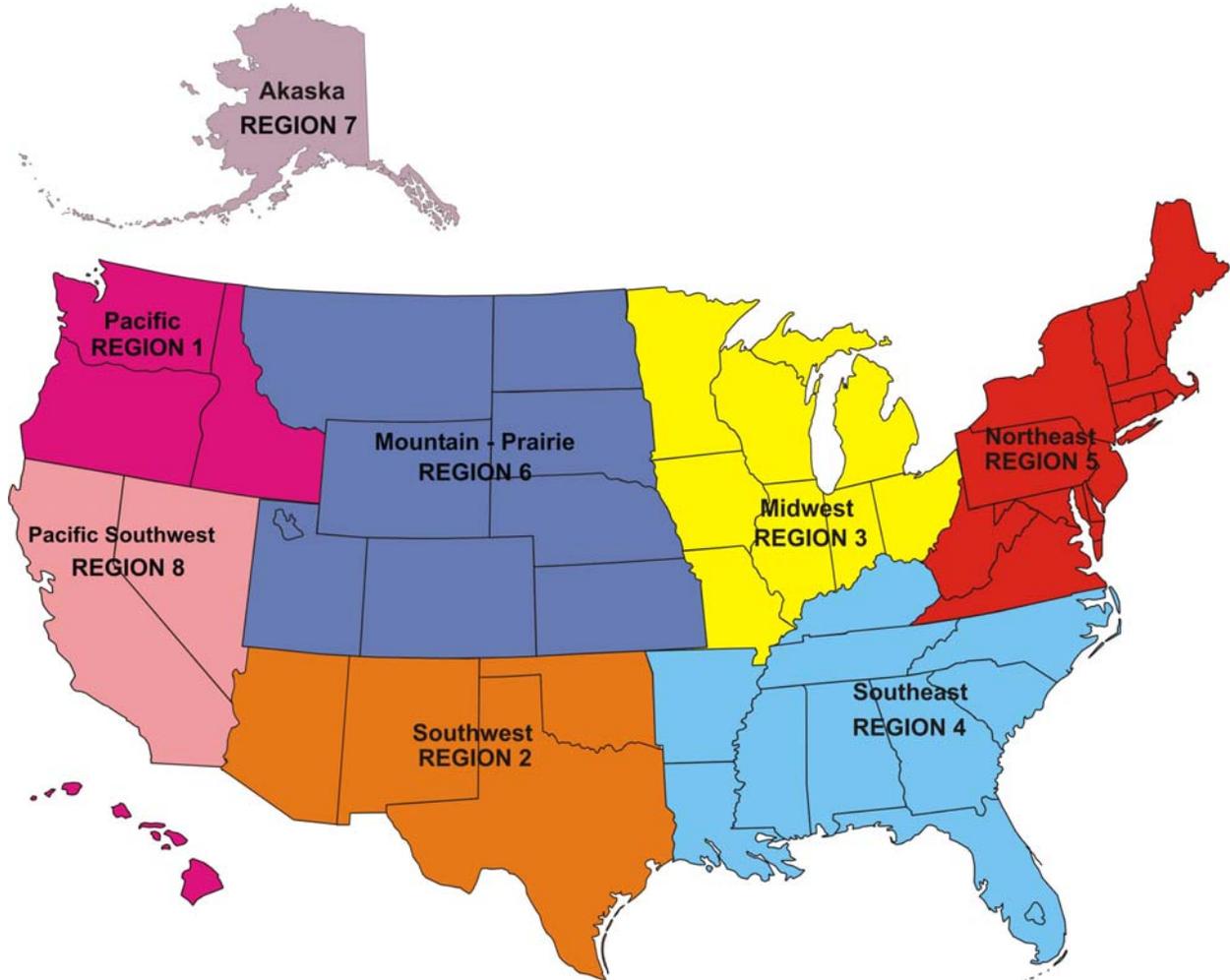


# U.S. Fish and Wildlife Service Fire Activity Report



2011

# US FISH & WILDLIFE SERVICE Regional Map



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## PACIFIC REGION



*Leavenworth National Fish Hatchery, Leavenworth, Washington*

### ***Wildland Fire Management***

Region One experienced a below average fire season having less initial attack and fewer large fires compared to the ten year average on refuge lands in Pacific Northwest, Great Basin, and Pacific Islands.

Firefighters did an excellent job managing/containing 16 initial attack fires on refuge lands and preventing 25 threat fires from burning onto refuge lands. In addition to managing/responding to fires locally, FWS and interagency assistance was provided both in and out of the region.

Region One personnel filled critical positions on both National and Area IMT's. Teams were dispatched to multiple fires in Washington and Oregon as well as the southwest and southern areas. Beyond IMT

members; the region provided single resources, engines for long-term initial attack response and large fire support in the PNW and two other geographic areas, and provided crew members to fill out Type 1 and Type II IA crews.

### ***ES/BAR***

The ES/BAR program was highlighted by successful treatments in response to wildfire at LPO NWR, Hart Mountain NWR, Mid-Columbia River NWRC, and SE Idaho NWRC. Collaboration with refuge staff and partners was critical to implementation of these projects.

### ***Hazardous Fuels Reduction***

Through the use of prescribed fire, mechanical, and chemical treatments the region worked with cooperating agencies to

reduce hazardous fuels on Service and adjacent lands.

Hazardous fuels reduction (HFR) accomplishments for Oregon, Washington, Idaho, and the Pacific Islands totaled 8,708 acres in the Wildland Urban Interface (WUI), with a total of 8,771 HFR acres being treated. The Regional fuels program continued to rely on the flexibility of the fire programs across the region and stations willingness to share resources to meet refuge objectives.

### ***Planning***

The region refined its strategy for preparing NEPA analysis and achieving NEPA coverage for fire management activities.

Refuges continued to update and refine fire management plans to insure proper response to wildfires and effective use of hazardous fuels management project opportunities.

Staff time dedicated to hazardous fuels planning was critical to secure scarce funding directed towards fuels reduction projects on priority Service lands within the region.

A report titled “*Common Prescribed Fire Effects to Habitat Types on USFWS Refuges in the Pacific Region*” was completed to document fire effects on commonly treated vegetation types and supplement refuge Comprehensive Conservation Plans.

The Region continues to collect monitoring data for all hazardous fuels treatments, storing observations (fire behavior, smoke dispersal, weather, and consumption) in the FEAT and FIREMON Integrated database (FFI). Fuels treatment perimeters with attributed information (linking to NFPORS and FMIS) have been categorized into the FWS corporate GIS database.

### ***Interagency and FWS Cooperation***

Region One personnel continued to actively participate on numerous Service fire related working groups, committees, and teams. Fire staffs also serve on the Pacific NW Coordinating Group, Great Basin Coordinating Group, and the Big Island Coordinating Group. As part of the interagency and Service responsibility to these groups, individuals represent the Service through the following; Aviation Working Team, Fuels Working Team, Operations Working Team, Training Working Team, Regional Fire Danger Operating Plan Work Group, FPA Working Team, GIS Working Team, Fire Environment Working Team, WFDSS Geo Editor Work Group, Washington Geographic Board, Oregon Geographic Board, Incident Management Organization Successional Planning Team (IMOSP), Westwide Risk Assessment Team (WWA), Regional Cohesive Strategy Steering Committee (RSC), as well as many local level working groups, teams, and committees.

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.

Region One refuges continued to be very active participants in Interagency Dispatch Offices throughout the northwest. The Region assisted in staffing or funding five dispatch locations in Washington, Idaho, and Oregon.

### ***Training and Development***

Regional personnel remained active cadre members for various training courses including; Regional Fire Effects Monitoring Workshop “FFI basics”, S-520/S-620 development, S-482, S-590, S-595, Fire

Management Leadership, and numerous 200/300 level local area courses.

### ***Leadership/Workforce Planning***

The fire management organization took on a new look as a Division. The program now works under the immediate direction of the Assistant Regional Supervisor for NWRs.

Regional Leadership, Project Leaders, and Fire Managers continued working together to implement the future staffing roadmap to meet the mission of the Service and provide an efficient and professional fire management organization. The region was successful in restructuring its staffing levels and reduced 9 FTE's (specifically three regional office staff, the Outreach Coordinator, an AFMO, a Station Manager and four engines). That effort along with minimizing fixed costs has helped to allow the region to continue to provide fire and fuels management capabilities at high priority areas.

The region expended a great deal of effort to establish its first fire management position in the Pacific Islands. This position will work closely with the NPS, DOD, DOFA, and other local partners to coordinate fire and fuels management activities on refuges and cooperator lands throughout the Islands.

### ***Firefighter Safety***

The 2011 firefighter safety and operations workshop was highlighted by a virtual Staff

Ride to the Thirty Mile Fire. The fire occurred on the Wenatchee National Forest, taking the lives of four firefighters in 2001. This experience was an excellent learning opportunity for the regions fire fighters and fire managers, examining contributing factors with individuals who were directly involved with decisions made on the Thirty Mile fire ten years earlier. The workshop also allowed an opportunity for the regions fire staff to camp out and grow together, focus on our mission, and support each other during a period of uncertainty within the program.

Regional fire leadership continued to emphasize the importance of firefighter safety and career development through routine conference calls, site visits, and preparedness reviews. Interaction between regional and local fire staff and line officers on these occasions is critical to "hammer" in the importance of dedicated time and commitment to situational awareness, training, and professionalism.

### ***Looking Ahead***

In 2012 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 2011 wildfire season in the Southwest Region was a record breaker. There were more than 5 million acres burned in the greater Southwest Region including adjacent lands in Mexico during this historically unprecedented La-Niña-drought year.

## ***Wildland Fire Operations***

In 2011 the Southwest Region of the USFWS and the Southwest Area of the United States experienced one of the most active wildland fire seasons in recent history. The year was typified by record setting drought conditions and unusually windy conditions in Arizona, New Mexico, Texas and Oklahoma attributed to the La Niña weather pattern which was in place most of the year. Arizona and New Mexico each suffered their largest fires in recorded history. Texas and Oklahoma also had several large fires and record numbers of fire occurrences with Texas alone losing approximately 3,000 homes and many more outbuildings.

During fiscal year 2011 Region 2 fire crews responded to 114 fires that burned 57,333 acres on Fish & Wildlife Service lands and another 127 fires that threatened National Wildlife Refuge lands. The largest of the fires on refuges was the Ferguson fire which occurred at Wichita Mountains National Wildlife Refuge consuming over 39,000 acres, 13 private homes and many more outbuildings. In addition fire crews assisted other jurisdictions with another 41 fire support responses.

In order to deal with the record setting fire danger, South Texas and Oklahoma Fire Districts brought in additional firefighting resources and extended local staffing through severity funding. Several of the

Fire Districts across the region also utilized emergency pre-suppression funding to augment local staffing when conditions warranted. Region 2 also supported the interagency efforts committing engines and overhead personnel to ongoing large fire incidents and repositioning of suppression resources in the Southwest and Southern Areas.

## ***Fuels/Prescribed Fire***

The majority of the acres treated were along the Texas Coast during January and February. After February the majority of Texas and Oklahoma went into burn bans due to the worsening drought conditions and the increasing numbers of wildland fires. Arizona and New Mexico were also suffering from the dry conditions with both states being categorized as being in severe to exceptional drought. These conditions made the use of prescribed fire ecologically and politically unfeasible and as a result Arizona was not able to complete any projects and New Mexico completed very few of their planned treatments. The Regional treated acres and project numbers are down approximately 20% below Region 2's long-term averages. This is due to the extreme drought conditions and severe wildland fire season that occurred over the majority of the region in 2011.

In 2011 Region 2 completed a total of 144 fuel treatments on 56,528 acres, of which 126 were completed utilizing prescribed fire and the remaining 18 were chemical or mechanical treatments. The chemical and mechanical treatments were mainly firebreaks that served to protect thousands of surrounding acres. Prescribed burns at Aransas NWR were essential this year for Endangered Whooping Crane foraging habitat, because of severe drought

conditions and otherwise limited food resources.

### ***Fire Planning***

#### **Spatial Fire Management Plan**

Region 2 was asked by the FWS National Fire Management Branch to participate in the Spatial Fire Management Plan (SFMP) pilot project. As the name suggests, a SFMP incorporates a spatial component to the standard written FMP and where appropriate and intuitive, graphically depicts the information. Sevilleta NWR was selected for the pilot project, and spatial datasets for the refuge were collected or developed and incorporated into a set of digital maps representing current information essential to fire management operations on the refuge. Much of the information in the written FMP was illustrated spatially and includes: a project map which provides information on completed and planned fuels treatments; a condition overview map which depicts fuels data, fire history on the refuge, & fire management zones; and an operations map which provides operations guidance, conditions and constraints for managing planned and unplanned ignitions. The goal of this pilot project is to have a usable plan, with continuously up to date information, that is readily accessible and comprehensible for refuge staff, cooperators, and others. GIS datasets will be updated to reflect current conditions or projects as needed to keep the plan current. Along with this process an Environmental Assessment will be completed.

#### **Wildland Fire Decision Support System (WFDSS)**

The WFDSS program has been used to document extended attack fires on several refuges within the region. There were two fires at Wichita Mountains NWR that required a decision to be published in the system. Both of these fires had Incident Management Teams assigned to them and the decision was published remotely by RO

staff with help from the refuge manager and fire management officer.

#### **Fire Program Analysis (FPA)**

Fire Program Analysis has started again over the last year. This time around the analysis was being run by a support working team from the National Office level. There was a group of FPA experts running the analysis with the support of the field and RO, to ensure the runs made sense. The fire planner has also been assigned some Fire Planning Units within the SW Geographic Area as an FPA advisor. The fire planner also participates on an FPA committee for the SW area.

#### **Hurricane Preparedness Planning**

A hurricane preparedness planning meeting was held at Anahuac NWR in May to coordinate planning efforts among all coastal refuges in TX. After this meeting each Texas refuge and Ecological Services (ES) office turned in a Hurricane Plan to the RO. In June a briefing was held for the Regional Directorate team. The plan for South Texas was used to a moderate extent in June when a Tropical Storm threatened the South Texas Refuge complex. This storm did not amount to more than a thunderstorm squall line when it made land fall. It was however a good “test” for regional planning.

#### ***Burned Area Rehabilitation (BAR)***

Nine R-2 BAR projects have been funded this fiscal year (2021). These include 4 ongoing projects and 5 new BAR plans and projects that were drafted and approved this year including the Lower Rio Grande Valley (4), Texas Mid-Coast (1), Balcones Canyonlands (1), Cibola (2), and Wichita Mountains (1) NWRs. The BAR project at Wichita Mountains NWR also includes limited funding for Emergency Stabilization activities. The nine projects were approved for a total combined funding of approximately \$1,400,000 dollars. The

2012 fiscal year will provide the final year of BAR funding for the Island, Las Ruinas, and the FM2611 projects, at Cibola, Lower Rio Grande Valley, and Texas Mid-Coast NWR's respectively. This work however will be continued with refuge and other support to bring these projects to fruition. The BAR program and these projects are helping to reduce future wildfire threats, control non-native invasive species, and to restore watersheds and native wildlife habitats for Refuges.

### ***Inventory, Monitoring, and Research***

The regional and national Inventory and Monitoring Programs (I&M) have been officially initiated. The Southwest Region's I&M program has been working closely with the Refuge Fire Programs to help meet fire and hazardous fuels inventory and monitoring needs. This includes support for the Fire Atlas project, development of Refuge monitoring plans, and development of applied research to inform management decisions. This work and continued strong collaboration between the Fire Program and I&M program, at regional and local scales, will help to enhance the Refuges Fire Program through better achievement of management and ecosystem objectives.

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

Dated fire monitoring plans at most locations are currently being reviewed and revised. Several research proposals are in development for the Joint Fire Science Program and through the Regional Science Support Program and Global Climate Change initiative. Prescribed fire effects and climate change research was completed 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 and

hazardous fuel treatment effects on oak recruitment and future habitat for Endangered Golden Cheeked Warbler and Black Caped Vireo research was initiated by researchers at the University of Missouri at Balcones NWR. Fire historian Dr. Stephen Pyne has begun interviewing Fire Management Staff in the region to provide storylines for his new book on fire history.

### ***Geospatial and Remote Sensing***

#### Fire Atlas

In order to address the need for comprehensive, spatially depicted baseline fire datasets at the station level, the Division of Fire Management is developing Fire Atlas' for NWRs throughout the Region. A fire atlas spatially documents the location, extent, and frequency of Wildland and Prescribed Fires that have occurred on a landscape for a specific time period and includes associated tabular information specific to each fire (name, date, actual burn acreage, ignition source, etc). Currently, most refuges have incomplete or limited digital data documenting their fire history and the extent of fires that have occurred on their lands. Once developed for a refuge, the fire atlas will establish a permanent baseline dataset which can be used for trend analysis and to better enable managers to examine the historical ecological effects of fire, monitor post-fire affected landscapes, and plan for future fire applications. The Division of Fire Management has completed a fire atlas for several refuges in the region, spatially mapping and documenting their fire history from the early 1980's - current. In addition to baseline data, fire history statistics for these refuges can now be summarized by fire management unit, year(s), affected habitat, return intervals, fire mosaics, cost structures, etc.

The fire management applications for the Fire Atlas project are immense. This fire history data can be used to inform future

management actions, including prescribed fire planning, location and frequency of burning needed, demonstration of fire regimes that promote future desired conditions, monitoring or research needs and design, etc... Region 2 is working to fine tune the fire atlas geospatial analysis process with assistance from the Southwest Regions Inventory and Monitoring Program. The FWS National Inventory and Monitoring Program and Regional Fire Ecologists had a combined meeting in November 2011. At that meeting it was decided to adopt the Fire Atlas project nationally for the FWS. The work being done in Region 2 will help develop a more efficient and consistent process that can then be implemented by FWS in other regions.

#### GIS Training FY 2011

On-site introductory and intermediate GIS courses were taught to fire staff in multiple Fire Districts to establish or further develop GIS skill sets. In addition, breakout sessions were offered to address localized station GIS or GPS needs such as software and hardware operation, data collection, storage and maintenance protocols, FMIS perimeter collection and uploading processes, etc...

#### ***Budget and Administration***

Preparations were completed this year in anticipation of FBMS, the new Financial and Business Management System. The new system was implemented following the Fiscal Year close in September, 2011.

#### Personnel

In Fiscal Year 2011 Mary Blake joined Region 2 as the Fire Budget Analyst and Nancy Cunningham as lead administration for Fire. In the field, Natalie Robison joined the New Mexico Fire District as the Fire Program Tech and Becky Hales joined the Arizona Fire District as the Fire Program Tech. Michael Johnson also joined the Regional Office staff as a Student

Conservation Association volunteer Intern. He brings additional geospatial skills to the group and will be assisting with the Fire Atlas Project among other activities.

#### Workforce Planning

Workforce planning was initiated in the region due to the declining budget and ongoing budget concerns. The Deputy Regional Fire Management Coordinator helped lead this process which began in 2011. Strategies and organizations were derived from two planning meetings where ideas were solicited from a variety of Refuge employees involved with fire management. The initial scoping occurred at the annual Refuges Fire Management Conference held in South Texas where break-out groups were tasked with developing more efficient strategies and organizations related to specific topics (e.g., hiring, recruitment and retention, prescribed fire habitat funding and support, and fire organizations and operations). These groups included Refuge Supervisors, Project Leaders, Managers, Regional Office Staff, and Fire District leadership. Suggestions from these groups were further assessed at a smaller workforce planning meeting attended by leadership from all fire districts. This workshop included most District Fire Management Officers and the Deputy RFMC. Suggestions from the breakout groups were analyzed at this meeting in context of regional and fire district data including patterns of workforce grade levels, organizational staffing, and major workload points related to prescribed fire, fire habitat, wildfire activity, and district complexities.

A working workforce plan has been drafted from the findings at these meetings. This plan provides strategies and organizations that can be implemented immediately to provide budgetary cost-saving efficiencies. Additionally, several potential new organizations were outlined that with further

budget cuts should enable the region to continue core fire management responsibilities while providing cost savings. All Refuge Fire Management staff have been considering and implementing these strategies and organizations where appropriate to inform more efficient fiscal management within their Fire Districts.

This workforce plan will be further developed to incorporate new FY 2012/2013 budget changes and National Fire Management branch workforce planning guidance. As a working plan it will be used to inform regional workforce planning for the fire management program over the next couple years as needed.

## MIDWEST REGION



*Prescribed burn at Minnesota Valley NWR, credit Dick Birger, USFWS*

Region 3 in 2011, was the year of “continuous change”. The year was full of change creating new challenges, from budget concerns to wildfire to severe weather events. This constant change from the expected made 2011 an especially pronounced year of activity. Regional Fire Coordinator Steve Jakala and Zone FMO Tom Zellmer both retired this year. Their leadership will be greatly missed.

Continuous drought or flooding was present within the region the entire year. Nationally, the United States set a record with 12 separate billion-dollar weather/climate disasters in 2011. As an indication of the severity and intense destructiveness of Midwest storm events, eight of these events occurred within some area of Region 3. Included in this list were the two Upper Midwest and Mississippi River Flood events from the spring and summer, the five tragic

Midwest/Southeast Tornado events from April to June, and the Groundhog Day Snow Blizzard occurring Jan 29 – Feb 3<sup>rd</sup>. These events caused much widespread damage to refuge lands and delays to project work in addition to the tragic loss of life associated with these storms. Further, as described in last years’ 2010 R3 report, tornado events are more common today in the North, with Iowa, and MO impacted by each of the five tornado events listed above and WI struck by three of these tornado events.

Through these challenging conditions we accomplished significant acres of hazardous fuels treatments, sensitive habitat maintenance and restoration, and contributed personnel and resources to the National fire mobilization effort in numerous states.

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. We continue to establish the “new normal” for weather in the upper Midwest and this new normal often includes the extreme. Below average temperatures and above average precipitation in the North were not the only extremes as evidenced by the high degree of tornado and wind events.

The winter to spring season transitioned quickly into extreme dryness and fire danger in the far 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 near record snowfall for the winter. Through mid-April, it was the 4<sup>th</sup> snowiest winter on record. 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. The persistent rainfall that occurred in the Ohio Valley led to historic flooding and extensive bottomland flooding on many refuges in Indiana, and along the Mississippi River in Illinois and Missouri. Many areas remained flooded in the Ohio Valley well into the summer months.

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. In the traditional snowbelt of the Upper Peninsula of MI, the 6<sup>th</sup> least amount of snow was recorded at Marquette for February along with the 5<sup>th</sup> driest start to a new year. Temperatures remained well below normal for these northern areas through April while in the Southern half of the region, temperatures were above normal.

June was a busy month for severe weather. All four weeks of the month brought severe weather to each of our eight Midwest states. Hail, severe wind, and tornadoes struck somewhere in the Midwest on every June day except the 29th.

For the month of July, hot and humid weather persisted making it one of the top seven warmest Julys for all our Midwest states. While temperatures were also slightly warmer for August through the region, it was precipitation that was most variable. As the Midwest drought area expanded, those areas that did receive rain often set daily records that led to flash flooding.

The East Central area of MN bordering WI and NW WI experienced a severe thunderstorm and straight line wind event (derecho) on July 1<sup>st</sup> as winds topped 100 mph destroying and damaging miles of Northern forestland. Large scale clean-up efforts remain in effect.

For the fall through December period in the region, the Upper Mississippi Valley and Northern areas of the region experienced below normal precipitation and well above normal temperatures. This caused drought conditions for many areas of Minnesota, Upper Peninsula Michigan and Iowa. The NWS issued their only red flag warning of the year for MN. Issued for the period of October 4 – 7, it not only was one of the latest red flag warnings issued but also the longest consecutive stretch of red flag days at four. This was indicative of the exceptionally dry and droughty conditions from September leading up to this warning. While the North Country was dry, the Ohio Valley experienced heavy precipitation with Southern Indiana, Illinois, Missouri, and Ohio, receiving tremendous rainfall and once again flooding many lowlands. Essentially, the region ended the year divided into two weather halves. North and West of a line extending from SW Missouri to the Eastern area of the Michigan Upper Peninsula was dry and in some form of

drought. South of this line, the region experienced near normal to excessive rainfall and precipitation events.

This past November, Agassiz NWR battled with a persistent peat fire started from an August prescribed burn. This smoldering peat created unfavorable smoke conditions for the neighboring community and was converted to the Silo Wildfire on October 24, 2011. Fire events in Northern Minnesota in November are a relatively rare event given that snow and precipitation have typically eliminated most high fire danger. This late season fire was indicative of the drought and extreme weather conditions that we dealt with through the year.

In spite of the late arrival of the budget, the region met the following hazardous fuels treatment targets. A total of 174 HFPAS approved hazardous fuel treatments were conducted totaling 29,578 acres and reported in NFORS. The complete FMIS record reports the following zone accomplishments: West Zone (MN) completed 230 prescribed burns for 27,470 acres.

Interagency cooperation and sharing of resources contributed greatly to the accomplishments of these large targets. Assisting were prescribed fire detailers and equipment from the NPS Fire Use Module from Buffalo River. These detailers provide much needed assistance during the spring Rx season. The South Zone (IA, IL and MO) and East Zone (IN, Upper and Lower MI, OH and WI) completed 181 prescribed burns and mechanical projects totaling 24,908 acres. One unfortunate accident occurred at Union Slough Wetland Management District, after the start of the year, when a structure fire destroyed the storage building and shop where the fire engine, Marshmaster, and fire cache were all stored. A great group effort from the South Zone showed the camaraderie and spirit firefighters possess as they pulled together and assisted Union Slough with making necessary preparations for the fire season.

For 2011, there were 39 wildfires which burned 3,185 acres within Region 3. It was a fairly normal year in total wildfire activity throughout the region except for Northern Minnesota. Many of our regions firefighters found themselves in Northern Minnesota, assisting with firefighting in the Boundary Waters Canoe Area Wilderness on the Pagami Creek Fire, the largest forest fire in MN in 93 years or on the Agassiz NWR Silo Fire. Nationally, it was an historic fire season in the Southwest and South Central Plains region with Arizona, New Mexico, Oklahoma and Texas experiencing record fire seasons. Texas and Oklahoma had not seen such drought since the 1930's epic dustbowl era. Region 3 provided engines and firefighters to all of these states to assist with their firefighting efforts. FWS resources were also mobilized, primarily on fire assignments, to Florida, Georgia, Arkansas and Virginia.

Region 3 continued with our proactive biomass and bio-fuels utilization program. In support of our hazardous fuels treatments and habitat improvement, a tremendous effort is made to utilize the harvested biomass for bio-energy generation. The benefits are widespread with the utilization of these renewable biofuels, including a reduction in greenhouse gas emissions and the utilized biomass supports energy efficiency while not negatively impacting agricultural food production.

Excellent progress continues to be made on our fire ecology studies within the region. At Big Oaks NWR, the Joint Fire Science Program (JFSP) project studying fire effects on *Mycrostegium* or Japanese Stiltgrass was extended. This promises to deliver additional scientific research at controlling this invasive plant of the Eastern deciduous forests. At Sherburne NWR, the Paleoenvironmental History project begun in May, 2010, was completed with all analysis and research finished. Conducted with the University of Utah, the final project manuscript will be completed in 2012. This

has been a tremendous project that will provide outstanding documentation in oak savanna research. In Michigan, our JFSP project on the pre-European distribution, abundance, and spatial patterns of young jack pine and jack pine barren ecosystems and integrating these findings into the restoration efforts on jack pine barrens and the effect on the endangered Kirtland's Warbler continues to make excellent progress. This is a truly joint effort between Wayne State University, The Ohio State University, and the FWS. We look to complete these studies in the coming two years with some impressive research results and papers to further our science based fire management within the region.

The JFSP funded Lake States Fire Science Consortium has been a solid success. We successfully received funding to continue the consortium and further the dispersal of scientific research throughout the Lake States region. Monthly newsletters, webinars, on-line panel discussions, and further improvements to the consortium 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 fire consortium completed its second year of operation.

We successfully applied for and received JFSP funding for the Eastern Tall Grass Prairie and Oak Savanna Fire Consortium. Operating through the University of Wisconsin, Madison, the fire consortium director is Dr. Paul Zedler. A program

coordinator position to handle daily operational needs of the consortium will be filled shortly. A web page and similar uses of electronic media and informational transfer as used in the Lake States Fire Consortium are planned.

There was no funding available for the ever popular Rural Fire Assistance (RFA) Program in 2011, however, \$5,972.00 was distributed and completed the spending requirements at Windom Wetland management District in Southern MN.

The region continued with our strong public outreach program. Fire staff from our South Zone, including Neal Smith NWR, staffed the fire management display at the Pheasants Forever Sport show and convention in Omaha, NE during January, 2011.

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, 2011 was a year of continuous change, uncertain budgets, changing financial and administrative programs and processes, a new Regional Office location to Bloomington, MN and ever changing extreme weather and hazardous assignments made for challenging times. It remained however, a year of safe and outstanding accomplishments for the R3 fire program.

## SOUTHEAST REGION

### *Season Overview*

The 2011 Fiscal Year (FY) proved to have one of the longest and most expensive fire seasons in history. The Honey Prairie Wildfire on Okefenokee NWR (started April 29) and Pains Bay Wildfire on Alligator River NWR (started May 5) together have burned more than 350,000 acres, at a current cost of \$68 million (Honey Prairie Wildfire is still burning). This year saw the highest number of severity packages submitted. Even with the heavy suppression workload, the region exceeded the hazardous fuels reduction (HFR) targets, assisted with all hazard response, represented the region and service on numerous committees and working teams and served as instructors in training courses of all levels. Throughout this very busy year, our SAFETY record remains exemplary.

### *Regional Highlights*

- 337 wildfires, 385,312 FWS acres, 45 Refuges, occurrence in all 12 months (2011CY)
- Six severity request from 4 districts for a total of \$1.23M, of which 71% were saved due to prudent management.
- Southeast Region personnel served on numerous interagency committees at all organizational levels. Three notables are; Josh O'Connor represents the Service on the Fire Program Analysis (FPA) Support Working Team. John Wallace represents the Service on the HFPAS modeling process and the NWCG Fire Danger Committee. Sue Wilder represents the Service on the Fire in Ecosystem Management Steering Committee
- The Southern Area has three Incident Management Teams. The Southeast Region 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. The Red team was part of the Bastrop Complex Unified Command which received the national award for "Most Notable Emergency Response Implementation, Federal, State, or Local Government". Tony Wilder accepted the award on behalf of the Red Team.
- The National Review of the Regional Fire Management Division was conducted in April, 2011. The previous review was in June 1993. The review team, which consisted of 12 personnel from the Boise Office, interviewed FWS staff (field and RO) and cooperators and considered survey responses from 90 respondents when formulating their commendations and recommendations. Overall the review was very positive toward the Southeast's performance and management appreciates suggested improvements.
- Despite the heavy wildfire workload, we still met our target of 62,000 treated acres. In addition to our target we treated additional acres in the wildland urban interface and improved habitat for numerous wildlife species.
- Regional Staff assisted the National Office on an outreach project "Burning for Habitat". This project

developed tools for our fire management officer to educate the CARE friends group, partners and NGO's on the importance of prescribed fire.

