

## HIGICC Quarterly Newsletter: May 2020



### Mark Lierman Memorial Scholarship Award

HIGICC is offering the Mark Lierman Memorial Scholarship Award: a \$1,000 scholarship for college students! for more information & to apply click here <https://higicc.org/awards>





## HIGICC Elections

Nominations are in for the next round of board members. Keep an eye out for the ballot and remember to vote !!!



## HIGICC 20th Anniversary Celebration

On the evening of March 6th, we gathered to celebrate the 20th year of HIGICC! The event was well attended and enjoyed by all. Mahalo to everyone who is a part of HIGICC. Photos from the event can be viewed on our website [higicc.org](http://higicc.org)







## Hawai'i Food Resources Map

HIGICC has put together a Hawaii Food Resources Map. This interactive map shows the locations of Farms, CSAs (Community Supported Agriculture), Food Hubs, and delivery services that provide locally grown food to the public with special information concerning operations during the COVID-19 pandemic. If you have more to add contact [higicc@higicc.org](mailto:higicc@higicc.org). Check it out <https://arcg.is/mf89P>



## Statewide COVID-19 Resources

The Statewide GIS Program is hosting an Esri Hub for COVID-19 here:

<https://coronavirus-response-histategis.hub.arcgis.com/>

It includes a great dashboard summary of COVID-19 related statistics and there are links to the relevant mapping applications:

Medicare Approved Health Care Facilities

State Licensed Health Care Facilities

Healthcare Center Locator

High Risk Populations by Census Tract

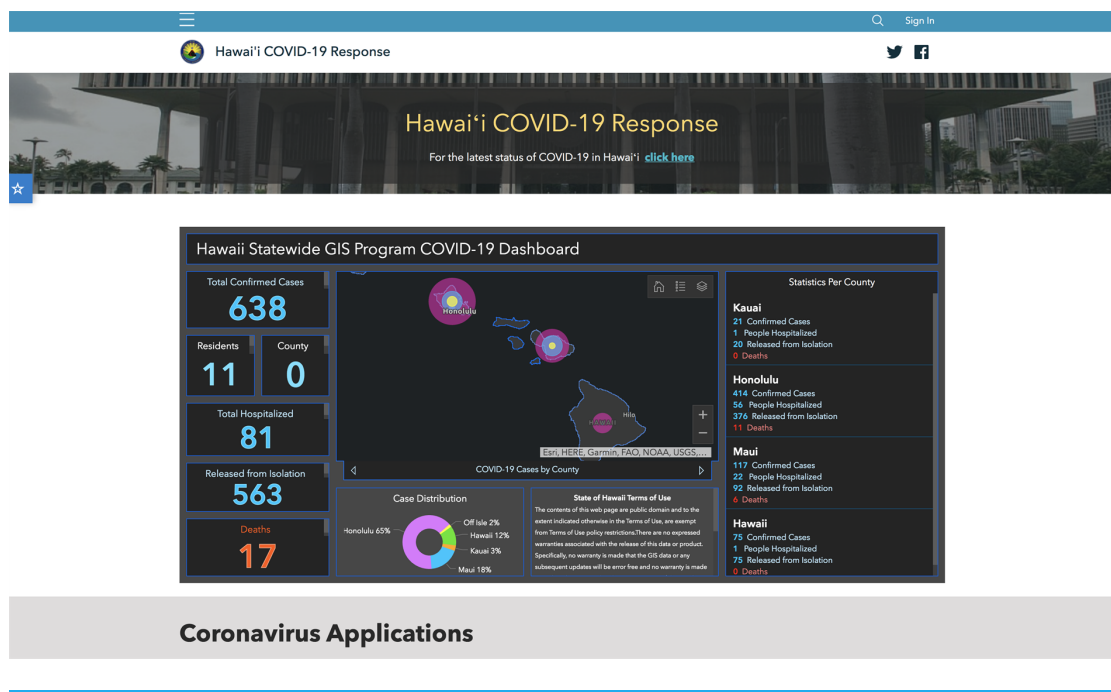
High Risk Populations by Census Tract

Food Resources (HIGICC)

