INTERIOR/**WILDLAND FIRE**

U.S. DEPARTMENT OF THE INTERIOR/OFFICE OF WILDLAND FIRE

Annual Report

FISCAL YEAR **2021**

A National Park Service employee with South Florida Fire and Aviation monitors a prescribed fire.

PHOTO BY M. GUE, NPS

Modernizing the wildland firefighting workforce

To meet our new norm of larger, more extreme wildfires, the Interior Department is modernizing its wildland fire workforce so that it is equitably compensated, available year-round, and cared for both physically and mentally. More in Workforce (page 18).

PHOTO BY B. MORK, NPS

Managing habitat with fire

Prescribed fire used by Ozark National Scenic Riverways and Pioneer Forest in Missiouri resulted in the largest population of rare wildflowers, an increase of more than 500 percent. These flowers are essential for declining butterfly and bird species. Helping declining species recover before they become endangered enriches our world. More in Fuel Management (page 8).

PHOTO BY A. SOKOLOWSKI, NPS

Reducing wildfire risk in the wildland urban interface

The strategic application of prescribed fire and vegetation reduction is helping build resilient landscapes and communities, particularly in the wildland urban interface, which is continuing to expand. In the Darling National Wildlife Refuge in Florida, the U.S. Fish and Wildlife Service uses prescribed fire to help protect homes. More in Fuel Management (page 8).

PHOTO BY BRIAN PIPPIN, USFWS

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This report summarizes accomplishments and statistics for the federal fiscal year 2021, the period between October 1, 2020, and September 30, 2021.

About the Program

The Department of the Interior strives to safely and effectively respond to wildfires, promote fire-adapted communities, reduce wildfire risk, and create fire-resilient landscapes through active management of public lands. The Department's Wildland Fire Management Program includes the Office of Wildland Fire, Bureau of Indian Affairs, Bureau of Land Management, National Park Service, and U.S. Fish and Wildlife Service. It coordinates with other Interior bureaus and offices to carry out wildland fire management responsibilities. Our employees collaborate with federal, state, Tribal, nonprofit, and other partners to ensure a unified approach to wildland fire that transcends administrative boundaries while protecting people, property, and the public lands we all enjoy.

The National Park Service conducts a prescribed fire in the Great Smoky Mountains National Park to protect homes in the wildland urban interface.
PHOTO BY NPS.

Letter from the Director

As record-setting fire years propelled by climate change continue to impact the vast array of our public and Tribal lands, wildland fire personnel with the U.S. Department of the Interior face significant challenges. The number of acres burned by wildfires across the nation has doubled over the past 20 years. The wildland urban interface has grown dramatically, putting 7.8 million people at risk from wildfires. The once-in-a-generation investment through President Biden's Bipartisan Infrastructure Law will help address these challenges in future years.

The 2021 fire year continued the pattern of increased wildfire activity, more acres burned, and some wildfires that grew to an enormous size. Nearly 59,000 wildfires burned 7.1 million acres nationwide, including nearly 1 million acres of lands managed by the Department and Tribes. At the height of the fire year, every geographic area experienced large wildfires for extended periods. The country was at a heightened preparedness level for a record 99 consecutive days. The COVID-19 pandemic also continued to pose challenges for wildfire operations.

While our partnerships with federal agencies, states, Tribal Nations, local governments, and others organizations have never been stronger, our wildland firefighters are stretched to their limits. In 2021, we employed more than 5,400 federal and 915 Tribal fire response personnel. In all, 8,300 Interior employees responded to wildfires in 2021, including those who offered support outside their regular duties.

The Interior Department continued its workforce reform initiative in 2021 to ensure our firefighters are equitably compensated, available year-round, and cared for both physically and mentally. We converted more than 550 temporary or seasonal firefighters to permanent or full-time positions. President Biden's pay initiative ensured all firefighters received at least $15 an hour, increasing pay for 3,500 Interior wildland fire personnel. And we continued to focus on creating health and wellness assistance, including mental health support.

The Department is helping to build resiliency to climate change and wildfires into our landscapes and communities under the National Cohesive Wildland Fire Management Strategy. We treated burnable vegetation on 1.6 million acres of public and Tribal lands in 2021. We also completed emergency stabilization on nearly 430,000 acres and rehabilitated approximately 900,000 acres of fire-impacted landscapes.

Wildfires have a disproportionate impact on low-income communities and people of color. Majority black and Hispanic communities are 50 percent more vulnerable to wildfires, while Native Americans are six times as vulnerable. We're working to prioritize mitigation in these areas.

Through the adoption of new technology, we are improving firefighter safety, increasing the effectiveness of our wildfire management activities, and improving interagency cooperation. We began installing rollover protection systems in fire vehicles. We piloted location-based technology to better track personnel across increasingly large wildfires. We also helped manage a diverse portfolio of over 60 computer applications that enhance interagency communication, the exchange of data, and decision support across the wildland fire community.

We grieve for the 21 wildland firefighters who tragically lost their lives this year. We offer our condolences to their families, friends, and colleagues. We will honor these individuals by working to build a safer future in which we are able to live with fire.

Jeff Rupert
Director, Office of Wildland Fire

Financial Summary

$993M

2021 Total Appropriations

The Consolidated Appropriations Act, 2021, provided $993 million for the Department's Wildland Fire Management Program in fiscal year (FY) 2021. The appropriations supported:

- More than 6,300 personnel[1], 107 aircraft, 635 engines, and 94 pieces of heavy equipment[2]
- Suppression activities for more than 7,600 fires that burned nearly 1 million acres of lands managed by Interior[3]
- Over 1.9 million acres of hazardous fuel reduction on lands managed by the Department and Tribes[4]
- 1.3 million acres of post-fire rehabilitation and stabilization work[4]
- Completion of 19 fire facility projects included in Interior's five-year wildland fire management deferred maintenance and capital improvement plan
- Completion of 26 climate change and wildland fire research projects and funding of another 20 to inform decisions by land managers and policymakers[5]

Across the United States in 2021, nearly 59,000 wildfires burned more than 7.1 million acres. The number of wildfires and acres burned were equivalent to the 10-year average, but there was considerable variation by region. The Western U.S. was particularly impacted by more numerous fires, some of which grew to an enormous size. The Eastern U.S. also saw an increase in more intense fire activity, while other areas of the U.S. that usually account for a large percentage of the nation's burned acreage, such as Alaska, saw fewer fires and significantly fewer acres burned.

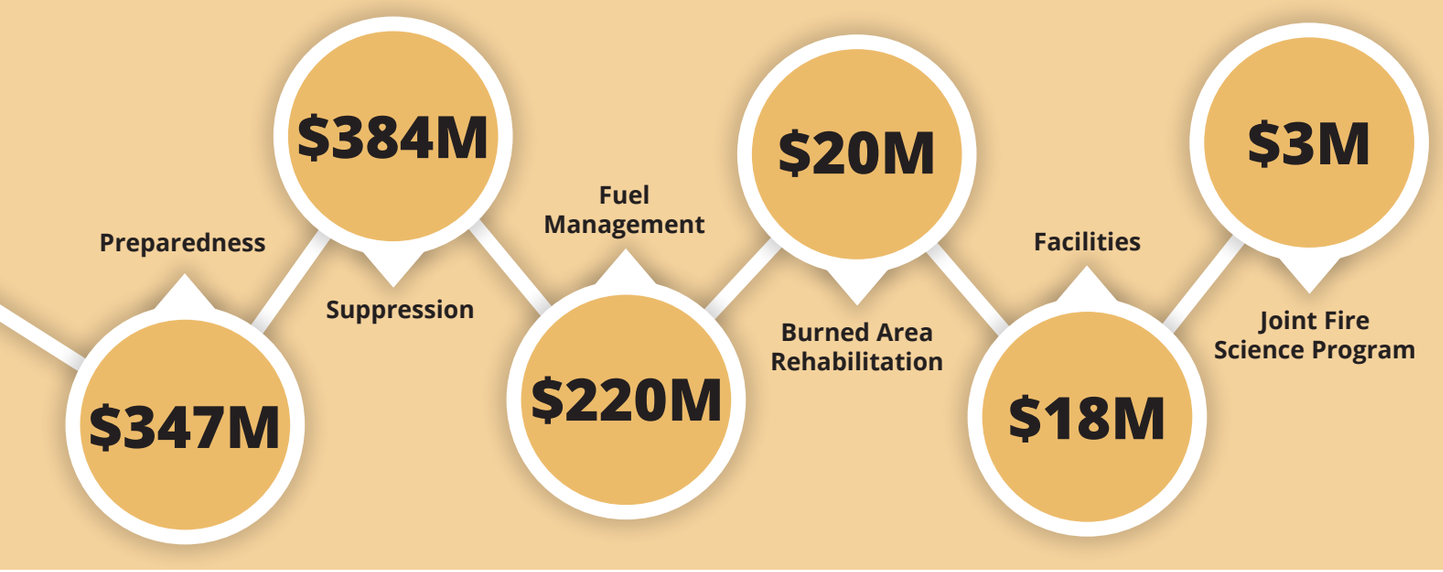
The 2021 fire year was particularly notable for the high demand on resources over an extended period of time. The country was at a heightened preparedness level for a record 99 consecutive days. In addition, a record 3,149 engines (compared with the prior record of 2,387 in 2020) and 138 Type 2 incident mnagement teams (compared with the prior record of 58 in 2000) were mobilized in 2021 for wildfire response.

Significant wildfire activity across the Western U.S. late in calendar year 2020 created a need for additional suppression transfers from the Wildfire Suppression Operations Reserve Fund in 2021.

In total, the Interior Department obligated over $1.2 billion for wildland fire management activities in FY 2021 (see Table 1). Details about Interior's wildland fire management appropriations and obligations in FYs 2011 to 2021 is provided in Appendix B.

