1.8 Report on Vertical Accuracy (Tiled Data)

The USGS LiDAR Base Specification Version 1.0 states that: "Vertical Accuracy of the LiDAR data will be assessed and reported in accordance with the guidelines developed by the NDEP and subsequently adopted by the ASPRS.

(1) The minimum vertical accuracy requirement for the unclassified lidar point cloud, using the NDEP/ASPRS methodology, is listed below:. See: http://www.ndep.gov/NDEP_Elevation_Guidelines_Ver1_10May2004.pdf

(2) Fundamental Vertical Accuracy (FVA)<= 24.5 centimeters (cm) Accuracyz (ACCz), 95 percent (12.5 cm Root Mean Square Error (RMSE)z).

(3) Accuracy for the LiDAR point cloud data is to be reported independently from accuracies of derivative products (i.e., DEMs). Point cloud data accuracy is to be tested against a TIN constructed from bare-earth LiDAR points.

Point cloud data accuracy is to be tested against a Triangulated Irregular Network (TIN) constructed from lidar points in clear and open areas. A clear and open area can be characterized with respect to topographic and ground cover variation such that a minimum of 5 times the NPS exists with less than 1/3 of the RMSEz deviation from a low-slope plane. Slopes that exceed 10 percent should be avoided. Ground that has been plowed or otherwise disturbed is not acceptable. All tested locations should be photographed showing the position of the tripod and the surrounding area ground condition."

The purpose of this section is to report on the fundamental vertical accuracy of the LiDAR data measured against surveyed ground check points.

This reports only the Fundamental Vertical Accuracy (FVA)

E:\Pope_Hardin\QAQC2\1_8\Report_VerticalAccuracy.csv
Units: US Survey Feet (/Meter)

	Classified Data
Control Points	20
Points with Coverage	20
Points With Required Accuracy	20
Percent of Points With Required Accuracy	100.00%
Average Z Error	0.09/0.03
Maximum Z Error	0.37/0.11
Median Z Error	0.11/0.03
Minimum Z Error	-0.31/-0.09
NSSDA Vertical Accuracy at the 95 confidence level	0.34/0.10 PASS
Standard Deviation (sigma) of Z for Sample	0.15/0.05
RMSE of Z for Sample	0.17/0.05 PASS
FGDC/NSSDA/FEMA Contour Interval	0.60/0.18
ASPRS Contour Interval	0.60/0.18
NMAS Contour Interval	0.60/0.18

1.8 Report on Vertical Accuracy (Tiled Data)

The purpose of this section is to show a frequency distribution chart of the the fundamental vertical accuracy of the LiDAR data measured against surveyed ground check points.

Data Source - E:\Pope_Hardin\Classified_LAS

Z Error