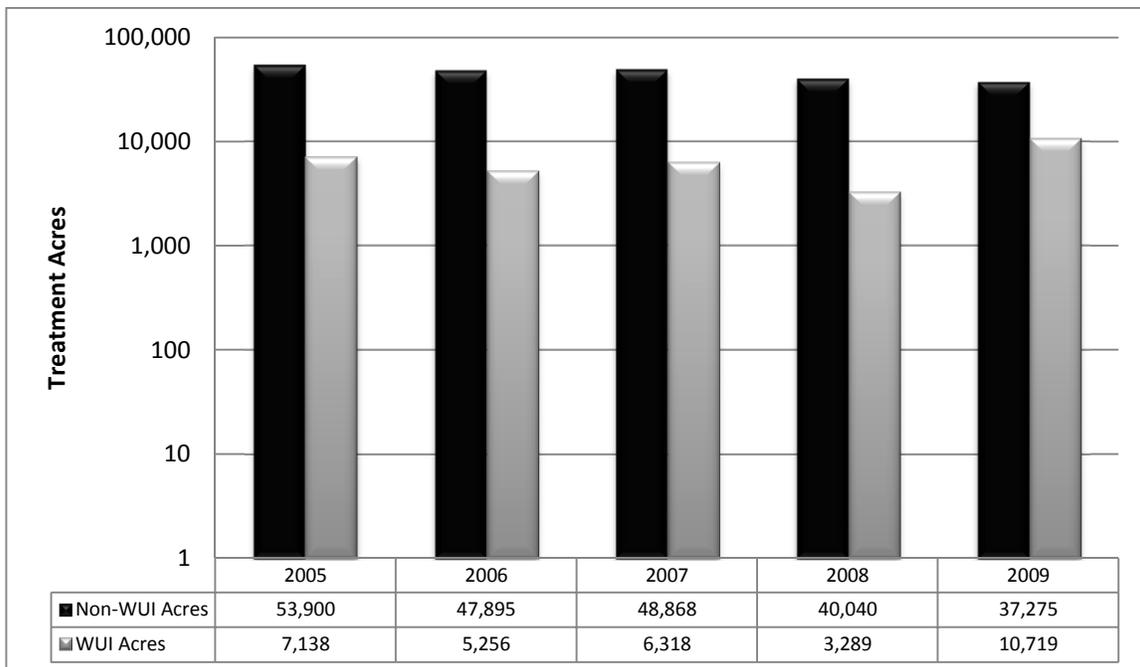
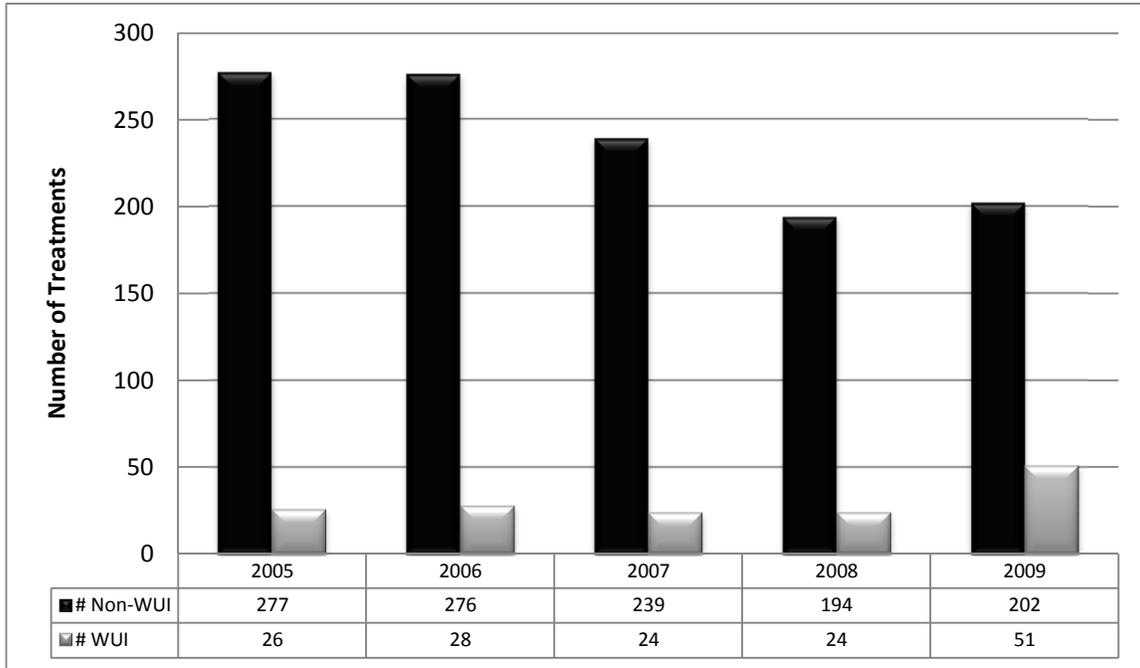
2005-2009



MOUNTAIN - PRAIRIE REGION

Treatments

2005-2009

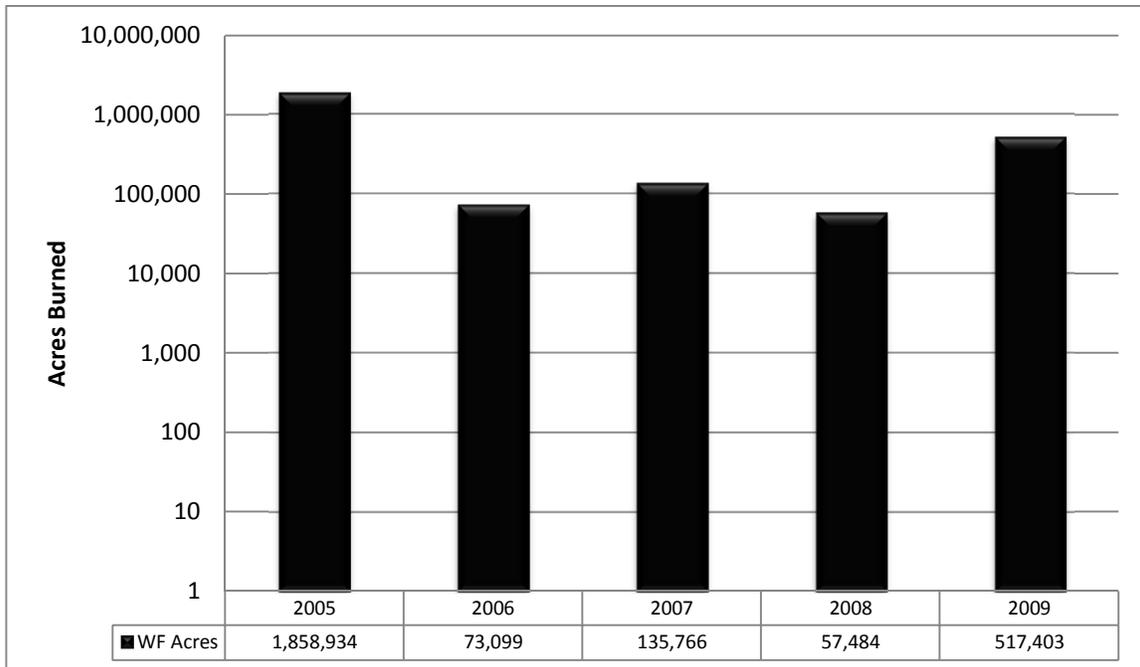
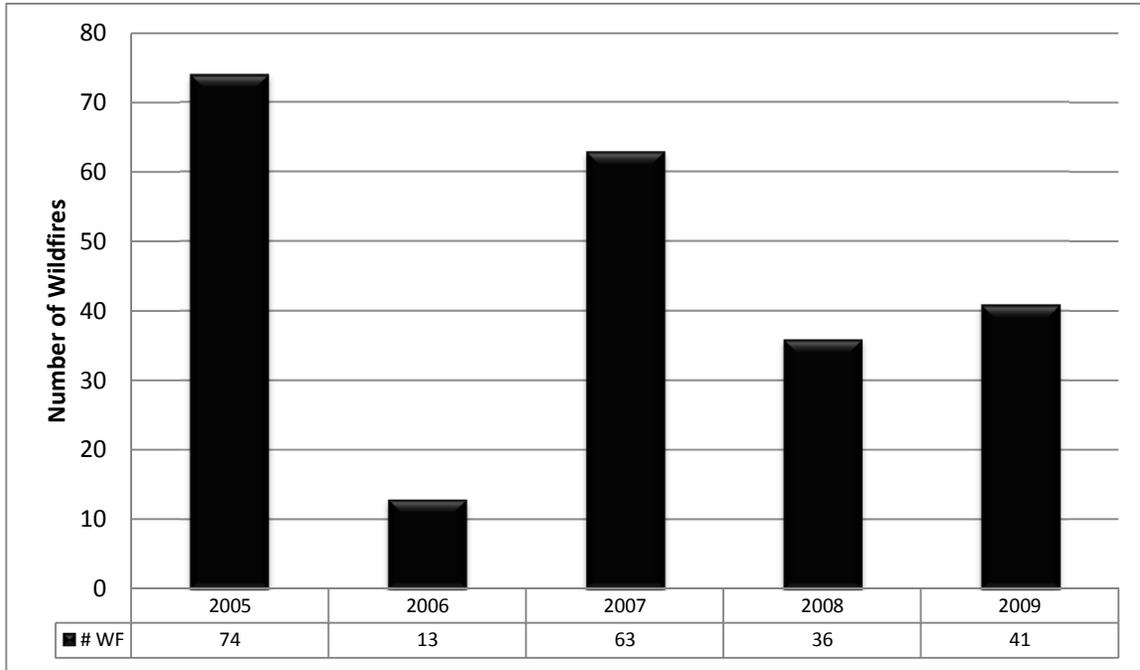