The Interior Department's appropriations for wildland fire management fund six programs: preparedness, suppression operations, fuel management, burned area rehabilitation, facilities, and joint fire science.

[1] Interior's Human Resources Information System
[2] The United States Department of the Interior Budget Justifications and Performance Information, Fiscal Year 2023, Wildland Fire Management
[3] National Interagency Coordination Center Wildland Fire Summary and Statistics Annual Report 2021
[4] National Fire Plan Operations and Reporting System
[5] Joint Fire Science Program Fiscal Year 2021 End of Year Report



Summit Trail Fire (photo by Colville Agency, BIA). Firefighter in helicopter at Trout Springs prescribed fire (photo by Neal Herbert, OWF). The Inchelium Complex Fire at night (photo by KS Brooks, USFWS).

Table 1: Interior's Wildland Fire Management Appropriations and Spending in FY 2021

Activity	Appropriations	Obligations*
Preparedness	$347,105,000	$347,834,000
Suppression Operations	$383,657,000	$648,316,000†
Fuel Management	$219,964,000	$227,811,000
Burned Area Rehabilitation	$20,470,000	$22,492,000
Facilities	$18,427,000	$17,203,000
Joint Fire Science Program	$3,000,000	$3,072,000
TOTAL for all activities	**$992,623,000**	**$1,266,728,000**

* Obligations include the FY 2021 appropriation, prior year carryover, recoveries throughout the year, and transfers from the USDA Forest Service and Wildfire Suppresion Operations Reserve Fund.

† In addition to appropriated funding for suppression operations, Interior received $260 million in transfers from the Wildfire Suppression Operations Reserve Fund.

The Geronimo Interagency Hotshot Crew managing a prescribed fire (photo by Lance Cheung, USDA). A prescribed fire in Yosemite National Park (photo by NPS). Glow of the Archie Creek Fire in a smoke plume (photo by Jeff McEnroe, BLM).

Preparedness

PROGRAMS

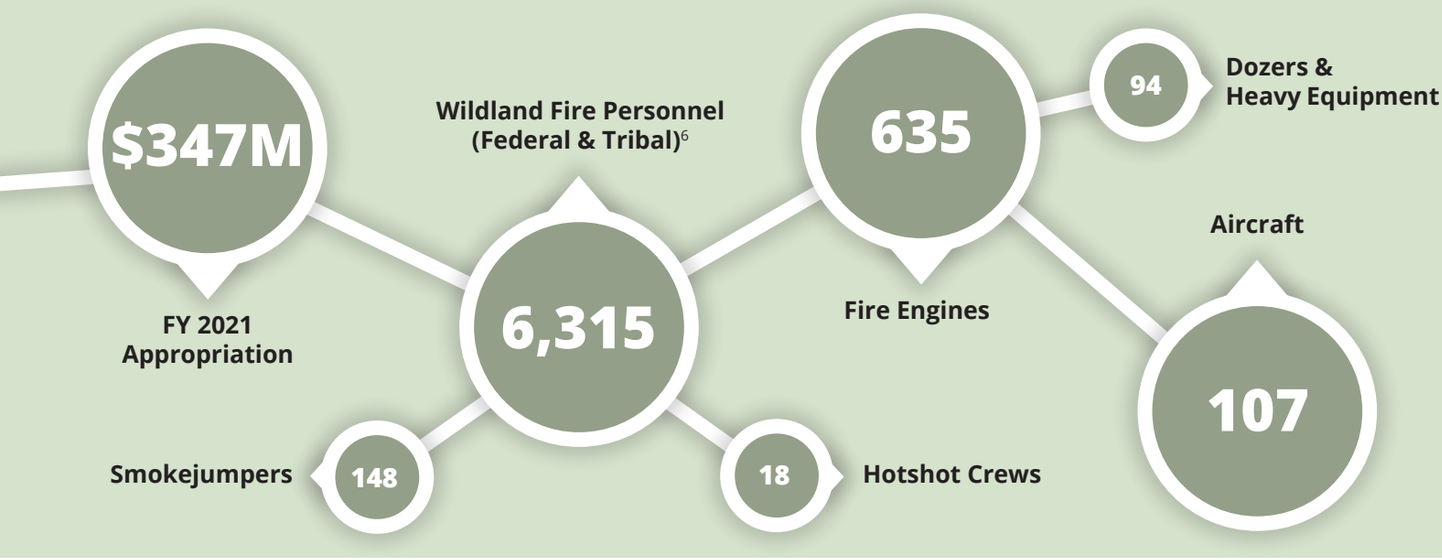
In FY 2021, the Interior Department employed more than 6,300 fire response personnel, including 148 smokejumpers and 18 hotshot crews. Department-wide, 8,300 qualified employees helped respond to wildfire incidents, including both those in fire reponse positions and those who suport wildfire response efforts outside of their regular duties. The program also funded 635 engines, 94 dozers and other heavy equipment, 35 single engine air tankers, 39 helicopters, and 6 water scoopers.

Consistent with Section 1114 in the John D. Dingell, Jr. Conservation, Management, and Recreation Act, the Interior Department pursued technological innovations to improve safety for firefighters and the public. The Bureau of Land Management established a standard for rollover protection systems and installed them in 14 heavy engines. The Bureau of Land Management also continued to install satellite terminals on fire vehicles to provide real-time tracking. The terminals are now operational on more than 700 wildland fire engines, crew transports, and support vehicles.

The Interior Department also continued its efforts to increase wildland fire response capacity at the local level. Through the Rural Fire Readiness Program, the Bureau of Land Management conducted 338 training sessions with rural fire departments. It offered another 21 training sessions with rangeland fire protection associations, which are crucial in responding to remote wildfires on private, state, and federal lands. These events trained nearly 6,000 firefighters working for rural fire departments and 722 rangeland fire protection association members. An additional 207 firefighters received training through an academy funded by the Bureau of Land Management.

[6] Interior's Human Resources Information System

The Interior Department's wildfire preparedness efforts help the wildland fire management community be ready to respond to wildfires. This includes hiring people, training them, tracking qualifications, and putting crews and equipment in the places most likely to experience fire. Interior also funds contracts, purchases, and maintenance for aviation resources, fire engines, equipment, and support services that create the capacity to manage wildfires safely and effectively.



From the Front Lines to the Fire Line

It just makes sense to match veterans' skills with wildland firefighting. From teamwork to leadership; risk mitigation to management; logistics to emergency medicine, many of the skills veterans learned in the military translate to wildland firefighting.

The Bureau of Land Management launched a Veteran Fire Crews program in 2012 to provide more jobs for veterans while benefiting from their experience and increasing the number of firefighters available during increasingly severe wildfire years.

The Folsom Lake Veterans' Crew in California combines military veterans with seasoned wildland firefighters. The crew constructs fire lines and can separate into smaller squads for initial wildfire suppression activities. It provides an opportunity for veterans to learn about the wildland fire management field and gain critical skills that will prepare them for a full career in wildland firefighting.

The Folsom Lake Veterans' Crew at the Dixie Fire in California. (Photo by Joe Bradshaw, BLM.)

Improving Safety with Rollover Protection

Following a fatal traffic accident in July 2016 that tragically took the lives of two firefighters when their engine rolled over, the Bureau of Land Management began extensive research on rollover protection systems and established a standard for their installation in heavy wildland fire engines. The safety features include seats with side impact airbags, seatbelt pre-tension systems, and internal roll cages.

Fire engines at the Bootleg Fire. (Photo by Marc Sanchez BLM.)

In 2021, Interior awarded the first contract to retrofit 14 heavy engines. It will improve the crashworthiness of off-road wildland fire engines. Moving forward, an industry-standard rollover protection system will be in each contract so it is part of manufacturing, not an addition after the engines are delivered.

Suppression Operations

PROGRAMS

Nationwide in 2021, nearly 59,000 wildfires burned more than 7.1 million acres of land. More than 52,500 were caused by humans and burned 3 million acres, highlighting the increasingly complex intersection of communities and wilderness.

The year was particularly notable for the high demand on resources over an extended period. The country was at a heightened preparedness level for a record 99 consecutive days.

The greatest proportion of wildfires, 56 percent, occured in the Eastern U.S. However, 71 percent of acres burned were in the Western U.S., which was impacted by fires that grew to an enormous size.[7]

In FY 2021, the Interior Department and Tribes responded to 7,555 fires that burned nearly 1 million acres.

During this record-setting fire year, interagency collaboration enabled an effective wildfire response. About 200 active duty military personnel, along with command and support staff, assisted with firefighting efforts. Eight military C-130 aircraft equipped with Modular Airborne Firefighting Systems helped battle western wildfires. The U.S. also received international support. Australia provided a 737 air tanker to assist firefighting efforts.

