

## Glossary

**Firefighting Aircraft** means support of the firefighters on the ground from aircraft in the air. Aircraft can access steep, rocky or unsafe areas before ground forces are able to gain entry. CAL FIRE has the largest state owned firefighting air fleet including 23 airtankers, 12 helicopters and 17 air attack aircraft.

**Air Attack or Air Tactical Aircraft** is an airplane that flies over an incident, providing tactical coordination with the incident commander on the ground, and directing airtankers and helicopters to critical areas of a fire for retardant and water drops. CAL FIRE uses OV-10s for its air attack missions.

**Airtanker** is a fixed-wing aircraft that can carry fire retardant or water and drop it on or in front of a fire to help slow the fire down. CAL FIRE uses Grumman S-2T airtankers for fast initial attack delivery of fire retardant on wildland fires. The S-2T carries 1,200 gallons of retardant and has a crew of one – the pilot.

**Helicopter** is a rotary-wing aircraft that can be fitted with a tank or carry a bucket with water or fire retardant. The tanks or buckets can be filled on the ground by siphoning water from lakes, rivers or other water sources. CAL FIRE uses UH-1H Super Huey helicopters for fast initial attack on wildfires. CAL FIRE's copters are able to quickly deliver a nine-person fire crew wherever needed as well as battle fires with water/foam drops.

**Fire Retardant** is a slurry mix consisting of a chemical salt compound, water, clay or a gum- thickening agent, and a coloring agent. The retardant is used to slow or retard the spread of a fire. At nine pounds per gallon, an S-2T can carry 10,800 pounds.

**Initial Attack** means the first attack on the fire. The number of resources sent on the first dispatch to a wildfire depends upon the location of the fire, the fuels in the area (vegetation, timber, homes, etc) and current weather conditions. Municipal fire departments would call this the first alarm. Most fires are caught within the first burn period (the first two hours). Therefore, the vast majority of the fires CAL FIRE responds to are considered initial attack fires.

**Extended Attack** means that the fire has burned beyond the area of origin, and beyond the initial attack phase, and additional resources are called. If the fire cannot be confined in the area of origin even with a substantial addition of resources, and a long-term resource commitment and logistical support will be required, then it is considered a major attack or a major fire.

For more information,  
Contact one of these offices:

Aviation Management Unit	(916) 561-3333
Headquarters	(916) 653-5123
Northern Region Operations	(530) 224-2489
Southern Region Operations	(951) 782-4140

Or contact your local CAL FIRE Unit



[www.fire.ca.gov](http://www.fire.ca.gov)



## CAL FIRE Aviation Quick Guide

The CAL FIRE Air Program has long been the premier firefighting aviation program in the world. CAL FIRE's fleet of over 50 fixed wing and rotary wing, make it the largest department owned fleet of aerial firefighting equipment in the world. CAL FIRE's aircraft are strategically located throughout the state at CAL FIRE's 12 airbases and 10 helicopter bases.



## Grumman S-2T

**Number of Airtankers: 23**  
**Type: S-2T airtanker**  
**Max. Speed: 235 knots (270 mph)**  
**Gallons Carried: 1,200**

CAL FIRE first began using airtankers in the 1950s when agriculture spraying planes were used to drop water on fires. In 1958, CAL FIRE, then CDF, contracted with a private airtanker service for the use of their converted World War II aircraft. By 1970 the department began to evaluate the use of former military Grumman S-2 aircraft. In 1987, CAL FIRE began the process of upgrading the engines to turbine driven. By 2005 all of CAL FIRE's airtanker fleet had been converted to S-2T airtankers. Today CAL FIRE utilizes the S-2T air tankers for fast initial attack delivery of fire retardant on wildland fires.



## OV-10 "Bronco"

**Number of Air Tactical Aircraft: 15**  
**Type: Rockwell OV-10**  
**Max. Speed: 225 knots (258/280 mph)**

In the mid 1970s the department found that the contractor-owned air attack planes did not provide the airspeed and safety needed for the new airtanker program. In 1993, CAL FIRE obtained and converted 15 North American OV-10As aircraft from the DOD. CAL FIRE uses OV-10s as aerial command and control of aircraft on wildland fires. The crew provides tactical coordination with the incident commander on the ground, providing information on the movement and spread of the fire and then directs CAL FIRE's airtanker and helicopter pilots where to make their retardant and water drops. In 2009, CAL FIRE also acquired and converted an OV-10D to the fleet.



## UH-1H "Super Huey"

**Number of Helicopters: 12****Type: UH-1H Super Huey**  
**Max. Speed: 110 knots (126 mph)**  
**Gallons Carried: 360**

CAL FIRE utilizes the Super Hueys for fast initial-attack on wildland fires; they can quickly deliver a nine- person fire crew wherever needed as well as battle fires with water/foam drops. The copters are also utilized for medical evacuations, backfiring operations, infra-red mapping of incidents and numerous non-fire emergency missions. CAL FIRE helicopter crews are highly trained for hoist rescues. A hoist rescue involves a crew-member being lowered from a hovering helicopter to an injured or trapped person below, the victim and crew-member are then hoisted back into the aircraft.



*If you see smoke stay at least 7 NM away.  
Remember fire fighting aircraft may approach  
from any direction. Advise nearest FSS/ATC facility*

National Interagency Airspace:  
<http://www.airspace.nifc.gov>