



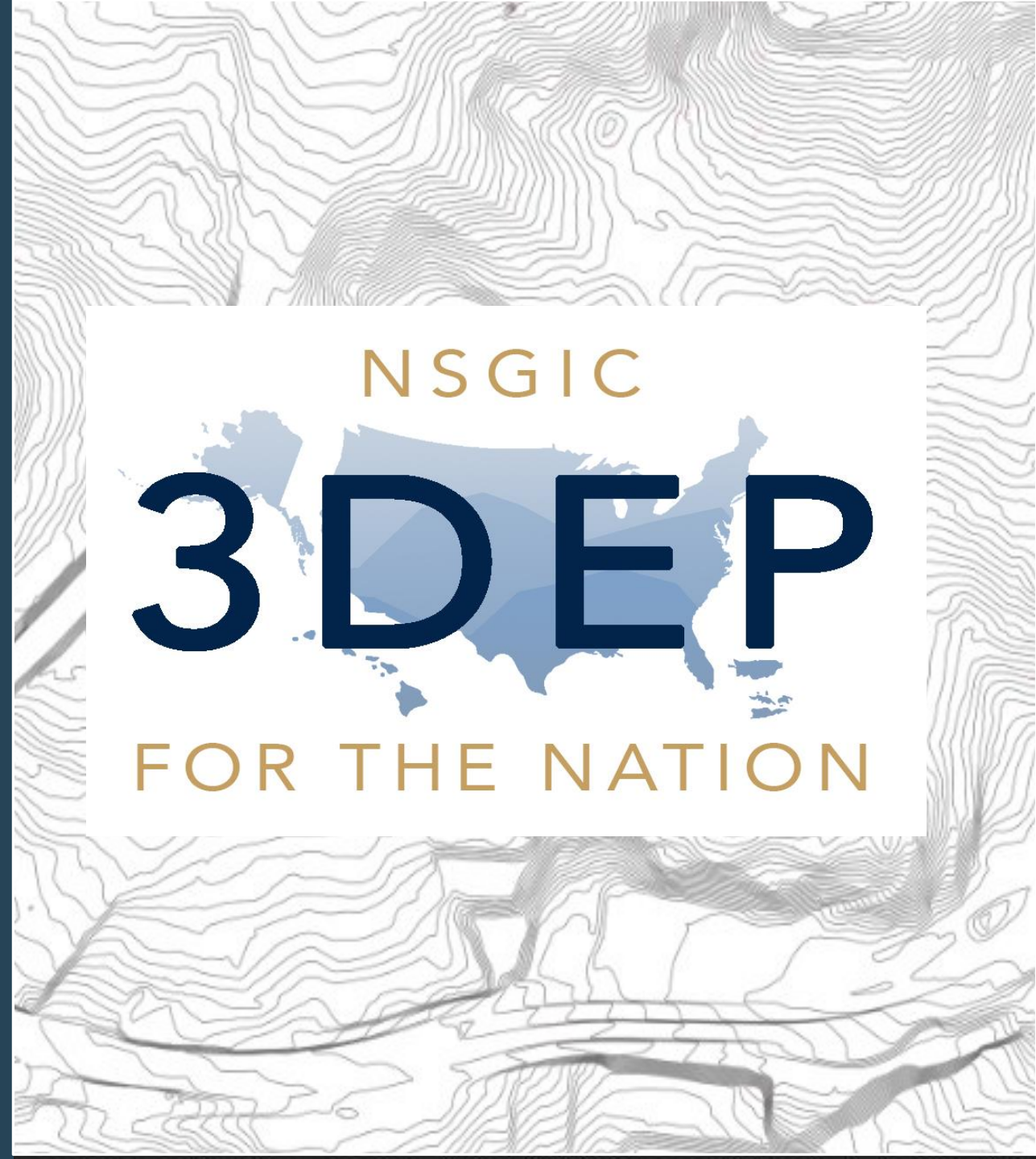
NSGIC 3DEP FOR THE NATION

3DEP INTEREST GROUP MEETING
DECEMBER 8, 2022



AGENDA

- USGS Update
- NSGIC Community FAQ: 3DEP Data Distribution Services and Applications
- 3DEP FTN Resources