WUI = Wildland Urban Interface

ALASKA REGION

Wildfires

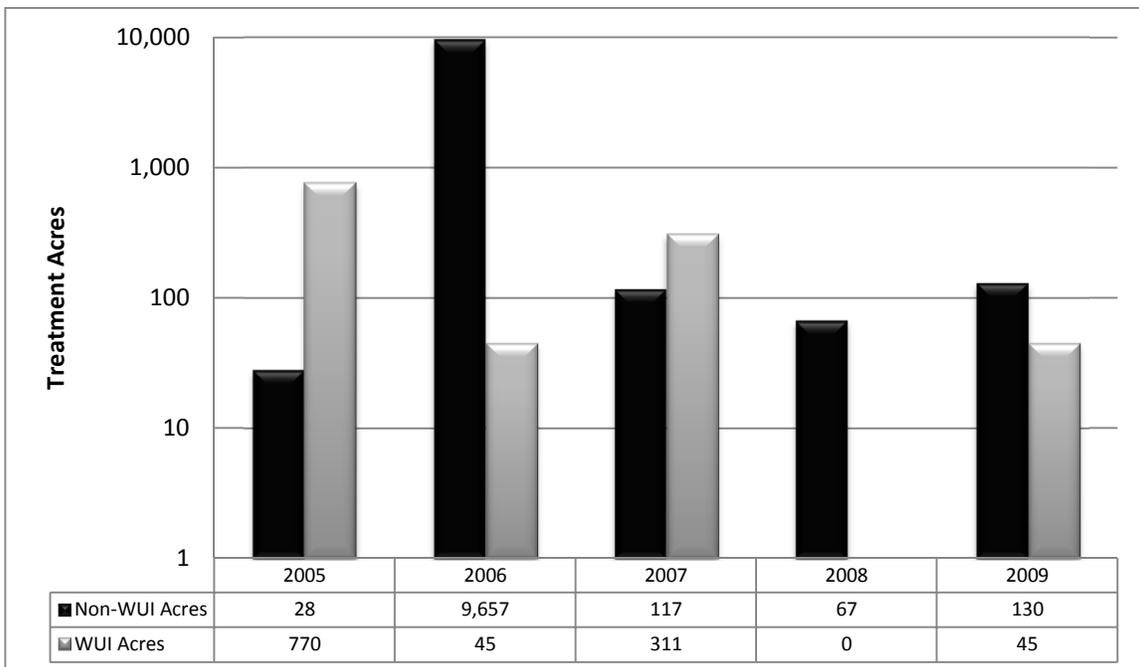
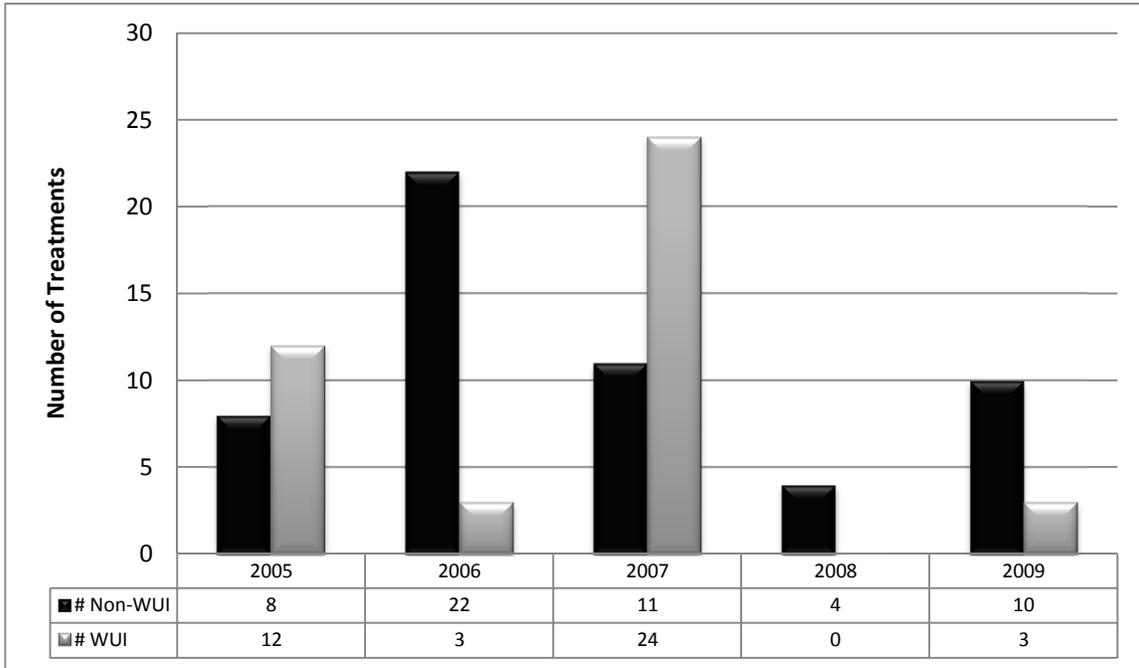
2005-2009