- \$83,000 of DOI Ready Reserve funds were distributed to the field to increase rural fire departments wildland fire operations safety, effectiveness and capacity by sponsoring local level training opportunities.
- FY 11 had a fairly active hurricane season, only Hurricane Irene made landfall in NC on August 27. Sami Gray stepped up as IC to lead the response team which spent approximately 10 days in the Carolinas assisting the Refuges and their personnel recover from the storm.
- The National Interagency Prescribed Fire Training Center (PFTC), directed by Mike Dueitt (FWS Southeast Region), coordinated the training of 145 individuals. Most of the training at PFTC is focused on the use of prescribed fire as a safe and effective land management tool, but they also offer courses focused on Agency Administrators and Biologists.
- The Southeast Region provided significant support to this year's Southern Area Advanced Fire and Aviation Academy, as well as the Tennessee/Kentucky Wildfire Academy. FWS was a co-sponsor with the USFS, NPS, and the Southern Group of State Foresters, the delivery of L-580, Leadership Is Action course. The course is held as a Staff Ride at Shiloh National

Battlefield. FWS had 12 participants with Tony Wilder serving as Subject Matter Expert.

- The Southeast Region, Division of Fire Management continues to assist with the MC 252 Oil Spill operations.
- Budget challenges . . . . "Adapt and Overcome" . . ."Do the best you can with what you've got."

***District Highlights*** . . . the heart of the Southeast Region's success

### **District 1**

The Pains Bay Fire and Hurricane Irene were will be the legacies of the year. The 45,294 acre, lightning-caused Pains Bay Fire was discovered on May 5 and burned for nearly four months on Alligator River NWR, finally being declared out on August 28. Hurricane Irene made landfall in late August, extinguished the fire but caused considerable damage to refuge lands and employee's personal property. While the Pains Bay Fire was in full swing at Alligator River, the rest of the District went into severity beginning June 5. The refuges received almost no rain from April through June, scattered rain in mid-July and then more consistent rain by mid-August.

The District was able accomplished 22 prescribed fire treatments on three refuges (Alligator River, Mackay Island, and Pea Island) for a total of 4,946 acres before weather conditions became unfavorable. Mechanically 570 acres were treated.

### *Highlights:*

- 74 personnel were dispatched through East Lake Operations Dispatch Office (NCALR)
- Various local trainings and workshops

- ALR Prescribe Fire Specialist and POR FMO staffing changes
- Pocosin Lakes hosted a field trip from the Joint Fire Science Committee Governing Board
- District hosted 2 SCA monitoring interns
- District Review Conducted by the Regional Office

### **District 2**

Wildfire occurrence was above the ten year average, but no fires went into extended attack. District- wide there were 13 wildfires totaling 708 acres. Of these fires, 10 were on refuge property and burned 205 acres of service lands.

The District had a strong burning season with 11,180 acres burned across 66 units. While these numbers fall short of the 10-year average, they are very respectable for a tough year considering weather and limited fuels dollars.

#### *Highlights:*

- A new research project, partnered with the University of Florida, was added to help better understand the management needs in maritime forests, particularly on barrier islands.
- Detailers from BLMs OJT training program were hosted and used for prescribed burning within the district.
- Made staff available for numerous assignments supporting fire activity and made a large contribution to the Response to Hurricane Irene

### **District 3**

The continued drought conditions made for an extremely active wildfire year, with the Honey Prairie Fire and Honey Prairie Complex continuing to be the primary focus of District 3 fire personnel. A total of 36

fires for 309,000 acres in the Honey Prairie Complex required a suppression response and some continue to smolder. Piedmont NWR also had an abnormally high occurrence of five wildfires on the refuge and KBDI's topping out at 792.

A very limited number of prescribed burns were conducted within the Fire District, primarily due to profound drought impacts. Okefenokee NWR was limited to 250 acres, and even the ever productive Piedmont NWR was down in prescribed acres, completing 15 treatments for 6,771 acres.

#### *Highlights:*

- In February, the District facilitated an Interagency Cooperator Pre planning meeting with Southern Area Incident Commanders and state cooperators. The focus of the meeting was to review items and "lessons learned" from the 2007 wildfires to better prepare for the forecasted probability of severe wildfires. Benefits from this meeting paid off on April 28<sup>th</sup>.
- Even with the Honey Prairie Fire active, a limited number of other details were accomplished, primarily for training purposes.
- Numerous staffing changes occurred, notably the Okefenokee AFMO went vacant.

### **District 4**

St. Vincent Refuge had the largest wildfire in its history consuming 1,297 acres. The C4 fire occurred in a recently burned area with an 18-month rough. St. Marks responded to 10 wildfires, the largest being the Grits fire (399 acres) adjacent to the Ochlockonee River State Park. The remaining fires were all small threat fires.

St. Vincent had one prescribed fire for 2,834 acres. St. Marks accomplished 17 prescribed

fires for a total of 2,546 acres; the lowest accomplishment since 1989. A combination of poor weather conditions and crews being away on fire assignment contributed to the low acres. Fire crews on Lower Suwannee NWR conducted 11 burns for 2,662 acres. Only one unit (two burns) was funded directly by fuels dollars and the rest of the burns were funded by 1261 funds. Lower Suwannee NWR also completed 14 mechanical treatments for 69 acres.

*Highlights:*

- 17 personnel were dispatched to 51 assignments including Hurricane Irene response.
- Received severity funding for the month of June.
- Completed 2 Community Wide Protection Plans
- Strong outreach initiative via representation at the National Society of American Foresters Convention and numerous presentations for local schools and civic groups.
- St Marks NWR implemented a prescribed fire for a Russian Delegation on ecotourism to demonstrate how fire management and endangered species management go hand in hand.

**District 5**

The District experienced a very busy season responding to 47 wildfires for approximately 37,859 acres. The breakdown for the fires and refuges are as follows: Merritt Island NWR – 11 fires for 4,295 acres, St. Johns NWR – 7 fires for 2,605 acres, Lake Woodruff NWR - 4 fires for 2,591 acres, Loxahatchee, Hobe Sound, and Lake Wales Ridge NWRs each had 1 fire for a combined one fire for 23, and 24 State assists for 28,346 acres.

Despite the extremely dry conditions, District 5 was able to complete 27

prescribed burns for over 34,000 acres this year. Loxahatchee completed 11 burns for slightly over 26,865 acres. The 4 Fire Lab RX burns totaled 750 acres and the purpose of these burns was to help modify and calibrate the new FIRETEK fire spread model/program. Merritt Island NWR completed 14 burns for 7,598 acres and Lake Woodruff NWR completed 2 burns for 118 acres.

*Highlights:*

- Numerous fire assignments within and outside the Region as well as assistance with Hurricane Irene response.
- Outreach representation at Everglades Festival (Loxahatchee), and the FWS CARES group.
- The new District FMO, Patrick Person, picked a good year to join the Region.

**District 6:**

Fire activity for the district was higher than average due to extremely dry conditions in the region. Caribbean Refuges, National Key Deer, Florida Panther and JN Ding Darling responded to 24, 12, 18 and 6 fires respectfully.

Florida Panther Refuge completed five prescribed burns for a total of 2,386 acres and mechanically treated 860 acres. National Key Deer completed 50 acres of mechanical treatment and had to convert a prescribed fire due to escape.

*Highlights:*

- A “District” Delegation of Authority and a daily staffing sheet with assigned Duty Officer were developed.
- District staff assisted with teaching 14 different classes

- Provided outreach to approximately 2,300 children and families through various programs.
- The new District FMO, Cass Palmer, also picked a good year to join the Region.

### **District 7**

There were 188 wildfires in District 7 for a total of 26,000 acres, with 17,000 of those acres on FWS land. Mississippi Sandhill Crane NWR experienced an unprecedented onslaught of WUI fires between mid-April and mid-July, most notably Soccer Field, Dante's Inferno, Breakwater, and Bayou Bend wildfires totaling 1470 acres. Felsenthal NWR responded to 15 fires for 613 acres across a large area of north Louisiana and south Arkansas. SW Louisiana fire personnel responded to 17 wildfires across the Complex with a combined size of approximately 21,600 acres. The Tourbe fire (2,200) was one of the longest active fires in recent history on Sabine NWR. It was discovered on June 18 and was controlled nearly three months later following Tropical Storm Lee. SE Louisiana Complex had one of the busiest seasons in their history with 32 fires for 1,837 acres. The City of New Orleans got involved, when a lightning strike ignited a fire adjacent to Bayou Sauvage NWR. New Orleans was smoked in for multiple days

resulting in a lot of media attention and the Governor declaring a State of Emergency.

Despite a number of obstacles including budget cuts, drought, persistent fog, and narrow windows of opportunity, the district had significant accomplishments in fuels treatments. There were a total of 48 prescribed burns for over 47,000 acres, 10 mechanical treatments for 1400 acres, and one herbicide treatment for 280 acres. SW Louisiana NWR complex completed a total of 10 prescribed fires for 34,500 acres. SE Louisiana NWRs had a relatively successful year, even with a persistent drought and no fuels dollars. The Complex burned 10 units for a total of 1,436 acres. Noxubee NWR had a productive year with over 7500 acres treated with prescribe fire. Mississippi Sandhill Crane NWR completed 9 burns for 1600 acres. Nine mechanical treatments for 1433 acres.

### *Highlights:*

- Interagency "team building" paid high dividends during the multijurisdictional WUI fires.
- Noxubee NWR hosted a crew of 10 AmeriCorps students that assisted with prescribe burning.
- 40 personnel were dispatched to 124 assignments

Sami Gray, District AFMO, served as IC on the Hurricane Irene Response.

## NORTHEAST REGION



*Phoenix 3 AmeriCorps Team at the Lateral West Fire, credit Catherine Hibbard, USFWS*

As 2011 came to a close, so did the tenure of our first Fire Coordinator, Allen Carter. After more than 30 years of Service, Allen retired at the end of December. We miss Allen and look forward to hiring another excellent program leader in 2012. Bill Giese of Chesapeake Marshlands National Wildlife Refuge Complex also retired in December with 39 years of service. He was one of our “original” Fire Control Officers starting at the same time with Allen.

We hired one new employee this year, Stephanie Fournier, who filled the dispatcher position at the Northeast Interagency Coordination Center in Maine. Above normal temperatures prevailed across our region. New England and the mid-Atlantic states received well above normal precipitation, except for coastal areas of Virginia, Delaware, and Maryland, where drought set up in what appears to be a

repeating pattern. Dry conditions there and throughout the southeast made for a long, active wildfire season. We had two fires in New England, four in New Jersey, two at Blackwater NWR, and six at Great Dismal Swamp NWR. Fire staff at Moosehorn NWR provided essential support to successfully prosecute a long history of arson wildfires. Under agreement, fire staff at Chesapeake Marshlands NWR Complex initial-attacked 17 wildfires on state and private lands, 3 of which were fires that directly threatened refuge resources.

On August 4, the Lateral West wildfire started in Great Dismal Swamp by two lightning strikes. Fueled by dead and down vegetation from the South One wildfire from 2008, it quickly escaped initial attack and escalated to a Type 1 incident. At the end of August, Hurricane Irene brought about a foot of much-needed rain to the 6,574 acre

wildfire, which smoldered until November 22, making it the largest, most complex, and most expensive fire in the history of our region and in the Commonwealth of Virginia. The hurricane also brought damaging winds and copious rainfall to other parts of our region. Fortunately, only two National Fish Hatcheries in New England reported severe damage.

We helped to our neighbors to the south suppress wildfires, including wildfires in Virginia, and Texas and fires at Alligator River NWR in North Carolina (Pains Bay Fire) and Okefenokee NWR in Georgia (Honey Prairie Fire).

Several regional fire staff had multiple assignments in the Southern Area. Catherine Hibbard served as Public Information Officer Type 2 on six assignments: three in Texas for the Texas Forest Service, one in Oklahoma for Wichita Mountains Wildlife Refuge, one in Florida for Big Cypress National Preserve (NPS), one for the Georgia Forestry Commission, and then as Public Information Officer Type 1 (trainee) at the Lateral West Fire. Laura Mitchell served as Resource Advisor on the Honey Prairie and Lateral West fires where she developed GIS databases to assist with identifying suppression damage, and emergency stabilization needs, which were folded into refuge rehabilitation plans.

From the field, Great Dismal Swamp National Wildlife Refuge sent people and equipment to the Pains Bay Fire. Staff from Chesapeake Marshlands NWR Complex helped early in May at Big Cypress Preserve, and at the Honey Prairie Fire as overhead, engine crews, and heavy equipment operators. Mary Elliot, Dispatcher/Fire Program Assistant served as an Extended Attack Dispatcher on the Pains Bay Fire, and support dispatcher at the

Eastern Area Coordination Center in Milwaukee, Wisconsin.

Tracy Gingrich of Wallkill River NWR spent six weeks as a Task Force Leader and Lead Resource Advisor at the Gulf Oil Spill (MC252 Deepwater Horizon) and traveled with other Wallkill River NWR firefighters to West Texas for initial attack engine assignments from late April through early August. New York/New Jersey/Pennsylvania Zone Fire Management Officer Mike Durfee served at the Pains Bay and Lateral West fires as a Fire Behavior Analyst and Planning Section Chief, while Brett Gore of Wallkill River NWR had several engine and Faller assignments to Texas, the Honey Prairie and Lateral West fires.

From New England, Zone Fire Management Officer Dave Walker was Operations Section Chief on two incident management team assignments in Georgia and Florida, while Moosehorn NWR fire staff provided an engine and staff for six crew rotations at the Honey Prairie and Lateral West fires. Collateral duty personnel and Casual Hires from this zone logged an estimated 600 days of fire duty.

The fuels program treated approximately 4,509 acres (target 3,690 acres) with a combination of prescribed fire and mechanical treatments. About \$77,500 were obligated to accomplish these treatments. Of note: Gerald Vickers of the Regional Fire Program, and Virginia/West Virginia Zone Fire Management Officer Tim Craig helped write the first fire management plan and complete the first prescribed burn at the National Conservation Training Center (NCTC) in Shepherdstown, WV. Gerald also worked with Patuxent Research Refuge to complete their prescribed burn plans for 50 acres of Savannah Restoration and 82 acres of grasslands.

We conducted fuels treatments with the following partners: Shenandoah National Park, Fredericksburg/Spotsylvania National Military Park, Virginia Department of Conservation and Recreation, Old Dominion University, West Virginia University, Mashpee Fire Department, Massachusetts Department of Conservation and Recreation, Maine Forest Service, and The Nature Conservancy in Maryland, Virginia, New Hampshire, and Maine.

Art Canterbury, Fire Management Officer at Chesapeake Marshlands NWR Complex, burned 45 units totaling 11,500 acres on agency and partner lands. The refuge worked with their regular partners and also brought in detailers from Huron Wetland Management District in South Dakota and two BLM personnel from Utah and Wyoming.

For the northern (wet) half of the region, Wallkill River NWR burned 5 units totaling 173 acres at Montezuma, Iroquois, and Cape May National Wildlife Refuges. New England completed 15 treatments for 196 acres benefiting 6 refuges.

Great Dismal Swamp NWR completed priority burns and met targets with over 3,000 acres treated despite a tight budget. Three seasonal firefighters were hired to support prescribed burns and initial attack throughout the Virginia/West Virginia Zone. Objectives for Service projects and assistance to partners focused on large scale ecosystem restoration, improving habitat for rare and endangered plants and threatened and endangered species, and supporting the Partners for Fish and Wildlife program.

We completed two Wildland Urban Interface projects this year: Patuxent NWR for 70 acres of timber harvest with bio-utilization and Sayville NWR for 34 acres of brush and tree grinding. Wallkill River and

Long Island NWRs completed two mechanical treatments for 200 acres. Eastern Massachusetts National Wildlife Refuge Complex completed 25 acres of defensible space, 2 acres of fuel breaks and 158 acres of mowed fire breaks.

Regional and zone fire staff were lead or unit instructors for training courses including M-410, S-215, S-211, S-212, S-390, S-130/190, S-336, Fire Refreshers, a "Prescribed Burn Workshop" at West Virginia University, RX-301/341 for the New York Wildfire and Incident Academy, Finger Lakes Community College, and Northeast Forest Fire Compact.

Regional employees Steven Hubner and Rick Vollick trained and red-carded 48 firefighters from the AmeriCorps NCCC program. AmeriCorps firefighters worked on prescribed fires both on and off Service lands, and were assigned to three wildfires along the east coast. Salary savings from using AmeriCorps firefighters was \$121,000. AmeriCorps members also collected native longleaf pine cones for Virginia Department of Forestry's longleaf pine restoration.

Catherine Hibbard completed L-480, Organizational Leadership in the Fire Service, and attended the R5 Biologists workshop and the Refuges Vision Conference. Regional Fire Administrative Officer Tifani Holt completed S-260/261 Interagency Incident Business Management courses.

Chesapeake Marshlands NWR Complex fire staff sent three people to the HAZMAT refresher training in Chincoteague, Virginia. One collateral duty staff member went to the New York Fire Academy, completing S-130/190, S131 and S212.

Dave Walker attended Advanced Supervision at NCTC, and sent his fire crew

to the New York Fire Academy for various single resource related training courses.

Gerald Vickers served on the National Fire and Operations Safety Team for Region 5. He also was on a Fire and Aviation Safety review team for the State of Texas.

Catherine Hibbard represented the Service on the National Wildfire Coordinating Group's Communication, Education, and Prevention Committee. She represented the region on and chaired the National Fire Outreach Team. She worked on press releases and fire outreach projects for Refuges and External Affairs, including New England cottontail and Burning for Wildlife topics.

Regional Fire Biologist/Ecologist Laura Mitchell designed and executed an experimental tidal marsh restoration treatment at Blackwater NWR, served as a reviewer for a multi-refuge *Phragmites australis* adaptive management project assembled by USGS, wrote habitat management strategies for managing *Phragmites australis* in impoundments at Prime Hook, worked to analyze 2010 marsh elevation data collected as part of a fire management/adaptive management project at Chesapeake Marshlands NWR, researched effects of prescribed fire on secretive marsh birds; co-authored a paper in the *Journal of Wildlife Management*; and contributed to a population viability analysis of seaside sparrow, under various burn regimes, at Chesapeake Marshlands NWR. Rehabilitation work for the South One wildfire was completed in 2011 with over 230,000 Atlantic White Cedar seedlings planted in areas burned. Most of these were subsequently lost in the Lateral West fire. Ironically, Chris Lowie, Refuge Manager at Great Dismal Swamp NWR, reported the restoration accomplishment to the Washington Office the day before the start

of the Lateral West wildfire. Rehabilitation and restoration work will now begin for the Lateral West fire. Laura Mitchell wrote the Emergency Stabilization Plan, which was funded for the purposes of treating invasives colonizing in the burn footprint and monitor treatment success. She is also working with refuge staff to improve water control and availability on the refuge.

We completed Fire Management Plans for Chesapeake Marshlands NWR Complex, and Stewart B. McKinney NWR. Rhode Island NWR Complex has a plan currently out for public comment, and plans for four other refuges in New England are in draft stage.

We signed the following agreements in 2011: Virginia Interagency Coordination Center inter-agency agreement with USDA for management and operation of Virginia Interagency Coordination Center, Master Cooperative Wildland Fire and Stafford Act Response Agreements, New Hampshire and Vermont.

We completed Rural Fire Assistance (RFA) reviews for 2010 for 34 volunteer fire departments. We awarded five RFA grants worth \$25,000 in 2011 to fire departments in Maine, New York, Maryland, and New Jersey.

Chesapeake Marshlands NWR Complex purchased a 2011 F550 extended cab brush truck. The truck replaces a 1994 Chevy 3500. They also purchased a Polaris 800, 6X6 Ranger utility vehicle (UTV) with a 100 gallon slip on. A heavy duty trailer was purchased to safely haul UTVs and on order is a Freightliner Coronado SD tractor truck replacing a 1989 Ford L9000. A new 60x80 foot pole building was completed adding storage and protection for fire equipment from adverse weather.

## MOUNTAIN~PRAIRIE REGION



*Perry WPA in NE Montana, credit Katie Theule, USFWS*

Declining budgets continued to affect all the Federal Land Management Fire Programs including the Region 6 preparedness and fuels programs. Overall, the Region 6 fire program experienced a 12% decrease in our funding from FY10 to FY11 due largely to the changes in the Hazardous Fuels Prioritization and Allocation System (HFPAS). This severe cut to our budget, compared to the levels of funding the Region has become accustomed to in recent years, resulted in general decreases in capability and staffing of the program. Specific project funding decreases made it harder to retain the level of prescribed burning accomplishments achieved in previous years.

The magnitude of the decreases between the FY10 and FY11 fire budgets indicated the potential for significant impacts to FWS fire program staffing in the very near future. This prompted the Regional Office fire staff, Project Leaders, and other permanent fire staff in 2011 to aggressively pursue a

strategic planning proposal. The emphasis of the Region 6 strategic planning process was to address workforce management approaches that would reduce staffing while meeting the Region's preparedness capability, but minimize impacts to encumbered permanent positions. The strategic planning efforts undertaken were based upon workload analysis and as much scientific data as possible regarding preparedness and the HFPAS fuels priorities. Both Zone FMOs Shane Del Grosso and Bob Rebarchik filled vacant District FMO leadership positions for an extended period of time while the workforce management strategies were developed.

Thanks to the La Nina weather pattern of the 2010-2011 winter, the spring of 2011 will be remembered as unseasonably cool, and an extremely wet year across most of the central and northern portions of the Region. Early snow melt in the Northern Rockies, in addition to unprecedented and continuous spring rains throughout Montana, Wyoming,

and the Dakota's contributed to wide spread flooding throughout Northern Great Plains. The rising flood waters and continuous rain showers resulted in unprecedented flooding in Minot, North Dakota and along the Missouri River Corridor, including waterways that had not seen severe flooding in more than 100 years.

The FWS played a significant role in support of FEMA and Non-Stanford Act Declarations throughout the Northern Great Plains. The North Dakota Dispatch Center continued to evolve as greater demands were placed on the center to supply Law Enforcement air boat operators and other operational and logistical support functions. A Type 3 Incident Management organization in the Regional Office and personnel from the field offices filled numerous resource orders for Resource Advisors, wildlife recovery efforts, logistical support, and Supervisory oversight positions to assist with recovery efforts. Additionally, oil spill clean-up efforts associated with the Deep Water Horizon gulf oil rig leak and a broken oil pipeline in Montana also occurred this year.

In contrast, the southernmost portions of the Region in Kansas and Southern Colorado suffered from extreme drought throughout much of year that pushed northward out of Texas and the Southwest. The drought required the approval of an extended long-term Severity request to meet the potential suppression needs of the San Luis Valley NWR complex and our interagency partners in southern Colorado.

The Mid Plains Interagency Handcrew continued to do an excellent job, but budget uncertainty and budget release delays resulted in cancellation of the annual fire training for the members of the Mid Plains Interagency Handcrew. However a special Crew Boss and Agency Representative

meeting was held by the Mid Plains District during the month of May to provide basic fundamentals to organize the crew.

Opportunities for Service personnel to support national suppression efforts were somewhat limited early in the spring but quickly changed when the Southwest Geographical Area and Texas experienced evolving drought conditions. Many fire personnel and equipment from the region saw extended wildfire duty in these areas much of the summer.

National Fire Plan fuels treatment accomplished this year included the completion of approximately 234 treatments, totaling 41,791 acres. Service personnel responded to a total of 44 wildfires which consumed a total of around 2,792 acres of refuge lands in Montana, North Dakota, South Dakota, Nebraska, Kansas, and Colorado.

Prescribed burning however does not come without risk, and in 2011 Refuges in Region 6 experienced 3 escaped prescribed fires. They included: the Anderson-Vilhauer escape at Sand Lake which burned 2 acre of private land; the Coteau Prairie Rx burn at Lostwood NWR which consumed 33 acres of private lands and 13 acres of Refuge lands; and the Salt Creek Escape at Quivira NWR which consumed 1204 acres of FWS lands and 693 acres of private lands.

Two thousand eleven marks the fifth year of operations of the North Dakota Dispatch Center (NDC) since moving to its new facilities in Bismarck, North Dakota. Like last year NDC was actively engaged with North Dakota Flooding in Minot and along the Red River. Locally the 2011 fire season in North Dakota never really materialized and resources from the zone were readily available to assist with national suppression efforts in Texas, Arizona, New Mexico,

Southern Colorado, and Northern Minnesota.

In 2011 the permanent fire staff in the Region saw some significant changes in staffing due to some individuals advancing their careers, internal transfers to other stations, and some retirements. Personnel moves in the Region included: Colleen Graue transferred to Devils Lake, Andy

Williams transferred to the BLM in Rawlins Wyoming, Bob Rebarchik transferred from Fire to the Deputy Refuge Manager position at the Bison Range, Jeremiah Philips left Region 6 when he accepted a position at the Wichita Mountains NWR, Kirk Jess departed to accept a job in the private sector, Jason Fallon transferred to the Idaho Falls BLM Office, and Pat Richardson retired from the Regional Office

## ALASKA REGION



*A slow fire season in Alaska gave smokejumpers time to assist with retrieval of spent research rockets landing in the Arctic National Wildlife Refuge. The rockets are launched from the Poker Flat Research Range 30 miles north of Fairbanks.*

Periodic rain and the lack of extended hot, dry spells kept wildfire activity in Alaska low in 2011 in both the number of fires and the acreage burned. A total of 32 fires burned 30,527 acres on Fish and Wildlife Service lands in Alaska, the lowest total acreage in ten years. Statewide, 515 fires burned 293,018 acres, well below the average yearly total of approximately one million acres. Nevertheless, it was a busy and productive year for the staff of the Alaska FWS Fire Management Program. Regional and Refuge staff assisted with fires in Alaska and the Lower 48, administered fuels treatments, wrote fire management plans, provided outreach and education to communities affected by wildland fire, conducted vegetation monitoring projects, provided and received training, and served

on numerous teams, committees, and working groups.

Among the personnel changes during the year, Ben Pratt began work in May as Fire Management Officer for Northwest Area Refuges, stationed in Galena. Kenai NWR Fire Program Technician Karen McGahan was selected as the new Fire Prevention Technician for the Kenai Refuge. Tetlin NWR Fuels Technician John Grafft was selected as Fire Prevention Technician for the Refuge. Maureen Clark joined the Regional Office Fire Management staff half-time as Regional Fire Information Specialist in December.

The annual FMO meeting was held in the Regional Office in Anchorage February 8-10, 2011, bringing together Regional Office

fire staff; FMOs; and refuge managers based in Fairbanks, Galena, Soldotna, and McGrath. In addition to discussions about budgets and business rules, attendees heard a presentation from Chris Wilcox, the National Fire Operations Program Leader. Wilcox talked about his work as a representative to the Incident Management Organization Succession Planning Team. The group also heard from Dr. Lily Ray, of Kawerak, Inc. in Nome, who spoke about her doctoral work on community perceptions regarding fire management in the villages of Huslia and Galena, located in and adjacent to the Koyukuk NWR. Portions of the meeting were video-conferenced between Anchorage, Fairbanks and Nome.

Fire management personnel and biologists from multiple agencies across Alaska attended Resource Advisor (READ) training on February 15, 2011 to learn how to protect sensitive habitats and other values during wildfires. The Alaska FWS Fire Program provided assistance to make this training available by video conference. Of the 36 people who attended the training, 14 video conferences from locations around the state. It is estimated that the Fish and Wildlife Service saved at least \$5,400 in flight costs, in addition to savings in lodging and per diem costs and the elimination of time spent in transit. In the face of declining budgets, the Alaska Fire Management Program is making greater use of video conferencing as an increasingly important and cost-effective tool for training and meetings.

FWS Fire Management staff traveled with fire leadership from the Alaska Fire Service (AFS) and National Park Service to Kotzebue June 8-9, 2011 to meet with FWS and NPS staff. The visit helped newly hired FWS FMO Ben Pratt and acting AFS FMO Tom St. Clair gain a better understanding of

the landscape and fire issues in the refuges and parks in the northwest region.

Fire management staff from the Regional Office and the Kenai National Wildlife Refuge traveled to Kodiak Sept. 7, 8, and 9 to work with Kodiak NWR staff on Known Sites data compilation.

Alaska FWS Regional Fire Management Coordinator Doug Alexander led the Fall Fire Review in Fairbanks Oct 3-6, 2011 in his role as chair of the Alaska Wildland Fire Coordinating Group. Fire personnel from AFS, FWS, NPS, BIA, USFS and the State of Alaska heard reports on the fire season, reviewed accomplishments from the previous year and identified issues for the year ahead.

Regional and refuge fire staff organized and participated in a planning workshop in Anchorage October 18-21, 2011. The meeting was intended to help FMOs become familiar with the new template used to prepare Fire Management Plans and to learn how the National Environmental Policy Act applies to Fire Management Plans. National Fire Planner Becky Brooks attended and provided guidance. Participants also included staff from the Regional Conservation Planning and Policy Division, Inventory and Monitoring Program, Division of Realty, and specialists in Wilderness and Cultural Resources.

Alaska FWS staff organized and attended a LANDFIRE fuels calibration workshop in Fairbanks November 7-11, 2011. Nineteen people representing five Federal agencies (FWS, NPS, BLM, BIA, and USFS) the State of Alaska, the Kenai Peninsula Borough and Tanana Chiefs Conference attended the meeting which was intended to improve the quality of the Alaska vegetation data in the LANDFIRE database. An

additional 15 people tuned in to the webinar for portions of the workshop.

The Alaska Region National Wildlife Refuges completed 22 hazardous fuels treatments in 2011 for a total of 353 acres.

### ***Area Highlights***

#### **Eastern Interior Refuges**

Twelve fires occurred across the district, burning a total of 2,872 FWS acres in 2011, well below historic averages. This was due in large part to a cool and wet July and August across large portions of the district. Eight fires burned on Yukon Flats Refuge, three of which were determined to be human starts. Four fires burned on Kanuti Refuge, all natural ignitions.

The Tetlin Fire Management Plan was reviewed by regional staff and was near completion. Plans for Kanuti, Yukon Flats, and Arctic were in the revision process.

Fire staff and Refuge Managers made several trips to the various villages within the district in an effort to strengthen communications with tribal leadership and provide education opportunities to village youth. Fire staff met with Ft. Yukon tribal members on several occasions to discuss ways to improve communications with FWS during fire season. There was also a discussion on how to utilize WUI projects with the Ft. Yukon biomass facility. FMO Peter Butteri and AFMO Brian Haugen also participated in career day at the Ft. Yukon School. The FMO and AFMO met with tribal leaders of Stevens Village to discuss the impacts of wildfire to their community. While in Stevens Village, they also gave a presentation to the elementary school about firefighting and the role of fire on the landscape. FMO went to Allakaket to participate in the winter carnival and to discuss fire management policies with the

tribal leadership. Butteri also made a trip to Arctic village and gave a presentation highlighting wildland firefighting.

FWS Regional Office provided funding support of \$10,000 to the Alaska Wildland Fire Academy. In addition, Tetlin NWR Forestry Technician John Grafft assisted the Alaska Division of Forestry with planning and instruction at the Academy. Grafft's effort also served as an effective outreach mechanism.