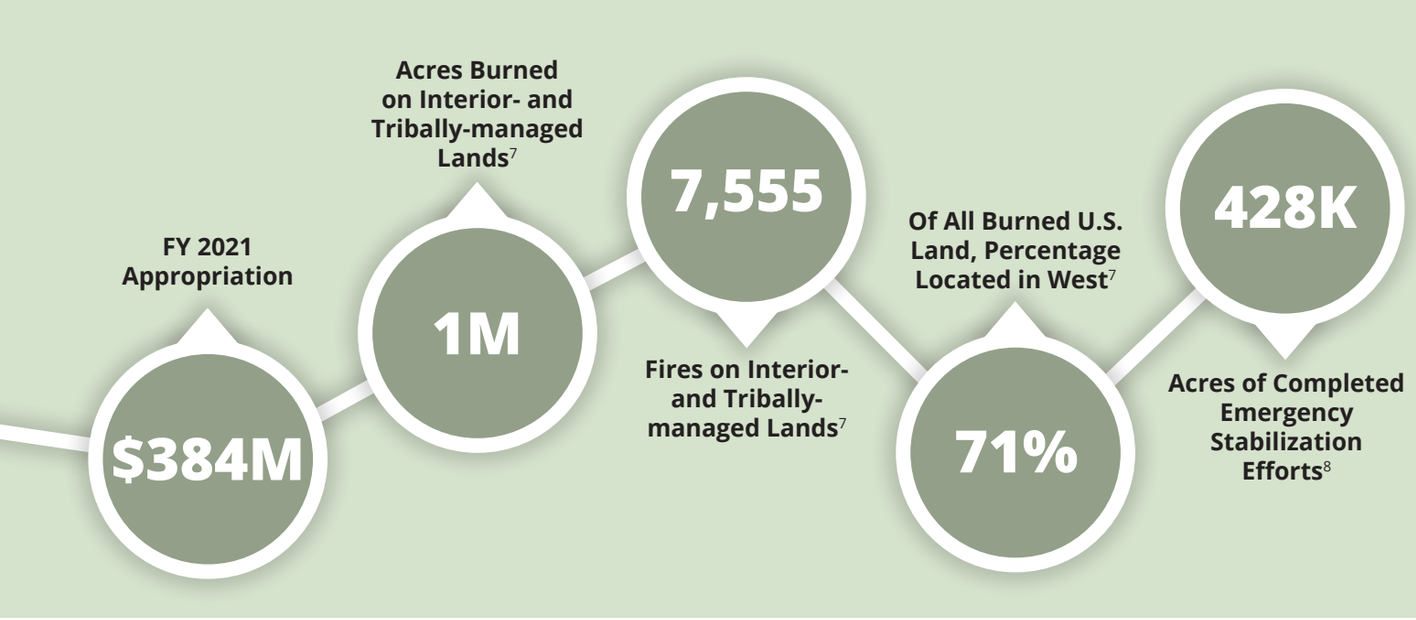
The Wildfire Suppression Operations Reserve Fund established in the Consolidated Appropriations Act of 2018 eliminated the need for transfers from other wildland fire accounts to meet suppression needs by providing additional budget authority for the Interior and Agriculture departments when suppression costs exceed normal appropriations. In FY 2021, an additional $310 million was available to Interior through this fund. Interior used $265 million, and the remainder rolled forward for use in future years.

Interior invested $648 million in wildfire suppression in FY 2021. Suppression costs across the Interior and Agriculture departments totaled $3.4 billion.[9]

The Department also invested in short-term burned area emergency stabilization to mitigate severe flooding, erosion, and other damage during and immeidately following wildfires. Interior and Tribal personnel treated 428,000 acres in FY 2021.[8]

[7] National Interagency Coordination Center Wildland Fire Summary and Statistics Annual Report 2021
[8] National Fire Plan Operations and Reporting System
[9] USDA Forest Service FY 2022 Budget Justification; the United States Department of the Interior Budget Justifications and Performance Information, Fiscal Year 2023, Wildland Fire Management

The Interior Department's wildfire suppression operations support a collaborative, interagency response to every wildfire on lands managed by federal and state agencies and Tribes. Key suppression activities include extinguishing fires when possible, controlling the movement and growth of fires to prevent losses, and conducting emergency stabilization after a fire.



International Cooperation Contains Wildfire

The Bear Creek Fire in Washington state was unique during the busy 2021 fire season. Discovered in North Cascades National Park, it was less than two miles from the international border with Canada. That area had no contemporary fire history. Further complicating the situation, the U.S. was at the highest preparedness level, meaning resources were stretched thin.

The national park looked beyond its borders to collaborate with other agencies and international partners to contain the fire. The logistics of international cooperation were simplified by the an agreement between British Columbia and the U.S. Established in 2014, the operating guidelines solidify international coordination in some of the most rugged terrain on the border.

Communication flowed easily between personnel on either side of the border, from initial reporting, to sharing of models, to the release of public information.

The Bear Creek Fire lasted for nearly three months, burning approximately 1,000 acres. Intergovernmental collaboration was essential to prevent the fire from spreading farther.

As climate change propels more frequent, extreme wildfires, they are likely to occur along this stretch of the U.S.-Canadian border more often. The Bear Creek Fire demonstrated that prior planning has successfully streamlined international cooperation. This will serve both countries well in the protection and preservation of natural and cultural resources in the coming years.

Smoke rising from the 2021 Bear Creek Fire along the Canadian border (Photo by K. Jongenlen, NPS.)

Fuel Management

PROGRAMS

In FY 2021, the Interior Department treated approximately 1.6 million acres of burnable vegetation across Department-managed and Tribal lands.[10] This accomplishment demonstrates the Department's commitment to the active management of vegetation on federal lands.

The Interior Department is partnering with the USDA Forest Service and the National Association of State Foresters to invest in a geospatial wildfire risk mitigation planning tool. It will assist land managers in collectively identifying potential wildfire risks and sharing planned and accomplished mitigation activites in support of establishing resilient landscapes. The tool will aggregate data that will help analyze the success of fuel treatments, thereby supporting adaptive management for continual improvement.

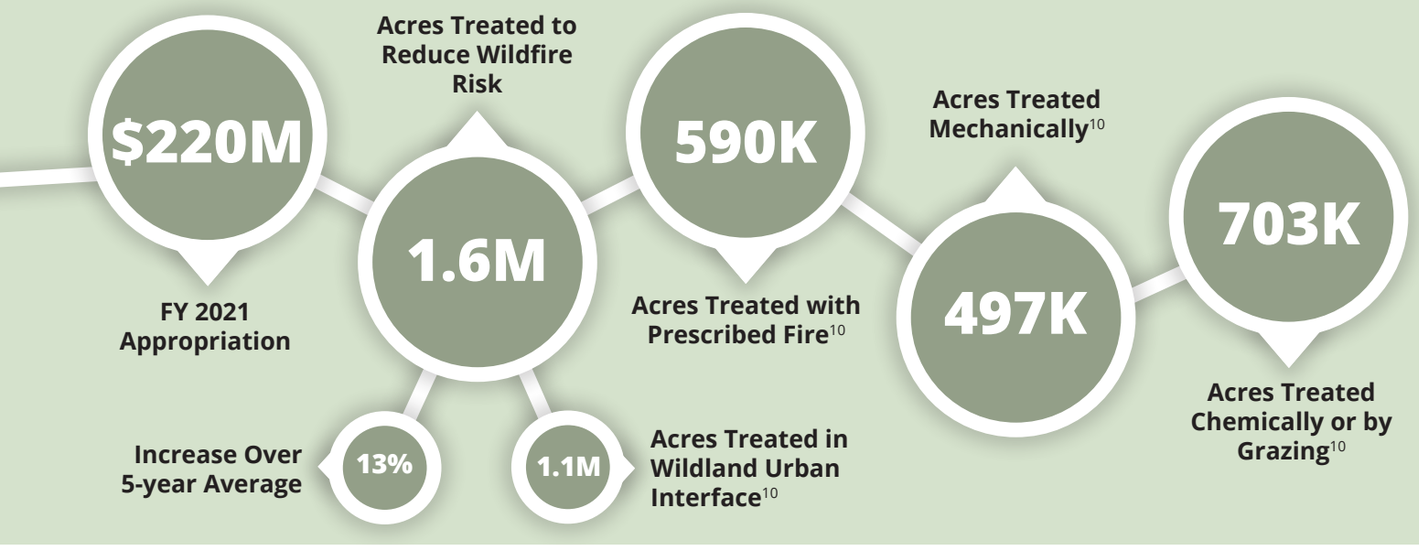
The Interior Department also continued to treat federal lands for non-native and invasive species that can increase fire frequency and alter ecosystem composition following a significant wildfire. Program staff treated 703,000 acres using chemical applications or grazing.[10]

Each year, the Department allocates $10 million for the Reserved Treaty Land Rights Program, enabling Tribes to collaborate with non-Tribal landowners on projects that enhance the health and resiliency of priority Tribal natural resources at high risk from wildland fire. In FY 2021, the Bureau of Indian Affairs approved an additional seven Reserved Treaty Rights Lands projects, bringing the total of approved projects since 2015 to 85. Projects funded through this program treated hazardous vegetation that could fuel wildfires on more than 20,250 acres of Tribal and neighboring lands. These projects restored or protected 32 ecological or cultural resources, such as culturally-significant plants, hunting grounds, and sacred sites.

The Interior Department also helped individuals and communities adapt to, prepare for, and respond to wildfire through the Community Wildfire Assistance Program. In FY 2021, Department staff completed extensive outreach to communities, coordinating more than 1,000 wildland fire education and prevention events, providing assistance with 470 community-led wildfire mitigation activities, and supporting the update or initiation of 69 Community Wildfire Protection Plans critical to preparing communities in the wildland urban interface for fire.

[10] National Fire Plan Operations and Reporting System

The Interior Department collaborates with other federal agencies, Tribes, states, counties, local organizations, and private landowners to plan and implement fuel treatments that help reduce the risks and impacts from wildfires and build resiliency in communities and ecosystems.



Taking On the Dual Threat of Invasive Plants and Wildfires

Many U.S. communities, natural landscapes, and cultural resources face a dual threat posed by the combination of invasive species and wildfire. What is the connection between these two threats?

Invasive plants such as cheatgrass, buffelgrass, and salt cedar can fuel wildfires, accelerate their spread, and increase the likelihood of unusually severe wildfires. The cycle is perpetuated by wildfires, which provide a blank canvas for non-native species to invade or even re-invade. Often, invasive plants have an advantage over native vegetation because invasive plants can get an early foothold after a wildfire.

