

**Project Definition:** The entire collection for a contracted area.

**Work Unit Definition:** A production block of data defined by the National Geospatial Technical Operations Center due to expediency, priority or resource allocation. There can be one or many work units per project.

### Project Information

<b>Lidar Base Specification:</b> 2.1	<b>Primary Contractor:</b> Quantum Spatial Inc. (QSI)
<b>Las Version:</b> 1.4	<b>Contract Mechanism:</b> GPSC
<b>P Method:</b> 13 - Topobathymetric Lidar	
<b>Collection Start Date:</b> 11-26-2019	<b>Collection End Date:</b> 08-25-2020
<b>The National Map Email:</b> tnm_help@usgs.gov	

### Vertical Accuracy Results

The U.S. Geological Survey evaluates absolute vertical accuracy of the lidar and lidar-derived bare earth DEM data at the project level

Lidar Point Cloud	Required NVA RMSEz (cm)	Tested NVA RMSEz (cm)	Required NVA at 95% confidence level (cm)	Tested NVA at 95% confidence level (cm)	Required VVA at 95th percentile (cm)	Tested VVA at 95th percentile (cm)
	10.0	<b>3.34</b>	19.6	<b>6.55</b>	N/A	<b>18.32</b>

Digital Elevation Model	Required NVA RMSEz (cm)	Tested NVA RMSEz (cm)	Required NVA at 95% confidence level (cm)	Tested NVA at 95% confidence level (cm)	Required VVA at 95th percentile (cm)	Tested VVA at 95th percentile (cm)
	10.0	<b>3.34</b>	19.6	<b>6.55</b>	30.0	<b>19.06</b>

Please see the vertical\_accuracy folder within the project metadata for more information.

### Classifications Used

Classification verification is limited to the minimum required by applicable Lidar Base Specification. Classifications beyond the minimum are not verified by USGS.

Classification ID	Classification Type
1	Processed, But Unclassified
2	Bare Earth
7	Low Noise
9	Water
17	Bridge Deck
18	High Noise
20	Ignored Ground
40	Bathy Bottom
41	Water Surface
45	Water Column

## Sensor(s) Used

Sensor
Riegl VQ-1560i - Aerial Oscillating Mirror
Riegl VQ-1560ii - Rotating Polygonal Mirror
Riegl 1560ii/ii-s - Rotating Polygonal Mirror
Leica Chiroptera 4x - Aerial Oscillating Mirror
Riegl VQ-880-GII - Rotating Polygon Mirror
Leica HawkEye 4X Deep Bathymetric - Oscillating Mirror

## Work Unit Information

<a href="#">NC_HurricaneFlorence_1_2020</a>	<b>Work Unit ID:</b> 186825	<b>Quality Level:</b> 1
<b>Horizontal EPSG Code:</b> 6346	<b>Vertical EPSG Code:</b> 5703	<b>Geoid Model:</b> GEOID18
<b>DEM Ground Sample Distance:</b> 0.5	<b>Hydro Treatment:</b> hydro-flattened	
<b>Collection Start Date:</b> 2019-12-10	<b>Collection End Date:</b> 2020-01-08	

<a href="#">NC_HurricaneFlorence_8_2020</a>	<b>Work Unit ID:</b> 218544	<b>Quality Level:</b> 1
<b>Horizontal EPSG Code:</b> 6346	<b>Vertical EPSG Code:</b> 5703	<b>Geoid Model:</b> GEOID18
<b>DEM Ground Sample Distance:</b> 0.5	<b>Hydro Treatment:</b> hydro-flattened	
<b>Collection Start Date:</b> 2019-12-16	<b>Collection End Date:</b> 2020-02-23	

<a href="#">NC_HurricaneFlorence_2_2020</a>	<b>Work Unit ID:</b> 196896	<b>Quality Level:</b> 1
<b>Horizontal EPSG Code:</b> 6347	<b>Vertical EPSG Code:</b> 5703	<b>Geoid Model:</b> GEOID12B
<b>DEM Ground Sample Distance:</b> 0.5	<b>Hydro Treatment:</b> hydro-flattened	
<b>Collection Start Date:</b> 2019-12-08	<b>Collection End Date:</b> 2020-01-08	

<a href="#">NC_HurricaneFlorence_3_2020</a>	<b>Work Unit ID:</b> 198494	<b>Quality Level:</b> 1
<b>Horizontal EPSG Code:</b> 6347	<b>Vertical EPSG Code:</b> 5703	<b>Geoid Model:</b> GEOID18
<b>DEM Ground Sample Distance:</b> 0.5	<b>Hydro Treatment:</b> hydro-flattened	
<b>Collection Start Date:</b> 2019-12-08	<b>Collection End Date:</b> 2020-01-26	

