

U.S. Fish and Wildlife Service Fire Activity Report



2010

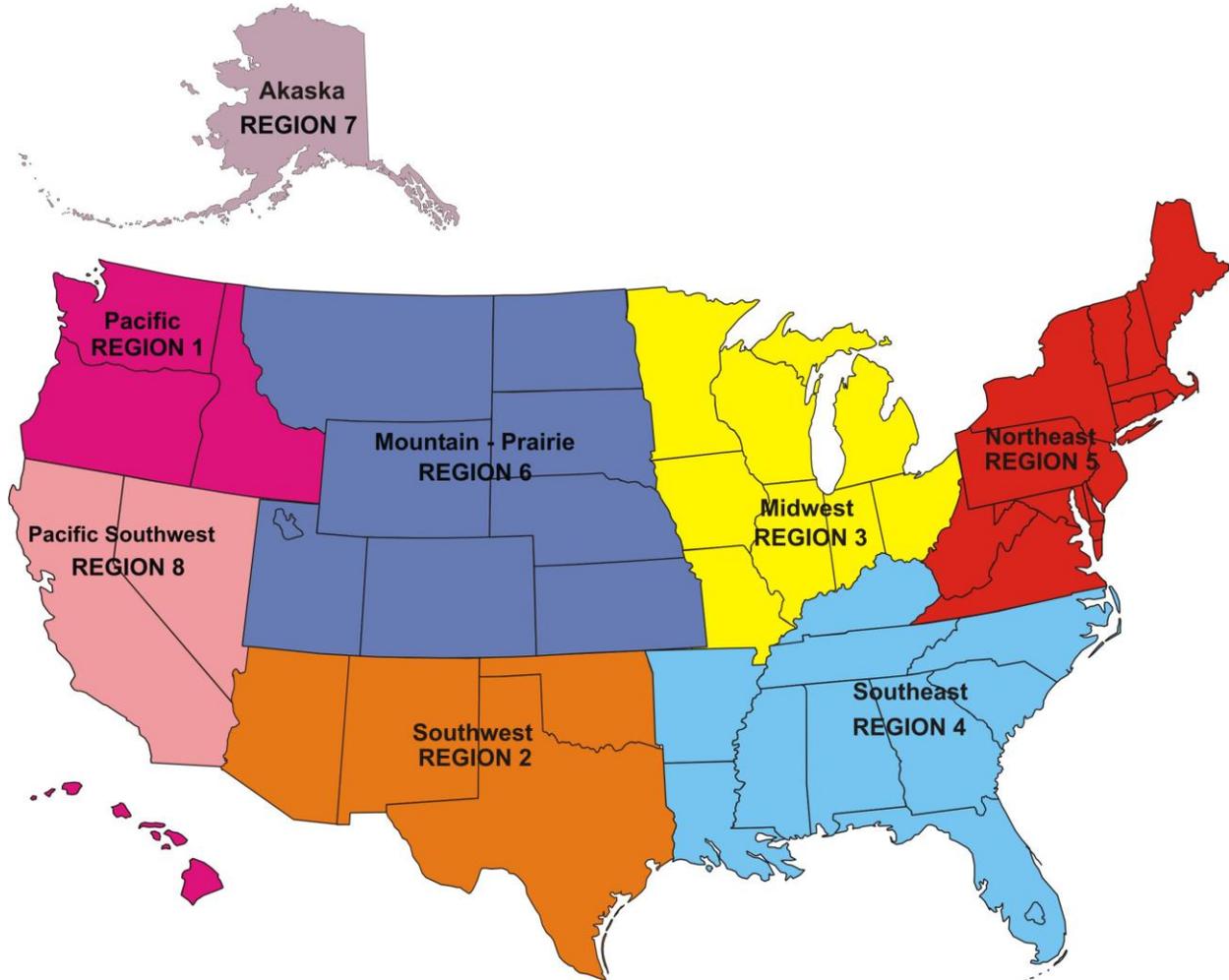
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US FISH & WILDLIFE SERVICE Regional Map



PACIFIC REGION



Season Overview

Region one experienced varying levels of fire season across its three geographic areas. The Pacific Islands were in drought conditions and experienced initial attack fire activity throughout much of the year, the Northwest experienced an average fire season in both Oregon and Washington, and the Great Basin experienced a below average fire load having fewer large fires compared to recent years.

Region one had one Type II incident, several Type III and numerous Type 4/5 fires occur 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 initial attack activity occurred at Mid Columbia River NWRC with 13 on Refuge fires and 48 support or threat responses. These fires were all managed at the Type III level or lower complexity and contained after several burning periods.

Large fire activity was experienced on several refuges in Washington and Oregon. Little Pend Oreille Refuge in northeast Washington hosted the Slide Creek fire. A Type II multi-jurisdictional fire (managed by FWS, Washington DNR, and Stevens County Fire District #7) located 13 miles east of Colville, Washington. Hart Mountain Refuge located 65 miles northeast of

Lakeview, Oregon utilized the local Type III IMT to manage two wildfires totaling 3550 acres.

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 a FWS presence on the Great Basin working teams, efficiently representing the need of the FWS in the geographic area.

Severity funds were requested on an interagency basis for Refuges in Oregon. Extended staffing levels were implemented for Sheldon-Hart Mountain NWRC, Mid Columbia NWRC, Inland NW NWRC and Malheur NWR. A single engine air tanker (SEAT) was contracted to service Sheldon-Hart Mountain NWRC and support the interagency cooperators in south central Oregon. In the Pacific Islands an engine module and Type III helicopter were brought in to supplement existing fire resources.

Following 3 years of successful fire leadership training, employee development and suppression/hazardous fuels reduction activity response, the Blue Goose/Job Corps Crew was stood down as a result of declining budgets.

Fuels Management

Fuels treatment accomplishments for Oregon, Washington, Idaho and Hawaii totaled 15,647 acres in the Wildland Urban Interface (WUI), with a total of 20,349 Hazard Fuels Reduction (HFR) acres treated. The Regional fuels program continued to rely on the flexibility of the fire programs across the Region and the

stations willingness to share resources to meet Refuge objectives.

The Region's Prescribed Fire Module, based out of Turnbull NWR, was used in cooperation with individuals from several other Refuges as a mobile workforce to implement mechanical and prescribed fire projects. This provided a foundation for evolving the Regions mobile fuels workforce to reduce hazardous fuels in priority areas throughout the Region.

For the second year DOD fire resources assisted FWS managers with prescribed fire activities at James Campbell NWR on the island of Oahu.

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. Fire Management Plan updates were completed throughout the Region using the new Interagency FMP template.

The Region developed a strategy for preparing NEPA analysis and achieving NEPA coverage for Fire Management Plans. The Region continues to collect monitoring data for all fuels treatments, storing observations in the FEAT and FIREMON Integrated database (FFI).

Interagency and FWS Cooperation

In response to the Deep Horizon oil spill, the Region mobilized 30 firefighters and a total of 110 employees in varying capacities to support Region 4 in restoration and recovery efforts.

Region 1 personnel filled critical positions on both National and Area IMT's. The teams were dispatched to multiple fires in Washington and Oregon. 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 Northwest, Great Basin and Pacific Islands.

The Region continued funding and supervising the chief meteorologist position at the Northwest Coordination Center (NWCC) in Portland, Oregon. This position has been a benefit to all of the wildland fire organizations in Washington and Oregon. After 22 years of fire coordination at the airport, NWCC is moving to its new location in downtown Portland.

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.

Outreach

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

Training and Development

The Region placed focus on providing wildfire training to FWS employees and cooperators from DOFA, DOD, and the NPS stationed in the Pacific Islands. Instructors from Refuges in Washington and Oregon provided training to 125 primary and collateral duty fire fighters in the following courses; annual fire refresher, S-212, L-280 and S-336.

Regional personnel also remained active cadre members for various training courses

including S-620/S-520, RX-310, S-490, S-590, S-430 and numerous 200/300 level local area courses.

Fire Management Leadership/ Workforce Planning

The annual Project Leader/FMO meeting was a large success in 2010 continuing to integrate roles and responsibilities, and develop strategic goals for future success.

Line officers and fire managers worked together to develop a future staffing roadmap to continue to meet the mission of the Service and provide an efficient and professional fire management organization in the Region.

Firefighter Safety

The 2010 firefighter safety and operations workshop was highlighted by the development and participation in the 1910 Idaho Fire Staff Ride and the 100 year anniversary of the Fires. This experience was an excellent learning opportunity for the Regions fire fighters and fire managers. Following the workshop, the 1910 Fire Staff Ride package was included in the National Staff Ride library posted on the fire leadership website at (http://www.fireleadership.gov/toolbox/staff_ride/library_staff_ride13.html).

Looking Ahead

In 2011 the Region will continue to implement workforce planning and focus efforts on supporting the firefighter at the ground level. 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 2010 wildfire season in the Southwest Region was relatively uneventful. The eastern portions of the region had a moderately active season due to hot-dry conditions and fuel loading. The western portion of the region generally experienced a below average fire season due to cooler temperatures, late spring moisture events, and a moderate 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 vacated at the years end. Recruitment to fill this position is under way. The Regional Prescribed Fire Specialist was filled by Butch Wilson former FMO at Buenos Aires NWR. The Regional Fire Planner position was filled by Ryan Whittaker, former fire planner for BLM Las Cruces NM. Our Geospatial Specialist position was filled with Kari Gromatzky, who joined us from the Regional Planning Division.

Operations

The El Nino pattern provided weather conditions that limited the number of wildfires for the majority of 2010 in Region 2. As the weather pattern shifted from an El Nino to a La Nina pattern, fire weather conditions turned more favorable for wildfires. Texas and Oklahoma had an increase in initial attack activity during the months of October, November, and December. The outlook for the winter and 2011 spring months continues to show weather conditions that could move much of

the Region into drought conditions and high fire danger.

Refuge fire personnel responded to 34 wildfires on Service lands totaling over 4,646 acres. Fire personnel also responded to an additional 50 fires for a total of about 5,237 acres on adjacent incidents, which threatened FWS refuges. FWS personnel also assisted our partner jurisdictions with controlling another 155 wildfires for over 11,965 acres. Our partner agencies suppressed 9 fires on FWS lands totaling 217 acres.

The most notable wildfire on Refuges was the 2,265 acre Northern Mountain Fire on the Wichita Mountains NWR in Oklahoma. A Southern Area Type 2 Incident Management Team was ordered to manage this fire.

In addition to wildfires, Refuge fire personnel responded to several all hazard incidents. Personnel responded to Wichita Mountains NWR in January due to an ice storm that caused significant damage to the Refuge. A type 3 organization was set up to assist the refuge with assessment and cleanup operations. Personnel also responded to the Mississippi Canyon Gulf Oil Spill this summer. Fire Management personnel assisted Region 4 and were a part of a type 3 organization that was in place to assist with the oil response along the Texas Gulf Coast.

Prescribed Fire/Hazardous Fuels

The Southwest Region had a good year in completing hazardous fuels prescribed fire and fuel reduction projects. Burn conditions were marginal over Texas from November thru March with extremely wet weather making it difficult to prepare and implement burns during this crucial time of year. The

remainder of the region had favorable burning conditions throughout most of the year allowing refuges in Oklahoma, New Mexico and Arizona to apply fire to maintain and improve wildlife habitat, reduce hazardous fuel concentrations and treat Wildland Urban Interface (WUI) acres. The region accomplished a total of 76,389 acres in FY10 (Total WUI acres for FY10 were 23,716. Total Hazard Fuels acres for FY10 were 52,673.) There were no lost time accidents associated with RX fire in the region during FY10. In addition over 50% of project funds were obligated to contracts.

The Southwest Regional Office continued to support the use of multi-year multi-unit burn plans. Many of the burn plans across the Region are now 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 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 the requirements and the current policy for prescribed fire planning as stated in the Interagency Prescribed Fire Planning and Implementation Procedures Guide.

In 2010 Region 2 became more involved with the USFWS Partners Program in applying fire to off-refuge private lands allowing us to better utilize a true landscape approach, versus stopping at fence lines when treating wildlife habitat. We look forward to expanding this relationship in 2011.

Fire Planning

Fire Management Plans

The region is working on getting all fire management plans updated and approved. There has been good progress in the last few years of getting plans in place. The majority

of the plans for the Oklahoma Fire District have been completed.

National Environmental Protection Act (NEPA)

There continues to be a push from the national and regional level to improve the NEPA that is done on refuges in regard to fire management. The fire management program is looking to host NEPA training for all FMOs and PFS's in the region in 2011. We are waiting to see what the budget will be like before committing to a course.

Fire Planning Analysis (FPA)

FPA continues to be in development. There were some products that had to be produced in 2010, and those were run by the interagency Fire Planning Unit (FPU) leads. In 2011 there will be a working group out of NIFC that will complete the runs for the FPUs around the country.

Wildland Fire Decision Support System (WFDSS)

The WFDSS came on line for the service last year. We had one fire that warranted a decision in the system in 2010. The system is designed to be used for larger extended attack fires. There is some work still to be done to incorporate Fire Management Unit objectives and Management requirements into this system from the Fire Management and Comprehensive Conservation Plans.

Geospatial and Remote Sensing

Fire Atlas

In order to address the need for comprehensive, spatially depicted baseline fire datasets at the station level, the RO Fire Program is now developing Fire Atlas' for NWRs throughout the Region. A Fire Atlas was recently completed for Buenos Aires NWR, spatially documenting the location, extent, and frequency of Wildfire and Rx fires that occurred on the refuge over the last

24 years (1986 – 2009). This dataset also includes fires that occurred off the refuge where Buenos Aires NWR staff assisted. Tabular information for each fire has been attributed, where data is available, and includes associated fire and cost related data. The comprehensive geo-referenced dataset includes: Landsat imagery (pre- and post- fire), feature class fire segmentation and perimeters, and associated tabular data. Fire history statistics for the refuge can now be summarized by fire management unit, year(s), affected habitat, return intervals, fire mosaics, cost structures, etc. In addition to summary statistics, the Buenos Aires NWR Fire Atlas can be used as baseline data to monitor fire-affected landscapes, plan for future fire applications, and used in collaboration with other agency, researcher, and partner projects. Several R2 Fire Districts have expressed an interest in developing baseline data for their stations and will be working with the RO to create a similar Fire Atlas for their stations in CY 2011.

FMUs in WFDSS

A National Fire Management Unit (FMU) layer is currently being compiled by the Wildland Fire Decision Support System (WFDSS) GIS team in an effort to provide a query able layer in the WFDSS. Once complete, the FMU layer will encompass the lands for the five federal wildland fire agencies for use within WFDSS and will be a spatial representation of the areas outlined in the Land/Resource Management Plan or Fire Management Plan. The RO is currently developing the spatial FMUs for all applicable NWRs within the Region for submission into the WFDSS program.

GIS Training for FY 2011

In the interest of developing or enhancing the GIS skills of the Fire Program at the station level, a GIS training schedule is now being developed for 2011 to offer on-site

introductory, intermediate, and customized GIS courses throughout the Region. In addition to fundamental GIS instruction, breakout sessions will be offered to address localized station GIS or GPS needs such as software and hardware operation, data collection, storage and maintenance protocol, FMIS perimeter collection and upload, etc...

Burned Area Rehabilitation (BAR)

Eight R-2 BAR projects have funding this fiscal year (2011); the Lower Rio Grande Valley (5), Havasu (1), Texas Mid-Coast (1), and Cibola (1) NWRs for approximately \$916,000 dollars. The 2011 fiscal year will provide the final year of BAR funding for the Pate Bend, Cottam 4, Gabrielson, and Sacramento Wash projects. These projects however will be continued with refuge and other support to bring these projects to fruition. These BAR projects are helping to reduce future wildfire threats, control non-native invasive species, and restore native wildlife habitats.

Outreach

A fire brochure was completed for the Oklahoma District NWRs.

Research and Monitoring

Fire effects monitoring data collection and analysis continue at most of our larger fire districts.

The development of the Regions Inventory and Monitoring Program will likely provide support for future fire effects monitoring. 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 collaboration with the University of New Mexico Albuquerque. Fire history and ecology research is ongoing at Wichita

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.

MIDWEST REGION

“The Year of Extreme Events”

Two thousand ten will best be remembered as the year of “extreme events” punctuated by outstanding accomplishments for the Region 3 fire program. Under some of the most challenging conditions and working around numerous obstacles, we accomplished significant acres of hazardous fuels treatments, sensitive habitat maintenance and restoration, contributing personnel and resources to the National FWS mobilization to the Deepwater Horizon Oil Spill disaster in the Gulf of Mexico, and containing a regional oil spill in Michigan.

What created a year with such extreme events? As always, weather was the principle component. We experienced tornadoes, flooding, snow, no snow, torrential rain events, and drought within our eight state Region. Often, these events occurred simultaneously between the various states.

The winter to spring season transitioned quickly into extreme dryness and fire danger in the North. An early warm up left most of the region with reduced or no snow cover by the end of March. In Minnesota, the twin cities area received no snow in March, joining 1860 and 1878, as the only snow free months of March in recorded history. This rapid loss of snow cover inevitably led to flood occurrence. Moderate to major flooding was observed on a number of rivers and streams in WI, MN, IA, and IL due to routing of snowmelt waters and ice jam action. Thankfully, no major damage occurred to refuges as in the previous several flood events that affected the Mississippi river and its major tributaries draining the afore named states.

The Upper Peninsula of Michigan, Northern Wisconsin and Northern Minnesota

remained in moderate drought through April. Multiple red flag warning days were recorded in April when it was too dangerous to conduct burns. Seney NWR, recorded the driest April on record for the previous 34 years. This quickly changed as May began very wet. Cooler temperatures, 6-8 degrees below normal, along with precipitation fell across the region. North Central MN and WI received snowfall on May 7th and 8th. The weather pattern became active and transitioned again with above normal temperatures beginning in early June. The June-July-August timeframe was the 3rd warmest since 1960, only behind the record drought years of 1983 and 1988. But, along with the heat came the rain. Iowa received more rain from June 1st through August 31st, (from 8/1 – 8/15 alone, Iowa received 201% of normal precipitation) than they endured during the great flood of 1993, which caused houses in extreme Eastern Iowa, to float down the Mississippi river. Not to be outdone, WI established a new record for rainfall for the same June – August timeframe of 18.65 inches.

The effects of climate change continue to be direct and visible here in the upper Midwest. Drought conditions give way to record wet and flooded conditions. One area of the region is excessively dry, while others experience record wet conditions. Above average temperatures and precipitation were not the only extremes. Larger and more frequent wind events punctuate the landscape. On June 17, 2010 Minnesota, experienced 48 tornadoes, a state record for one day. As recorded by the State Climatology Office, this event “will remain for some time one of the region’s most widespread, numerous and destructive outbreaks”. Unfortunately, three fatalities and 45 injuries were reported from this

enormous tornado event. Not a record any state aspires too, this single day outbreak of tornadoes positioned MN, to set the highest tornado count in the country for 2010, with a total of 104 confirmed twisters. The most disturbing aspect of this fact is that it represents a defined shift North in “tornado alley” (that area of Kansas and Oklahoma famous for record tornado activity) of 500 miles. Is this epicenter shift a one year blip or does it harken a more permanent change? Weather records show the shift as real. Time will tell!

While this active and dangerous weather pattern existed in the North and Central portion of the region, Indiana and Ohio were experiencing extreme drought conditions. The Eastern Area Coordination center (EACC) issued a Fuels and Fire Behavior Advisory on 10/14/2010, for Indiana, due to the record dry fuel conditions present and the potential for large fire growth. These drought conditions prevailed in Indiana and Ohio into late November.

For the remainder of the region, the extreme wet conditions from Summer continued into Fall, with the wet pattern continuing. Record rainfall events occurred in late September, that allowed previously dry or drought plagued areas to recover soil moisture. By December, essentially the entire Western half of the region was moist to excessively moist while the remaining eastern portion of the region was finally near normal in moisture allowing fuel moistures to recover quite well in our drought stricken areas.

With quick response to favorable burn conditions the region exceeded burn targets. A total of 472 hazardous fuel treatments were conducted totaling 71,123 acres within Region 3. The zone breakdown for accomplishments is as follows: West Zone (MN) completed 211 prescribed burns for 32,862 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, Texas, New Mexico, California (BLM), Iowa, and Missouri, along with the NPS Fire Use Module from Buffalo River. These detailers assisted greatly during the spring Rx season. The East Zone (IN, Lower MI, OH and WI) completed 137 prescribed burns for 23,680 acres. There were also 8 mechanical fuels projects completed for an additional 1457 acres. The South Zone (IA, IL and MO) completed 115 prescribed burns totaling 11,941 acres. In the Upper Peninsula of Michigan, Seney NWR, accomplished 781 acres of treatments including 7 prescribed burns for 513 acres and 2 mechanical fuels projects for an additional 268 acres. Excellent production for reducing hazardous fuels and restoring and maintaining critical habitats considering the weather related obstacles our crews were confronted with.

For 2010, there were 40 wildfires which burned 5519 acres within Region 3. It was a normal year in total wildfire activity throughout the region, but the acreage figure was higher due to the nature and location of several of the wildfires. Nationally, it was a slow fire season with minimal need of our fire personnel in other regions for fire assignments. However, FWS resources were mobilized, primarily on severity assignments to California, Oregon, Nevada, Colorado, Idaho, and Minnesota.

All hazard incident management was another concern. Of national and regional importance was the horrific Deepwater Horizon Oil Spill in the Gulf of Mexico. This tragedy involved significant response in personnel and equipment from the region as the FWS was tasked with responding to this disaster. A total of 166 regional FWS personnel were mobilized to the various

command and staging areas to support the clean-up effort around the gulf region with many returning for a second deployment thus bringing the total number of deployments to approximately 236 for the Gulf oil spill. Within region, the Enbridge Pipeline spill near Marshall, MI, along Talmadge Creek and the Kalamazoo River, commanded our time and attention. Fire staff filled crucial incident command positions and assisted with the clean-up effort. Approximately 53 personnel were deployed to MI. In addition to these two oil spills, one short duration FEMA hurricane assignment was also completed.

As stated in past annual reports, Region 3 has been a leader and proactive in biomass and bio-fuels utilization for many years. In 2010, Region 3 was the only region within the FWS to successfully complete American Resource and Reinvestment Act (ARRA) funded projects. This funding, approximately \$1,000,000.00 was spent on hazardous fuels and fuels treatment projects. A tremendous use of these funds along with achieving great resource and habitat benefits from this management. In addition, fuels treatments, tree cutting and habitat management were accomplished at the large Wetland Management Districts in MN and WI. These projects removed woody biomass from many management units that was subsequently utilized for bio-energy production and secondary product utilization contributing to reduction of greenhouse gases and contributing fuel from a renewable resource.

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 project has been extended due to the opportunity to analyze

an even larger sample of the forest following the windstorm damage resulting from Hurricane Gustav in 2008. Additionally, we are continuing with the Joint Fire Science project studying fire effects on Mycrostegium or Japanese Stiltgrass. We look to complete these studies in the coming year with some impressive research results and papers to further our science based fire management within the region. At Sherburne NWR, a Paleoenvironmental History project began in May, 2010. Conducted with the University of Utah, pollen cores were obtained from a natural lake to determine the fire return interval and plant composition within an historic oak savanna ecosystem. The core samples are currently under analysis with tremendous information forthcoming.

The Lake States Fire Science Consortium has been a solid success. Robert (Zeke) Ziel, (retired, MI DNR) has been hired as the Program Coordinator. His years of work in both the forestry and fire community along with extensive experience in fire behavior, make him ideally suited to this position. Monthly newsletters, webinars, on-line panel discussions, and development of a web page are some of the highlights from this past year of operation. Numerous future webinars and workshops are already planned to further disseminate fire based forest and ecosystem management to land managers across the Lake states region.

The ever popular Rural Fire Assistance (RFA) Program was again used to great advantage within the region. A total of \$198,017.00 was distributed to individual rural fire departments. This assistance in developing our local fire departments adjacent to NWR's and WMD's in expanding their firefighting capabilities has been a great boon to these rural communities and fire departments.

The region continued with our strong public outreach program. Fire staff participated in numerous events including staffing the fire management display at the Pheasants Forever Sport show and convention in des Moines, IA during January, 2010 and assisting the National office in October, at the Society of American Foresters (SAF) National Convention in Albuquerque, NM .

Region 3 personnel continue to participate nationally and regionally in FPA, LANDFIRE, EMDS and HFPAS

development and workshops. It has been challenging with program changes and modifications but hopefully, the fruits of this labor will benefit fire and resource management regionally and nationally.

In conclusion, 2010 was a year of extremes, extreme weather and hazardous assignments made for challenging times. It remained however, a year of outstanding accomplishment setting the stage for the challenges and opportunities ahead.

SOUTHEAST REGION

General

The Southeast Region had 156 wildfires covering 17,832 acres in 2010. The largest fire occurred on the Sabine NWR and totaled 6,259 acres. There were 606 mechanical fuel treatments for 7,905 acres and 318 prescribed fire treatments for 128,759 acres. This totaled 924 treatments for 135,018 acres.

Some areas throughout the region experienced significant ongoing high fire danger events over the year. The North Louisiana / South Arkansas Refuge Complex was approved for severity funding. The Eastern North Carolina Refuges and Southwest Louisiana Refuge Complex prepared severity request packages which were on their way to approval, when significant rain events materialized and quelled the danger.

The Southern Area has three Incident Management Teams. The Southeast Region of FWS now provides Incident Commanders (and many other subordinate positions) to two of the three teams. Tony Wilder is IC for the Red Team (Type 1) and Michael Dueitt is IC for the Type 2 Team. Tony Wilder served as ICT2 at the Stony Ridge and Bowling Green Fires in North Carolina, and at the North Mountain Fire in Oklahoma.

There was no request for FEMA disaster assistance this year. Our emergency storm response assistance was not required because the incidence of damaging storms making landfall was, thankfully, less than prior years.

We acquired and invested \$348,480.00 of DOI Rural Fire Assistance Program funds and \$119,691.00 of Ready Reserve Program funds. These numbers represent ~26% and ~88% of FWS totals respectively.

The Southeast Region had an active year working towards general fire management and Incident Management Team succession planning goals. Along with conducting a plethora of training events at the refuge level, we were involved in significant training activity at the regional level as well.

We provided much support to this year's Southern Area Advanced Fire and Aviation Academy via providing Steering Committee representation, Course Coordinators, Lead and Unit Instructors, various Subject Matter Experts and Presenters, and over sixty course attendees. We also provided significant assistance at the Tennessee/Kentucky Wildfire Academy via delivery of the S-230 Crew Boss and S-231 Engine Boss courses. Our Regional Fire Ecologist, Sue Wilder, continues to provide training support at the national level through her participation on the steering committee of M-580 Fire in Ecosystem Management, which is delivered at the National Advanced Fire and Resource Institute.

Six stations prescribed burned over 85,944 acres even with the relatively wet conditions in parts of the southeast. These refuges accounted for 61% of the Refuges RX acreage and 35% of the number of burns, as listed in the table below.

All Hazard Response

The Southeast Region is within the Southern Area Geographical Area. 2010 will best be remembered for the extreme wet to drought conditions experienced at various refuges throughout the region. Tropical storm damage to the southeast region was insignificant, but a large amount of precipitation had an impact to some areas. For the second time in five years, life changed forever along the north central Gulf Coast. In 2005 it was Hurricane Katrina and

in April 2010 it was the Mississippi Canyon 252 Oil Spill, the worst environmental disaster in the history of the United States. An immeasurable quantity of oil, estimated at 10 or 20 times the size of the Exxon Valdez, leaked into the Gulf following an explosion at the Deepwater Horizon rig. Within weeks oil began washing up along the barrier islands and coastlines of Louisiana, Mississippi, Alabama and Florida, including Bon Secour and Grand Bay NWRs. The federal government response began immediately and will continue for years to come.

The oil spill incident was created in ROSS on April 23, 2010. From that initial time through January 5, 2011 there have been 3,153 overhead resources processed. Out of the 3,153 request 2,846 have been filled, 226 cancelled, 8 are still pending, and the remainder were filled/closed. Resources were filled by FWS employees, Forest Service, Bureau of Land Management, National Park Service, and numerous Administratively Determined (AD) individuals. The hiring procedure for ADs was handled at MS Sandhill Crane NWR, Alligator River, Region 4 Office, and a few more refuges in the southern area. Incident command posts for the oil spill were located in four areas. They were Houma, LA; New Orleans, LA; /Mobile/Daphne, AL; and Pensacola, FL. There was also an aircraft command located in Lakefront, LA. The leads for this incident are BP and Coast Guard. At the present time there is only one incident command post located in New Orleans; expanded dispatch is stationed there also. Most requests are presently for individuals on a long-term basis up to a four-month detail. There is also an on-going process that is taking place in identifying other biological positions so that they may be added into ROSS and IQCS and approved by the NWCG.

Volumes could be written, and eventually will be, regarding the response to the Mississippi Canyon 252 Oil Spill. The Southeast Region of the US Fish and Wildlife Service has provided leadership and been intimately involved in management of this catastrophe at all levels since the outset and will continue to do so.

Hurricane Season

This year was one of the most active seasons on record in the Atlantic Basin. Fortunately, impacts on the U.S. were minimal. 2010 is tied with 1995 for the third-most tropical/subtropical storms (19) on record, behind only 1933 (21 storms) and 2005 (28 storms).

The totals are even more remarkable given the relatively slow start to the season, with the fourth named storm not forming until late August, near the long-term average date for that occurrence.

Starting with Danielle on Aug. 27, the season's five major hurricanes formed within just three weeks, including four Category 4 hurricanes in a record 20 days. Interestingly enough, no hurricanes reached Category 5 intensity this year.

The 2010 season is also similar to 1995 in terms of where the tropical cyclones generally formed and moved. As in 1995, the storms were in two separate groups, with about 60 percent forming and staying east of about the longitude of Jamaica and New Jersey, and the other 40 percent forming and staying west of there. Many of the 2010 storms developed quickly over the far eastern Atlantic as in 1995, but they turned to the north and northeast before they could reach the United States, due to a persistent trough over the eastern U.S. and western Atlantic. The center of Earl, when it was a Category 2 hurricane, passed within just 85 miles east of the Outer Banks of North

Carolina on Sept. 3. That area experienced tropical storm conditions that included gusts of 70-80 mph, causing some downed trees and power outages. A storm surge of 2-6 feet from the Pamlico Sound side of the Outer Banks caused inundation of North Carolina's Highway 12 and damage to dozens of structures.

Because of the same atmospheric steering patterns that kept systems away from the continental United States, no strong tropical cyclones passed directly over the area of the oil disaster in the northeastern Gulf of Mexico. Even though the center of Hurricane Alex in June remained over the southwestern Gulf, it had a very large circulation and large waves disrupted operations in the BP well spill area. The threats of Tropical Storm Bonnie and Tropical Depression Five, both of which were weaker than forecast when they traversed the northeastern Gulf, also

prompted operations in the area to cease for a few days.