To address these issues, Interior's Wildland Fire Management program and Office of Policy Analysis are working with other Federal agencies using a framework that emphasizes coordination, geospatial mapping, aggressive invasive plant management, guidance and support to local post-fire restoration efforts, and increased research and decision support.

Together, these measures will help reduce the spread of invasive plants. With fewer invasives to fuel them, wildfires should burn less frequently and at a lower intensity, in turn reducing opportunities for invasives to get a new foothold.

The National Park Service uses prescribed fire in south Florida to target non-native invasive plants. (Photo by M. Gue, NPS.)

Burned Area Rehabilitation

PROGRAMS

In FY 2021, the Interior Department rehabilitated nearly 883,000 acres of burned lands managed by the Department and Tribes.[11]

The use of hand tools and heavy equipment helped restore fire-impacted landscapes through seeding, fencing, monitoring, trail work, and controlling runoff so that post-fire erosion didn't compromise water quality in nearby streams, reservoirs, and water treatment systems.

Interior also helped treat lands managed by the Department and Tribes for non-native and invasive species. Invasive species complicate the recovery of post-fire landscapes when they gain a foothold, outcompeting native plants and transforming ecosystems in ways that affect local businesses, recreation, and wildlife. They can also help propel future wildfires. Staff treated more than 728,000 acres for invasive species.[11]

[11] National Fire Plan Operations and Reporting System

The Interior Department's burned area rehabilitation efforts support the repair or improvement of burned landscapes unlikely to recover without human assistance. Activities include initial assessments, seeding native plants, disrupting the growth of invasive plant species, and modifying landscapes to control runoff.

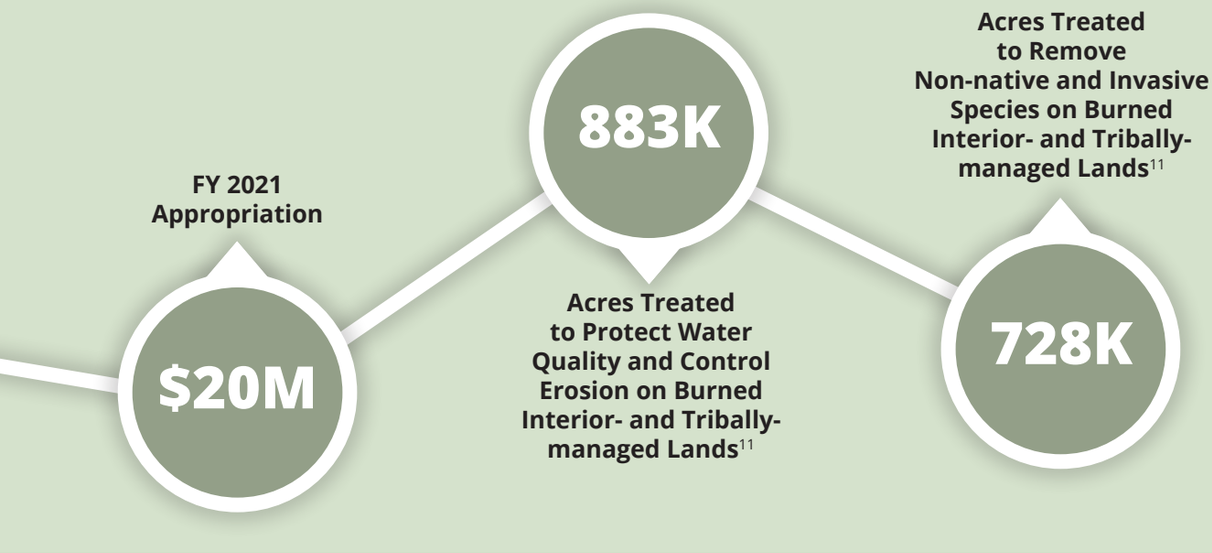
Long-term Invasive Weed Solutions in Idaho

A hair woodpecker on a scorched branch after a wildfire. (Photo by Rachel Portwood, USFWS.)

After the 2014 Big Cougar Fire burned 65,000 acres in Idaho, the Bureau of Land Management seeded 45 acres at six sites in the Corral Creek area south of Lewiston.

In July 2021, the Snake River Fire burned 108,000 acres and intersected with the Corral Creek project. Because the established seedings had already stabilized the plant communities, the land was able to recover naturally, producing desirable plant species instead of invasive weeds, and the need for immediate post-fire rehabilitation was drastically reduced.

This project demonstrates how burned area rehabilitation is providing long-term solutions as the frequency of wildfires increases in areas affected by invasive species throughout the West.



Burned Area Rehabilitation Helps Keālia Pond

Known for their lush, tropical, humid climate, the Hawaiian Islands typically do not conjure images of wildfires, but wildfires do occur on the islands.

Over the last several years, Maui has experienced one of the worst droughts on record since 2006 and an increased threat of severe wildfire activity.

The Central Maui Fire started on July 11, 2019. It was driven by strong north trade winds toward the town of Kihei. By the time it was fully contained on July 28, the fire had burned 10,000 acres of abandoned sugar cane fields, forcing thousands of residents from their homes. The fire also burned 84 acres within Keālia Pond National Wildlife Refuge.

Keālia Pond National Wildlife Refuge visitors center as the 2019 Central Maui Fire approaches. (Photo by USFWS.)

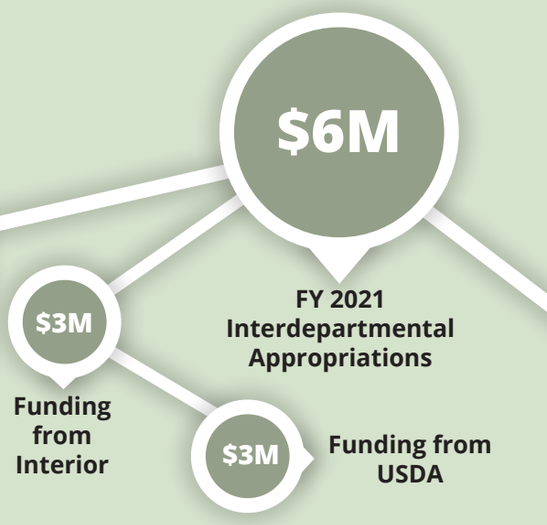
The refuge includes one of the last remaining intact wetlands in Hawaii, which provides essential breeding and foraging habitat for three endangered endemic water birds and thousands of migratory shorebirds.

In response to the fire, the U.S. Fish and Wildlife Service assembled a burned area rehabilitation team to provide recommendations to improve burned landscapes unlikely to recover naturally to desired conditions.

After the initial assessment, Keālia Pond National Wildlife Refuge immediately began following the recommendation to repair the ungulate fencing and remove the deer and pigs that migrated into the area. Those repairs were completed in January 2020. A second recommendation to remove standing dead trees was completed in May 2021.

Finally, the refuge is managing invasive plant species by removing plants by hand, as well as using mowers and herbicide. Refuge staff contracted with a local nursery to receive 1,000 native plants per month for three years. Dense plantings of native species within the 80-acre swath will establish a corridor of drought- and fire-resistant vegetation.

Joint Fire Science



PROGRAMS

In FY 2021, researchers funded by the Joint Fire Science Program completed 26 projects to better understand climate change and its impact on wildland fire. Topics included how to better apply fire science in wildland fire management, the factors that make fuel treatments successful, improving wildfire predictions with spatial data, evaluating the effects of post-fire rehabilitation efforts on landscape recovery, and how to improve the reliciency of landscapes and communities to climate change and wildfires. These research projects included participation from 143 undergraduate, masters, and doctoral students.[12] All completed fire research supported by the program is available for partner and public use at firescience.gov.

Through its Graduate Research Innovation funding, the Joint Fire Science Program also awards grants to supplement existing thesis or doctoral work by adding a component that addresses the management or policy relevance of the research.

The Joint Fire Science Program managed 59 active wildfire research projects in FY 2021.[12]

The program received 65 proposals in FY 2021 and funded 20. These projects will focus on reducing human-caused larger wildfires; quantifying the ability of prescribed fire to mitigate damage from wildfires; creating fire-resilient forests; modeling long-term post-fire hydrologic recovery; the effects of managed wildfire versus fire exclusion on tree growth during droughts; and forecasting fire smoke, particularly within vulnerable communities.[12]

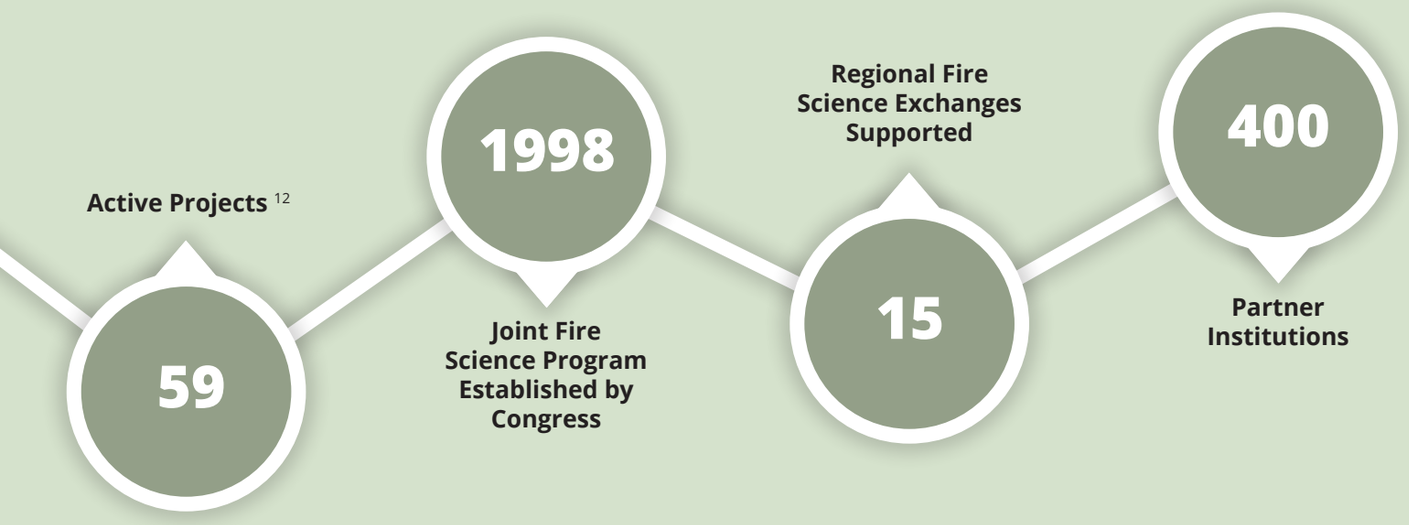
The Joint Fire Science Program also supports the Fire Science Exchange Network, which is an influential tool for relaying information about wildland fire science among many types of fire and fuel professionals. The 15 regional exchanges provide access to the latest publications, offer webinars and workshops, sponsor field tours, host discussion forums, and promote other interactions between managers and researchers.

