



# 2019 fire program report

Michigan Department of Natural Resources  
Forest Resources Division  
Fire Management Section



# Michigan's Community Wildfire Protection Program

The Michigan Department of Natural Resources is charged with the suppression and prevention of wildfires in the 1994 Natural Resources and Environmental Protection Act.

The DNR Forest Resources Division houses a nationally-recognized, statewide wildfire program, which protects both public and private lands. Staff members annually respond to an average of 400 wildfires and train to respond to many types of emergencies. They also support forest management activities including prescribed burning, cultivation and infrastructure work.

The central office in Lansing is supported by field units operating at two incident coordination centers in Roscommon and Marquette, four district offices, 17 management unit offices and 30 field offices.



Upper Peninsula prescribed burn

## Weather and fire danger

Overall weather conditions in 2019 were wet, starting with a cool spring that extended snow cover and delayed the start of fire season, followed by fluctuating moisture conditions in summer and ending with a cold and rainy fall.

The first fire the DNR responded to was in March, and the last was in October.

Most fires occurred in April and May, when fuels were dry, prior to "green-up" - the late spring period when plant growth takes off and reduces the potential of fires to spread. August and September saw longer periods between rains, followed by wet, cool fall weather in late September and October that ended the season.

## Renewing the land with prescribed burning



Kirtland's Warbler

Prescribed burns are fires set on purpose by highly-trained experts under the right weather conditions to help control invasive species, create critical habitat for wildlife and help forests grow. They also remove natural materials that, left unchecked, could fuel bigger wildfires.

**92 burns**  
**8,847 acres**

In 2019, DNR staff conducted 92 prescribed burns, treating 8,847 acres of land - nearly 3,000 more acres than in 2018.

These efforts are conducted in cooperation with the proper authorities and local units of government. Public safety is a top priority during all prescribed burns.

Forest management practices including prescribed burning improved jack pine habitat in mid-Michigan. This enabled the recovery of the Kirtland's Warbler from the federal endangered species list in October 2019.

Learn more in our [interactive story map about prescribed burning](#).