The Fire Program and Regional Office helped to coordinate and logistically support a debris recovery effort on the Arctic NWR. Refuge aircraft and BLM smokejumpers recovered debris from Poker Flats rockets and other sources. Despite weather delays, the clean-up effort was a success. Regional Fire Ecologist Lisa Saperstein and Yukon Flats Biologist Delia Vargas-Kretsinger visited sites on the 2010 Pat Creek Fire in order to detect invasive species that may have been introduced during the fire suppression effort. Lambsquarter was detected at a cabin site and was removed. Canada Thistle was discovered at the Stevens Village airstrip and removed.

Scientists from the U.S. Army Cold Regions Research and Engineering Laboratory-Alaska (CRREL), in concert with Nikki Guldager and Mike Hinkes of the Yukon Flats NWR, conducted a reconnaissance survey of Yukon Flats snow conditions. Scientists from the U.S. Geological Survey, who were coincidentally gauging streams in the Refuge, were supplied with equipment by CRREL and contributed to the project by measuring snow depths at their measurement sites. Preliminary results indicate that trends in snow properties across the Yukon Flats are not overly pronounced. The Alaska FWS Fire Program contributed \$5,000 to fund this snow survey.

FMO Butteri and Regional Fire Ecologist Saperstein revisited photo points on Tetlin's 1982 Kennebec Fire in order to document habitat change over time. FMO Butteri and Regional Fire Ecologist Saperstein, along with Refuge Manager Spindler, reviewed and modified the Kanuti old-growth spruce/lichen protection area to account for areas burned since it was originally identified.

A 40-acre shaded fuel break on the outskirts of Chalkyitsik was completed in the fall of 2011 with \$20,000 of 2010 funds under an agreement with the Chalkyitsik Village Council. A 40-acre fuel break was created at Fort Yukon and defensible space was established around structures within the village with \$150,000 of 2010 funds. The project was completed in the fall of 2011 under an agreement with the Gwichyaa Zhee Gwich'in Tribal Council. Fuels reduction in the Tok Area continues under an agreement with Alaska DOF. In FY 2011, 60 acres were treated for \$63,000. This project is focused on creating fuel breaks and defensible space in and around Tok using both DOF and TCC crews to implement the work. Slash from the project is being used to fuel the biomass heating unit at the Tok School. Five acres of thinning and piling was accomplished at Bettles by force account.

### **Kenai and Kodiak Refuges**

While 2011 budget constraints impacted all Service field stations and programs in the Alaska Region, the impacts experienced by the Kenai NWR Fire Program were notable. For the first time in more than 15 fire seasons the Refuge was unable to hire temporary seasonal firefighters and with almost no WUI or Hazard Fuels project funding, field project accomplishments were minimal.

In response to changing fire management program needs and projected fire management budget limitations, and with concurrence from the Regional Fire Management Coordinator, the Refuge Manager and FMO Doug Newbould decided to change the Fire Management Organization. The GS-0462-7 Supervisory Wildland Firefighter position was converted to GS-0462-6/7 Fire Prevention Technician. The Refuge plans to convert the vacant Fire Program Technician position to a GS-0462-05 Fire Technician in 2012, depending upon funding.

Statistics for the fire season on the Kenai and Kodiak Refuges were as follows: The Kenai NWR experienced 8 wildfires in 2011. All were caused by abandoned/escaped campfires except for the fire on Caribou Island in Skilak Lake, which was caused by a house fire. The Caribou Island Fire occurred on a private in-holding within the Refuge boundaries, and was therefore a State-jurisdiction fire. The first fire was discovered on May 4 and the last fire was declared Out on Dec. 19, 2011. The 7 Refuge-jurisdiction fires consumed a total of 1.6 acres. The Caribou Island Fire burned 0.8 acres. The Kodiak NWR reported no fires on Refuge Lands in 2011.

The Refuge Fire staff worked closely with Alaska Division of Forestry staff from the Kenai-Kodiak Area Office to plan and implement hazardous fuels reduction projects in the Funny River and Sterling Community Wildfire Protection Plan areas, with funds provided to the State through a \$180,000 Federal WUI Grant. In addition, staff assisted interagency partners in revising the 2004 interagency "All Lands All Hands Action Plan." The Fire Staff also worked with its protection agency cooperators, FWS Regional Office staff, and Kenai/Kodiak Refuge staffs to complete the Alaska Interagency Wildland Fire

Management Plan - Known Sites Database coverage for both Refuges. The Fire Staff assisted its Kenai-Kodiak area interagency partners in completing the 2011 tasks associated with the *Calamagrostis canadensis* Mitigation Study. Specifically, the Fire Staff treated three blocks outside the refuge on two separate dates, with gas-powered brush-cutters.

### **Northwest Area Refuges**

Ben Pratt started May 22, 2011 as the FMO for the Northwest Area Refuges, based in Galena. Shortly thereafter, the NW area's wildfire season began when lightning sparked the 24,525-acre Kitalitna Fire. On the same day, the nearby 7,086-acre Hochandochtla Fire rekindled from an incident in 2010. These and other fires in the region grew quickly until weather conditions moderated around the first week in June. With the exception of the 2,620-acre Nowitna River 1 Fire, weather moderated fire growth for the rest of the season and limited the number of new starts on FWS lands to 9. All were limited management fires, though suppression action was taken on the 17.6-acre Hahanuta Fire, due to its proximity to Native allotments.

FMO initiated revisions to the Selawik NWR Fire Management Plan with assistance from the Regional Office and participated in a joint effort with AFS, the Koyukuk-Nowitna NWR and Galena school system to provide a 2 week science camp with an emphasis on wildland fire. In cooperation with AFS, refuge staff re-visited vegetation monitoring plots on the Kaiyuh flats and Three-Day Slough areas. Other significant activity included completion of a Cooperative Agreement for the third phase

of the Ruby Fuels project. Refuge staff also maintained thinned areas around the Hog River and Nowitna River administrative cabins.

### **Southwest Area Refuges**

2011 proved to be a wetter than normal year in the Southwest Area Refuges Fire Management Zone with minimal lightning activity. Since lightning is the primary cause of fires in this area, there were no wildland fires on refuge lands. The Dish Mountain Fire located on State lands east of Innoko NWR was monitored by fire staff but only burned within 6 miles of the refuge boundary.

FMO Kristi Bullock completed the initial Togiak Fire Management Plan, which is awaiting signatures. The FMO also revised the Southwest Area Refuges Preparedness Plan for fire management operations. The preparedness plan spells out the protocols for the protection providers to follow at the SW Area Refuges. In addition, the FMO participated in a fire prevention presentation with the McGrath Volunteer Fire Department for the local Headstart school group. The FMO also continued Known Sites Database updates for the Innoko and Togiak Refuges. Additionally, the FMO was delegated as the winter point of contact for SW area State Lands Known Sites information. The FMO assisted the McGrath Volunteer Fire Department in acquiring \$5,200 State grant for wildland fire engine equipment and assisted in identifying and purchasing the most appropriate equipment. In addition, the FMO completed a 20-acre hazard fuel reduction project at the Innoko Field Camp.

# PACIFIC SOUTHWEST REGION



*Prescribed fire on the North Central Valley Fire Zone (AKA Sacramento Fire Zone)*

## ***Fire Season Overview***

2011 was wetter and cooler-than-normal, with a fairly mild fire season. There were approximately 8,263 wildfires in California and Nevada, burning over 558,000 acres.

- 22 wildfires on refuge lands (3,893 acres)
- 25 fires threatened refuge lands

## ***Regional Highlights***

One standout fire management activity in 2011 was workforce planning. The effort focused on developing and implementing strategies to better align the Region 8 fire organization with declining budgets. Glenn Gibson, the new Regional Fire Management Coordinator, worked with other regional staff, zone fire management officers, and a number of refuge project leaders to discuss and develop budget and staffing strategies.

Project Leaders and Refuge Managers made significant contribution to the fire organization's capability to achieve both

prescribed fire and preparedness objectives. The Region 8 fire organization and refuge leadership strengthened their resolve to work together to continue to do the critical work on the refuges, in spite of budget reductions.

The region put significant effort toward building partnerships for habitat burning and leveraging fire program resources. Region 8's Partnership, Outreach, and Prevention Specialist (Miriam Morrill) worked with ten different conservation organizations this year to discuss grant and project funding options. Her outreach included Ducks Unlimited, The Nature Conservancy, Mule Deer Foundation (MDF), Rocky Mountain Elk Foundation, and the National Wild Turkey Federation. Fire Management Zone partnership accomplishments included:

- 22 fire projects leveraged with partners
- 1 Mule Deer Foundation grant awarded to Klamath NWRC

This year, the region completed a number of fuels program reviews and met annual fuels program targets by treating 28,746 acres for hazardous fuels and habitat objectives.

- 28,746 acres treated throughout the region
- 21,512 acres treated in the WUI
- 25,907 acres treated through prescribed fire
- Fuel treatments in approximately 18 counties
- Fuel treatments protecting approximately 70 WUI communities
- Projects supporting over 20 Threatened and or Endangered Species

The region continued its strong interagency support including an international assignment (Miriam) to support the US Forest Service in facilitating community wildfire protection planning on the islands of Yap, in the Federated States of Micronesia, and Palau. Jessica Wade, Regional Fire Operations Coordinator, assumed the chair position of the California Wildland Fire Coordinating Group's (CWCG) Operations Committee and also participated in the update and revision of the California Fire Management Agreement. Outreach and education efforts were supported at the regional and local level through numerous partnerships with refuge, community and interagency partners.

### *Fire Management Zone Highlights*

#### **Klamath Basin FMZ: Southern Oregon, northern California's Modoc plateau and north coast - Dave Goheen, Fire Management Officer**

- 6 wildfires on refuge lands (less than 1 acre)
- 20,539 acres treated; 20,489 acres of prescribed fire

This year, Greg Zoppetti, Assistant Fire Management Officer, acquired funding and

support from the Oregon Mule Deer Foundation and Oregon Department of Fish & Wildlife to install a 1,800 gallon water tank at the Bear Valley NWR. The guzzler is now a water source that will benefit both wildlife and wildland firefighters in a Wildland Urban Interface area near Klamath Falls, Oregon.

The zone had very light fire season with six wildfires on refuge lands, burning less than one acre. The fires were all human caused and associated with permitted agricultural activities. Emergency stabilization and rehabilitation efforts were completed on the 2010 Hay Fire burned area. Zone fire personnel and collateral employees assisted in various incident response efforts in Texas, New Mexico, Arizona, Nevada, Idaho, Wyoming, California and Oregon. Zone fire personnel assisted Type 3 teams on local incident and two fire employees completed Engine Captain details to assist the Mid-Columbia Refuge Complex in Region 1.

The zone treated 20,489 acres of hazardous fuels and wildlife habitat through the use of prescribed fire and 50 acres were treated through mechanical means.

Fire personnel also assisted the US Forest Service, National Park Service and Bureau of Land Management with local prescribed fire projects. Two fire personnel served on a short detail to provide prescribed fire assistance to several NWRs in the Dakotas. The zone also provided a coordinator for the Prescribed Fire Training Center in Florida.

Fire personnel assisted with development of the Klamath Basin Comprehensive Conservation Plan and were actively involved with interagency cooperative efforts and local smoke management. Mike Broughton, FWS National Smoke Management Specialist, participated on an interagency smoke committee in Klamath

Falls. Mike's goal is to help bring the Klamath Falls area into "Attainment" conditions while maintaining our ability to continue to use fire as a tool when appropriate.

Zone fire personnel worked closely with refuge public affairs staff in getting fire messages out to the public and provided outreach materials and assistance during the Tululake Migratory Bird Festival in May and the Tululake Fair in September. Fire personnel participated in Klamath Fire Prevention Cooperative meetings and events.

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

- 4 wildfires on refuge lands (0.8 acres); 9 threat fires
- 933 acres treated; 826 acres prescribed fire
- 7 goat grazing/mechanical treatments (107.5 acres) in the WUI

The Zone celebrated the completion of a new fire station and office at Sacramento National Wildlife Refuge Complex and is now supporting multiple program needs with their high tech meeting room. This year, Jeremy McMahon graduated from the Wildland Firefighter Apprenticeship Academy; Dale Shippelhoute provided strong leadership coordination for the DOI Engine Academy; and Kipp Morrill, (AFMO), assisted as an instructor at the interagency Burn Boss Training (RX-341).

Wildfire activity in the Zone was fairly slow with only four wildfires on refuge lands (0.8 acres burned). Fire staff assisted on multiple fire assignments in Texas and northern California.

The zone completed 826 acres of prescribed fire treatments and just over 107 acres were

treated for hazardous fuels reduction and wildlife habitat through a goat grazing contract.

Fire personnel also supported a number of outreach and education effort including school presentations and refuge community events.

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

- 16 initial attack fires totaling 1,019 acres.
- 18 fuels projects totaling 4,599 acres, nearly all using prescribed fire

The San Luis National Wildlife Refuge Complex and Zone fire program celebrated the completion of their stunning new Visitor Center and refuge headquarters. Fire staff was recognized for the tremendous effort they contributed toward the new Center. One of the first events hosted at the new facility was the 2011 Region 8 Fire Management Meeting.

Bob Parris, Deputy Project Leader continues to support the regional fire program as a representative on the National Line Officer Team and has been strongly involved in the regional budget and staffing strategy meetings.

The San Luis Zone was able to make two major contributions to the long term capability of the Fish and Wildlife Service fire management program by hiring two outstanding new employees. They hired Ryan Mahon, whose own initiative brought the service a fully qualified type "A" CDL and the expertise to run nearly any equipment on the refuge. He is also a top-notch firefighter. San Luis was also able to hire Keith Mayer into an Engine Captain position. Keith has a wealth of fire

experience and will be providing fire leadership within the FWS for many years to come.

**Southern California FMZ: Southern California Inland and Coast - Lee Rickard, Fire Management Officer**

- 26 wildfires supported by Zone, 8 fires on refuge lands
- 6 prescribed fires
- 550 acres treated in the WUI
  - San Diego NWR mechanical treatments supported by Zone fire staff

The Region welcomed a new Zone FMO, Lee Rickard, who brings a great deal of experience and leadership to the program. The Zone celebrated the completion of the new San Diego Refuge Office Opening in August. The Zone also provided support in outreach and educational events including National Wildlife Refuge Week and numerous school fire safety presentations.

2011 was a slow fire season for the zone with eight wildfires on refuge lands totaling 35 acres. The Zone was able to support a wide number of state and national wildfire response efforts. San Diego NWRC Engine 56, and Lee Rickard had fire assignment to West Texas. Larry Wade (AFMO) had two fire assignments to Arizona, and Gordon Tamplin (Engine Captain), took assignments to Florida and Iowa.

The Zone continued its support for interagency fire training programs such as the San Diego County Wildland I-Zone Drill, and the 2011 Department of Interior Engine Academy, supported by Engine Captain, Jimmy Mitchell. Other interagency fire training support included the Southwest College Basic Wildland Fire Academy and Chula Vista Fire Department Poggio RX/IA Instruction.

**Nevada FMZ: State of Nevada - Tim Rash, Fire Management Officer**

- 14 wildfires on refuge lands; 773 acres burned
  - 35 day management of landscape fire on Desert NWR
- 5,999 acres treated (27 projects):
  - 3,062 acres WUI hazardous fuels
  - 890 acres non-WUI hazardous fuels
  - 2,047 acres habitat treatments

This year Tim Rash was hired as the Fire Management Officer, and Ross Wise replaced him as the Assistant Fire Management Officer. The two are located approximately 300 miles apart in order to provide better service to the widely scattered refuges in Nevada.

The Nevada Zone reached an historic level in 2011. Wildfire incidents were three times the annual average recorded for 1981-2009. There were 14 wildfires on refuge lands and one was managed under an appropriate strategy for landscape fire on Desert NWR. The fire lasted 35 days and resulted in a significant cost-savings and resource benefits while maximizing safety.

This year the Zone treated nearly 6,000 acre, with around 3,000 acres treated in the Wildland Urban Interface and over 2,000 acres managed for habitat benefits. The Zone was able to reciprocate for the many years the National Park Service has supported Zone fire projects by assisting the NPS with two understory burns at Parashaunt/Grand Canyon.

James Roberts, Regional Fire Ecologist, was instrumental in developing and leading a fire history study in Ponderosa pine on Desert NWR. The effort included help from other Service employees and academic experts to set up extensive monitoring plots and protocol.

New strides were made toward the long-term developed of the fire program including the establishment of a dedicated fire station facility at Stillwater NWR. The Zone inaugurated a joint FWS-BLM enhanced Type 6 engine program through an agreement with Carson City District. Engine staffing consists of a BLM Engine Captain and two FWS firefighters. The module is stationed at Stillwater NWR and this year participated on numerous wildfires in Nevada and Arizona. The Zone also expanded their fire fleet with two new Polaris 6x6 quick attack units and added four non-fire collateral staff to their militia firefighting cadre.

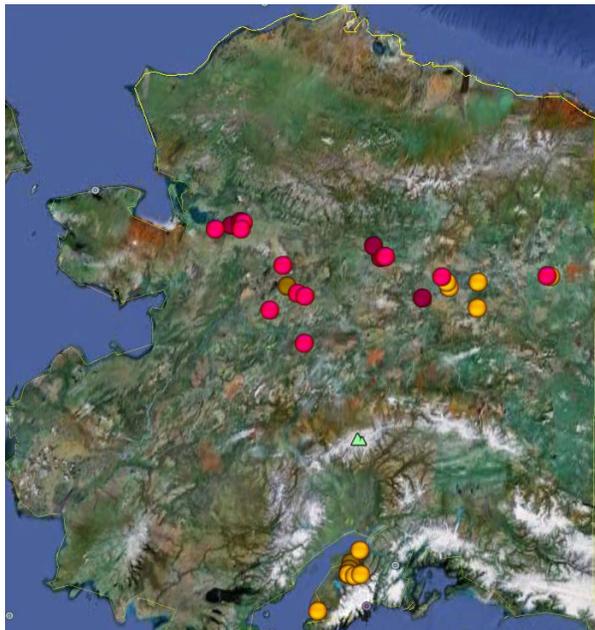
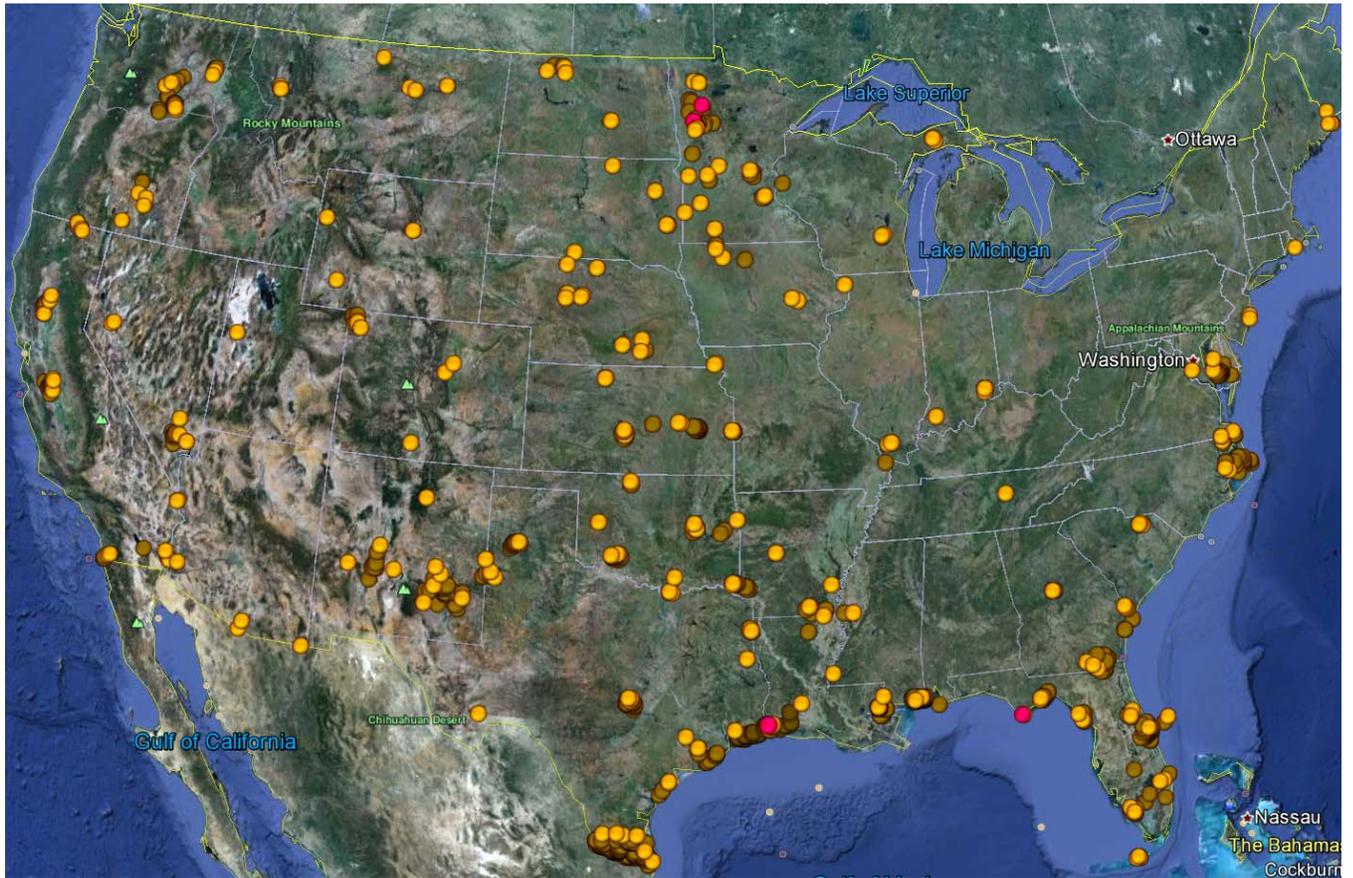
This year the Zone expanded their program capability by obtaining non-fire program

funding from two refuge complexes to assist with habitat burning projects.

Fire staff also co-instructed at the Wildland Rookie School with Fallon Naval Air Station and incorporated a live prescribed fire exercise. Trainees came from NAS Federal Fire Department, the Bureau of Indian Affairs and three Service employees including a seasonal firefighter, refuge employee and Partners for Fish & Wildlife Program employee.

Other key interagency partnerships this year included the Northeast Nevada Fire Group, Eastern Nevada Fire Cooperators, BLM Carson City, Southern Nevada Operations Group, National Park Service Lake Mead National Recreation Area, and the Nevada Department of Forestry.

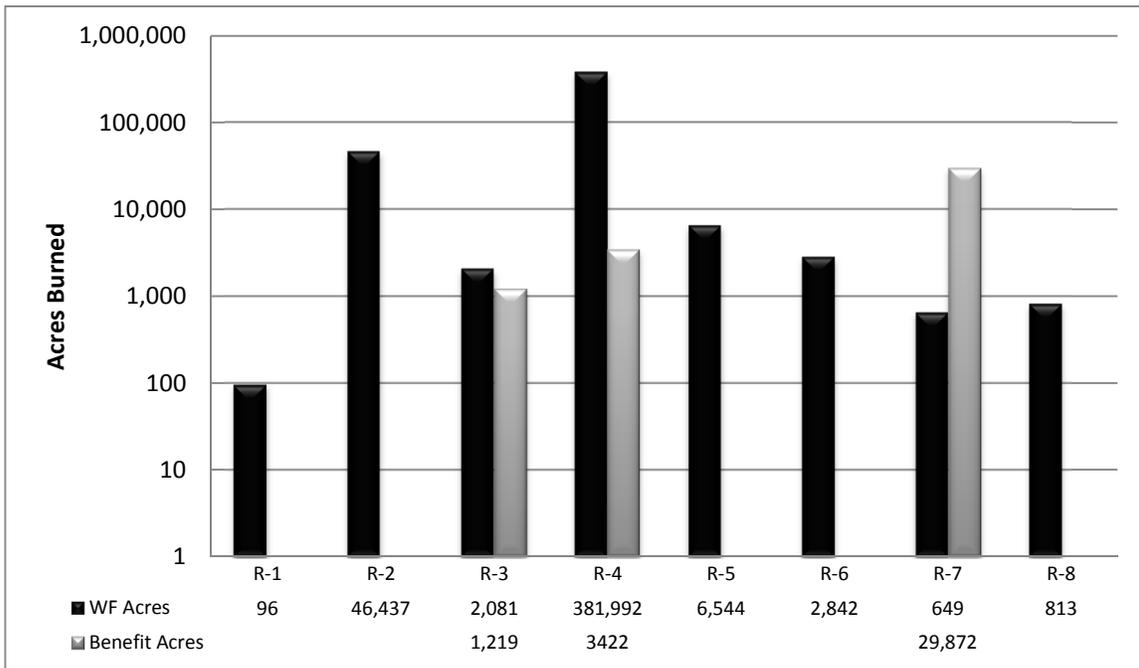
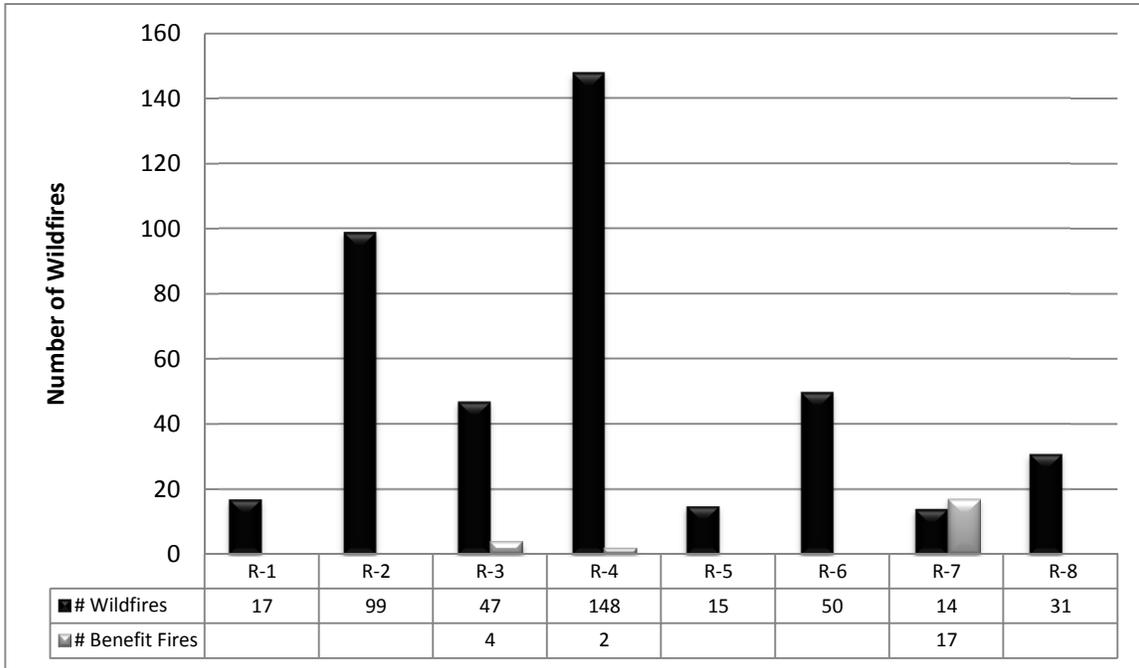
# 2011 WILDFIRE ACTIVITY



- = Wildfires
- = Wildfires for Resource Benefit



# WILDFIRES 2011



# WILDFIRES

## by State

### 2011

<u>State</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Alabama	1	0.1		0.1
*Alaska	31	30,520.9	6,786.0	37,306.9
Arizona	7	5,306.8		5,306.8
Arkansas	8	61.1		61.1
California	15	38.9		38.9
Colorado	3	28.0		28.0
*Florida	39	14,404.4	14.0	14,418.4
Georgia	15	329,021.1	24,078.0	353,099.1
Illinois	4	11.6		11.6
Indiana	6	411.5	62.0	473.5
Iowa	5	1,189.0	120.0	1,309.0
Kansas	22	2,563.8	3,025.0	5,588.8
*Louisiana	30	16,674.6	5,358.7	22,033.3
Maine	3	0.9		0.9
Maryland	2	57.7		57.7
Michigan	2	2.0		2.0
*Minnesota	30	1,678.1	39.0	1,717.1
Mississippi	29	217.0	303.3	520.3
Missouri	2	7.0		7.0
Montana	7	118.1	5.3	123.4
Nebraska	4	29.1	1.0	30.1
Nevada	15	773.5		773.5
New Hampshire	2	0.5		0.5
New Mexico	7	224.6		224.6
North Carolina	18	24,871.8	21,530.0	46,401.8
North Dakota	6	61.5	40.9	102.4
Oklahoma	25	31,291.9	12,553.0	43,844.9
Oregon	6	9.8		9.8
Puerto Rico	8	444.8	7.0	451.8
Rhode Island	1	0.1		0.1

South Carolina	6	583.8		583.8
South Dakota	5	12.4		12.4
Texas	60	9,613.3	1,765.0	11,378.3
Utah	1	28.0		28.0
Virginia	3	5,620.2	70.0	5,690.2
Washington	12	86.6	1.0	87.6
Wisconsin	2	1.1		1.1
Wyoming	2	0.6		0.6
<b>Total</b>	<b>444</b>	<b>475,966.2</b>	<b>75,759.2</b>	<b>551,725.4</b>

\* Wildfires for resource benefit have been added to Alaska totals: 17 fires for 29,871.5 acres  
Florida totals: 1 fire for 1,297.0 acres  
Louisiana totals: 1 fire for 2,125.0 acres  
Minnesota totals: 4 fire for 1,219.0 acres

Natural outs have been included for all regions.

