December 1, 2015

Following our conference calls on 10/22/15 and on 11/30/15, we would like to propose making the following changes so that our Oneida/Vilas lidar datasets will pass your QC process and be accepted by the USGS per our proposal for use in the National Map.

Conference call participants:
USGS: Randy Mccash, Kimberly Mantey, Ron Wencl, et al.
Oneida Co: Mike Romportl
Vilas Co: Barb Gibson
Ayres Associates: Zach Nienow
Atkins: Tom Asbeck

DEM
Kim confirmed that the .img test tiles that we provided for Oneida and Vilas work fine on her end (11/30/15). We will provide the DEMs for each county in .img format. The DEMs will be delivered according to the original tiling scheme for each project, and the tiles will be clipped to the project boundary, which is 500-feet beyond each county boundary.

Metadata
We will have the swath .xml and project .xml created per base specification 1.0. The vertical tested accuracies will be reported in the swath and project .xml. We ask that you provide us samples of each metadata type and how to test it so we can make sure it meets your requirements. We also ask that you provide the 4 errors that will be acceptable based on the difference between versions 1.0 and 1.2.

Vertical Accuracy
We will have the accuracies reported according to FVA at 95% confidence level and SVA/CVA at 95^{th} percentile for each county. Our accuracy reporting will be based on testing of independent control against the point cloud. We will convert the checkpoint control data from .txt to .shp so that you can use it for testing the DEMs. We will provide calibration points in .shp format as well. We do not expect a need for relaxed accuracies for these projects. The vertical accuracy report for Vilas Co will be provided to you (we thought it was on the original hard drive you received).

Coordinate Systems
The USGS representative confirmed that Wisconsin County Reference System (WISCRS) county-specific coordinate systems will be acceptable by 3DEP. The LAS files will contain spatial reference information specific to Oneida Co and Vilas Co coordinate systems. The LAS files will not contain Geotiff information tags. The EPSG codes for these systems were published on 11/25/15, and are as follows:

NAD83(2011) / WISCRS Oneida (ftUS) EPSG::7623
NAD83(2011) / WISCRS Vilas (ftUS) EPSG::7638

LAS errors
The LAS errors noted in your report are caused by areas with a high density of inland lakes. In some cases, lakes make up the entire tile. In other cases, there is a large lake along the tile edge, but it is not a gap in the data.

Next Steps
Please review this document and confirm your understanding of the data formats that will be re-delivered. In summary - DEMs in .img format, metadata updates to meet USGS requirements, vertical accuracy reporting to meet base specification 1.0, and spatial reference information included in all LAS files. Then we will have the changes made and send the hard drive for each county back to you for QC.

Thank you,

Mike Romportl
Oneida County