


Pacific Northwest Fire and Aviation Management

2019 WILDLAND FIRE SEASON



**A cooperative effort between the Forest Service, U.S. Department of Agriculture
and the Bureau of Land Management, U.S. Department of the Interior**



The 204 Cow Fire, ignited by lightning in August 2019 on the Malheur National Forest, was managed to reduce fuel build-up and restore forest health in an area dominated by beetle-killed trees that had not seen fire in 30 years. Photo Credit: Michael Haas

Cover: The lightning-caused Granite Gulch Fire, which started in July 2019, burned in a remote part of the Eagle Cap Wilderness within the Wallowa-Whitman National Forest and was successfully managed to restore ecosystem resiliency. USFS Photo

A Season of Extremes: Opportunities in Oregon and Washington, Challenges in Alaska

The 2019 fire season was short and inexpensive compared to past years in Oregon and Washington. Resources were on board and ready for an active fire year. Yet, the level of fire activity and resource commitment remained well below what has been experienced in recent years. Recurrent precipitation kept most of the geographic area at or below average levels of fuels dryness. The fuel moisture retention helped minimize severe wildfire activity and enabled firefighters to quickly contain hundreds of fires during initial attack.

In Alaska, the situation was very different. Fire conditions warranted the highest preparedness level for an extended period of time. Resources from Oregon and Washington were sent to assist with a long and challenging season.

While Alaska focused on wildfire suppression, Oregon and Washington seized opportunities to promote resilient landscapes through proactive fire management when conditions allowed.

This report showcases accomplishments, success stories, and lessons learned from the 2019 fire season. Thank you to the many partners, stakeholders, contractors, local fire/rescue departments, and neighbors who worked alongside us and helped in countless ways.

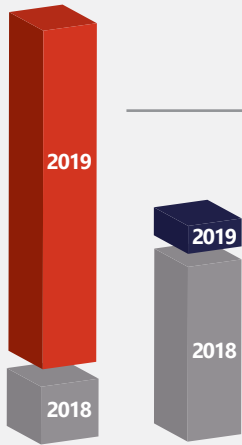
**“IT’S HOW WE WORK
BEFORE THE FIRE
STARTS THAT IS MOST
IMPERATIVE ON HOW WE
CHANGE OUR PARADIGM.”**

**Chief Vicki
Christiansen**

USDA
Forest
Service

SEASON OVERVIEW

INCIDENT MANAGEMENT TEAMS FROM THE NORTHWEST MOBILIZED **13 TIMES** TO INCIDENTS IN ALASKA, OREGON, AND WASHINGTON.