ALASKA REGION

Treatments

2005-2009

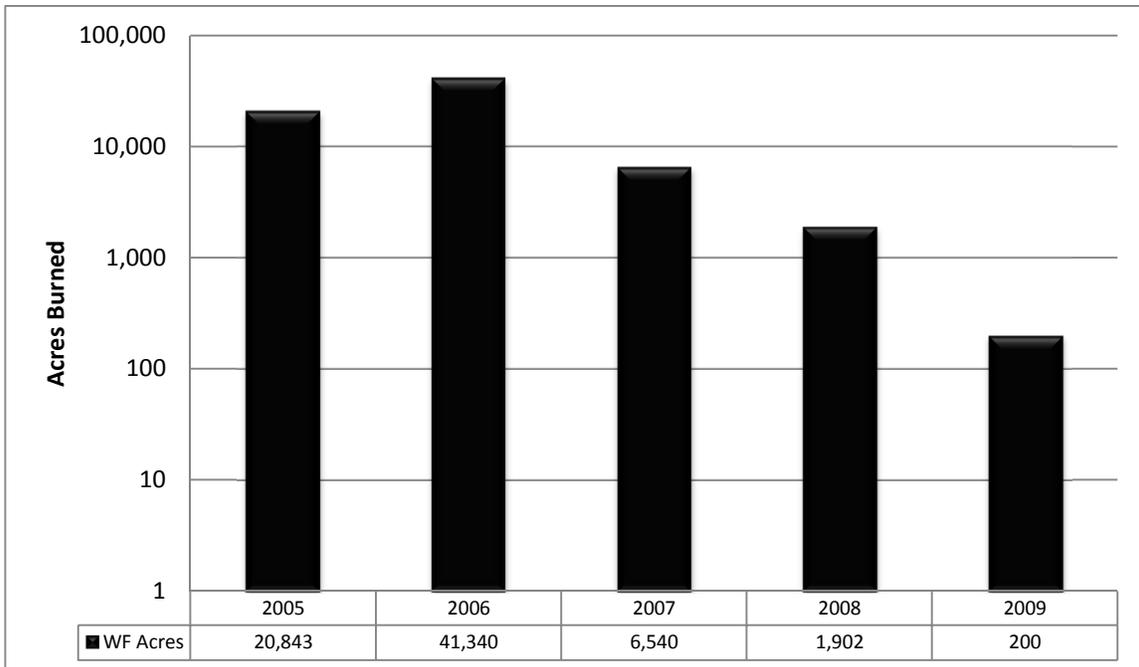
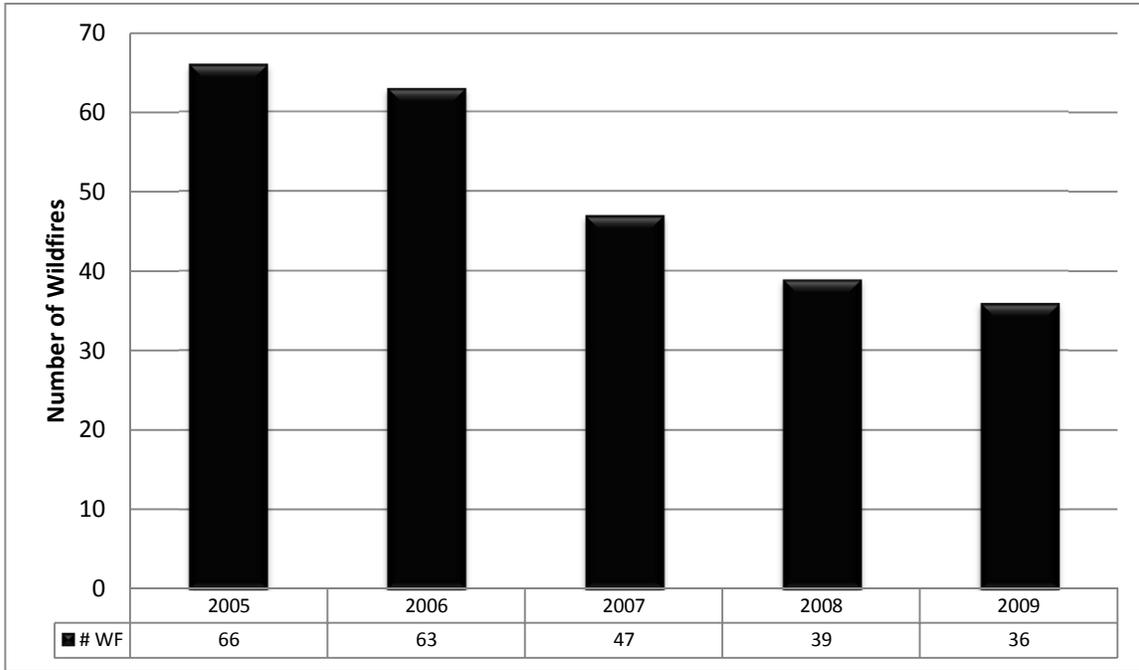


WUI = Wildland Urban Interface

PACIFIC SOUTHWEST REGION

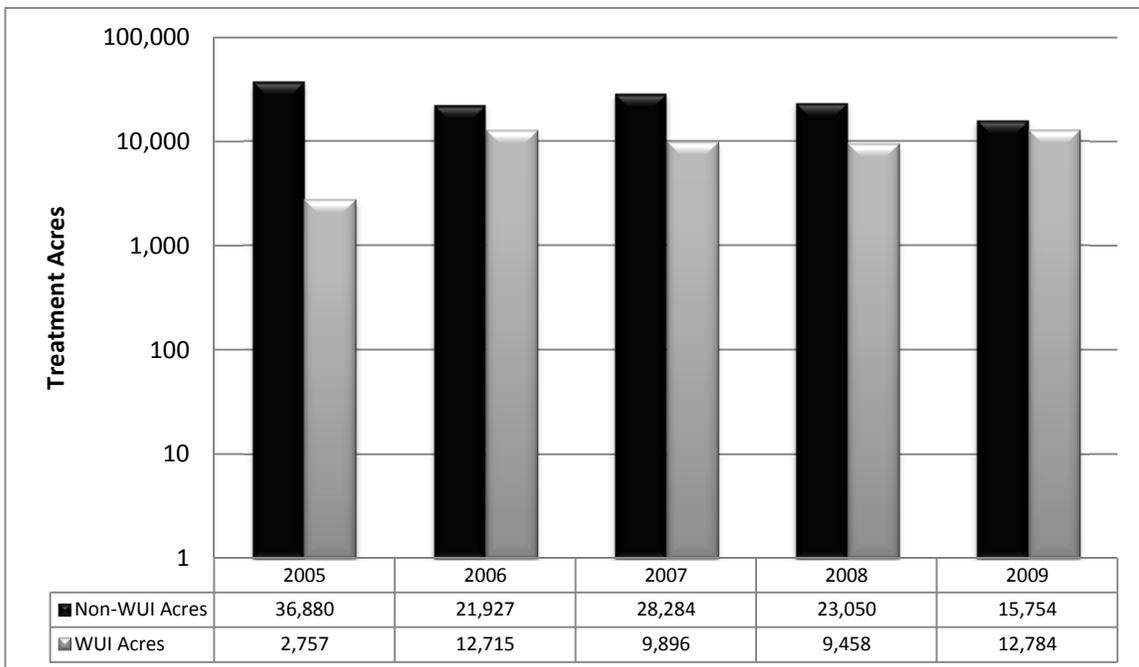
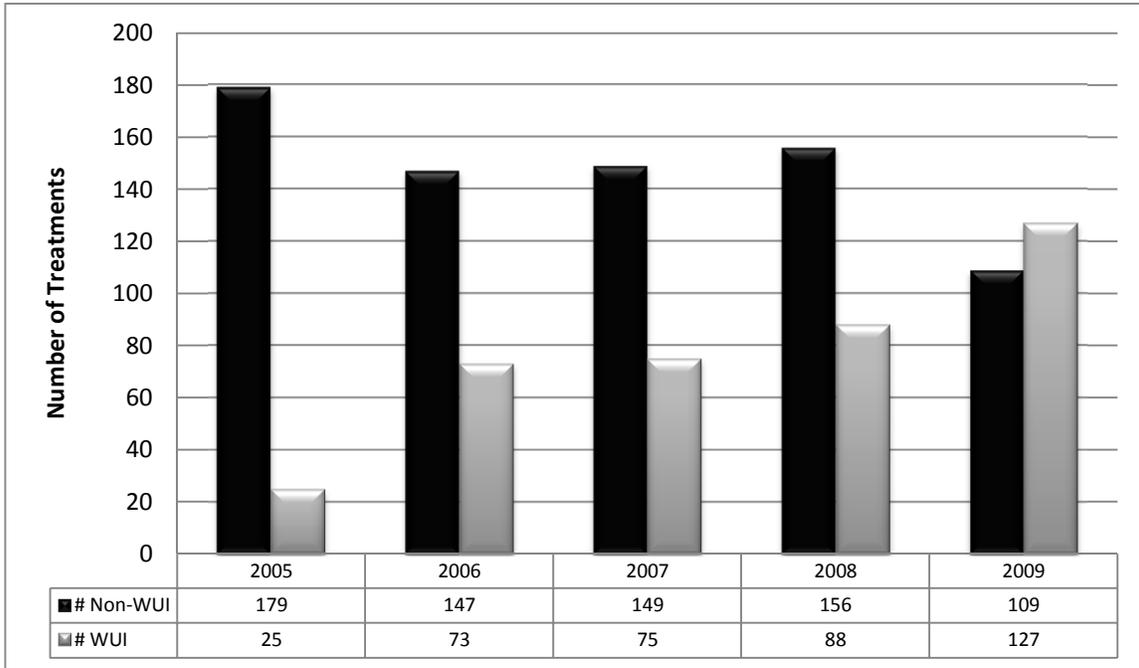
Wildfires

