

# National Interagency Coordination Center

## Wildland Fire Summary and Statistics Annual Report 2016



Soberanes Fire, California



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# Identifier Legend

## Interagency Coordination Centers

**NICC** – National Interagency Coordination Center

**AK** - Alaska

**EA** - Eastern Area

Management

**GB** - Great Basin

**NO** - Northern California

**NR** - Northern Rockies

**RM** - Rocky Mountain

**SA** - Southern Area

**SO** - Southern California

**SW** - Southwest

**CIFFC** - Canadian Interagency Forest  
Fire Centre

**FCK** - National Interagency Radio  
Support Cache

## Government Agencies

**Department of the Interior:**

**BIA** - Bureau of Indian Affairs

**BLM** - Bureau of Land

**FWS** - Fish & Wildlife Service

**NPS** - National Park Service

**NW** - Northwest

**Department of Agriculture:**

**FS** – USDA Forest Service

**Department of Defense: DOD**

**Department of Homeland Sec.**

**FEMA** - Federal Emergency  
Management Agency

**ESF #4** – Emergency Support  
Function 4, Firefighting

**Department of Commerce:**

**WXW** - National Weather Service

**Department of Energy: DOE**

**ST** – State

**ST/OT** – State and Other  
combined

**OT** – Other

**PRI** – Private

**CNTY** – County

**CN** – Canada

**AU** – Australia

**NZ** – New Zealand

# Preface

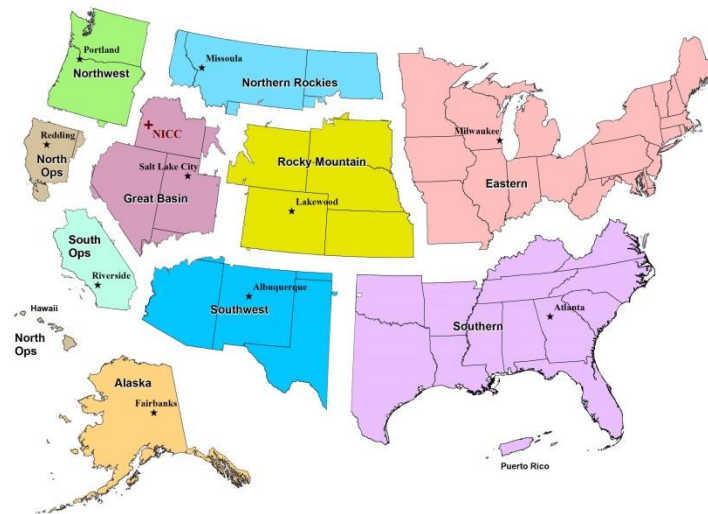
Statistics used in this report were gathered from the interagency Fire and Aviation Management Web Applications (FAMWEB) system, which includes the Situation Report and Incident Status Summary (ICS-209) programs. Previous National Interagency Coordination Center (NICC) annual reports and other sources were also used in this document. The statistics presented here are intended to provide a national perspective of annual fire activity, but may not reflect official figures for a specific agency. The statistics are delineated by agency and Geographic Area. Pie chart figures are rounded to the nearest whole percentage point. This document is available electronically at the National Interagency Coordination Center web page: <https://www.predictiveservices.nifc.gov/intelligence/intelligence.htm>.

**\* Five and ten year averages no longer include the current year data in the average. Therefore, in this report those averages will remain the same as the 2015 annual report.**

For agency-specific details or official data contact the individual agency.

Resource mobilization statistics used in this report were gathered from the interagency Resource Ordering and Status System (ROSS), which tracks tactical, logistical, service and support resources mobilized by the national incident dispatch coordination system. Statistics presented in this report are the resources requested by one of the ten Geographic Area Coordination Centers and processed through NICC. Requests by FEMA are placed to NICC through Emergency Support Function (ESF) #4 (Firefighting). The resource ordering process and procedures may be found in the National Mobilization Guide. The National Mobilization Guide can be found on the NICC web site (<https://www.nifc.gov/news/nicc.html>) under reference materials.

