Data Validation Report

from the National Geospatial Technical Operations Center in Support of the 3D Elevation Program

CA_SierraNevada_9_2022

2024-06-11

Project Name: CA_SierraNevada_B22

Report Date: 2024-06-11

Based on this review, the delivered data is **EXPECTED TO MEET** 3D Elevation Program requirements.

Work Unit Summary Information

Project Name: CA_SierraNevada_B22	**Project ID:** 224823	
WU Name: CA_SierraNevada_9_2022	**Work Unit ID:** 300364	
Mechanism: GPSC	**Lidar Base Spec:** Lidar Base Specification 2022 rev. A.	
Quality Level: 1	**P-Method:** 7 - Linear-Mode Lidar	
Horizontal EPSG Code: 6340	**Vertical EPSG Code:** 5703	**Geoid Model:** GEOID18
The National Map Help Desk Email: tnm_help@usgs.gov		

The U.S. Geological Survey evaluates absolute vertical accuracy of the lidar and lidar-derived bare earth digital elevation model (DEM) data at the project level. Data are produced to meet 9.8 cm absolute vertical accuracy at the 95-percent confidence level in non-vegetated, open terrain. To review vertical accuracy results, please see the project report

Breaklines

Based on this Review, the USGS-NGTOC **ACCEPTS** the Breaklines

Breaklines are visually reviewed in conjunction with the bare earth DEM for spatial and geometric accuracy. Breaklines are confirmed to be three dimensional (3D) features and that elevations are at or just below the immediately surrounding terrain. Single- and double-line drainages are reviewed to ensure downstream flow. The USGS recognizes that differences in collection methodology, resampling techniques, and other factors that are unique to proprietary production do occur, and these will result in minor horizontal and vertical differences between breaklines derived on the fly.

Reporting Metadata

Based on this Review, the USGS-NGTOC **ACCEPTS** the Reporting Metadata

Reports from the contractor, including calibration, collection, and processing methods, are reviewed for accurate information. For more information, please see the work units metadata.

FGDC XML Metadata

Based on this Review, the USGS-NGTOC **ACCEPTS** the FGDC XML Metadata

CSGDM .xml metadata are parsed using the USGS Geospatial Metadata Validation Service and reviewed for accurate information. CSDGM is maintained by the Federal Geographic Data Committee (FGDC).

Spatial Metadata

Based on this Review, the USGS-NGTOC **ACCEPTS** the Spatial Metadata

Spatial metadata from the contractor, including raster and vector datasets, are evaluated together with pertinent deliverables for geometric fidelity and attribution accuracy. For more information, please see the work units metadata.

DEM

Based on this Review, the USGS-NGTOC **ACCEPTS** the DEM

Visual review is performed on .tif bare earth rasters at a 1:5,000 or larger viewing scale to validate point cloud geometry, raster processing methodology, point classification, and breaklines. Comprehensive review is completed to ensure consistency and accuracy across all files. For additional information, please see this work units metadata folder.

Pointcloud

Based on this Review, the USGS-NGTOC **ACCEPTS** the Pointcloud

Visual and statistical review is performed on classified .las files to validate adherence to contracted specifications. A comprehensive review is completed to ensure consistency and accuracy across all files, including the spatial reference system. Classification verification is limited to the minimum required by applicable Lidar Base Specification. Classifications beyond the minimum are not verified by USGS. LAS files are evaluated to ensure the public header block, point data records, and variable/extended variable length records are correctly populated. For additional information, please see the work units metadata folder.