Table 2: Joint Fire Science Projects by the Numbers

Projects in Process in FY 2021	56
Projects Completed in FY 2021	26
Projects Funded in FY 2021	20

[12] Joint Fire Science Program Fiscal Year 2021 End of Year Report

The Joint Fire Science Program provides funding for scientific studies associated with wildland fire, fuels, and fire-impacted ecosystems that respond to the emerging needs of land managers, practitioners, and policymakers. The program is jointly funded by the Department of the Interior and the USDA Forest Service.



Scientists Help Re-introduce Healthy Fire in Florida Forests

When fire was re-introduced to long-unburned forests, fire managers at Eglin Air Force Base in Florida noticed large-scale mortality in overstory pines. They wanted to restore the fire-dependent forest ecosystems but were hesitant to apply prescribed fire until the cause of the tree mortality was identified.

Research funded by the Joint Fire Science Program found the amount of shed vegetation on the forest floor, known as duff, and its moisture content were a strong influence on tree mortality after a fire. Research further found that extensive consumption of the duff by fire led to the observed pine mortality.

The Southern Fire Exchange worked with fire scientists to share this information through a local workshop and field tour. Together, fire scientists and managers formulated burn guidelines based on rainfall and drought conditions, duff moisture, and preventative techniques such as proactively managing the duff around critical trees.

This research brought awareness to the complexity of fire and forest floor interactions. It refocused local prescribed fire objectives from reducing mid-story vegetative cover to gradually removing the duff layer on top of sensitive roots.

This project illustrates how fire science was able to help land managers in the south bring healthy fire back to the forest and restore a balanced ecosystem.

A duff workshop offered by the Southern Fire Exchange in 2019. (Photo by David Godwin, the Southern Fire Exchange.)

Facilities

FY 2021 Appropriation

$18M

PROGRAMS

In FY 2021, 10 wildland fire facility projects received funding. They will replace or renovate two fire stations, one crew quarters, five aviation facilities, one heavy equipment storage facility, and one warehouse for firefighting supplies.

An additional 19 faciliites were repaired or repalced in eight states in FY 2021. For example, replacement of the Carolina Sandhill National Wildlife Refuge crew quarters created a safe, healthy residence for staff and their families. The renovation of the Glacier Wildland Fire Cache included repairs to the roof, electrical, and plumbing; improved energy efficiency; and expanded to improve equipment storage and the working environment for employees. And the hanger at the Okefenokee National Wildlife Refuge was replaced so helicopters can be stored indoors at a secure facility.

The Interior Department maintains the physical infrastructure to support wildfire operations and ensure firefighters have the resources they need to protect the nation's public lands and safeguard the public from wildfire. This includes air tanker bases, crew quarters, emergency dispatch centers, and other facilities.

Upgrading the Boise Airtanker Base

Fire retardant at the Boise airtanker base. (Photo by Carrie Bilbao, BLM.)

Change has been a long time coming for the Boise airtanker base located at the National Interagency Fire Center. For the past 20 years, the Boise National Forest has operated the airtanker base out of a portable trailer.

Construction of a permanent facility was a collaborative effort between the Bureau of Land Management and the USDA Forest Service. The Bureau of Land Management provided design guidance, project management, and contracting. The Forest Service was key in project funding and development of the new buildings.

During fire activity, the new 2,400-square-foot cache will store retardant bins. The retardant inventory will allow the airtanker

23

Projects in Interior's Five-year Wildland Fire Management Deferred Maintenance and Capital Improvement Plan

100

Facility Projects Funded in the Past 10 Years

base to maintain continuity of operations throughout the fire year.

In addition to the permanent structures, the retardant containment and distribution systems were replaced, the water distribution system was upgraded, and the power service was updated to meet current standards. Security was also improved with new cameras and enhanced access control.

Construction of the permanent buildings and storage cache was completed in 2021. The improved airtanker base will enable federal agencies to provide airtanker support to nearby wildfires in the Great Basin and the Northwest.

Renovating Fire Facilities in Okefenokee National Wildlife Refuge

The Okefenokee National Wildlife Refuge in Georgia contains the third largest national wilderness area east of the Mississippi River at over 350,000 acres.

The refuge recently completed a $500,000 renovation of its heavy equipment storage facility. The renovation improved security and increased energy efficiency. The work included replacing doors and siding, enclosing shop bays, installing roll-up bay doors, and insulating the facility.

Next, housing for refuge firefighters will undergo a $1.3 million renovation. The renovation will address the refuge's need for single-dwelling housing. The current facility will be converted into a bunkhouse to accommodate more personnel.

A strategic firing operation during the West Mims Fire at the Okefenokee National Wildlife Refugre. (Photo by Josh O'Connor, USFWS.)

Health & Wellness

Wildland Firefighter Medical Exams Completed

3,600

PROGRAMS

Wildland firefighters work in arduous, stressful environments that can take a toll on both physical and mental health. The Interior Department is thankful for the ongoing efforts of our wildland firefighters to protect lives, communities, and our public and Tribal lands.

Because wildland firefighters perform rigorous tasks as a regular part of their job, they must maintain medical and physical fitness to ensure they can complete tasks reuiqred by the job and to reduce the chance of injury or fatigue. For their safety and the safety of those working alongside them, each individual must meet the federal interagency medical standards for wildland firefighters.

Wildland firefighters must complete a comprehensive exam every 36 months and are required to report any significant changes in health during non-exam years. Routine exams and self-certifications help the Interior Department identify significant health trends.

In 2021, despite postponements due to the COVID-19 pandemic, the Medical Standards Program still completed over 3,600 wildland firefighter medical qualification exams. This includes over 120 exams conducted at an onsite exam event for firefighters living in remote areas.

Mitigating the spread of COVID-19 before, during, and after wildland fire operations continued to be a top priority in 2021. Many of the protocols that were adopted at the start of the pandemic, consistent with guidance from the Centers for Disease Control and Prevention, remained in place.

The Mental Health Subcommittee of the interagency National Wildfire Coordinating Group continued to proactively identify and address mental health issues in 2021 by providing a forum where firefighters and managers can increase awareness and advocate for wellness throughout the workforce. It also produced new mental health resources specifically for wildland firefighters.

Moving forward, the Interior Department is committed to developing additional resources to support the health and wellbenig of our wildland firefighters, including a wide range of mental health support specifically tailored to those who work in this demanding profession.

The Interior Department works to ensure the health and wellness of our wildland firefighters. The Medical Standards Program establishes the minimum level of medical qualifications needed to perform the work safely. Interior also works through interagency bodies to develop resources tailored to firefighters to support their mental health and wellbeing.

120

Medical Exams Completed at Mobile Event

Individuals or Crews to Receive NWCG Wildland Fire EMS Awards in 2021

10

Recognizing Outstanding Emergency Medical Service Providers in Wildland Fire

The National Wildfire Coordintating Group selected the recipients of the 2020 Wildfire Emergency Medical Service Awards. This annual award program, sponsored by the group's Emergency Medical Committee, recognizes individuals and organizations for going above and beyond their normal duties in rendering medical care for our nation's wildland firefighters.

John Dentinger, Nathan Navarro, Riley Currey, and Austin Lattin

Award of Excellence in Wildfire EMS/Rescue

In September 2020, a firefighter at the Bureau of Land Management Vale District Office collapsed from a heart attack. Nearby staff acted promptly to summon help and provide life-saving measures. The employee was rushed to the local hospital and then flown to a cardiac hospital. His doctors informed him that he would have experienced permanent damage or death had CPR started just one minute later. The crew was nominated by the survivor, who said, "Without these guys and their quick response, I would have died."