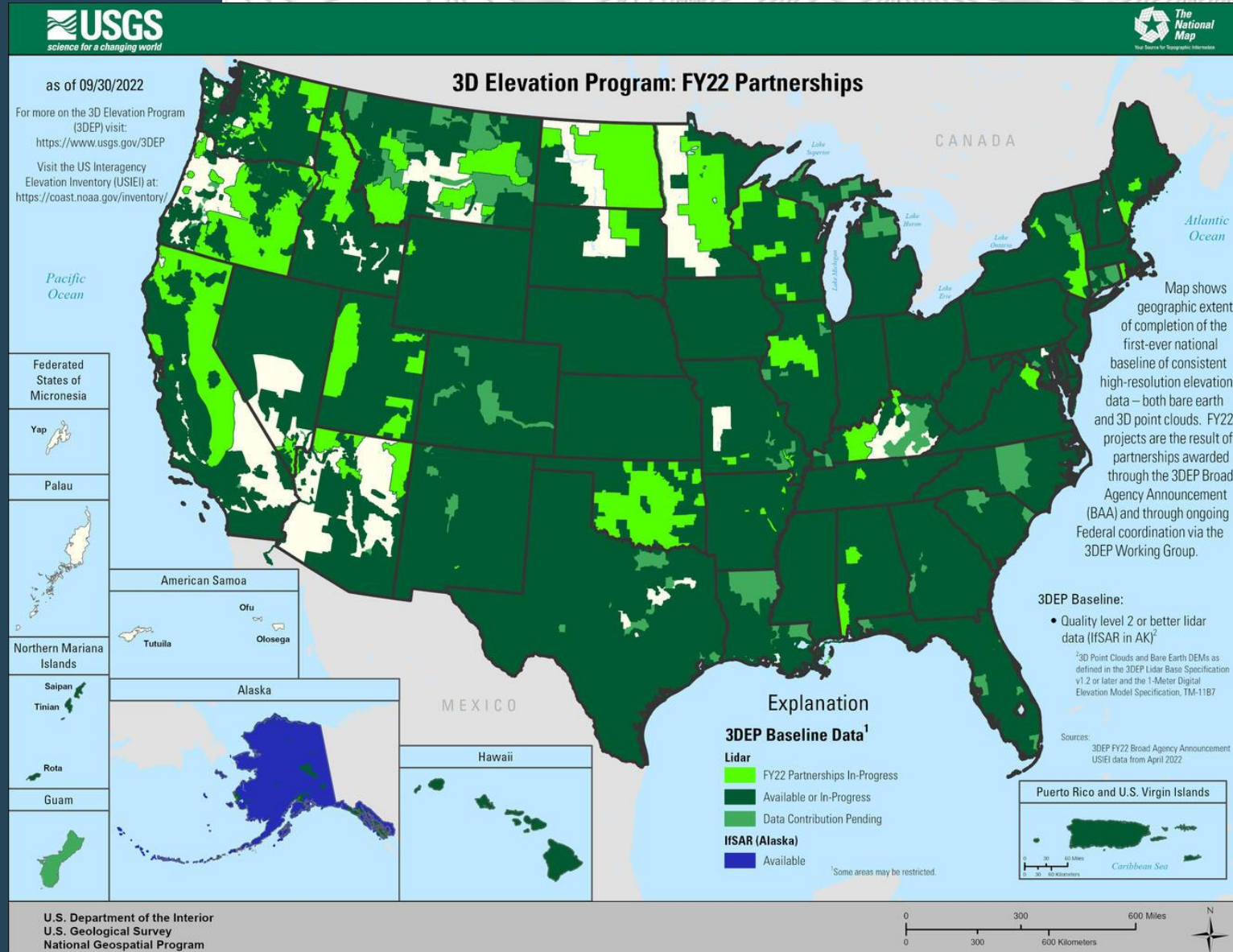
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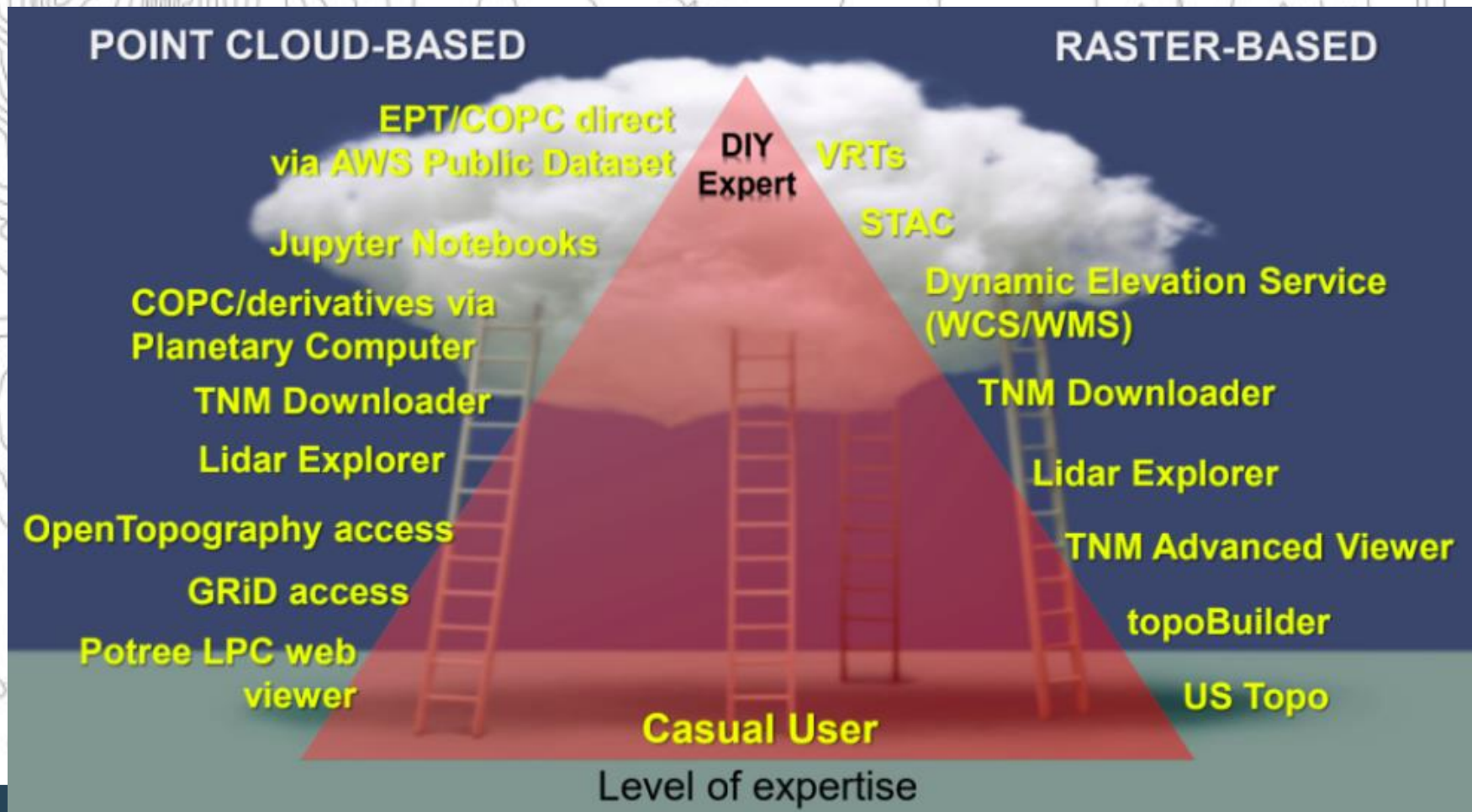
3DEP