Social Distancing Scorecard

Department of Health Updates

Information and resources from Maui, Hawaii, Honolulu & Kauai



## Pacific Lidar Acquisition Updates

Light Detection and Ranging (lidar) is an active remote sensing system that uses pulses of light to measure distances and terrain elevation from an aerial platform, vehicle, or ground station. Most GIS users interact with lidar as an elevation product, such as a Digital Elevation Model (DEM) or shapefile of elevation contour lines. In 2012 the US Geologic Survey conducted the National Enhanced Elevation Assessment, which identified 27 separate lidar business uses. For the State of Hawai'i, the top 3 business uses were; flood risk management, infrastructure and construction management, and natural resources conservation. The same study predicted more than 5:1 return on investment during the lidar data's anticipated 8-year useful life.

In response to the 2012 National Enhanced Elevation Assessment, many Federal, State, and local agencies began to increase coordination and dissemination of this critical elevation data. The most tangible opportunity for governments to collaborate on lidar projects is through the USGS 3D Elevation Program (3DEP), which provides a federal funding match to potential lidar projects.

3DEP recently announced its latest round of lidar projects for 2020, and the



HIGICC thought this would be a good time for updates of ongoing lidar projects for the US Pacific Island States and Territories. Please note that COVID-19 related delays are anticipated for projects with pending acquisition. These projects are being marked “TBD” until we have more information.

### 2019 Kauai Topobathymetric Lidar

- **Area of Interest:** The entire island of Kauai and nearshore depths of 60 meters (or laser termination due to turbidity or non-reflective ocean substrate).
- **Point Density:** 8 points per square meter (terrestrial), 2 points per square meter (bathymetric)
- **Vertical Accuracy:** 10 cm RMSEz (terrestrial only)
- **Anticipated Release Date:** TBD
- **Where will the data be available?:** [USGS National Map](#), [NOAA Digital Coast](#)
- **Funding partners:** Federal Emergency Management Agency (FEMA)

### 2020 Oahu Island and Maui Nui Topographic Lidar

- **Area of Interest:** The entire islands of Oahu, Maui, Molokai, Lanai, and Kahoolawe. Land only, no bathymetric depths.
- **Point Density:** 8 points per square meter
- **Vertical Accuracy:** 10 cm RMSEz
- **Anticipated Release Date:** TBD
- **Where will the data be available?:** [USGS National Map](#), [NOAA Digital Coast](#)
- **Funding partners:** National Oceanic and Atmospheric Administration’s Office for Coastal Management (NOAA OCM), State of Hawai’i Office of Planning (SOH OP), the National Fish and Wildlife Foundation (NFWF), 3D Elevation Program (3DEP)

### 2018-2020 Big Island Lidar Topographic Lidar

- **Area of Interest:** Approximately 70% of Big Island. Mostly along leeward coasts. Complete coverage for the districts of Hamakua, Kohala, and Kona. Almost complete coverage for Ka'u. Partial coverage for Puna and Hilo. (see inset map).
- **Point Density:** 8 points per square meter
- **Vertical Accuracy:** 10 cm RMSEz
- **Anticipated Release Date:** Q2 2021
- **Where will the data be available?** [USGS National Map](#), [NOAA Digital Coast](#)
- **Funding partners:** National Oceanic and Atmospheric Administration's Office for Coastal Management (NOAA OCM), US Department of Agriculture Natural Resources Conservation Service (USDA NRCS), US Geological Survey (USGS), USGS Volcano Hazards Program (USGS VHP), Federal Emergency Management Agency (FEMA) Region IX and Headquarters, County of Hawai'i, 3D Elevation Program (3DEP)