2005-2009



PACIFIC SOUTHWEST REGION

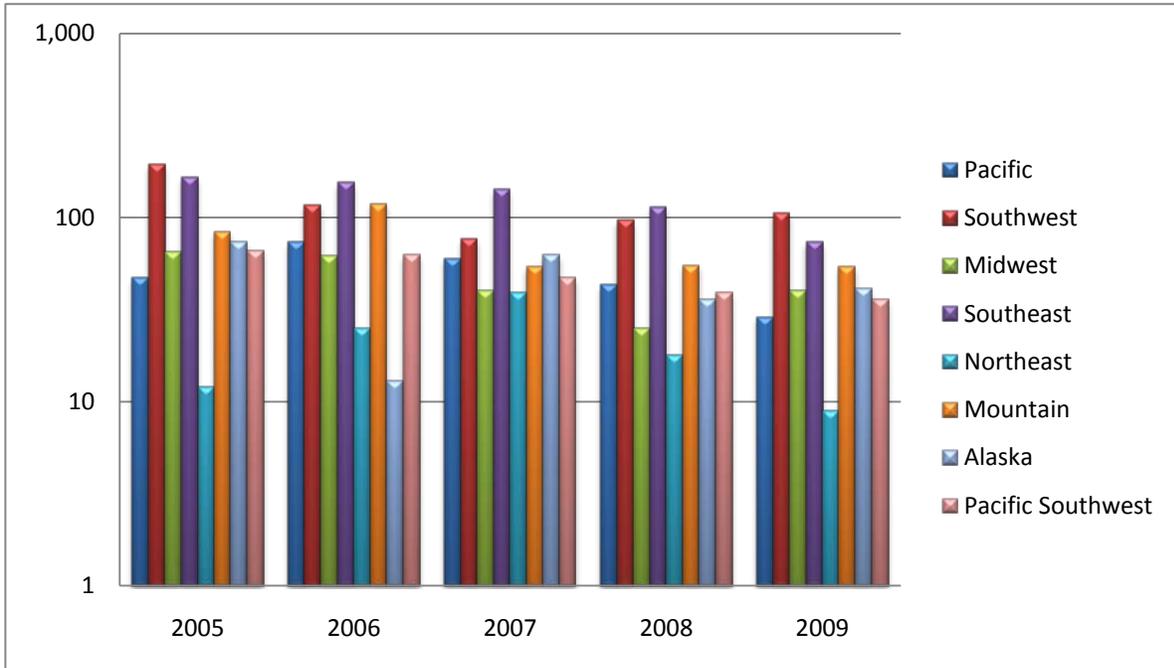
Treatments 2005-2009



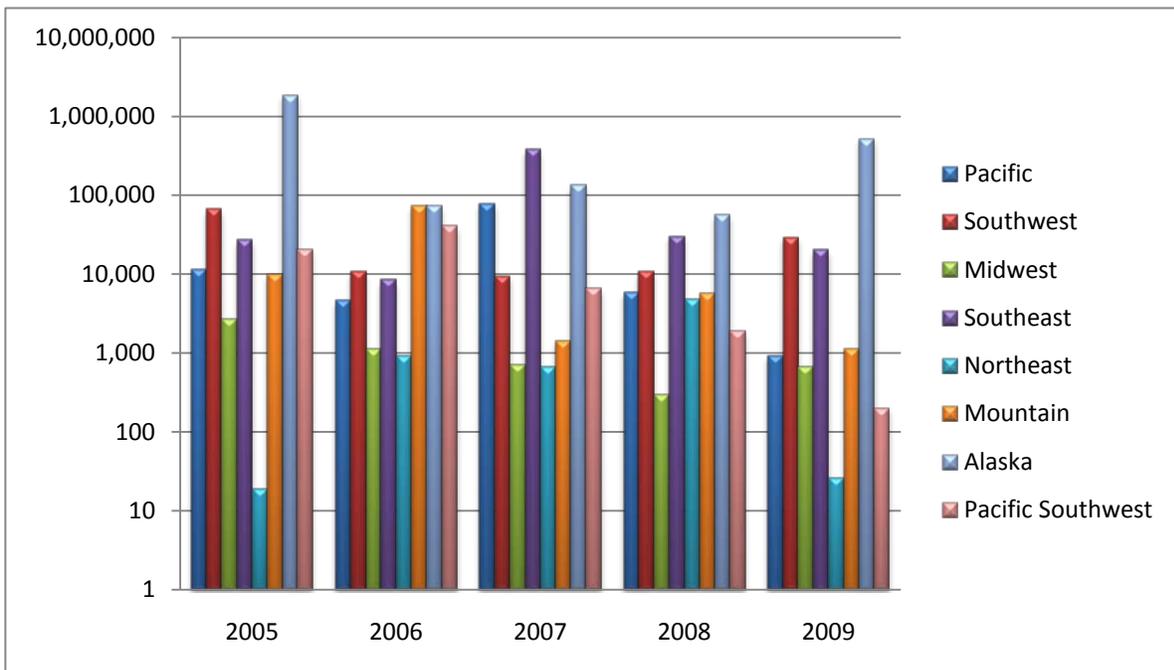
WUI = Wildland Urban Interface

WILDFIRES 2005-2009

Number of Wildfires

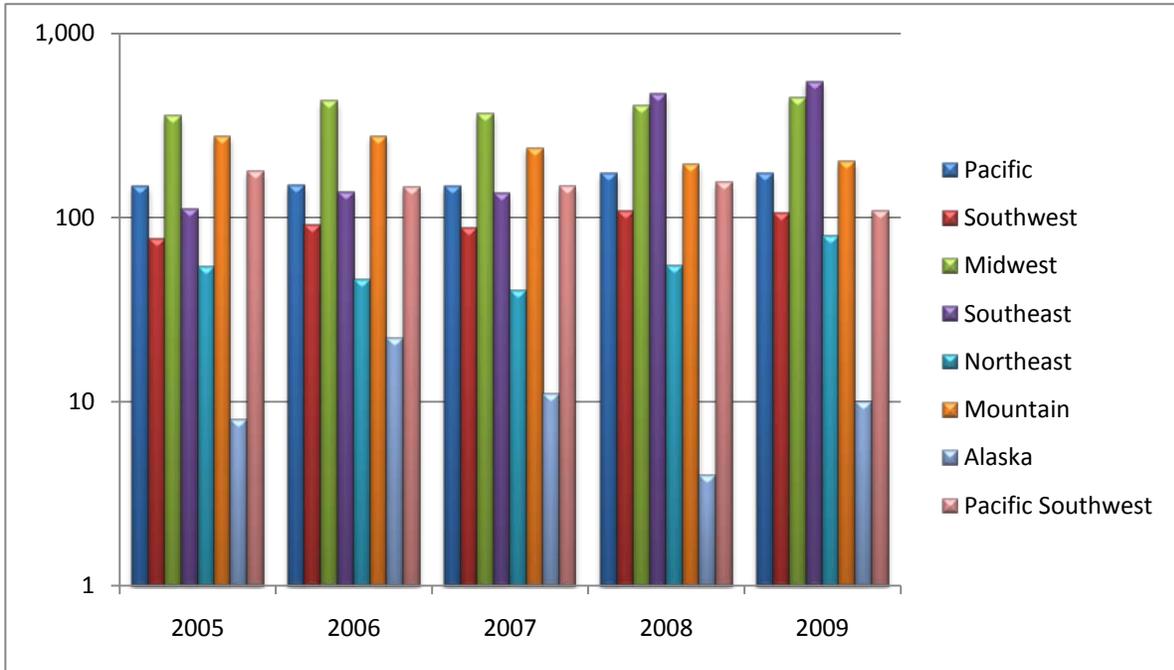


Acres Burned

