



Geospatial Solutions

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Initial QA/QC LiDAR Collection  
2013 Oneida/Vilas County LiDAR  
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## **LiDAR Collection 2013**

### **Oneida and Vilas Counties**

Prepared by  
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Aerometric Project 1130208 / E112-14434



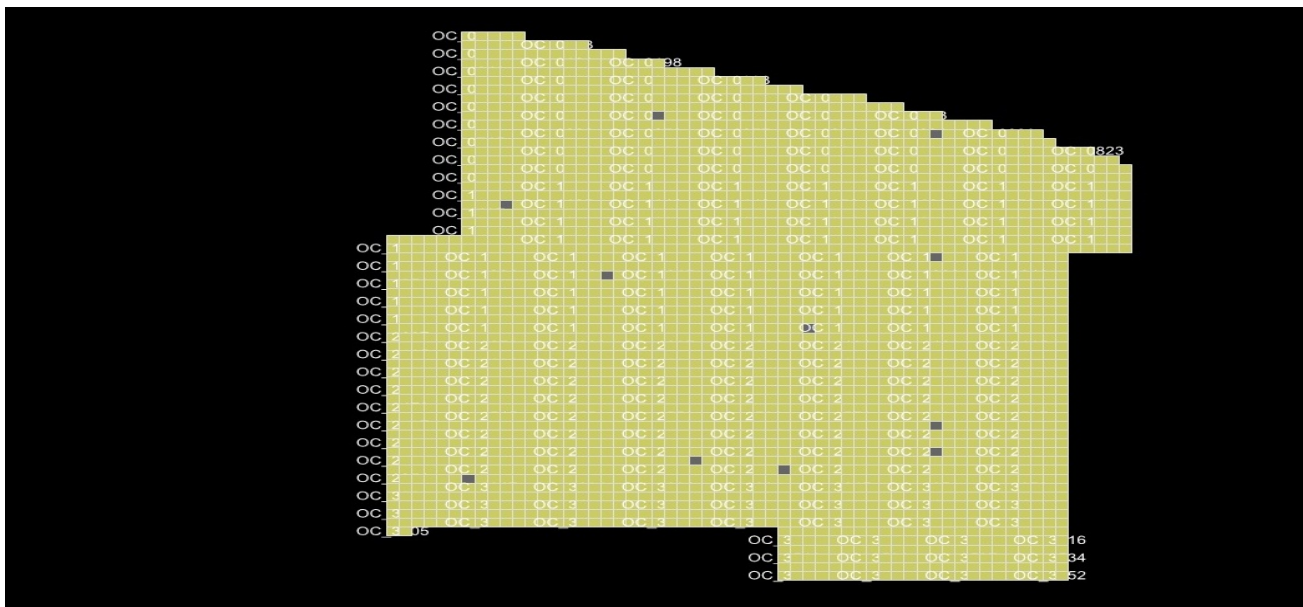
1. Nominal Pulse Spacing (NPS), or point density and points per square meter (PPSM) for lidar data.

Planned Point Spacing

Maximum Point Spacing Across Track	1.17	m
Maximum Point Spacing Along Track	1.16	m
Across Track/Along Track Ratio	1.00	
Average Point Spacing	0.79	m

Gray Tiles in screenshot below were used for random point density check. Overlap points were not used for density calculation.

Tile	Points (no overlap total)	PPSM
OC_0553	5194366.00	2.24
OC_0693	4709691.00	2.03
OC_1131	3792630.00	1.63
OC_1519	4494452.00	1.94
OC_1611	4224425.00	1.82
OC_1981	4008597.00	1.73
OC_2640	3919827.00	1.69
OC_2817	3999605.00	1.72
OC_2857	3576855.00	1.54
OC_2923	3818253.00	1.64
OC_2957	4646171.00	2.00
Average PPM		1.82