ALASKA

ACRES AFFECTED BY WILDFIRE TOTALED MORE THAN 628% OF ACRES BURNED IN 2018

OREGON & WASHINGTON

ACRES AFFECTED BY WILDFIRE TOTALED ABOUT 16% OF ACRES BURNED IN 2018

ALASKA

REPORTED FIRES
719

LARGE FIRES*
172

HUMAN CAUSED
351

LIGHTNING CAUSED
368

ESTIMATED FIREFIGHTING COSTS

\$224,000,000

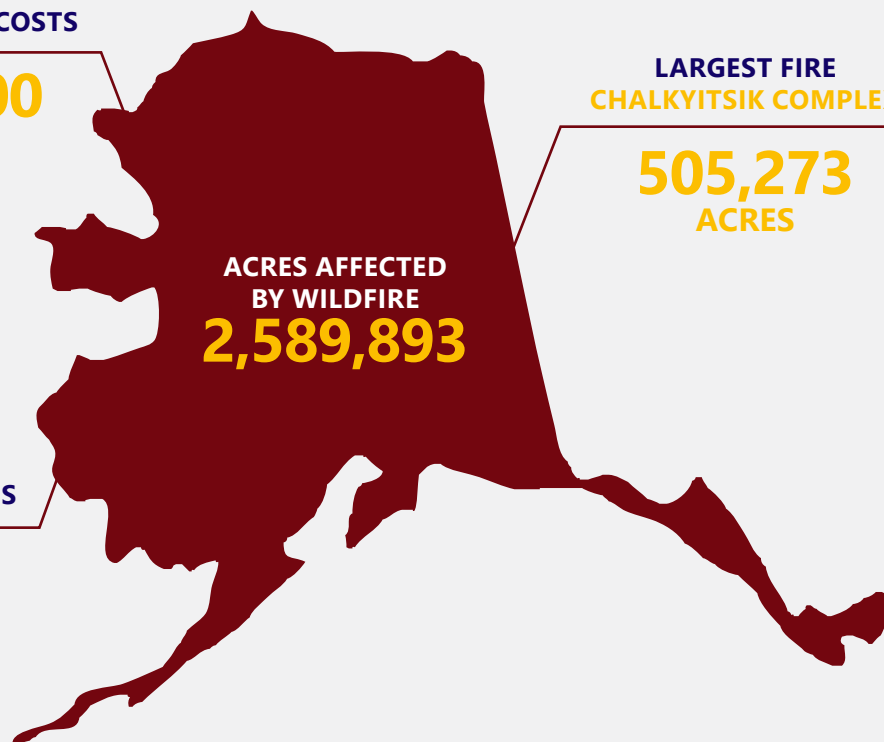
LARGEST FIRE
CHALKYITSIK COMPLEX

505,273
ACRES

ACRES AFFECTED
BY WILDFIRE
2,589,893

PRESCRIBED FIRE ACRES

15,204



*A large fire is considered a wildfire at least 100 acres in timber or 300 acres in grass or brush
Sources: Northwest Coordination Center (NWCC) and Alaska Interagency Coordination Center (AICC) as of 12/10/19

WASHINGTON

REPORTED FIRES
1,325

LARGE FIRES*
21

HUMAN CAUSED
1,008

LIGHTNING CAUSED
317

ESTIMATED FIREFIGHTING COSTS

\$39,011,775

LARGEST FIRE
WILLIAMS FLATS

44,446
ACRES

ACRES AFFECTED
BY WILDFIRE
146,271

PRESCRIBED FIRE ACRES

15,807

OREGON

REPORTED FIRES
2,272

LARGE FIRES*
26

HUMAN CAUSED
1,162

LIGHTNING CAUSED
1,110

ESTIMATED FIREFIGHTING COSTS

\$59,361,000

LARGEST FIRE
POKER FIRE

23,400
ACRES

ACRES AFFECTED
BY WILDFIRE
67,915

PRESCRIBED FIRE ACRES

84,485

FIRE MANAGEMENT

Strategic Approaches to Wildfire in Oregon And Washington

New science and evolving technology are helping fire managers better plan and prepare before wildfire occurs and make better decisions on the ground when wildfires start. Fire managers evaluate strategies to provide the highest probability of success with the lowest exposure to firefighters and values at risk. Risks, benefits, current conditions, and future impacts are weighed carefully.

GRANITE GULCH FIRE

The lightning-caused fire was reported July 28, 2019 in a remote part of the Eagle Cap Wilderness within the Wallowa-Whitman National Forest. Forest Service fire managers used the fire to restore ecosystem resiliency while actively managing to keep the wildfire within specific, pre-identified areas. The fire area totaled 5,555 acres.

HK COMPLEX

Fourteen fires were reported August 5, 2019 on the Heppner Ranger District of the Umatilla National Forest following a dry lightning event. The fires merged to become the HK Complex and burned into a project area where timber harvest and thinning treatments had occurred over the past decade. Upon reaching the treated area, the fire spread slowed and flames moderated. Burn severity analysis showed that 59% of the entire area burned at a low severity. Only one percent was considered to be a high-severity burn. Information gained from the 2,705-acre fire will help forest managers improve future prescriptions.

204 COW FIRE

Igniting in August 2019 after multiple lightning storms moved across the Prairie City Ranger District on the Malheur National Forest, this fire was burning in an area dominated by beetle-killed trees. Firefighters managed this fire strategically to improve forest health on 9,668 acres in remote high-elevation areas where wildfire had not occurred in about 30 years.

Notable Wildfire Activity in Alaska

SWAN LAKE FIRE

The Swan Lake Fire was one of the most expensive fires of the summer, costing about \$46 million. Lightning ignited the fire on June 5, 2019, in a remote area of the Kenai National Wildlife Refuge Wilderness. Hot, dry conditions promoted rapid fire growth, with the fire growing to over 167,000 acres, impacting air quality and travel routes. Firefighters continued containment and suppression repair efforts into September.