### **2019-2020 Commonwealth of the Northern Mariana Islands (CNMI) Topobathymetric Lidar**

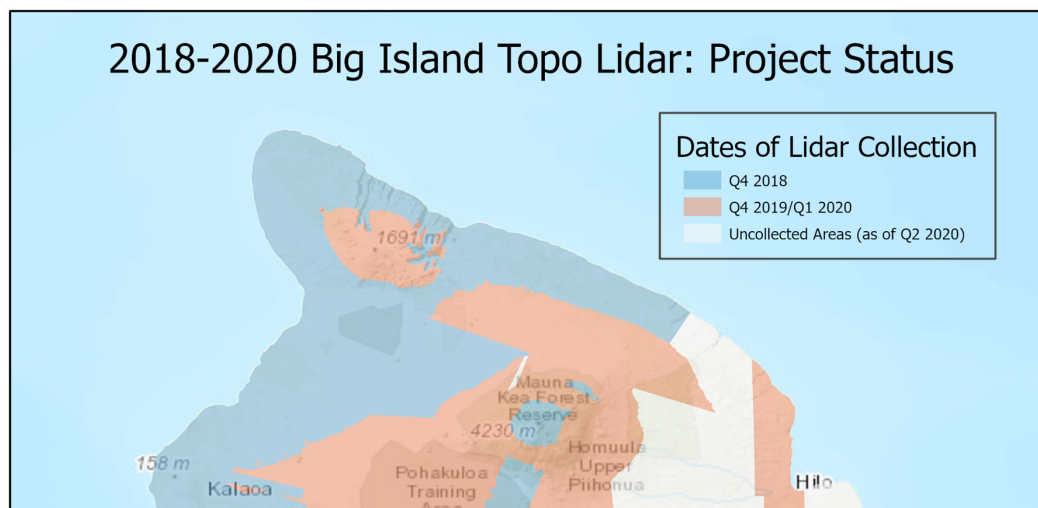
- **Area of Interest:** The entire islands of Rota, Tinian, Aguijan, Saipan, Farallon de Medinilla, and Pagan. Also these islands' nearshore depths down to 50 meters (or laser termination due to turbidity or non-reflective ocean substrate).
- **Point Density:** 8 points per square meter (terrestrial), 2 points per square meter (bathymetric)
- **Vertical Accuracy:** 10 cm RMSEz (terrestrial only)
- **Anticipated Release Date:** Q3 2020
- **Where will the data be available?** [USGS National Map](#), [NOAA Digital Coast](#)
- **Funding partners:** National Oceanic and Atmospheric Administration's Office for Coastal Management (NOAA OCM), NOAA National Geodetic Survey (NOAA NGS), Federal Emergency Management Agency (FEMA), US Department of Agriculture Natural Resources Conservation Service (USDA

NRCS), 3D Elevation Program (3DEP)