In the past year we have had a few changes in some of our mid-level leadership throughout the region. Michael Dueitt has taken the reins as Director of the Interagency Prescribed Fire Training Center. Glen Stratton has joined the regional office team as Prescribed Fire Specialist. Josh O'Conner has joined the regional office team as a Fire Management Specialist with a focus on data base continuity, providing FPA leadership, and managing a plethora of other important program functions. Vince Carver is another addition to the regional office staff as one of our two Regional Fire Ecologists. Out in the field, Terri Jenkins has moved from District 2 to District 3 providing district leadership in a variety of functions. Rob Wood has come to the region as our District 2 Fire Management Officer. Pat Pearson is now on as District 5 FMO, and Cass Palmer is now FMO for District 6.

NORTHEAST REGION

The winter of 2009-2010 in the Northeast was characterized by very wet conditions and heavy snowfall amounts in the more northern refuges. Conditions quickly changed with the onset of spring, when wet conditions transitioned into one of the hottest, driest spring and summers on record. Central Maine saw some of the driest conditions in the last ten years in July and August. Refuges in the southern part of Region 5 experienced rapid rises in the KBDI drought index, but precipitation in the latter part of the summer and early fall relieved the fire danger somewhat.

Wildfire activity was low overall, despite the dry spring and summer conditions. Great Dismal Swamp NWR had two small fires on the refuge and four assists in the mutual threat zone around the refuge. Chesapeake Marshlands NWR fire staff responded to three small refuge wildfires and assisted on seven fires off refuge. Central Zone staff assisted the New Jersey Forest Fire Service with two WUI fires and responded to the Dry Marsh fire at Montezuma NWR in central New York. This marsh fire occurred on Easter Sunday immediately south of the New York Thruway, and is believed to have been caused by a carelessly tossed cigarette. The highway proximity resulted in numerous curious onlookers, but fortunately the fire burned itself out rather quickly due to natural water barriers after consuming 694 acres. In the New England Zone, Moosehorn NWR fire staff participated with the Maine Forest Service in high visibility patrols as part of the Wildfire Arson Task Force; responded to four arson fires adjacent to the refuge and assisted Maine Forest Service with suppression efforts on four other fires; and conducted initial response to a downed power line fire on the refuge itself.

Implementation of the approved South 1 Burned Area Rehab Plan continued in 2010. Over 133,000 Atlantic White Cedar seedlings were planted on 390 acres, with a like amount planned for 2011. Survival and growth monitoring is ongoing.

43 Rural Fire Assistance (RFA) grants worth a total of \$211K were awarded to fire departments in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, New York, Pennsylvania, New Jersey, Delaware, Maryland, and North Carolina.

9,948 acres (target 9,000 acres) were treated within the Region with a combination of prescribed fire, mechanical, and herbicide treatments at a cost of \$571K in projects funds. Partners included the VA Department of Conservation and Recreation, VA Division of Natural Heritage, MD Natural Heritage Program, Fredericksburg/Spotsylvania National Military Park, and TNC preserves in VA, NH, and ME.

The wet conditions made 2010 a challenging year for prescribed fire across the VA/WV zone. Historically their burn season begins in January and is wrapping up by the end of May. However, this year 27 of the 30 burn days were completed between the first of March and the first of May. Three seasonal firefighters were hired to help prepare, execute, monitor and rehab prescribed burns throughout the state on Federal, State and Private lands. Burns were executed on 5 National Wildlife Refuges, 2 Virginia Natural Area Preserves, 1 Old Dominion University Research Area, 1 Virginia Wildlife Management Area, 1 Nature Conservancy Preserve, and 2 private properties. Over 3000 acres were treated in FY 2010. Mechanical fuels treatments

continued at James River NWR with an additional 250 acres of pine thinning to reduce hazardous fuels, improve habitat, and provide large-scale biomass utilization.

The Blackwater fire crew were able to complete several prescribed burn on both FWS lands and Fishing Bay Wildlife Management Units. Total burns completed on the Blackwater NWR were 18 for a total of 1506 acres. Burns completed on the Fishing Bay Wildlife Management area were 12 for a total of 1818 acres. In addition to working on FWS and Fishing Bay units, the crew assisted the State DNR with 7 burns on Chesapeake Forest lands for 470 acres and the Soldiers Delight unit for an additional 35 acres. One burn was conducted with the TNC chapter in southern Maryland. Staff also completed 13 acres of mechanical fuel reduction in WUI areas at Blackwater NWR and 207 acres of chemical treatments. Regional WUI Specialist Gerald Vickers initiated a 50 acre biomass utilization timber harvest at Patuxent NWR in Maryland and contracted over 9 miles of ice storm damage salvage removal. Keith Morris and Steve Stack traveled to the Huron Fire District in South Dakota to assist with their spring burn season, and Dispatcher Mary Elliott participated in 4 details to SACC, EACC, and VICC.

Burns in the Central Zone were hampered by the wet weather and late arrival of spring. Staff did manage to complete 4 New Jersey burns for 94 acres at E.B. Forsythe and Supawna Meadows NWR in March, followed by 5 April burns for 111 acres at Montezuma and Iroquois Refuges in New York. Assistance was provided to the Delaware Water Gap (NPS) on 3 burns totaling 135 acres. Wallkill River and Long Island Refuges completed 4 mechanical treatments for 277 acres. The Sayville grinding project to treat 34 acres at Long Island NWR had to be delayed due to

equipment failure. A forest stewardship plan was completed under contract to begin management of hazardous fuels at Forsythe NWR in New Jersey.

In New England, fire staff conducted 3 spring grass burns for 40 acres on Maine refuges, and completed 22 acres of pile and broadcast burns at Moosehorn NWR. They assisted Maine TNC with prescribed burning at the Ossipee, New Hampshire pine barrens for 131 acres. A contract was awarded at Mashpee NWR in Massachusetts for WUI boundary protection using mechanical fuels reduction techniques, and by December 2010 approximately 25 acres had been treated.

Regional Fuels Coordinator Steven Hubner trained and red-carded 48 firefighters from the AmeriCorps program based at Perry Point, MD. AmeriCorps firefighters participated on numerous prescribed fires both on and off Service lands in Region 5. Estimated salary savings associated with using AmeriCorps firefighters was \$32K.

Regional fire staff worked many hours over the summer and fall supporting deployments to the Gulf oil spill. We entered over 300 employees (Region 5, NCTC, Washington Offic) into the IQCS system and subsequent export of data to ROSS., as well as advising and counseling individuals about required training, dispatch procedures, listing availability, and providing information on responders to the Regional Director office. Many Region 5 fire staff were deployed to the Gulf (some on multiple details) along with employees from other program areas.

Regional and zone fire staff were involved in a variety of training sessions either as lead or unit instructors for numerous courses including S-130/190, S-131, S-211, S-212, S-215, S-244, RX-410, NFDRS, and several RT-130 refresher sessions.

Fire management plans completed and approved in 2010 included Cape May NWR, Eastern Neck NWR and Great Dismal Swamp NWR. Plans near completion or waiting on approval included Stewart B. McKinney NWR and Chesapeake Marshlands Complex. Gerald Vickers worked with NCTC staff, the Region 9 liaison, and several interagency partners to continue 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 much of Rick's time early in the year 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. Rick posted various FireFamily products to the Region 5 sharepoint site so that FMOs could review their zone fire danger situation periodically throughout the season. He also prepared fuel assessments and gathered climate information for our Predictive Services group and the upcoming 2011 fire season.

Regional Fire Biologist Laura Mitchell was involved in a number of fire science initiatives in 2010, including co-authoring a paper on the effects of prescribed fire on secretive marsh bird abundance and nest success on Chesapeake Bay, Maryland; overseeing a ground-breaking marsh elevation survey across Blackwater NWR, using high precision GPS (Real Time Kinematic GPS), to detect differences in marsh accretion/subsidence, and to link these effects to prescribed fire regime; initiating a new partnership with the

National Geodetic Survey (under NOAA), who supported this project with equipment, training, and expert advice; initiating a remote-sensing analysis of tidal wetland deterioration and loss at the Chesapeake Marshlands NWR Complex and nearby Fishing Bay Wildlife Management Area; contributing spatial and fuels data to the LANDFIRE "Refresh" process; completing a ground-truthed, severity geodatabase of the South One Fire at Great Dismal Swamp NWR, including a Methods Report and Burn Severity Key; assisting refuges in executing a multi-refuge contract to spray large-scale *Phragmites australis* infestations via helicopter for FY2010, treating 2,300 acres in coastal Delaware and Virginia. *Phragmites* poses a significant hazardous fuels threat at the wildland-urban interface at coastal refuges in the Northeast, and has severely degraded Region 5 coastal refuge habitats from Maine to Virginia. She also assisted in coordinating, and contributing to, a structured-decision making process on *Phragmites* management, compiling the notes and products from two workshops, and will assist Regional Biologists in developing novel approaches to *Phragmites* management and conducting adaptive management on this issue across Region 5 refuges.

Catherine Hibbard continued as Region 5 representative on the FWS National Fire Outreach Team, becoming chair in October. Catherine also represents FWS on the NWCG Communication, Education, and Prevention Committee. Catherine launched the Region 5 fire internet site and set up the regional fire sharepoint site, which has already seen a lot of use within the Region 5 fire community for sharing and editing fire management plans and other documents. She assisted many R5 refuges in fire outreach including writing articles and fact sheets for projects, providing press releases, putting refuge fire information on the

regional website, developing interpretive panels, and participating in Friends conference calls and meetings. She sent a fire DVD, copy of The Magic Field book, and sample outreach brochures to all refuges and hatcheries in the region. Catherine also began work on The Wildlife Society's Technical Review of Prescribed Fire as a member of the technical review committee.

Partnerships continued to play a major role in addressing the fire suppression, preparedness, and fuels management workload in the Northeast. MOUs for wildland fire support were signed between Chesapeake Marshlands NWR and Maryland Forest Service, Maryland Park Service, and Maryland Wildlife and Heritage Division. A local agreement with the County of Dorchester was signed between the Refuge and County EMS to allow refuge staff to assist with emergency response such as flooding, tornados, wildfire, and snow storms. Gerald Vickers traveled to Ohio River Islands NWR to lead the first ever partnership meeting between refuge staff, West Virginia State Forestry, Monongahela National Forest, and local volunteer fire departments. An MOU between refuges in Maine and the Maine Fire Protection Service was signed in May 2010.

Region 5 was invited to become an Associate Member of the Northeast Forest Fire Protection Committee (aka NFFPC or Northeast Compact), with Rick Vollick serving on the Operations Committee and Fire Science Working Team, and Mike Durfee on the Training Working Team. Several personnel changes were accomplished in 2010. Tifani Holt started work in January as the new Administrative Officer for the Regional Fire Management Office. Following the March departure of KellyAnn Gorman to TNC in Pennsylvania, Art Canterbury transferred from Region 6 in June and took over as the new FMO at Chesapeake Marshlands NWR and the MD-DE fire management zone. After a lengthy period of four years with no FMO in place, the New England zone finally welcomed Dave Walker from Sheldon Hart NWR in October as the new FMO. Dave is stationed at the Rhode Island NWR Complex. Calvin Miller, FWS Dispatcher and Assistant Center Manager at the Northeast Coordination Center in Maine, accepted a new position as Aircraft Dispatcher with the Southern Area Coordination Center in Atlanta. At the end of 2010, Calvin's old position had been advertised twice with no suitable candidates in sight, so the future of this position remains uncertain.

MOUNTAIN/PRAIRIE REGION

Regional Highlights

With another slow wildfire season, both within the region and across the nation, this year will be remembered by many men and women in the Region as a year which many individuals dedicated their 2010 calendar year to responding to the Deep Water Horizon Oil Spill to assist with Gulf oil spill wildlife recovery efforts. After the drill rig disaster in April, Region 6 fire staff from field stations and the Regional Office played key roles in filling incident management positions, and providing an organizational structure that allowed many other Service employees to conduct recovery efforts as technical experts for the rest of the year.

Despite an extremely dry winter and the prospect of a severe fire season in the northern part of the region, wet and cool weather conditions prevailed throughout the spring and summer resulting in only a few significant wildfires. This same weather pattern kept the northern parts of the Prairie side of the region moist all year long, but created persistent hot and dry conditions in the mid-plains section, perhaps setting the stage for a busy fire season in 2011. Despite the challenges to prescribed burning from flooding and moist conditions in parts of the region, and dry, high fire danger conditions in others, by the end of the year the Region 6 fire program had still managed to put together a very good year for fuels treatments.

Changes for the Fish and Wildlife Service fire program, which had looming on the horizon due to shifting Departmental Hazardous Fuels priorities and concerns over the country's economic situation, got much closer with the release of DOI fuels treatment priorities and FY 2011 draft budgets. Plans were drafted to review the Region's fire management program

direction and organizational structure. The Region 6 annual FMO meeting, which had been scheduled for November, was cancelled so that we could prepare instead for a different session in which fire personnel and line officers would work together to develop the framework of the Region 6 fire program of the future.

Many fire management personnel, and an increasing number of employees from other programs, continued to participate as members of incident management teams. One of the stalwarts of team participation had been Rick Willoughby, the regional fire management specialist. However, due to personal reasons, Rick left federal service in the late summer, after years of providing dedicated professional advice and assistance in a wide variety of fire management and fuels treatment duties, and performing as a committed incident management team participant.

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

Prairie Zone personnel responded to the oil spill as their highest priority. A total of 103 dispatch orders were processed and filled throughout the zone as many people cycled through oil spill assignments numerous times. These dedicated individuals rose to the challenge, performed remarkable work, obtained outstanding accomplishments, and made huge sacrifices to support wildlife recovery operations.

Fire Suppression in the Prairie Zone was relatively quiet. Spring Flooding, below normal temperatures, general cloudiness along with frequent wetting rains combined to prevent fire ignitions or subdue fire behavior when fires did occur. In spite of these conditions the Prairie Zone still had a

total of 13 wildfires which burned approximately 4,100 acres of fee title lands in Kansas, Nebraska, South Dakota, and North Dakota. The largest of these fires occurred at Quivira NWR in which 2,700 acres of service lands were burned.

Around 249 prescribed burns were conducted throughout the zone totaling approximately 48,500 acres. This represents a 26% increase from our 2009 accomplishments and is a new historic high for the zone. Other highlights in the zone include the completion of 3 mechanical treatment projects for a total of 55 acres, and the completion of 2,100 acres of burning on other agency lands (not counted in the above total) through a Service First Agreement with the NPS.

This year marked the third year that the Northern Great Plains Fire Use Module was assembled by the North and South Dakota National Park Service and U.S. Fish and Wildlife Service. The Module assisted the NPS and FWS Service with fuel treatment projects in Arkansas, Missouri and Kansas.

The North Dakota Dispatch Center (NDC) once again geared up in anticipation of spring flooding. Localized flooding occurred throughout much of Eastern ND, however the complexity and severity of the flooding was less severe than previous years, and very few additional resources were needed outside the NDC Zone. This was largely due to better preparations and preplanning by Federal, State and Local Officials. NDC was moderately active in filling resource orders to support fire detail opportunities and to support the gulf.

Other significant activities in the Zone this year included: Shane Del Grosso completed a 30 day international detail to Australia; a ground breaking ceremony was held to begin the new construction of administrative

and fire facilities at Arrowwood NWR; the new fire facility at Rainwater Basin was completed; Lostwood NWR experienced a hail storm that caused damage to their facilities and several of the fire vehicles; an additional Marsh Master was purchased and stationed at Sand Lake; the Mid Plains interagency crew was mobilized twice during the fire season; and the Mid Plains District continued to service five National Parks through their "Service First" Agreement.

Personnel moves for the Prairie zone included the following: Marti Dahlin, the Western ND dispatcher, accepted a Logistic/Dispatcher position with the Forest Service in Bismarck, ND; Art Canterbury accepted the FMO position at Black Water NWR in Region 5; and Andy Williams was hired as the new senior firefighter at Audubon NWR.

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

2010 started with good moisture that continued through the fire season. All three geographic areas within the Zone (the Northern Rockies, Eastern Great Basin, and Rocky Mountain) experienced a generally mild fire season with near average numbers for fire occurrence. There were 31 wildfires for roughly 16,600 wildfire acres on FWS lands and 11,900 acres on other ownership within the Zone. There were no extended severity requests in the Zone this year.

The most notable wildfire in the zone and in the region this season was the "Raven/Rat Patch" fire, which burned almost 27,900 of FWS, BLM, State, and private lands. Quick efforts by the Charles M. Russell initial attack forces and cooperators resulted in an impressive 20-mile burnout along refuge access roads, which caught the fire and reduced suppression costs significantly. Even though this fire resulted in approval of

a fire restoration request of almost \$223,000, suppression costs and damages would have been much higher if not for the prompt action by the responding personnel. The crews received letters of appreciation from the Governor of Montana for their efforts, who cited their extraordinary firefighting efforts during the early stages of the fire.

Although the Mountain Zone experienced a wet spring, 2010 was the most productive prescribed fire year recorded in the Zone as burning conditions allowed for late spring and subsequent summer/fall burning. Approximately 11,400 acres were treated in thirty-three burns on twelve Refuges scattered in all four states. All burns were spring or summer burns except for one burn at Benton Lake NWR, and one at Lee Metcalf NWR, where fall burning is utilized. The zone WUI program also contributed to the zone prescribed fire accomplishments by completing nine prescribed burns treating approximately 2,100 acres (included in the total above) and continuing with planning for future projects.

The Mountain Zone also supported Service and interagency response efforts beginning with assistance for the Deep Water Horizon oil spill relief efforts. The Zone contributed more than 300 man days in support of the spill. Other support included fire details to Alaska, Florida, South Dakota, Kansas, Nebraska, Nevada, and Washington DC.

The Mountain Zone experienced several fire personnel changes this year including, John Ashcraft filled the new full-time Engine Boss at Browns Park NWR where he will support the Northwestern Colorado Interagency Fire organization; Jason Fallon, from Grand Canyon NP, filled the vacant Supervisory Fire Technician at Rocky Mountain Arsenal NWR; Mike Hill filled the vacant Fire Technician position at the Jordan field station of the CMR NWR; James Forsythe filled the vacant Prescribed Fire Specialist position for the Eastern MT District, transferring from Medicine Lake NWR to the new position at Bowdoin NWR; and Kevin Beck was converted from a Prescribed Fire Specialist to an AFMO for the Mountain West District to better fit his duties and responsibilities.

ALASKA REGION

Each year brings new staff and new challenges to the fire program. This year Region 7 was proactive in restricting the fire staff to meet anticipated budget cuts. Lisa Saperstein joined the fire staff as the Regional Ecologist, Sid Hall, FMO stationed in Galena AK transferred a joint BLM/USFS fire position in Colorado. The region supported the Deep Water Horizon Oil spill response with support in IQCS as well as sending 5 responders from the fire staff.

Tetlin NWR

There were no wildfires on Tetlin NWR during 2010. Thirteen wildland urban interface (WUI) fuels reduction treatments were completed cooperatively with the State of Alaska Division of Forestry (AKDOF) over 331 acres on State, private, and Service administered lands. A 2007 WUI fuels reduction cooperative agreement with the State was closed out, and a new agreement implemented.

The Refuge fire program assisted AKDOF, BIA, Tanana Chiefs Conference, and the Doyon Native Corporation with planning, funding and instructors for the first Interior Alaska Wildland Fire Academy, a three week program offering basic NWCG courses and hands-on training to local students. Thirty eight students graduated from the Academy, many of whom were employed later in the season on Refuge sponsored fuels treatments and on wildfires with local type 2 hand crews.

Refuge personnel and equipment supported local initial attack, regional Interagency assists, and were mobilized on the Eagle Trail Fire which threatened the communities of Tanacross and Tok in late May and early June. The Refuge fire program facilitated deployment of three technical specialists and

a Strike Team Leader to the Deepwater Horizon Oil Spill.

Strategic planning efforts involving Refuge Managers, the Refuge fire program, and the Regional Office resulted in a program realignment in which the Tetlin FMO has been reassigned to Kanuti Refuge in Fairbanks. The Tetlin-based FMO position has been abolished; to be replaced, as funding permits, with an AFMO. The Kanuti Refuge FMO now manages fire for Arctic; Kanuti; Tetlin; and Yukon Flats Refuges, the largest fire district in the country, requiring coordination with two different suppression organizations: BLM-AFS and the Alaska Division of Forestry. When complete, the realignment will save the Region 1³/₄ FTEs.

Fairbanks Area Refuges

Several fire staffing changes occurred within the Fairbanks based refuges in 2010. Fire Management Officer (FMO) Chase Marshall left in April to fill a FMO position with the U.S. Forest Service. Sam Patten, Fire Management Specialist, retired in October after eight years with the Service. As part of a regional realignment of the fire program, Peter Butteri moved to Fairbanks in October to fill the FMO position. This newly formed Eastern Interior Refuges district now encompasses a landmass of 33.6 million acres.

AFMO Haugen assisted the Alaska Fire Service-Military Zone with 6 prescribed burns throughout April and May. The Fairbanks refuges had a total of 25 wildfires in 2010 beginning with the Sheenjek Fire which was detected on 05/27 on the Yukon Flats NWR (YFR). The last fire of the season, Deadman Riffle was detected on 09/25, also on YFR. The largest and most expensive fire in Alaska this year started on

native corporation lands adjacent of YFR and quickly spread onto refuge lands. The Pat Creek fire illustrated the complex nature of fire management in Alaska where viewpoints of what role fire should play throughout this vast landscape often differ among the various land management agencies.

Public outreach and education among the 14 villages scattered across the Kanuti, Yukon Flats and Arctic refuges continued to be a priority among refuge managers. Two cooperative agreements used to fund WUI fuels reduction projects were implemented in the villages of Chalkysik and Fort Yukon. Through these ongoing efforts the FWS continues to foster improved relationships within these communities.

Alaska SW Refuges

Overall the fire activity was below average for fire occurrences on the Yukon Delta Refuge (2 wildland fires totaling 10,767 acres) and Innoko Refuge (1 wildland fire totaling 4,245 acres) based on the ten year fire history for both. Kodiak had no wildland fires for 2010. Two fires were lightning caused fires and one was unknown (Tuntutiak fire).

The below average fire activity was most likely due to the wetter and cooler summer experienced in the southwestern portions of Alaska, in contrast to the hot and dry summer experienced by most other interior areas of the State.

Innoko Field Camp hazard fuel treatment was initiated, 18 acres thin, 8 acres hand pile. The pile burning will take place in 2100.

Kenai NWR

Early in the fire season, the Kenai NWR participated in its first Fire Program Review. A team of seven reviewers: five from

Region 7, and one each from Region 3 and the Fire Branch, conducted the review during the week of May 17-21. The Refuge learned much from the final report and prepared a prioritized action plan in response.

In addition to the fire staff four temporary fire positions (two GS-5 and two GS-4) were filled in 2010, using designated ARRA Youth Hiring Initiative funds.

Statistics for the fire season on the Kenai and Kodiak Refuges were as follows: 5 wildfires at Kenai and 1 wildfire at Kodiak, 4 human ignitions and 1 lightning fire at Kenai; the Kodiak fire was human-caused; 3 Kenai fires were in FULL, 1 fire was in CRITICAL, and the 65-acre lightning fire (McLain Lake) was in LIMITED; the Kodiak fire was in a MODIFIED (FULL) Fire Management Option area; total wildfire acres at Kenai were 65.4; total wildfire acres at Kodiak were 3.0; all fires on both Refuges were suppressed.

The early fire season in Alaska was very active and for the year, more than 1 million acres burned. Fire danger indices were at extreme levels over much of the state in May and early June, and the Kenai Peninsula was no exception. The decision to suppress the lightning-caused #303 McLain Lake Fire (a non-standard response in LIMITED) was based upon statewide fire activity and fire danger levels, the scarcity of available firefighting resources in Alaska, and the earliness of the fire season (the potential for the fire to grow large and threaten area values at risk).

While the fire danger dropped dramatically on the Kenai Peninsula and Kodiak Island in June, when a series of wetting rains affected South-central Alaska, the rest of the state continued to experience an active fire season. The Kenai Refuge responded by

sending five firefighters and three engines off-Refuge under State Pre-Position resource orders (Kenai-Kodiak, McGrath and Tok), one HECM to the #208 Eagle Trail Fire, one Type-4 Refuge Engine (with three firefighters) to the #219 Gilles Creek Fire, and one Type-6 Refuge Engine (with a USDA Forest Service engine crew) to support the #222 Chitanatala and #240 Cascaden Ridge fires.

Project work accomplishments in FY2010 were as follows: the Skilak Loop Habitat Improvement Project (123 acres of mixed spruce-hardwood forest were cut/treated through an ARRA-funded mechanical service contract, and 21 acres of slash piles

were burned by Refuge firefighters); the Moose Research Center Habitat Improvement Project (21 acres of mixed spruce-hardwood forest were mechanically cut and piled by Refuge firefighters, and 17.5 acres of slash piles were burned); and, the Funny River Road Fuel Break (6 acres of slash piles were burned by Refuge firefighters).

The Refuge Fire Program also supported the successful completion of one fire-related research project on the Refuge in 2010 – Dr. Phil Higuera’s lake sediment (wildfire ash deposition) study, which had been active on the Refuge since 2005.

PACIFIC SOUTHWEST REGION

Fire Season Overview

The year 2010 was, on average, a slow fire year, with approximately 7,150 wildfires in California and Nevada and only 18 wildfires on refuge lands.

The state of Nevada had an above average year of precipitation which increased grass and fine fuel loads and posed a higher than normal fire risk. California and the Klamath Basin experienced average fire danger conditions although several human-caused wildfires occurred in the Klamath Basin.

Regional Highlights

The year 2010 can best be described as an all-hazard readiness and response period, with the Gulf Coast oil spill response taking full focus.

Approximately 125 Service employees from the region responded to the oil spill with a total of 2,491 days of deployment. The fire program coordinated all response ordering and qualification tracking and provided 712 days of response time on incident.

This year, the region completed fire readiness reviews for all fire management zones and sponsored training for fire and refuge management staff, including priority Wildland Fire Decision Support System training (WFDSS).

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.

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 communications plan, and social media efforts.

The region accomplished 99 percent of its National Fire Plan targets by treating 43,172 acres of hazardous fuels and wildlife habitat areas; 40,187 acres treated through prescribed fire, 1,596 acres by mechanical means, and 1,389 acres utilizing goats and or chemical treatments.

Regional Summary

- 18 wildfires on refuge lands
- 40,187 acres of prescribed fire treatments
- 43,172 acres total National Fire Plan treatments
- 43 permanent and 12 temporary fire employees
- 1 new type 3 fire engine
- 1 new fire facility (San Diego NWRC) & initial work for new fire facility at Sacramento NWRC
- 125 employees supported oil spill response
- \$277,577 for Emergency Stabilization & Rehabilitation projects
- \$2.076 million HFR funding
- \$75,000 RFA grant funding to 8 rural fire departments
- \$47,000 of severity funding
- 3 private land forestry and or best practice workshops supported by R8 fire program
- Hired a Regional Fuels Management Specialist (Glenn Gibson)
- 1 international fire assignment (Australian Community Engagement/Fire Information-Miriam Morrill)

FIRE MANAGEMENT ZONE HIGHLIGHTS

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

Dave Goheen, Fire Management Officer

- 7 wildfires on refuge lands (3,320 acres); 6 human-caused
- 1 BAER & ESR plan
- 20,719 acres treated with prescribed fire and 20 acres of mechanical treatments
- Interagency assistance on prescribed fire projects
- 6 fire fighters involved in oil spill response
- Local outreach events supported by fire personnel
- \$19,500 RFA grants to local/volunteer fire departments

The zone had a moderate fire season with seven wildfires on refuge lands, burning a total of 3,320 acres. The Hay Fire, burned 3,083 acres, threatened several structures, private property, and temporarily closed a major highway. Fire rehabilitation and stabilization efforts were handled primarily by assigned fire management staff. Emergency stabilization and rehabilitation (ESR) funding was request and authorized for the protection of sensitive resources potentially exposed by the Hay Fire.

Zone fire personnel and collateral employees assisted in various incident response efforts, including the Gulf Coast oil spill. Prescribed Fire Specialist, Ruth Johnson, assisted with plans for a local Type III team and several engine modules and overhead supported the Southern Oregon/Northeast California Task Force during local incidents.

The zone treated 20,719 acres of hazardous fuels and wildlife habitat through the use of prescribed fire and 20 acres were treated through mechanical means.

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

Fire personnel assisted with scoping and issue identification for the Klamath Basin Comprehensive Conservation Plan and were actively involved with interagency cooperative efforts and local smoke management.

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.

The zone provided assistance to the Regional Fire Program by sending their Prescribed Fire Specialist to act as the Regional Assistant Fire Management Officer - Operations for four weeks.

California North Central Valley FMZ:
Northern California Sacramento Valley.
Dale Shippelhoute, Fire Management Officer

- 5 wildfires on refuge lands (1.0 acres); 9 threat fires
- 75 resource orders processed for oil spill
- 2 new firefighter positions hired
- 3 Ready Reserve firefighter training courses
- \$45,000 RFA grants to volunteer fire departments
- 31 prescribed fire projects (1,422 acres)
- 6 goat grazing projects in the WUI
- 4 outreach events supported by the fire program

It was a slow fire season for the zone with ten wildfires on refuge lands burning only 1.0 acre total. The zone did spend a large amount of time processing resource orders for employees (Sacramento Field Office and zone refuge programs) responding to the Gulf Coast oil spill and other incidents; supported 991-days of deployment. The Assistant Zone Fire Management Officer, Kipp Morrill, was sent on two rotations to the oil spill; assignments as Helicopter Manager and Deputy Branch Director, Operations Section Chief, Area Coordinator.

The zone provided assistance to the Regional Fire Program by sending the Zone Fire Management Officer to act as the Regional Assistant Fire Management Officer - Operations for three weeks.

The zone was very active supporting local fire departments through the implementation of three firefighter training courses through the

Department of Interior's Ready Reserve program and coordinating five Rural Fire Assistance grants to volunteer fire departments. The zone also developed a cooperative agreement to station a Service fire engine at the Tehama County Fire Department station and better cover fire response needs on northern zone area refuge lands.

The zone completed 1,422 acres of prescribed fire treatments and additional acres of treatments through goat grazing for hazardous fuels reduction and wildlife habitat management.

The Sacramento National Wildlife Refuge Complex started the initial construction phases of a new fire facility.

Zone fire personnel were involved with many intra-agency 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 efforts.

Fire personnel also supported a number of outreach and education effort such as the Sacramento National Wildlife Refuge's Junior Firefighter program and other fire and refuge community events.