MCKINLEY FIRE

The human-caused McKinley Fire started on August 17, 2019, between Anchorage and Fairbanks along the Parks Highway. Fire destroyed 52 primary residences, three commercial structures, and 84 outbuildings on the night of August 18. The fire was contained at 3,288 acres.

Mop-up operations on the HK Complex,
Umatilla National Forest, August 2019.
USFS Photo



*Fire personnel monitor the September 2019 Boundary Prescribed Fire on the Fremont-Winema National Forest.
USFS Photo*



PRESCRIBED FIRE

Minimal wildfire activity in Oregon and Washington, cooler temperatures, and intermittent precipitation allowed firefighters to conduct prescribed burns when conditions aligned to safely meet objectives.

Large-Scale Prescribed Burns Completed

BOUNDARY RX

As part of the Boundary fuels reduction project on the Chemult Ranger District of the Fremont-Winema National Forest, fire crews conducted an 8,990-acre prescribed burn in September. Seventy percent of the burn area had been mechanically treated and 45% of the area had been treated with fire in the last 11 years. The project joined what would have been 15 individual projects into one contiguous burn block. Benefits include increased firefighter safety, reduced smoke impacts to communities, and provision of a critical fire break to neighboring Crater Lake National Park.

CANYON 66 RX

The Ochoco National Forest completed a 5,072-acre prescribed burn on the Lookout Mountain Ranger District in September. This treatment was included in the larger Canyon Fuels and Vegetation Management Environmental Impact Statement that analyzed over 31,000 project acres. The burn reduced project costs and potential long-term smoke impacts to adjacent communities by combining several planned small burns into one large project.

Expanding Prescribed Burns on a Landscape Scale

COYOTE CREEK RX

Working together across boundaries, The Nature Conservancy and Forest Service teamed up on the Coyote Creek Prescribed Fire in early October 2019. Firefighters from Sycan Marsh and the Silver Lake Ranger District on the Fremont-Winema National Forest completed the 1,500-acre prescribed fire near Klamath Falls, Oregon, which included about 420 acres of Nature Conservancy lands. Control lines were strategically located for effectiveness and units were grouped into fuel types regardless of ownership. Interagency collaboration helped achieve common goals to safely reduce the dense fuels to a historic fire-adapted ecosystem and reduce the risk of future wildfires.



FIRE TECHNOLOGY

DETECTION CAMERAS

The Bureau of Land Management in Oregon, Washington, and Idaho have an assistance agreement with ALERTWildfire through the University of Nevada Reno and the University of Oregon for installation and access to fire detection cameras on the landscape. While the program is still in the early stages with only a few cameras installed, at least three fires were spotted this year and three others confirmed using the technology. Early detection saves time in dispatching the appropriate resources and helping to ensure an effective fire response. Four fire detection cameras are located in Oregon and two in Washington, with more planned in the coming years.



SCAN EAGLE UNMANNED AIRCRAFT SYSTEM

The Pacific Northwest has been a leader the past two years in deploying unmanned aircraft systems (UAS) in support of firefighting efforts. In late July, the Milepost 97 Fire used a Type I long duration Scan Eagle UAS for monitoring and mapping missions as well as an aerial ignition drone to support burn out operations. Several UAS modules stayed in the geographic area for multiple assignments utilizing the aerial ignition capabilities as well as infrared imagery for fire detections and mapping.

JUMP 61 AIRPLANE

The Jump 61 aircraft came online for the Forest Service in the spring of 2019 to transport smokejumpers. The first mission in the Pacific Northwest was a dispatch to a 40-acre fire reported south of Burns in the Steens Mountains area. Eight smokejumpers and their 902 pounds of paracargo were delivered to the heel of the fire. Smokejumpers were on the scene in less than 40 minutes – a significant improvement in the speed, range, and performance of the previous model.

EXCLUSIVE-USE HELICOPTER

One of the many resources sent from the Pacific Northwest to support fire in Alaska was the Wenatchee exclusive-use helicopter. The aircraft is equipped to provide medical support and emergency extraction of injured firefighters through “short haul” capability. In addition to initial attack, the crew maintains qualifications and skills to rapidly stand up and staff large helibase operations. All of these capabilities are essential to operations in remote areas.