## WILDFIRES Pacific Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Columbia NWR	2	1.1	1.0	2.1
Hanford/Saddle Mtn. NWR	2	1.1		1.1
Malheur NWR	3	8.0		8.0
McNary NWR	5	30.2		30.2
Sheldon-Hart Mountain NWRC	2	1.0		1.0
Turnbull NWR	2	0.2		0.2
Umatilla NWR	1	54.0		54.0
<b>Total</b>	<b>17</b>	<b>95.6</b>	<b>1.0</b>	<b>96.6</b>

## WILDFIRES

### Southwest Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Attwater Prairie Chicken NWR	1	0.7		0.7
Balcones Canyonlands NWR	1	24.0		24.0
Bitter Lake NWR	4	224.3		224.3
Bosque Del Apache NWR	3	0.3		0.3
Brazoria NWR	3	125.3		125.3
Buenos Aires NWR	1	0.1		0.1
Caddo Lake NWR	2	0.7		0.7
Cibola NWR	1	5,169.0		5,169.0
Deep Fork NWR	4	35.6		35.6
Grulla NWR	1	30.0		30.0
Hagerman NWR	2	557.5	5.0	562.5
Imperial NWR	2	1.6		1.6
Kofa NWR	1	0.1		0.1
Lake Havasu Refuges Complex	1	135.0		135.0
Little River NWR	5	55.9		55.9
Lower Rio Grand Valley NWR	37	1,356.4	55.5	1,411.9
McFaddin NWR	4	1,335.1	275.9	1,611.0
Ozark Plateau NWR	1	290.0	30.0	320.0
Salt Plains NWR	3	26.3	105.0	131.3
San Bernard NWR	6	2.7		2.7
San Bernardino NWR	1	1.0		1.0
Tishomingo NWR	1	152.0	360.0	512.0
Texas Point NWR	3	6,180.9	1,428.6	7,609.5
Washita NWR	1	0.3		0.3
Wichita Mtns Wildlife Refuge	10	30,731.8	12,058.0	42,789.8
<b>Total</b>	<b>99</b>	<b>46,436.6</b>	<b>14,318.0</b>	<b>60,754.6</b>

## WILDFIRES Midwest Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Agassiz NWR	1	200.0		200.0
Big Oaks NWR	5	411.0	62.0	473.0
Big Stone NWR	1	1.6		1.6
Crab Orchard NWR	3	3.2		3.2
Detroit Lakes WMD	12	1,386.6	39.0	1,425.6
Glacial Ridge NWR	1	0.3		0.3
Horicon NWR	1	0.1		0.1
Iowa WMD	3	155.0	80.0	235.0
Litchfield WMD	1	21.0		21.0
Minnesota Valley NWR	4	2.3		2.3
Morris WMD	4	60.0		60.0
Patoka River NWR	1	0.5		0.5
Port Louisa NWR	2	1,034.0	40.0	1,074.0
Rydell NWR	1	3.0		3.0
Seney NWR	2	2.0		2.0
Sherburne NWR	3	1.2		1.2
Squaw Creek NWR	2	7.0		7.0
St. Croix WMD	1	1.0		1.0
Tamarac NWR	2	2.1		2.1
Upr MS River-Savanna District	1	8.4		8.4
<b>Total</b>	<b>51</b>	<b>3,300.3</b>	<b>221.0</b>	<b>3,521.3</b>

Wildfires for resource benefit have been added into the totals - 4 fires, 1,219.0 FWS acres

## 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	8	24,006.1	21,290.0	45,296.1
ARM Loxahatchee NWR	1	14.0		14.0
Bayou Sauvage NWR	3	59.1		59.1
Big Branch Marsh NWR	6	123.1	0.7	123.8
Cabo Rojo NWR	4	106.8		106.8
Cameron Prairie NWR	3	52.0		52.0
Carolina Sandhills NWR	5	148.8		148.8
Cedar Keys NWR	1	0.7		0.7
Culebra NWR	1	10.0		10.0
D'Arbonne NWR	1	20.0		20.0
Eufaula NWR	1	0.1		0.1
Florida Panther NWR	2	20.1		20.1
Grand Bay NWR	5	8.3	96.0	104.3
Harris Neck NWR	2	3.6		3.6
Hobe Sound NWR	1	18.0		18.0
Lacassine NWR	4	1,198.0		1,198.0
Lake Wales Ridge NWR	1	0.3		0.3
Lake Woodruff NWR	4	2,576.5	14.0	2,590.5
Lower Suwannee NWR	3	37.0		37.0
Mackay Island NWR	3	0.3		0.3
Merritt Island NWR	9	4,134.3		4,134.3
MS Sandhill Crane NWR	22	194.7	207.3	402.0
National Key Deer Refuge	6	100.7		100.7
Okefenokee NWR	7	332,195.0	24,078.0	356,273.0
Overflow NWR	3	36.0		36.0
Pea Island NWR	3	1.1		1.1
Piedmont NWR	5	14.5		14.5
Pond Creek NWR	4	25.0		25.0
Red River NWR	1	5.0		5.0
S. Arkansas Refuges Complex	1	0.1		0.1
Sabine NWR	10	15,063.4	5,358.0	20,421.4

Savannah-Pickney Natl Wildl Rfgs	1	435.0		435.0
Southeast Louisiana Refuges	2	154.0		154.0
St. Catherine Creek NWR	1	2.0		2.0
St. Johns NWR	8	2,613.7		2,613.7
St. Marks NWR	1	399.0		399.0
St. Vincent NWR	2	1,297.1		1,297.1
Vieques NWR	3	328.0	7.0	335.0
Wassaw NWR	1	1.0		1.0
Yazoo NWR	1	12.0		12.0
<b>Total</b>	<b>150</b>	<b>385,414.4</b>	<b>51,051.0</b>	<b>436,465.4</b>

Wildfires for resource benefit have been added into the totals - 2 fires, 3,422.0 FWS acres

# WILDFIRES

## Northeast Refuges

<b><u>Refuge</u></b>	<b><u># Fires</u></b>	<b><u>FWS Acres</u></b>	<b><u>Other Owner Acres</u></b>	<b><u>Total Acres</u></b>
Back Bay NWR	1	110.0	70.0	180.0
Chesapeake Marshlands NWRC	2	57.7		57.7
Edwin B. Forsythe NWR	2	0.5		0.5
Great Dismal Swamp NWR	5	6,374.4	240.0	6,614.4
Moosehorn NWR	3	0.9		0.9
Potamac River NWRC	1	0.1		0.1
Rhode Island NWRC	1	0.1		0.1
<b>Total</b>	<b>15</b>	<b>6,543.7</b>	<b>310.0</b>	<b>6,853.7</b>

# WILDFIRES

## Mountain-Prairie Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Benton Lake NWR	1	25.0		25.0
Charles M. Russell NWR	3	92.4		92.4
Chase Lake NWR	1	3.0		3.0
Des Lacs NWR	1	0.1	7.9	8.0
Fish Springs NWR	1	28.0		28.0
Flint Hills NWR	14	1,047.1	2,172.0	3,219.1
Kirwin NWR	1	80.0	160.0	240.0
Lostwood WMD	1	13.0	33.0	46.0
Madison WMD	3	3.0		3.0
Marais Des Cygnes NWR	4	225.1		225.1
Monte Vista NWR	1	1.5		1.5
National Bison Range	3	0.7	5.3	6.0
National Elk Refuge	1	0.1		0.1
Quivira NWR	3	1,211.6	693.0	1,904.6
Rainwater Basin WMD	4	29.1	1.0	30.1
Rocky Flats NWR	1	20.0		20.0
Rocky Mountain Arsenal NWR	1	6.5		6.5
Sand Lake NWR	1	2.1		2.1
Seedskadee NWR	1	0.5		0.5
Upper Souris NWR	3	45.4		45.4
Waubay NWR	1	7.3		7.3
<b>Total</b>	<b>50</b>	<b>2,841.5</b>	<b>3,072.2</b>	<b>5,913.7</b>

## WILDFIRES

### Alaska Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Alaska Maritime NWR	1	1.0		1.0
Kanuti NWR	4	509.5		509.5
Kenai NWR	7	1.6		1.6
Koyuku NWR	1	0.6		0.6
Koyukuk/Nowitna NWR	5	27,472.6	6,786.0	34,258.6
Selawik NWR	5	6.4		6.4
Yukon Flats NWR	8	2,529.2		2,529.2
<b>Total</b>	<b>31</b>	<b>30,520.9</b>	<b>6,786.0</b>	<b>37,306.9</b>

Wildfires for resource benefit have been added into the totals -17 fires, 29,871.5 FWS acres

## WILDFIRES

### Pacific Southwest Refuges

<u>Refuge</u>	<u># Fires</u>	<u>FWS Acres</u>	<u>Other Owner Acres</u>	<u>Total Acres</u>
Colusa NWR	1	0.1		0.1
Desert National Wildlife Range	12	724.2		724.2
Lower Klamath NWR	3	2.6		2.6
Sacramento NWR	2	0.6		0.6
Sacramento River NWR	1	0.1		0.1
San Diego Bay NWR	5	0.4		0.4
San Diego NWR	1	0.1		0.1
San Joaquin River NWR	1	1.2		1.2
Sonny Bono Salton Sea NWR	1	35.0		35.0
Stillwater NWR	2	48.5		48.5
Tule Lake NWR	2	0.4		0.4
<b>Total</b>	<b>31</b>	<b>813.2</b>	<b>0.0</b>	<b>813.2</b>

## WILDFIRES by Cause

<b>Cause</b>	<b># Fires</b>	<b>FWS Acres</b>	<b>Other Owner Acres</b>	<b>Total Acres</b>
Natural	130	392,358.1	50,669.0	443,027.1
Debris / Vegetation Burn	39	1,409.8	803.3	2,213.1
Equipment Use	41	49,184.5	19,456.4	68,640.9
Exceeded RX Prescription	5	1,669.0	1,086.0	2,755.0
Incendiary	59	8,447.2	89.0	8,536.2
Misuse of Fire	7	537.5		537.5
Open or Outdoor Fire	36	37.0	0.7	37.7
Other Causes	25	5,261.5	30.0	5,291.5
Smoking	6	20.7		20.7
Undetermined	96	17,040.9	3,624.8	20,665.7
<b>Total</b>	<b>444</b>	<b>475,966.2</b>	<b>75,759.2</b>	<b>551,725.4</b>

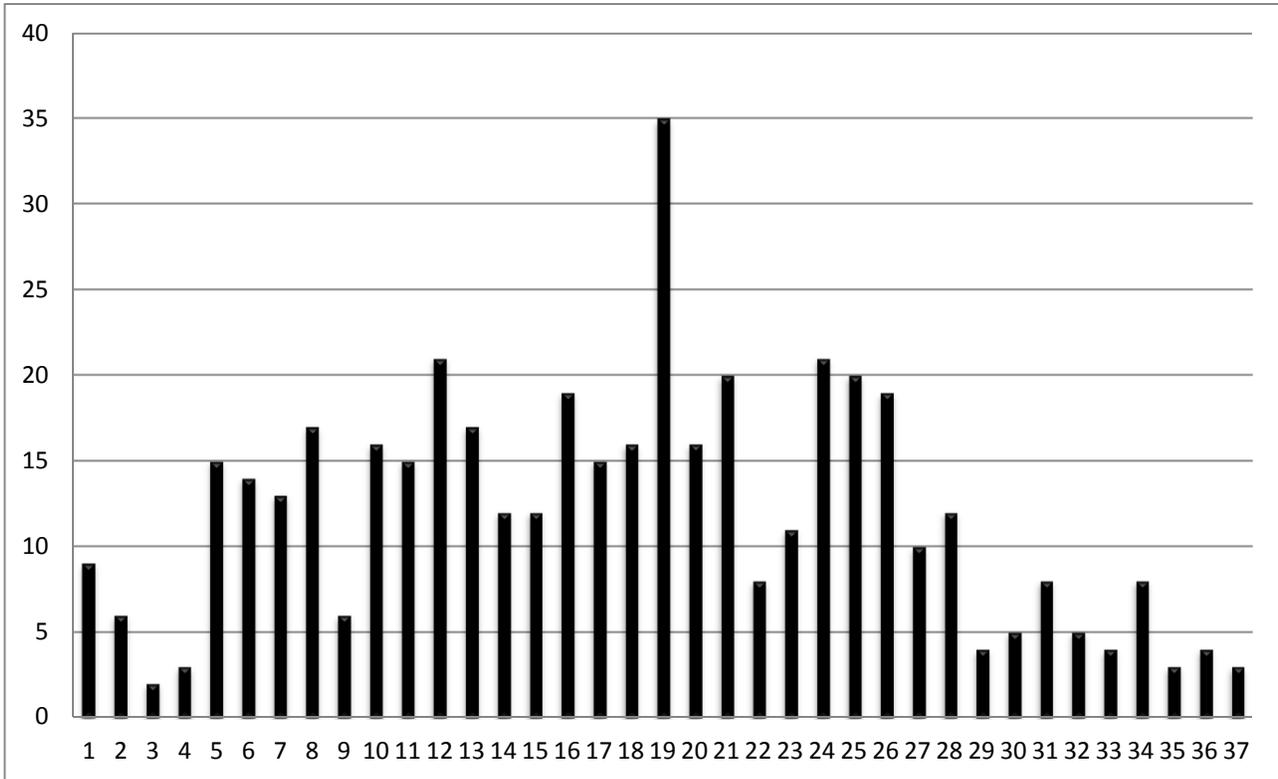
Includes wildfires for resource benefit and natural outs.

## WILDFIRES by Size Class

<b>Size Class</b>	<b># Fires</b>	<b>FWS Acres</b>	<b>Other Owner Acres</b>	<b>Total Acres</b>
A (0 - .2)	125	13.9	47.9	61.8
B (.3 - 9.9)	174	395.9	614.0	1,009.9
C (10 - 99.9)	80	2,744.5	1,163.8	3,908.3
D (100 - 299.9)	24	4,142.0	1,577.0	5,719.0
E (300 - 999.9)	17	9,870.0	5,630.0	15,500.0
F (1000 - 4999.9)	13	27,413.9	2,397.5	29,811.4
G (5000 +)	11	431,386.0	64,329.0	495,715.0
<b>Total</b>	<b>444</b>	<b>475,966.2</b>	<b>75,759.2</b>	<b>551,725.4</b>

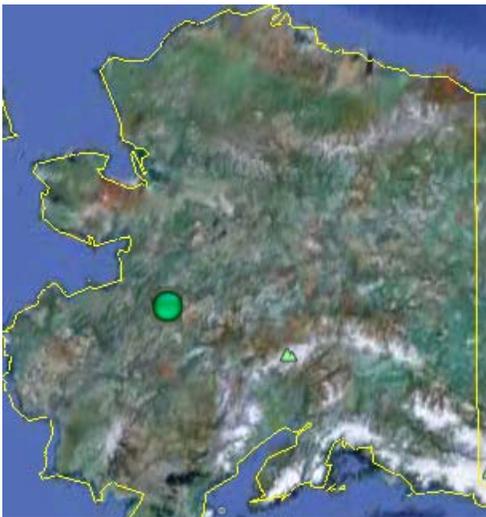
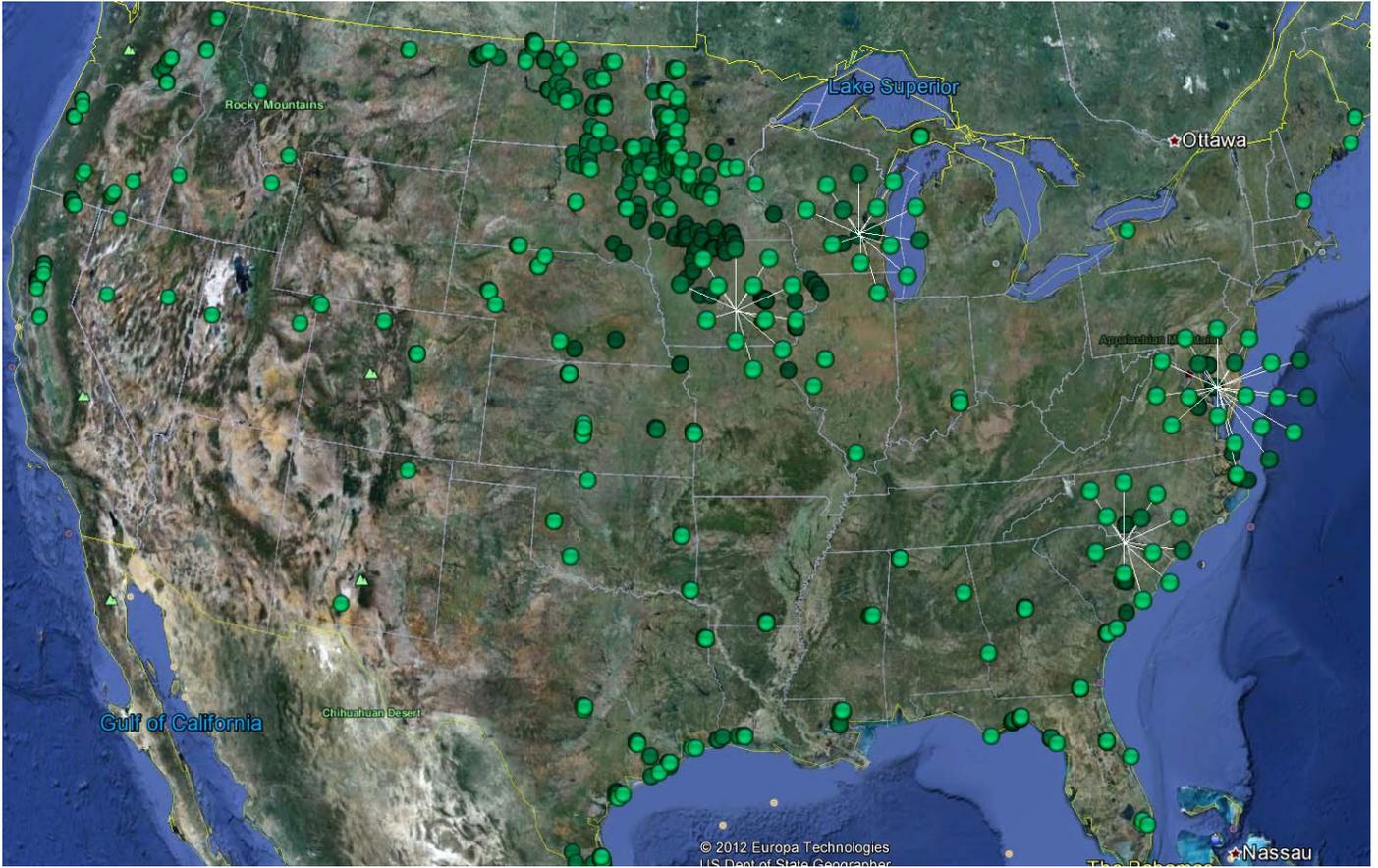
Includes wildfires for resource benefit and natural outs.

## WILDFIRE STARTS - 2010 10 - Day Period

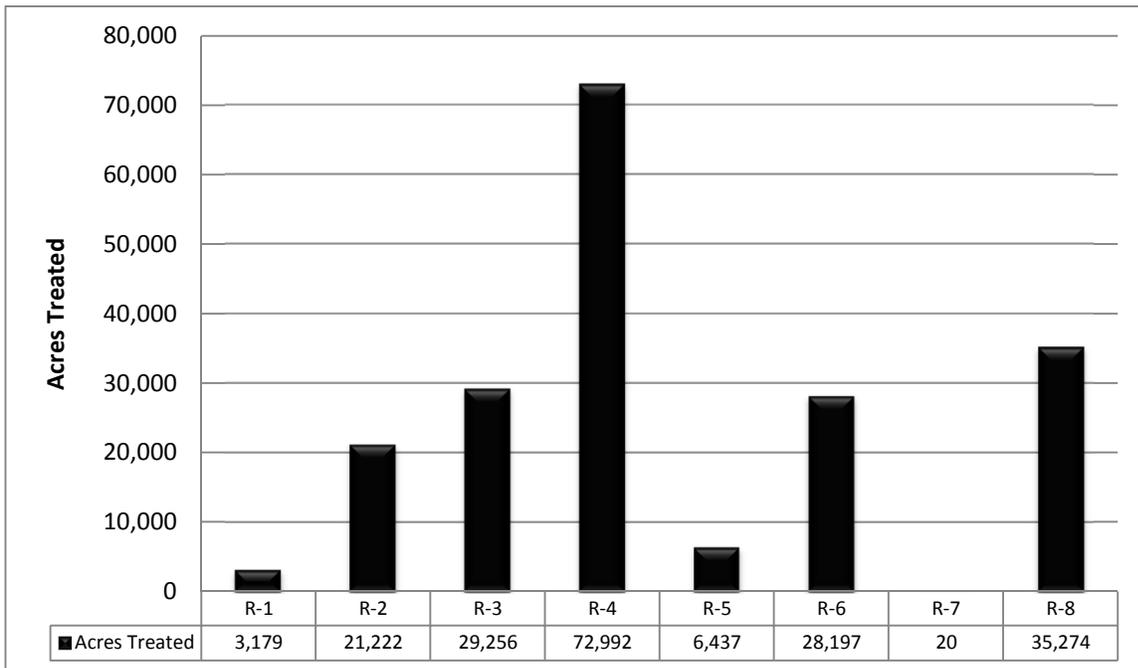
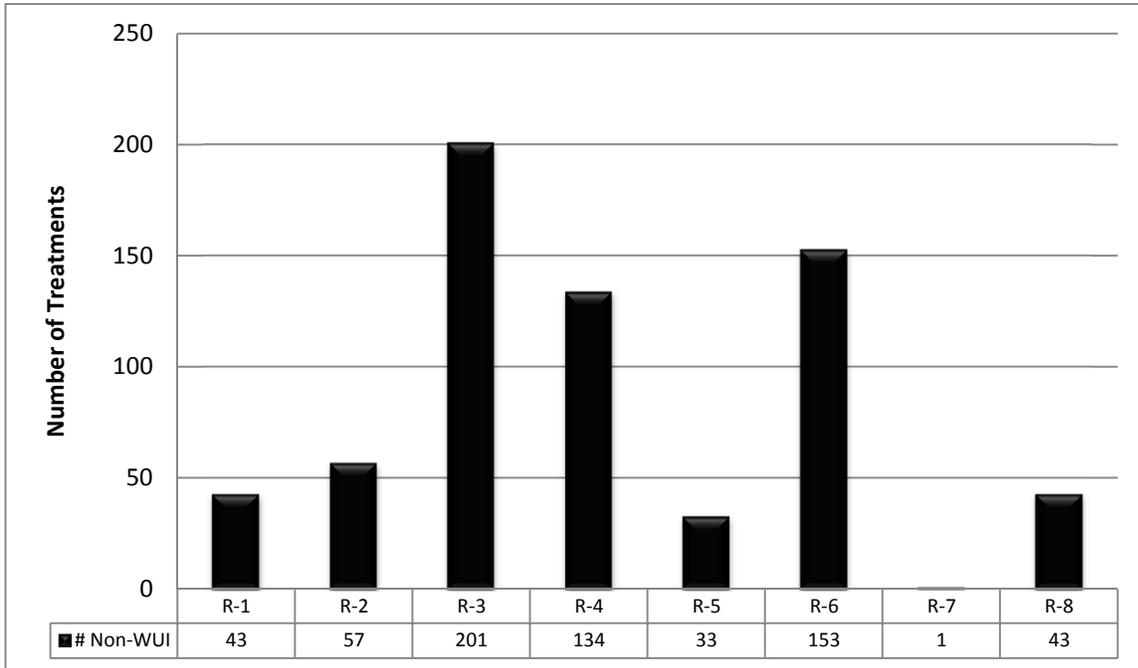


<u>Period</u>	<u>Dates</u>	<u>Period</u>	<u>Dates</u>	<u>Period</u>	<u>Dates</u>
<b>1</b>	Jan 01 - Jan 10	<b>13</b>	May 01 - May 10	<b>25</b>	Aug 29 - Sept 07
<b>2</b>	Jan 11 - Jan 20	<b>14</b>	May 11 - May 20	<b>26</b>	Sept 08 - Sept 17
<b>3</b>	Jan 21 - Jan 30	<b>15</b>	May 21 - May 30	<b>27</b>	Sept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

# 2011 NON-WUI ACTIVITY



# NON-WUI TREATMENTS 2011



## NON-WUI TREATMENTS by State 2011

<u>State</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Chem/Other Acres</u>	<u>Total Acres</u>
Alabama	5	105.0	12.1		117.1
Alaska	1	20.0			20.0
Arkansas	6	1,617.0			1,617.0
California	37	29,599.0		95.5	29,694.5
Colorado	7	920.8			920.8
Delaware	1	599.0			599.0
Florida	28	29,644.0			29,644.0
Georgia	11	1,537.0			1,537.0
Idaho	2	70.0	96.0		166.0
Illinois	10	1,153.5			1,153.5
Indiana	4	2,317.0			2,317.0
Iowa	49	7,541.0			7,541.0
Kansas	26	4,144.0			4,144.0
Louisiana	13	34,163.1	1.0		34,164.1
Maine	3	20.4	157.5		177.9
Maryland	23	5,232.0			5,232.0
Michigan	6	3,000.0			3,000.0
Minnesota	112	13,549.0	70.0		13,619.0
Mississippi	5	1,307.0			1,307.0
Missouri	2	20.0			20.0
Montana	11	2,596.0			2,596.0
Nebraska	11	2,082.0			2,082.0
Nevada	3	1,150.0	7.0		1,157.0
New Hampshire	2	40.5			40.5
New Mexico	4	1,159.0		2.0	1,161.0
New York	2	183.0			183.0
North Carolina	9	788.0	22.0		810.0
North Dakota	67	12,246.8			12,246.8
Oklahoma	8	4,838.2			4,838.2
Oregon	28	6,108.0	57.0		6,165.0
Puerto Rico	33		162.0	50.0	212.0

South Carolina	24	3,584.0			3,584.0
South Dakota	30	5,441.5			5,441.5
Texas	45	15,121.3	101.6		15,222.9
Utah	2	966.0			966.0
Virginia	2	205.0			205.0
Washington	16	217.1	1,053.0		1,270.1
Wisconsin	17	1,405.0			1,405.0
<b>Total</b>	<b>665</b>	<b>194,690.2</b>	<b>1,739.2</b>	<b>147.5</b>	<b>196,576.9</b>

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>
Ankeny NWR	1	10.0			10.0
Basket Slough NWR	6	96.0	50.0		146.0
Camas NWR	1	70.0			70.0
Columbia NWR	3	48.0			48.0
Deer Flat NWR	1		96.0		96.0
Hanford/Saddle Mtn. NWR	3	50.0	325.0		375.0
Hart Mtn. Natl. Antelope Rfg	4	860.0			860.0
Inland Northwest NWR	2	40.0	382.0		422.0
Little Pend Oreille NWR	1	5.0			5.0
Malheur NWR	1	103.0			103.0
McNary NWR	5	27.1	290.0		317.1
Sheldon NWR	1	150.0			150.0
Turnbull NWR	2	47.0	56.0		103.0
William L. Finley NWR	12	474.0			474.0
<b>Total</b>	<b>43</b>	<b>1,980.1</b>	<b>1,199.0</b>	<b>0.0</b>	<b>3,179.1</b>

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	2	522.0			522.0
Aransas NWR	5	3,362.0			3,362.0
Aransas/Matagorda Isl. NWRC	1	304.0			304.0
Attwataer Prairie Chicken NWR	7	848.0			848.0
Balcones Canyonlands NWR	3	139.0	71.6		210.6
Big Boogy NWR	1	625.0			625.0
Bosque Del Apache NWR	2	87.0			87.0
Brazoria NWR	6	667.2			667.2
Caddo Lake NWR	5	1,781.1			1,781.1
Laguna Atascosa NWR	7	1,721.0			1,721.0
Little River NWR	2	176.0			176.0
Lower Rio Grand Valley NWR	2	49.0			49.0
Matagorda Island NWR	2	3,848.0			3,848.0
Maxwell NWR	1			2.0	2.0
South Texas Refuges Complex	1		30.0		30.0
Salt Plains NWR	1	4,000.0			4,000.0
San Andres NWR	1	1,072.0			1,072.0
San Bernard NWR	2	1,180.0			1,180.0
Sequoyah NWR	2	622.1			622.1
Texas Midcoast Complex	1	75.0			75.0
Washita NWR	2	40.0			40.0
Wichita Mtns Wildlife Refuge	1	0.1			0.1
<b>Total</b>	<b>57</b>	<b>21,118.5</b>	<b>101.6</b>	<b>2.0</b>	<b>21,222.1</b>

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	4	1,797.0			1,797.0
Big Oaks NWR	4	2,317.0			2,317.0
Big Stone NWR	5	582.0			582.0
Crab Orchard NWR	1	5.0			5.0
Crane Meadows NWR	2	81.0	10.0		91.0
Desoto NWR	2	650.0			650.0
Detroit Lakes WMD	19	2,896.0			2,896.0
East Zone Fire Management	1	1.0			1.0
Emiquon NWR	2	56.0			56.0
Fergus Falls WMD	16	1,865.0			1,865.0
Glacial Ridge NWR	6	627.0			627.0
Horicon NWR	14	1,145.0			1,145.0
Iowa WMD	13	1,517.0			1,517.0
Leopold WMD	2	78.0			78.0
Litchfield WMD	11	1,410.0			1,410.0
Meredosia WMD	1	35.0			35.0
Morris NWR	19	2,074.0			2,074.0
Neal Smith NWR	13	2,295.0			2,295.0
Port Louisa NWR	19	2,509.0			2,509.0
Rice Lake NWR	1		30.0		30.0
Seney NWR	6	3,000.0			3,000.0
Sherburne NWR	3	9.0	30.0		39.0
Squaw Creek NWR	2	20.0			20.0
St. Croix WMD	1	182.0			182.0
Tamarac NWR	6	90.0			90.0
Union Slough NWR	3	770.0			770.0
Upper Mississippi River-Savanna	5	1,056.5			1,056.5
Upper Mississippi River-Winona	1	17.0			17.0
Windom NWR	19	2,101.0			2,101.0
<b>Total</b>	<b>201</b>	<b>29,185.5</b>	<b>70.0</b>	<b>0.0</b>	<b>29,255.5</b>

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	5	547.0	6.0		553.0
ARM Loxahatchee NWR	3	20,865.0			20,865.0
Big Branch Marsh NWR	3	463.1			463.1
Bogue Chitto NWR	4	406.0			406.0
Cabo Rojo NWR	4		4.0	11.0	15.0
Cameron Prairie NWR	1	14.0			14.0
Carolina Sandhills NWR	12	2,350.0			2,350.0
EF Hollings Ace Basin NWR	1	50.0			50.0
Eufaula NWR	1	80.0			80.0
Felsenthal NWR	1	460.0			460.0
Key Cave NWR	3	25.0	12.0		37.0
Lacassine NWR	3	7,372.0	1.0		7,373.0
Laguna Cartagena NWR	29		158.0	39.0	197.0
Lake Woodruff NWR	5	1,230.0			1,230.0
Lower Suwannee NWR	5	979.0			979.0
Mackay Island NWR	1		16.0		16.0
Merritt Island NWR	1	1,605.0			1,605.0
Mountain Longleaf NWR	1		0.1		0.1
Noxubee NWR	4	1,244.0			1,244.0
Okefenokee NWR	4	159.0			159.0
Pea Island NWR	1	131.0			131.0
Pee Dee NWR	2	110.0			110.0
Piedmont NWR	7	1,378.0			1,378.0
Pinckney Island NWR	2	131.0			131.0
South Arkansas Refuges Complex	5	1,157.0			1,157.0
Sabine NWR	3	25,971.0			25,971.0
Santee NWR	3	265.0			265.0
Savannah-Picnkney Refuges	6	788.0			788.0
St. Marks NWR	13	2,131.0			2,131.0
St. Vincent NWR	1	2,834.0			2,834.0
<b>Total</b>	<b>134</b>	<b>72,745.1</b>	<b>197.1</b>	<b>50.0</b>	<b>72,992.2</b>

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	22	5,711.0			5,711.0
Eastern Neck NWR	2	120.0			120.0
Eastern Virginia Rivs. NWRC	2	205.0			205.0
Great Bay NWR	2	40.5			40.5
Iroquois NWR	1	103.0			103.0
Maine Coastal Island NWR	1	15.4			15.4
Montezuma NWR	1	80.0			80.0
Moosehorn NWR	2	5.0	157.5		162.5
<b>Total</b>	<b>33</b>	<b>6,279.9</b>	<b>157.5</b>	<b>0.0</b>	<b>6,437.4</b>

