



Kristyn Blocher  
Air Safety Investigator  
AS-WPR

**Date:** 9/16/24

**Subject:** WPR24FA298 Density Altitude Calculations

Density altitude for the accident site was calculated based on the nearest available recorded weather around the time of the accident. The Portland-Troutdale Airport (TTD) METAR at 1253 stated KTTD 061953Z 31005KT 10SM CLR 31/14 A2994 which reads:

Aerodrome Routine Meteorological Report at TTD on September 6, 2024, at 1953 Zulu (1253 Pacific standard time) showed wind at 310° at 5 knots, 10 statute miles visibility, sky clear, temperature 31° C, dewpoint 14° C, altimeter setting 29.94.

The field elevation at TTD was 39 ft mean sea level (msl) and the calculated density altitude at TTD was 1,929 ft. (Figure 1)

The elevation of the accident site was 2,751ft msl. The standard lapse rate of 2°C per 1,000 ft of elevation was incorporated, and the calculated density altitude near the accident site, around the time of the accident was 4,626 ft. (Figure 2)

## Density Altitude Calculator

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### Altimeter Setting to Pressure Altitude

Altimeter Setting ☒ in/hg ☐ hpa

Field Elevation ☒ ft ☐ mt

Pressure Altitude (ft)

[What is the formula?](#)

### Pressure Altitude to Density Altitude

Pressure Altitude ☒ ft ☐ mt

True Altitude (ft)

Standard (ISA) Temperature ☒ °C ☐ °F

Air Temperature (OAT) ☒ °C ☐ °F

Density Altitude (ft)

Figure 1. TTD density altitude calculation.

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Density Altitude (ft)

Figure 2. Accident site density altitude calculation.