

24 entries — every glossary entry under this letter, no curation. Reproduced verbatim from the Pilot's Handbook of Aeronautical Knowledge (FAA-H-8083-25C (July 2023)), Glossary.

## WAAS

See wide area augmentation system.

FAA definition of **Wide area augmentation system (WAAS)**:

A differential global positioning system (DGPS) that improves the accuracy of the system by determining position error from the GPS satellites, then transmitting the error, or corrective factors, to the airborne GPS receiver.

## Wake turbulence

Wingtip vortices that are created when an airplane generates lift. When an airplane generates lift, air spills over the wingtips from the high pressure areas below the wings to the low pressure areas above them. This flow causes rapidly rotating whirlpools of air called wingtip vortices or wake turbulence.

## Warm front

The boundary area formed when a warm air mass contacts and flows over a colder air mass. Warm fronts cause low ceilings and rain.

## Warning area

An area containing hazards to any aircraft not participating in the activities being conducted in the area. Warning areas may contain intensive military training, gunnery exercises, or special weapons testing.

## WARP

See weather and radar processing.

## Waste gate

A controllable valve in the tailpipe of an aircraft reciprocating engine equipped with a turbocharger. The valve is controlled to vary the amount of exhaust gases forced through the turbocharger turbine.

## Waypoint

A designated geographical location used for route definition or progress-reporting purposes and is defined in terms of latitude/longitude coordinates.

## WCA

See wind correction angle.

FAA definition of **Wind correction angle (WCA)**:

The angle between the desired track and the heading of the aircraft necessary to keep the aircraft tracking over the desired track.

## Weather and radar processor (WARP)

A device that provides real-time, accurate, predictive, and strategic weather information presented in an integrated manner in the National Airspace System (NAS).

## Weather depiction chart

Details surface conditions as derived from METAR and other surface observations.

## Weight

The force exerted by an aircraft from the pull of gravity.

## Wide area augmentation system (WAAS)

A differential global positioning system (DGPS) that improves the accuracy of the system by determining position error from the GPS satellites, then transmitting the error, or corrective factors, to the airborne GPS receiver.

## Wind correction angle (WCA)

The angle between the desired track and the heading of the aircraft necessary to keep the aircraft tracking over the desired track.

## Wind direction indicators

Indicators that include a wind sock, wind tee, or tetrahedron. Visual reference will determine wind direction and runway in use.

## Wind shear

A sudden, drastic shift in windspeed, direction, or both that may occur in the horizontal or vertical plane.

## Winds and temperature aloft forecast (FB)

A twice daily forecast that provides wind and temperature forecasts for specific locations in the contiguous United States.

## Wing area

The total surface of the wing (in square feet), which includes control surfaces and may include wing area covered by the fuselage (main body of the airplane), and engine nacelles.

## Wings

Airfoils attached to each side of the fuselage and are the main lifting surfaces that support the airplane in flight.

## Wing root

The wing root is the part of the wing on a fixedwing aircraft that is closest to the fuselage. Wing roots usually bear the highest bending forces in flight and during landing, and they often have fairings to reduce interference drag between the wing and the fuselage. The opposite end of a wing from the wing root is the wing tip.

## Wing span

The maximum distance from wingtip to wingtip.

## Wingtip vortices

The rapidly rotating air that spills over an airplane's wings during flight. The intensity of the turbulence depends on the airplane's weight, speed, and configuration. Also referred to as wake turbulence. Vortices from heavy aircraft may be extremely hazardous to small aircraft.

## Wing twist

A design feature incorporated into some wings to improve aileron control effectiveness at high angles of attack during an approach to a stall.

## Work

A measurement of force used to produce movement.

## World Aeronautical Charts (WAC)

A standard series of aeronautical charts covering land areas of the world at a size and scale convenient for navigation (1:1,000,000) by moderate speed aircraft. Topographic information includes cities and towns, principal roads, railroads, distinctive landmarks, drainage, and relief. Aeronautical information includes visual and radio aids to navigation, airports, airways, restricted areas, obstructions and other pertinent data.