

Quick Crosswind Estimate

Featuring [Tom Turner](#), AOPA Pilot Workshop

Subscriber question:

"Is there a quick and easy way to estimate the crosswind component when landing, without a lot of calculation?" - Neal M.

"While pilots may compute the crosswind component for takeoff and decide whether or not to fly, we almost never compute the crosswind component for landing after hearing ATIS, AWOS or other current wind reports. We use the reported wind to decide which runway to use at a non-towered airport, but it's extremely rare when a pilot decides not to attempt the landing at all and diverts to another airport.

When you get the local winds and choose or are assigned a landing runway, take a moment to estimate the crosswind component using these rules of thumb:

- If the wind differs from the runway heading by **15 degrees**, the crosswind component is roughly **one-quarter** or 25% of the wind velocity. Divide the reported wind speed by four to estimate the crosswind component.
- If the difference between the wind and runway heading is **30 degrees**, the crosswind is **half** of the reported wind speed.
- If the wind makes a **45-degree** angle with the runway, the crosswind component is **three-quarters** or 75% of the overall wind speed.
- When the windsock is pointing **60 degrees** or more from the runway centerline, assume the crosswind component is the **same** as the reported wind speed.



Listening to AWOS or otherwise learning the winds at your planned destination drives two decisions: which runway to use, and whether to try landing at that airport at all.

History shows most loss of directional control during landing crashes occur with less than 10 knots crosswind component. Compute and record the crosswind component for every landing you make, with a subjective judgment of your level of comfort making that landing. If your personal crosswind comfort gets down to five knots, or less than the typical crosswinds you encounter, it's time get some dual instruction on crosswind landings."