## Geographic Area Coordination Centers



# **National Interagency Coordination Center**

## **2016 Fire Summary**

### **Winter (December 2015 – February 2016)**

The winter months were generally warmer-than-normal across the U.S. except for normal to slightly below normal conditions in the Great Basin and Southwest where closed low systems brought periods of precipitation. The northern Plains to New England were quite warm—as much as 6 to 15 degrees above normal. Overall, it was the warmest winter on record across the contiguous states with six Northeast states recording their warmest winters in 121 years. Alaska had its second warmest winter on record since 1925.

Precipitation was above normal in several regions east of the Rockies. The Upper Midwest and central Plains had over 200 percent of normal precipitation with Iowa recording its wettest winter in 121 year. The Southeast and Mid-Atlantic regions were also 130 to 200 percent of normal precipitation from Alabama to Virginia. Much of the Pacific Northwest, northern California, and parts of the Great Basin received above normal precipitation, much as rain instead of typical snow. The Southwest and South Central state were dry with less than 70 percent of normal precipitation falling from southern California to Texas. Severe to exceptional drought conditions continued to worsen across much of California, Nevada and southern Oregon.

Fuel conditions were sufficiently moist through the early part of the year to mitigate the majority of significant fire activity.

### **Spring (March – May)**

The spring continued a very warm trend across most of the nation with only near normal to slightly below normal temperatures in the Interior West and the Southwest. Above normal temperatures stretched from the Pacific Northwest to the northern Plains and the Upper Midwest with readings 2 to 6 degrees above normal in general. Alaska had its warmest spring on record. All 50 states recorded above normal temperatures.

Precipitation was above normal across much of the western and central U.S. while much of the eastern third of the nation was dry. Texas had several heavy rain events that caused extensive flooding in the central and coastal parts of the state. Tropical Storm Bonnie made landfall on the central South Carolina coast, producing up to 10 inches of rain and severe flooding. Heavy snow in the northern Rockies kept snowpack at or above normal into the late spring. Some precipitation managed to get into southern California and the Southwest, slowing the spread of drought slightly.

Fuel conditions continued to be generally moist through the early part of the year to mitigate the majority of significant fire activity. Exceptions to this occurred in the

southern plains where occasional dry and windy events lead to some unusual significant fire activity, and in the southern Appalachian mountains where long term dryness, which would come into play again later, led to a short term outbreak of significant fires. Excepting these two isolated circumstances the remainder of the fire activity in the U.S. trended well below normal.

### **Summer (June – August)**

Very warm trends continued into the summer for much of nation, especially the Southwestern states and east of the Mississippi. In the West, California had its warmest summer on record while in the East most states were in the top 10 warmest with Connecticut recording its warmest. Alaska had its second warmest summer on record.

Very wet conditions develop along the Mississippi basin to the Upper Midwest. Texas continued to experience above normal rains as well. The West was very dry with less than 50 percent of normal precipitation over most of the region. Dry conditions began to develop in the Southeast where less than 70 percent of normal rainfall occurred across Alabama, Georgia, South Carolina, North Carolina, and Tennessee. Florida's east coast was also dry while the west coast was wet. Drought conditions worsened in the West where severe to exceptional drought continued across much of California, Nevada, and Oregon. Severe or worse drought developed in Wyoming and South Dakota; Alabama, Georgia, South Carolina, and Tennessee; and over parts of New England.

Though conditions were present to support significant fire activity throughout the summer fire season, for the most part these conditions fell well within the normal range and fire activity was generally normal. The primary exception to this was in Southern California where long term drought led to significant tree mortality; however, ignitions in this area did not occur at a sufficient pace to lead to exceptional activity. Generally, what would be considered normal fuel conditions and normal levels of fire activity were experienced throughout the U.S. during the typical summer fire season.

### **Autumn (September – December)**

Extreme heat took hold across much of the nation in the fall as most of the lower 48 had record or near record autumn (September-November) temperatures. Seven states (Texas, New Mexico, Colorado, Kansas, Iowa, Wisconsin, and Michigan) had the warmest autumns on record. Most of the rest east of the Rockies were in their respective top five warmest on record. Conditions were cooler on the West Coast but still much warmer-than-normal.