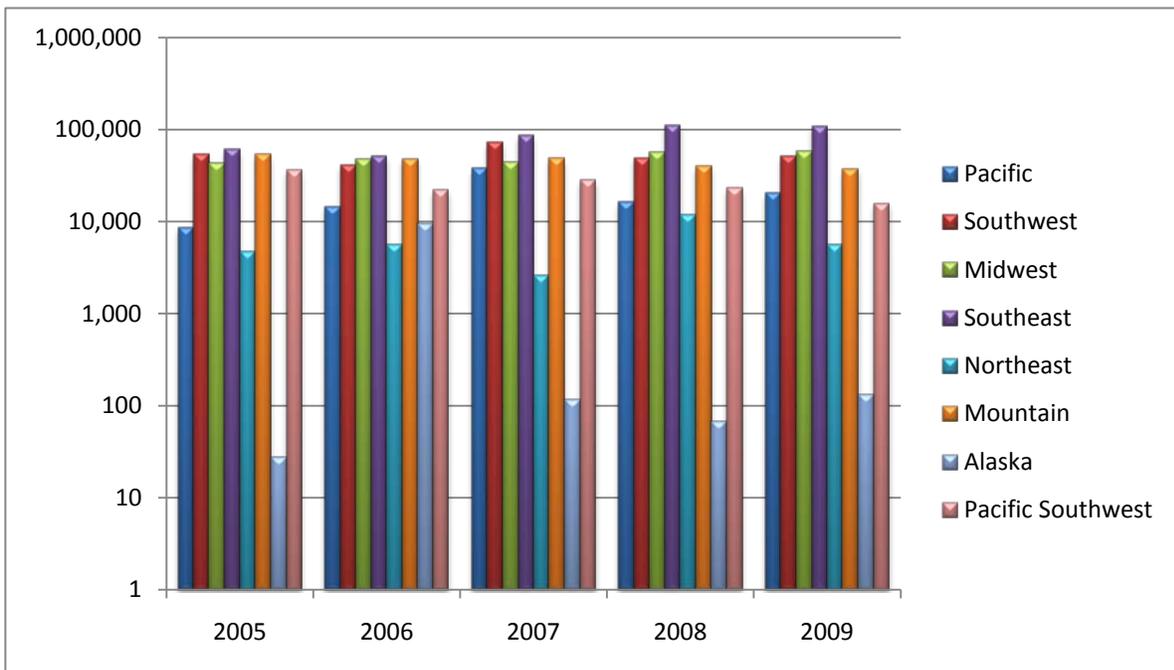


NON-WUI TREATMENTS 2005-2009

Number of Treatments



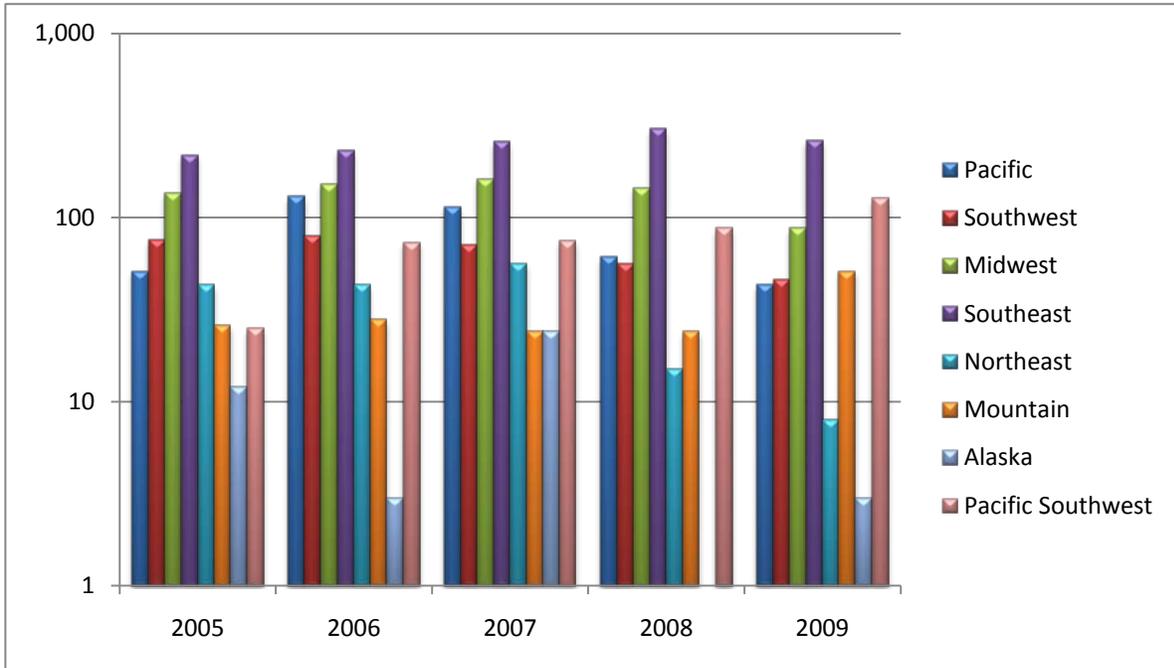
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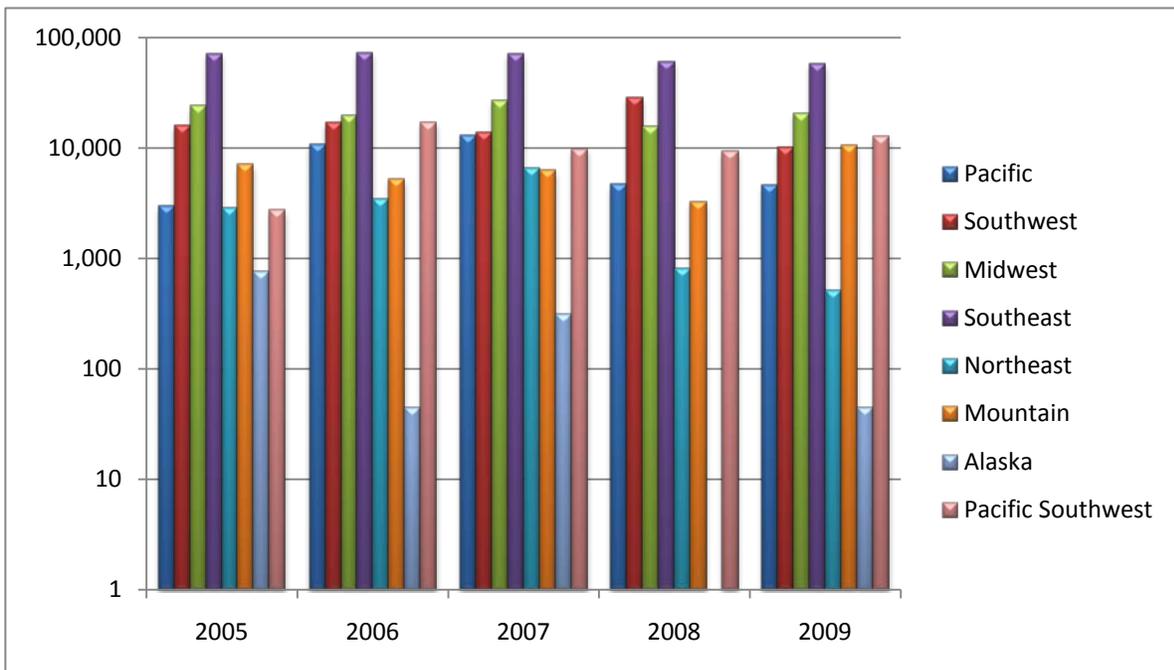
WUI = Wildland Urban Interface