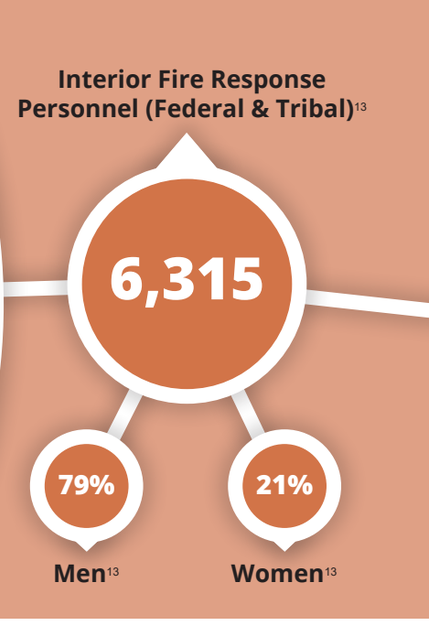
Burns Interagency Fire Zone and Malheur National Forest T2IA Crews

Outstanding Wildfire EMS Crew of the Year

On August 5, 2020, the 20-member Burns Interagency Fire Zone and Malheur National Forest crews were providing initial response to a fire in the Malheur National Forest in eastern Oregon. A rock rolled downhill and struck the Burns Interagency Fire Zone crew's EMT on the head, rendering him unconscious with heavy bleeding. Just days prior, that same EMT had trained the crew on what to do if their EMT were incapacitated. The crew immediately worked to stabilize the patient with the assistance of the Malheur National Forest crew. They were able to transport him to an ambulance within 20 minutes. The EMT had a severe head laceration and a skull fracture that required emergency surgery. According to the neurosurgeon, this type of head injury is typically not survivable. Due to the quick actions of both crews on the scene, the EMT was able to get medical attention in time, make a full recovery, and be released to light duty. A report about the incident was developed to help train other crews on what to do in a similar situation.

The Bureau of Land Management Vale District Office sign. (Photo by Greg Shine.)

Workforce



INITIATIVES

People are the greatest asset of the Interior Department's wildland fire management efforts. To ensure they can accomplish the increasingly challenging and complex mission of managing wildlland fire on public and Tribal lands requires a workforce that is fairly compensated, available year-round, cared for both phyiscally and mentally, and that has all the necessary tools to accomplish the mission safely, effectively, and efficiently. The wildland fire workforce framework that was established in the 1950s must be revised to meet the demands of more frequent, larger, costlier, and more complex wildfires.

To meet this need, in FY 2021, Interior began converting temporary and seasonal wildland fire response positions to permanent, full-time positions available for fire resonse and mitigation activities year-round. More than 550 positions were converted in FY 2021.

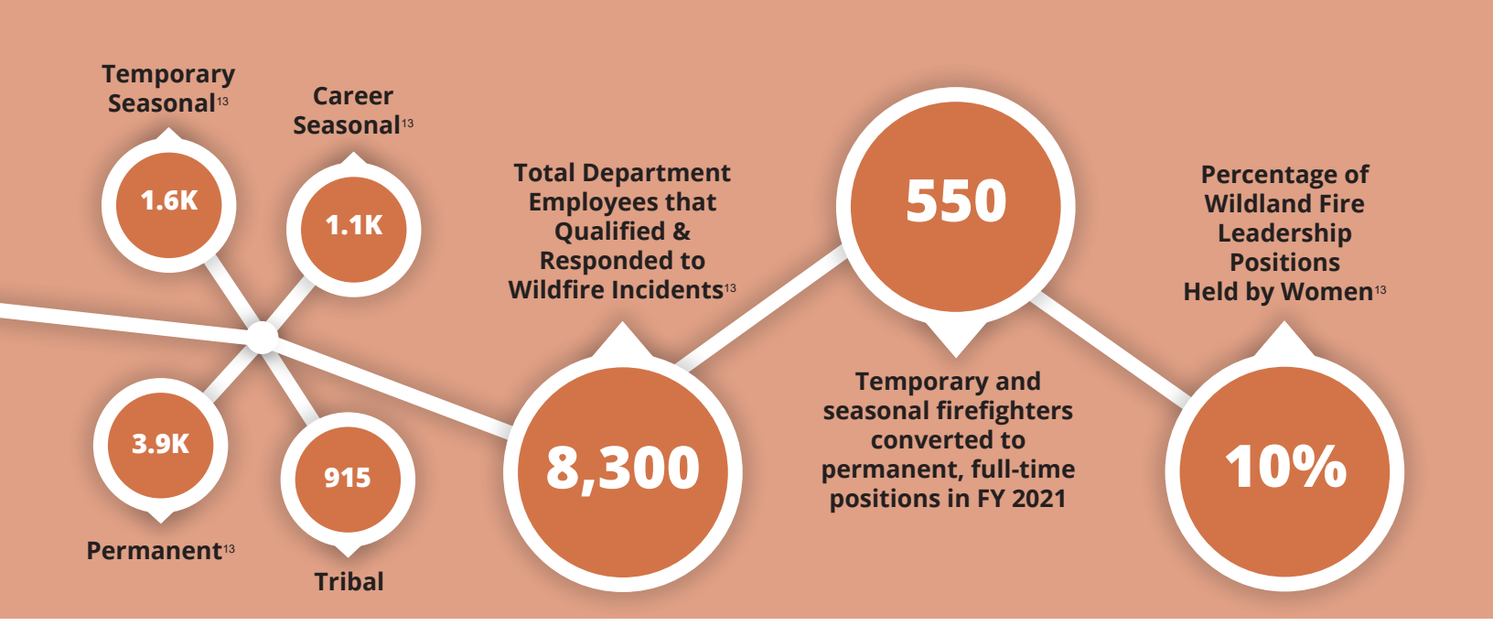
The Interior Department continued to use the direct hire authority provided by the Office of Personnel Management to meet critical staffing needs. This authority expedited hiring by eliminating competitive ranking and enabled the Department to fill 775 mission-critical positions at various levels and locations in FY 2021.

In FY 2021, the Interior Department was included in the Wildland Fire Apprenticeship Program and helped to revise interagency standards and assosiated standard position descriptions.

Moving forward, the Interior Department will continue to modernize its wildland fire workforce through comprehensive reforms that include long-term improvements to compensation adn benefits, establishing a wildland firefighter health and wellness program with a wide range of mental health support tailored to firefighters, and providing additional resources to support expanded training, education, and experiential learning opportunities.

[13] Interior's Human Resources Information System

The Interior Department strives to ensure a harassment-free workplace, modernize hiring practices, control risk, and support professional development so we can continue to recruit, retain, and empower a workforce of thousands to manage wildland fire on public and Tribal lands across the country.



Conservation Corps Program Offers Women Experience in Wildland Fire

Women are traditionally underrepresented in firefighting positions, especially leadership roles. Within the National Park Service, women make up less than five percent of wildland fire leadership at the local level and less than two percent at regional and national levels.

These types of initiatives allow for a more robust, resilient workforce. By increasing diversity, the National Park Service will bring new perspectives and innovative ideas to address complex challenges such as climate change, extended drought, and intense wildfire years.

In the summer of 2021, the National Park Service created two all-women conservation corps fire crews at Yosemite and Grand Teton national parks. The crews were employed through a partnership with the California and Montana conservation corps. This pilot initiative was funded with a $200,000 grant from the National Park Foundation.

All-women conservation corps fire crew at Yosemite National Park. (Photo by NPS.)

The crews, comprised of six women each, focused on fuel management projects to decrease the risk to local communities from severe wildfires, maintaining healthy park ecosystems, and creating opportunities for safe fire response. The program provided the women with hands-on training that qualified them for several types of positions.

In August, after fulfilling their conservations corps commitment, many crew members were hired as firefighters. While the program started small, the National Park Service is looking to build on its success and expand in future years.

Climate Resilience

$145B

Cost of Extreme Climate-related Disasters in 2021[14]

INITIATIVES

Wildfire is a natural and essential component of many healthy ecosystems. However, rising temperatures, changing precipitation patterns, and the resulting increase in drought conditions caused by climate change around the world is increasing the frequency, extent, and severity of wildfires.

More than half of U.S. land is covered by grasslands, shrublands, and forests that sequester carbon dioxide. Wildfire can turn these carbon sinks into carbon sources and cause smoke emissions that harm human health.

The Interior Department worked diligently in FY 2021 to prepare for and respond to the more frequent, extreme wildfires propelled by climate change across the U.S. By removing vegation that can fuel wildfires and re-introducing healthy fire, the Department helped to increase resiliency to climate change and wildfire across landscapes and communities. After a wildfire, the Department also worked to prevent the spread of non-native species that can further propel extreme wildfires.

Research funded by the Joint Fire Science Program continued to offer insights into addressing more extreme wildfires, predicting fire behavior, and minimizing harmful wildfires amid climate change.

A combined approach to wildland fire management that uses the latest science and technology for wildfire preparedness, suppression, response, fuels management, and post-fire recovery across the hundreds of millions of acres of national parks, refuges, other public lands, and Indian Country will support the Department's climate adaptation actions and reilence activities.

[14] NOAA 2021 U.S. Billion-dollar Weather and Climate Disasters in Historical Context
[15] The Unequal Vulnerability of Communities of Color to Wildfire
[16] National Interagency Fire Center Total Wildland Fires and Acres (1993-2021)

The Interior Department is committed to combating the impacts of climate change that propel wildfires and improving the resiliency of communities and landscapes to wildfire while working to solve the climate crisis.

21 Years of Fire Effects Data Shows Success at Ozark National Scenic Riverways

In 1999, managers at Ozark National Scenic Riverways in Missouri recognized that without fire, the diversity and abundance of native wildflowers and grasses were rapidly disappearing. That year, they established monitoring plots to study fuel management and prescribed fire. Two decades later, the National Park Service collected post-burn data.

By 2020, 32 of the 62 monitoring plots had burned at least five times. The average increase in native wildflower and grass species after five burns was 137 percent.

