

Drone Incursion Interference with Wildfire Suppression Activities on Federal Lands Over the Past Five Years

Request: The Forest Service, in consultation with the Bureau of Land Management, shall report to the Committees on Appropriations within 180 days of enactment of this Act, on the number of times that a drone incursion has interfered with wildfire suppression activities on federal lands in the past five calendar years, the actions taken to prevent drone incursions, and recommendations to prevent future incursions.

Aviation is a critical part of wildfire suppression operations needed to protect lives and communities. Aerial firefighting activities utilize a wide array of aircraft and require secured airspace to ensure safe air operations. The Federal Aviation Administration (FAA) has regulatory authority over all airspace in the United States. During a wildfire, the FAA will often implement Temporary Flight Restriction¹ and designate areas over the Temporary Flight Restriction as an Airspace Coordination Area² to protect aircraft involved in wildfire operations. Despite these restrictions, there have been 93 cases of drone incursions³ within wildfire areas over the past five calendar years (Table 1). Of the 93 reported cases, 56 instances of drone incursions temporarily halted aviation operations above federal lands and seven instances of drone incursions required aviation operations to be relocated to another area of the fire. The remaining 30 reported drone incursions did not halt or relocate aviation operations but interfered in the Fire Traffic Area or Temporary Flight Restriction area, where pilot attention was diverted from the suppression mission to provide for aviation safety and follow reporting procedures.

Unauthorized drone flights pose serious risks to firefighter and public safety and the effectiveness of wildfire suppression operations. Most aerial firefighting activities occur at low altitudes, like drones, which are small, difficult to locate, and operate at low speeds. Drone incursions within wildfire areas with active aerial operations create a collision risk and may result in aircraft being grounded until the threat is mitigated. These delays adversely affect the safety and efficiency of the overall firefighting effort. However, it does appear that while the popularity of drones is increasing, our partnerships and outreach efforts are making a difference, as we have seen a decrease in reported drone incursions that halted aviation operations over wildland fire incidents since 2017.

¹ 14 CFR § 91.137 Temporary flight restrictions in the vicinity of disaster/hazard areas.

² The FAA may establish an Airspace Coordination Area, that denotes a volume of airspace over a disaster area in which participating aircraft operations warrant increased vigilance by all pilots. This Airspace Coordination Area generally covers a large area encompassing one or more Temporary Flight Restriction areas.

³ An incursion occurs when an unauthorized aircraft violates a TFR area.

Table 1. Drone Incursions Interfering with Aviation Operations from 2016-2020.

State	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Total
Alaska	-	-	-	-	1	1
Arizona	3	7	2	2	4	18
California	4	4	1	3	3	15
Colorado	1	2	2	-	4	9
Idaho	2	-	7	-	-	9
Montana	1	4	-	-	-	5
North Carolina	-	1	-	-	-	1
New Mexico	1	2	1	-	1	5
Nevada	2	2	-	1	-	5
Oregon	-	1	1	-	-	2
Utah	6	1	3	3	-	13
Washington	1	2	1	1	-	5
Wyoming	1	3	1	-	-	5
Total	22	29	19	10	13	93

The Forest Service and federal partners have taken steps to mitigate drone incursions within active wildfire areas, including partnering with aviation and non-profit organizations, information campaigns to educate the public about the dangers of flying drones over wildfires, and imposing penalties for interfering with firefighting aviation operations.⁴ For example, the Forest Service partnered with *Tread Lightly!*[®] to develop multimedia resources for responsible drone operation.⁵

In February 2019, the National Wildfire Coordinating Group, of which the Forest Service is a member, created a public information campaign that provided unmanned aircraft system communication and education material, as well as public service announcements regarding firefighting airspace avoidance. This information is posted on the National Interagency Fire Center's website.⁶ The Forest Service and the Bureau of Land Management have also reached out to the Aircraft Owners and Pilots Association to provide information on situational awareness around wildland fires, Temporary Flight Restriction, and Airspace Coordination Areas. Federal land management agencies also have several Letters of Agreement and Memoranda of Understanding with the Department of Defense to limit airspace conflicts and prevent unmanned aircraft intrusions during wildfire incidents.

⁴Federal Land Management Agency Law Enforcement Officers may assist in locating the pilot, seize the drone, and issue a citation for the offenses to the suspect. If the infraction was inside of the Temporary Flight Restriction area, they could also include the FAA investigator who would then have the authority to initiate FAA enforcement and penalties including: (1) being criminally punished up to a maximum of one year in federal prison and a \$100,000 fine, (2) suspension or revocation of pilot license, and/or (3) receive a civil penalty by itself or on top of the \$100,000 fine. The FAA can also complete a Compliance Action for educational purposes. The imposition depends on the severity, carelessness, recklessness and/or outcome of the incursion.

⁵ <https://treadlightly.org/learn/recreation-tips/drones/>

⁶ <https://www.nifc.gov/drones/outreach.html>

While much has been done, there are additional actions that should be taken to prevent future incursions. The Forest Service will continue to work with the National Aeronautics and Space Administration and the FAA on its Scalable Traffic Management for Emergency Response Operations⁷ project. Implementing their Unmanned Aircraft Systems Traffic Management⁸ will allow participating aircraft to locate drones and enable secure fire traffic areas within a Temporary Flight Restriction area during wildfire suppression operations. Additional information is available at the following link: <https://www.nasa.gov/ames/stereo>.

Continuing to work with the FAA developing airspace management solutions that provide flexibility and adaptability during rapidly changing conditions on wildfire disasters, as well as the ongoing partnerships with *Tread Lightly!*[®] and the Department of Defense, continued public information campaigns such as *If You Fly, We Can't* and others delivered through the National Interagency Fire Center, are also important to prevent drone incursions during wildfire suppression operations.⁹

⁷ <https://www.nasa.gov/ames/stereo>

⁸ <https://www.nasa.gov/ames/utm>

⁹ *If You Fly, We Can't!* Forest Service Unmanned Aircraft System PSA - YouTube