NATIONAL INFRARED OPERATIONS

Under the umbrella of a National Infrared Operations (NIROPS) contract, the Pacific Northwest Region explored capabilities to scan large areas for small ignition sources. No new wildfires were identified but a camp fire was detected. As this work was being conducted, new fires started and the capability was applied to daytime mapping of large fires before shifting into the traditional NIROPS nighttime flight mapping. New sensors are now better understood and new knowledge will be applied to automating fire mapping and ordering procedures.



Use of an unmanned aircraft systems in support of the September 2019 Boundary Fuels Reduction Project on the Fremont-Winema National Forest. USFS Photo

SAFETY AND RISK

In Oregon and Washington, a short season led to less exposure. In contrast, firefighters in Alaska faced more exposure over the course of a long, demanding season. Although firefighters are trained to adapt to changing conditions, mental challenges can sometimes be more taxing than the physical challenges. While this element of situational awareness in self and others remains complex, recognition of mental challenges associated with incident response is growing.



Lessons Learned

Multiple learning products were developed this year to include Rapid Lessons Sharing, Facilitated Learning Analysis, and Lessons Learned Reviews. Opportunities for organizational learning included environmental hazards such as the seasonality of bee aggression, as well as operational hazards such as falling objects, hot ash pits, and risks amplified by night operations that were deemed necessary for public health and safety.

Fire Related Injuries

Safety reports can be searched for at the Wildland Fire Lessons Learned Center, <https://www.wildfirelessons.net/irdb>

OREGON

West Canal RX Engine Burn Damage
Home Creek Fire Insect Bite
Milepost 97 Fire- Object Strikes
Crewmember
East Evans Creek Tree Strike
Cow Fire Hit by Tree Medevac
Canyon 66 Rollover
Western Oregon Bucking Incident

WASHINGTON

Left Hand Fire Tree Strike
Okanogan Fire Department Fatality
Williams Flat Fire Vehicle Accident

ALASKA

Swan Lake Fire IHC Crewmember
Bee Sting
Chandalar River Fire #349 Hit By Tree
Swan Lake Fire Bee Sting
Chetaslina Fire Vehicle Accident
Swan Lake Fire Hit By Tree
Southcentral Alaska Ash Pit Burn
Injuries
Swan Lake Fire Ash Pit Burn Injuries

Workers' Compensation Programs

Promoting safety means building a safer organization, continually working to reduce injuries, and supporting firefighters who are injured. Under the Office of Workers' Compensation Programs (OWCP), claim denials have resulted in lengthy appeals processes and direct medical billing to injured firefighters. Options are being explored on the national level to improve these processes for accepting and facilitating valid OWCP claims to ensure injured firefighters receive the medical care they need and deserve.



Suicide in the Firefighting Community

This season, suicide and suicide intervention touched the lives of many in the wildland fire community.

Critical Incident Stress Management responses related to suicide and suicide attempts outnumbered responses to fire related serious accidents.

Firefighters face intense physical and psychological demands and confront a variety of unique stressors inherent to their occupation. Often, the culture of wildland firefighters inhibits a member from asking for help. Thankfully, first responders are now taking a more accepting view towards mental health by reducing the stigma, building understanding, and raising awareness of work-related stressors and their impact on mental health, although we recognize further strides must be made. If you or someone you know is experiencing suicidal thoughts, reach out for help. You are not alone.

RESOURCES

If you're thinking about suicide, are worried about a friend or loved one, or would like emotional support, resources are available.

NATIONAL SUICIDE PREVENTION LIFELINE

1-800-273-8255

<https://suicidepreventionlifeline.org>

24/7, free and confidential support for people in distress, prevention, and crisis resources. They also offer a web chat.

SAFE CALL NOW

1-206-459-3020

A 24/7 help line staffed by professionals who are familiar with the culture of wildland firefighting. They can assist with treatment options for mental health, substance abuse, and other personal issues.

FIRE/EMS HELPLINE

1-888-731-3473

A program run by the National Volunteer Fire Council. Help line, text-based help service, and resources for people looking for help and support.

CRISIS TEXT LINE

Text "Start" or "Help" to 741-741

A service that allows people in crisis to speak with a trained crisis counselor via text message.