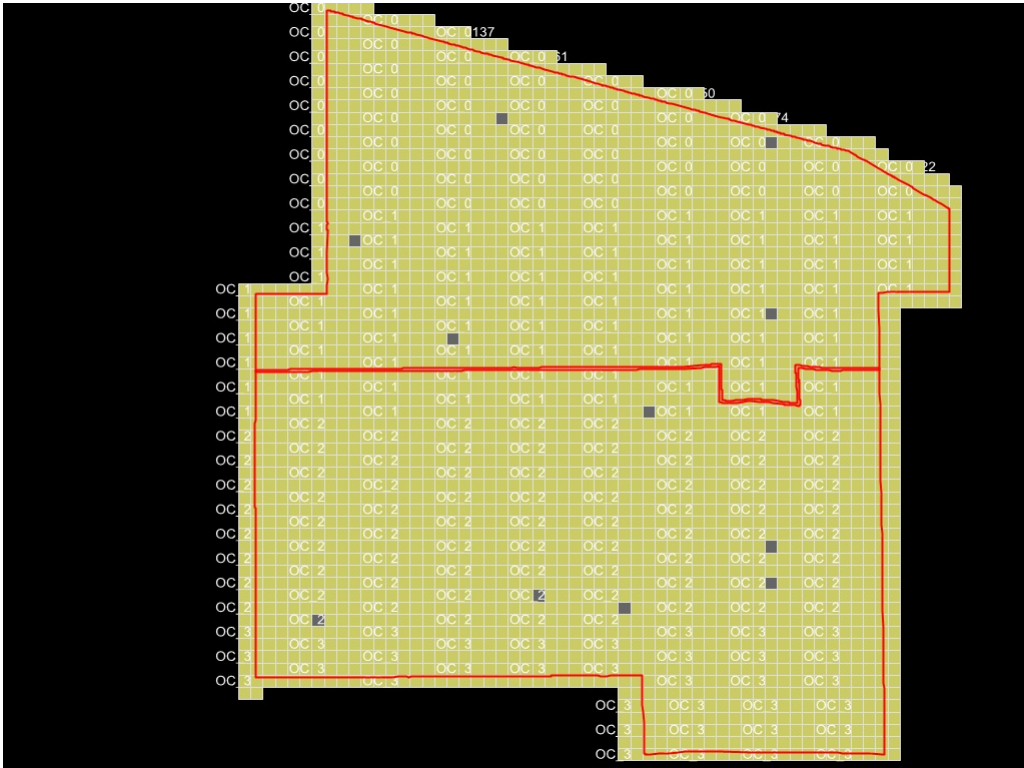


2. Spatial distribution of points is uniform and free from clustering.

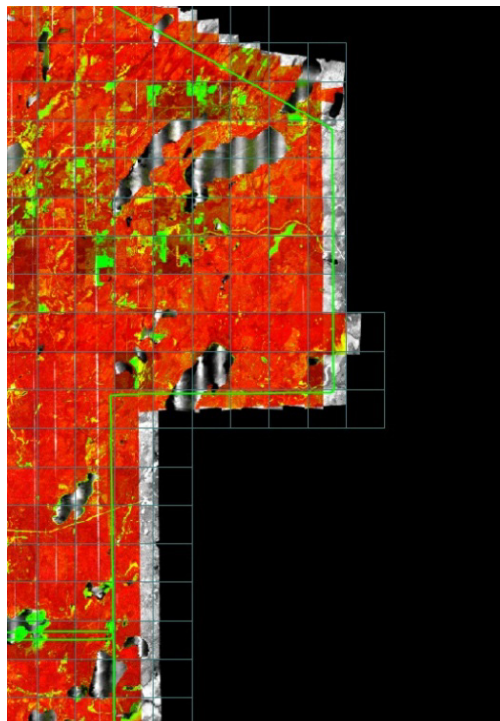
Yes

3. Flight planning and data acquired encompass a 500-foot buffer surrounding project boundary.

Yes, tiles represented below are 5,000' x 5,000' square in size.

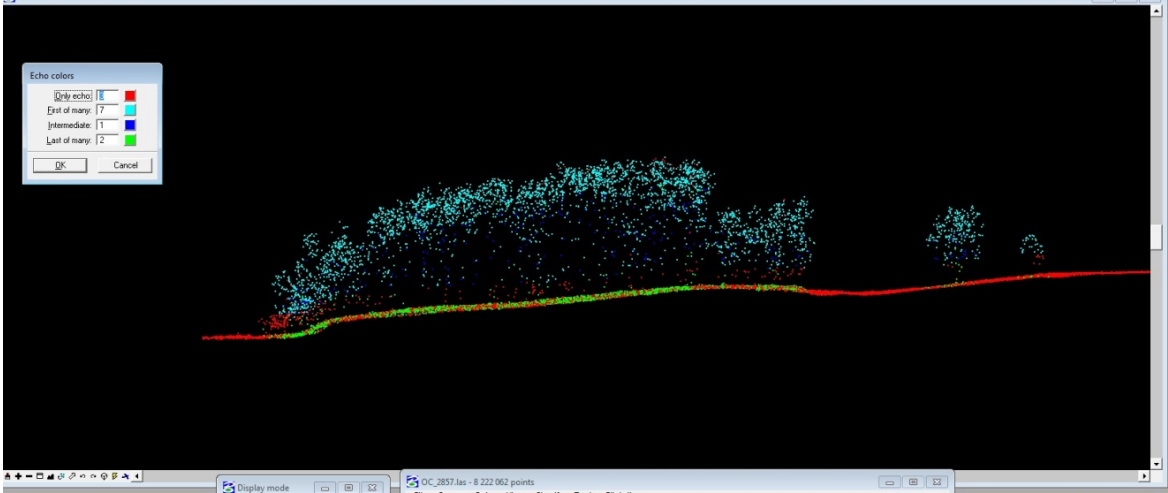


Zoomed in view of DZ raster showing the tile layout and coverage beyond the green project boundary.

