

Using LiDAR Derived Digital Surface Models to Detect Temporal Change in Forestry

Discussion:

The Compute Change Raster geoprocessing tool was used on two sets of LiDAR derived, Digital Surface Models (DSM) to detect change in height in the landscape. The intent of this analysis was to find all the areas that had been logged on the Olympic Peninsula coast between the years 2012 and 2018. After the geoprocessing tool was ran a raster was output containing the values of the change between the two time periods. Decided via visual analysis, anything over 38 feet was symbolized as red and all other values were left colorless. The 3 images boxes to the right show the same location with hill shade derived layers from the two datasets and the bottom box depicting logged areas.

Data:

Both datasets were downloaded from the Washington DNR Portal. The datasets were downloaded as Digital Surface Models which are derived from first return LiDAR data (laz/ las files). The area of study is the overlapping of the two datasets, outlined in blue.

2012 Imagery

Contracted by Puget Sound LiDAR Consortium and by the Hoh Tribe, Watershed Sciences, Inc collected LiDAR data on the Hoh River Watershed.

2018 Imagery

From the Olympics North OPSW 2018 project, part of the Olympic Peninsula and Southwest Counties (OPSW) lidar collection undertaken by the Washington Geologic Survey, the USGS and local Washington Partners.