WUI TREATMENTS 2005-2009

Number of Treatments

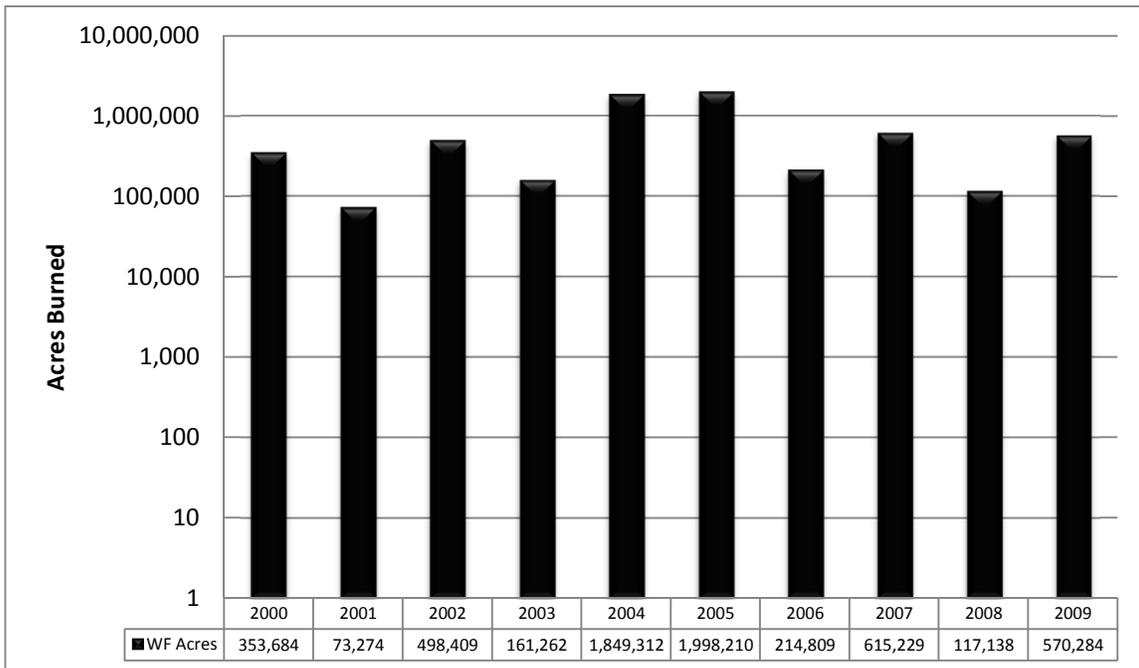
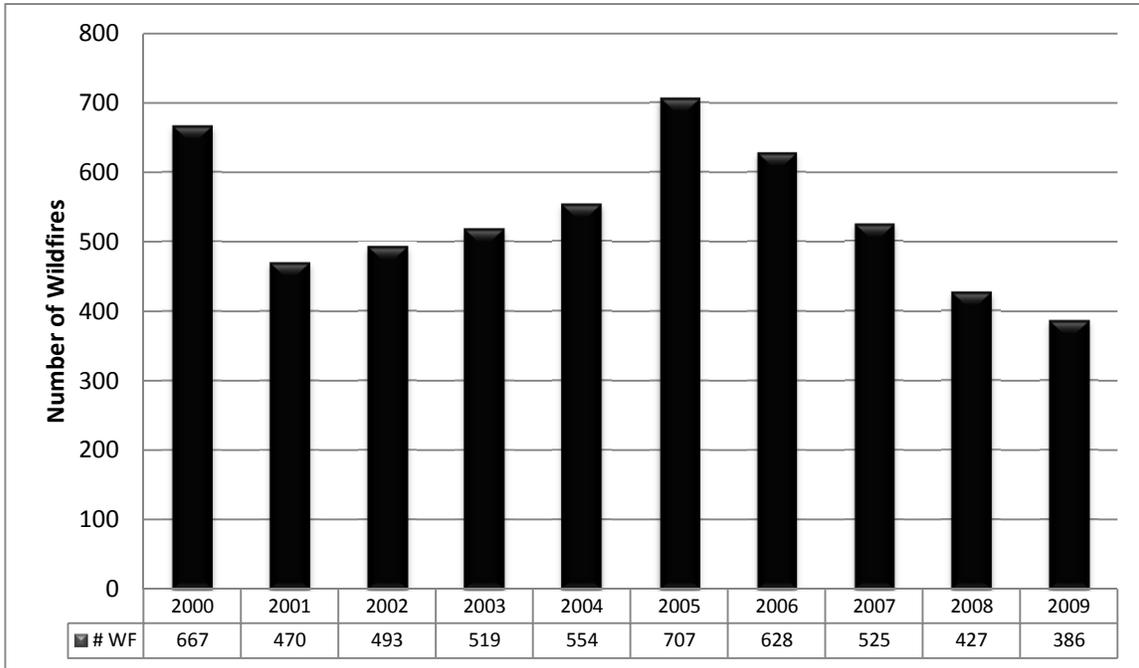