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>
Arapaho NWR	1	503.0			503.0
Arrowwood NWR	10	1,894.0			1,894.0
Audubon NWR	9	970.0			970.0
Bowdoin NWR	2	308.0			308.0
Browns Park NWR	2	156.8			156.8
Chase Lake NWR	1	600.0			600.0
Chase Lake Prairie Proj. WMD	3	637.0			637.0
Crescent Lake NWR	4	742.0			742.0
Crosby WMD	1	154.0			154.0
Des Lacs NWR	9	2,343.8			2,343.8
Devils Lake NWR	8	356.0			356.0
Fish Springs NWR	1	730.0			730.0
Flint Hills NWR	4	161.0			161.0
Fort Niobrara NWR	1	226.0			226.0
Huron WMD	2	544.0			544.0
J. Clark Salyer NWR	4	1,366.0			1,366.0
Kirwin NWR	7	2,374.0			2,374.0
Kulm WMD	8	1,001.0			1,001.0
Lacreek NWR	3	543.5			543.5
Lake Andes NWR	2	105.0			105.0
Lee Metcalf NWR	1	5.0			5.0
Long Lake NWR	2	500.0			500.0
Lostwood WMD	2	125.0			125.0
Madison WMD	7	529.0			529.0
Marais Des Cygnes NWR	7	472.0			472.0
Medicine Lake NWR	7	2,282.0			2,282.0
Ouray NWR	1	190.0			190.0
Quivira NWR	8	1,137.0			1,137.0
Rainwater Basin WMD	3	166.0			166.0
Red Rock Lakes NWR	1	1.0			1.0
Rocky Mtn. Arsenal NWR	4	307.0			307.0
Sand Lake NWR	7	2,530.0			2,530.0

Tewaukon NWR	6	722.0			722.0
Upper Souris NWR	4	1,578.0			1,578.0
Valentine NWR	2	748.0			748.0
Waubay NWR	9	1,190.0			1,190.0
<b>Total</b>	<b>153</b>	<b>28,197.1</b>	<b>0.0</b>	<b>0.0</b>	<b>28,197.1</b>

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>
Innoko NWR	1	20.0			20.0
<b>Total</b>	<b>1</b>	<b>20.0</b>	<b>0.0</b>	<b>0.0</b>	<b>20.0</b>

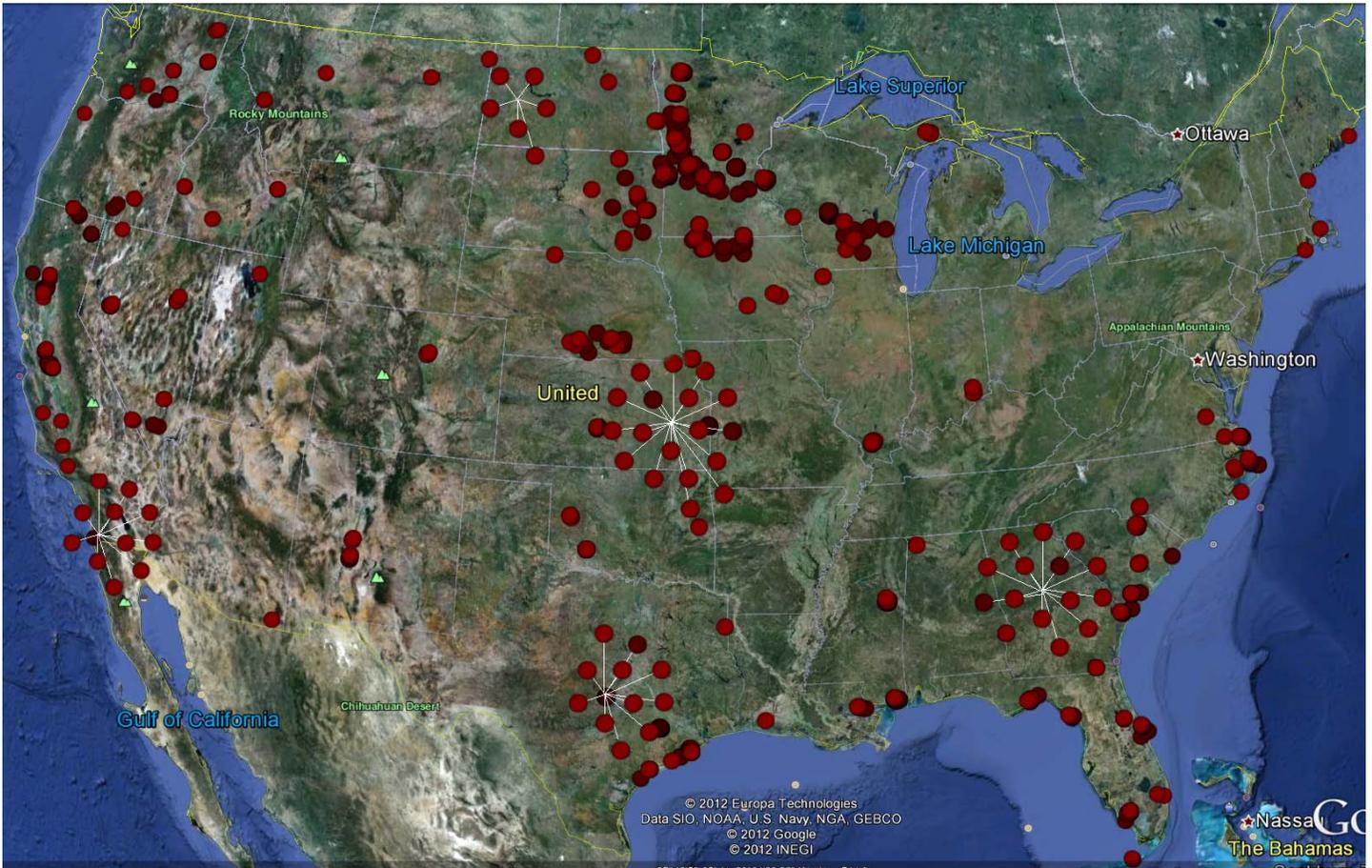
Other Acres = The number of acres that have been treated by a method other than prescribed fire or mechanical.

## NON-WUI TREATMENTS Pacific Southwest Refuges

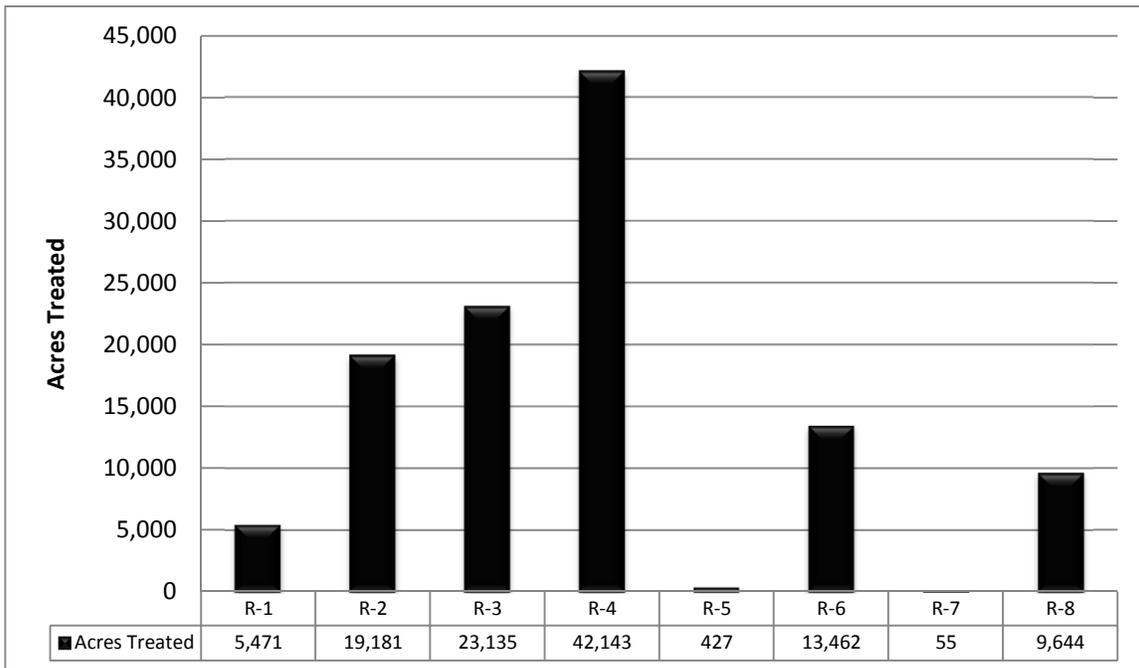
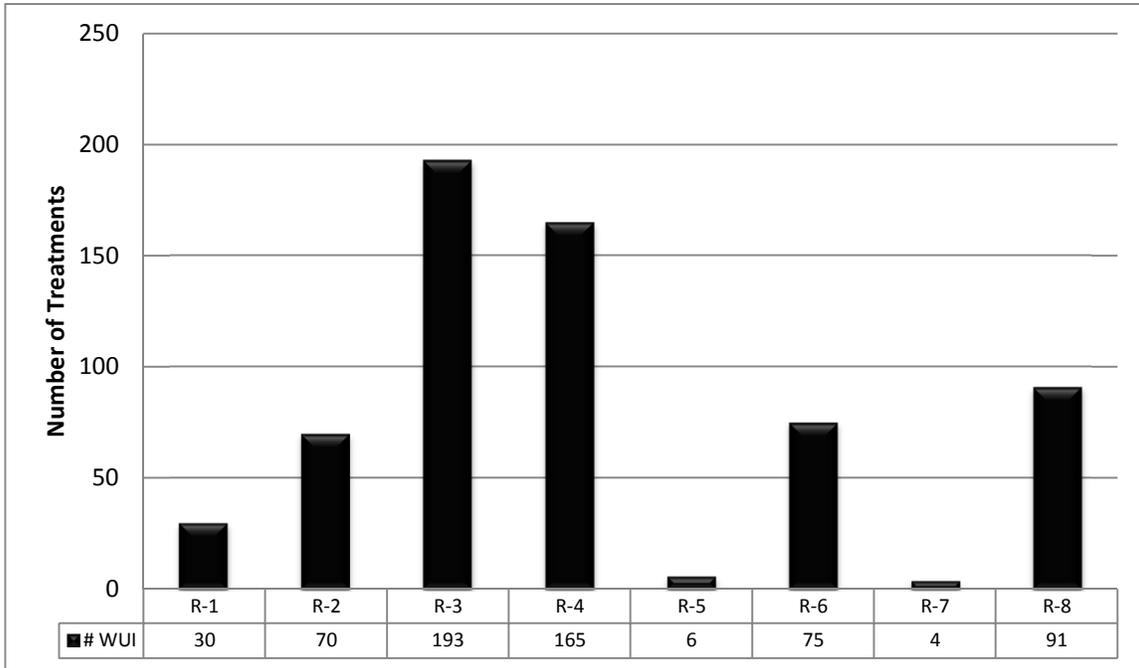
<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Colusa NWR	1	5.0			5.0
Delevan NWR	8	146.0			146.0
Klamath Marsh NWR	2	160.0	7.0		167.0
Lower Klamath NWR	6	9,274.0			9,274.0
Ruby Lake NWR	1		7.0		7.0
Sacramento NWR	10	198.0			198.0
Sacramento River NWR	9	148.0		52.0	200.0
Stillwater NWR	1	1,000.0			1,000.0
Stone Lake NWR	2	1.0		43.5	44.5
Tule Lake NWR	3	24,232.0			24,232.0
<b>Total</b>	<b>43</b>	<b>35,164.0</b>	<b>14.0</b>	<b>95.5</b>	<b>35,273.5</b>

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

# 2011 WUI ACTIVITY



# WUI TREATMENTS 2011



## WUI TREATMENTS by State 2011

<u>State</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Chem/Other Acres</u>	<u>Total Acres</u>
Alabama	3	179.0			179.0
Alaska	4	5.0	50.0		55.0
Arizona	1	10.0			10.0
California	71	5,319.0	769.0	12.0	6,100.0
Colorado	3	635.4			635.4
Florida	40	12,565.0	910.0		13,475.0
Georgia	20	5,900.0			5,900.0
Hawaii	1	25.0			25.0
Idaho	5	28.0	255.0	21.0	304.0
Illinois	9	989.0			989.0
Indiana	3	1,255.0			1,255.0
Iowa	21	3,949.0			3,949.0
Kansas	27	6,900.0			6,900.0
Louisiana	7	1,950.0			1,950.0
Maine	2	20.7			20.7
Massachusetts	1	50.0			50.0
Michigan	3	25.0	12.0		37.0
Minnesota	113	11,736.0	143.0		11,879.0
Mississippi	25	8,089.0	689.0		8,778.0
Missouri	8	1,205.0			1,205.0
Montana	5	320.0	20.0		340.0
Nebraska	14	1,893.0			1,893.0
Nevada	18	2,644.0	108.0	891.0	3,643.0
New Mexico	14	1,755.0	149.0	15.0	1,919.0
North Carolina	25	4,227.0	245.2	504.0	4,976.2
North Dakota	8	1,203.0			1,203.0
Oklahoma	8	1,749.7			1,749.7
Oregon	9	1,207.0	1,085.0		2,292.0
Puerto Rico	17		131.0		131.0
Rhode Island	1	56.0			56.0

South Carolina	27	6,753.0			6,753.0
South Dakota	17	2,157.0	84.0		2,241.0
Texas	47	15,388.1	113.7		15,501.8
Utah	1	250.0			250.0
Virginia	3	301.0			301.0
Washington	17	513.0	1,203.0	1,035.0	2,751.0
Wisconsin	36	3,649.1	171.5		3,820.6
<b>Total</b>	<b>634</b>	<b>104,901.0</b>	<b>6,138.4</b>	<b>2,478.0</b>	<b>113,517.4</b>

## 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		25.0		25.0
Camas NWR	2	28.0	190.0		218.0
Columbia NWR	2	48.0			48.0
Conboy Lake NWR	1		10.0		10.0
Deer Flat NWR	2		50.0	21.0	71.0
Hagerman NFH	1		15.0		15.0
Hart Mtn Natl Antelope Refuge	2	1,146.0			1,146.0
James Campbell NWR	1	25.0			25.0
Little Pend Oreille NWR	2	40.0	262.0		302.0
Malheur NWR	2		960.0		960.0
McNary NWR	7	232.0	931.0	1,035.0	2,198.0
Sheldon NWR	1	250.0			250.0
Toppenish NWR	1	35.0			35.0
Turnbull NWR	4	158.0			158.0
Umatilla NWR	1	10.0			10.0
<b>Total</b>	<b>30</b>	<b>1,972.0</b>	<b>2,443.0</b>	<b>1,056.0</b>	<b>5,471.0</b>

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

## WUI TREATMENTS

### Southwest Refuges

<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Aransas NWR	2	910.0			910.0
Aransas/Matagorda Isl NWRC	2	299.0			299.0
Attwater Prairie Chicken NWR	10	1,006.9			1,006.9
Balcones Canyonlands NWR	16	2,410.0	41.0		2,451.0
Big Boggy NWR	1	144.0			144.0
Bitter Lake NWR	1	930.0			930.0
Bosque Del Apache NWR	10	311.0	149.0		460.0
Brazoria NWR	13	9,993.2			9,993.2
Caddo Lake NWR	1		72.7		72.7
Maxwell NWR	1	513.0			513.0
San Bernard NWR	2	625.0			625.0
San Bernardino NWAR	1	10.0			10.0
Sequoyah NWR	1	1.0			1.0
Sevilleta NWR	2	1.0		15.0	16.0
Washita NWR	3	561.0			561.0
Wichita Mountains Wildlife Rfg	4	1,187.7			1,187.7
<b>Total</b>	<b>70</b>	<b>18,902.8</b>	<b>262.7</b>	<b>15.0</b>	<b>19,180.5</b>

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	9	2,749.0			2,749.0
Big Oaks NWR	3	1,255.0			1,255.0
Big Stone NWR	15	1,475.0			1,475.0
Crab Orchard NWR	8	303.0			303.0
Crane Meadows NWR	4	265.0			265.0
Detroit Lakes WMD	8	721.0			721.0
Fergus Falls WMD	19	1,737.0	8.0		1,745.0
Glacial Ridge NWR	4	358.0			358.0
Iowa WMD	18	2,802.0			2,802.0
Leopold WMD	13	630.0	1.5		631.5
Litchfield WMD	19	2,015.0			2,015.0
Minnesota Valley NWR	3	98.0			98.0
Morris WMD	14	1,860.0			1,860.0
Neal Smith NWR	1	73.0			73.0
Necedah NWR	16	2,465.1	170.0		2,635.1
Port Louisa NWR	2	1,074.0			1,074.0
Rice Lake NWR	1		36.0		36.0
Rydell NWR	2	113.0			113.0
Seney NWR	3	25.0	12.0		37.0
Sherburne NWR	8	94.0	82.0		176.0
Squaw Creek NWR	8	1,205.0			1,205.0
St. Croix WMD	6	515.0			515.0
Tamarac NWR	3	69.0			69.0
Trempealeau NWR	1	39.0			39.0
Upper Mississippi River-Savanna	1	686.0			686.0
Windom WMD	4	182.0	17.0		199.0
<b>Total</b>	<b>193</b>	<b>22,808.1</b>	<b>326.5</b>	<b>0.0</b>	<b>23,134.6</b>

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	8	694.0	43.0	4.0	741.0
ARM Loxahatchee NWR	2	1,050.0			1,050.0
Big Branch Marsh NWR	6	952.0			952.0
Cabo Rojo NWR	16		120.0		120.0
Carolina Sandhills NWR	6	3,030.0			3,030.0
Cedar Island NWR	1		70.0		70.0
Currituck NWR	1		2.2		2.2
EF Hollings Ace Basin NWR	11	2,216.0			2,216.0
Eufaula NWR	2	172.0			172.0
Florida Panther NWR	10	4,462.0	860.0		5,322.0
Key Cave NWR	1	7.0			7.0
Lacassine NWR	1	998.0			998.0
Laguna Cartagena NWR	1		11.0		11.0
Lake Woodruff NWR	2	120.0			120.0
Lower Suwannee NWR	4	1,683.0			1,683.0
Mackay Island NWR	9	2,290.0		500.0	2,790.0
Merritt Island NWR	10	4,329.0			4,329.0
Mississippi Sandhill Crane NWR	14	1,601.0	689.0		2,290.0
National Key Deer Refuge	2		50.0		50.0
Noxubee NWR	11	6,488.0			6,488.0
Okefenokee NWR	3	90.0			90.0
Pea Island NWR	3	759.0			759.0
Pee Dee NWR	2	485.0			485.0
Piedmont NWR	14	5,393.0			5,393.0
Pinckney Island NWR	2	38.0			38.0
Pocosin Lakes NWR	2		130.0		130.0
Santee NWR	3	292.0			292.0
Savannah-Picnkey Refuges	7	1,467.0			1,467.0
St. Johns NWR	1	100.0			100.0
St. Marks NWR	9	821.0			821.0
Waccamaw NWR	1	127.0			127.0
<b>Total</b>	<b>165</b>	<b>39,664.0</b>	<b>1,975.2</b>	<b>504.0</b>	<b>42,143.2</b>

## 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>
Eastern MA NWRC	1	50.0			50.0
Eastern VA Rivers NWRC	1	250.0			250.0
Great Dismal Swamp NWR	1	50.0			50.0
Maine Coastal Islands NWR	1	10.7			10.7
Rachel Carson NWR	1	10.0			10.0
Rhode Island NWRC	1	56.0			56.0
<b>Total</b>	<b>6</b>	<b>426.7</b>	<b>0.0</b>	<b>0.0</b>	<b>426.7</b>

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	849.0			849.0
Bear River Migratory Bird Rfg.	1	250.0			250.0
Benton Lake WMD	1	207.0			207.0
Charles M. Russell NWR	1		20.0		20.0
Devils Lake WMD	1	34.0			34.0
Flint Hills NWR	18	2,923.0			2,923.0
Fort Niobrara NWR	1	161.0			161.0
Huron WMD	2	405.0	84.0		489.0
J. Clark Salyer NWR	1	320.0			320.0
Lake Andes NWR	2	77.0			77.0
Lee Metcalf NWR	2	110.0			110.0
Madison WMD	8	940.0			940.0
Marais Des Cygnes NWR	5	362.0			362.0
Medicine Lake NWR	1	3.0			3.0
Quivira NWR	4	3,615.0			3,615.0
Rainwater Basin WMD	13	1,732.0			1,732.0
Rocky Mtn. Arsenal NWR	3	635.4			635.4
Sand Lake NWR	3	678.0			678.0
Waubay NWR	2	57.0			57.0
<b>Total</b>	<b>75</b>	<b>13,358.4</b>	<b>104.0</b>	<b>0.0</b>	<b>13,462.4</b>

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

## WUI TREATMENTS Alaska Refuges

<b><u>Refuge</u></b>	<b><u>Number</u></b>	<b><u>Rx Acres</u></b>	<b><u>Mech Acres</u></b>	<b><u>Other Acres</u></b>	<b><u>Total Acres</u></b>
Kanuti NWR	3	5.0	10.0		15.0
Yukon Flats NWR	1		40.0		40.0
<b>Total</b>	<b>4</b>	<b>5.0</b>	<b>50.0</b>	<b>0.0</b>	<b>55.0</b>

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

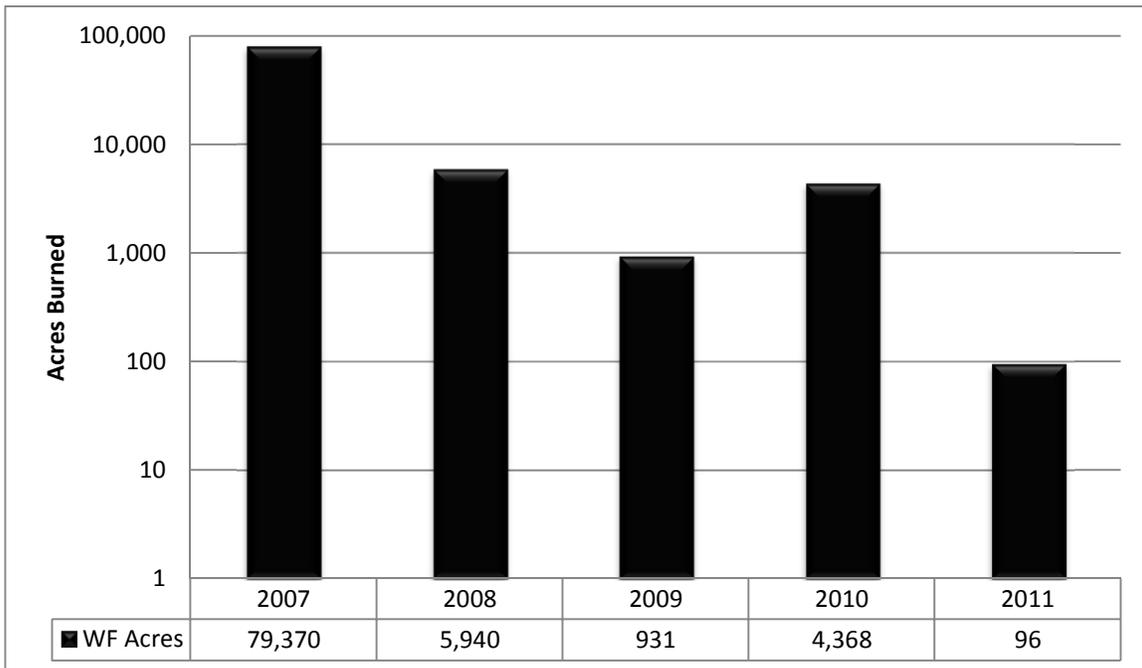
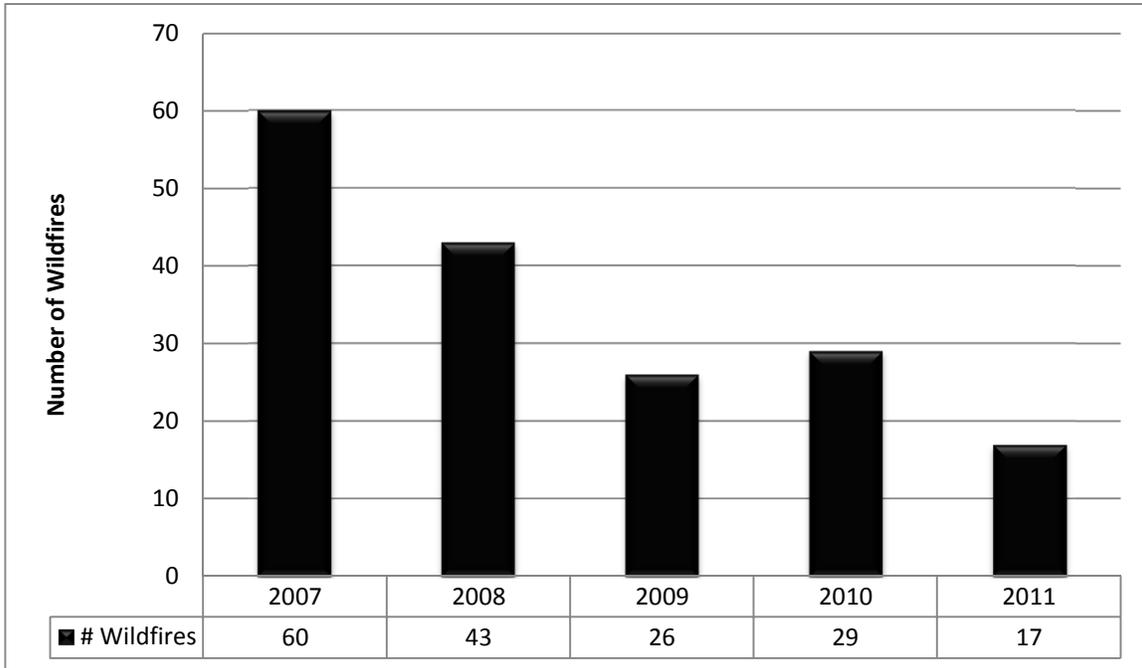
## WUI TREATMENTS

### Pacific Southwest Refuges

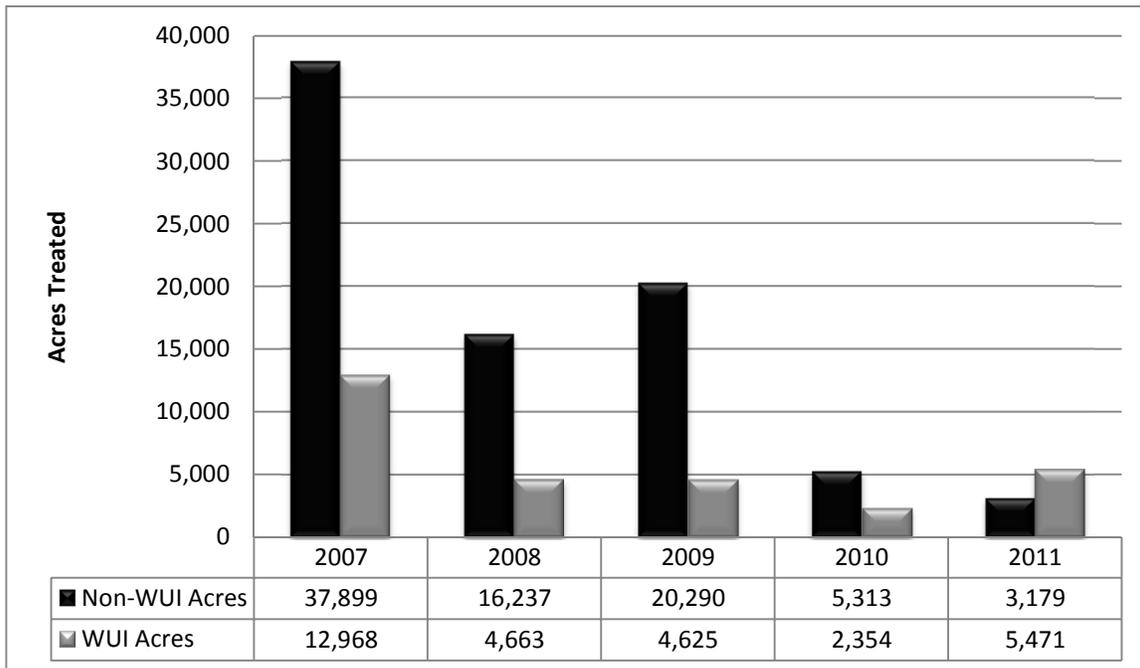
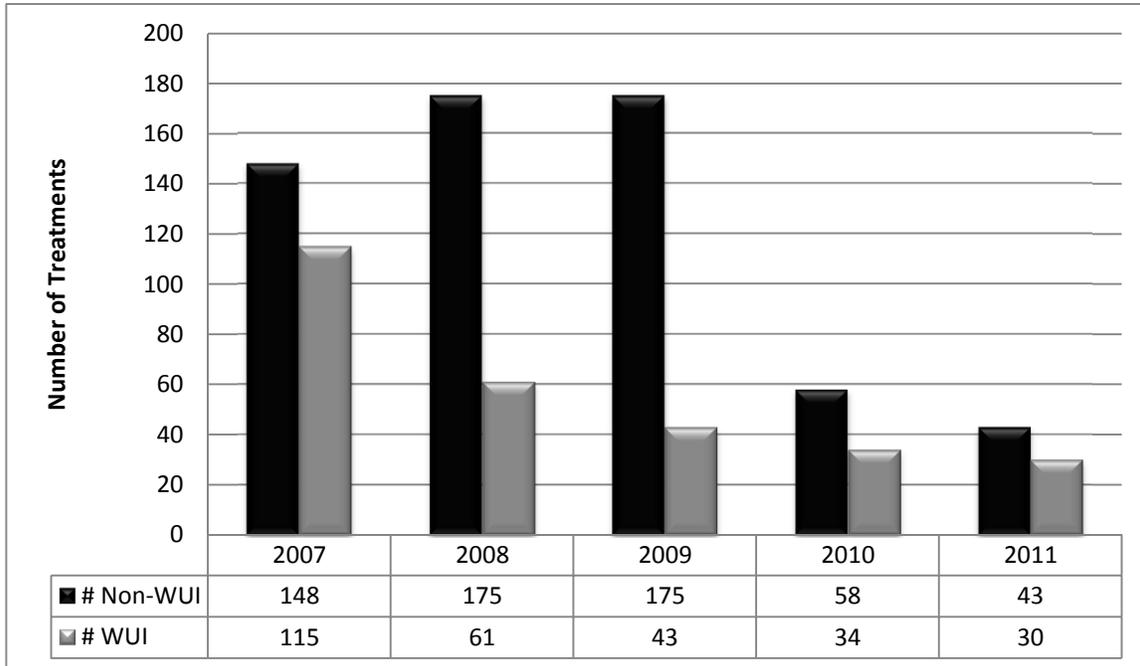
<u>Refuge</u>	<u>Number</u>	<u>Rx Acres</u>	<u>Mech Acres</u>	<u>Other Acres</u>	<u>Total Acres</u>
Ash Meadows NWR	3	265.0	30.0		295.0
Bear Valley NWR	3	51.0	100.0		151.0
Bitter Creek NWR	1		49.0		49.0
Colusa NWR	1	20.0			20.0
Delevan NWR	1	4.0			4.0
Desert National Wildlife Range	1	1.0			1.0
Hopper MountainNWR	1		10.0		10.0
Kern NWR	2	173.0	120.0		293.0
Merced NWR	7	171.0	175.0		346.0
Modoc NWR	5	225.0			225.0
Pahranagat NWR	2	523.0			523.0
Ruby Lake NWR	3	750.0	78.0		828.0
Sacramento NWR	5	93.0			93.0
Sacramento River NWR	12	63.0		12.0	75.0
San Diego Bay NWR	1		80.0		80.0
San Diego NWR	11		37.0		37.0
San Joaquin River NWR	6	675.0	124.0		799.0
San Luis NWR	13	2,970.0	162.0		3,132.0
San Luis NWRC	2	240.0			240.0
Stillwater NWR	8	855.0		891.0	1,746.0
Tule Lake NWR	3	685.0	12.0		697.0
<b>Total</b>	<b>91</b>	<b>7,764.0</b>	<b>977.0</b>	<b>903.0</b>	<b>9,644.0</b>