<a href="#">NC_HurricaneFlorence_7_2020</a>	<b>Work Unit ID:</b> 217003	<b>Quality Level:</b> 1
<b>Horizontal EPSG Code:</b> 6346	<b>Vertical EPSG Code:</b> 5703	<b>Geoid Model:</b> GEOID18
<b>DEM Ground Sample Distance:</b> 0.5	<b>Hydro Treatment:</b> hydro-flattened	
<b>Collection Start Date:</b> 2019-12-12	<b>Collection End Date:</b> 2020-01-08	

<a href="#">NC_HurricaneFlorence_6_2020</a>	<b>Work Unit ID:</b> 224678	<b>Quality Level:</b> 1
<b>Horizontal EPSG Code:</b> 6347	<b>Vertical EPSG Code:</b> 5703	<b>Geoid Model:</b> GEOID18
<b>DEM Ground Sample Distance:</b> 0.5	<b>Hydro Treatment:</b> hydro-flattened	
<b>Collection Start Date:</b> 2019-12-16	<b>Collection End Date:</b> 2020-02-08	

<a href="#">NC_HurricaneFlorence_5_2020</a>	<b>Work Unit ID:</b> 210877	<b>Quality Level:</b> 1
<b>Horizontal EPSG Code:</b> 6346	<b>Vertical EPSG Code:</b> 5703	<b>Geoid Model:</b> GEOID18
<b>DEM Ground Sample Distance:</b> 0.5	<b>Hydro Treatment:</b> hydro-flattened	
<b>Collection Start Date:</b> None	<b>Collection End Date:</b> None	

NC_HurricaneFlorence_4_2020	Work Unit ID: 208939	Quality Level: 1
Horizontal EPSG Code: 6346	Vertical EPSG Code: 5703	Geoid Model: GEOID18
DEM Ground Sample Distance: 0.5	Hydro Treatment: hydro-flattened	
Collection Start Date: 2020-01-30	Collection End Date: 2020-02-02	

NC_HurricaneFlorence_9_2020	Work Unit ID: 220804	Quality Level: 1
Horizontal EPSG Code: 6347	Vertical EPSG Code: 5703	Geoid Model: GEOID18
DEM Ground Sample Distance: 1.0	Hydro Treatment: hydro-flattened	
Collection Start Date: 2020-01-18	Collection End Date: 2020-02-28	

NC_HurricaneFlorence_10_2020	Work Unit ID: 225700	Quality Level: 1
Horizontal EPSG Code: 6347	Vertical EPSG Code: 5703	Geoid Model: GEOID18
DEM Ground Sample Distance: 0.5	Hydro Treatment: hydro-flattened	
Collection Start Date: 2019-12-15	Collection End Date: 2020-01-26	

NC_HurricaneFlorence_11_2020	Work Unit ID: 225793	Quality Level: 1
Horizontal EPSG Code: 6347	Vertical EPSG Code: 5703	Geoid Model: GEOID18
DEM Ground Sample Distance: 0.5	Hydro Treatment: hydro-flattened	
Collection Start Date: 2019-12-15	Collection End Date: 2020-02-28	

NC_HurFlo_NOAA_15_2020	Work Unit ID: 300149	Quality Level: 1
Horizontal EPSG Code: 6346	Vertical EPSG Code: 5703	Geoid Model: GEOID18
DEM Ground Sample Distance: 0.5	Hydro Treatment: hydro-flattened	
Collection Start Date: 2019-11-26	Collection End Date: 2020-04-02	

NC_HurFlo_NOAA_14_2020	Work Unit ID: 300148	Quality Level: 1
Horizontal EPSG Code: 6347	Vertical EPSG Code: 5703	Geoid Model: GEOID18
DEM Ground Sample Distance: 0.5	Hydro Treatment: hydro-flattened	
Collection Start Date: 2019-11-26	Collection End Date: 2020-03-12	

NC_HurFlo_NOAA_12_2020	Work Unit ID: 300146	Quality Level: 1
Horizontal EPSG Code: 6347	Vertical EPSG Code: 5703	Geoid Model: GEOID18
DEM Ground Sample Distance: 0.5	Hydro Treatment: hydro-flattened	
Collection Start Date: 2019-11-26	Collection End Date: 2020-07-20	

NC_HurFlo_NOAA_13_2020	Work Unit ID: 300147	Quality Level: 1
Horizontal EPSG Code: 6347	Vertical EPSG Code: 5703	Geoid Model: GEOID18
DEM Ground Sample Distance: 0.5	Hydro Treatment: hydro-flattened	
Collection Start Date: 2019-12-07	Collection End Date: 2020-08-25	