Early snow and heavy rain in the northwestern quarter helped keep temperatures down in the region but also brought near-record precipitation for the season. Several across the northwest received over 200 percent of normal precipitation. Oregon recorded its wettest autumn. Drought continued in the western U.S. although late autumn precipitation reduced its areal coverage and severity. Only southern California and western Nevada had severe or worse drought. In the central U.S. conditions were also

improving by the end of autumn. In the Southeast, however, conditions had worsened with severe to exceptional drought now covering much of Alabama, Georgia, western South Carolina, western North Carolina, and eastern Tennessee. Parts of coastal New England were also in severe or worse drought.

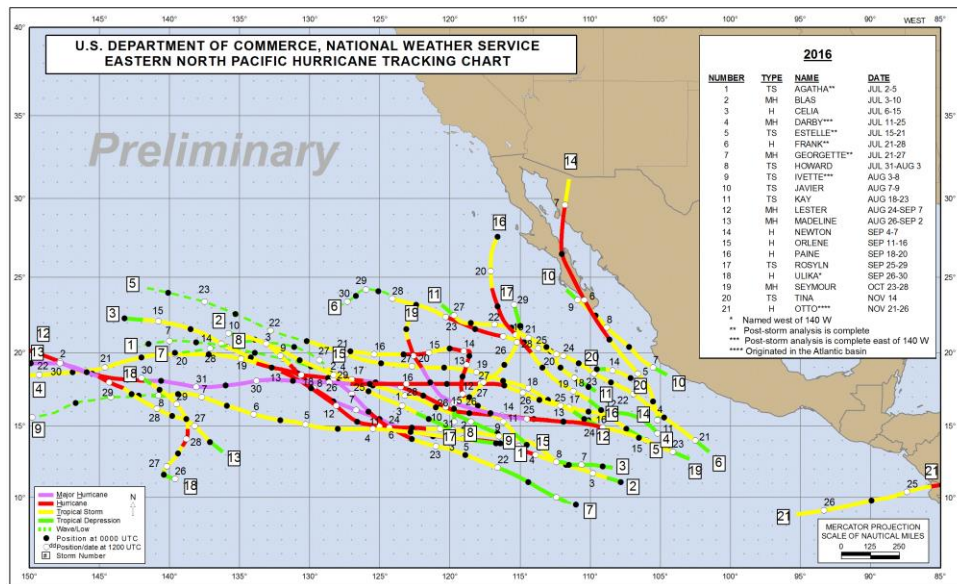
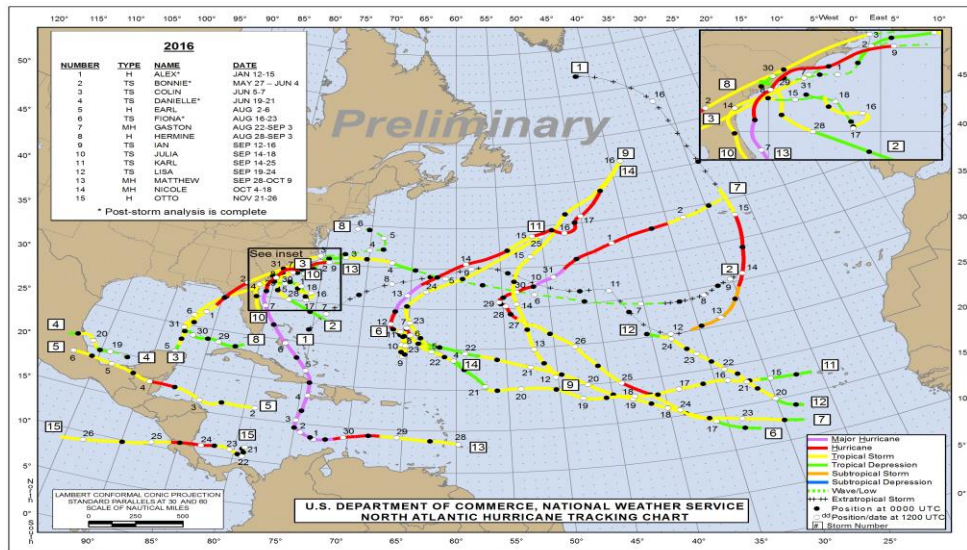
By December, heavy precipitation across the Southeast greatly reduced the drought conditions with only severe to extreme drought observed in a narrow band from central Alabama to the western tip of North Carolina. In the West and the Northeast, conditions changed little through December.