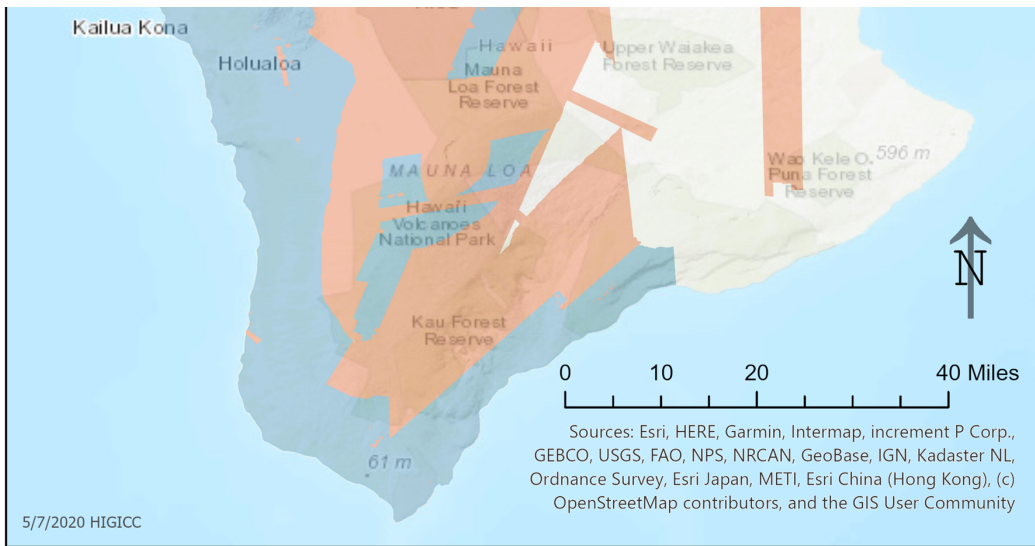
## 2020 Guam Topobathymetric Lidar

- **Area of Interest:** The entire island of Guam, except for Ritidian Point in the far north, and nearshore depths down to 50 meters (or laser termination due to turbidity or non-reflective ocean substrate).
- **Point Density:** 8 points per square meter (terrestrial), 2 points per square meter (bathymetric)
- **Vertical Accuracy:** 10 cm RMSEz (terrestrial only)
- **Anticipated Release Date:** Q4 2020
- **Where will the data be available?** [USGS National Map](#), [NOAA Digital Coast](#)
- **Funding partners:** National Oceanic and Atmospheric Administration's National Geodetic Survey (NOAA NGS), 3D Elevation Program

If you would like to learn more about lidar, **NOAA Office for Coastal Management just released the first module of their brand new training, "Introduction to Lidar"** (<https://coast.noaa.gov/digitalcoast/training/intro-lidar.html>). This interactive training is available online at no cost and offers one hour of continuing education credits for the American Institute of Certified Planners (AICP). **USGS also offers a Youtube training series which covers accessing, downloading, and working with lidar in a variety of GIS/remote sensing software applications** (<https://www.usgs.gov/core-science-systems/national-geospatial-program/training>).







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## Furloughed Workers Get Complimentary Access to Software and Training

GIS professionals who are impacted by work furloughs are now eligible for free access to ArcGIS Online, training, and over 20 apps. This includes access to ArcGIS Pro and a library of lessons through Learn ArcGIS and the Esri Academy. We hope that the Esri community will return to the workforce re-energized with new ideas and the information needed to help organizations achieve their next objectives.

[Read More](#)



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## Open Source Metadata: USGS FGDC Metadata tool

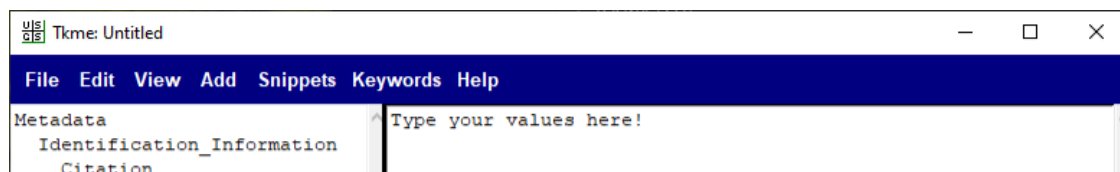
Have you ever need more information about a spatial dataset? Have you ever received a dataset that had coded values, questionable attributes, or origination with no supplemental information to help you make sense of it? Did you ever wonder when a dataset was created, by whom and how? Maybe the data creator didn't have time or the resources to generate data about the data, otherwise known as metadata. This article aims to provide you with a quick introduction to a few metadata resources to help you generate metadata that you can share with others.