WILDLAND FIREFIGHTER FOUNDATION: <https://wffoundation.org>

CODE GREEN CAMPAIGN: <https://codegreencampaign.org>

FIREFIGHTER BEHAVIORAL HEALTH ALLIANCE: www.ffbha.org

EMPLOYEE ASSISTANCE PROGRAM (EAP)

1-800-869-0276 or <https://espyr.com/>, password = eapr6

A voluntary, confidential program providing services including assessments, counseling, and referrals. Even seasonal workers can request services—as long as it is before their employment ends. The EAP will pay for six sessions and will provide other services as necessary.

CRITICAL INCIDENT STRESS MANAGEMENT

<http://gacc.nifc.gov/cism>

Peer Support Group and other professional crisis intervention support.

FIRE RECOVERY

Burned Area Emergency Response

The summer of the 2019 fire season culminated in three burned area emergency response (BAER) assessments resulting in funding needs: the Left Hand Fire, Okanogan-Wenatchee National Forest; 163 HK Complex, Umatilla National Forest; and the 204 Cow Fire, Malheur National Forest. Soil burn severity percentages across these three fires show an average of 3% high severity, 15% moderate severity, 55% low severity, and 27% unburned. Treatments include hazard warning road/trail sign installation, road/trail drainage storm proofing, installation of water bars and rolling dips, paved road culvert relief pipe installation, water source protection, burned area cultural resource protection monitoring, and noxious weed treatments. The mild fire season also provided an opportunity to provide burned area emergency response training to on-forest resource specialists under less pressure than recent busy fire years.

Lookouts watch for falling snags and other potential hazards while a burned area emergency response team soil scientist inspects soil burn severity on the 204 Cow Fire, Malheur National Forest. USFS Photo



COOPERATION

Western Oregon Operating Plan

On May 14, 2019, the Bureau of Land Management (BLM), Oregon Department of Forestry (ODF), Coos Forest Protective Association, and Douglas Forest Protective Association signed a new five-year operating plan. This new operating plan addresses wildfire protection on BLM-administered lands in western Oregon involving cooperation, interagency working relationships and protocols, financial arrangements, sharing of resources, and joint activities/projects. The new operating plan helped facilitate successful interagency coordination, including the two success stories below.

MILEPOST 97 FIRE

The human-caused wildfire was reported on July 24, 2019 one mile south of Canyonville, Oregon. The fire was burning adjacent to Interstate 5, in an old fire scar from 1987, in steep, rocky terrain with limited access. Due to the difficult terrain, values at risk, and rapid rate of spread, the BLM and Douglas Forest Protective Association made a joint decision to order the Oregon Department of Forestry Incident Management Team #3 to manage this fire. The new Western Oregon Operating Plan provided the framework for the BLM and Douglas Forest Protective Association to work together jointly, establishing mutual incident objectives and share the financial cost through a cost share agreement. The final fire size was 13,119 acres.

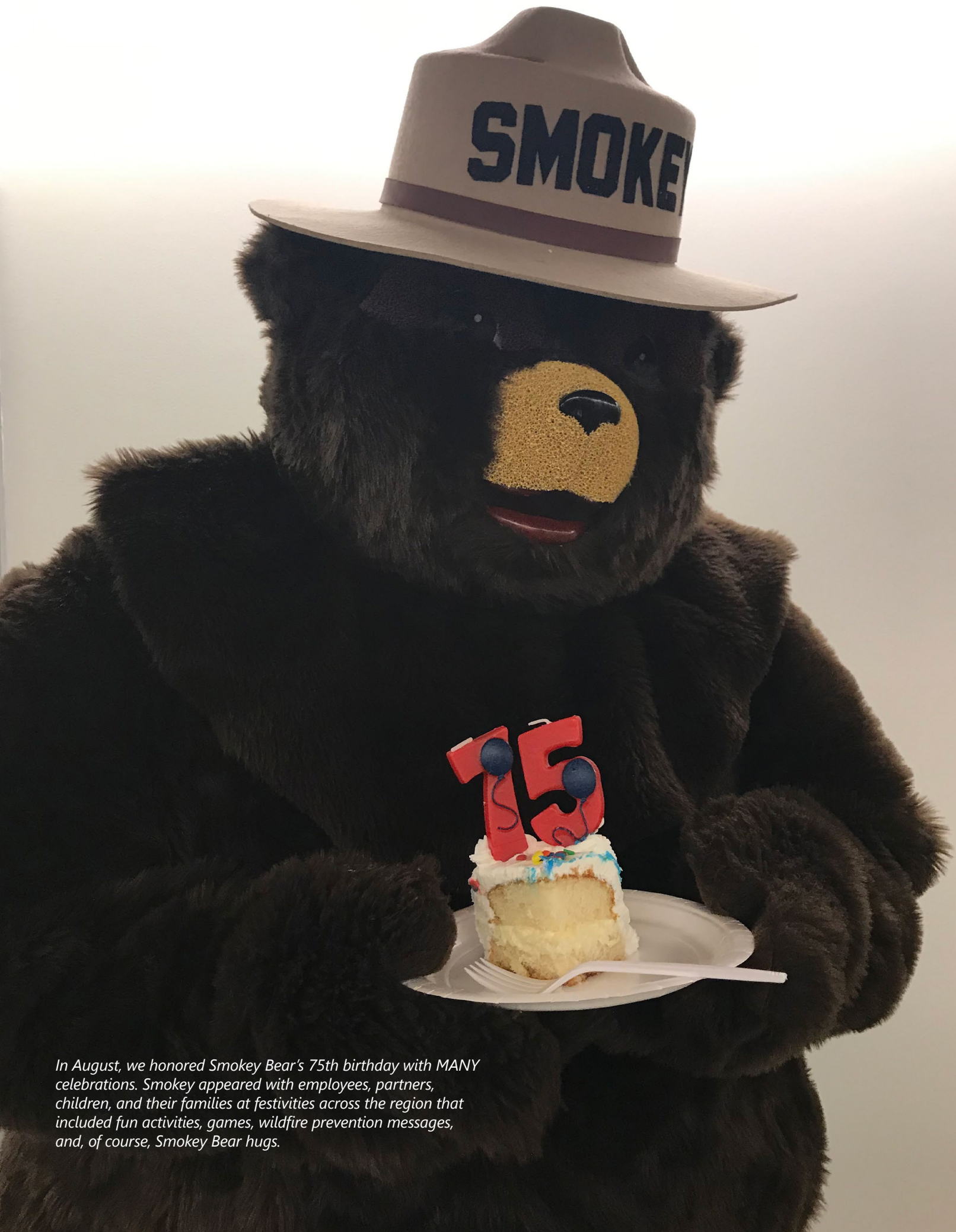
WARD FIRE

The Ward Fire started early August 9, 2019 on BLM lands approximately 21 miles southwest of Klamath Falls, Oregon, when a lightning storm came through the area. The fire instantly started running and spotting, aided by topography and winds. Initial attack crews responded from both ODF and BLM. Based on the observed fire behavior, a joint decision was made between BLM and ODF to order the Oregon Department of Forestry Incident Management Team #2 to manage this fire. The Western Oregon Operating Plan provided the framework for the BLM and ODF to work together and, by request of ODF, for BLM to be the paying agency. The final fire size was 1,301 acres.

Rural Fire Readiness Program

The Bureau of Land Management implemented a new program to transfer excess vehicles, equipment, and supplies to local fire departments and rangeland fire protection associations (RFPAs.) The RFPAs are private, non-profit organizations established to help prevent and suppress fires on “unprotected” lands, a term assigned to lands located outside of a fire protection jurisdiction. RFPAs represent a collaborative “neighbors helping neighbors” effort among private landowners, BLM, and the Oregon Department of Forestry. Under the program, local wildland firefighting cooperators that meet certain requirements may receive wildland fire engines and other equipment the BLM no longer needs free of charge. This year, the BLM transferred three engines stocked with tools and supplies to local fire departments and RFPAs. Recipients included the Fields-Andrews Rangeland Fire Protection Association in Harney County, the Nyssa Rural Volunteer Fire Department, and the Vale Fire and Ambulance Department.





In August, we honored Smokey Bear's 75th birthday with MANY celebrations. Smokey appeared with employees, partners, children, and their families at festivities across the region that included fun activities, games, wildfire prevention messages, and, of course, Smokey Bear hugs.