An unusually robust southern fire season occurred as the confluence of significant long term drought and seasonal leaf drop provided a heavy and dry fuel bed in which ignitions occurred and spread rapidly. This unusual condition led to a significant increase in fire activity and a well above normal fall fire season across the southern Appalachia region.

# Hurricane and Other Non-Fire Incident Support

The 2016 Atlantic Hurricane season ended with 15 named storms, seven of which became hurricanes and three major hurricanes. Both named storms and hurricanes were above the long-term averages (12 and 6). Three tropical storms (Bonnie, Colin, Julia) and two hurricanes (Hermine, Matthew) made landfall in the U.S.

In the Eastern Pacific, there were 21 named storms with 11 hurricanes, well above average. Of those, five were major hurricanes. There were all above the long-term averages of 16, 8 and 4, respectively.



Preliminary hurricane storm tracks for the 2016 Atlantic Hurricane Season (top) and the 2016 Eastern Pacific Hurricane Season (bottom). From NOAA National Hurricane Center (<http://www.nhc.noaa.gov/>)



## National Fire Activity Synopsis

The 2016 fire season was below normal for number of reported wildfires (92 percent of the 10-year annual average). There were 67,743 wildfires reported nationally (compared to 68,151 wildfires reported in 2015). The number of acres burned was also below normal in 2016 with 5,509,995 acres or 79 percent of the national 10-year average. The Southern Area led the nation with nearly 1.6 million acres burned (109 percent of its 10-year average).

Based on an annual 10-year average, Alaska (114%) and Southwest (108%) reported above average fire occurrences in 2016. Rocky Mountain (98%) and Eastern (97%) experienced near average fire occurrence, while Southern (94%), Northern Rockies (92%), Southern California (90%), Northern California (82%), Great Basin (75%), and Northwest (71%) all experienced below average fire occurrences.

Rocky Mountain (193%), Southern California (153%) and Southern Area (109%) were the only Geographic Areas to experience above average acres burned. All other Geographic Areas were below their annual average acres. Nineteen fires exceeded 40,000 acres in 2016; thirty-three less than in 2015 (see Significant Fire Activity below for a list of those fires).

A total of 4,312 structures were destroyed by wildfires in 2016, including 3,192 residences, 1,025 minor structures, 78 commercial structures and 17 mixed commercial/residential structures. This is above the annual average of 1,449 residences, 1,248 minor structures, and 53 commercial structures destroyed by wildfire with this year ranking 5<sup>th</sup> in total structures lost (data from 1999 to present). Tennessee accounted for the highest number of structures lost in one state in 2016: 2,121 residences, 53 commercial structures, and 1 minor structure. California was second with 754 residences, 12 commercial structures, 1 mixed residential/commercial structure and 429 minor structures.

Requests for firefighting resources placed to the National Interagency Coordination Center during the 2016 fire season were right at or lower than the 10-year average in most categories. Filled requests for crews, type 1 and type 2 helicopters and heavy air tankers exceeded their respective 10-year averages.

National Type 1 teams were mobilized 31 times (down from 39 in 2015), and spent 439 days on assignments (down from 571 days in 2015). All 16 national teams had between one and three assignments each. Type 2 Teams were mobilized 92 times (down from 121 in 2015), for a total of 1,046 days assigned to incidents (down from 1,537 days in 2015). (Figures include both national and state teams.) Area Command teams were not mobilized in 2016. National Incident Management Organizations (NIMO) mobilized 7 times in 2016 to both wildland fire and non-fire incidents.