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

## PACIFIC REGION Wildfires 2007 - 2011

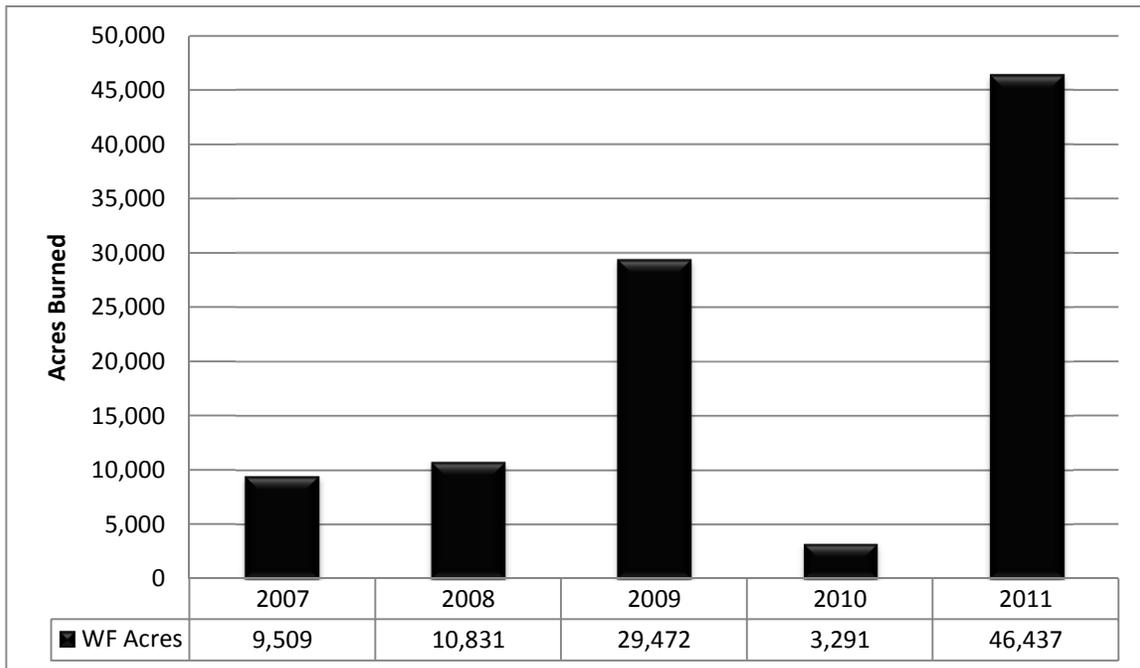
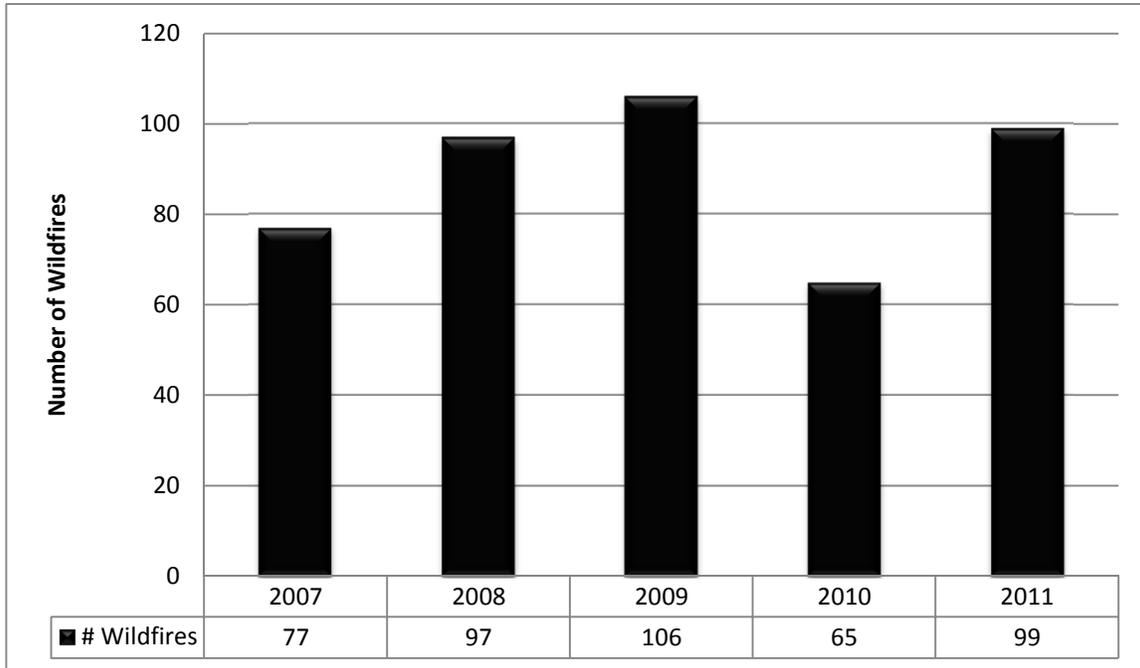


## PACIFIC REGION Treatments 2007 - 2011

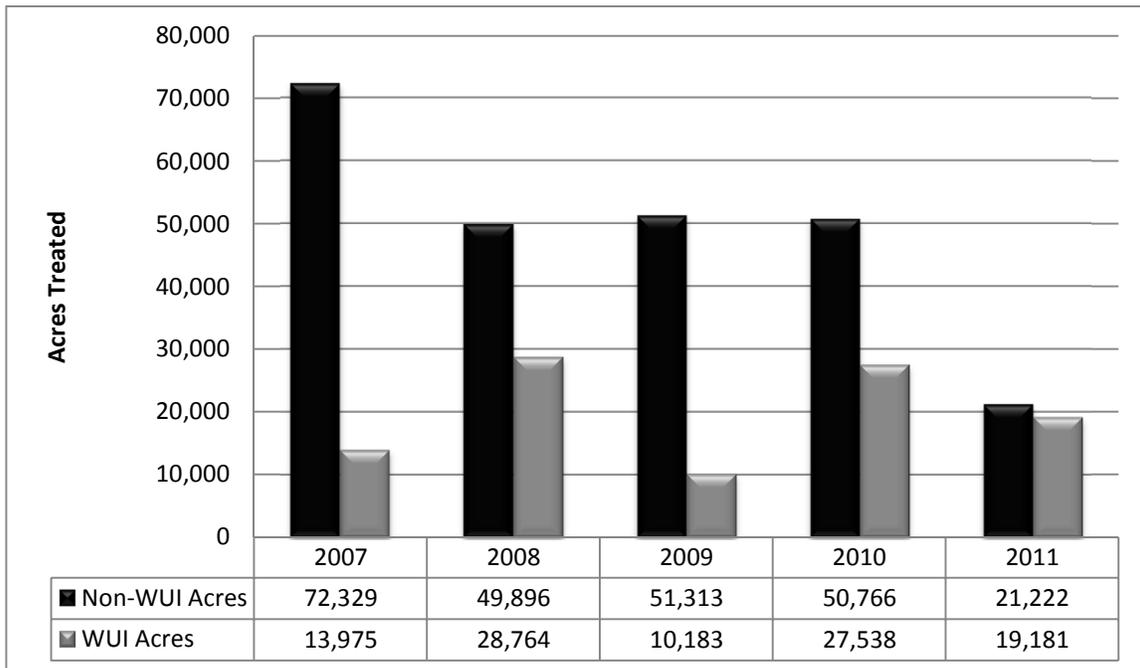
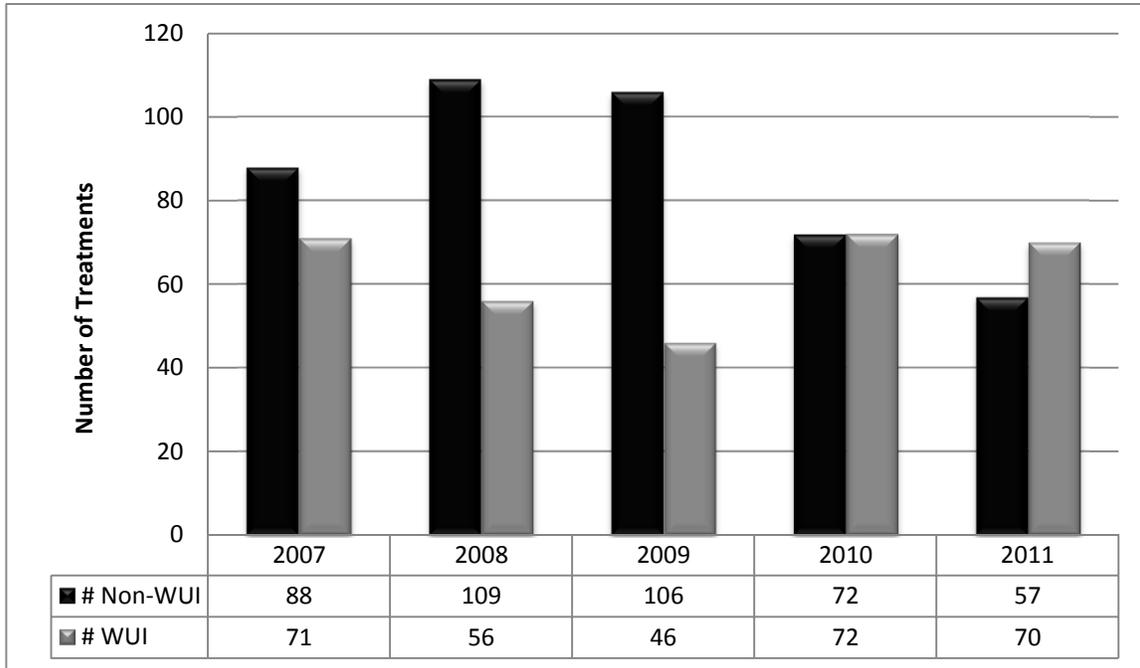


WUI = Wildland Urban Interface

## SOUTHWEST REGION Wildfires 2007 - 2011

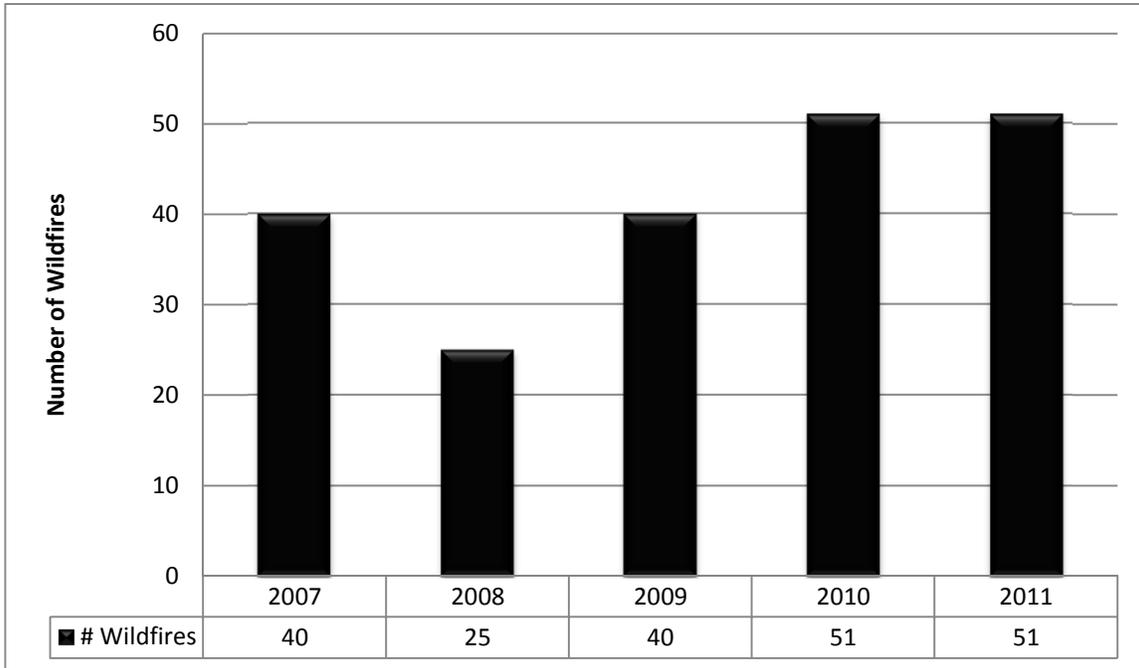


## SOUTHWEST REGION Treatments 2007 - 2011

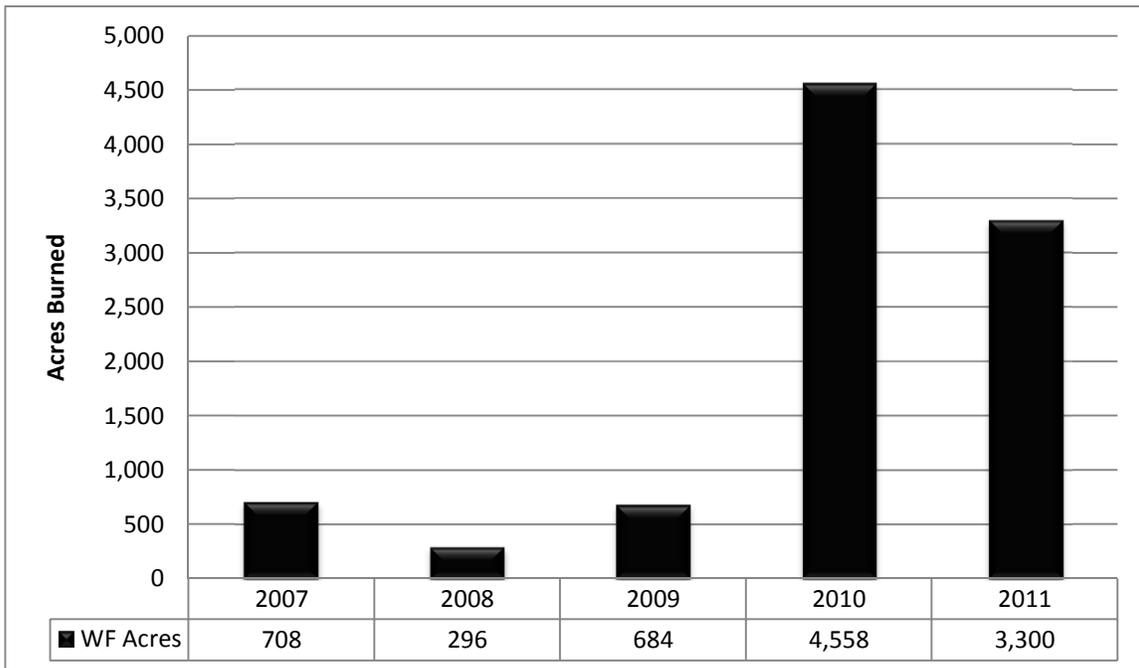


WUI = Wildland Urban Interface

## MIDWEST REGION Wildfires 2007 - 2011

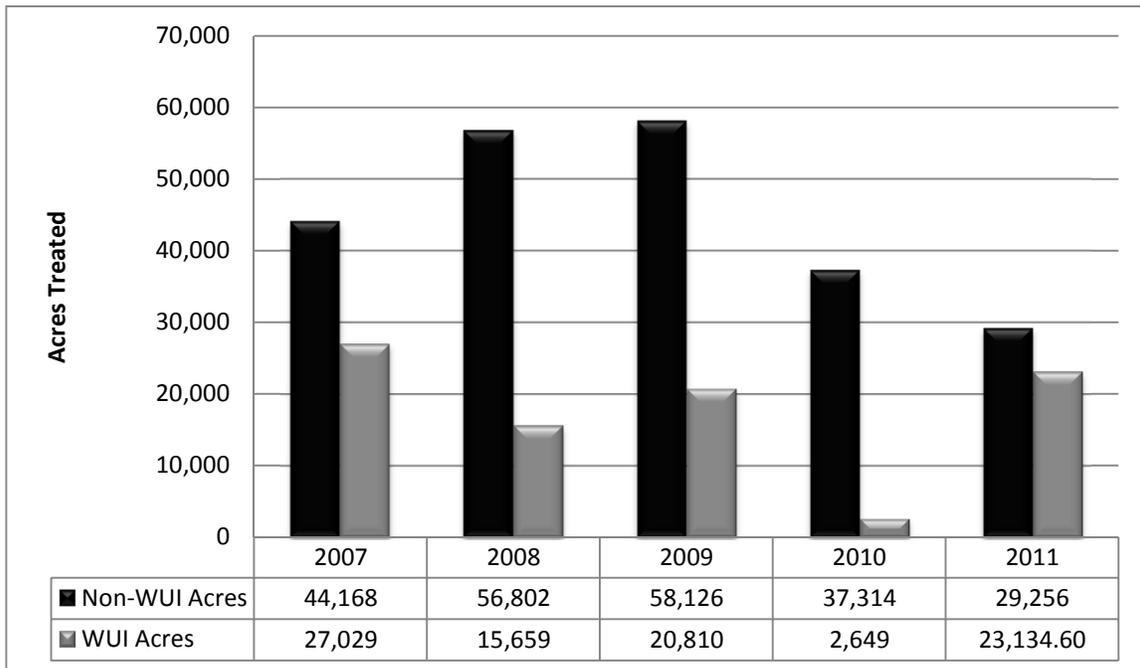
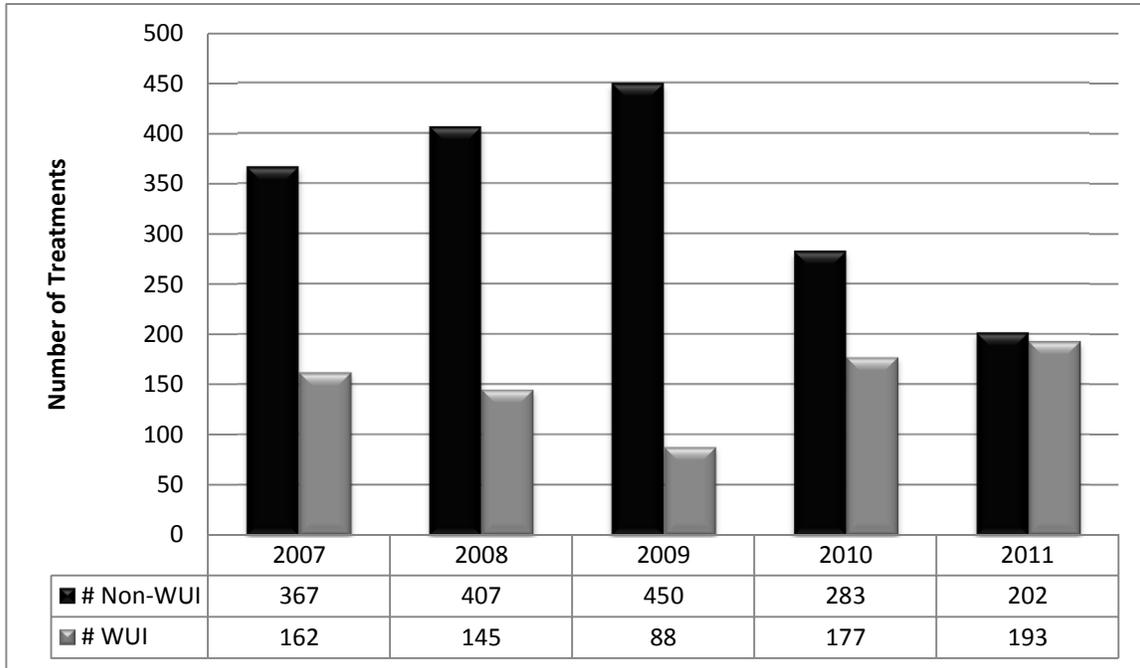


Wildfires for resource benefit have been added into the total - four fires



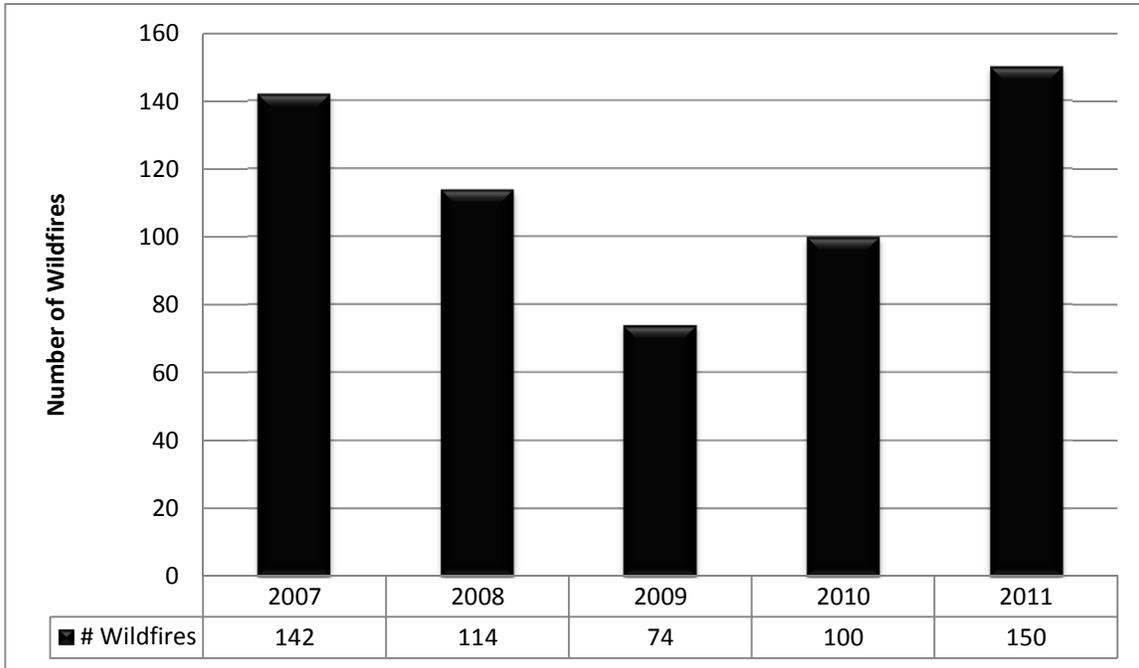
Wildfires for resource benefit have been added into the total acres - 1,219 acres

## MIDWEST REGION Treatments 2007 - 2011

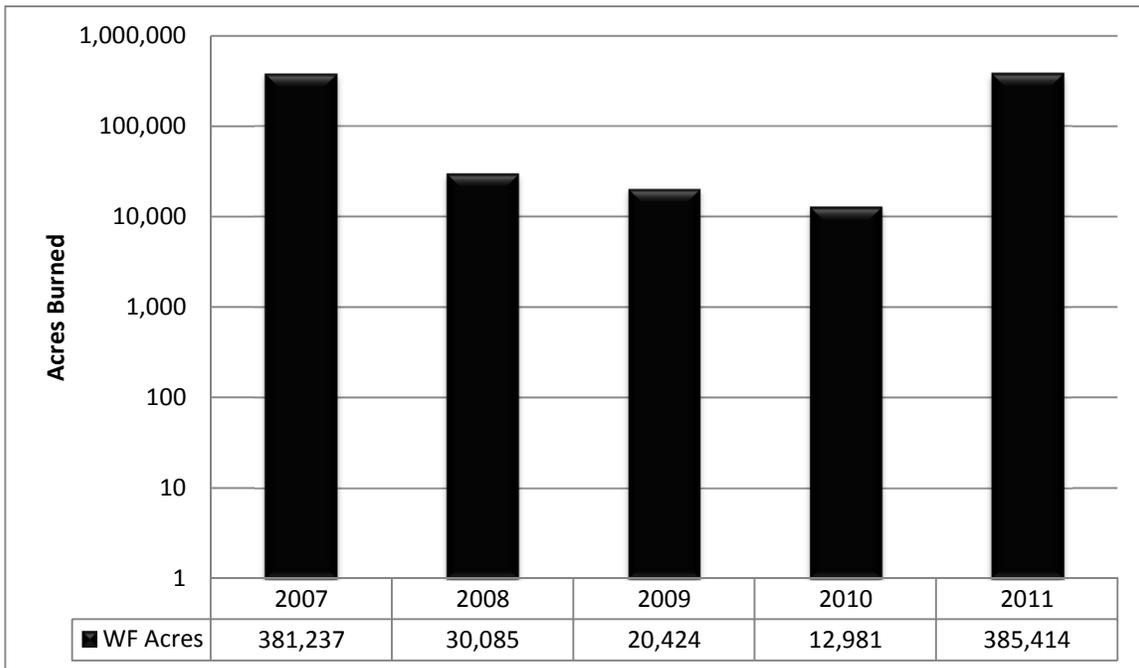


WUI = Wildland Urban Interface

## SOUTHEAST REGION Wildfires 2007 - 2011

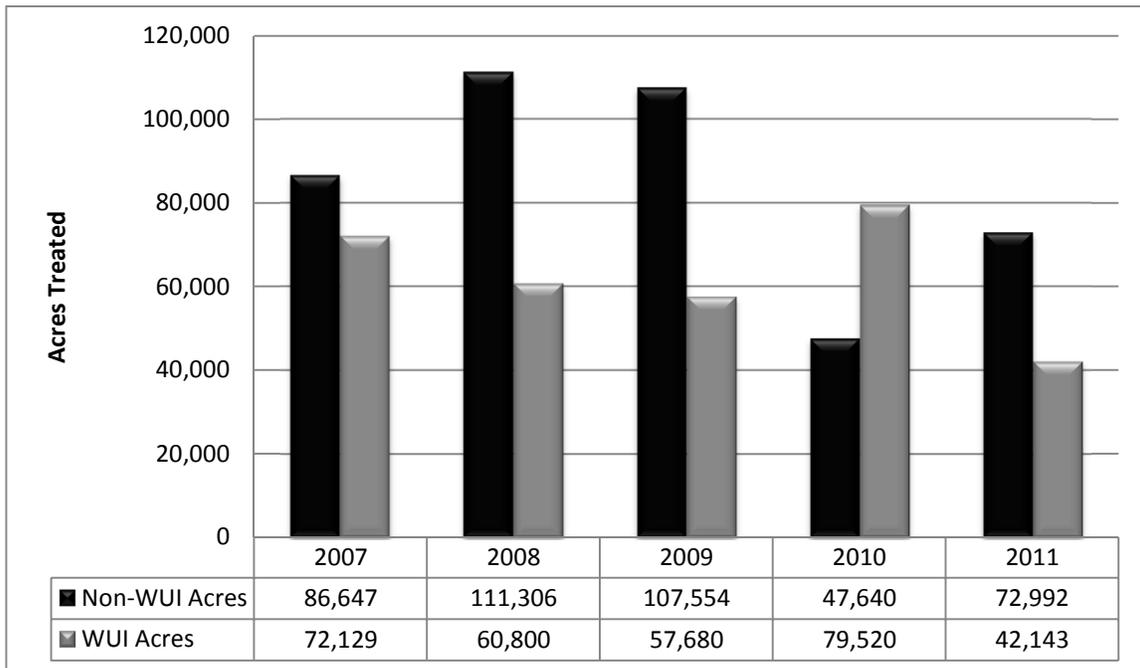
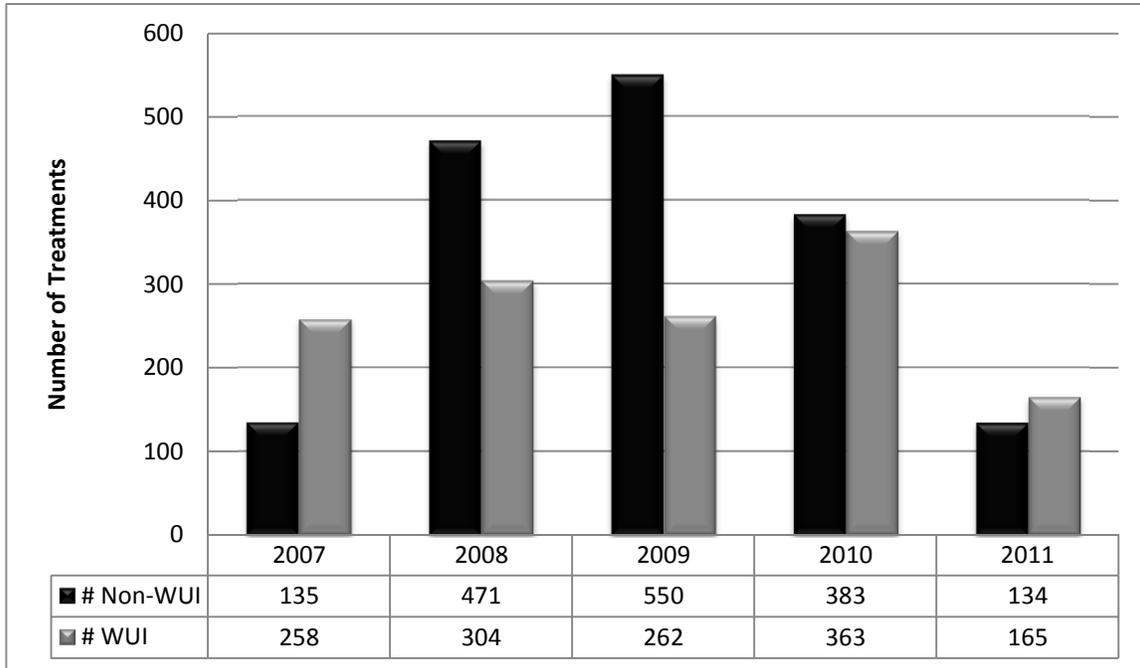