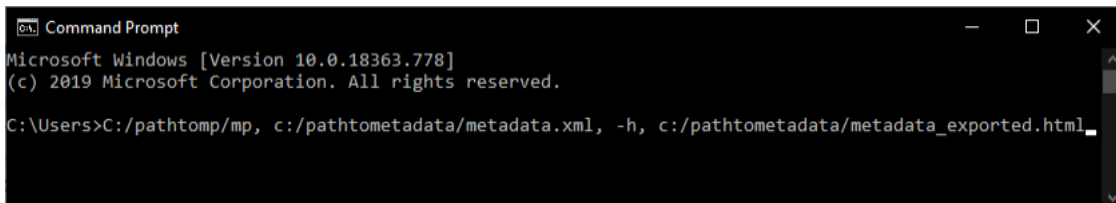
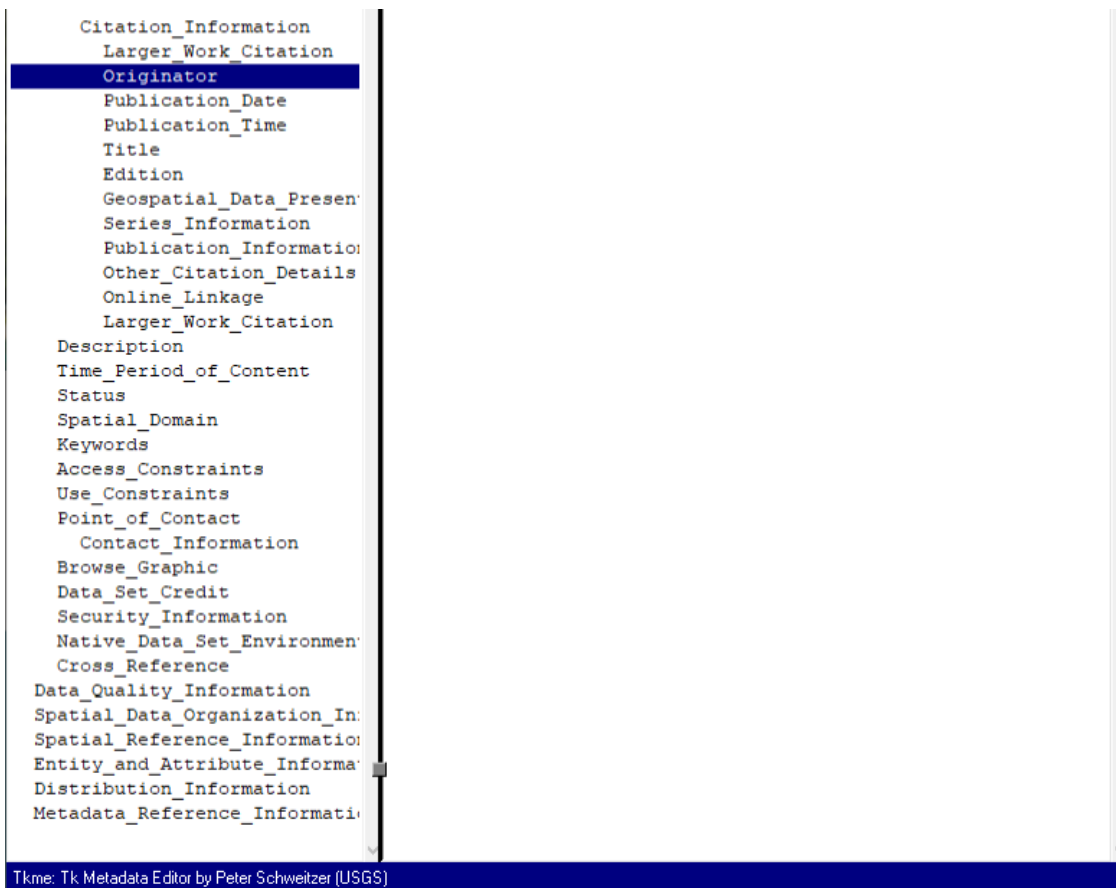
Metadata is a great way to describe information about a dataset, especially when the metadata itself is in a standard format that enables interoperability. There are several commercial off the shelf programs like ESRI and free open source software (FOSS) that you can use to create, edit, and read metadata. ESRI desktop apps have some nice built in tools for handling metadata. However, if you are not able to use ESRI software there is at least one FOSS alternative. The United States geological Survey (USGS) has a few lightweight FOSS metadata creator and translator tools. I've found two of these tools useful, Tkme and mp.

With Tkme you can create an Extensible Markup Language (xml) file that contains metadata information. Xml files are structured text files that are both human and machine readable which allows us to programmatically make changes to many xml files. For example, if you needed to update the contact information for 50 metadata records, you could do that with any programming language that can read/write xml files, or you could use a search and replace function on the xml file using a text editor. Notepad++ is a very useful text editor and source code editor that can read many different computer languages including xml as well as plugins available to help with workflows.

The other useful tool from the USGS is mp. With it you can verify if the metadata xml is compliant to the Federal Geographic Data Committee (FGDC) and International Organization for Standardization (ISO) metadata standards as well as convert from xml to a more human readable file in html or plain text format. USGS mp is a command line interface tool meaning the computer processes your commands via lines of text as opposed to using a graphical user interface. This tool is available for download use of the online version.

*Figure 1. Tkme user interface. Using the “Add” dropdown you can add elements to the metadata record. With the “View” dropdown you can collapse and expand the different levels to navigate the elements.*





## Mahalo to our sponsors:

For sponsorship info [click here](#).