Acres Treated

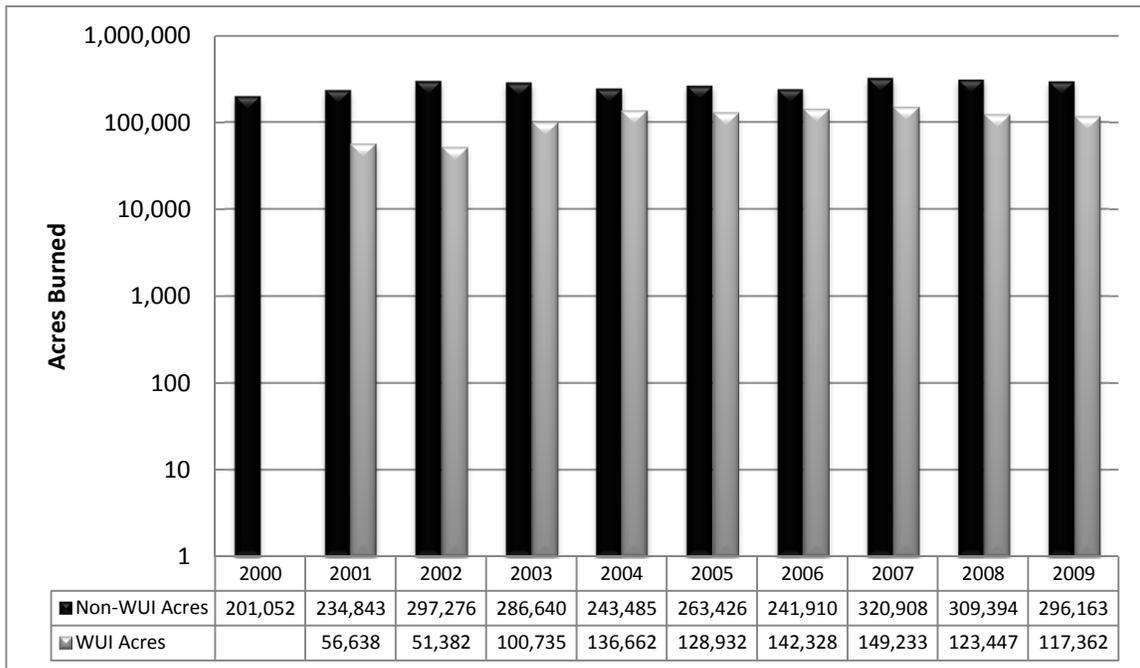
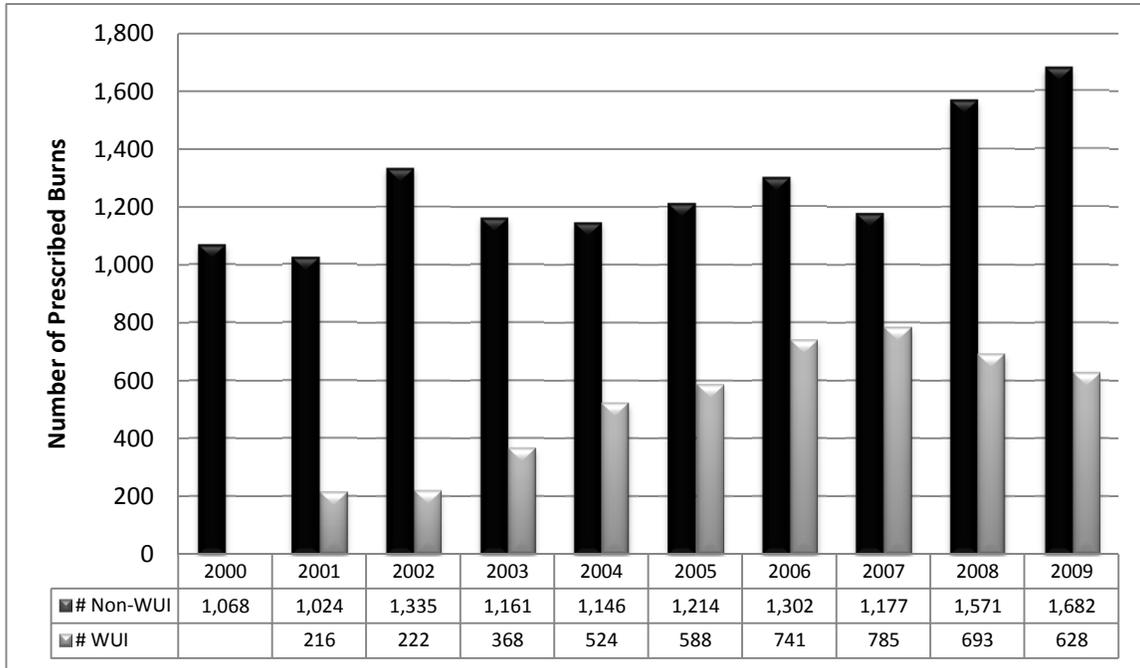