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

- 15 initial attack responses (990 acres) on or threatening refuge lands
- 39 red cards processed and 12 employees deployed to support the oil spill response
- Bob Parris, Deputy Project Leader, R8 Line Officer rep for LOT Team
- 18 prescribed fire projects (2,320 acres)
- 13 mechanical projects (720 acres)
- First prescribed fire at San Francisco Bay NWR complex in over ten years
- Assisted the National Prescribed Fire Training in Florida with a field coordinator and trainees
- Tracey Germino, Zone Budget Technician assisted in developing the National Fire

- Budget and Finance workshop in California.
- \$10,500 in RFA grants

Although it was a slow fire season throughout the State of California and Nationally, the San Luis Fire Management Zone was busy.

The zone sent twelve employees from San Luis National Wildlife Refuge Complex, San Francisco NWRC, Kern NWRC and the Stockton Field Office to assist on the oil spill. The Zone Fire Management Officer, Peter Kelly was assigned to the oil spill as a Deputy Branch Director, Operations Section Chief, Area Coordinator, while other zone area employees filled positions such as Refuge Liaison, Biologist, and Technical Specialist.

The zone completed the first prescribed fire in over ten years at the San Francisco NWRC which was focused on reducing hazardous fuels in the wildland urban interface and enhancing endangered species habitat.

The zone completed 18 prescribed fire projects treating over 2,320 acres and 13 mechanical projects treating 720 acres for hazardous fuels reduction and habitat management objectives. The zone also assisted the Bureau of Land Management on several prescribed fire projects in the coastal foothill region of central California.

This year the zone assisted the National Prescribed Fire Training Center in Tallahassee, Florida by sending the Fire Management Officer as a field coordinator. During this assignment three student trainees had their task books completed. The Fire Management Officer also provided assistance to the Regional Fire Program by acting as the Regional Assistant Fire Management Officer – Operations for three weeks.

Additionally, the zone Budget Technician, Tracey Germino, assisted in the development and coordination of the National Fire Budget and Finance Workshop in San Diego, California. The Deputy Refuge Manager of the San Luis National Wildlife Refuge Complex, Bob Parris, served another year as the Region 8 LOT Team Representative.

Southern California FMZ: Southern California Inland and Coast. John Truett, Fire Management Officer (position vacated and filled with detailers)

- 1 wildfire on refuge lands (27 acre)- *refuge fuel treatment success story*
- 65 emergency and mutual aid responses
- 45 employees deployed to the oil spill
- Assisted in several interagency training efforts
- 2 refuge mechanical treatment projects in the WUI (1,331 acres)
- Assisted with 1 prescribed fire on Stillwater NWR in Nevada
- Assisted with several state and local partner prescribed fire projects
- Supported numerous fire safe council planning, project and outreach efforts.
- New cooperative fire station completed (7-years planning and construction)
- 1 graduate from the UNLV Fire/401 Program (Jim Mitchell)

2010 was a slow fire season for the zone with only one wildfire on refuge lands (Jamacha Fire). The wildfire did produce a great fuels treatment and cooperative fire response success story. For years, the San Diego National Wildlife Refuge has maintained a fuels break around a neighboring community. The fuels break and quick fire response of the San Diego NWR Engine 58 helped local unified command control the fire at 27 acres, protecting 930 homes.

Funding for fuel reduction treatments continues to decline. The San Diego National Wildlife Refuge Complex and Hopper Mountain NWRC were able to complete fuel treatment projects this year but the largest accomplishment was through a US Fish & Wildlife Service and the San Diego Rural Fire Protection District partnership to work with homeowners on defensible space. The Service has provided \$942,000 toward this partnership since 2002 which has resulted in the protection of nearly 2,000 homes and nearly 14,000 acres. With the declining budget, this program can no longer be supported.

The zone supported a number of interagency fire training efforts including the San Diego County Wildland Fire Drill and DOI Engine Academy, Southwest College Wildland Firefighter Academy. Zone Fire Engine Captains Gordon Tamplin and Jim Mitchell provided strong support to these training efforts and Jim Mitchell was also successful in completing the University of Nevada Las Vegas 410 Series Training Program in May 2010.

The zone supported a number of interagency committees and teams including the Border Agency Fire Council and Forest Area Safety Taskforce. Zone Wildland Urban Interface Coordinator, James Roberts continues to provide collaborative support for numerous fire safe council and partner agencies in community wildfire protection planning efforts.

Nevada FMZ: State of Nevada

Tim Rash, Acting Fire Management Officer

- 8 wildfires on or threatening refuge lands
- 7,521 acres of hazardous fuels treated
- 2,000 acres of WUI area treated with prescribed fire and 654 acres treated through goat grazing or mechanical means
- Developed draft EA for a pilot fire reintroduction into a Ponderosa pine ecosystem at Desert NWR
- Completed programmatic burn plan for Stillwater NWR
- Strong FWS non-fire staff (militia) support of Nevada Zone fire program (wildfire and prescribed fire)
- \$45,000 provided to support the Interagency Statewide Fuels Assistance Agreement
- Supported the Las Vegas Interagency Helitack Program with a FWS detailer
- FWS engine detail to Pahrangat NWR
- Zone supported by over 30 agencies/partners on wildfire and fuel treatment projects

During 2010, the Nevada Fire Zone continued to explore the limits of the “do more with less” work model. In late June, Glenn Gibson, Zone FMO, moved into a new position as Region 8 Fuels Specialist, and Tim Rash, Zone AFMO has moved into the Acting Zone FMO position. Although the program suffered from a skeletal staffing situation, the program of work

progressed to a new peak level, thanks in great part to interagency partners and collateral staff.

Ever more creative and cutting edge means of getting the job done were put into practice this year. Refuges provided \$45,000 of funding toward the Interagency Statewide Fuels Assistance Agreement and programmatic burn plans were established for wetland broadcast burning at Stillwater NWR. The use of non-Fire FWS “militia” on wildfires and prescribed burning was greatly expanded (line officers, biologists, Ecological Services, equipment operators, and Partners Program staff from seven offices). Dedicated “militia” were provided PPE and a support equipment cache was established.

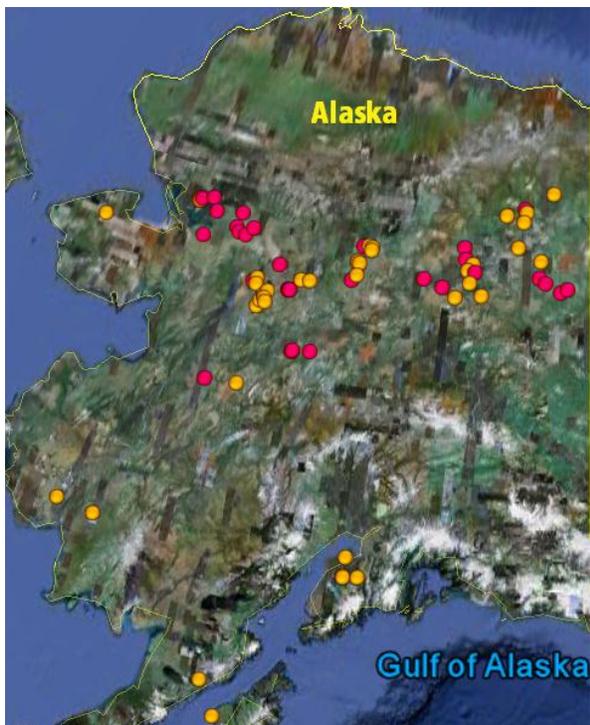
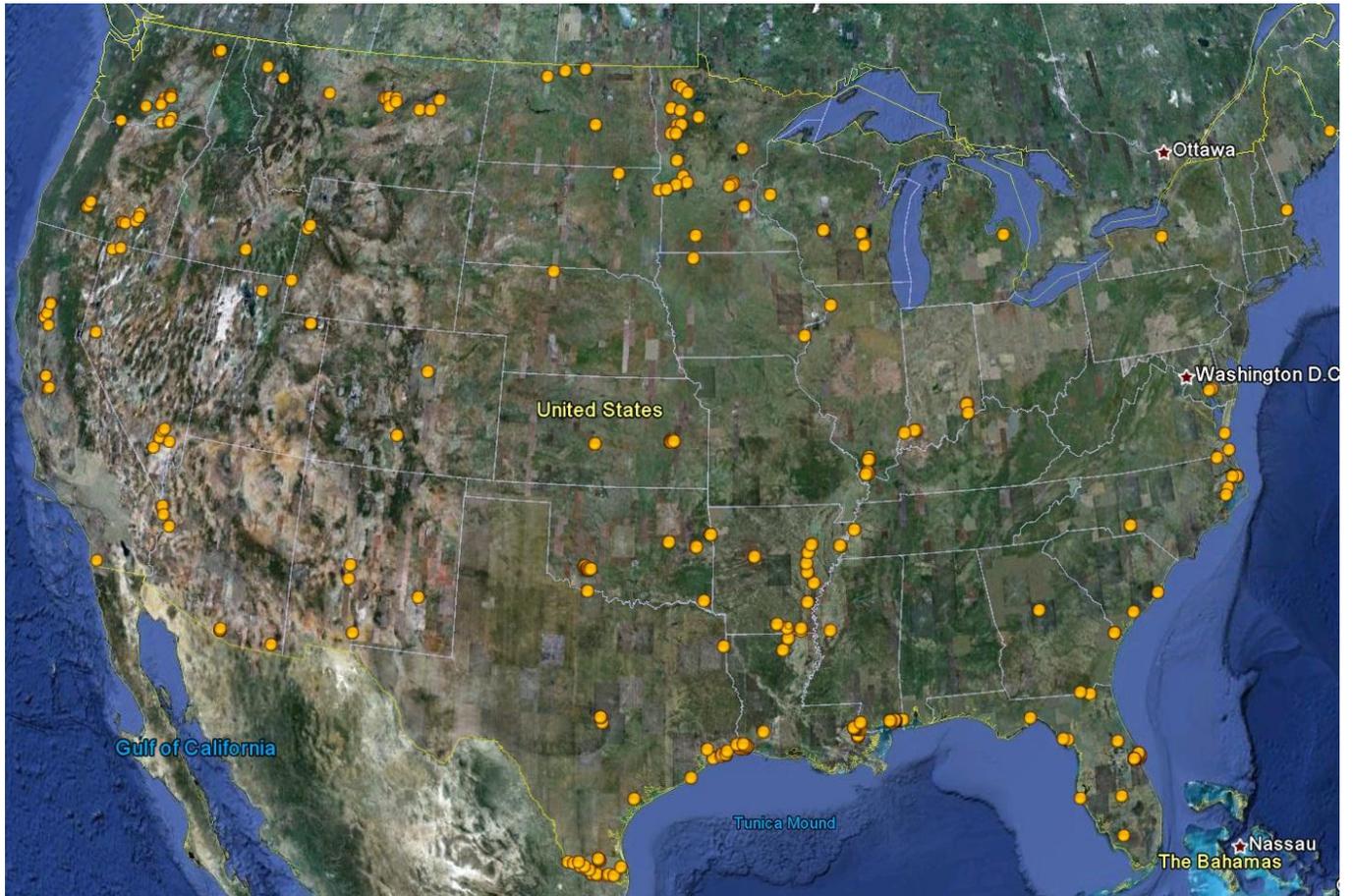
There were eight wildfires on refuge lands this year, including the Ramsey Weeks fire which damaged improvements and threatened a State Parks residence. The 700-acre Moapa Fire

burned in sensitive T&E habitat that is in-progress of transfer into FWS ownership. This year, Nevada Zone completed 7,521 acres of hazardous fuels treatment, spanning 30 treatment units at four Refuges. The total includes 2,000 acres of WUI burning, plus prescribed goat grazing (576 acres) and mechanical fuel breaks (78 acres).

The zone took maximum advantage of close interagency relationships; wildfire response and fuel treatment support by over 30 agencies and departments, including federal, State, Tribal, County, local and the Department of Defense.

The zone continued support for the interagency helitack program stationed in Las Vegas with one FWS detailer as well as coordinated a Service engine detail to the Pahrangat NWR and an Acting Fire Management Officer position during strength-of-force.

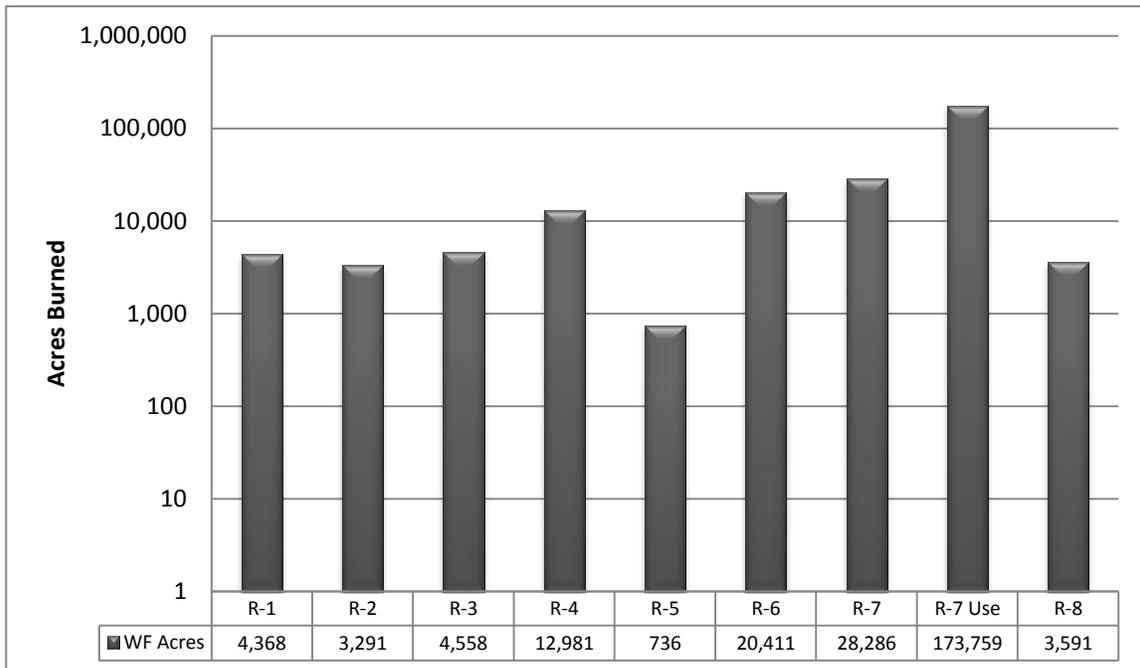
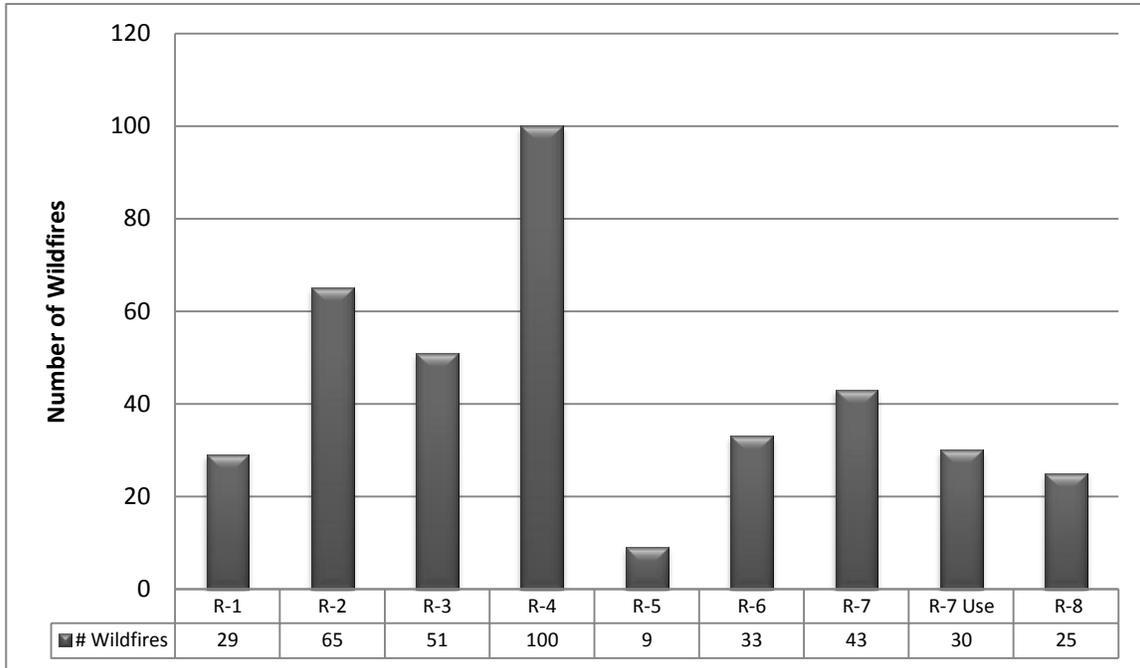
2010 WILDFIRE ACTIVITY



- = Wildfires
- = Wildfires for Resource Benefit



WILDFIRES 2010



WILDFIRES

by State

2010

<u>State</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
*Alaska	73	202,045.6	67,887.8	269,933.4
Arizona	9	21.9		21.9
Arkansas	17	253.5	20.0	273.5
California	12	267.6	0.2	267.8
Colorado	2	0.6		0.6
Florida	23	3,589.7		3,589.7
Georgia	5	7.2		7.2
Hawaii	1	1.0		1.0
Idaho	1	642.0	1,159.0	1,801.0
Illinois	9	66.7		66.7
Indiana	7	1,375.6		1,375.6
Iowa	2	258.0		258.0
Kansas	7	2,949.1	2,265.9	5,215.0
Louisiana	27	9,026.5	600.0	9,626.5
Maine	1	0.1		0.1
Maryland	2	1.1		1.1
Minnesota	26	2,815.5	1,014.0	3,829.5
Mississippi	17	72.2	1.0	73.2
Montana	12	16,576.3	11,932.3	28,508.6
Nebraska	1	0.1		0.1
Nevada	7	3.0	600.9	603.9
New Hampshire	2	0.4		0.4
New Mexico	4	3.2		3.2
New York	1	694.0		694.0
North Carolina	8	6.6		6.6
North Dakota	4	857.1	512.5	1,369.6
Ohio	1	24.0	46.0	70.0
Oklahoma	19	1,608.6	1,691.7	3,300.3
Oregon	15	6,712.8	34.0	6,746.8
Puerto Rico	1	18.0		18.0

South Carolina	2	5.0		5.0
South Dakota	2	4.3		4.3
Tennessee	1	2.0		2.0
Texas	33	1,657.6	231.0	1,888.6
Utah	1	10.3		10.3
Virginia	2	40.1		40.1
Washington	18	332.6	3,446.0	3,778.6
Wisconsin	6	18.2	6.0	24.2
Wyoming	4	13.1		13.1
Total	385	251,981.2	91,448.3	343,429.5

* Wildfires for resource benefit have been added to Alaska totals. 30 use fires for 173,759.2 acres
Natural outcrops 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>
Columbia NWR	1	5.0		5.0
Hanford/Saddle Mtn. NWR	5	3.1		3.1
Hart Mtn. Natl. Antelope Refuge	3	3,350.1		3,350.1
James Campbell NWR	1	1.0		1.0
Little Pend Oreille NWR	5	268.8	721.0	989.8
Little White Salmon NFH	1	0.1		0.1
Malheur NWR	3	4.0		4.0
McNary NWR	4	78.0	2,754.0	2,832.0
Mid-Columbia River NWRC	2	15.5	5.0	20.5
Minidoka NWR	1	642.0	1,159.0	1,801.0
Sheldon NWR	2	0.4		0.4
Toppenish NWR	1	0.1		0.1
Total	29	4,368.1	4,639.0	9,007.1

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	32.1		32.1
Aransas NWR	1	0.3		0.3
Balcones Canyonlands NWR	3	52.7		52.7
Bill Williams River NWR	1	0.1		0.1
Bitter Lake NWR	1	1.0		1.0
Bosque Del Apache NWR	1	0.1		0.1
Brazoria NWR	1	150.0		150.0
Buenos Aires NWR	4	0.4		0.4
Caddo Lake NWR	1	0.1		0.1
Deep Fork NWR	1	1.0		1.0
Havasu NWR	3	3.4		3.4
Laguna Atascosa NWR	1	0.2		0.2
Leslie Canyon NWR	1	18.0		18.0
Little River NWR	1	0.1		0.1
Lower Rio Grand Valley NWR	13	135.1		135.1
McFaddin NWR	6	1,262.2	95.0	1,357.2
Ozark Plateau NWR	2	132.0	80.0	212.0
South Texas Refuges Complex	4	24.8	136.0	160.8
Santa Ana NWR	1	0.1		0.1
Sequoyah NWR	2	12.0		12.0
Sevilleta NWR	2	2.1		2.1
Tishomingo NWR	1	0.5		0.5
Wichita Mountains Wildlife Refuge	12	1,463.0	1,611.7	3,074.7
Total	65	3,291.3	1,922.7	5,214.0

WILDFIRES

Midwest Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Agassiz NWR	5	1,490.0	509.0	1,999.0
Big Oaks NWR	4	1,331.0		1,331.0
Crab Orchard NWR	4	0.4		0.4
Cypress Creek NWR	4	66.0		66.0
Detroit Lakes WMD	6	1,251.0	189.0	1,440.0
Fergus Falls WMD	1	36.0		36.0
Glacial Ridge NWR	1	1.0		1.0
Hamden Slough NWR	1	3.0		3.0
Horicon NWR	2	0.3		0.3
Iowa WMD	1	155.0		155.0
Leopold WMD	1	2.0	6.0	8.0
Minnesota Valley NWR	2	0.2		0.2
Morris WMD	4	22.0	316.0	338.0
Necedah NWR	2	15.8		15.8
Ottawa NWR	1	24.0	46.0	70.0
Patoka River NWR	3	44.6		44.6
Port Louisa NWR	1	103.0		103.0
Rice Lake NWR	1	1.0		1.0
Sherburne NWR	4	9.3		9.3
St. Croix WMD	1	0.1		0.1
Upr MS River-Savanna District	1	0.3		0.3
Windom WMD	1	2.0		2.0
Total	51	4,558.0	1,066.0	5,624.0

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	4	4.0		4.0
Bayou Sauvage NWR	5	0.9		0.9
Big Branch Marsh NWR	7	84.7		84.7
Bogue Chitto NWR	1	0.5		0.5
Cabo Rojo NWR	1	18.0		18.0
Cache River NWR	4	191.0	20.0	211.0
Cape Romain NWR	1	4.0		4.0
Chickasaw NWR	1	2.0		2.0
D'Arbonne NWR	1	3.4		3.4
Egmont Key NWR	1	0.1		0.1
EF Hollings Ace Basin NWR	1	1.0		1.0
Felsenthal NWR	2	19.7		19.7
Florida Panther NWR	1	1.0		1.0
Grand Bay NWR	1	1.0		1.0
Holla Bend NWR	1	0.5		0.5
Lacassine NWR	1	25.0		25.0
Lake Wales Ridge NWR	1	2.2		2.2
Lake Woodruff NWR	1	0.2		0.2
Lower Suwannee NWR	2	0.2		0.2
Merritt Island NWR	8	3,170.5		3,170.5
MS Sandhill Crane NWR	16	71.2	1.0	72.2
Okefenokee NWR	2	6.1		6.1
Overflow NWR	4	35.4		35.4
Pee Dee NWR	1	1.0		1.0
Piedmont NWR	1	0.9		0.9
Pocosin Lakes NWR	1	1.0		1.0
S. Arkansas Refuges Complex	1	2.0		2.0
Sabine NWR	10	8,865.1	600.0	9,465.1
Savannah-Pickney Natl Wildl Rfgs	2	0.2		0.2
Southeast Louisiana Refuges	1	45.0		45.0

St. Johns NWR	8	414.8		414.8
St. Marks NWR	1	0.7		0.7
Swanquarter NWR	1	0.5		0.5
Upper Ouachita NWR	1	1.9		1.9
Wapanocca NWR	2	2.5		2.5
White River NWR	3	2.4		2.4
Total	100	12,980.6	621.0	13,601.6

WILDFIRES

Northeast Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Back Bay NWR	1	40.0		40.0
Chesapeake Marshlands NWRC	2	1.1		1.1
Eastern Shore of VA NWR	1	0.1		0.1
Great Bay NWR	2	0.4		0.4
Great Dismal Swamp NWR	1	0.1		0.1
Montezuma NWR	1	694.0		694.0
Moosehorn NWR	1	0.1		0.1
Total	9	735.8	0.0	735.8

WILDFIRES

Mountain-Prairie Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Baca NWR	1	0.1		0.1
Bear River Migratory Bird Rfg.	1	10.3		10.3
Benton Lake NWR	1	0.1		0.1
Charles M. Russell NWR	9	16,573.7	11,932.3	28,506.0
Chase Lake Prairie Proj. WMD	1	16.0	242.0	258.0
Cokeville Meadows NWR	1	0.1		0.1
Flint Hills NWR	6	255.1	1,295.9	1,551.0
Fort Niobrara NWR	1	0.1		0.1
J. Clark Salyer NWR	2	841.0	270.5	1,111.5
Lost Trail NWR	1	2.4		2.4
National Elk Refuge	2	0.2		0.2
Quivira NWR	1	2,694.0	970.0	3,664.0
Rocky Mountain Arsenal NWR	1	0.5		0.5
Sand Lake NWR	1	1.0		1.0
Seedskaadee NWR	1	12.8		12.8
Swan River NWR	1	0.1		0.1
Upper Souris NWR	1	0.1		0.1
Waubay NWR	1	3.3		3.3
Total	33	20,410.9	14,710.7	35,121.6

WILDFIRES

Alaska Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Arctic NWR	4	737.3		737.3
Becharof NWR	1	640.0		640.0
Innoko NWR	1	983.1	3,261.8	4,244.9
Kanuti NWR	9	21,016.2	17,148.2	38,164.4
Kenai NWR	5	65.4		65.4
Kodiak NWR	1	3.0		3.0
Koyuku NWR	9	260.3		260.3
Koyukuk/Nowitna NWR	7	20,617.7	3,417.0	24,034.7
Nowitna NWR	3	15,935.0		15,935.0
Selawik NWR	14	3,149.2	21,125.0	24,274.2
Yukon Delta NWR	2	10,767.0		10,767.0
Yukon Flats NWR	17	127,871.4	22,935.8	150,807.2
Total	73	202,045.6	67,887.8	269,933.4

Wildfires for resource benefit has been added into the totals. 30 fires, 173,759.2 acres

WILDFIRES

Pacific Southwest Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Delevan NWR	2	0.2	0.2	0.4
Desert National Wildlife Range	4	0.7		0.7
Klamath Marsh NWR	7	3,320.4		3,320.4
Moapa Valley NWR	1	0.1	600.9	601.0
Sacramento River NWR	4	0.8		0.8
San Diego NWR	1	27.5		27.5
San Joaquin River NWR	2	2.0		2.0
San Luis NWR	2	237.0		237.0
Stillwater NWR	1	2.1		2.1
Sutter NWR	1	0.1		0.1
Total	25	3,590.9	601.1	4,192.0

WILDFIRES by Cause

Cause	# Fires	FWS Acres	Other Owner Acres	Total Acres
Natural	142	230,377.8	83,861.1	314,238.9
Debris / Vegetation Burn	34	1,700.6	785.0	2,485.6
Equipment Use	24	4,754.1	1,020.0	5,774.1
Exceeded RX Prescription	4	61.5	300.0	361.5
Incendiary	34	3,798.0	966.7	4,764.7
Misuse of Fire	13	93.6	132.0	225.6
Open or Outdoor Fire	22	98.1	288.0	386.1
Other Causes	25	3,901.2	0.0	3,901.2
Smoking	7	77.4	0.0	77.4
Undetermined	80	7,118.9	4,095.5	11,214.4
Total	385	251,981.2	91,448.3	343,429.5

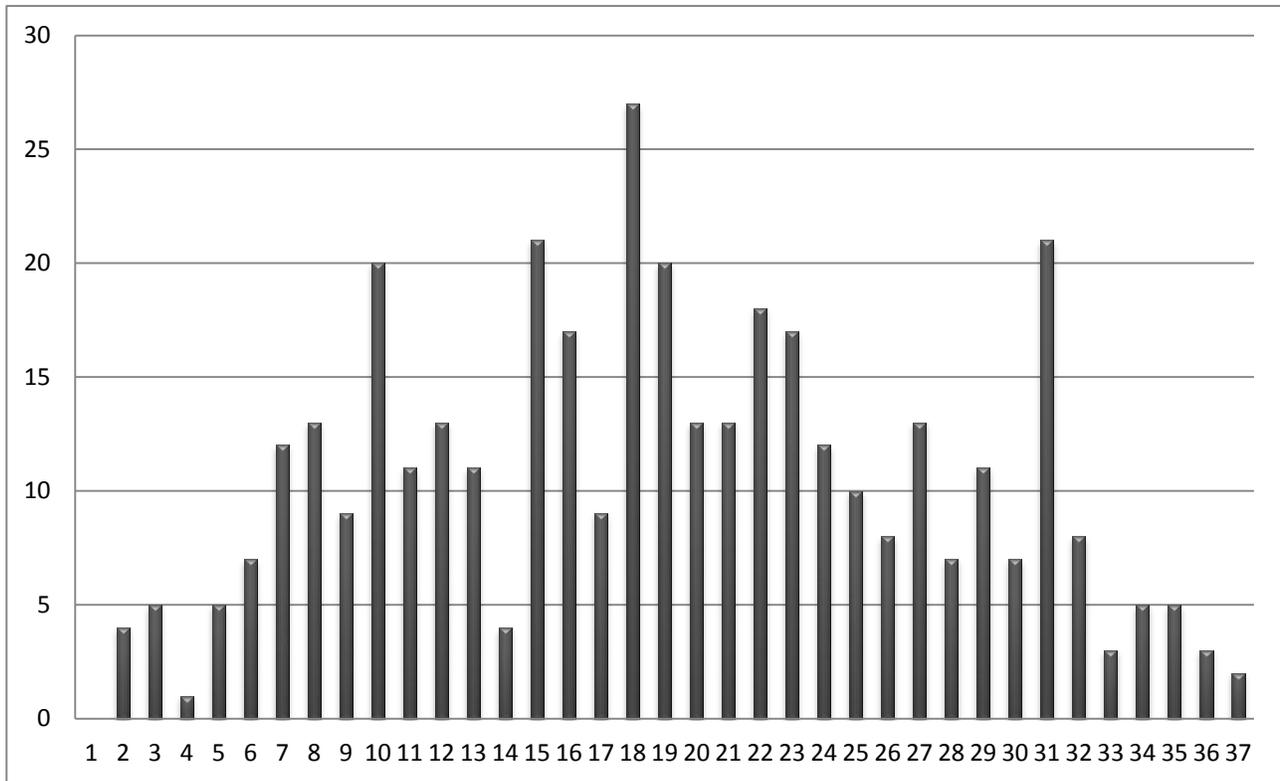
Includes wildfires for resource benefit and natural outs.