Wildfires for resource benefit have been added into the total - two fires



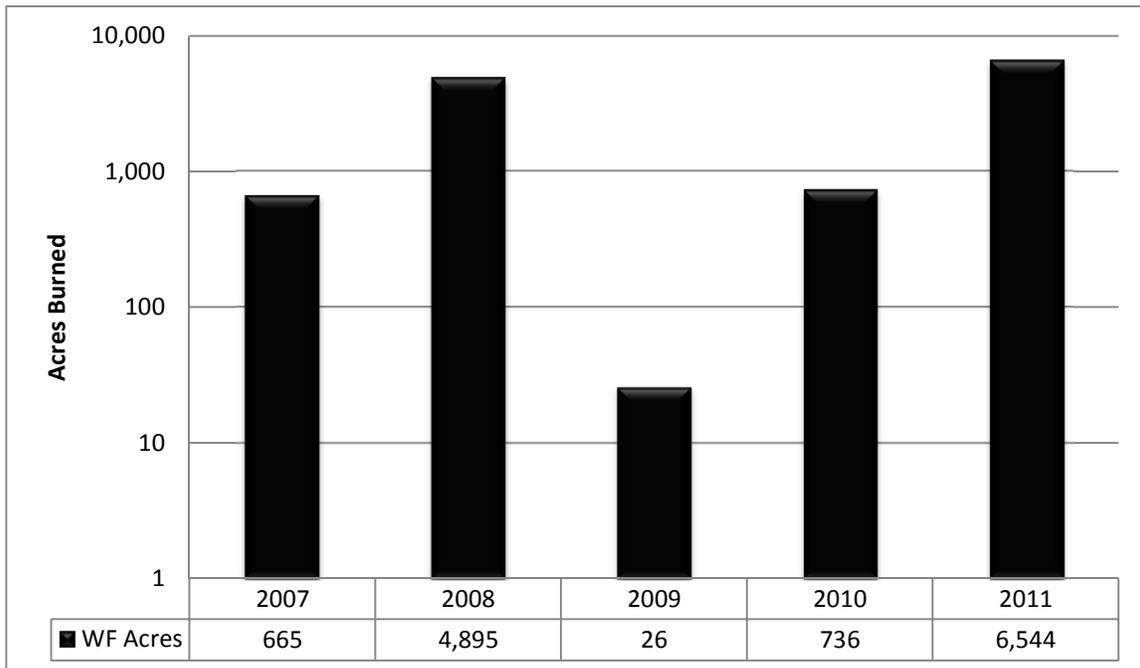
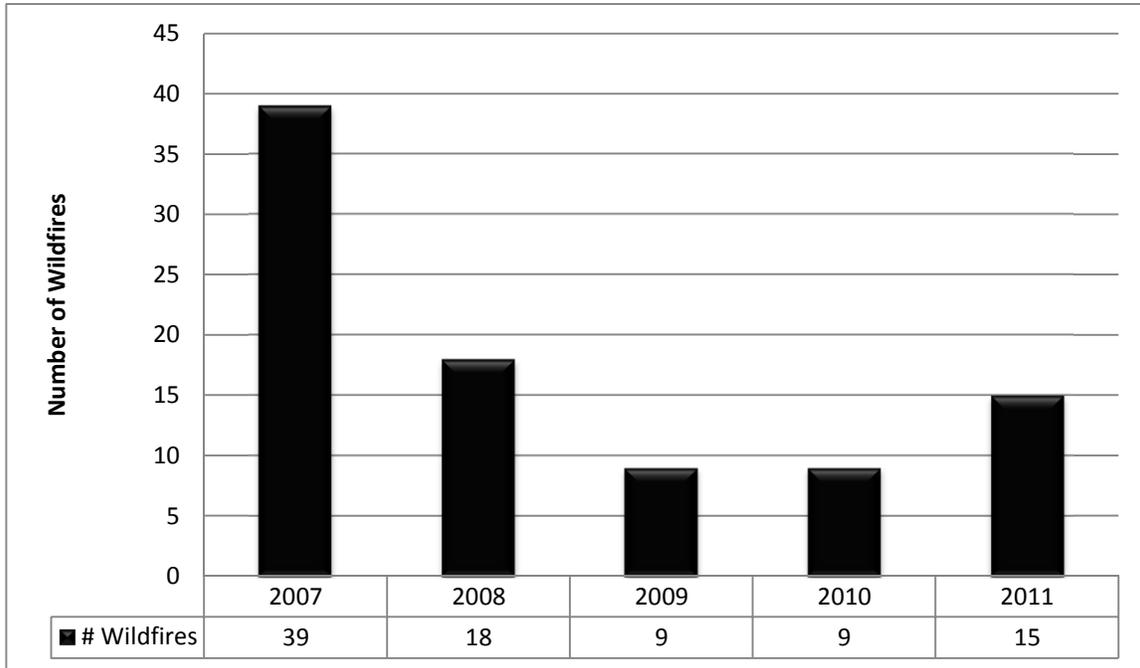
Wildfires for resource benefit have been added into the total acres - 3,422 acres

## SOUTHEAST REGION Treatments 2007 - 2011

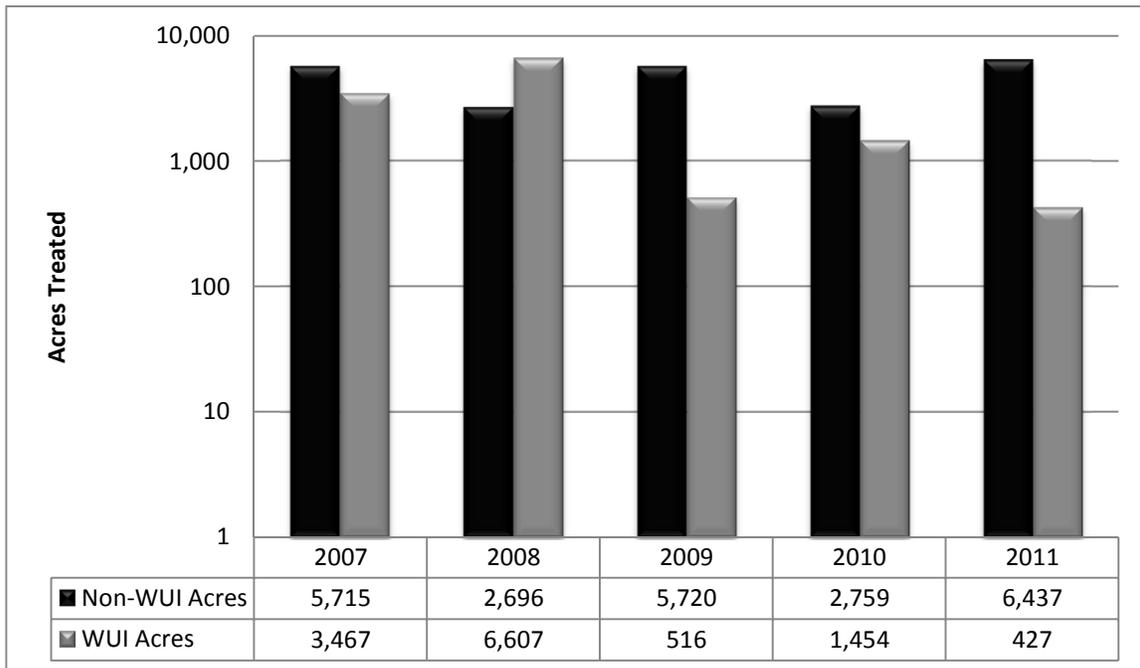
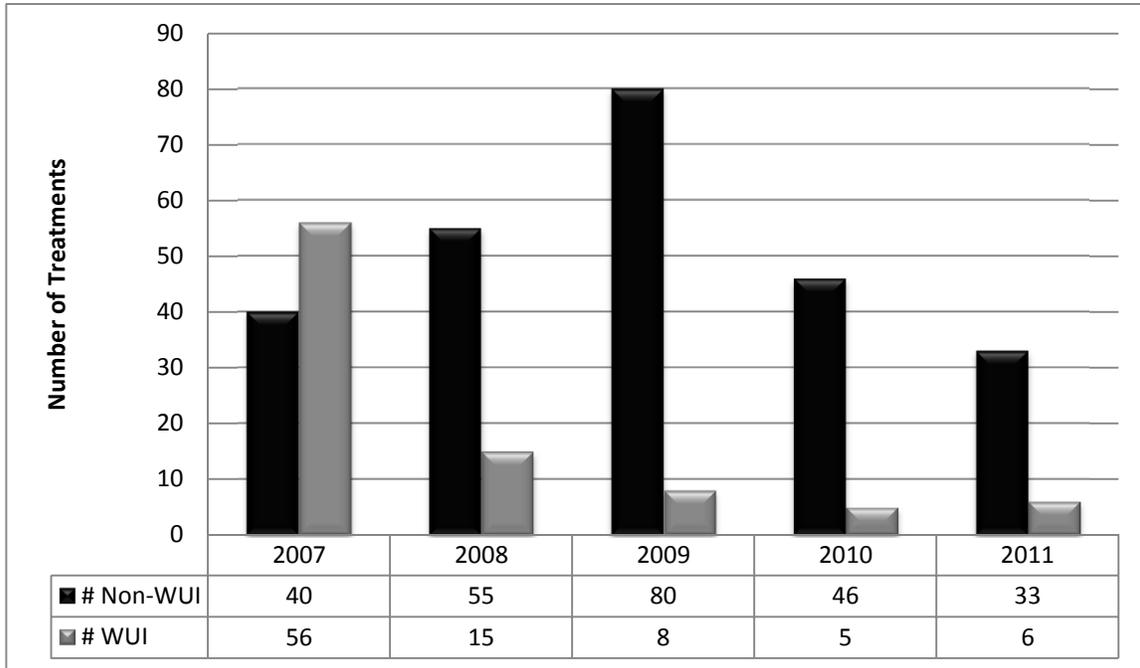


WUI = Wildland Urban Interface

## NORTHEAST REGION Wildfires 2007 - 2011



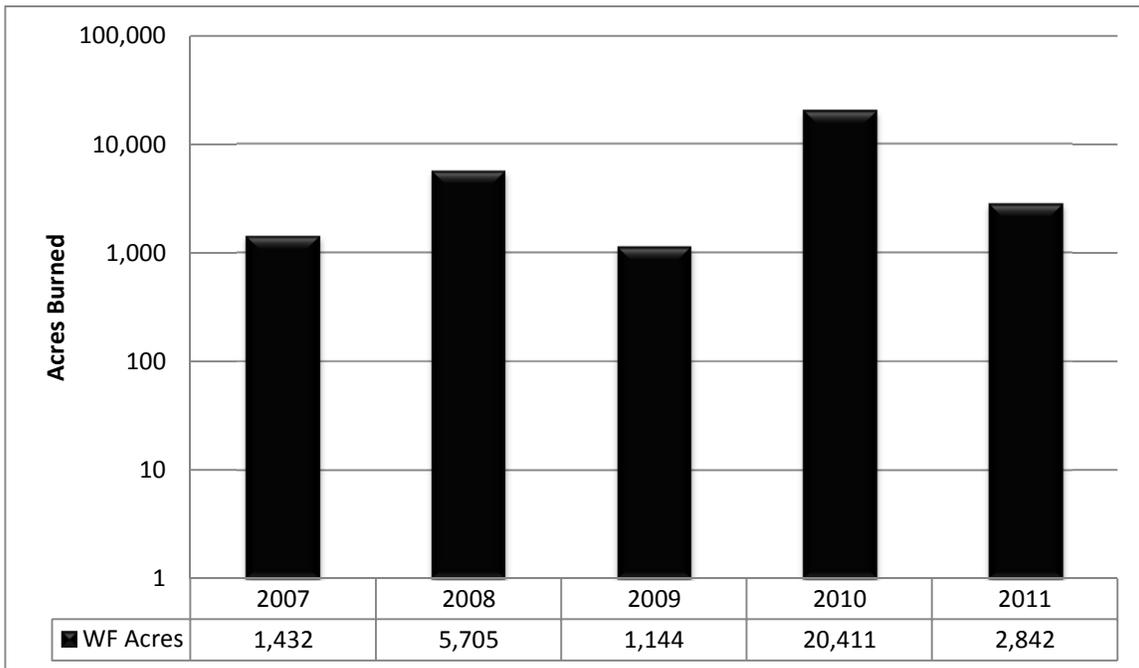
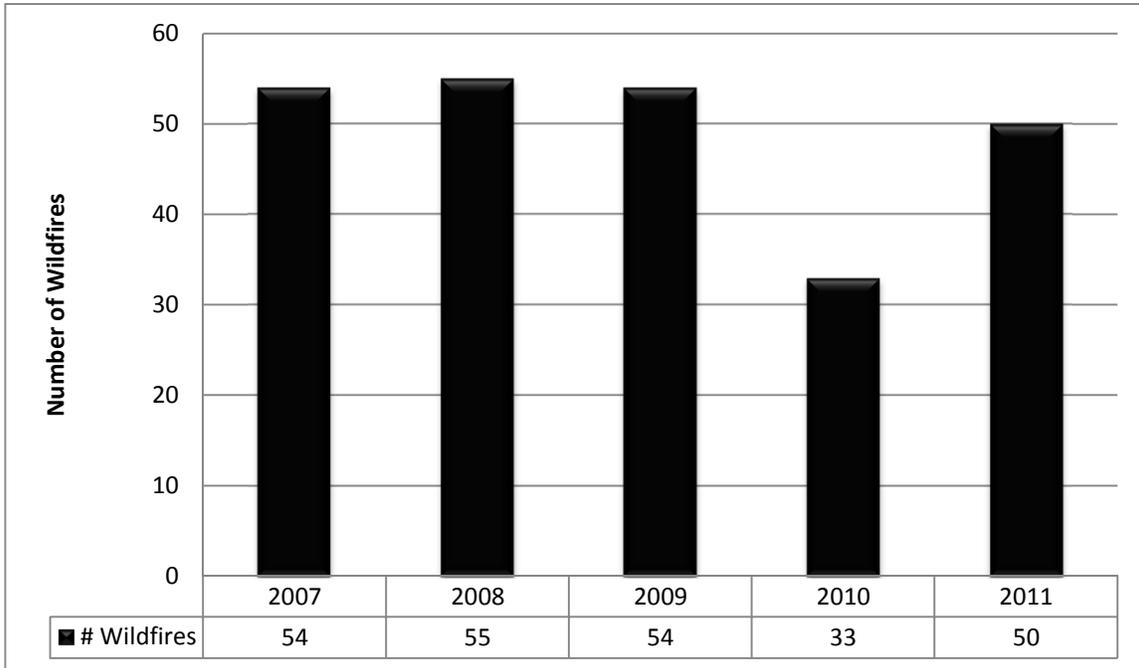
## NORTHEAST REGION Treatments 2007 - 2011



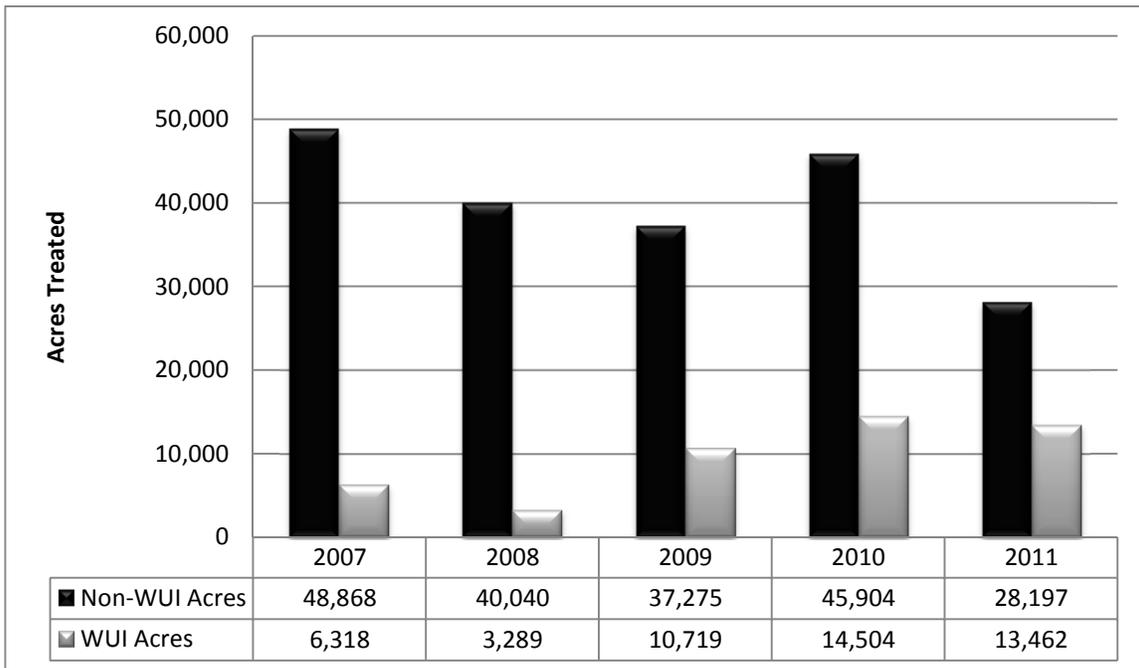
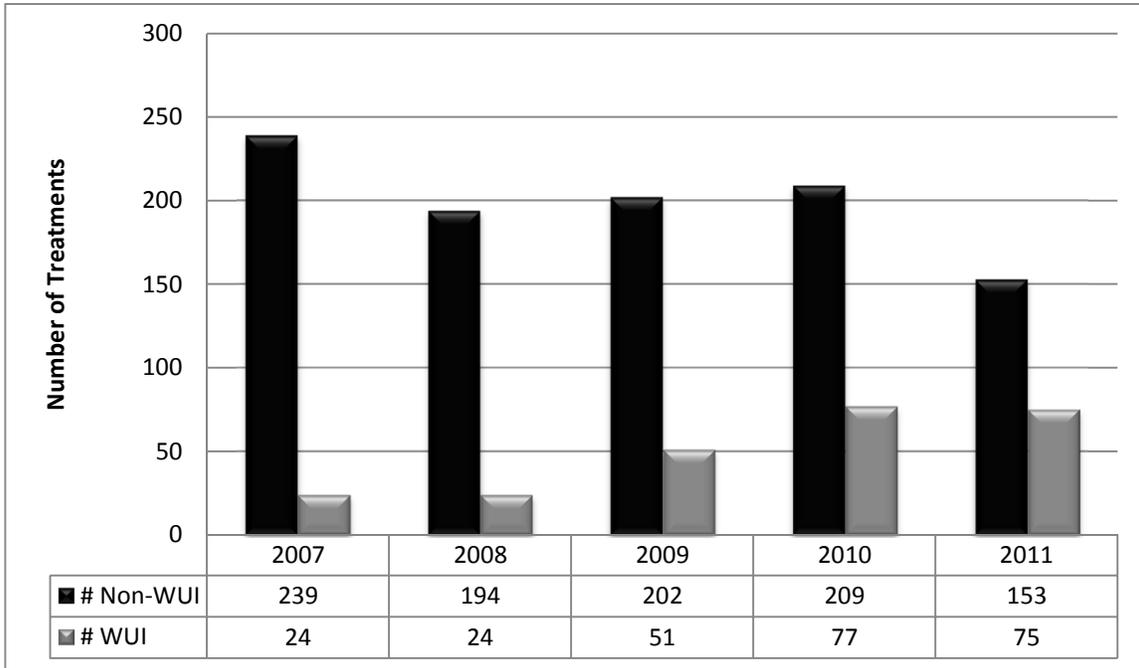
WUI = Wildland Urban Interface

# MOUNTAIN-PRAIRIE REGION

## Wildfires 2007 - 2011

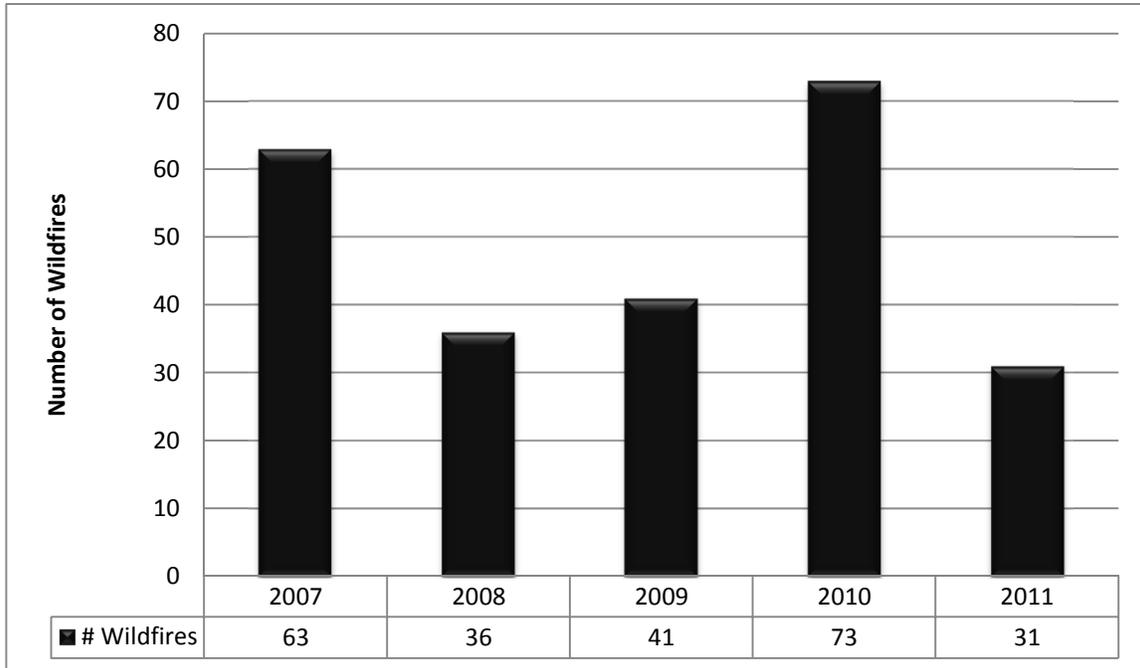


## MOUNTAIN-PRAIRIE REGION Treatments 2007 - 2011

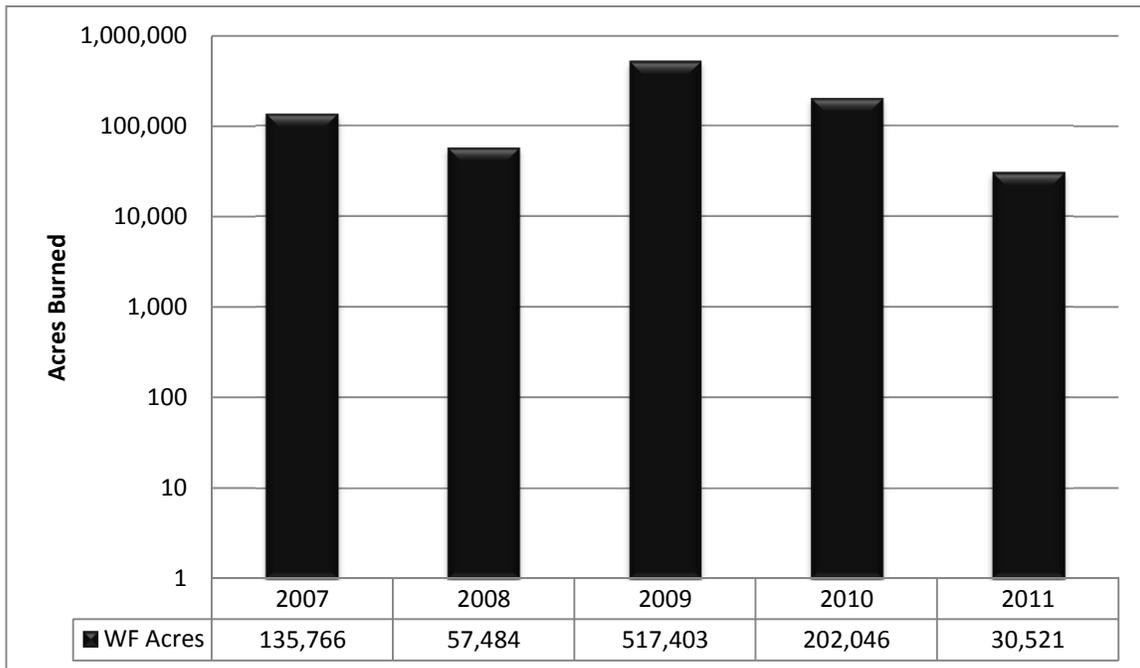


WUI = Wildland Urban Interface

## ALASKA REGION Wildfires 2007 - 2011

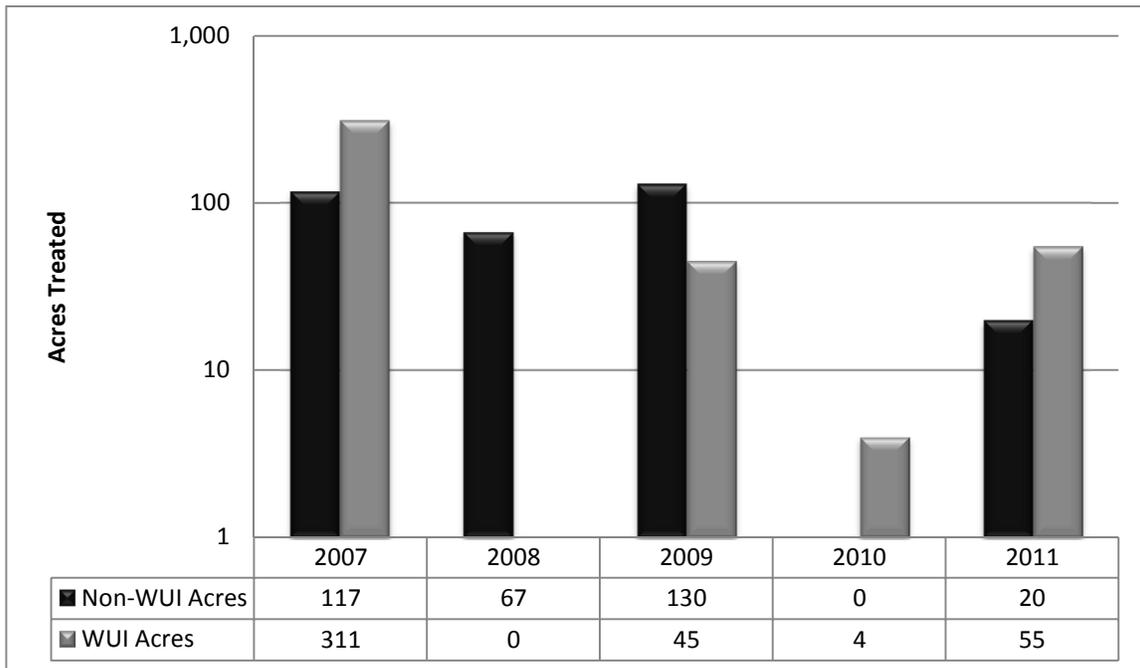
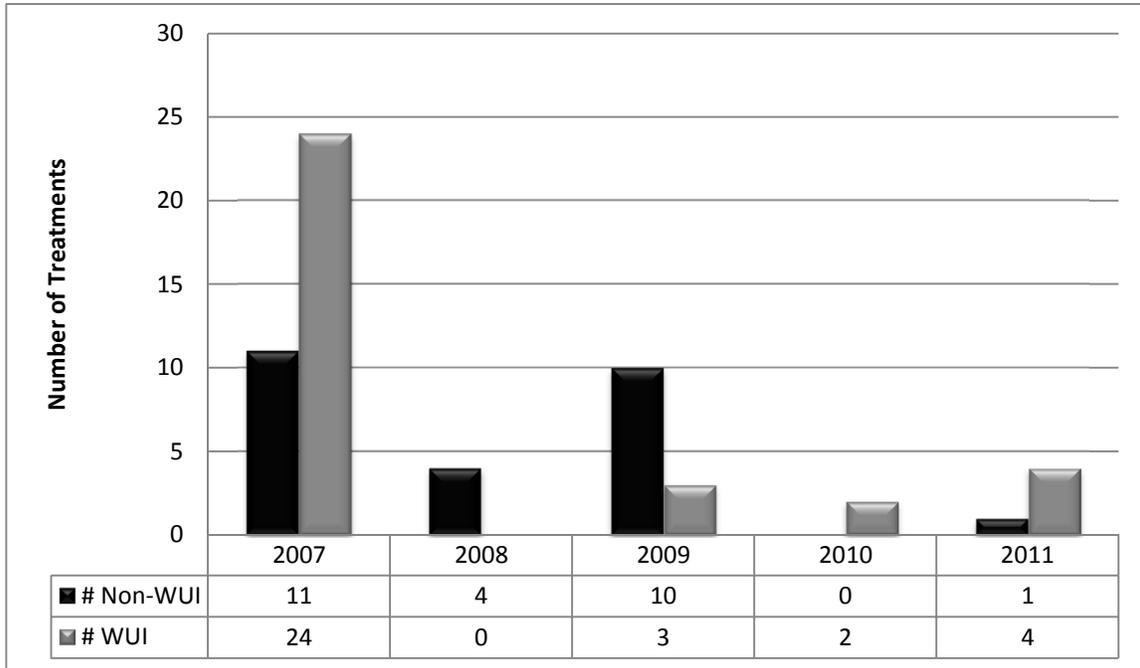


Wildfires for resource benefit have been added into the total - 17 fires



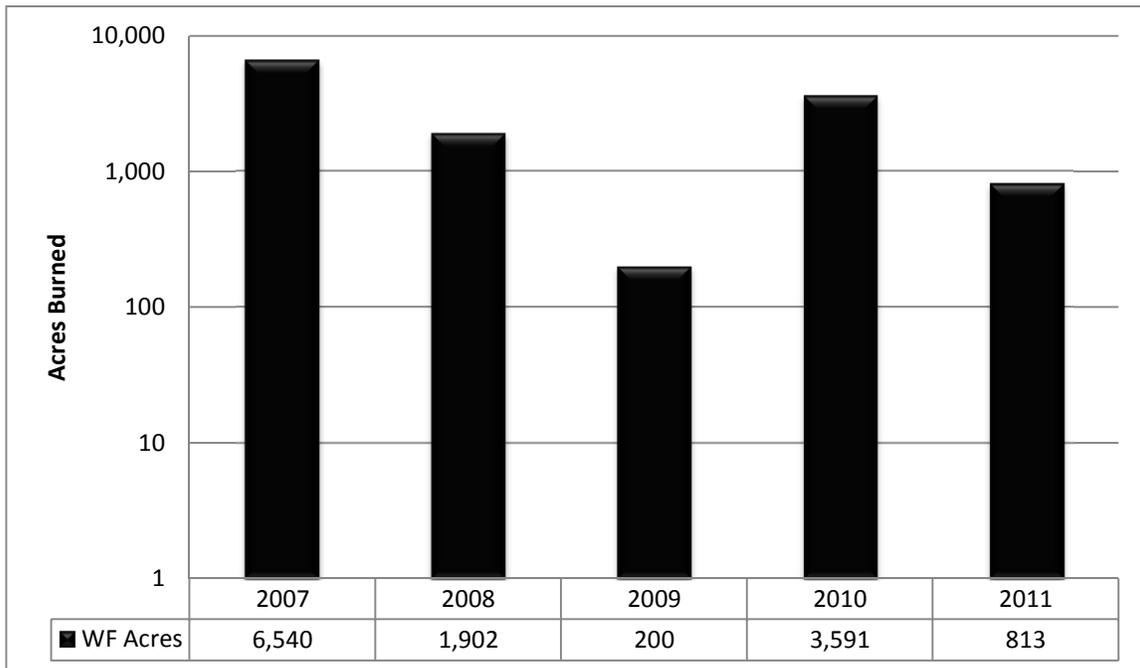
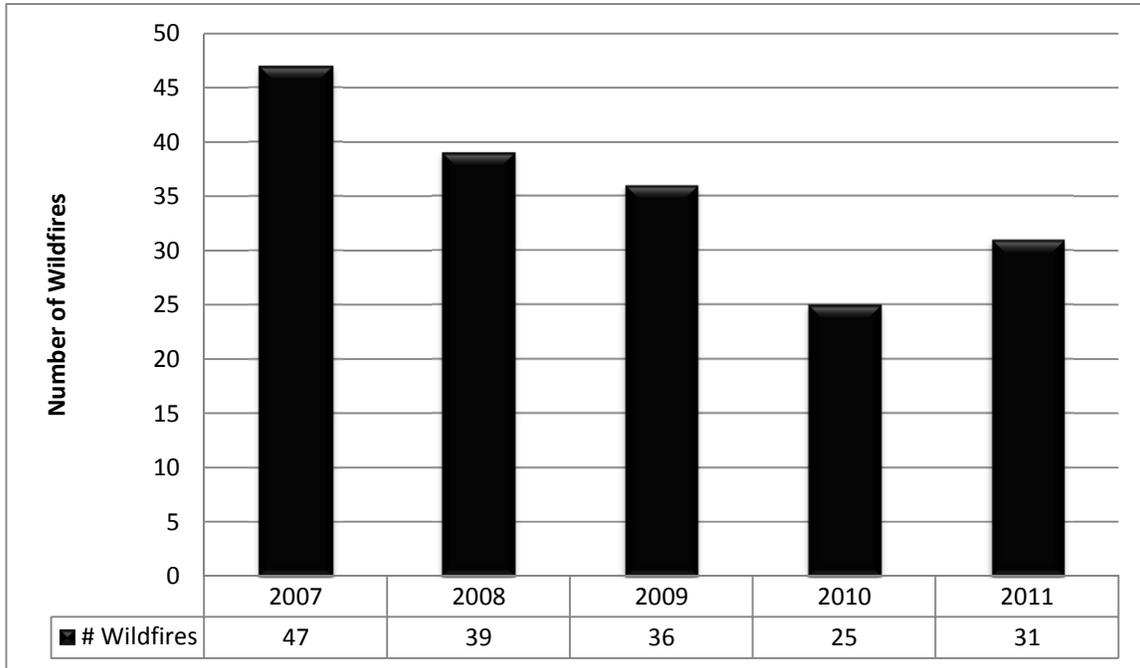
Wildfires for resource benefit have been added into the total acres - 29,871.5 acres