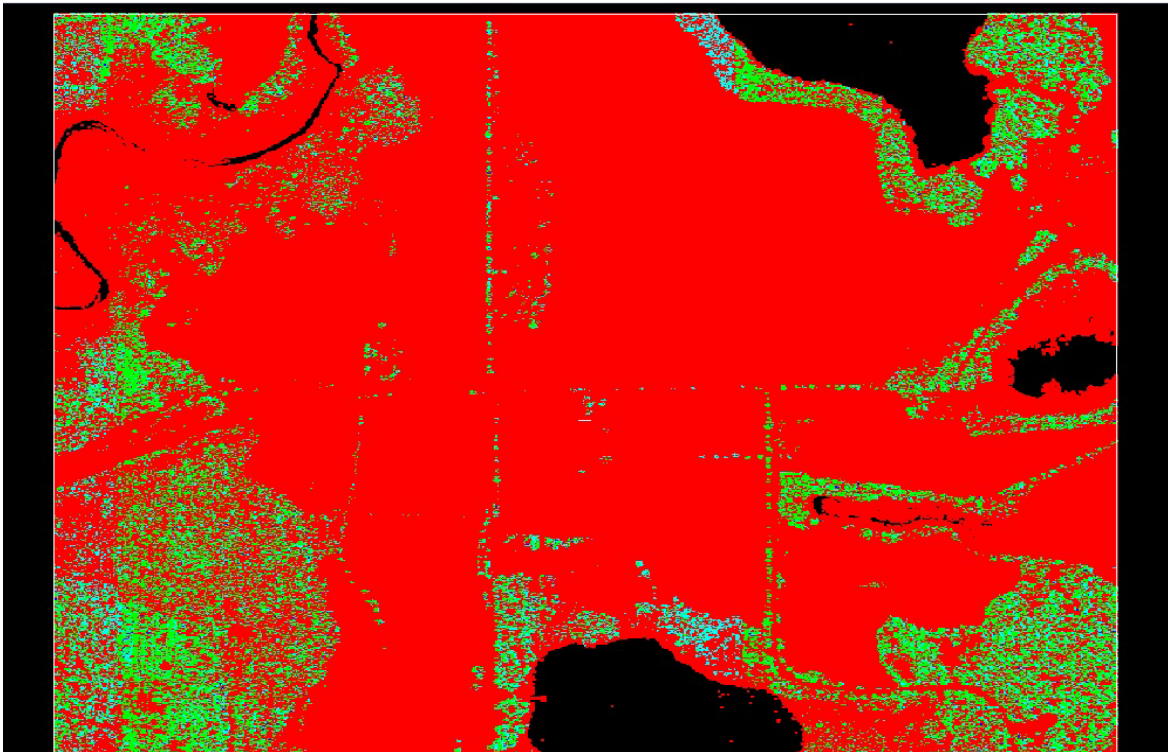


- Multiple returns from any given pulse are stored in order and point families remain intact.

Yes - Cross section of points by return shown below:

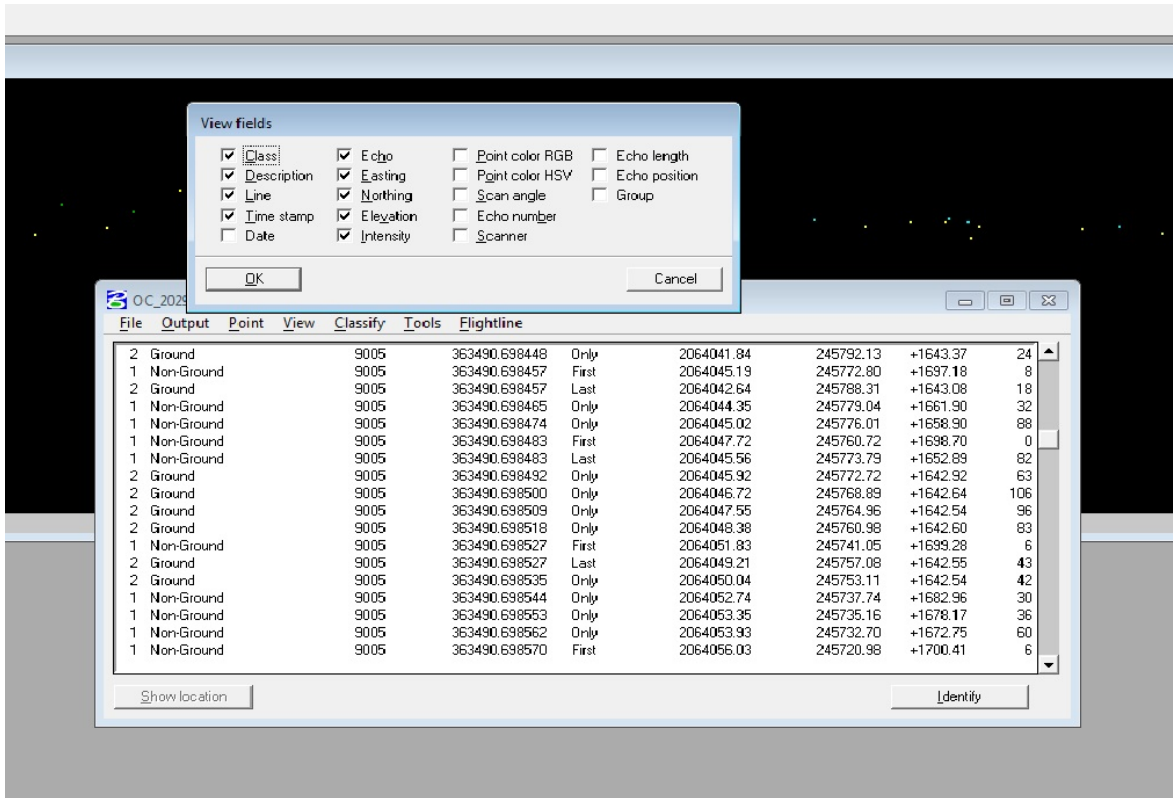


Top view of points by return:



- Each return includes: easting, northing, elevation, intensity, order of return (i.e. first-return, second-return), classification, GPS week, GPS second. Easting, northing, and elevation must be recorded to the nearest 0.01 meter and GPS second reported to the nearest microsecond (or better). May include additional attributes but no duplicate entries.

**Yes** - see screen shot of LAS stats:



6. Minimum 50% overlap on adjoining swaths.

Yes. See DZ

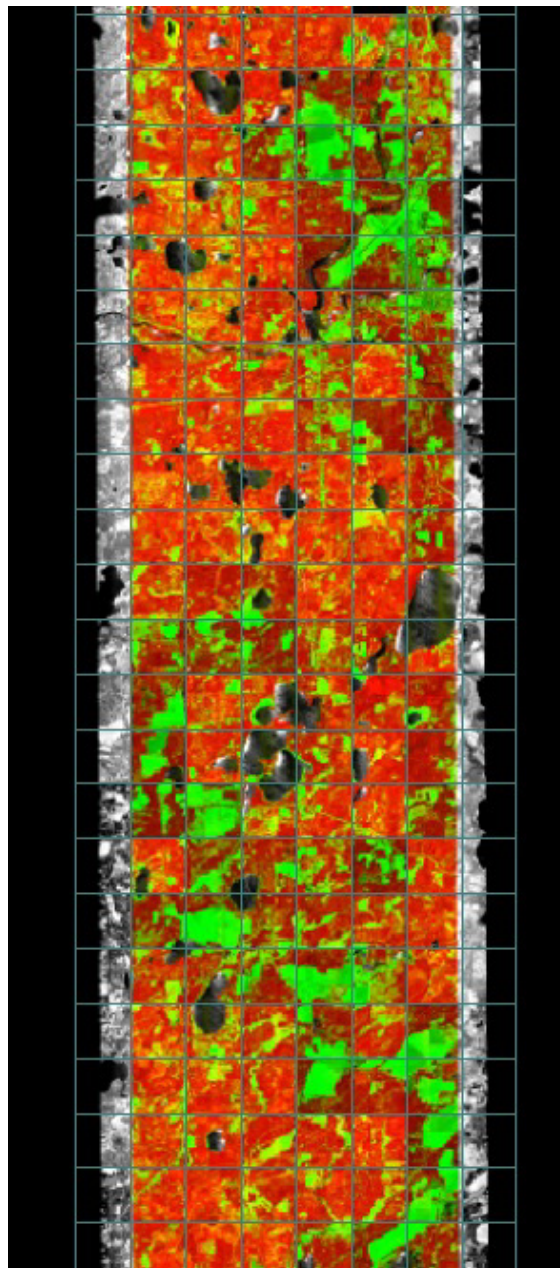
7. No voids between swaths.

Yes. See DZ

8. Must be cloud, smoke, dust, and fog-free between the aircraft and ground.

Yes. See DZ

Mission DZ Raster Image



9. At least two (2) GPS reference stations in operation during all missions, sampling positions at 1 Hz or higher frequently. Differential GPS baseline lengths shall not exceed 30 km. Differential GPS unit in aircraft shall sample position at 2 Hz or more frequently.

Yes see mission plots below with base locations during missions:

