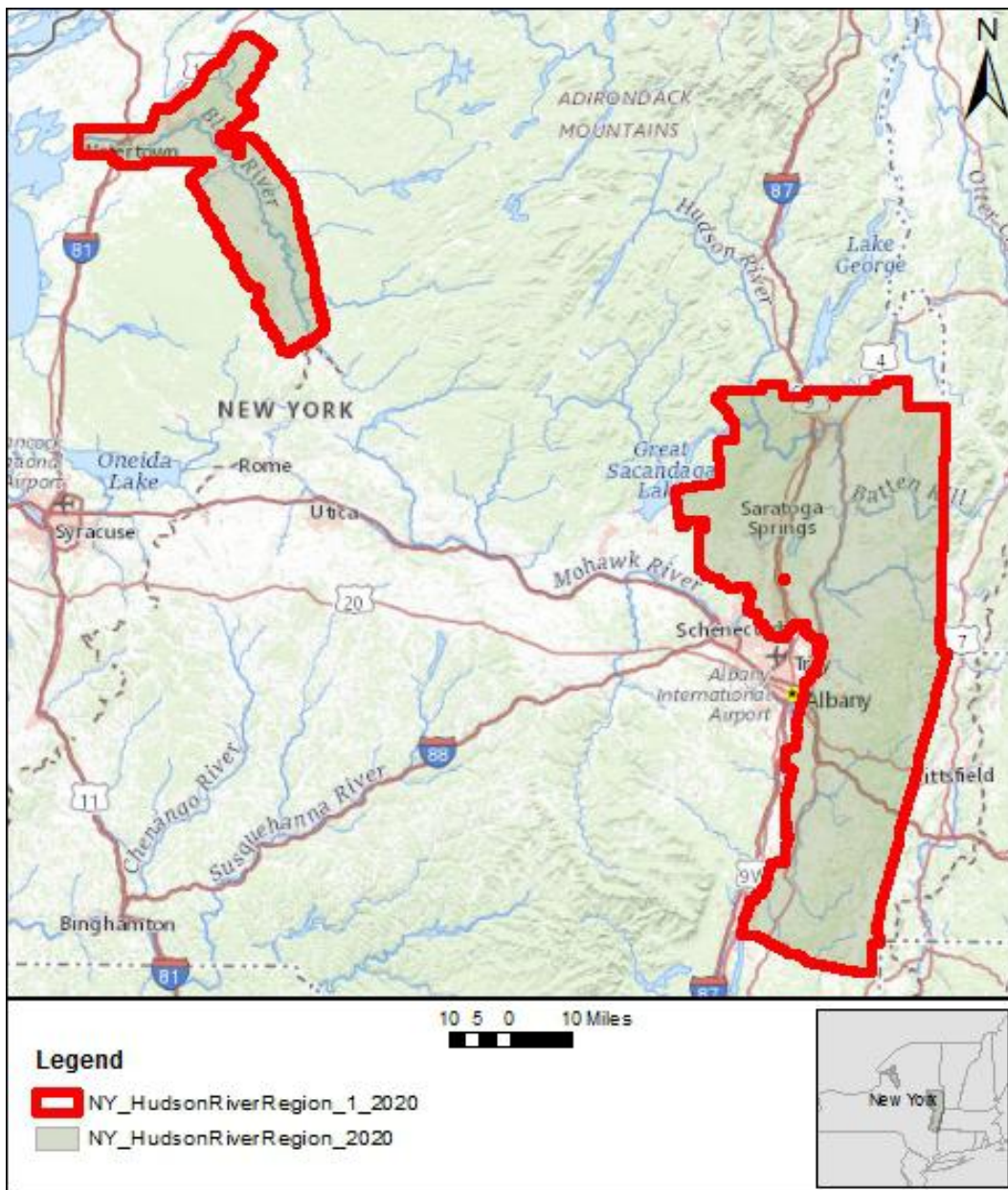


# Data Validation Report

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

## NY\_HudsonRiverRegion\_1\_2020

2022-05-24



Based on this review, the delivered data **DOES NOT MEET** 3D Elevation Program requirements.

## Work Unit Summary Information

<b>Project Name:</b> NY_HudsonRiverRegion_2020_A20	<b>Project ID:</b> 192494
<b>WU Name:</b> NY_HudsonRiverRegion_1_2020	<b>Work Unit ID:</b> 192491
<b>Mechanism:</b> Partner	<b>Lidar Base Spec:</b> 2.1
<b>Quality Level:</b> 2	<b>P-Method:</b> 15 - Geiger Mode Lidar
<b>Horizontal EPSG Code:</b> 6347	<b>Vertical EPSG Code:</b> 5703 <b>Geoid Model:</b> GEOID 12B
<b>The National Map Help Desk Email:</b> 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 **DOES NOT ACCEPT** 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	Downstream Constraint	6

**Dictionary Description:** Water feature does not present a gradient downhill surface that follows the immediately surrounding terrain.

Geometry Error	River/Stream Segment(s)	1
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**Dictionary Description:** A stream or river feature that is broken up into discontinuous segments when it should be a single collected water feature.

Geometry Error	Under Extended Breakline	10
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**Dictionary Description:** Breakline that underrepresents the full extent of the water body.

Missing Feature	River/Stream	2
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**Dictionary Description:** There is a river or stream 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.



Project Name: NY\_HudsonRiverRegion\_2020\_A20

Report Date: 2022-05-24

## FGDC XML Metadata

Based on this Review, the USGS-NGTOC **DOES NOT ACCEPT** the FGDC XML Metadata

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

Error Type	Subtype	Quantity
<a href="#">Content Inaccurate</a>	None	9
<b>Dictionary Description:</b> There is incorrect information in the XML metadata files. Tag location and description of occurrence will be indicated in text field.		
<a href="#">Failed Parser</a>	None	2
<b>Dictionary Description:</b> FGDC XML Metadata parses with errors through the USGS Geospatial Metadata Validation Service.		

## Spatial Metadata

Based on this Review, the USGS-NGTOC **DOES NOT ACCEPT** 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.

Error Type	Subtype	Quantity
<a href="#">Incorrect Geometry</a>	None	1
<b>Dictionary Description:</b> One or many aspects of the spatial features' geometry is incorrect. Description of error will be in text field.		

## 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 **DOES NOT ACCEPT** 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
<a href="#">Header Properties</a>	<a href="#">Spatial Reference</a>	1
<b>Dictionary Description:</b> The Coordinate Reference System information is incorrect for some or all LAS files.		