WILDFIRES by Size Class

Size Class	# Fires	FWS Acres	Other Owner Acres	Total Acres
A (0 - .2)	108	12.6	1,048.7	1,061.3
B (.3 - 9.9)	146	281.5	431.0	712.5
C (10 - 99.9)	72	2,215.0	22,460.8	24,675.8
D (100 - 299.9)	18	3,221.8	1,372.0	4,593.8
E (300 - 999.9)	17	10,405.7	4,824.8	15,230.5
F (1000 - 4999.9)	13	28,620.2	19,996.4	48,616.6
G (5000 +)	11	207,224.4	41,314.6	248,539.0
Total	385	251,981.2	91,448.3	343,429.5

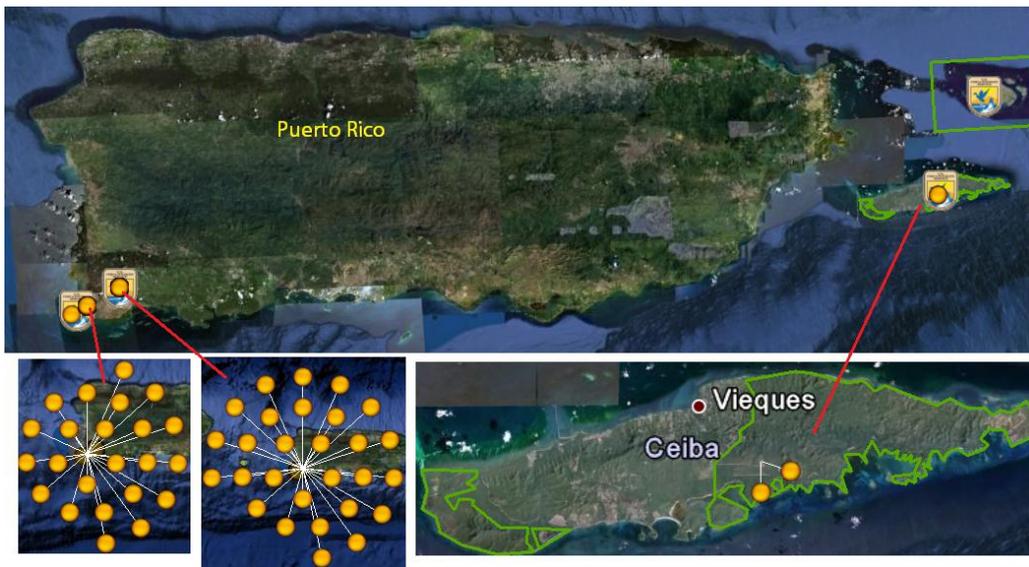
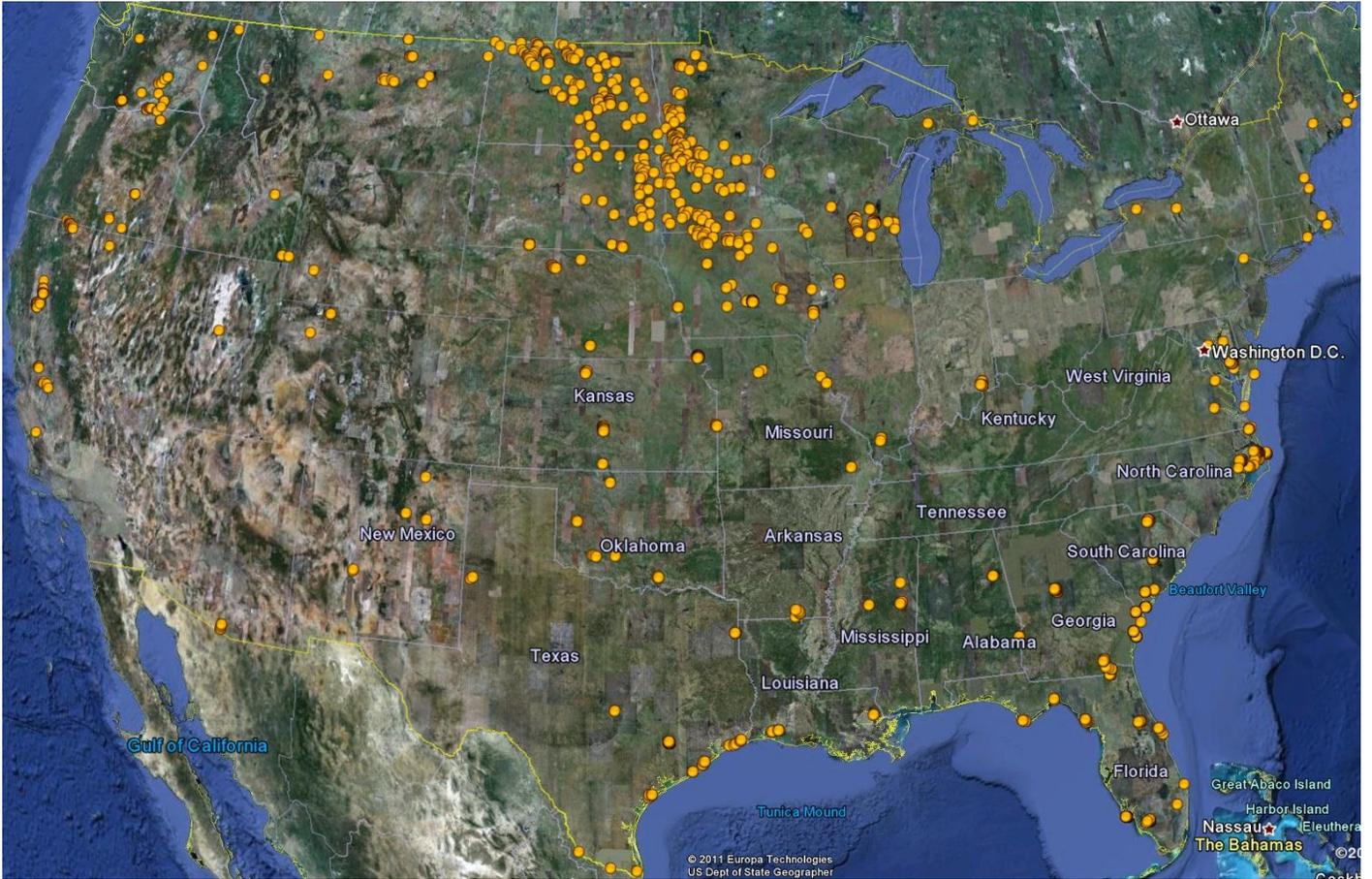
Includes wildfires for resource benefit and natural outs.

WILDFIRE STARTS - 2010 10 - Day Period

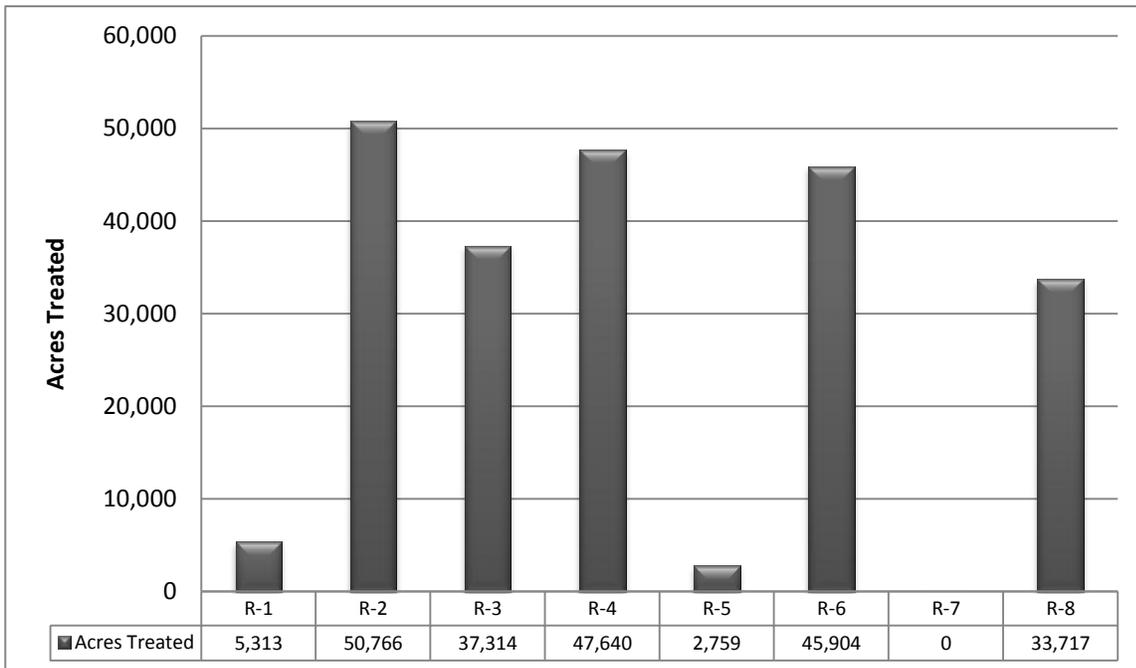
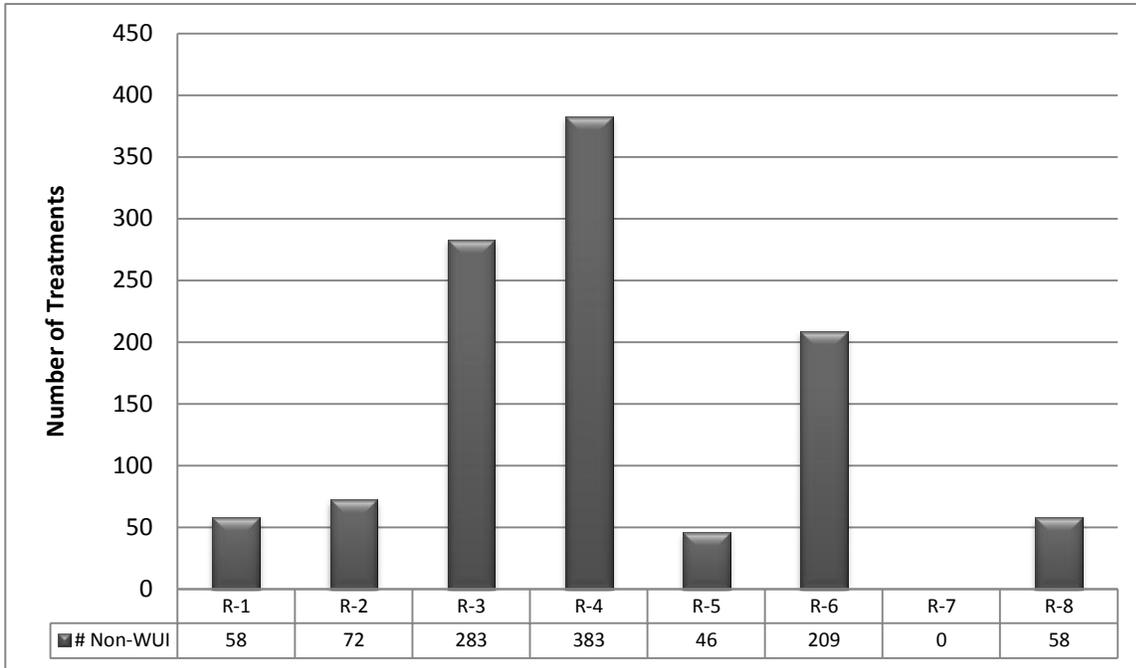


<u>Period</u>	<u>Dates</u>	<u>Period</u>	<u>Dates</u>	<u>Period</u>	<u>Dates</u>
1	Jan 01 - Jan 10	13	May 01 - May 10	25	Aug 29 - Sept 07
2	Jan 11 - Jan 20	14	May 11 - May 20	26	Sept 08 - Sept 17
3	Jan 21 - Jan 30	15	May 21 - May 30	27	Sept 18 - Sept 27
4	Jan 31 - Feb 09	16	May 31 - June 09	28	Sept 28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

2010 NON-WUI ACTIVITY



NON-WUI TREATMENTS 2010



NON-WUI TREATMENTS by State 2010

<u>State</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Chem/Other Acres</u>	<u>Total Acres</u>
Alabama	6	1,023.0	0.1		1,023.1
Arizona	5	7,146.0			7,146.0
Arkansas	5	1,139.0			1,139.0
California	56	29,977.5	434.0	146.0	30,557.5
Colorado	2	101.0			101.0
Florida	72	23,703.0	316.0		24,019.0
Georgia	75	8,163.0	702.0		8,865.0
Idaho	5	244.0	506.0		750.0
Illinois	8	651.0			651.0
Indiana	8	3,088.0			3,088.0
Iowa	61	7,607.1			7,607.1
Kansas	26	7,151.0			7,151.0
Louisiana	8	1,214.1	272.0		1,486.1
Maine	13	60.3	109.6		169.9
Maryland	21	1,572.1	13.0	26.0	1,611.1
Massachusetts	3		207.0		207.0
Michigan	2	60.0	256.0		316.0
Minnesota	133	18,234.5	70.0	370.0	18,674.5
Mississippi	7	1,953.4			1,953.4
Missouri	24	1,452.0			1,452.0
Montana	18	6,076.5	15.0		6,091.5
Nebraska	10	2,505.0	38.0		2,543.0
Nevada	1	80.0			80.0
New Hampshire	1		24.0		24.0
New Jersey	1		175.0		175.0
New Mexico	5	630.0			630.0
New York	2	114.0	30.0		144.0
North Carolina	101	3,850.0	978.0	382.0	5,210.0
North Dakota	109	19,273.0			19,273.0
Oklahoma	11	727.2			727.2

Oregon	24	4,788.0	347.5	362.0	5,497.5
Puerto Rico	55	14.0	329.0	14.0	357.0
Rhode Island	1		25.0		25.0
South Carolina	54	2,964.0	623.0		3,587.0
South Dakota	43	9,805.0			9,805.0
Texas	51	42,184.9	78.2		42,263.1
Utah	2	1,598.0			1,598.0
Virginia	4	403.0			403.0
Washington	30	413.0	1,726.5	5.0	2,144.5
Wisconsin	45	4,310.7	252.0	225.0	4,787.7
Wyoming	1	79.0			79.0
Total	1,109	214,355.3	7,526.9	1,530.0	223,412.2

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>
Bear Lake NWR	3		506.0		506.0
Camas NWR	1	210.0			210.0
Cold Springs NWR	2			70.0	70.0
Columbia NWR	3	70.0			70.0
Conboy Lake NWR	14		1,321.0		1,321.0
Hanford/Saddle Mtn. NWR	4	125.0	400.0		525.0
Hart Mtn. Natl. Antelope Rfg	3	398.0	265.0		663.0
Kootenai NWR	1	34.0			34.0
Little Pend Oreille NWR	1	90.0			90.0
Malheur NWR	3	1,218.0	40.0		1,258.0
McKay Creek NWR	2		4.5	30.0	34.5
McNary NWR	5	2.0	8.5	5.0	15.5
Mid-Columbia River NWR	2	70.0			70.0
Sheldon-Hart Mtn. NWRC	1	80.0			80.0
Toppenish NWR	1	20.0			20.0
Turnbull NWR	1	56.0			56.0
Umatilla NWR	11	10.0	18.0	262.0	290.0
Total	58	2,383.0	2,563.0	367.0	5,313.0

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	1	558.0			558.0
Aransas NWR	5	2,694.0			2,694.0
Aransas/Matagorda Isl. NWRC	1	1,093.0			1,093.0
Attwater Prairie Chicken NWR	19	1,519.8	63.0		1,582.8
Balcones Canyonlands NWR	2		15.2		15.2
Bitter Lake NWR	1	5.0			5.0
Bosque Del Apache NWR	2	50.0			50.0
Brazoria NWR	3	9,415.0			9,415.0
Buenos Aires NWR	5	7,146.0			7,146.0
Caddo Lake NWR	4	562.0			562.0
Laguna Atascosa NWR	1	400.0			400.0
Las Vegas NWR	1	4.0			4.0
Lower Rio Grand Valley NWR	1	0.1			0.1
Maxwell NWR	1	571.0			571.0
McFaddin NWR	5	22,029.0			22,029.0
Muleshoe NWR	2	886.0			886.0
South Texas Refuges Complex	1	30.0			30.0
Salt Plains NWR	1	473.0			473.0
San Bernard NWR	3	378.0			378.0
Tishomingo NWR	3	9.0			9.0
Texas Midcoast Complex	3	2,620.0			2,620.0
Washita NWR	3	225.0			225.0
Wichita Mtns Wildlife Refuge	4	20.2			20.2
Total	72	50,688.1	78.2		50,766.3

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	21	5,411.5		370.0	5,781.5
Big Oaks NWR	8	3,088.0			3,088.0
Big Stone NWR	2	126.0			126.0
Boyer Chute NWR	2	738.0			738.0
Crab Orchard NWR	3	540.0			540.0
Crane Meadows NWR	1		10.0		10.0
Desoto NWR	1	510.0			510.0
Detroit Lakes WMD	18	3,946.0			3,946.0
Fergus Falls WMD	27	2,382.0			2,382.0
Fox River NWR	2	15.0			15.0
Great River NWR	2	71.0			71.0
Horicon NWR	23	3,478.0			3,478.0
Iowa WMD	24	2,714.0			2,714.0
Leopold WMD	15	802.7	20.0		822.7
Litchfield WMD	10	645.0			645.0
Michigan WMD	1	60.0			60.0
Mingo NWR	1	5.0			5.0
Minnesota Valley NWR	5	595.0			595.0
Morris WMD	26	3,144.0			3,144.0
Neal Smith NWR	19	2,272.0			2,272.0
Necedah NWR	1	5.0			5.0
Port Louisa NWR	13	1,774.1			1,774.1
Rice Lake NWR	1		30.0		30.0
Seney NWR	1		256.0		256.0
Sherburne NWR	2	1.0	30.0		31.0
Squaw Creek NWR	20	1,041.0			1,041.0
St. Croix WMD	3		232.0	225.0	457.0
SouthCentral Zone Fire Mgmt	1	167.0			167.0
Swan Lake NWR	2	350.0			350.0
Union Slough NWR	3	170.0			170.0
Upper Mississippi River-McGregor	2	18.0			18.0

Upper Mississippi River-Savanna	4	96.0			96.0
Windom NWR	19	1,976.0			1,976.0
Total	283	36,141.3	578.0	595.0	37,314.3

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	55	756.0	346.0	71.0	1,173.0
ARM Loxahatchee NWR	1	5,800.0			5,800.0
Big Branch Marsh NWR	2		35.0		35.0
Blackbeard Island NWR	14		80.0		80.0
Cabo Rojo NWR	26	14.0	131.0	14.0	159.0
Cameron Prairie NWR	2	0.1	215.0		215.1
Carolina Sandhills NWR	13	2,360.0			2,360.0
Currituck NWR	1	190.0			190.0
EF Hollings Ace Basin NWR	10	100.0	562.0		662.0
Eufaula NWR	2	223.0			223.0
Felsenthal NWR	1	60.0			60.0
Florida Panther NWR	21	2,327.0	269.0		2,596.0
Harris Neck NWR	9		148.0		148.0
Hobe Sound NWR	1		5.0		5.0
J.N. Ding Darling NWR	19		42.0		42.0
Lacassine NWR	4	1,214.0	22.0		1,236.0
Laguna Cartagena NWR	27		156.0		156.0
Lake Woodruff NWR	9	9,420.0			9,420.0
Lower Suwannee NWR	8	1,823.0			1,823.0
Mackay Island NWR	6	112.0	4.0	250.0	366.0
Mattamuskeet NWR	6	3.0	32.0		35.0
Merritt Island NWR	5	1,115.0			1,115.0
Mountain Longleaf NWR	4	800.0	0.1		800.1
Noxubee NWR	7	1,953.4			1,953.4
Okefenokee NWR	18	5,084.0	4.0		5,088.0
Pea Island NWR	9	700.0	24.0	11.0	735.0
Piedmont NWR	20	3,129.0	392.0		3,521.0
Pinckney Island NWR	16		61.0		61.0
Pocosin Lakes NWR	24	2,089.0	572.0	50.0	2,711.0
South Arkansas Refuges Complex	4	1,079.0			1,079.0
Santee NWR	14	384.0			384.0

Savannah-Picnkney Refuges	15	120.0	58.0		178.0
St. Marks NWR	3	304.0			304.0
St. Vincent NWR	4	2,864.0			2,864.0
Vieques NWR	2		42.0		42.0
Wassaw NWR	1		20.0		20.0
Total	383	44,023.5	3,220.1	396.0	47,639.6

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>
Chesapeake Marshlands NWRC	19	1,544.1	13.0		1,557.1
Chincoteague NWR	1	10.0			10.0
Eastern MA NWRC	2		11.0		11.0
Eastern Neck NWR	1	26.0		26.0	52.0
Eastern Shore of Virginia NWR	1	80.0			80.0
Eastern Virginia Rivs. NWRC	2	313.0			313.0
Great Bay NWR	1		24.0		24.0
Iroquois NWR	1	83.0	10.0		93.0
Maine Coastal Island NWR	1	10.7			10.7
Montezuma NWR	1	31.0	20.0		51.0
Moosehorn NWR	11	35.3	109.6		144.9
Parker River NWR	1		196.0		196.0
Patuxent Research Refuge	1	2.0			2.0
Rhode Island NWRC	1		25.0		25.0
Sunkhaze Meadows NWR	1	14.3			14.3
Wallkill River NWR	1		175.0		175.0
Total	46	2,149.4	583.6	26.0	2,759.0

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>
Arrowwood NWR	10	1,839.0			1,839.0
Arrowwood WMD	4	481.0			481.0
Audubon NWR	9	1,732.0			1,732.0
Benton Lake NWR	1	800.0			800.0
Benton Lake WMD	1	95.0			95.0
Bowdoin NWR	7	2,970.0			2,970.0
Browns Park NWR	2	101.0			101.0
Charles M. Russell NWR	7	1,919.5	15.0		1,934.5
Chase Lake NWR	4	1,031.0			1,031.0
Chase Lake Prairie Proj. WMD	3	607.0			607.0
Crosby WMD	4	437.0			437.0
Des Lacs NWR	9	1,509.0			1,509.0
Devils Lake WMD	8	1,528.0			1,528.0
Fish Springs NWR	1	1,200.0			1,200.0
Huron WMD	3	1,244.0			1,244.0
J. Clark Salyer NWR	15	2,052.0			2,052.0
John W and Louise Seier NWR	1		5.0		5.0
Kirwin NWR	7	1,313.0			1,313.0
Kulm WMD	6	599.0			599.0
Lacreek NWR	5	2,435.0			2,435.0
Lake Andes NWR	5	196.0			196.0
Long Lake NWR	1	122.0			122.0
Long Lake WMD	2	587.0			587.0
Lostwood NWR	5	2,918.0			2,918.0
Lostwood WMD	6	855.0			855.0
Madison WMD	12	1,342.0			1,342.0
Marais Des Cygnes NWR	4	278.0			278.0
Medicine Lake NWR	1	124.0			124.0
National Bison Range	1	168.0			168.0
Ouray NWR	1	398.0			398.0
Quivira NWR	15	5,560.0			5,560.0

Rainwater Basin WMD	1	162.0			162.0
Sand Lake NWR	8	2,366.0			2,366.0
Seedskafee NWR	1	79.0			79.0
Tewaukon NWR	6	433.0			433.0
Upper Souris NWR	12	2,074.0			2,074.0
Valentine NWR	6	1,605.0	33.0		1,638.0
Valley City WMD	5	469.0			469.0
Waubay NWR	10	2,222.0			2,222.0
Total	209	45,850.5	53.0	0.0	45,903.5

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>
Total	0	0.0	0.0	0.0	0.0

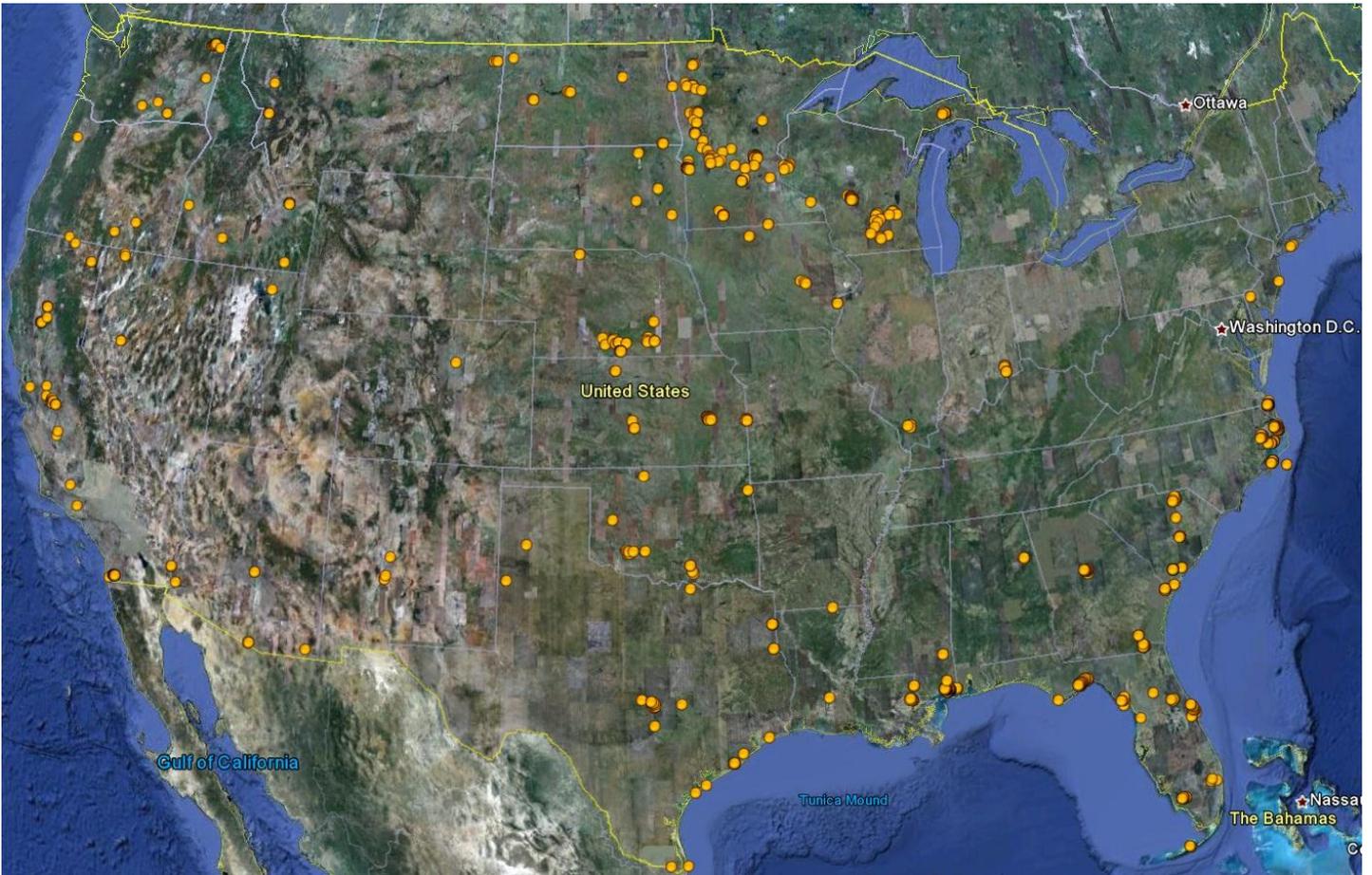
Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

NON-WUI TREATMENTS Pacific Southwest Refuges

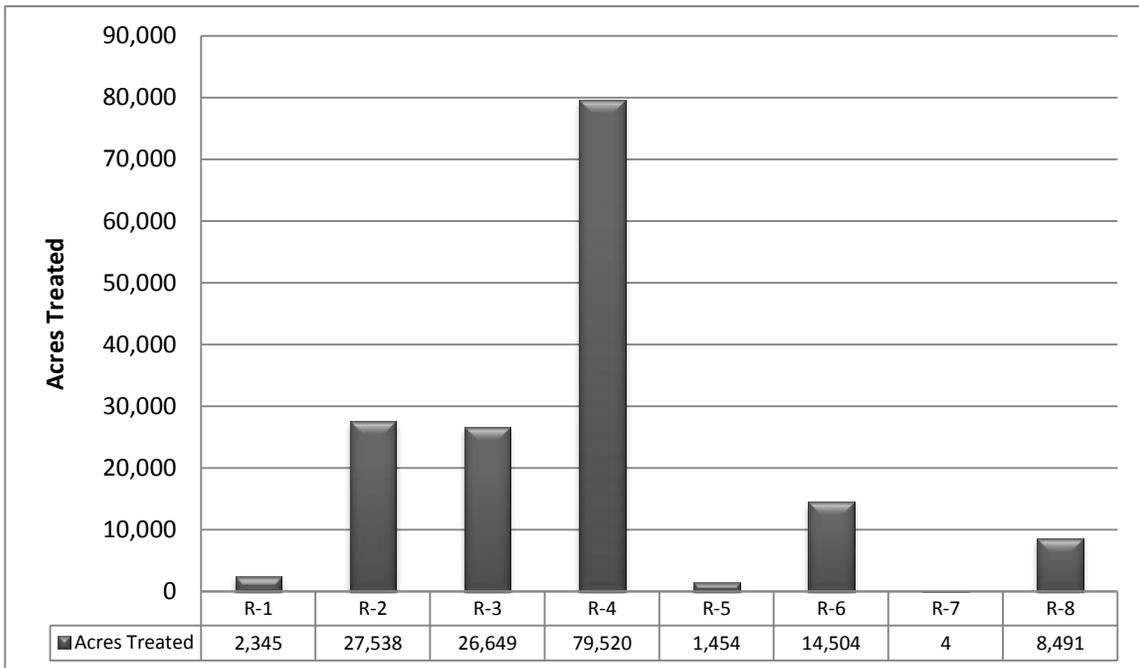
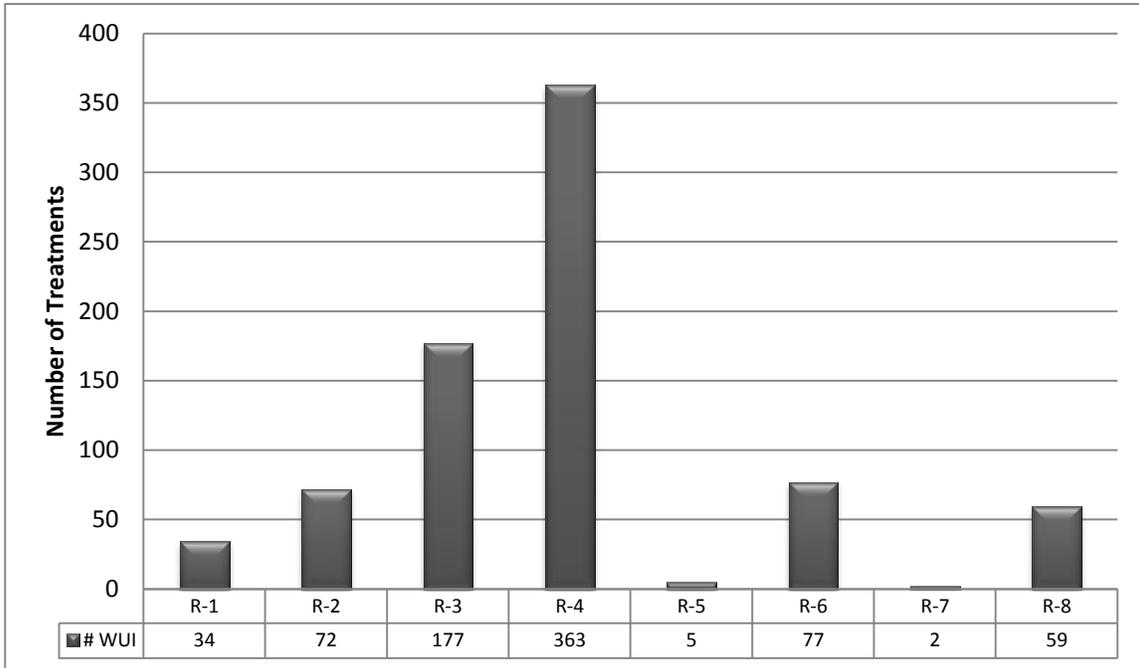
<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Bear Valley NWR	1		17.0		17.0
Delevan NWR	5	105.0			105.0
Kern NWR	1		120.0		120.0
Lower Klamath NWR	9	18,110.0			18,110.0
Merced NWR	3	120.0	175.0		295.0
Sacramento NWR	10	268.5			268.5
Sacramento River NWR	15	253.0	17.0	146.0	416.0
San Joaquin River NWR	4	85.0	122.0		207.0
San Luis NWR	4	531.0			531.0
Tule Lake NWR	6	13,647.0			13,647.0
Total	58	33,119.5	451.0	146.0	33,716.5

