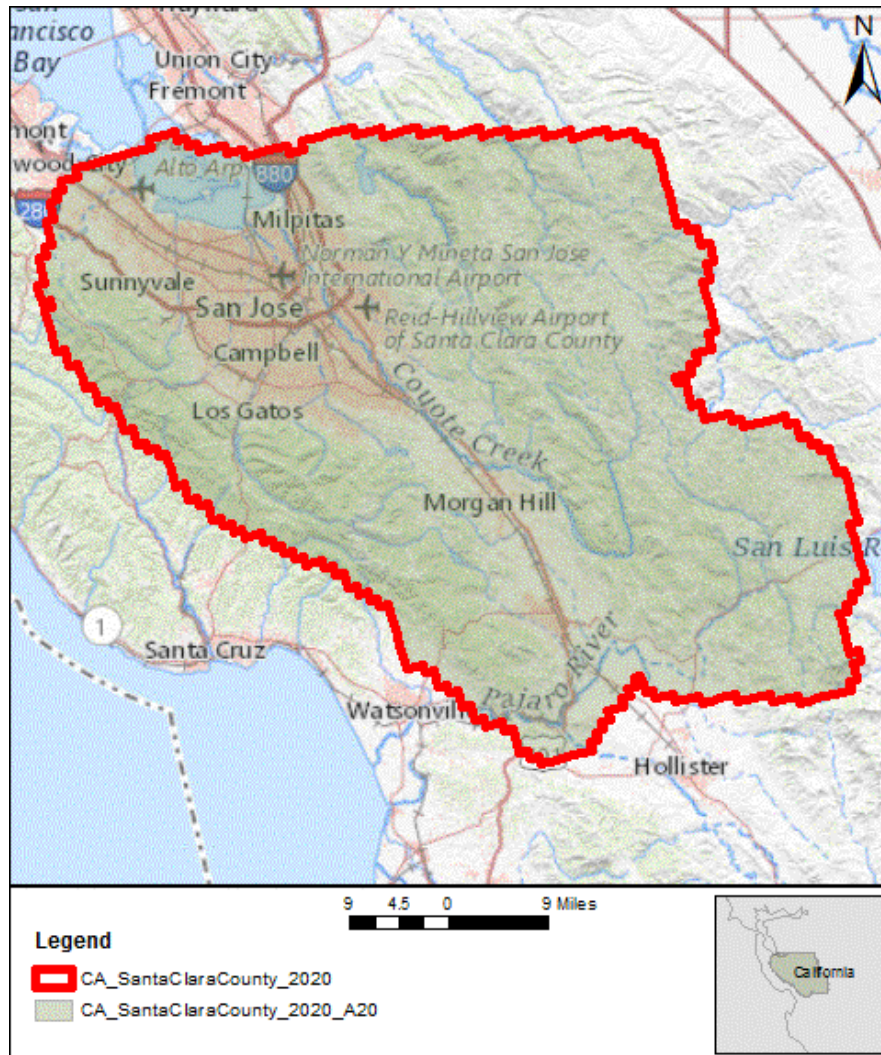


Data Validation Report

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

CA_SantaClaraCounty_2020

2021-04-26



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

Work Unit Summary Information

WP Name: CA_SantaClaraCounty_2020_A20	Work Package ID: 190593
WU Name: CA_SantaClaraCounty_2020	Work Unit ID: 190591
Mechanism: Partnership	Lidar Base Spec: 2.1
Quality Level: 1	P-Method: 7 - Linear-Mode Lidar
Horizontal EPSG Code: 6420	Vertical EPSG Code: 6360 Geoid Model GEOID 12B
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 work package 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 work package 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.

Error Type	Subtype	Quantity
Geometry Error	Z-Values	0
Dictionary Description: The elevation value of a breakline's vertices are not at or below the immediately surrounding terrain. This can result in waterbodies that appear to be sunken or floating.		
Missing Feature	Waterbody	0
Dictionary Description: There is a waterbody that meets the contracted collection size that is not encompassed with a breakline.		

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.

Other

Based on this review, the USGS-NGTOC **ACCEPTS** the Other.

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.

Error Type	Subtype	Quantity
Collection	Density	1
Dictionary Description: Point density for specific file(s) appears to be excessively high or low compared to the expected values.		
Header Properties	File Creation	1
Dictionary Description: The file creation (day and/or year) was incorrectly populated.		
Point Mis-classification	None	0
Dictionary Description: There is an incorrect classification of points. Text field will be used to specify.		