Dataset Title

2019 LIDAR (.las) for of portions of Maui and Molokai islands, Hawaii, USA.

Distribution Note

The data originator, Vexcel, Inc. of Boulder, CO (Vexcel), did not provide metadata. The information contained in this abbreviated metadata record is the result of a collaboration between the State of Hawaii and the County of Maui GIS staff to provide guidance to users. Effort has been made to ensure this information is as complete and accurate as possible, but users should exercise due diligence and verify any information given. An accuracy report was also not provided by Vexcel.

.las Spatial Reference System

Universal Transverse Mercator (UTM), Zone: 4 North, Horizontal Datum: NAD83 (epoch unknown, but likely 1986), Vertical Datum: NAD83(PA11)*, XYZ units: meters

*- see "B" under "Use Limitations/Disclaimer" for more information regarding the vertical datum.

Please note that the rasters produced from Vexcel, Inc.'s .las files are not in UTM, rather they are in the County of Maui's standard projection – Hawaii State Plane, Zone 2, NAD83(1986), feet.

Description of Dataset

Circa November 2019 LIDAR datasets of Maui and Molokai were purchased by County of Maui to assist with three-dimensional structure modeling in areas of higher development; and consist of: ~1' GSD .las files covering portions of Maui and Molokai islands, Hawaii, USA – specifically, Central Molokai (from north coast to Kaunakakai), Kahului (includes Wailuku), Kihei (includes Maalaea and Wailea), Lahaina (West Maui) and Pukalani (includes Kula).

Use Limitations/Disclaimer

A. This dataset is being placed in the public domain. Any use is allowed except re-sale. Neither Vexcel, Inc., the County of Maui, nor the State of Hawaii make any guarantees, expressed or implied, regarding its accuracy or fitness of use. Users should verify XYZ values via a licensed surveyor for any engineering application. The data should only be used as a guide, vs. a statement of fact regarding real-world conditions.

B. Vertical Datum - The originator of this LIDAR dataset, Vexcel Inc. of Boulder, Colorado, referenced Z values to the North American Vertical Datum of 1988 (NAVD88). NAVD88 is not recognized as a valid vertical reference for the state of Hawaii because it is North American Plate-centric. Currently Hawaii has no official (de jure or de facto) vertical datum, and NOAA's National Geodetic Survey (NGS) recommends that elevations be referenced to the nearest NOAA tidal gauge.

   A legacy LIDAR dataset produced in 2013 by the United States Army Corps of Engineers (USACE) used NAD83(PA11) as its vertical reference. In theory this approach should result in better accuracy for the Z dimension as PA11 is a Pacific Plate-centric datum. In comparing flat areas containing neither structures nor vegetation, it was found that the Vexcel data sat approximately 1.3m/4' above the USACE dataset. The vertical datum/Z-value discrepancy issue was brought to the attention of Vexcel, Inc. Vexcel used the 2013 USACE LIDAR as vertical control to correct their LIDAR data.

   The (corrected) .las data is shared as it was delivered. As stated above, the use of this data transfers all risks and assumption of responsibility to the user For more information see https://files.hawaii.gov/dbedt/op/gis/data/Maui_2019_las.html or contact County of Maui at GISMonitor@co.maui.hi.us or Hawaii Statewide GIS Program at gis@hawaii.gov.

Credits:

Vexcel Inc. of Boulder, Colorado, 2019