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

2010 WUI ACTIVITY



WUI TREATMENTS 2010



WUI TREATMENTS by State 2010

<u>State</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Chem/Other Acres</u>	<u>Total Acres</u>
Alabama	4	1,745.0	6.0		1,751.0
Alaska	2		4.0		4.0
Arizona	9	3,748.0			3,748.0
Arkansas	1	410.0			410.0
California	56	5,921.0	245.0	738.0	6,904.0
Colorado	1	100.0			100.0
Florida	99	53,229.0	257.0		53,486.0
Georgia	37	6,553.0	462.0		7,015.0
Idaho	10	110.0	771.0		881.0
Illinois	4	223.0			223.0
Indiana	8	5,751.0			5,751.0
Iowa	6	373.0			373.0
Kansas	25	4,183.0			4,183.0
Louisiana	10	758.0	40.0	199.0	997.0
Michigan	9	513.0	11.0		524.0
Minnesota	100	10,900.3	1,291.0		12,191.3
Mississippi	74	3,213.0	511.0	36.0	3,760.0
Montana	9	1,872.0			1,872.0
Nebraska	26	4,449.0			4,449.0
Nevada	4	1,745.0	17.0		1,762.0
New Jersey	2	94.0	97.0		191.0
New Mexico	4	138.0			138.0
New York	2		63.0		63.0
North Carolina	96	5,241.0	1,162.0	7.0	6,410.0
North Dakota	11	1,890.0	12.0		1,902.0
Oklahoma	16	12,005.5			12,005.5
Oregon	5	15.0	25.0	131.0	171.0
South Carolina	41	5,686.0			5,686.0
South Dakota	4	498.0			498.0
Texas	43	11,467.6	124.4	54.0	11,646.0

Utah	1	1,500.0			1,500.0
Virginia	2	1,200.0	5.0		1,205.0
Washington	18	745.1	360.0	13.0	1,118.1
Wisconsin	50	6,287.0		1,300.0	7,587.0
Total	789	152,563.5	5,463.4	2,478.0	160,504.9

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>
Baskett Slough NWR	1	8.0			8.0
Camas NWR	7	110.0	346.0		456.0
Deer Flat NWR	1		100.0		100.0
Hagerman NFH	1		25.0		25.0
Hanford Reach/Saddle Mtn	1	22.0			22.0
Hart Mtn Natl Antelope Refuge	1			131.0	131.0
Little Pend Oreille NWR	13	556.0	290.0	13.0	859.0
Malheur NWR	1		25.0		25.0
McNary NWR	3	165.1			165.1
Oxford Slough Waterfowl Area	1		300.0		300.0
Sheldon NWR	2	160.0	17.0		177.0
Toppenish NWR	1	7.0			7.0
Turnbull NWR	1		70.0		70.0
Total	34	1,028.1	1,173.0	144.0	2,345.1

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>
Anahuac NWR	1	842.1			842.1
Balcones Canyonlands NWR	21	755.0	16.7	54.0	825.7
Bosque Del Apache NWR	3	131.0			131.0
Brazoria NWR	1	1.0			1.0
Buenos Aires NWR	5	3,737.0			3,737.0
Buffalo Lake NWR	1	713.0			713.0
Caddo Lake NWR	7	837.0			837.0
Cibola NWR	2	8.0			8.0
Hagerman NWR	1	595.0			595.0
Imperial NWR	1	2.0			2.0
Inks Dam NFH	1		7.7		7.7
Leslie Canyon NWR	1	1.0			1.0
Lower Rio Grande Valley NWR	1	80.0			80.0
Matagorda Island NWR	2	3,807.0			3,807.0
Muleshoe NWR	1	1,000.0			1,000.0
Ozark Plateau NWR	1	84.0			84.0
S. Texas Refuges Complex	1		100.0		100.0
Salt Plains NWR	2	522.0			522.0
San Bernard NWR	3	1,555.5			1,555.5
Sevilleta NWR	1	7.0			7.0
Tishomingo NFH	2	100.5			100.5
Tishomingo NWR	2	372.0			372.0
TX Midcoast Refuges Complex	3	2,737.0			2,737.0
Washita NWR	1	858.0			858.0
Wichita Mountains Wildlife Rfg	7	8,614.0			8,614.0
Total	72	27,359.1	124.4	54.0	27,537.5

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	371.0			371.0
Big Oaks NWR	8	5,751.0			5,751.0
Big Stone NWR	17	1,140.0			1,140.0
Crab Orchard NWR	4	223.0			223.0
Detroit Lakes WMD	10	1,298.0			1,298.0
Fergus Falls WMD	7	513.0			513.0
Glacial Ridge NWR	3	1,248.0			1,248.0
Hamden Slough NWR	2	305.0			305.0
Horicon NWR	6	827.0			827.0
Leopold WMD	14	853.0			853.0
Litchfield WMD	12	1,263.0			1,263.0
Minnesota Valley NWR	1	0.1			0.1
Morris WMD	10	1,411.0	81.0		1,492.0
Necedah NWR	22	3,882.0		1,300.0	5,182.0
Port Louisa NWR	5	341.0			341.0
Rice Lake NWR	1		36.0		36.0
Rydell NWR	5	150.0			150.0
Seney NWR	9	513.0	11.0		524.0
Sherburne NWR	20	2,798.0	1,166.0		3,964.0
St. Croix WMD	8	725.0			725.0
Union Slough NWR	1	32.0			32.0
Upper Mississippi River-Winona	1	0.2			0.2
Windom WMD	7	403.0	8.0		411.0
Total	177	24,047.3	1,302.0	1,300.0	26,649.3

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	32	210.0	274.0	7.0	491.0
ARM Loxahatchee NWR	3	12,933.0			12,933.0
Big Branch Marsh NWR	8	423.0	40.0	199.0	662.0
Bogu Chitto NWR	3			36.0	36.0
Carolina Sandhills NWR	11	2,890.0			2,890.0
Cedar Island NWR	14	1,866.0	37.0		1,903.0
Chassahowitzka NWR	1	30.0			30.0
EF Hollings Ace Basin NWR	16	1,814.0			1,814.0
Florida Panther NWR	16	2,540.0	257.0		2,797.0
Grand Bay NWR	4		12.0		12.0
Lacassine NWR	1	334.0			334.0
Lake Woodruff NWR	6	2,341.0			2,341.0
Lower Suwannee NWR	10	4,945.0			4,945.0
Mackay Island NWR	26	2,028.0	68.0		2,096.0
Mattamuskeet NWR	13		120.0		120.0
Merritt Island NWR	12	8,028.0			8,028.0
Mississippi Sandhill Crane NWR	68	3,213.0	505.0		3,718.0
Mtn. Longleaf NWR	3	1,745.0			1,745.0
National Key Deer Refuge	5	51.0			51.0
Okefenokee NWR	19	1,733.0	37.0		1,770.0
Piedmont NWR	18	4,743.0	425.0		5,168.0
Pinckney Island NWR	2	133.0			133.0
Pocosin Lakes NWR	12	1,137.0	668.0		1,805.0
South Arkansas Refuges Complex	1	410.0			410.0
Santee NWR	6	181.0			181.0
Savannah-Picnkey Refuges	7	821.0			821.0
Southeast Lousianna Refuges	1	1.0			1.0
St. Johns NWR	2	150.0			150.0
St. Marks NWR	42	22,049.0			22,049.0
St. Vincent NWR	1	86.0			86.0
Total	363	76,835.0	2,443.0	242.0	79,520.0

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	1,200.0			1,200.0
Edwin B. Forsythe NWR	1	72.0			72.0
Long Island NWRC	2		63.0		63.0
Supawna Meadows NWR	1	22.0	97.0		119.0
Total	5	1,294.0	160.0	0.0	1,454.0

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>
Audubon NWR	6	780.0	12.0		792.0
Bear River Migratory Bird Rfg.	1	1,500.0			1,500.0
Crosby WMD	1	730.0			730.0
Devils Lake WMD	1	20.0			20.0
Flint Hills NWR	14	1,084.0			1,084.0
Fort Niobrara NWR	2	547.0			547.0
Huron WMD	1	293.0			293.0
Kirwin NWR	2	404.0			404.0
Lee Metcalf NWR	5	178.0			178.0
Madison WMD	1	45.0			45.0
Marais Des Cygnes NWR	6	1,555.0			1,555.0
Medicine Lake NWR	3	1,534.0			1,534.0
National Bison Range	1	160.0			160.0
Quivira NWR	3	1,140.0			1,140.0
Rainwater Basin WMD	24	3,902.0			3,902.0
Rocky Mtn. Arsenal NWR	1	100.0			100.0
Sand Lake NWR	1	109.0			109.0
Tewaukon NWR	3	360.0			360.0
Waubay NWR	1	51.0			51.0
Total	77	14,492.0	12.0	0.0	14,504.0

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>
Tetlin NWR	2		4.0		4.0
Total	2	0.0	4.0	0.0	4.0

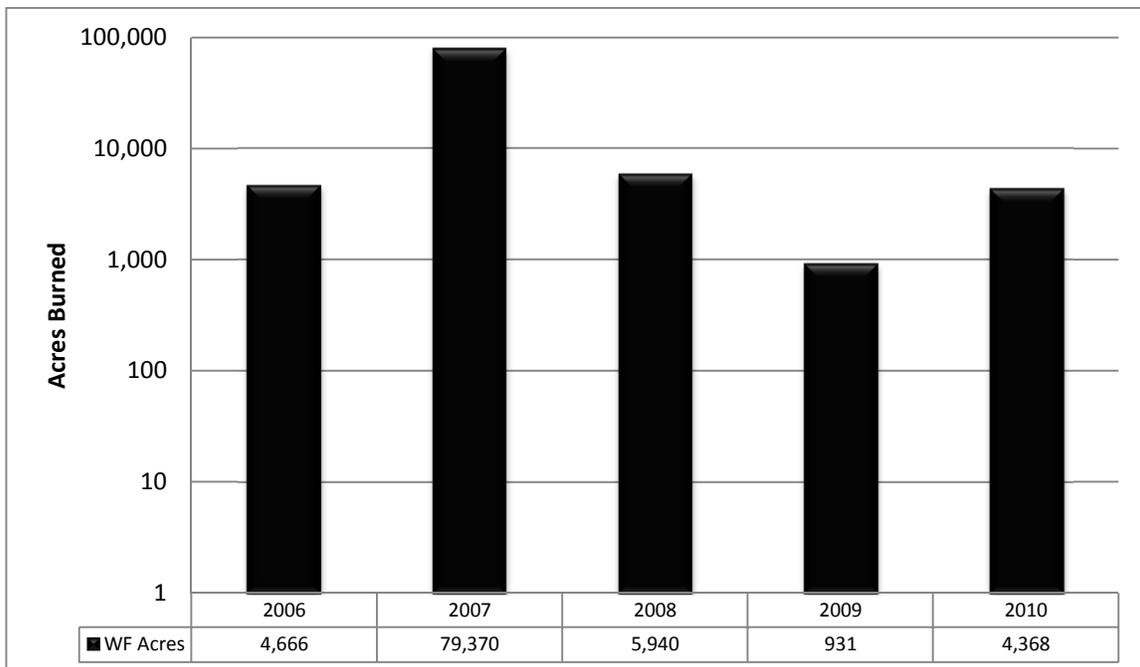
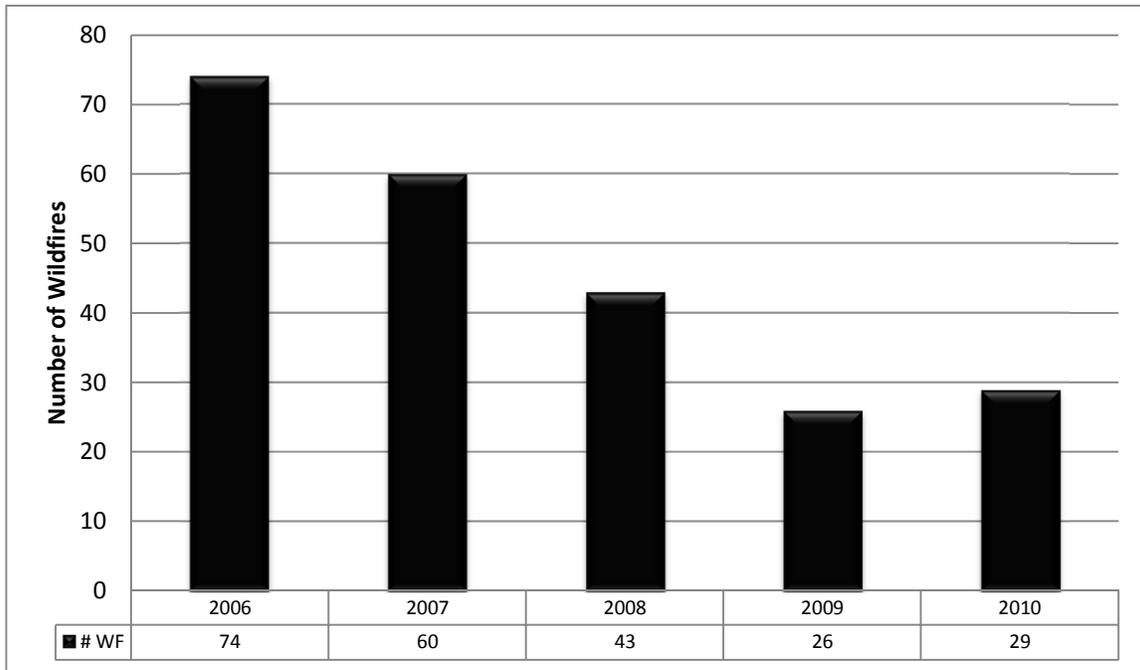
Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

WUI TREATMENTS Pacific Southwest Refuges

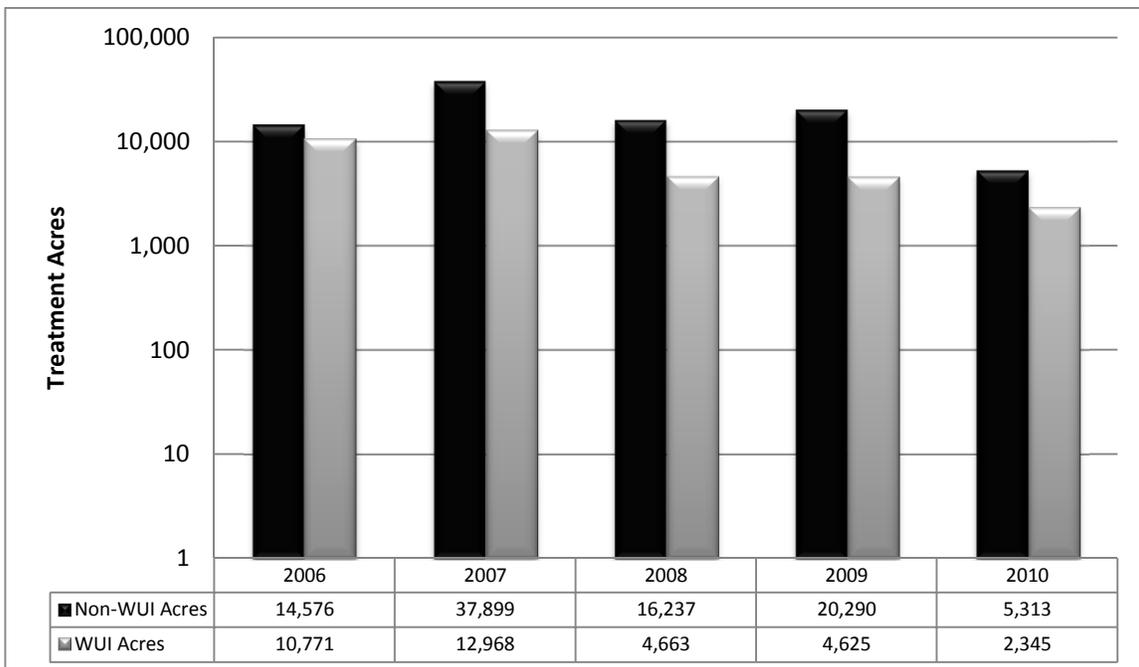
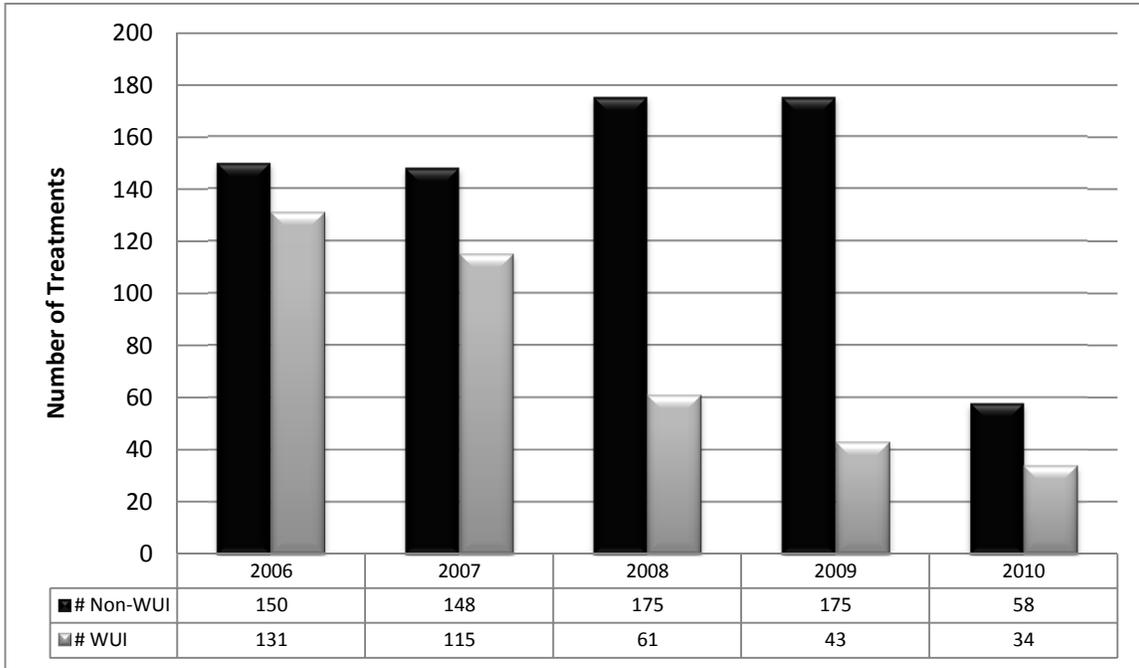
<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Bear Valley NWR	1	2.0			2.0
Bitter Creek NWR	1		49.0		49.0
Don Edwards SF Bay NWR	1	32.0			32.0
Hopper MountainNWR	1		10.0		10.0
Merced NWR	5	1,480.0			1,480.0
Modoc NWR	2	407.0			407.0
Sacramento NWR	8	238.0			238.0
Sacramento River NWR	5	63.0			63.0
San Diego Bay NWR	1			3.0	3.0
San Diego NWR	18		22.0	735.0	757.0
San Joaquin River NWR	2	530.0	2.0		532.0
San Luis NWR	11	1,019.0	162.0		1,181.0
Stillwater NWR	2	1,585.0			1,585.0
Tule Lake NWR	1	2,152.0			2,152.0
Total	59	7,508.0	245.0	738.0	8,491.0

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

PACIFIC REGION Wildfires 2006-2010



PACIFIC REGION Treatments 2006-2010

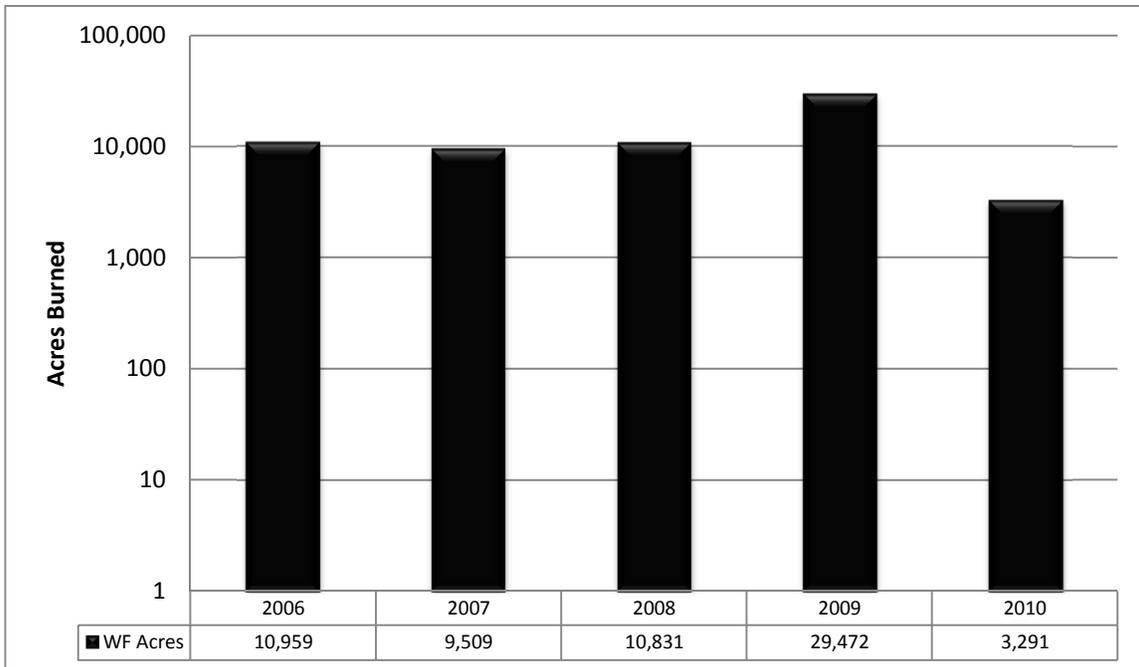
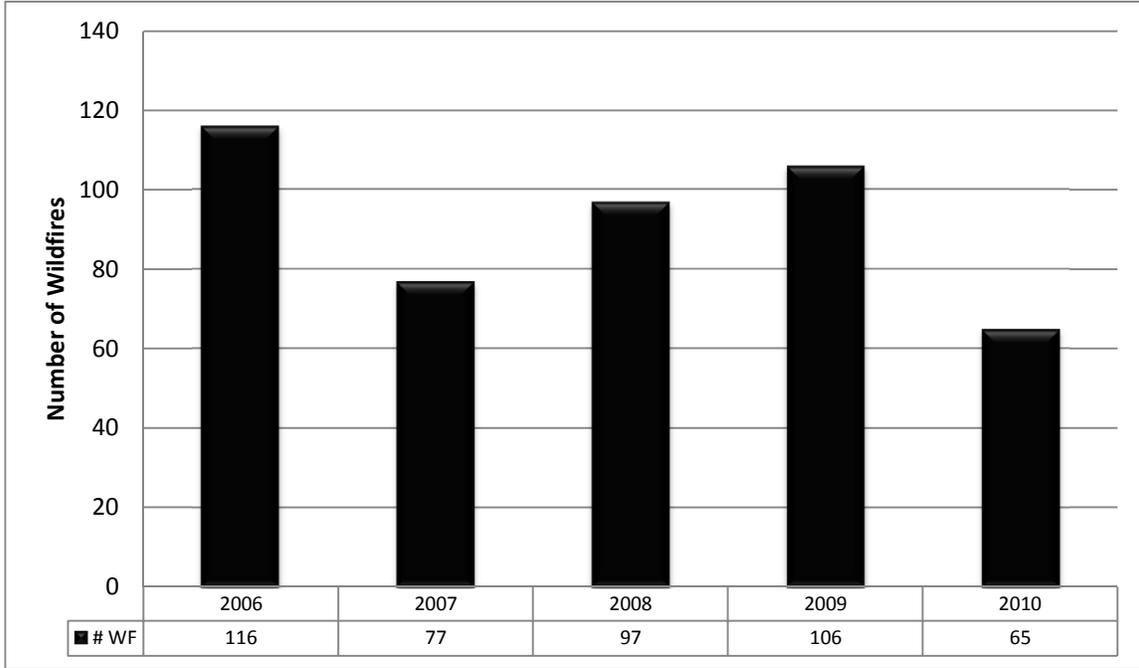


WUI = Wildland Urban Interface

SOUTHWEST REGION

Wildfires

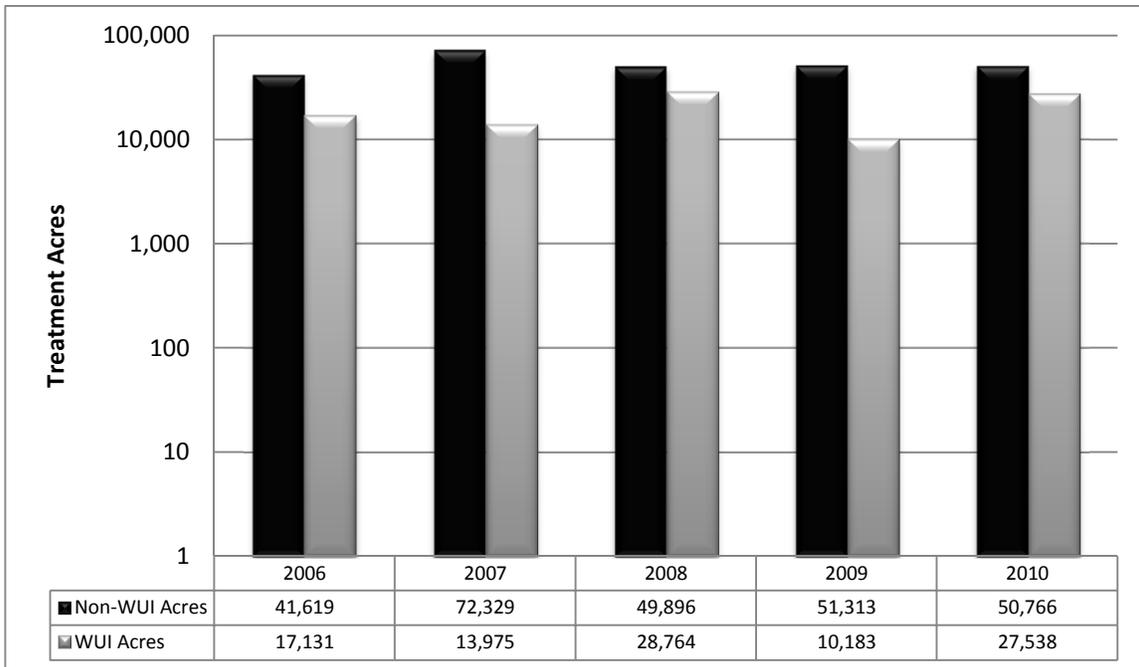
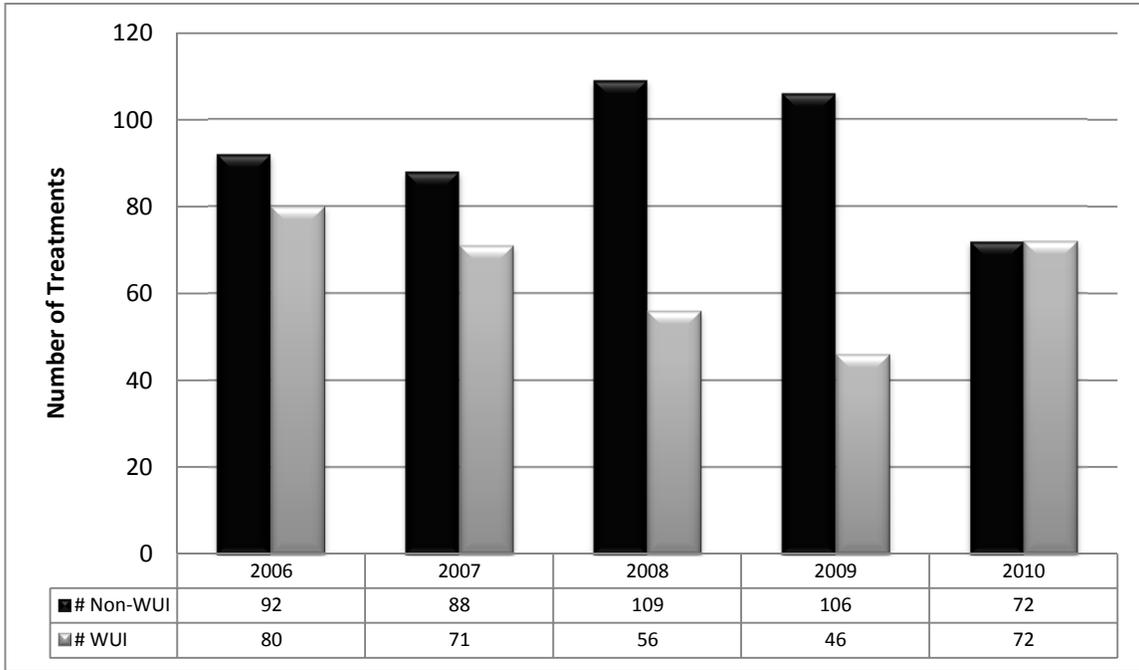
2006-2010