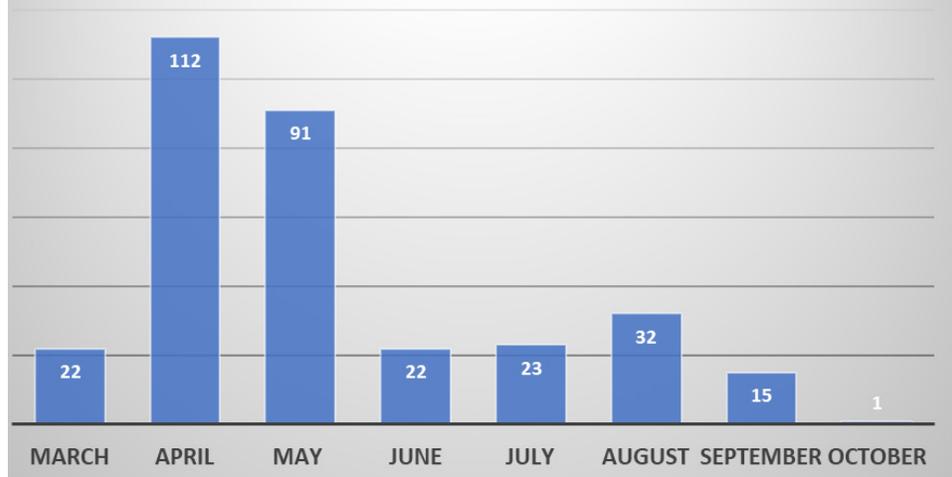
# Wildfire response

**318 wildfires**  
**1,015 acres burned**

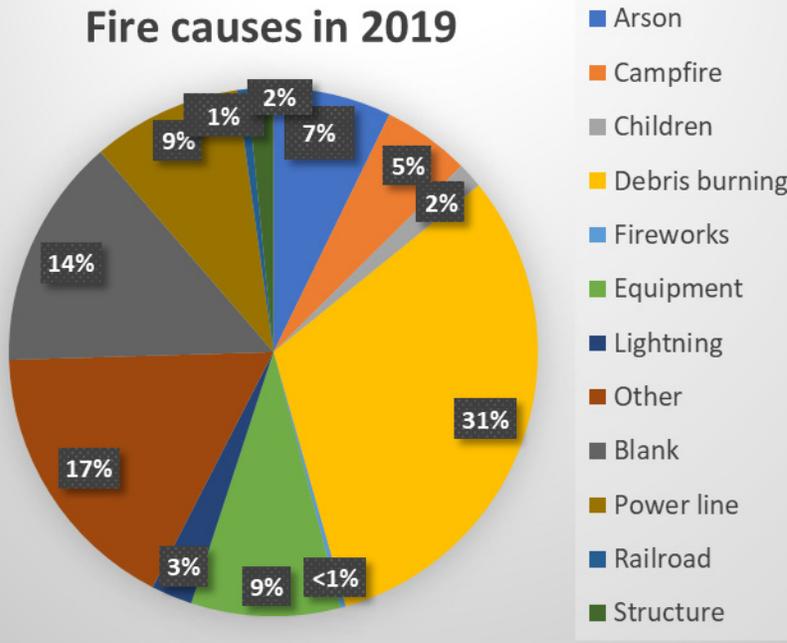
## Fire season summary

DNR fire management staff responded to 318 fires in 2019, which burned a combined 1,015 acres of land. The largest fire occurred near Traverse City, burning nearly 140 acres on April 28. Of the 333 commercial, residential and outbuildings threatened by wildland fire, only 17 were lost, mostly outbuildings.

## Wildfires responded to by DNR in 2019



## Fire causes in 2019



## Fire causes

The majority of 2019 fires were ignited on weekends and were caused by people. The most common cause, consistent with previous years, was debris-burning. This led to 31% of fires, including those started by leaf and brush burning or fires that escaped burn barrels. Other frequent causes were arson, campfires and sparks from equipment.

Always get a burn permit before igniting a fire by checking [Michigan.gov/BurnPermit](https://www.michigan.gov/BurnPermit). Don't burn on a windy day and always have a shovel and water source available. Permits are issued based on fire danger ratings. Ordinances may vary at the local level. Consider other means of leaf and brush disposal, such as composting.

People cause of nine out of 10 wildfires. In Michigan, about three quarters of fires start in the Lower Peninsula, a quarter in the Upper Peninsula. Fire safety information for at home and at a campsite is available on the DNR website at [Michigan.gov/PreventWildfires](https://www.michigan.gov/PreventWildfires).

## Training

DNR fire management staff completed nearly 7,500 hours of training in 2019. Training sessions covered topics including leadership, emergency incident simulations, equipment techniques, fire investigation and fire suppression tactics. In addition to fire prevention and suppression training, DNR fire management staff prepare to assist with responding to a variety of emergency situations.



Tractor plow equipment training in the Upper Peninsula

# Assisting local fire departments

## Volunteer Fire Assistance program grants

Through the [Volunteer Fire Assistance program](#), local volunteer fire departments can receive reimbursement for the cost of critical protective gear, radios, firefighting equipment and other supplies. The funding is provided through a 50/50 federal-state grant. In 2019, 108 grants totaling \$332,773 were provided.

**108 grants**  
**\$332,773 distributed**  
**98 pieces of equipment**  
**12,479 training hours**



Water truck secured for Hersey Township

## Equipment placement through the Federal Excess Property Program

Through the [Federal Excess Property Program](#), the DNR helps place excess military fire equipment with local fire departments, a cost-effective way for departments that often have limited budgets to procure emergency response equipment.

In 2019, the DNR facilitated placement of 98 pieces of equipment with local fire departments, including generators and utility vehicles, valued at \$644,235.

## Local training

In addition to providing funding and gear, the DNR assists with training local fire departments, county emergency managers and university students and participates in joint military training. Nearly 12,500 hours of training was provided in 2019, including comprehensive refresher courses and specialized classes.

# Regional partnerships and out-of-state assistance

Agreements between Michigan and other U.S. states and Canadian provinces ensure that fire management staff can help other jurisdictions and call in assistance to manage wildland fires in our state.

The DNR made 23 dispatches of fire management staff to five out-of-state locations in 2019. Most out-of-state assignments in 2019 were to Washington, continuing a multi-year Engine Boss training partnership. DNR staff and equipment also assisted federal agency staff with fires in the Huron-Manistee National Forest in northern Lower Michigan. The DNR is reimbursed for its assistance on these assignments, and staff get opportunities to sharpen their skills.