29M

Americans with a Significant Potential to be Impacted by Wildfires[15]

20

Extreme Climate-related Disasters in 2021[14]

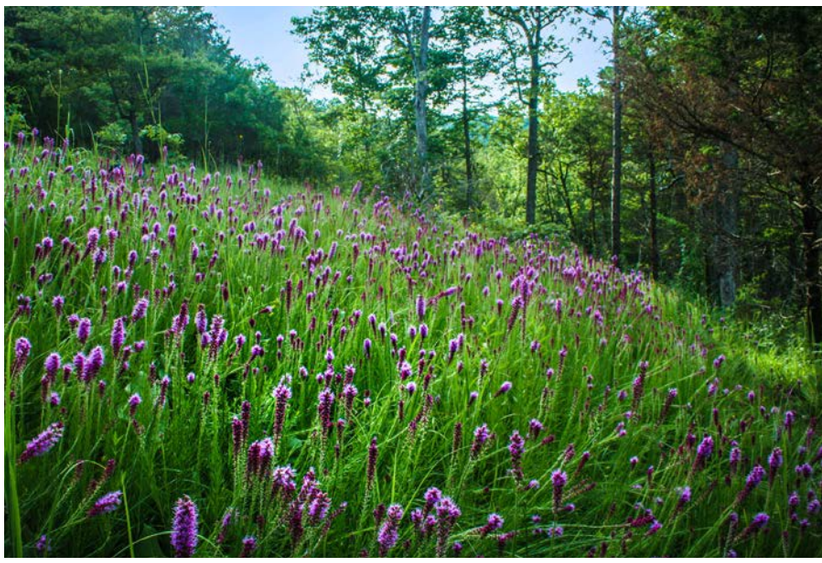
97%

Increase in Acres Burned by Wildfires Annually over the Past 20 Years[16]

Nine wildflower species that benefitted are listed as imperiled or vulnerable in Missouri. Many are significant to butterflies and other pollinators that are also declining.

Restoring the diversity and abundance of herbaceous plants also helps wildlife. Prairie warblers, quail, wild turkeys, and elk are some of the species that show notable preference for fire-managed lands in the area.

Recovering viable populations of declining species, before they become endangered, enriches our world and saves the economic costs associated with reacting when a species is already in crisis.



Prescribed fire helped native plants increase at Ozark National Scenic Riverways. (Photo by R. Manuel, NPS.)

Climate Science Approach Unifies Fire Management in South Florida

With communities expanding into fire-dependent lands, they are also becoming more vulnerable to climate change and catastrophic wildfires.

South Florida National Parks and Preserve is taking steps to combat these challenges. It developed a cohesive fire management strategy that was implemented in 2021.

South Florida National Parks and Preserve manage a prescribed fire. (Photo by M. Gue, NPS.)

Under this strategy, the prescribed fire program was redesigned to conduct additional burns under moderate fire conditions. This approach builds resiliency within fire-adapted and fire-dependent ecosystems.

In 2021, prescribed fire was applied to more than 140,000 acres under this framework. The expanded use of prescribed fire helps reduce the severity of wildfires, lowering their cost and risk to communites.

WILDLAND FIRE

Information Technology

INITIATIVES

The development of technology to serve the wildland fire community historically focused on the needs of small groups, which led to a proliferation of systems and significant duplication. The Wildland Fire Information and Technology Program (WFIT) jointly administered by the Interior Department's Office of Wildland Fire and USDA Forest Service provides the technology fire managers need to do their jobs, regardless of location or affiliation.

In FY 2021, the Interior Department continued to equip wildland fire personnel with mobile devices and bring networks into the remote areas where they operate to make these applications more accessible on incidents.

In collaboration with FirstNet and other service providers, Interior expanded high-speed broadband for use in wildland fire operations in remote locations that currently lack access. Interior piloted satellite-based connectivity on wildfire incidents through Starlink. The Department also used edge computing to maintain connectivity in areas with low bandwidth. These efforts ensure more fire response personnel operating in remote locations have access to essential, real-time data and modeling to inform their decisions.

The program managed 60 wildland fire management applications in 2021.

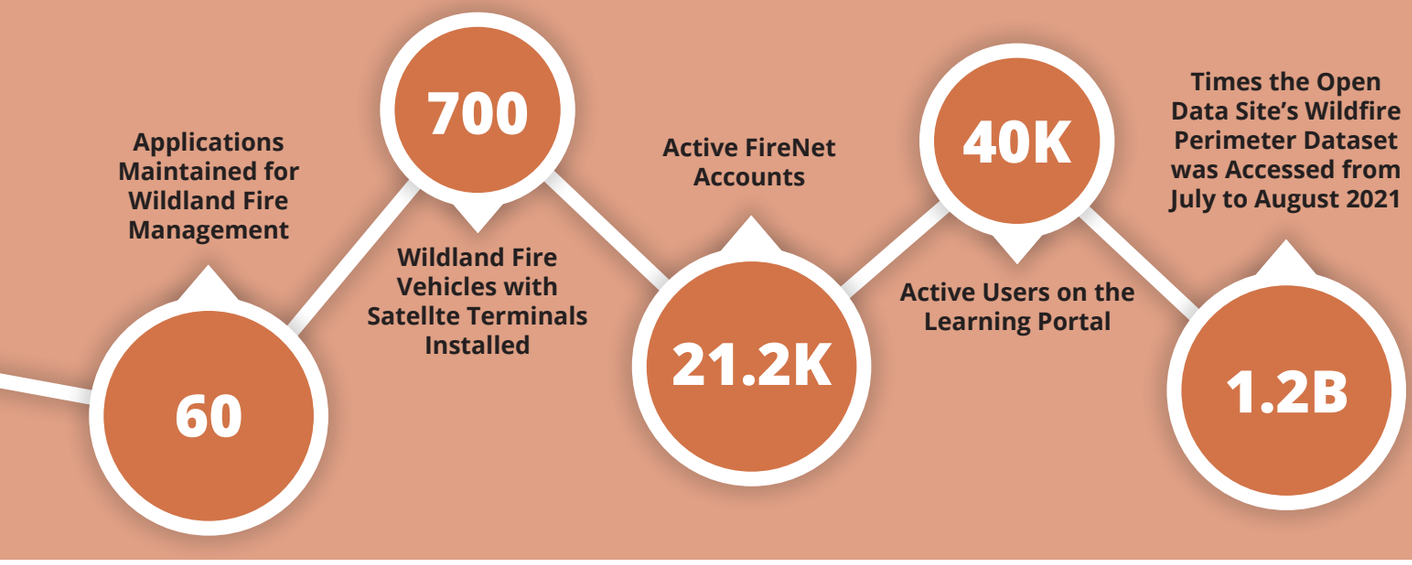
The wildland fire open data site, launched the prior year to make information on wildfire activity publicly available, reached a record number of people in 2021 and was used by major media outlets and technology companies to make wildfire information more readily available.

FireNet, which provides a single, secure point of access for fire personnel across agencies to communicate and share information, had nearly 21,250 users in FY 2021, an increase of 280 percent over three years.

The Wildland Fire Learning Portal, which launched in 2018 to support the education and training needs of the wildland fire community, reached 40,100 active users, an increase of 1,640 percent since 2019.

The Department also improved firefighter safety through location-based services. In FY 2021, the Bureau of Land Management completed the installation of satellite terminals in 700 wildland fire vehices to provide real-time tracking to improve situational awareness and rapid decision making.

The Interior Department collaborates with the USDA Forest Service and other partners on a holistic approach to technology, developing and improving a wide range of applications to serve the entire wildland fire community.



Wildfire Open Data is Driving Innovation And Improving Public Safety

Real-time wildfire data has historically been difficult for the public to access. Although federal agencies have made it publicly available since 2001, the information was located across multiple sites, often compiled manually, and either simplified or required expertise to access.

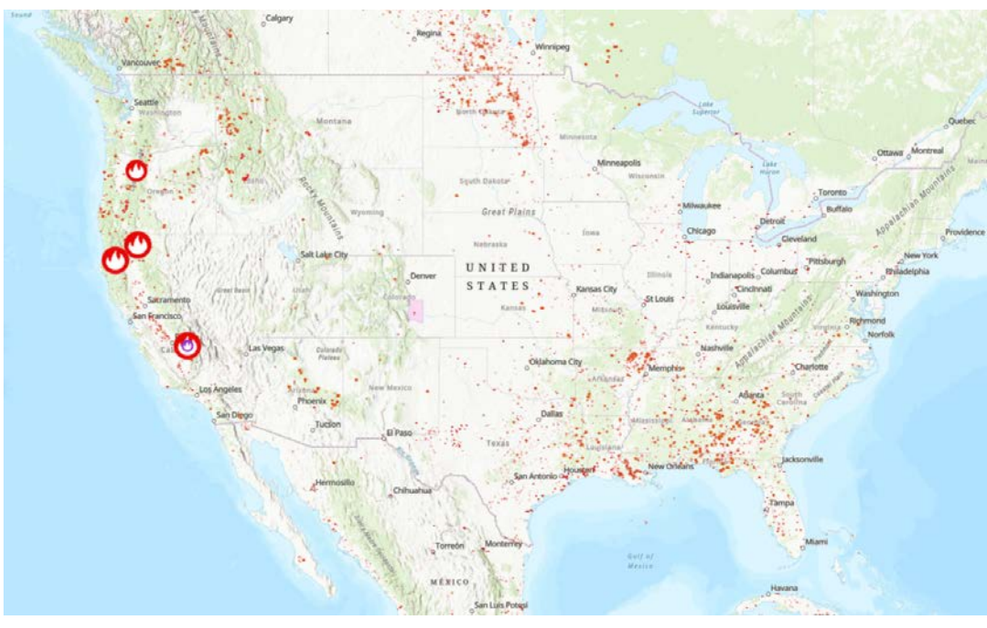
Launched in April 2020, the National Interagency Fire Center's wildland fire open data site makes information on wildfire activity across the U.S. publicly available. During the record-setting 2021 wildfire year, the most popular dataset—providing information on wildfire perimeters—was accessed 1.2 billion times in July and August alone.

The site provides high-quality information crafted to be useable by both humans and computers across different agencies and locations. Data that was historically collected for internal use by federal agencies is now accessible to individuals, nonprofits, and businesses alike, and it's serving the public in new and innovative ways.