SOUTHWEST REGION

Treatments

2006-2010

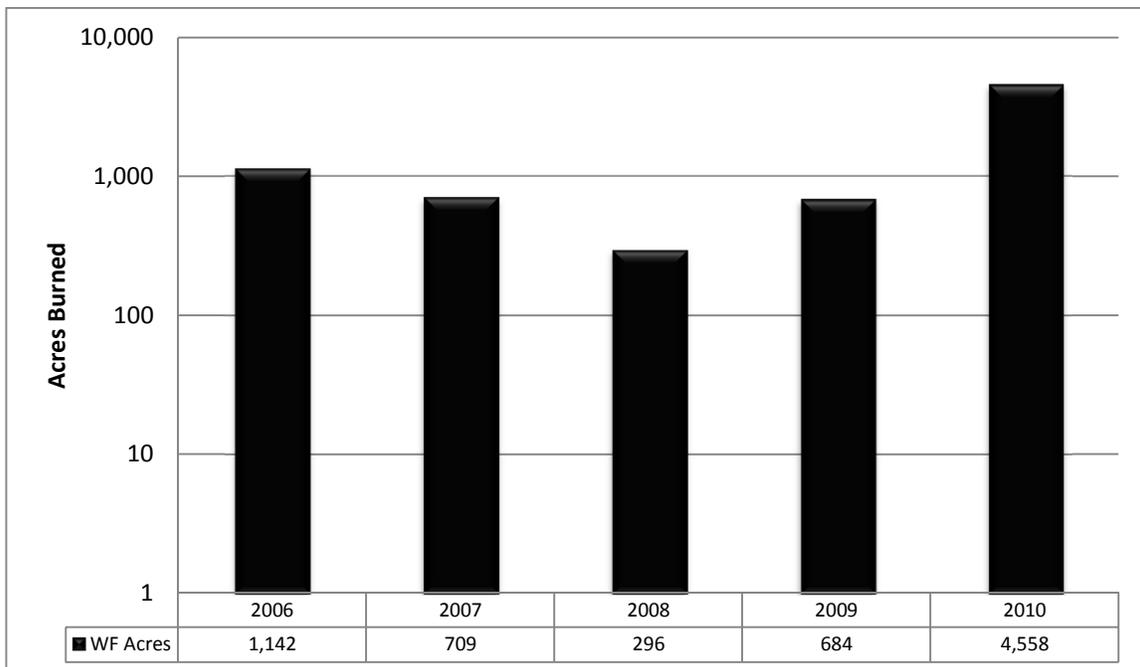
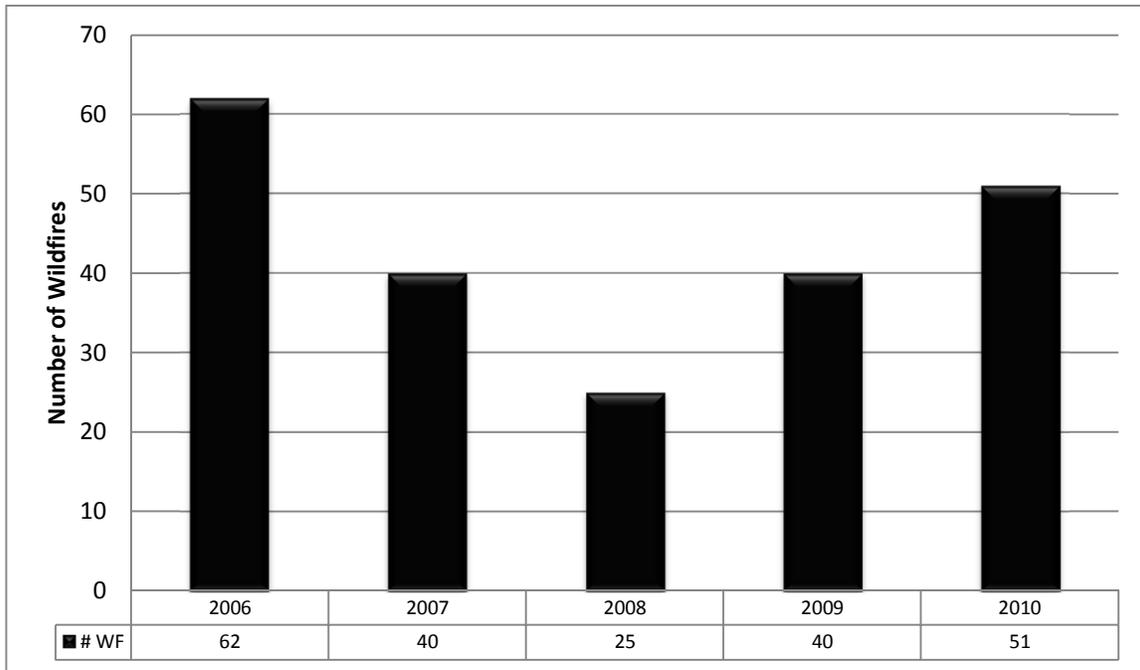


WUI = Wildland Urban Interface

MIDWEST REGION

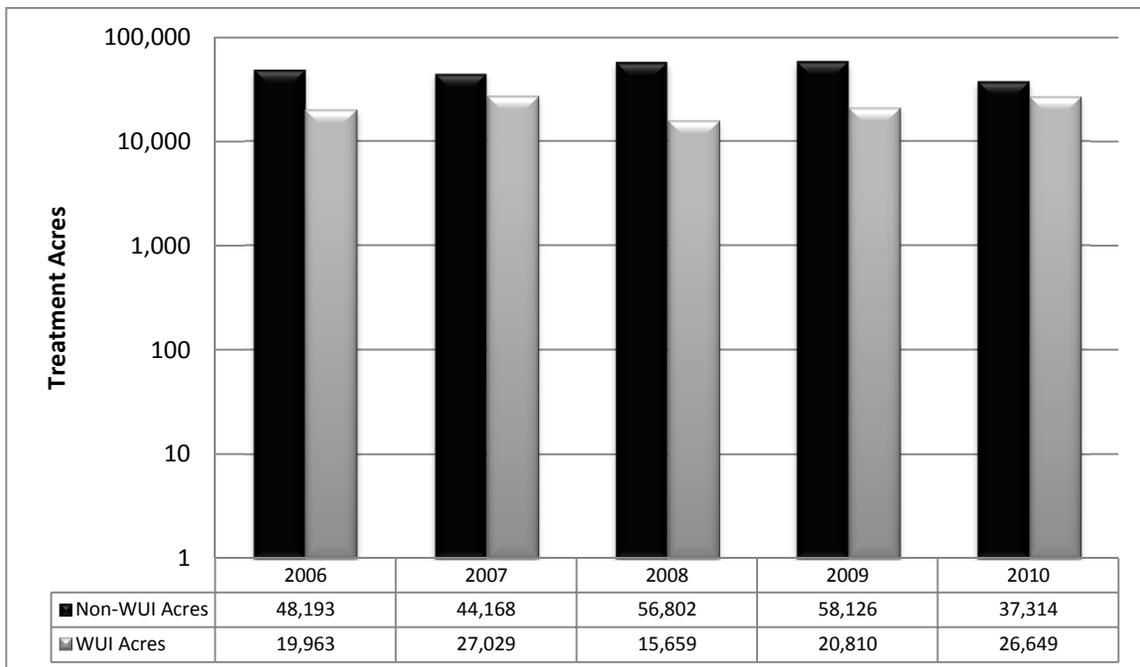
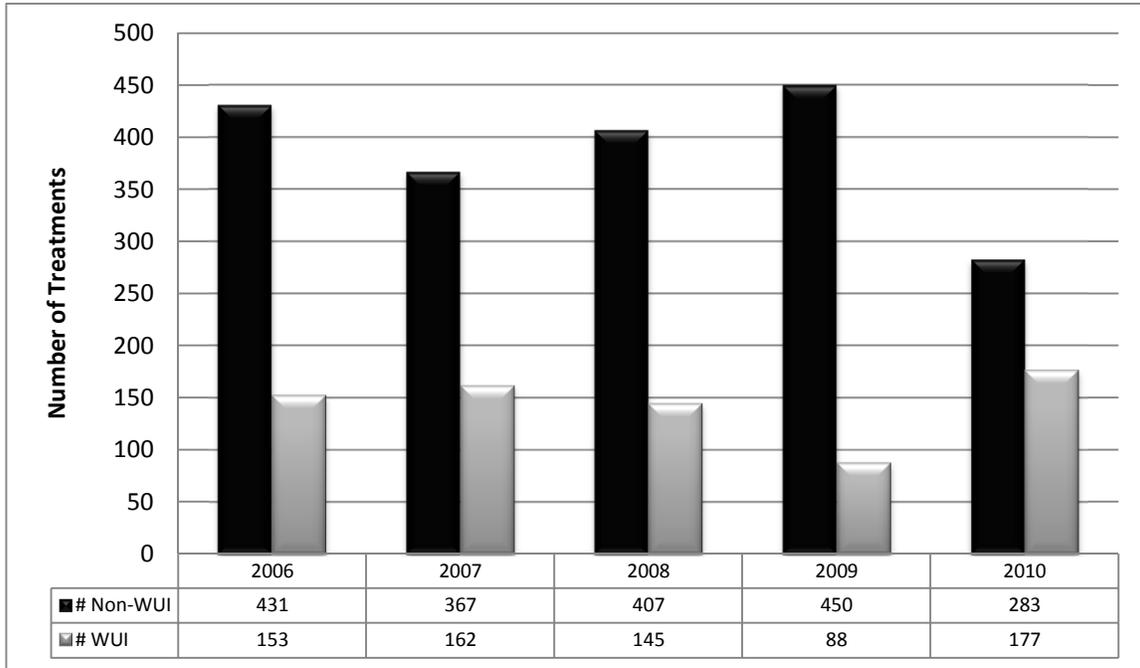
Wildfires

2006-2010



MIDWEST REGION

Treatments 2006-2010

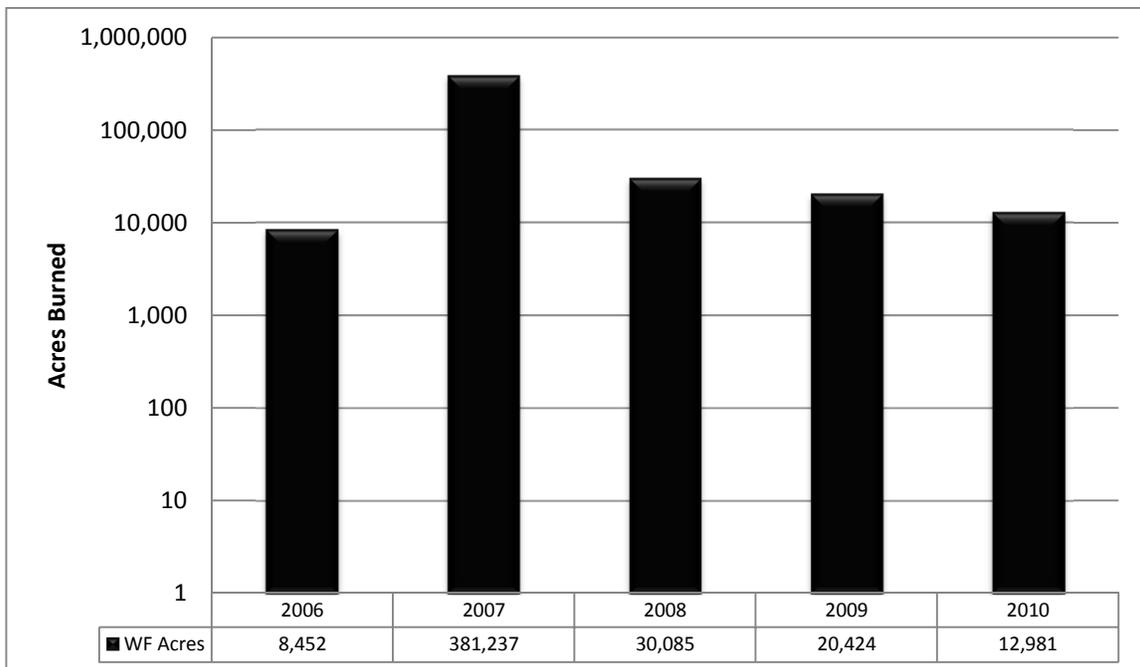
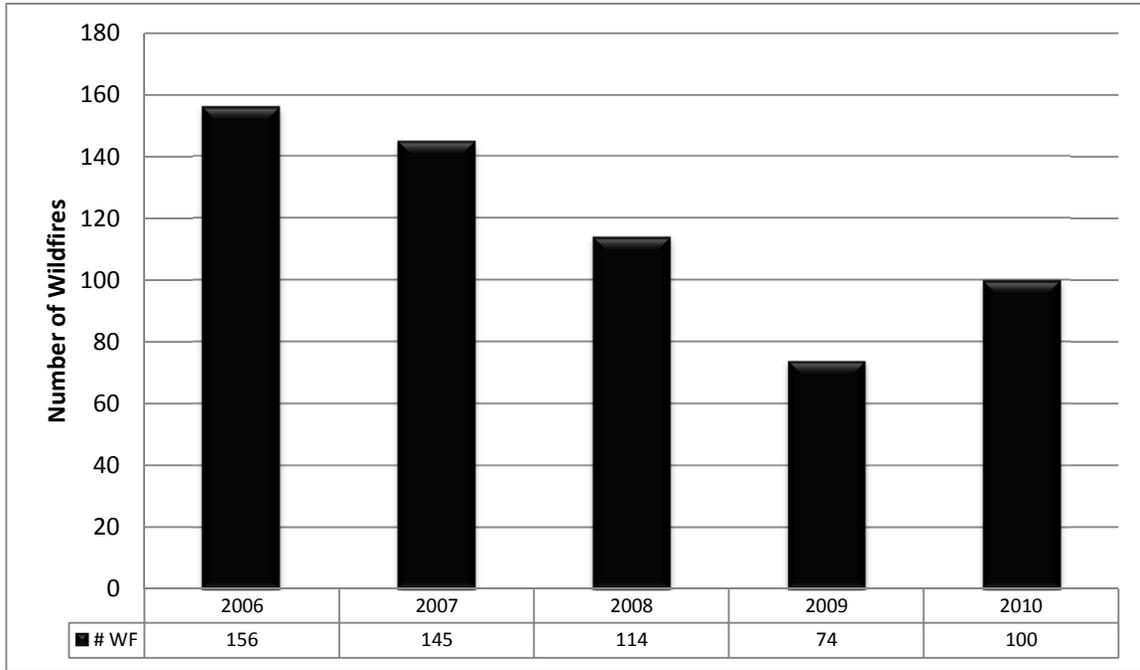


WUI = Wildland Urban Interface

SOUTHEAST REGION

Wildfires

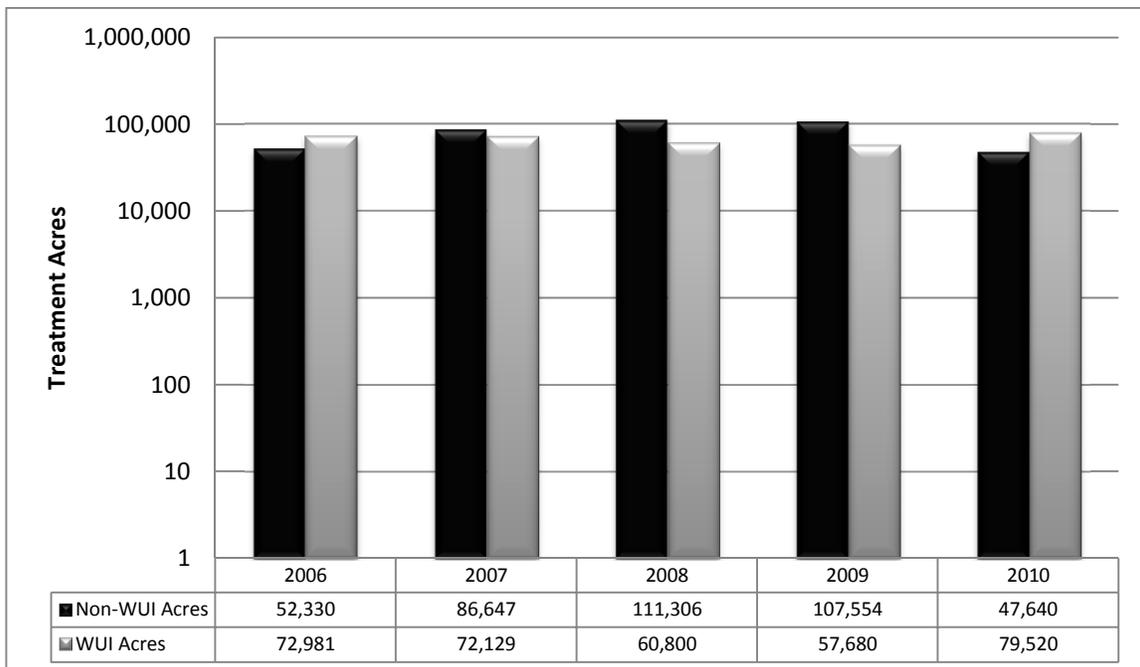
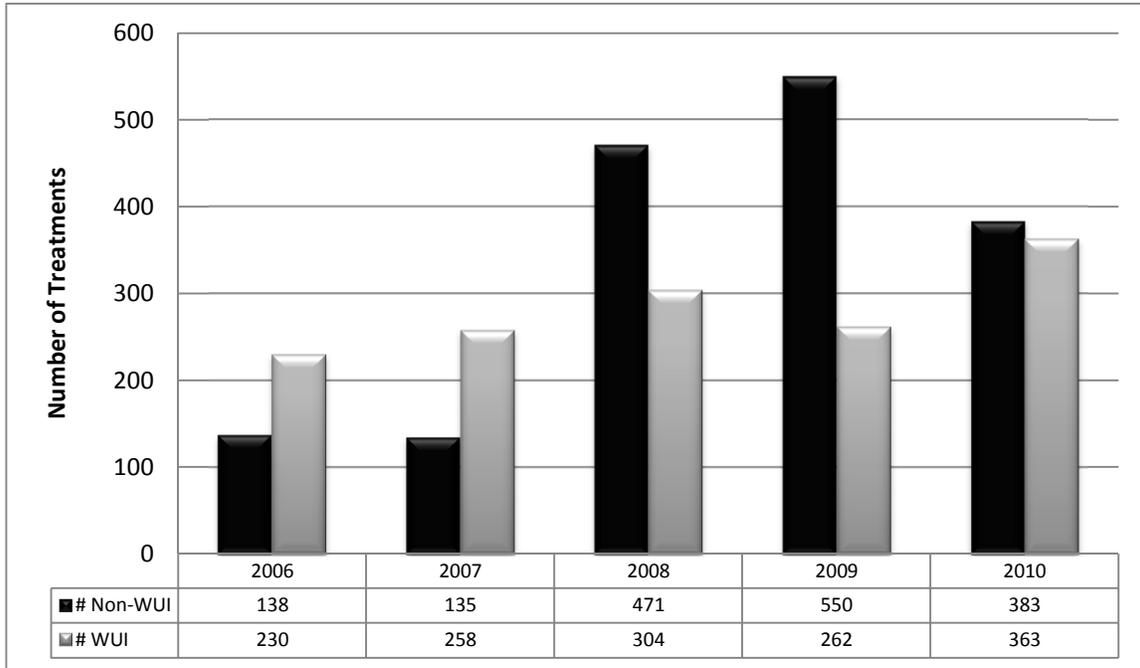
2006-2010



SOUTHEAST REGION

Treatments

2006-2010

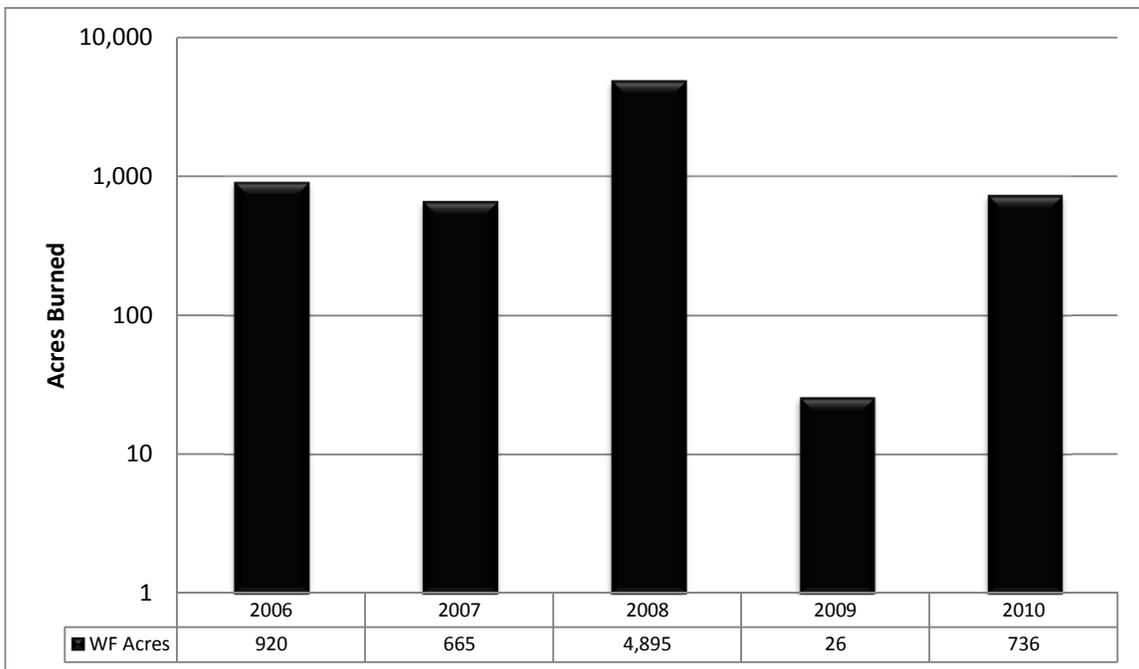
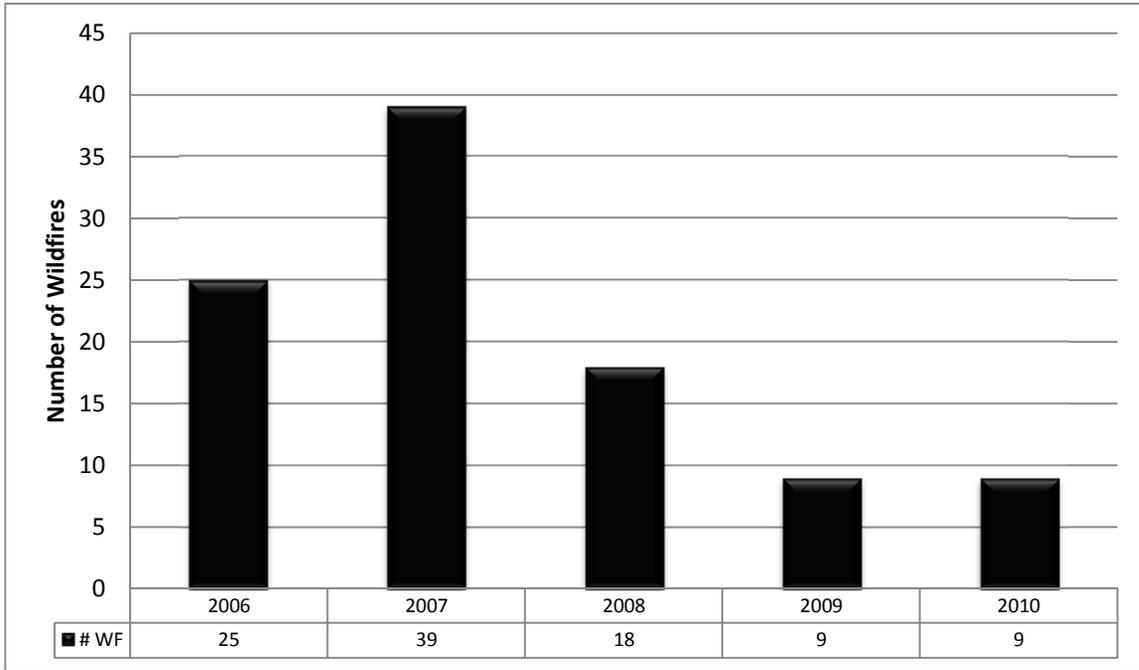


WUI = Wildland Urban Interface

NORTHEAST REGION

Wildfires

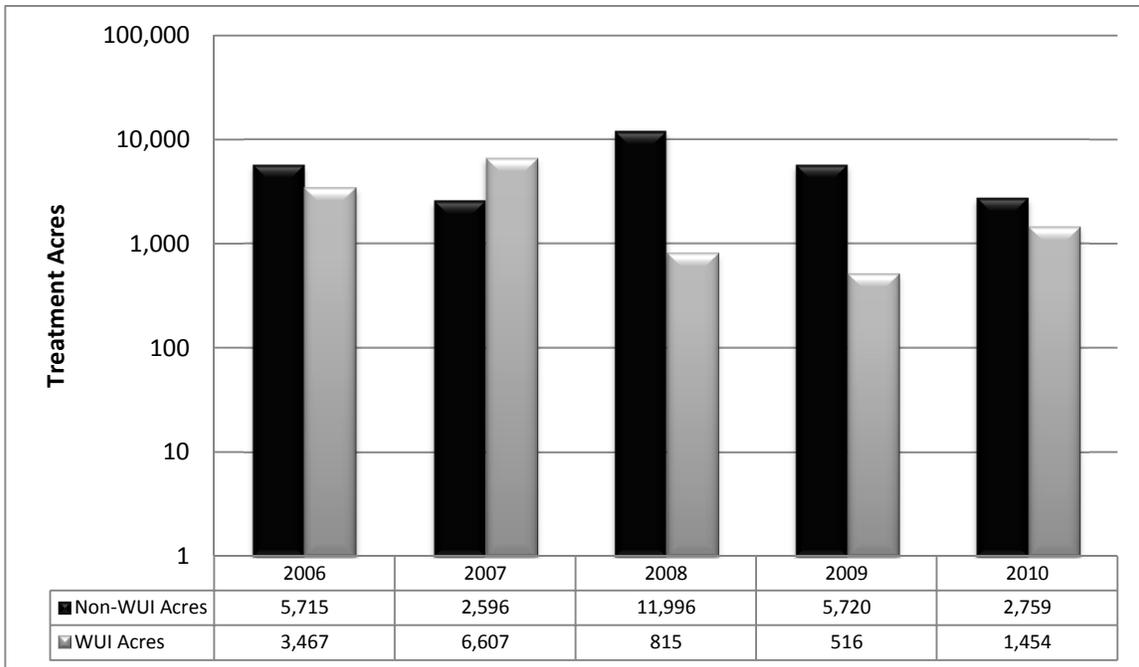
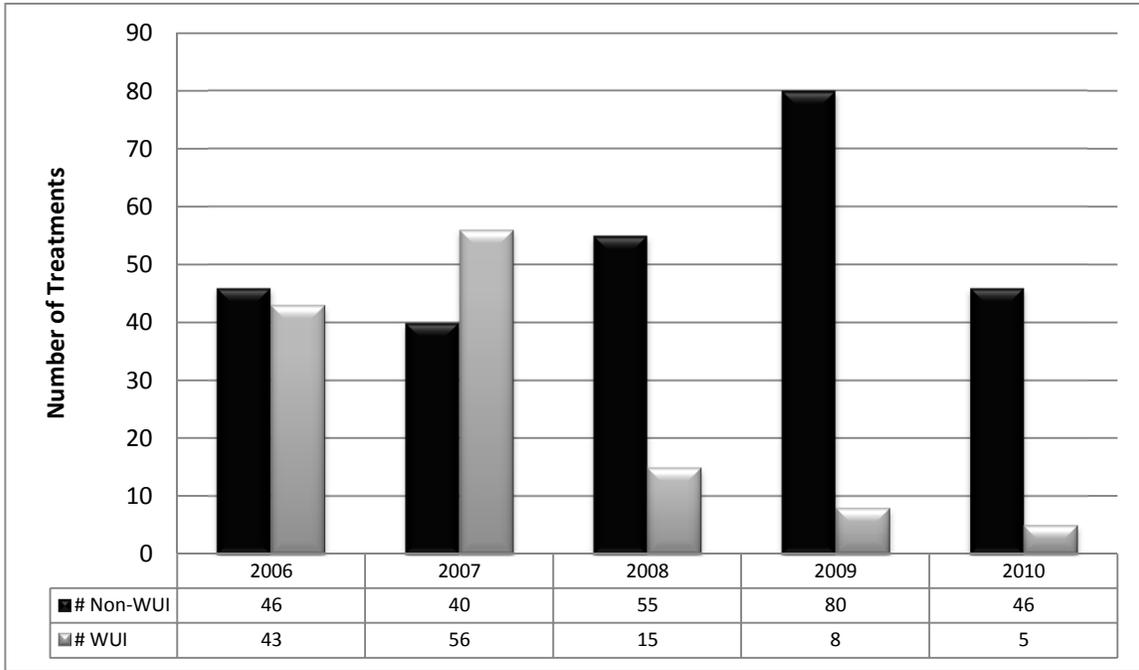
2006-2010