## ALASKA REGION Treatments 2007 - 2011

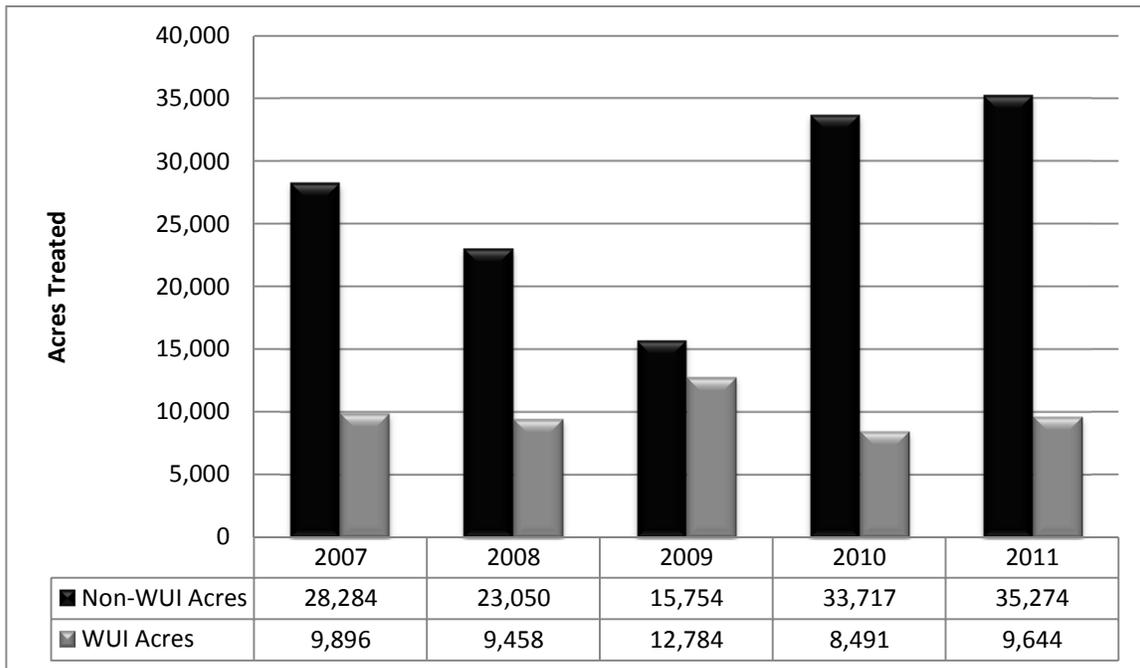
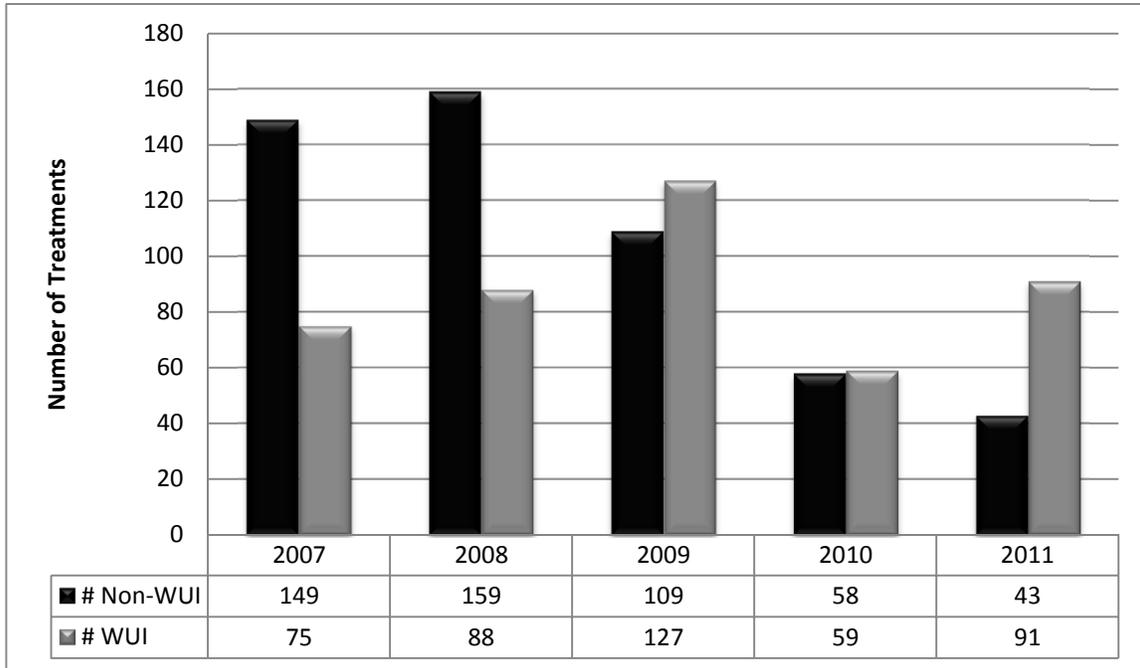


WUI = Wildland Urban Interface

## PACIFIC SOUTHWEST REGION Wildfires 2007 - 2011



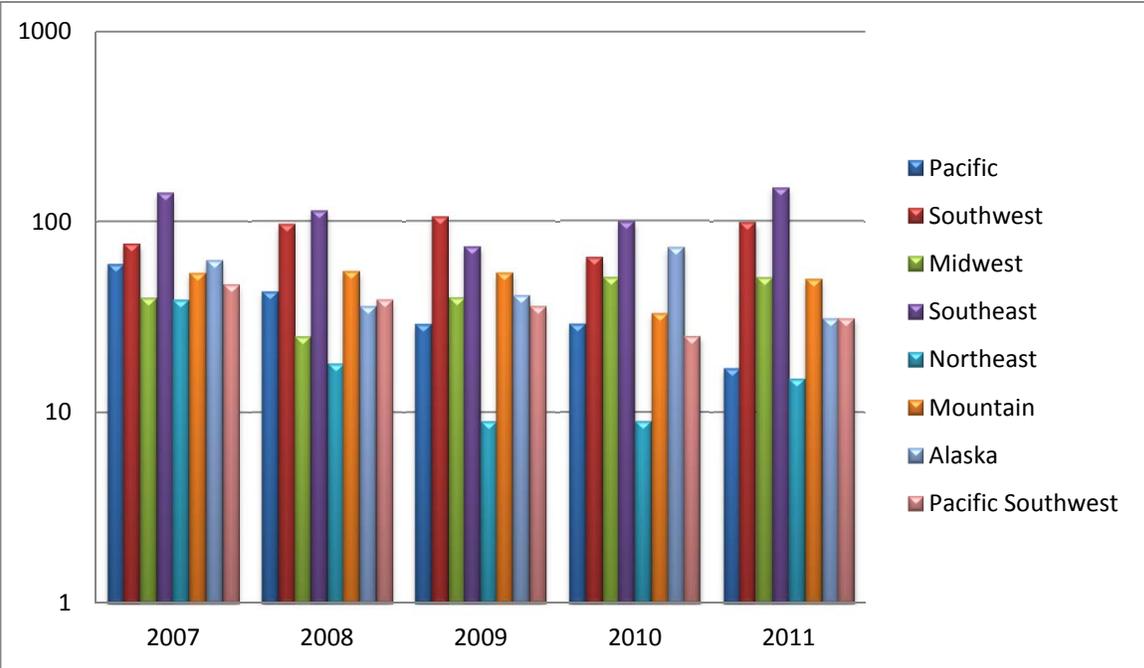
## PACIFIC SOUTHWEST REGION Treatments 2007 - 2011



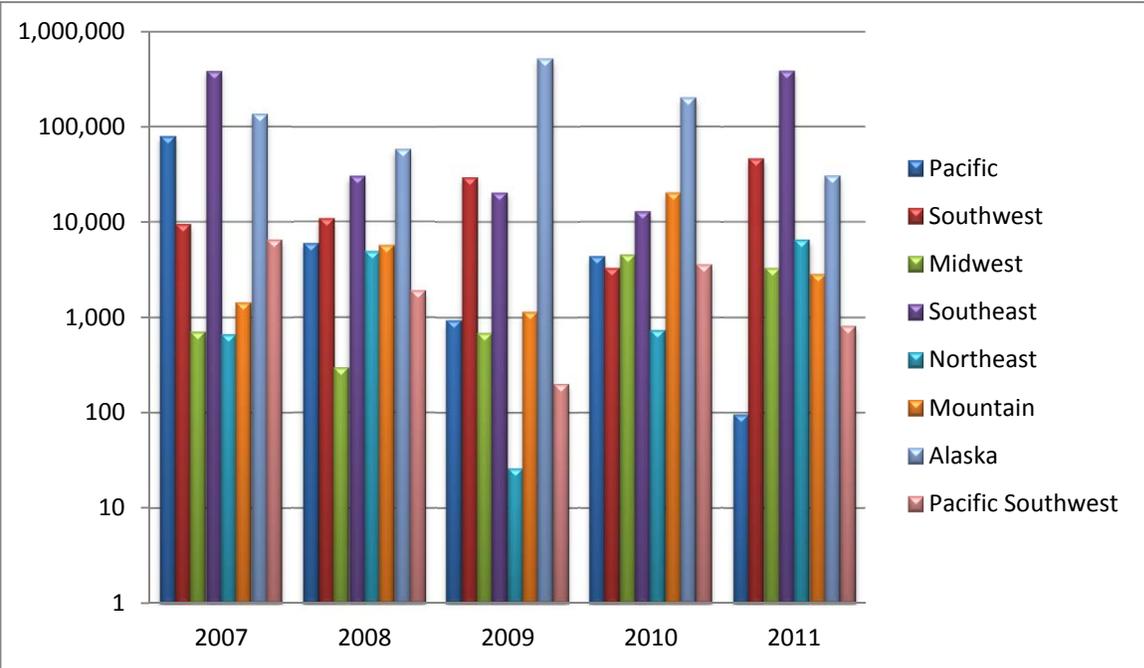
WUI = Wildland Urban Interface

# WILDFIRES 2007-2011

## Number of Wildfires

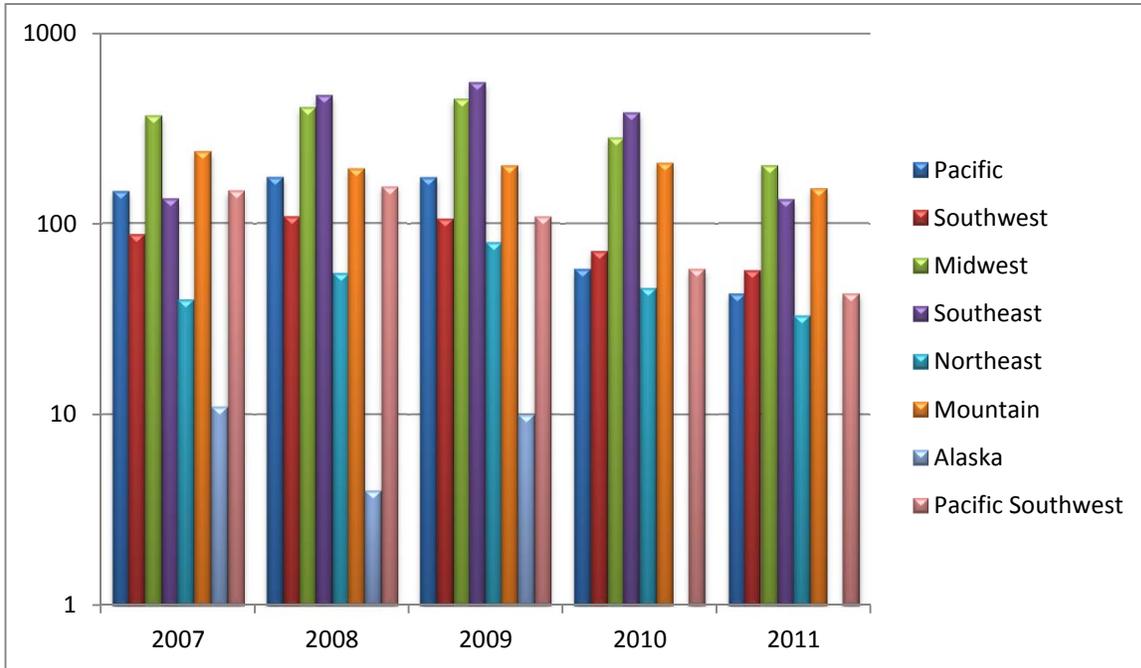


## Acres Burned

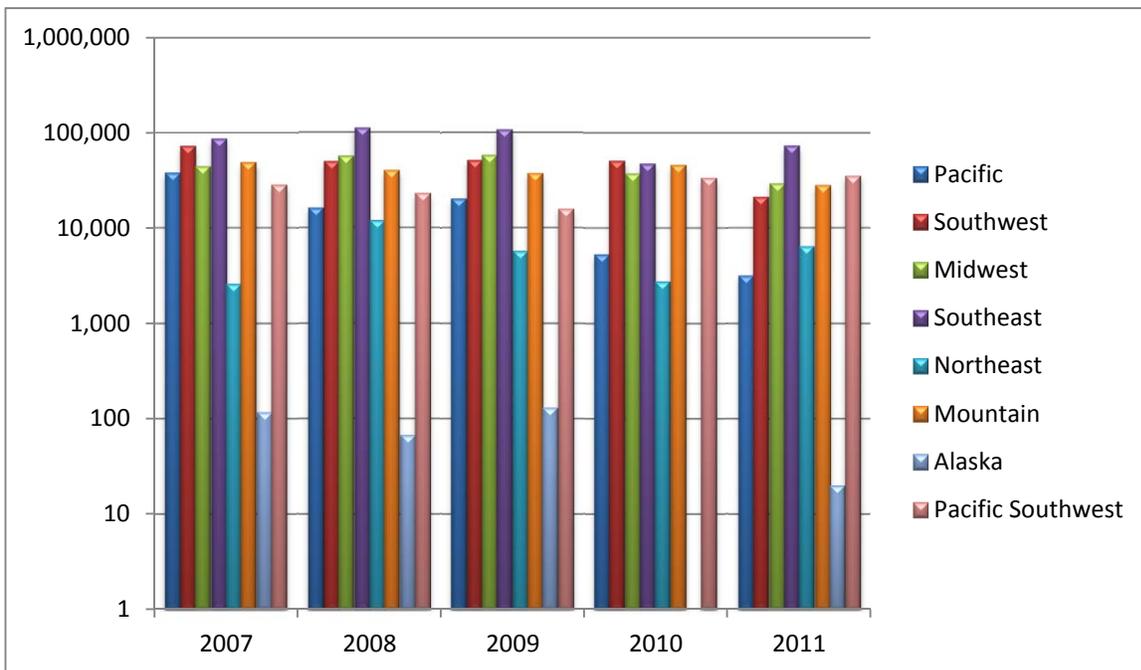


# NON-WUI TREATMENTS 2007-2011

## Number of Treatments



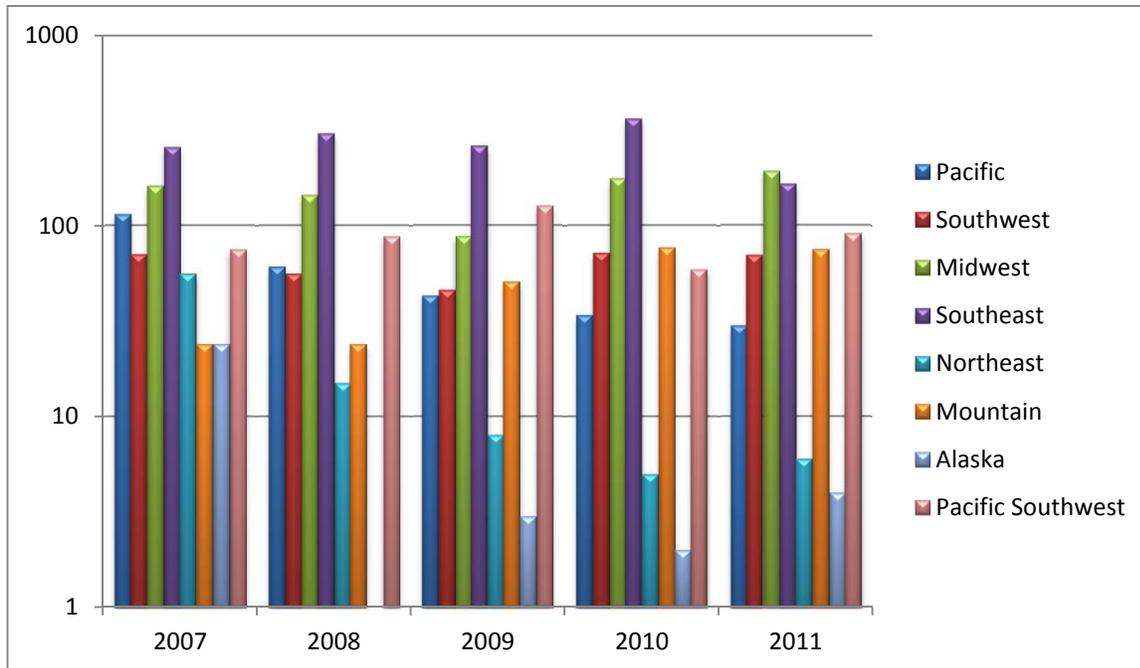
## Acres Treated



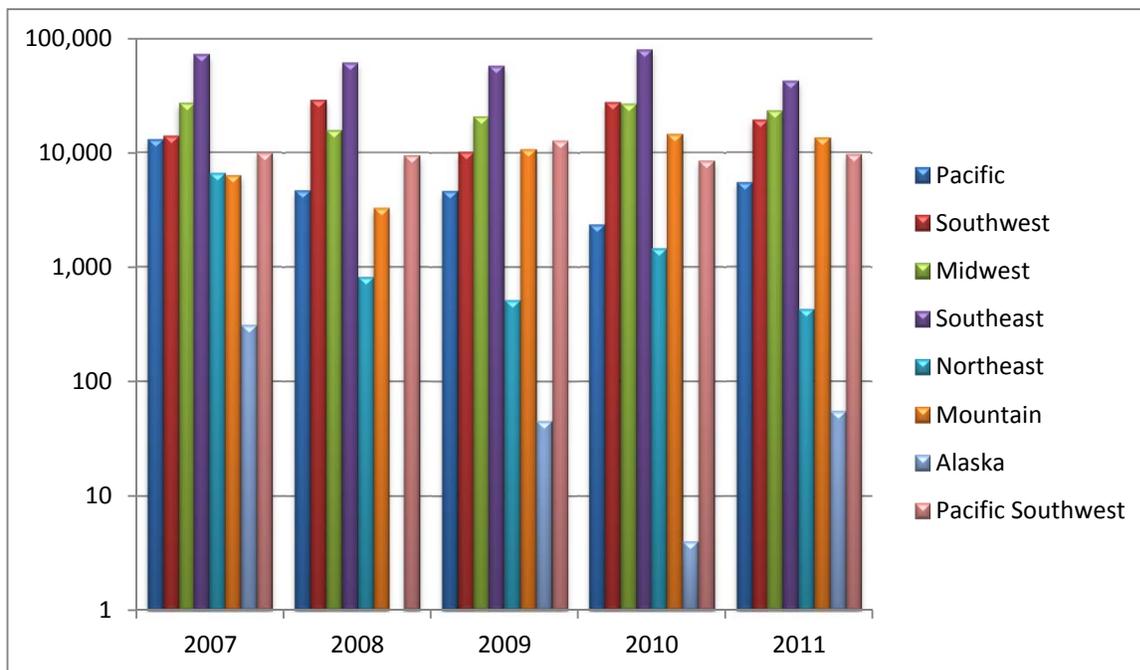
WUI = Wildland Urban Interface

## WUI TREATMENTS 2007-2011

### Number of Treatments



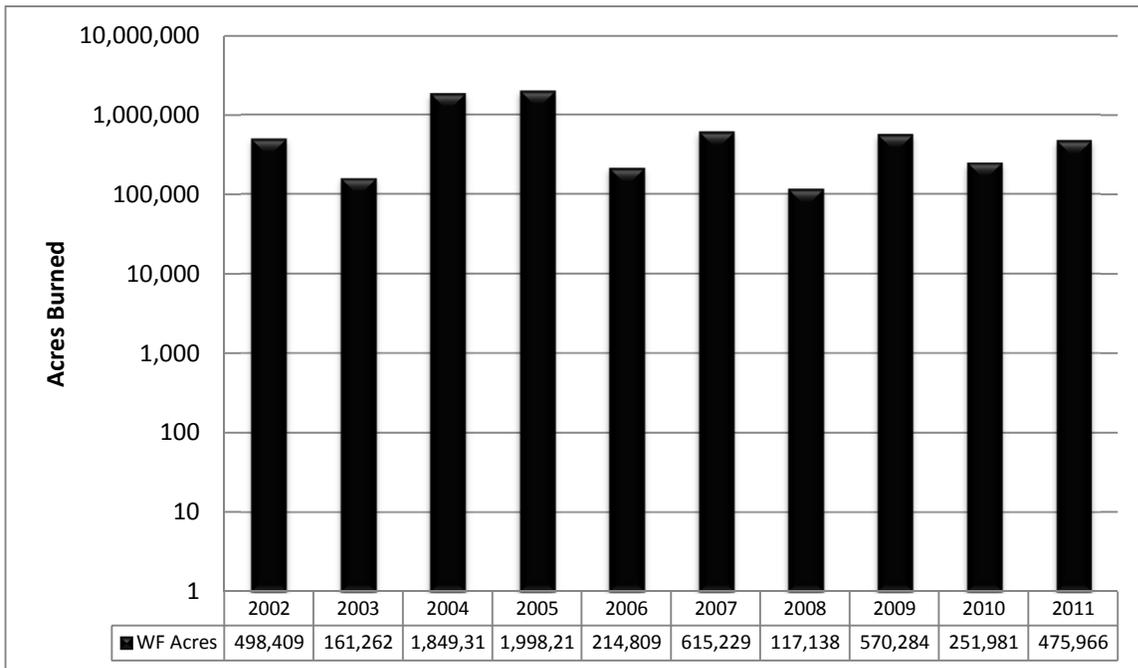
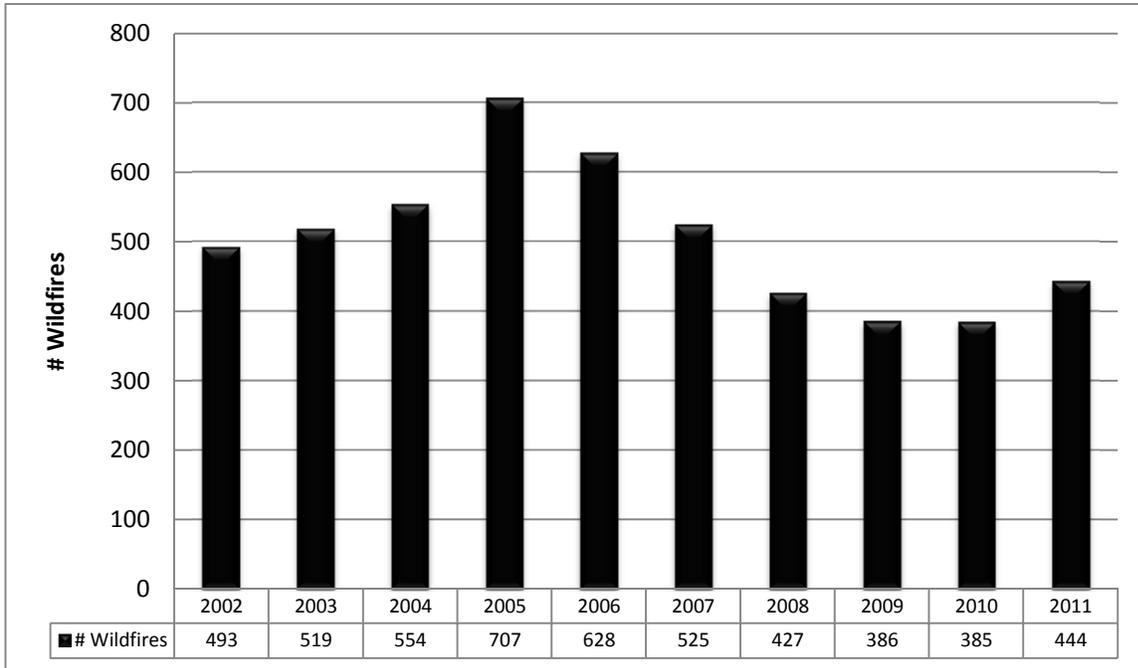
### Acres Treated



WUI = Wildland Urban Interface

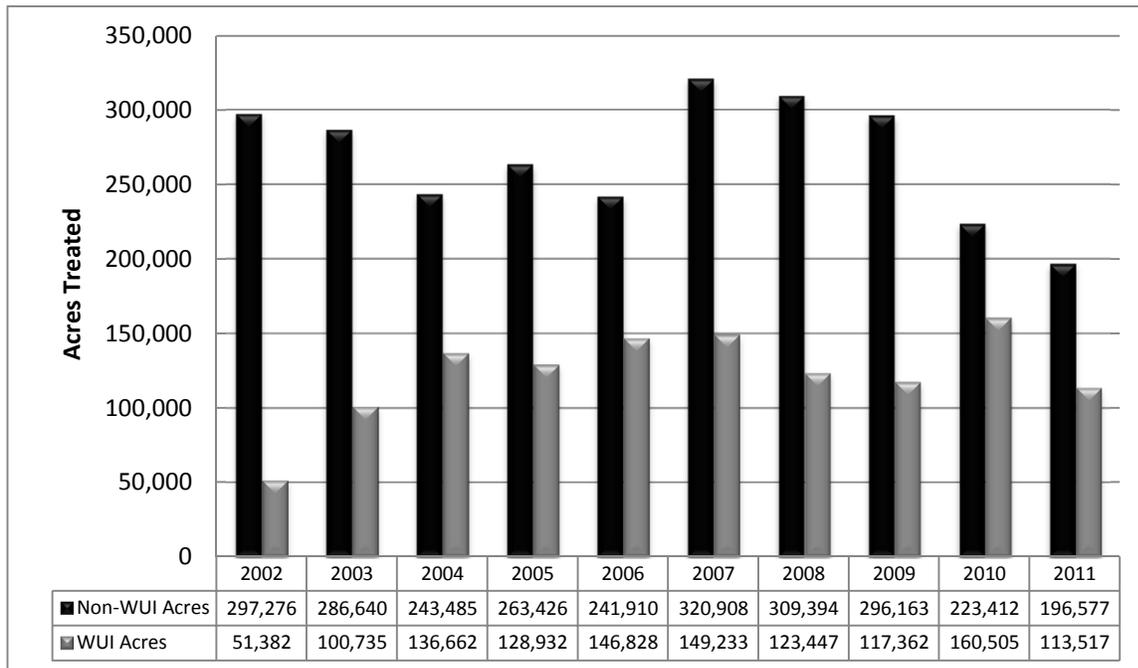
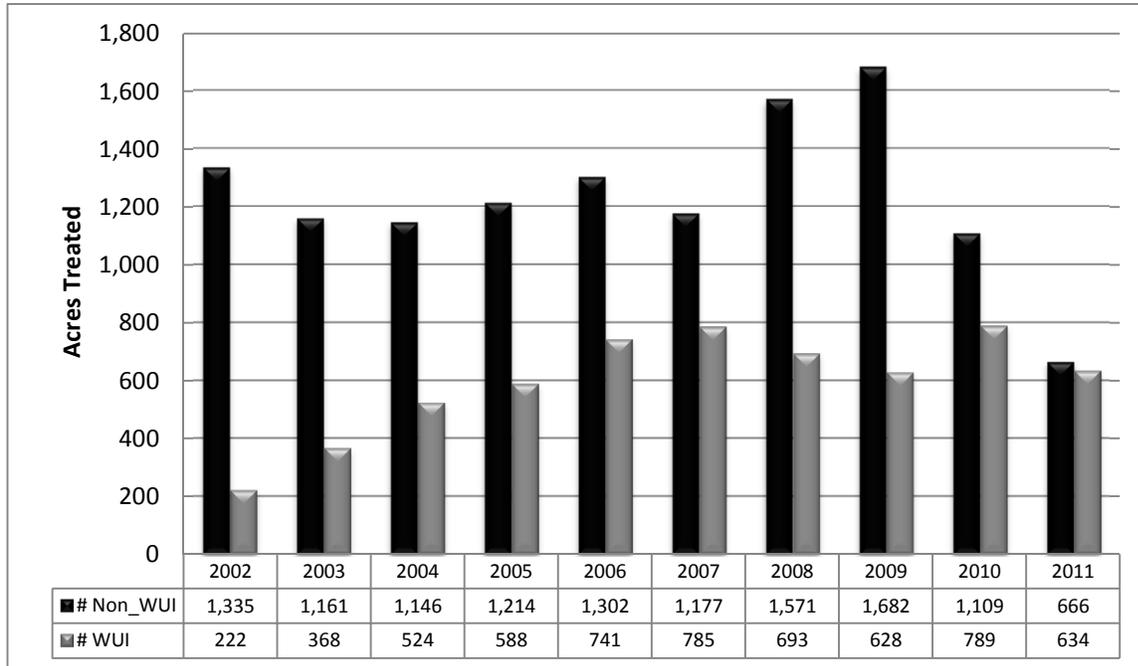
# WILDFIRES

## 2002 - 2011



# TREATMENTS

## 2002 - 2011



WUI = Wildland Urban Interface