Partnerships were put into action when a DNR team was called to assist with firefighting in the remote, off-grid forests and swamps of Keewaywin in Ontario, Canada. The team traveled by helicopter to a two-week assignment where they responded to fires and provided assistance as part of emergency incident management teams.



Michigan DNR team assisting with wildfires in Ontario, Canada

# Infrastructure, facilities and equipment

## Forest road infrastructure

When fire teams are not training or responding to wildfires, they work to improve forest road infrastructure. Safe and reliable roads, bridges and culverts allow access to the forest for wildfire response; for recreation including hunting, fishing and hiking; and for forest products industry uses. They also help prevent erosion, reducing the amount of excess soil that enters waterways, protecting fish and wildlife habitat.

**Nearly 14,000 miles of forest roads**



Alpena County Butterfield Creek road and culvert project

## Upgrading facilities for better service and energy-efficiency

In December 2019, Sault Ste Marie fire and forestry staff moved to a new 18,000-square-foot facility with other DNR staff members. This move helps serve the public by reducing wildfire response times and consolidating fire equipment to a single location.

Individual facility upgrades were targeted toward energy savings and included replacement of older heating units with high-efficiency boilers, replacement of lighting fixtures with cost-saving LED lighting and the addition of insulation to reduce heating costs.



CAT D4 dozer for firefighting

Smokey Bear fire danger signs were installed at additional locations to communicate daily wildfire risk.

## Equipment

The fire section invested in new equipment to respond more effectively to wildfires and keep staff and communities safe. This included two new CAT D4 dozers, which will be fitted with plows at the Forest Fire Experiment Station in Roscommon. Other procured firefighting equipment includes F550 trucks, Navistar units, trailers, chainsaws and generators.

# Wildfire prevention and community outreach



Smokey bear is hugged by children at an event

In 2019, local fire prevention and management staffers attended festivals, fairs, youth events, community parades, school programs and other events to share wildfire prevention messages.

The Smokey Bear fire prevention campaign, which recently celebrated its 75-year anniversary, is a staple of Michigan's youth fire prevention messaging. The program provided additional fire safety outreach through a fire safety advertising campaign, email alerts, radio messages, feature stories, social media and other digital media.



A classroom visit from a fire officer

# Aviation



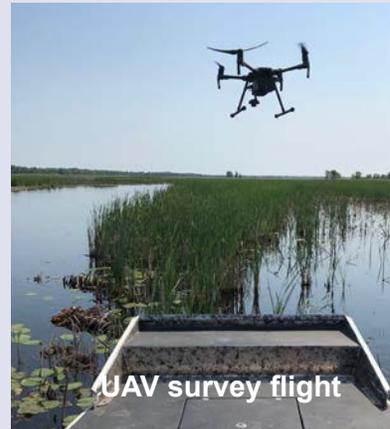
Tecnam P2006T airplane

The DNR's aviation program conducted missions totaling 1,500 flight hours in 2019. Fewer fire detection flights were performed than in the 2018 season due to cool, wet spring weather.

Survey flights scheduled in partnership with DNR wildlife management staff were used to study moose, elk and bald eagle populations.

In addition to piloted flights, 2019 was the second year of the DNR's UAV (uncrewed aerial vehicle) program. These flights are used for aerial photography and video collection, aerial surveys and to save the expense of piloted aircraft.

At the end of 2019, the program purchased a used Tecnam P2006T twin-engine airplane to replace two older aircraft. It will be used to detect fires from the air, relay critical information to ground crews fighting fires, produce aerial photography for fire planning and response, and offer expanded aviation services to other DNR divisions. The operating cost is less than most of the division's single-engine aircraft.



UAV survey flight

## Tools of the trade

Tools for the future of wildland firefighting are being shaped at the DNR's Forest Fire Experiment Station and embedded Roscommon Equipment Center program. The Forest Fire Experiment Station develops wildland firefighting equipment for the DNR. Work in 2019 included developing Ford F-550 medium wildfire engines.



Ford F-550 wildfire engines developed by the Forest Fire Experiment Station



The Roscommon Equipment Center program provides agencies across the nation with specialized wildland firefighting equipment in its cutting-edge design and fabrication shop. In 2019, the shop designed and fabricated an educational game to teach youth about the dangers of campfire embers and share fire prevention techniques. More information is available at [Michigan.gov/RoscommonEquipmentCenter](https://Michigan.gov/RoscommonEquipmentCenter).