WUI = Wildland Urban Interface

WILDFIRES 2000-2009

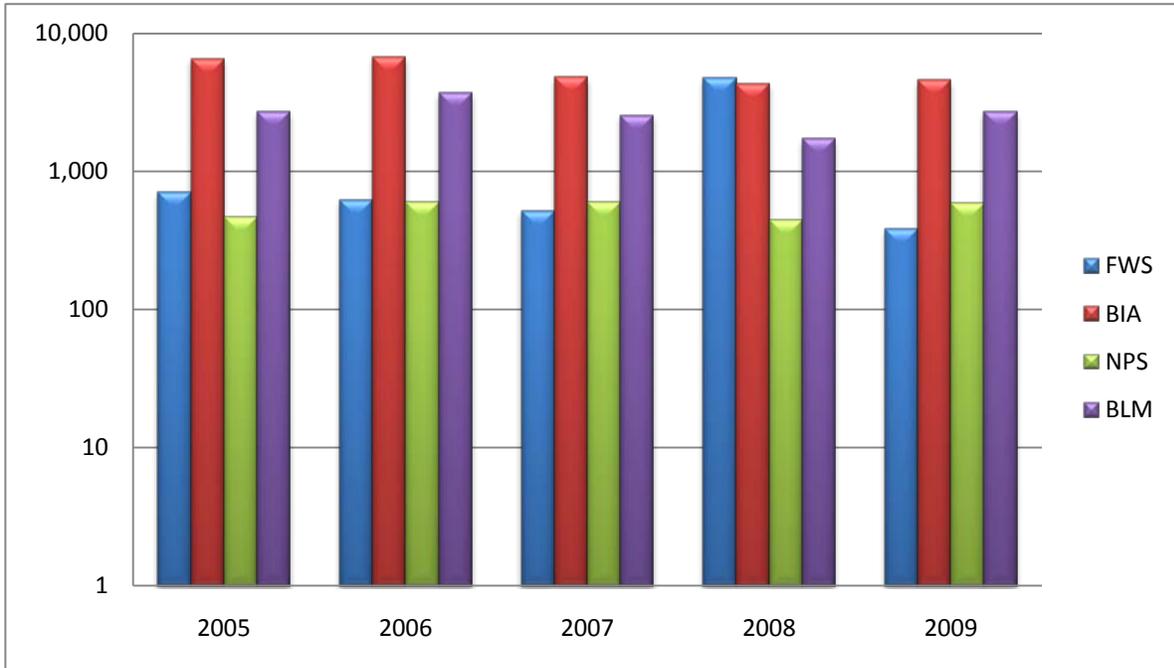


TREATMENTS 2000-2009

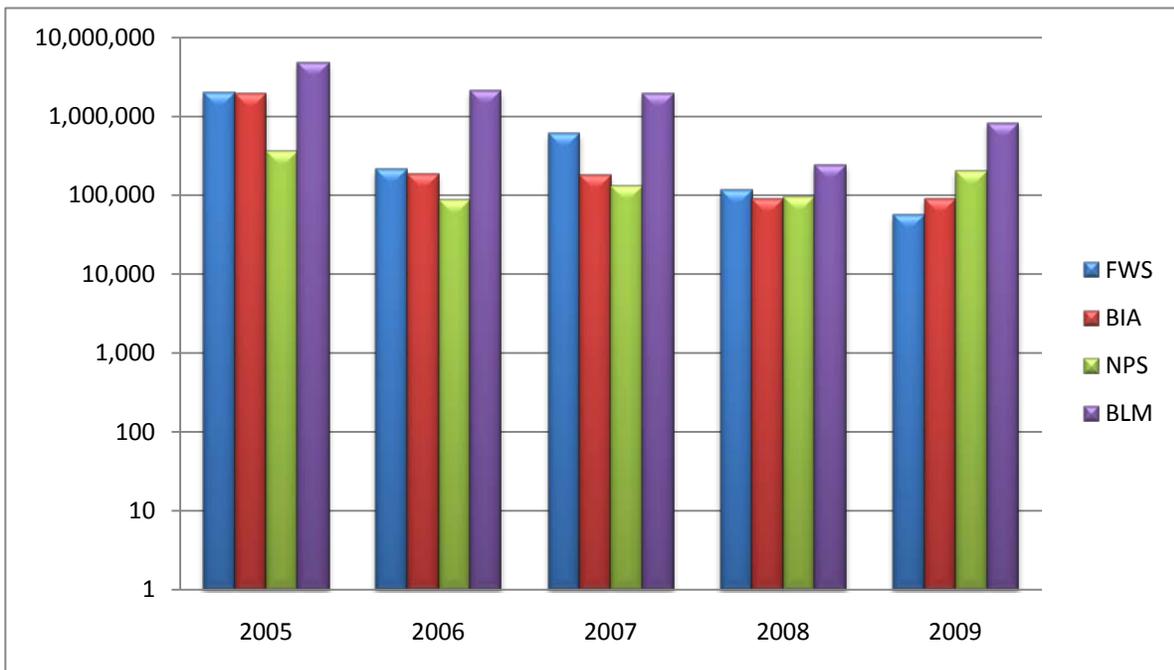


WUI = Wildland Urban Interface

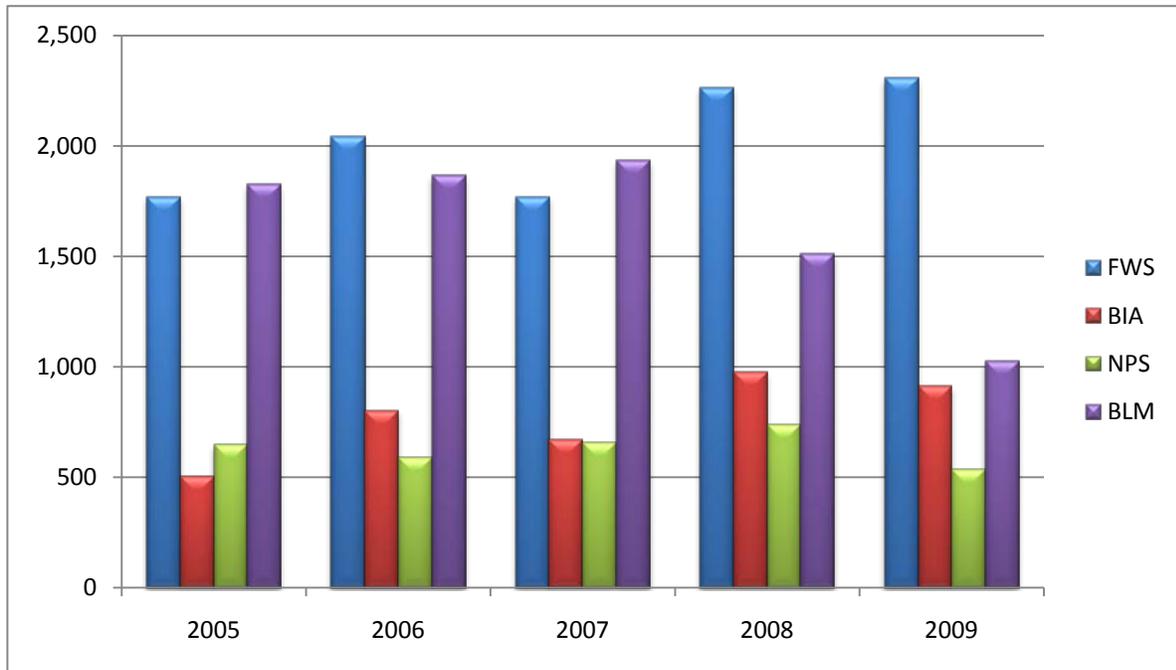
DEPARTMENT OF THE INTERIOR Number of Wildfires



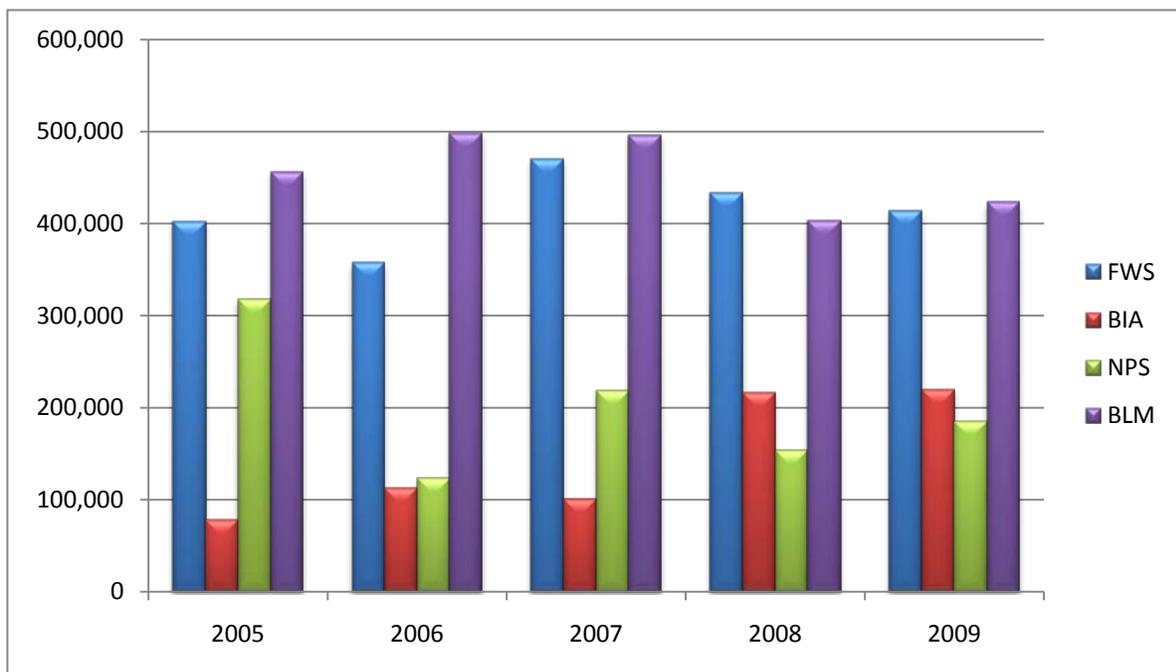
Acres Burned



DEPARTMENT OF THE INTERIOR Number of Treatments



Acres Treated



Statistics obtained from NFPORS