



Glossary

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Aerial Delivery System: A fixed- or rotary-winged aircraft and attached tank and gating system capable of delivering firefighting chemicals.

Aerial Drop: A release of firefighting chemical from an aerial delivery system.

Airtanker: Fixed-wing aircraft capable of transport and delivery of fire retardant solutions.

Baffling: Partitioned walls placed in tanks to reduce shifting of the liquid load and to give the tank greater structural integrity.

Conformance Test: Once a tank and gating system has passed the static test, a conformance test is conducted to determine if airtankers of a similar type will meet the retardant requirements without the extensive testing needed to qualify flow rates.

Contour Plot: A graphical picture on which the characteristics of a surface are shown by contour lines. In drop testing the contour line is a line that joins points of equal coverage level on a surface. Also called a ground distribution pattern.

Conventional tank: Airtankers that divide the retardant load into multiple isolated compartments. The release system is designed to open the doors of these compartments over an interval of time (seconds) resulting in the building of retardant line.

Coverage Level: The volume in gallons of retardant applied to 100 square feet of surface. Coverage level 2 represents 2 gallons per hundred square feet (gpc).

Drop Test: A test of an aerial delivery system performed by releasing firefighting chemicals over a cup and grid matrix to determine the coverage level production of the system for each drop type.

Flow rate: The rate at which the retardant exits the tank or bucket, usually expressed in gallons per second.

Gate: Refers to the door area and release mechanism of a tank.

gpc: A unit for measuring coverage expressed in gallons per one hundred square feet.

Ground pattern: The characteristics of a retardant dropped on the ground. Length, width, area, and coverage level (expressed in gpc).

Helicopter bucket: A container suspended below a helicopter usually used for dipping water for fire fighting. The gate can be operated from the cockpit to release the load.

Helitanker: A helicopter equipped with a fixed-tank capable of lifting 1000 gallons of water at sea level.

IAB (Interagency Airtanker Board): A seven-member group which administers an evaluation and testing process to determine acceptable aircraft and tank and gate system performance. Members come from the Department of Agriculture and the Department of Interior. The IAB is chartered by the National Interagency Aviation Council.

Nonconventional tank: Airtankers that do not rely on intervals to vary volumes released. The tanks do not divide the load into isolated compartments and the pilot directly selects the desired coverage level and release volume. (Examples include constant flow and MAFFS)

Static test: A test where water is dropped from the tank which is either attached to the parked aircraft or on a stand. The flow rate, door opening rate, and internal tank pressure are measured to characterize the system.

Tank and gating system: Tank, doors, and release mechanism installed in aircraft to release a drop.

Torque tubes: A hydraulically or pneumatically powered, rotating shaft to open and close the doors.

Venting: The openings in the tank vents used to allow air into the tank.