## **Military and International Resource Mobilizations**

**Military:** On August 4, two MAFFS units were activated through a Request for Assistance (RFA) to the Department of Defense. This request was filled with one MAFFS from the 153<sup>rd</sup> Airlift Wing and one MAFFS from the 302<sup>nd</sup> Airlift Wing were positioned at Boise, ID in support wildland fire operations. On August 19 one additional MAFFS from the 153<sup>rd</sup> Airlift Wing was positioned at Boise, ID. On August 17 one MAFFS from the 153<sup>rd</sup> Airlift Wing was released back to the DOD. On September 4 the remaining two MAFFS each from the 302<sup>nd</sup> and 153<sup>rd</sup> Airlift Wing were released back to the DOD.

MAFFS units primarily provided retardant delivery primarily to the Great Basin and Northwest Geographic Areas while employed from August 4 through September 12. These units delivered a total of 395,632 gallons of retardant while conducting 165 sorties. This is down from 2015 when 372 sorties were flown delivering 842,983 gallons of retardant.

**International:** Through the NIFC-CIFFC Agreement the U.S. provided two heavy air tankers and two lead planes to Ontario, Canada for one day. On May 20 the U.S. mobilized 10 crews and two overhead personnel to Alberta. These resources were released back to the U.S. on June 4.

Through the NIFC-CIFFC Agreement Canada provided two air tanker groups to the U.S. On August 4 British Columbia provided two air tankers and one bird dog. On August 26<sup>th</sup> Alberta provided two air tankers and one bird dog to the U.S. On September 3 the U.S. released two air tankers and one bird dog back to British Columbia. On September 9 the U.S. released two air tankers and one bird dog back to Alberta.

# Significant Wildland Fires

## Fires and Complexes Over 40,000 Acres in 2016

Name	GACC	State	Start Date	Contain or Last Report Date	Size (Acres)	Cause	Estimated Cost
Anderson Creek	SA	OK	3/23	4/4	367,740	U	\$1,750,000
Pioneer	GB	ID	7/18	10/27	188,404	U	\$90,000,000
Range 12	NW	WA	7/30	8/8	176,600	U	\$1,700,000
Soberanes	SO	CA	7/22	10/23	132,127	H	\$262,500,000
Hot Pot	GB	NV	7/2	7/10	122,292	U	\$3,402,259
Alatna Complex	AK	AK	6/28	7/24	113,157	L	\$1,040,018
Virginia Mountains Complex	GB	NV	7/29	8/6	59,727	L	\$8,000,200
Dulbi Flats	AK	AK	6/26	8/26	58,138	L	NR
350 Complex	SA	OK	5/5	5/15	57,167	U	\$900,000
Henrys Creek	GB	ID	8/21	8/31	52,972	U	\$4,320,000
Erskine	SO	CA	6/23	7/7	48,019	U	\$23,000,000
Chimney	SO	CA	8/13	9/5	46,344	U	\$78,300,000
Cedar	SW	AZ	6/15	7/28	45,977	U	\$14,000,000
Maple	RM	WY	8/8	10/27	45,516	L	\$6,267,928
Crutch Complex	SA	TX	3/24	3/24	44,696	U	NR
Big Mud	AK	AK	6/1	6/19	42,641	L	\$59,268
North	SW	NM	5/21	7/14	42,102	L	\$4,800,000
Rail	NW	OR	7/31	9/29	41,706	U	\$34,900,000
Cottonwood CA	RM	SD	10/16	10/18	41,360	U	\$170,000

L – Lightning    H – Human    U – Undetermined or Under Investigation    NR – Not Reported

Information in the above table was derived from ICS-209 reports submitted in the Fire and Aviation Management Web Applications system (FAMWEB). Information shown may not reflect final official figures.

# Significant Fire Activity

There were 1,251 large or significant wildfires reported in 2016 (derived from ICS-209 reports submitted through FAMWEB). Significant wildfires represented about 1.8 percent of total wildfires reported nationally in 2016. The maps below depict the locations of these fires.

