LiDAR Data at ISU's GIS TReC

LiDAR data is big data, not only in size, but also in the large number of files associated with a collection or project. Collections will have LAS point returns as well as raster TIF file products, and also associated vector files, PDF reports, and metadata that increase the richness and completeness of the collection itself. To make these data accessible and as clear as possible, the LiDAR Repository at ISU's GIS TReC uses the following file structure.

***NOTE: PROJECTS MAY NOT HAVE ALL DATA LISTED BELOW ***

- **All LiDAR data are stored in ZIP files.**
- **If you are looking for RAW LAS data, navigate to one of the RAW folders/directories on the server.**
- **If you are looking for processed raster data, navigate into the PROCESSED folders/directories**
- **Project data are further organized by region within Idaho (see map below)**

[ProjectNameYear]_LAS.zip
Raw or classified lidar point returns

[ProjectNameYear]_ProcessedProductType.zip
Processed raster data are saved as tifs. There are several ways the LiDAR data has been processed. Below are some of different abbreviations.
- be- Bare earth surface raster
- DSM- Digital surface model raster
- nDSM- Normalized digital surface model raster

- int- Intensity Image raster
- behf- Bare earth hydroflattened surface raster
- hh- highest hit raster (e.g., top of canopy or top of structure)
- Hillshade raster
- Slope raster
- Imagery raster
- DTM- Digital Terrain Model raster

[ProjectNameYear]_Reports.zip

All reports including final reports, addendums, etc., are stored in a single zip files labeled [ProjectNameYear]_Reports.zip.

ProjectNameYear_Metadata.zip

All metadata are stored in a single zip file labeled [ProjectNameYear]_Metadata.zip.

ProjectNameYear_Vectors.zip

All files considered vector data (e.g., shapefiles, geodatabases, and dwg files) are stored in a single zip file labeled [ProjectNameYear]_Vectors.zip. These vector data may include:
- Breaklines- lines or polygons created to represent roadbeds, cliffs, surface water shorelines, etc.
- Contours- line features created by connecting contiguous points with equal heights.
- Flight paths/lines- predetermined lines followed by the aircraft collecting the LiDAR data.
- Tile index polygons
- Raster index polygons
- Project boundary polygon
- Ground survey points
- SBET- smoothed best estimate of trajectory. This is used by the vendor to create LAS files
- Hydrolines line data
- RTK GNSS points
- Ground control points