Across the federal government's emergency response agencies, it's hard to find another site that compares in terms of providing real-time, complex data on tens of thousands of incidents across the country. Information is curated by both remote sensors and people on the ground. The site's data is updated every 5 to 10 minutes.

A diverse range of companies, nonprofits, and public groups are using the data this site provides, including universities, mapping services, insurance providers, and even local hiking groups.

In 2021, major media outlets, including the New York Times and Los Angeles Times, created real-time wildfire maps from this data to keep their readers better informed. Esri, the GIS mapping company, created wildfire map layers and live data feeds. And, in the fall of 2021, Google launched a wildfire layer in Google Maps. These are all great examples of how open data can help more people find real-time information on active wildfires through the tools they already use on their devices.



A featured interactive map on the wildland fire open data site showing fire locations nationwide.

APPENDIX A

Wildfire Statistics

Table 2: Fires and Acres Burned on Department of the Interior Lands, CY 2012-2021[15]

Year	BIA	BLM	NPS	USFWS	Totals
10-year average	*3,947 fires*	*2,481 fires*	*379 fires*	*271 fires*	*7,021 fires*
	424,612 acres	*1,990,158 acres*	*118,676 acres*	*89,966 acres*	*2,525,771 acres*
2021	**4,646**	**2,362**	**361**	**307**	**7,676**
	396,433	**412,155**	**131,182**	**51,264**	**991,034**
2020	4,740	2,362	304	238	7,644
	923,298	1,131,540	145,447	52,739	2,253,024
2019	2,659	2,515	282	147	5,603
	139,195	2,019,771	18,104	94,637	2,271,707
2018	3,472	2,872	389	162	6,895
	216,118	1,905,343	121,092	71,137	2,313,690
2017	3,843	2,927	314	252	7,336
	306,542	2,711,267	110,349	206,393	3,334,551
2016	4,056	2,105	463	174	6,798
	325,162	1,183,821	177,901	15,374	1,702,258
2015	3,886	2,093	398	194	6,571
	591,644	4,770,133	74,780	33,897	5,470,454
2014	3,377	1,944	389	348	6,058
	327,352	871,642	24,949	17,404	1,241,347
2013	3,239	2,628	455	332	6,654
	173,491	1,012,600	265,755	138,284	1,590,130
2012	5,753	3,031	369	394	9,547
	866,444	3,331,273	140,807	101,752	4,440,276

[15] National Interagency Coordination Center Wildland Fire Summary and Statistics Annual Report, 2021

Table 3: Fires and Acres Burned on Public and Privately-managed Lands in the United States, CY 2012–2021[15]

Year	DOI	USDA	Other*	Totals
10-year average	*7,021 fires*	*6,467 fires*	*49,255 fires*	*62,799 fires*
	2,525,771 acres	*2,041,565 acres*	*2,851,841 acres*	*7,516,818 acres*
2021	**7,676**	**6,244**	**45,186**	**58,985**
	991,034	**4,126,564**	**2,008,045**	**7,125,643**
2020	7,644	5,629	45,559	58,083
	2,253,024	2,307,439	4,146,363	8,767,492
2019	5,603	5,060	35,616	46,279
	2,271,707	713,976	2,176,054	5,161,737
2018	6,895	5,629	45,559	58,083
	2,313,690	2,307,439	4,146,363	8,767,492
2017	7,336	6,617	57,546	71,499
	3,334,551	2,866,031	3,825,504	10,026,086
2016	6,798	5,676	55,269	67,743
	1,702,258	1,247,906	2,559,831	5,509,995
2015	6,571	7,056	54,524	68,151
	5,470,454	1,916,302	2,738,393	10,125,149
2014	6,058	6,755	50,799	63,612
	1,241,347	871,876	1,482,390	3,595,613
2013	6,654	7,105	33,820	47,579
	1,590,130	1,365,644	1,363,772	4,319,546
2012	9,547	7,098	51,129	67,774
	4,440,276	2,680,233	2,205,729	9,326,238

* Includes federal, Tribal, state, and private lands not managed by the Interior or Agriculture departments.

APPENDIX B

Financial Statist

Table 4: Wildland Fire Management Appropriations, FY 2012-2021

10-year average	*$313,357,500*	*$334,075,000*	*$8,710,000*	*($27,157,700)*	*$176,669,400*
2020	$332,784,000	$383,657,000	$0	$0	$194,000,000
2018	$332,784,000	$389,406,000	$50,000,000	$0	$184,000,000
2017	$332,784,000	$395,000,000	$0	$0	$180,000,000
2016	$323,685,000	$291,673,000	$0	$0	$170,000,000
2015	$318,970,000	$291,657,000	$0	$0	$164,000,000
2014	$281,929,000	$285,878,000	$21,600,000	$0	$145,024,000
2013[4]	$264,833,000	$261,206,000	$15,500,000	$0	$137,685,000
2012[5]	$276,522,000	$270,481,000	$0	($271,577,000)[6]	$183,021,000

[1] Does not include funding transferred from USDA Forest Service in support of suppression operations.
[2] Does not include funding available under Section 102 transfer authority.
[3] Enacted funding was $65 million; however, $50 million was transferred to the USDA Forest Service in support of suppression operations.

Table 5: Wildland fire management obligations, FY 2012-2021

Fiscal Year	Preparedness[1]	Suppression[1,2]	Suppression Supplemental	Fuels Management[1]	BAR
10-year average	*$317,790,200*	*$389,005,400*	*$8,710,000*	*$181,140,000*	*$21,241,200*
2021	**$347,834,000**	**$648,316,000**	**$0**	**$227,811,000**	**$22,492,000**
2020	$338,463,000	$510,947,000	$0	$197,984,000	$21,556,000
2019	$331,514,000	$440,708,000	$0	$196,676,000	$21,463,000
2018	$340,871,000	$412,351,000	$50,000,000	$191,053,000	$23,523,000
2017	$341,712,000	$453,103,000	$0	$184,540,000	$29,702,000
2016	$330,361,000	$271,729,000	$0	$176,633,000	$17,534,000
2015	$316,651,000	$312,543,000	$0	$162,821,000	$14,814,000
2014	$280,104,000	$254,594,000	$21,600,000	$150,228,000	$13,664,000
2013	$264,042,000	$296,651,000	$15,500,000	$137,705,000	$12,002,000
2012	$286,350,000	$289,112,000	$0	$185,949,000	$35,792,000

[1] Obligations include funding transferred from USDA Forest Service in support of activity.

ics

BAR	BAR Supplemental	JFSP[1]	Facilities	RFA	FLAME	Total
$18,075,600	*$690,000*	*$4,762,700*	*$11,274,800*	*$0*	*$68,990,100*	*$895,947,400*
$20,470,000	**$0**	**$3,000,000**	**$18,427,000**	**$0**	**$0**	**$992,623,000**
$20,470,000	$0	$3,000,000	$18,427,000	$0	$0	$952,338,000
$20,470,000	$0	$3,000,000	$18,427,000	$0	$0	$941,211,000
$20,470,000	$0	$3,000,000	$18,427,000	$0	$0	$998,087,000
$20,470,000	$0	$5,990,000	$8,427,000	$0	$15,000,000[3]	$957,671,000
$18,970,000	$0	$5,990,000	$6,427,000	$0	$177,000,000	$993,745,000
$18,035,000	$0	$5,990,000	$6,127,000	$0	$92,000,000	$896,779,000
$16,035,000	$6,900,000	$5,990,000	$6,127,000	$0	$92,000,000	$861,483,000
$12,341,000	$0	$5,676,000	$5,805,000	$0	$87,048,000	$790,094,000
$13,025,000	$0	$5,991,000	$6,127,000	$0	$91,853,000	$575,443,000

[4] Does not reflect enacted funding, which was reduced by an across-the-board reduction of 2 percent and 5 percent sequestration.
[5] Does not reflect enacted funding, which was reduced by an across-the-board reduction of 0.16 percent.
[6] Suppression funding was reduced by a rescission of unobligated balances ($82 million) and by the amount of unobligated emergency suppression funds directed to use ($189.6 million).

BAR Supplemental	JFSP[1]	Facilities	RFA	FLAME	Total	% Change from enacted
$690,000	*$6,795,100*	*$8,308,700*	*$25,100*	*$63,976,800*	*$997,695,500*	*11.4%*
$0	**$3,072,000**	**$17,203,000**	**$0**	**$0**	**$1,266,728,000**	**27.6%**
$0	$4,138,000	$8,068,000	$0	$0	$1,081,156,000	13.5%
$0	$2,869,000	$11,883,000	$0	$0	$1,005,113,000	6.8%
$0	$3,255,000	$11,161,000	$0	$66,000,000	$1,098,214,000	10.0%
$0	$6,529,000	$8,513,000	$0	$55,000,000	$1,079,099,000	12.7%
$0	$10,228,000	$2,821,000	$0	$100,000,000	$909,306,000	8.5%
$0	$7,026,000	$5,234,000	$23,000	$105,000,000	$924,112,000	3.0%
$6,900,000	$9,719,000	$6,981,000	$0	$50,000,000	$793,790,000	7.9%
$0	$11,529,000	$5,543,000	$0	$87,048,000	$830,020,000	5.0%
$0	$9,586,000	$5,680,000	$228,000	$176,720,000	$989,417,000	71.9%

[2] Obligations include funding available under Section 102 transfer authority.

July 2022

www.doi.gov/wildlandfire

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Produced by Erin McDuff, Public Affairs Specialist, Office of WIldland Fire

Members of the military receive wildland fire training before deploying to support federal wildland firefighters in 2021.

PHOTO BY JOE BRADSHAW, BLM