NORTHEAST REGION

Treatments

2006-2010

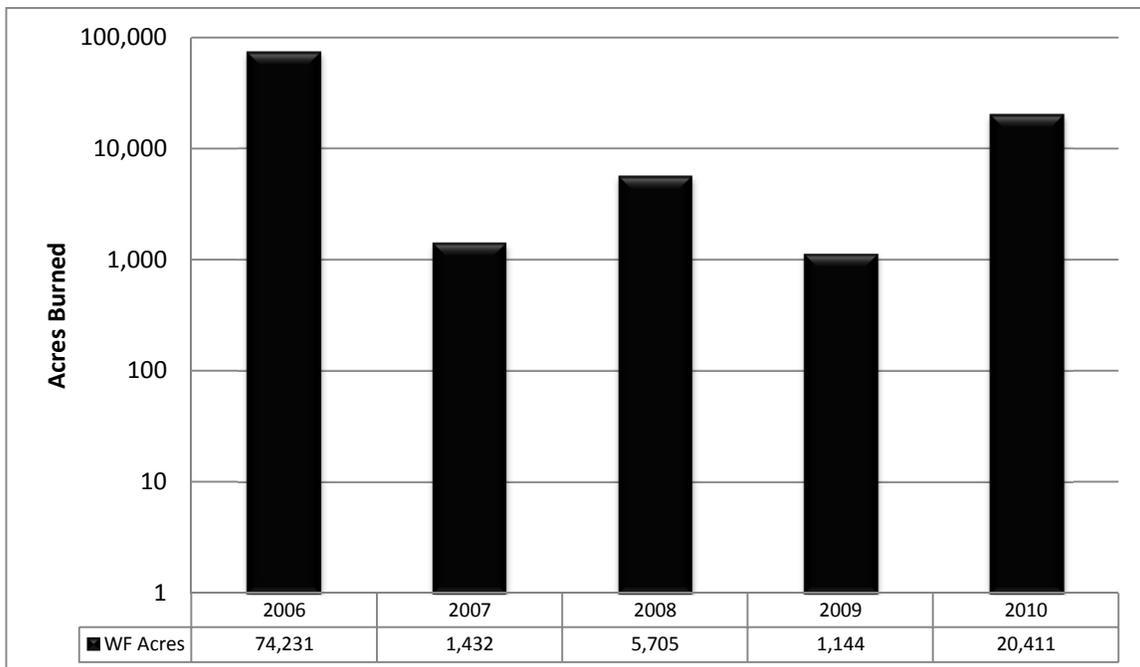
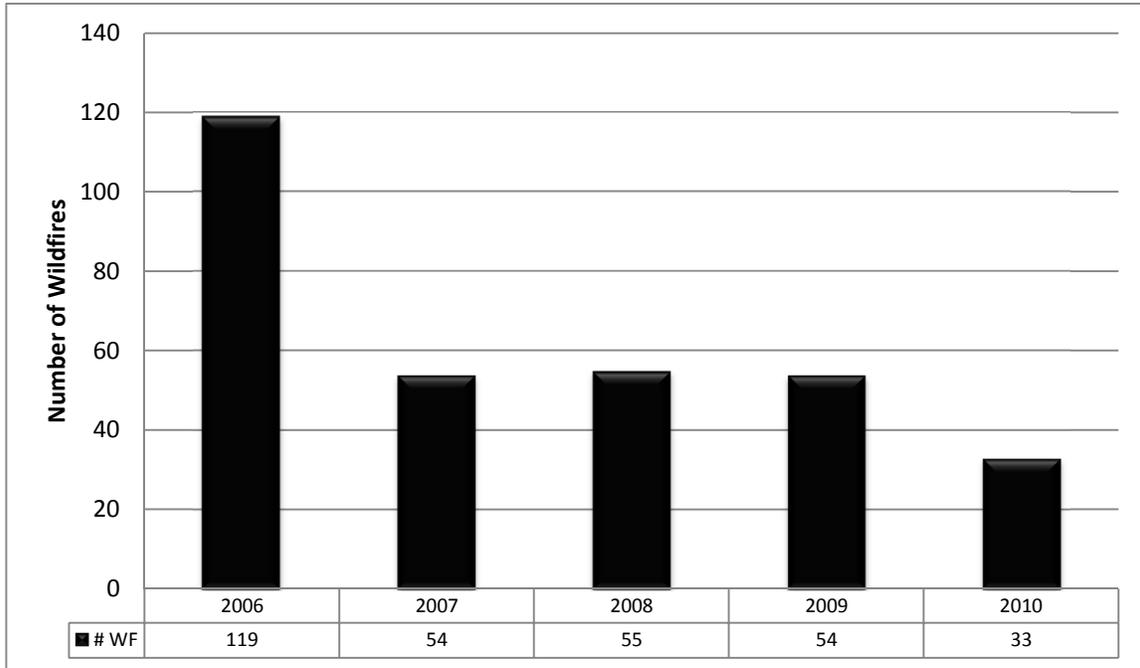


WUI = Wildland Urban Interface

MOUNTAIN - PRAIRIE REGION

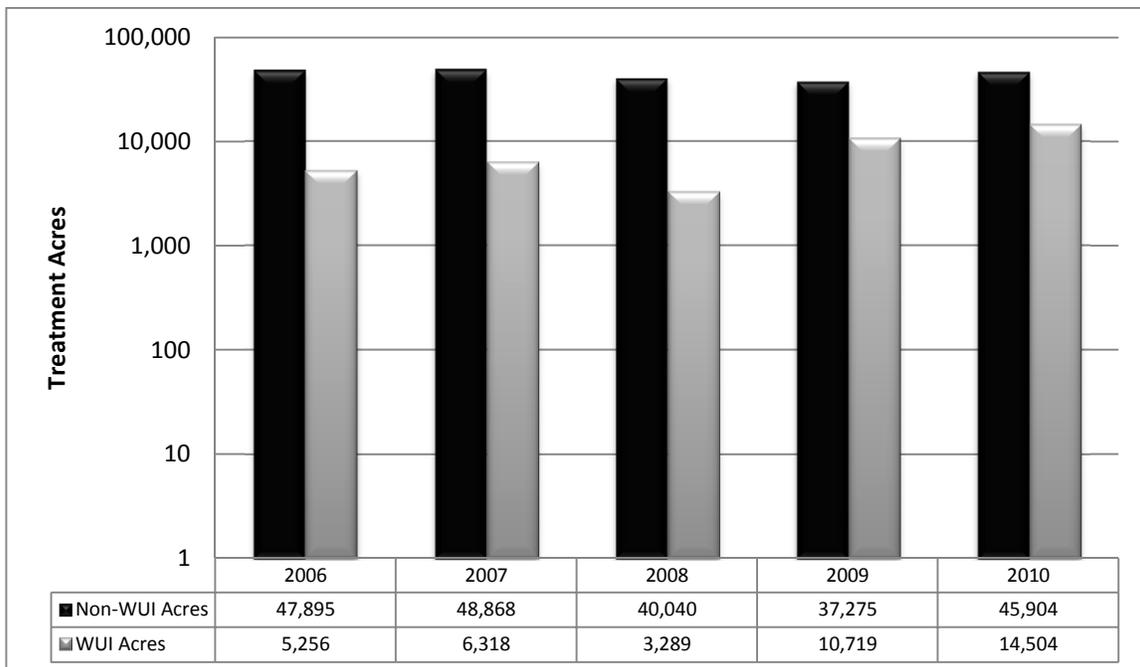
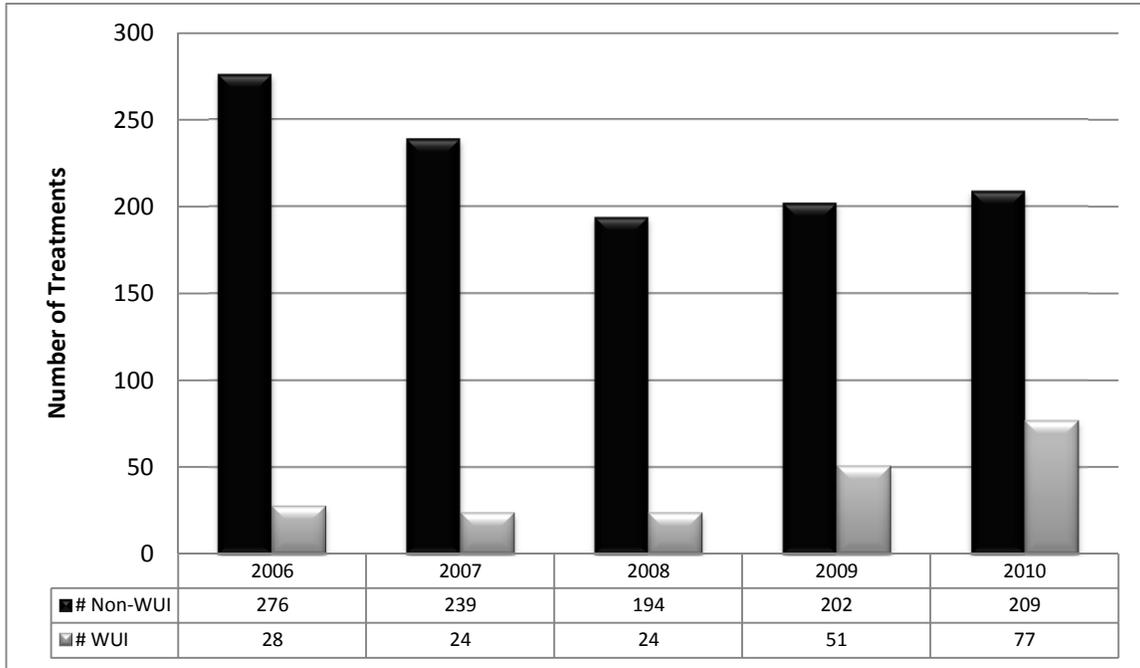
Wildfires

2006-2010



MOUNTAIN - PRAIRIE REGION

Treatments 2006-2010

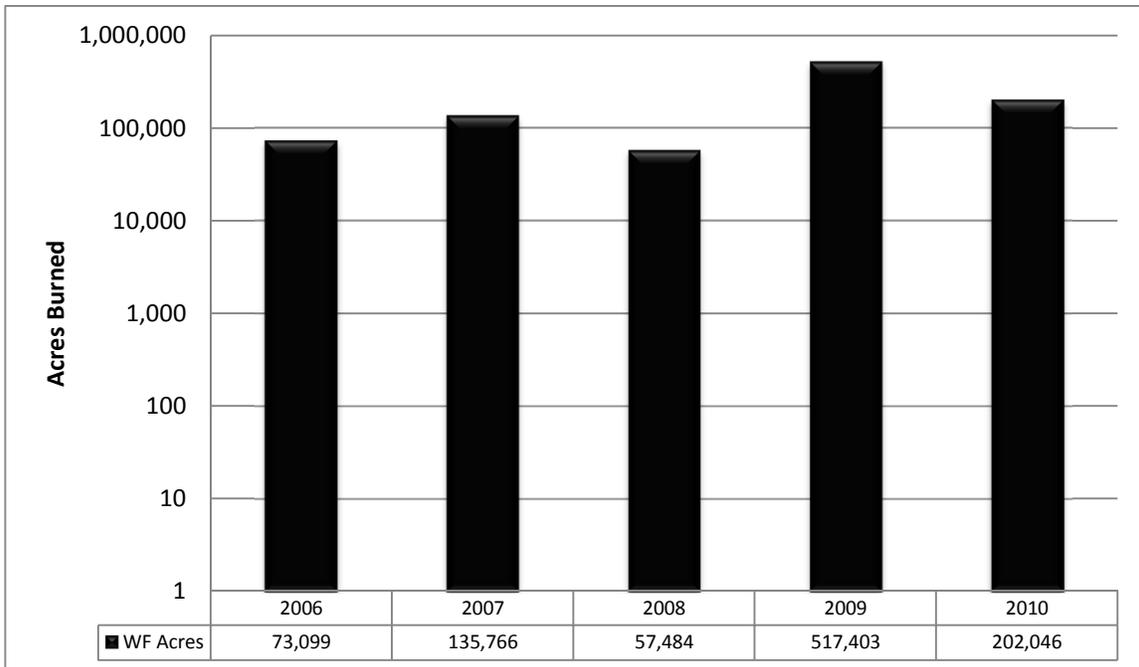
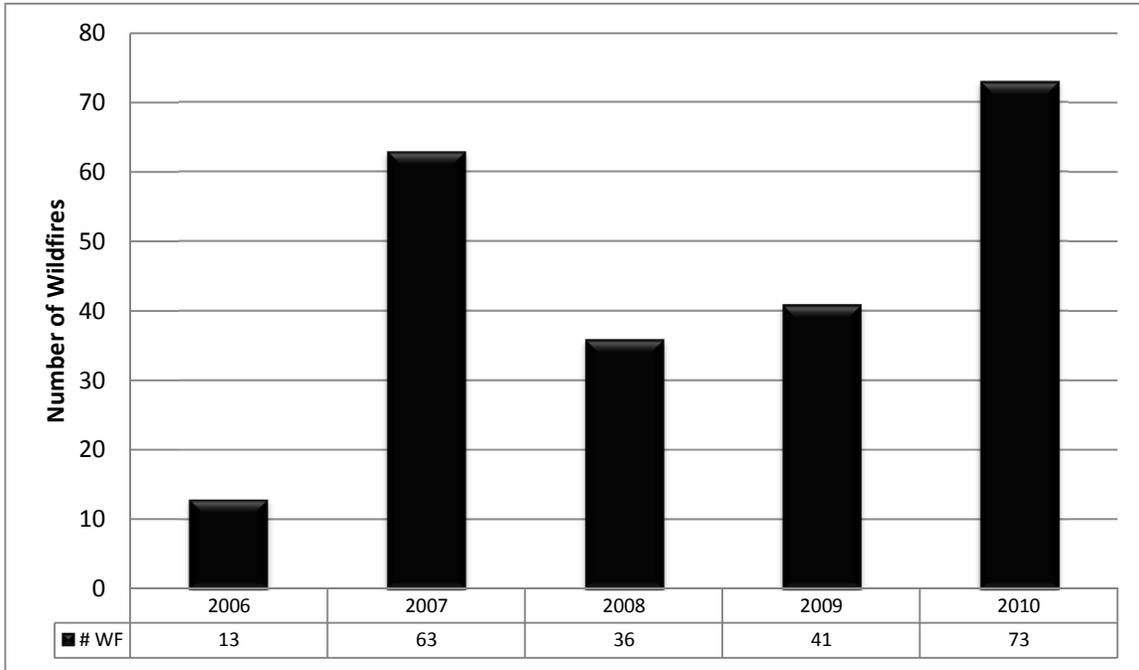


WUI = Wildland Urban Interface

ALASKA REGION

Wildfires

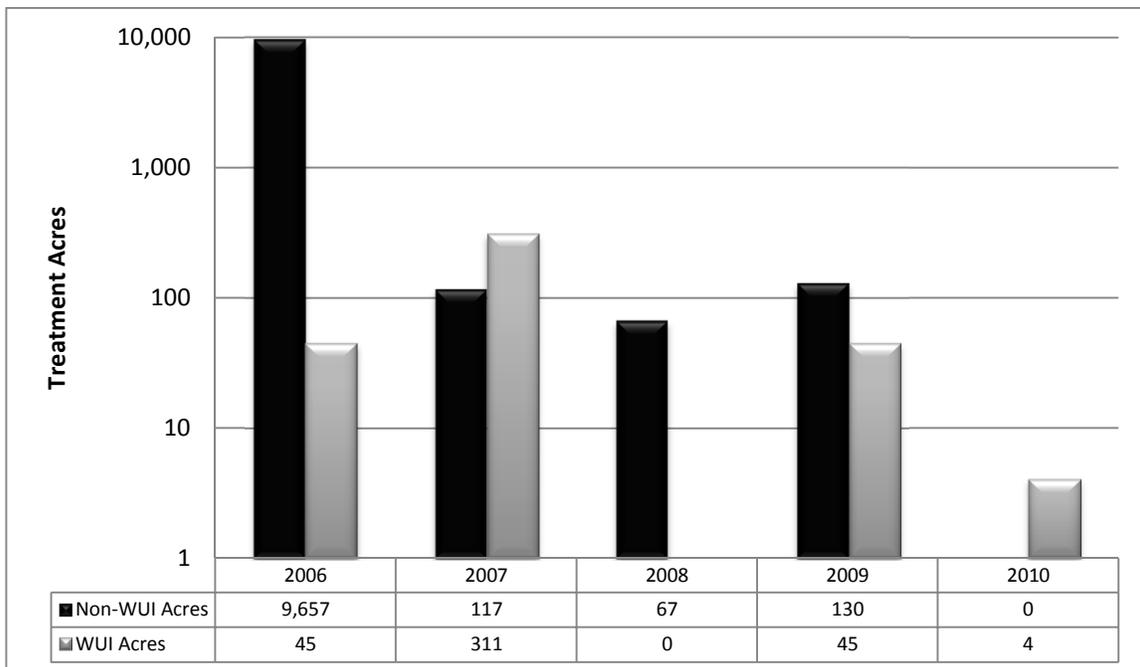
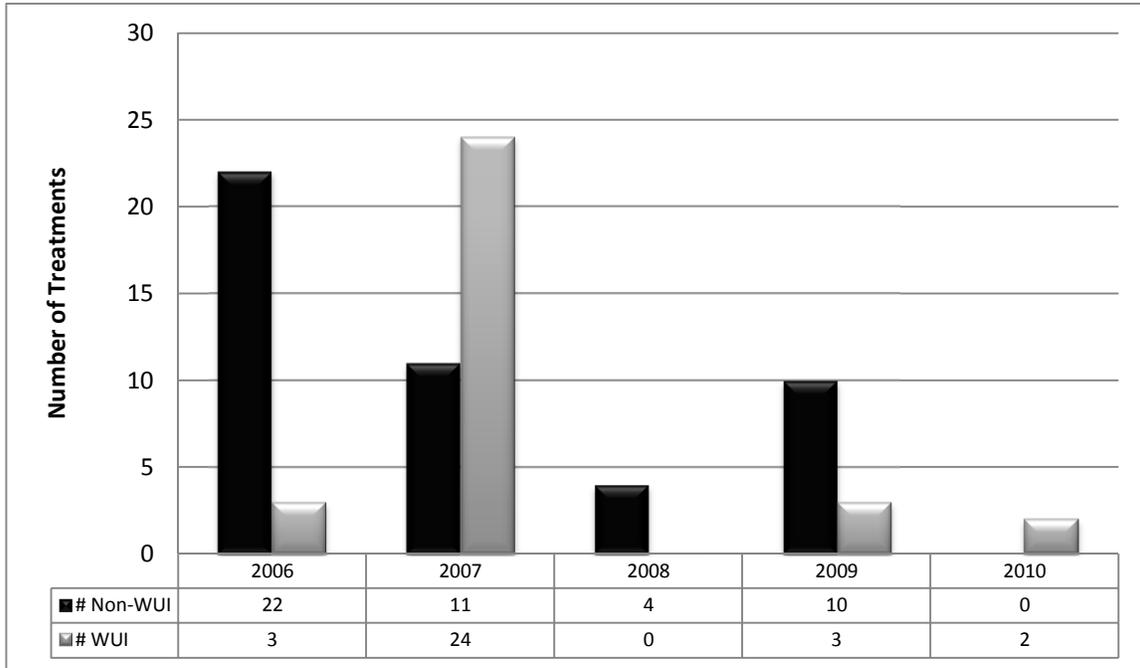
2006-2010



ALASKA REGION

Treatments

2006-2010

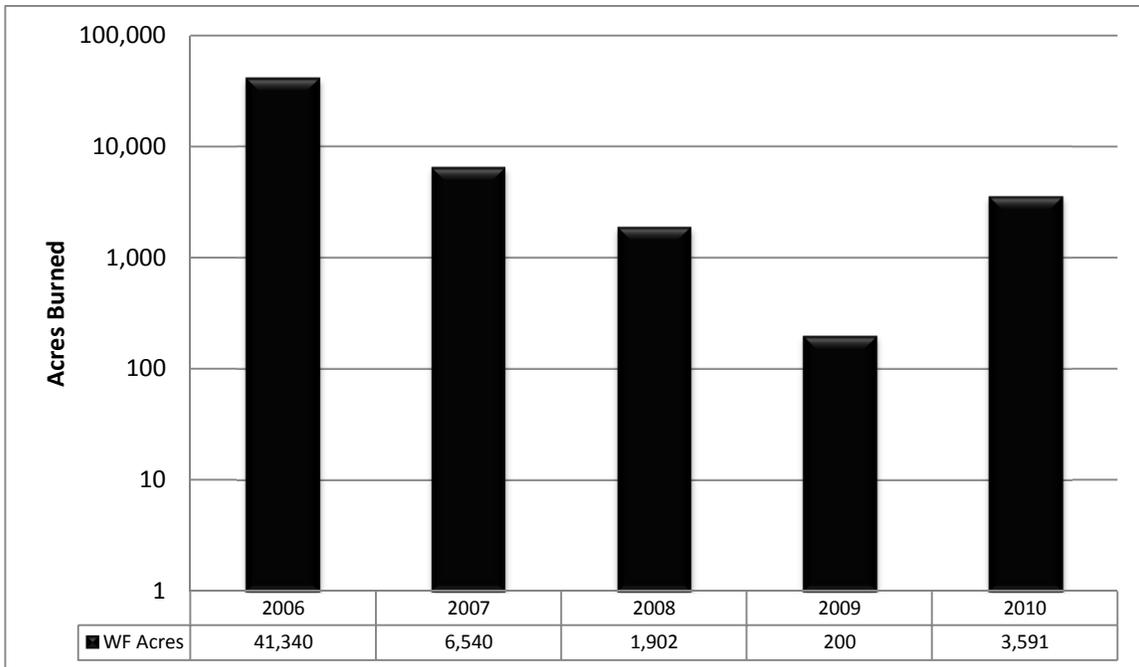
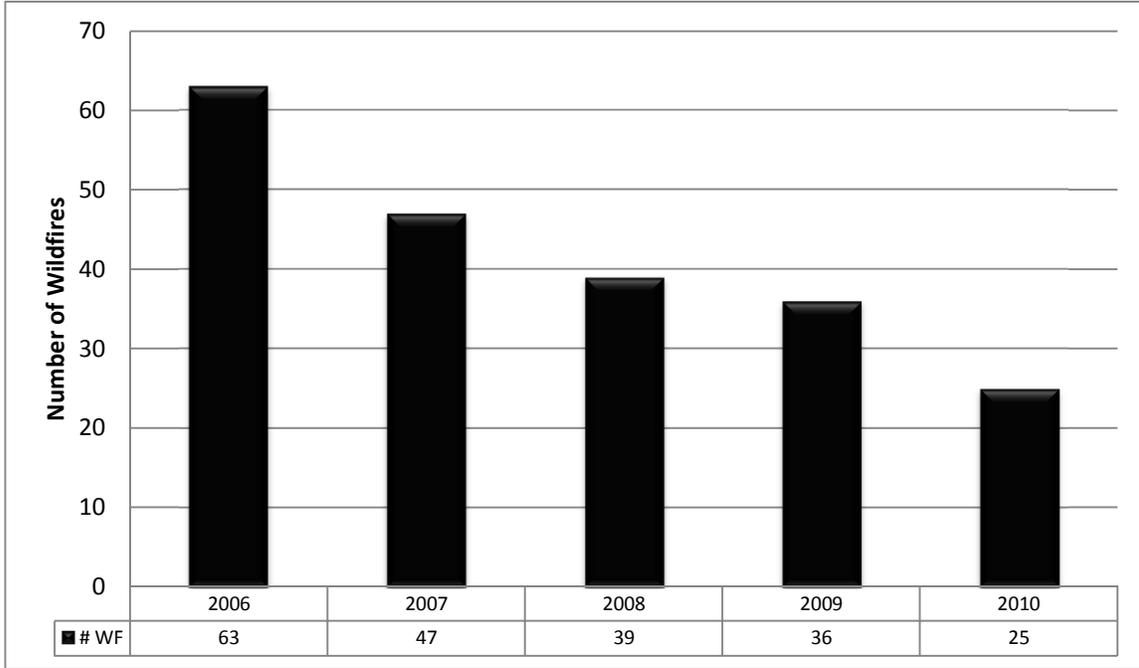


WUI = Wildland Urban Interface

PACIFIC SOUTHWEST REGION

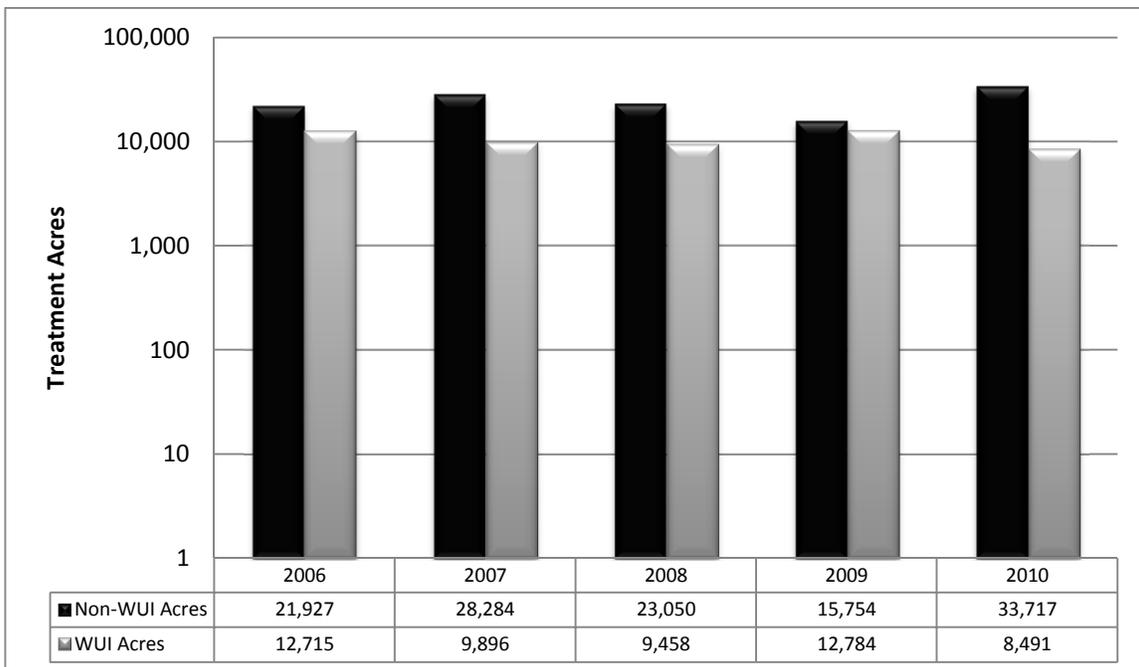
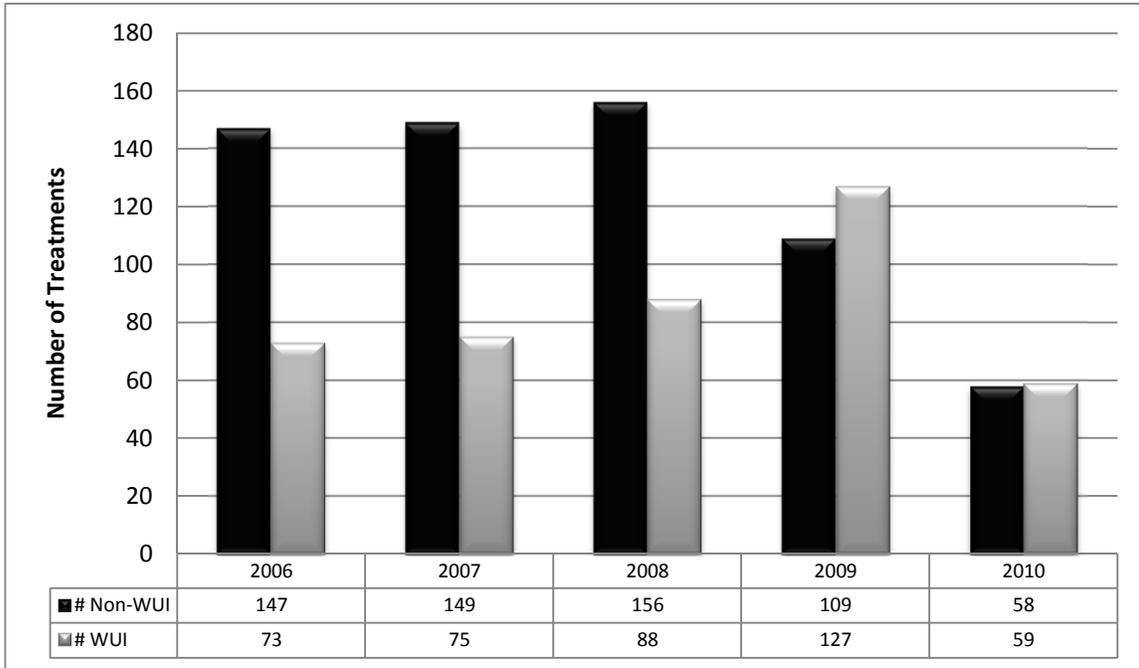
Wildfires

2006-2010



PACIFIC SOUTHWEST REGION

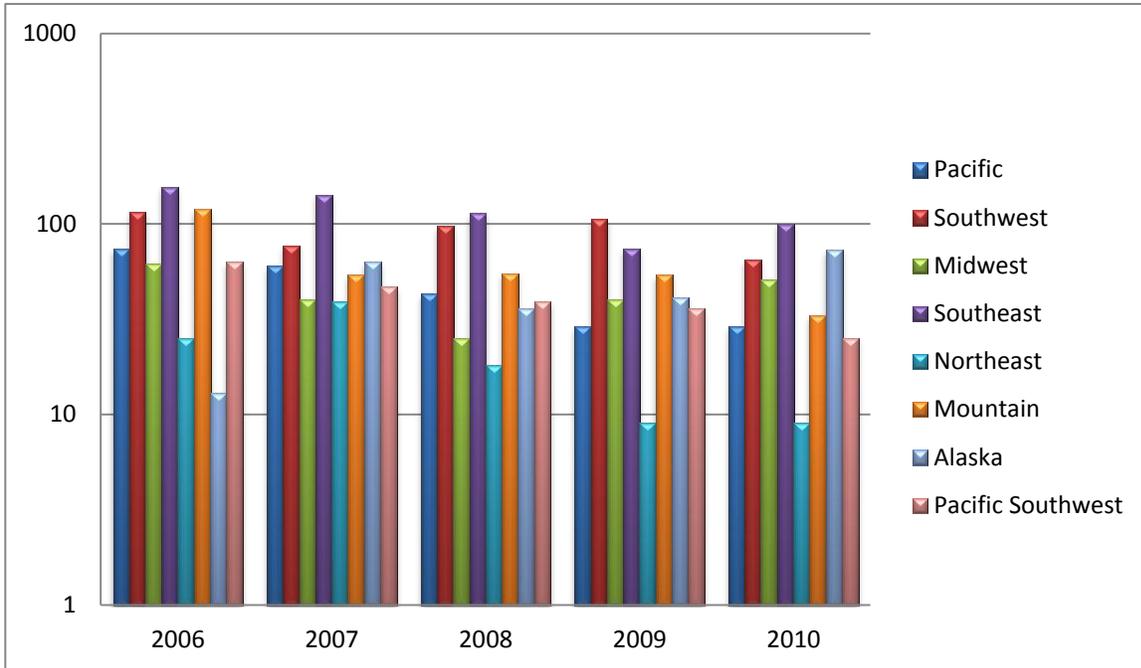
Treatments 2006-2010



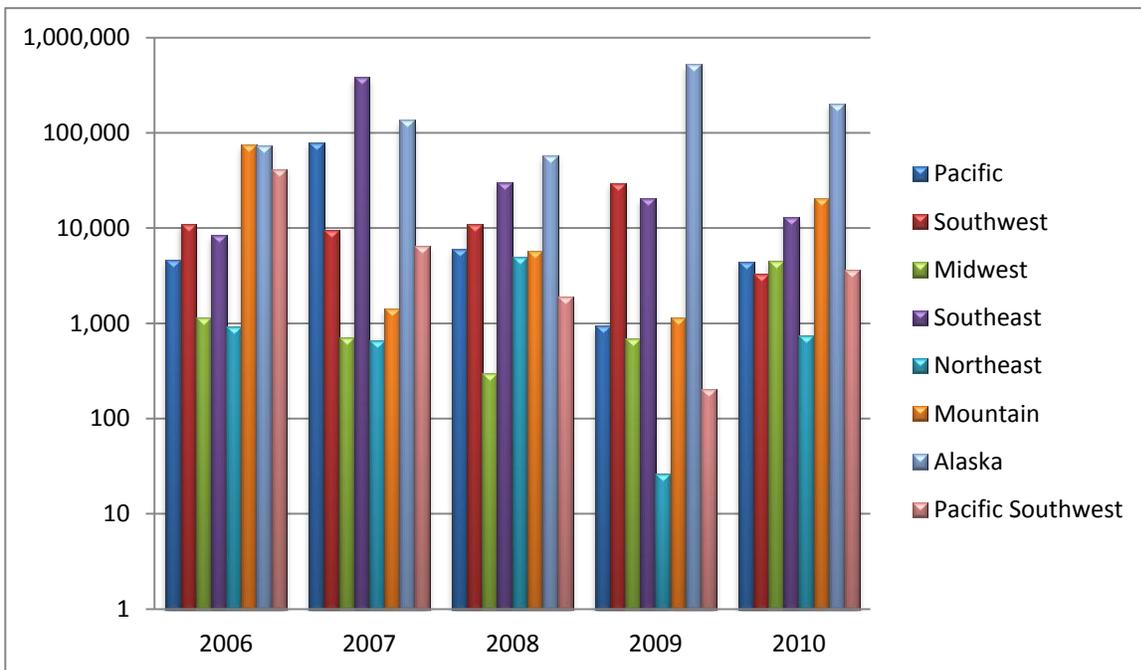
WUI = Wildland Urban Interface

WILDFIRES 2006-2010

Number of Wildfires

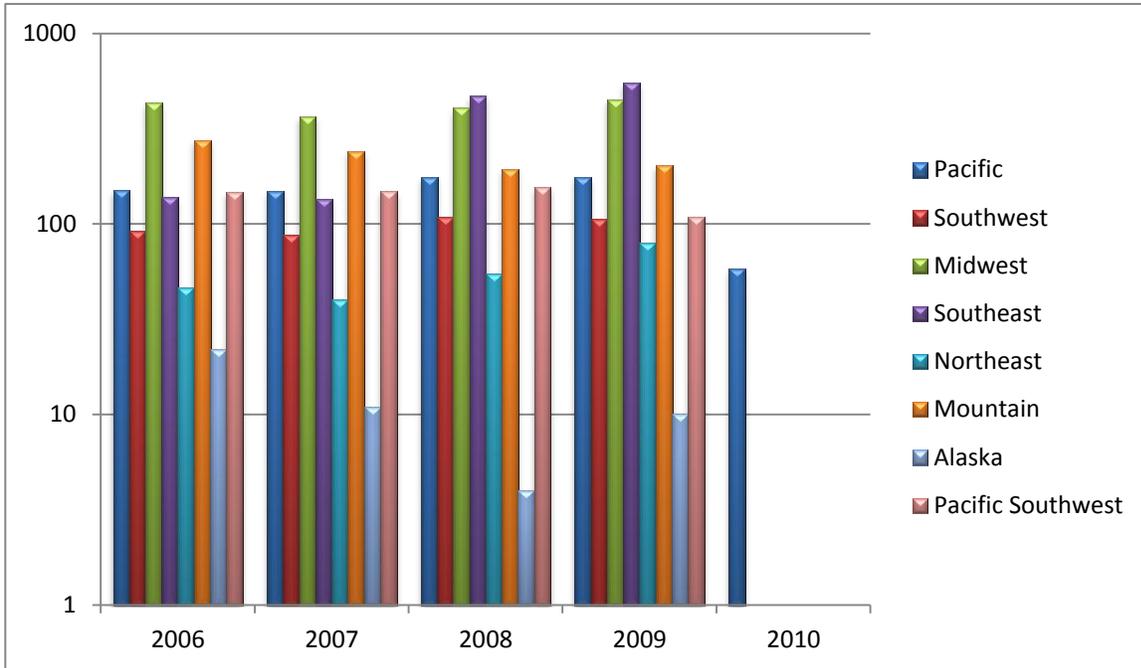


Acres Burned

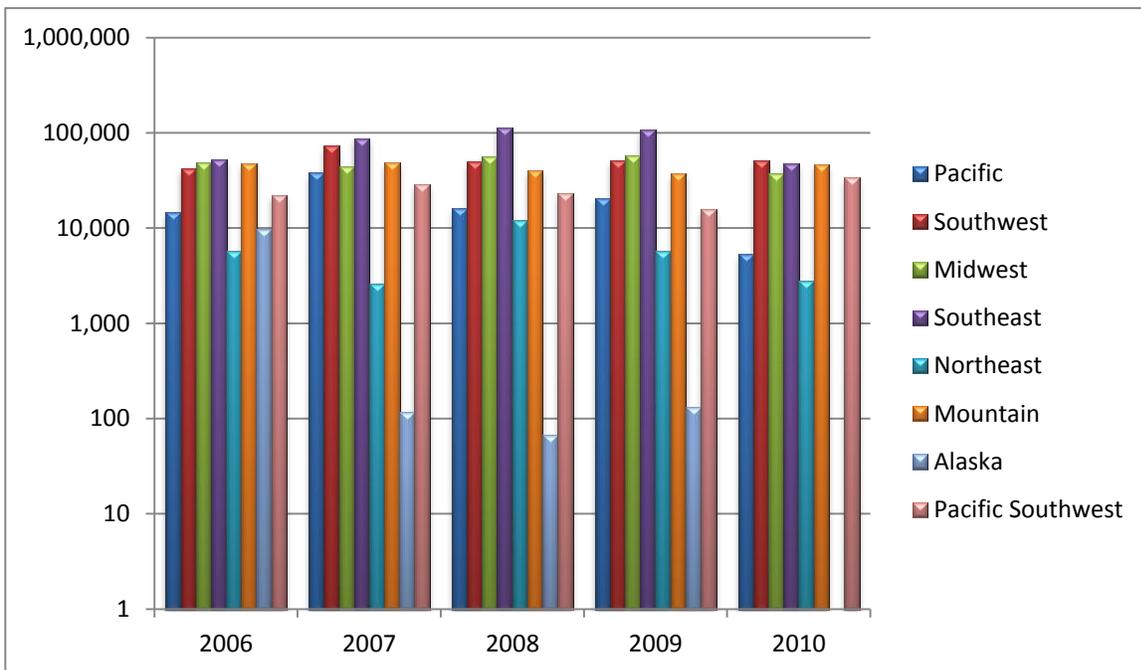


NON-WUI TREATMENTS 2006-2010

Number of Treatments



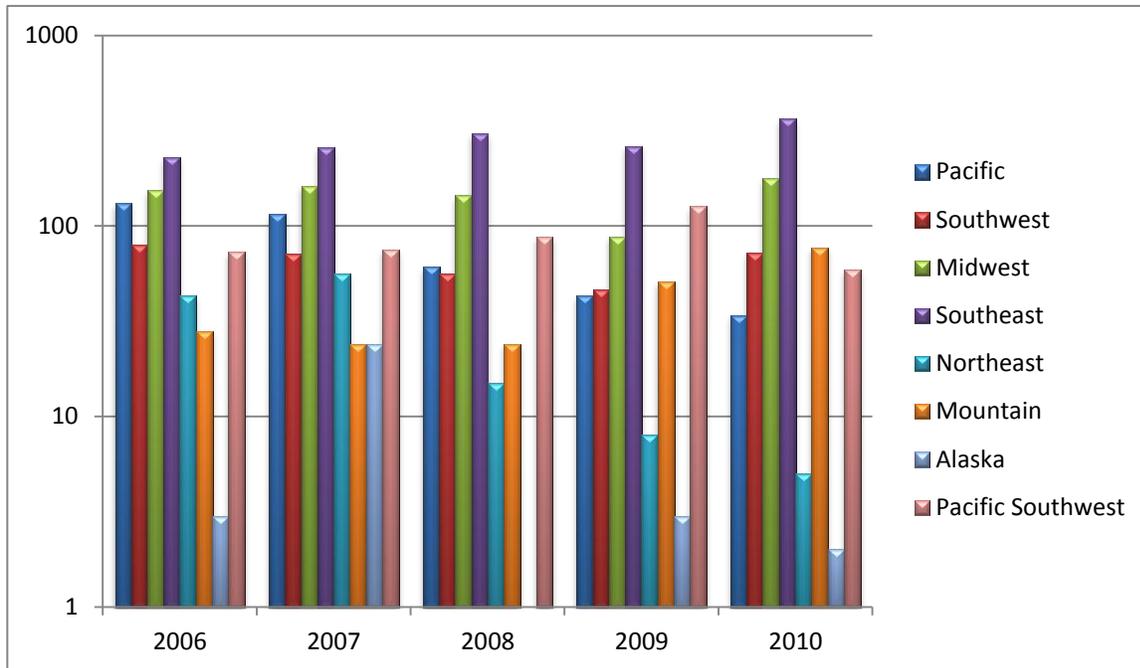
Acres Treated



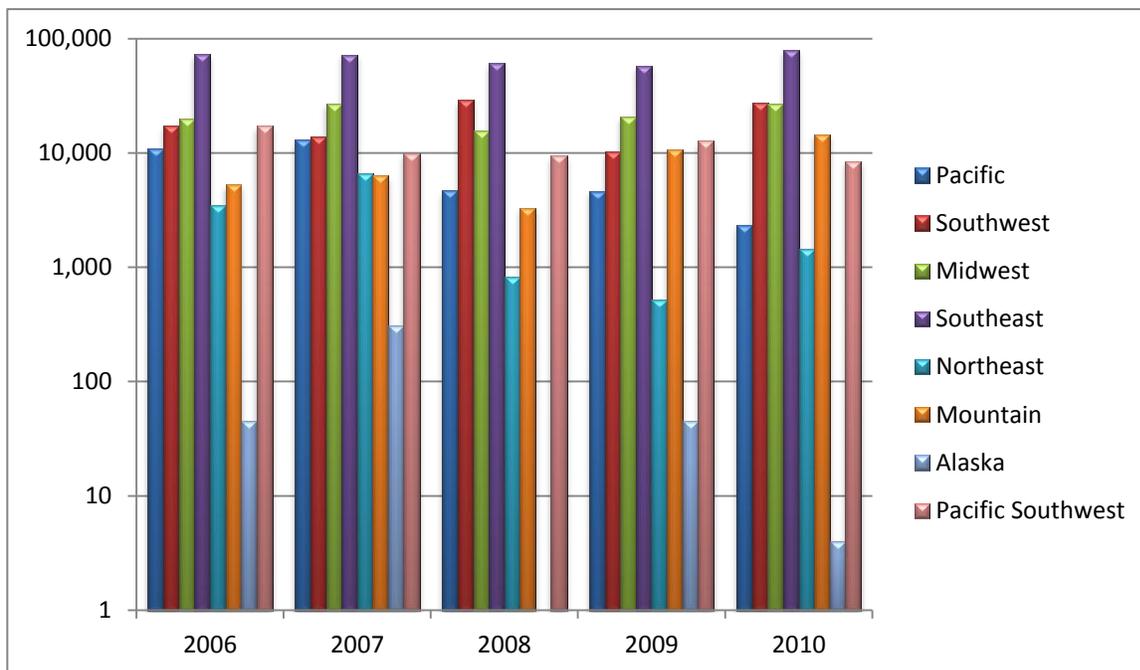
WUI = Wildland Urban Interface

WUI TREATMENTS 2006-2010

Number of Treatments

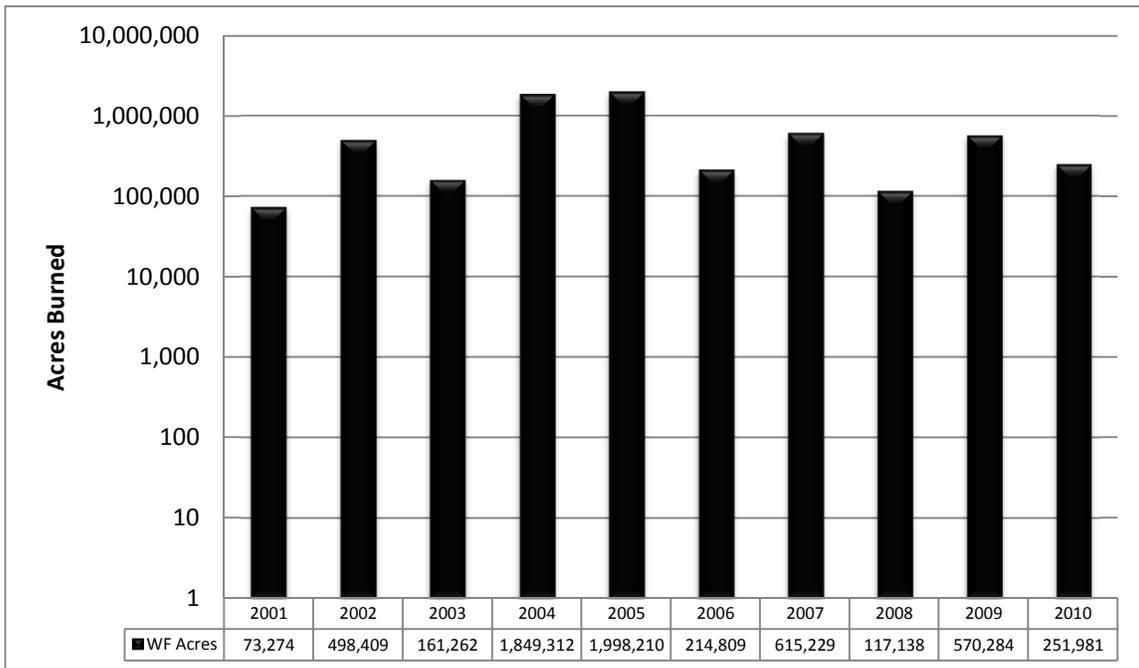
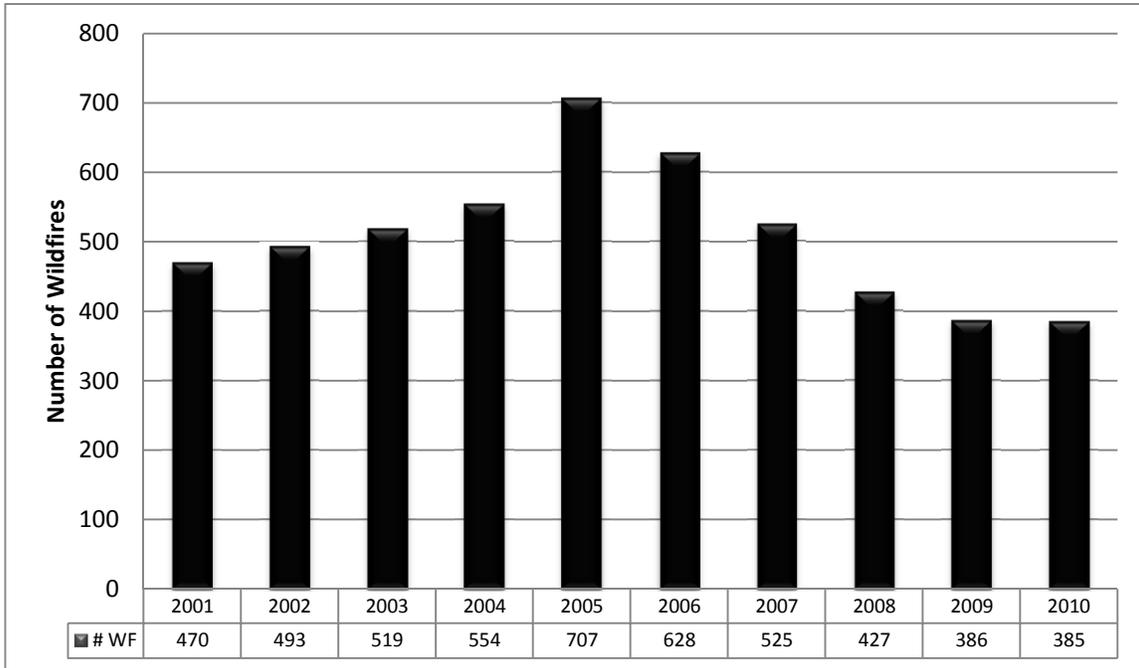


Acres Treated



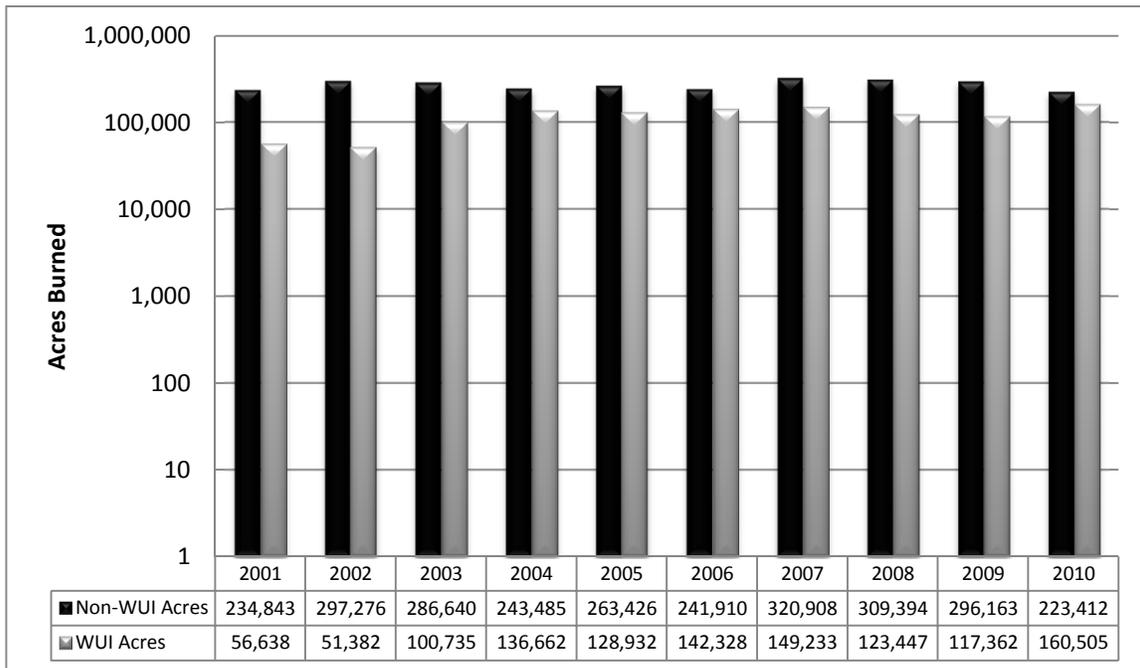
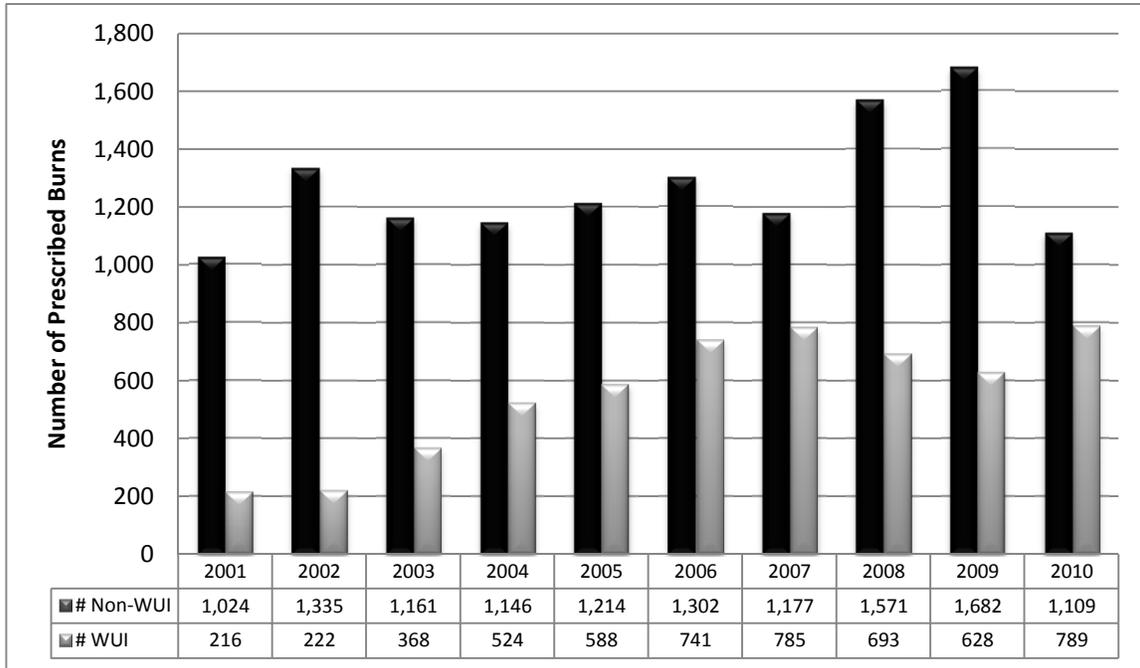
WUI = Wildland Urban Interface

WILDFIRES 2001-2010



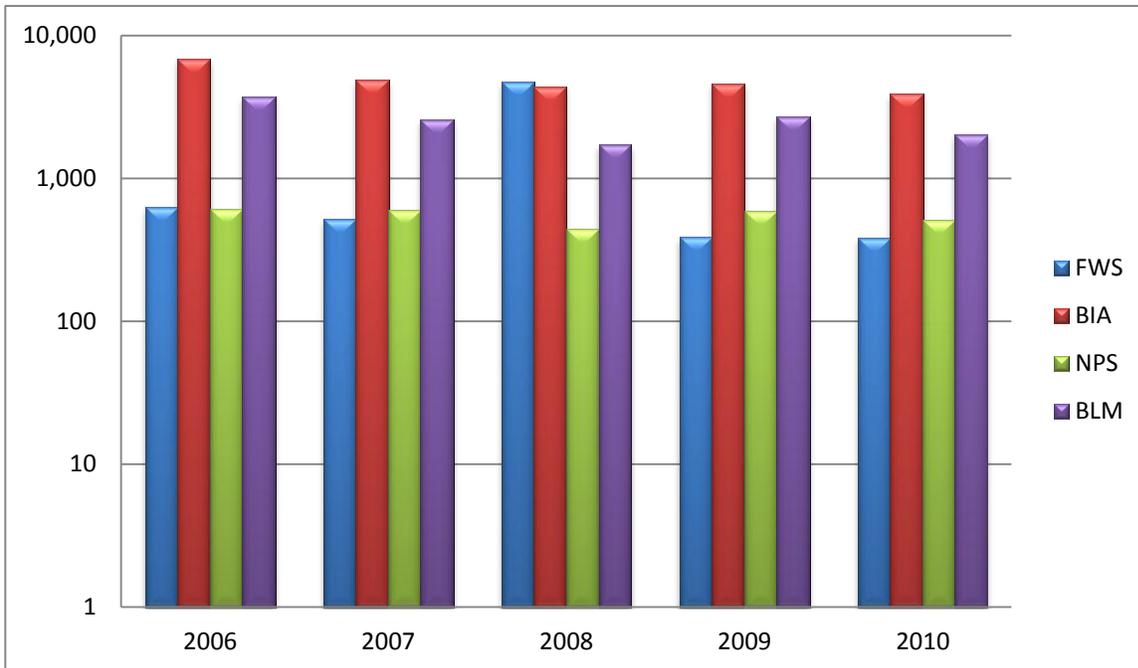
TREATMENTS

2001-2010

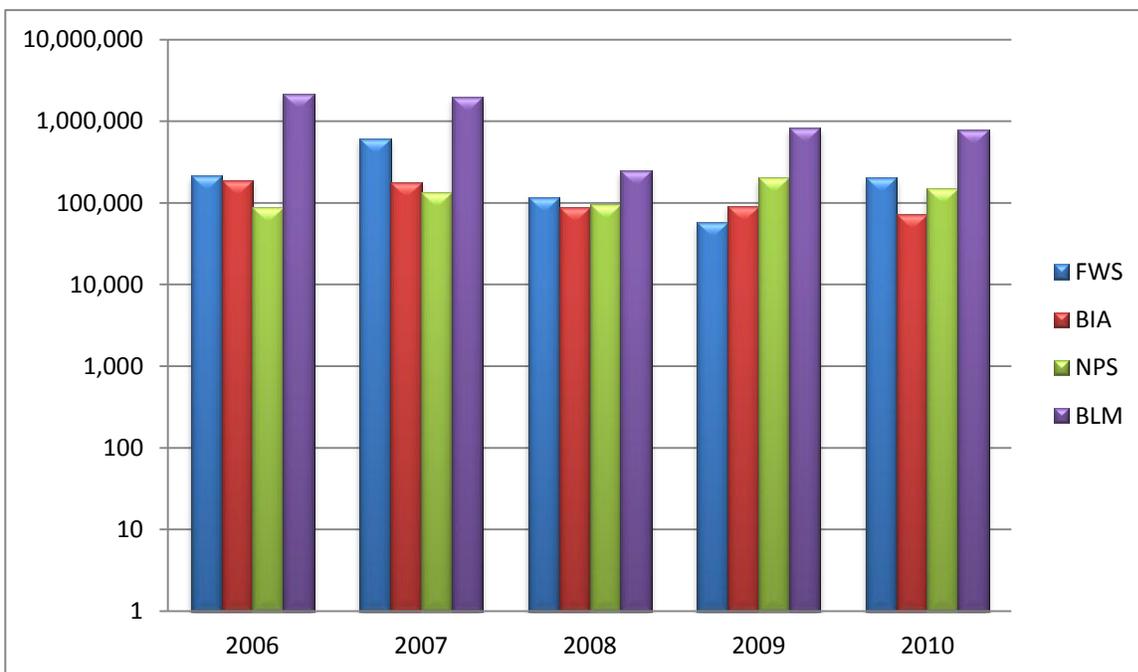


WUI = Wildland Urban Interface

DEPARTMENT OF THE INTERIOR Number of Wildfires

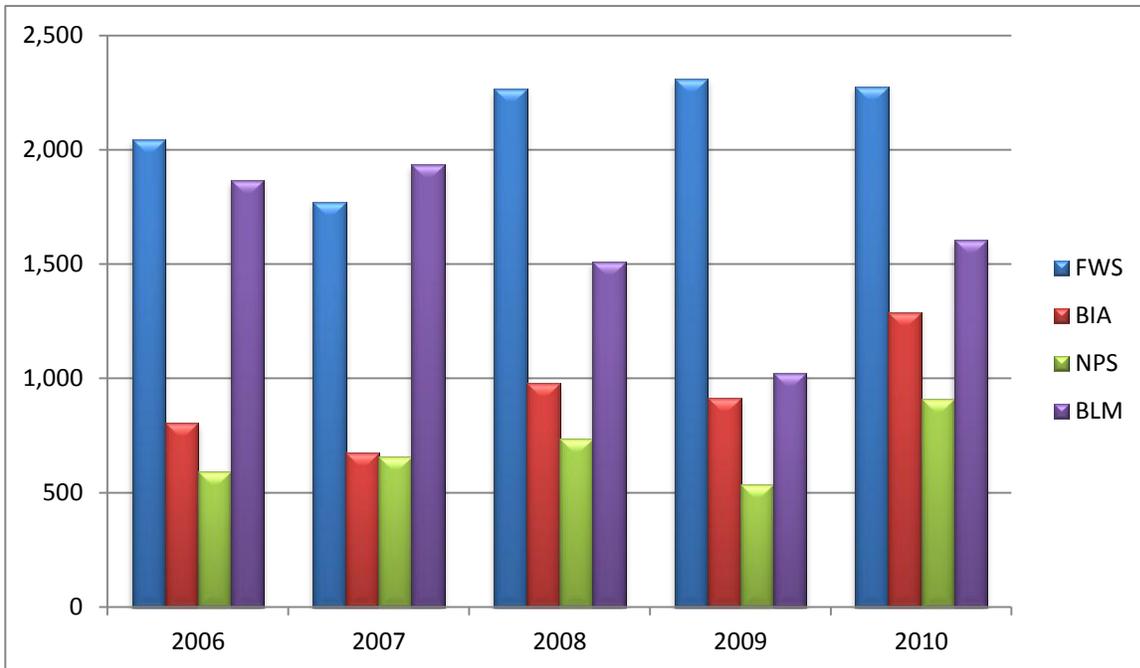


Acres Burned

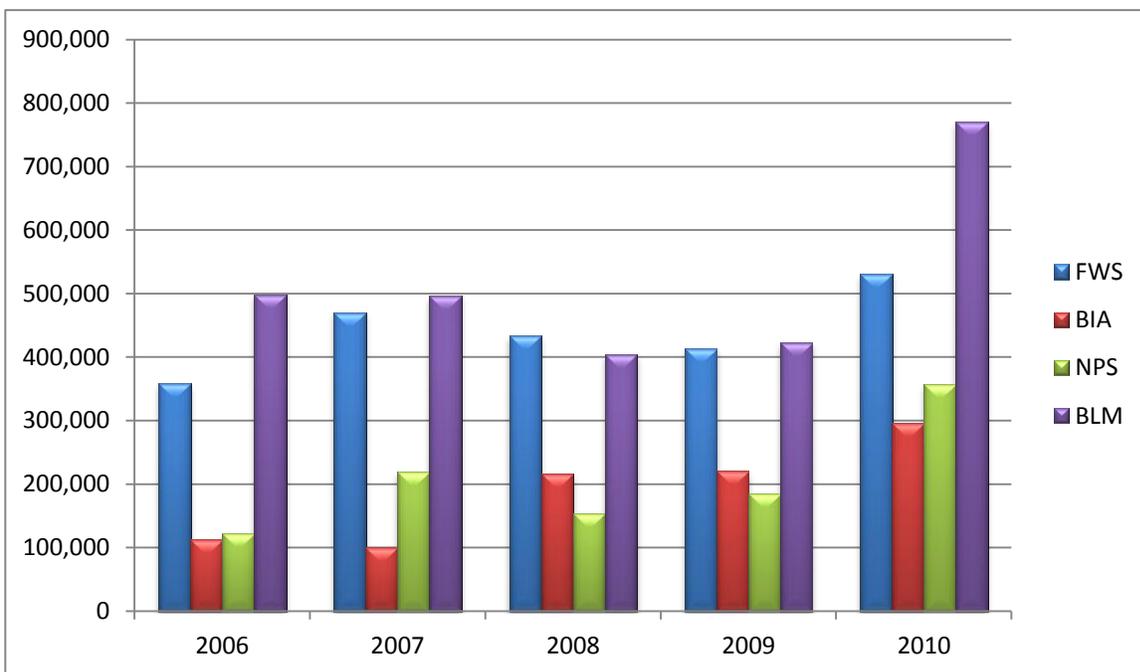


Statistics obtained from fire reporting systems.

DEPARTMENT OF THE INTERIOR Number of Treatments



Acres Treated



Statistics obtained from NFPORS