FOR THE NATION

USGS UPDATE

- Received 26 proposals in 16 states
- Approved 23 proposals in 14 states
 - ~180k sq miles
- estimated 89.5% national coverage as of FY23
- Status map updated regularly and available at: <https://www.usgs.gov/3d-elevation-program>





NSGIC COMMUNITY FAQ: 3DEP DATA DISTRIBUTION SERVICES AND APPLICATIONS

PHIL WORRALL, NSGIC 3DEP FTN PROJECT ENGINEER

image courtesy of Jason Stoker, USGS

3DEP PROJECT STATUS

Completed, In-progress, and Contracted 3DEP Data:

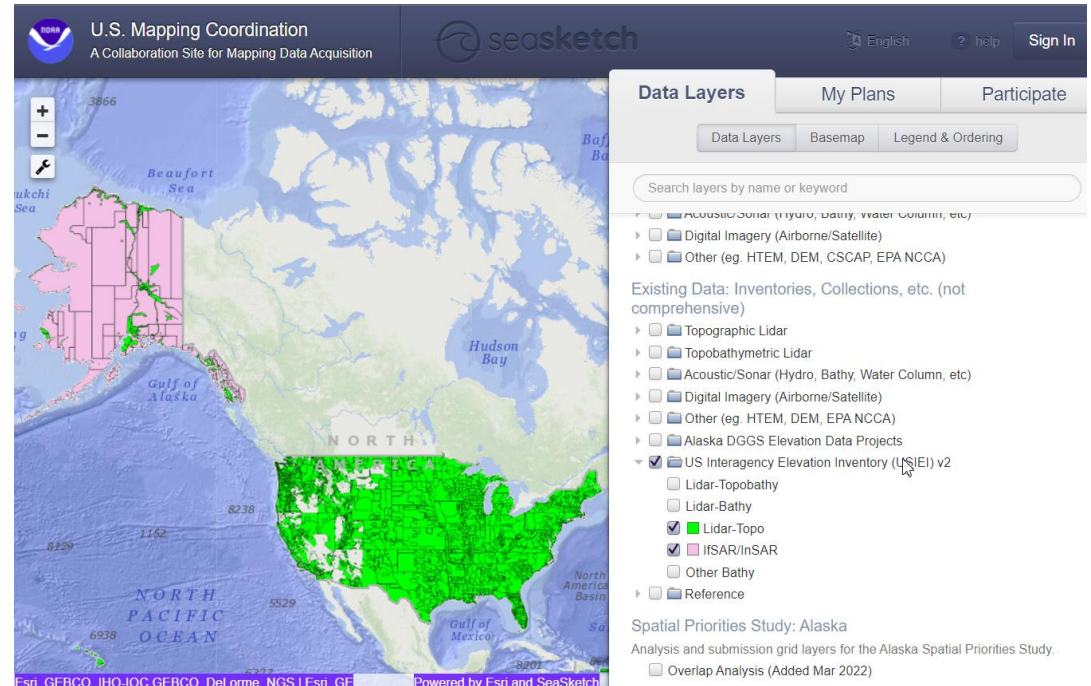
USGS reports almost 90% national 3DEP coverage

3DEP Data Currently Available:

US Interagency Elevation Inventory (USIEI) reported on Seasketch as of November 2022

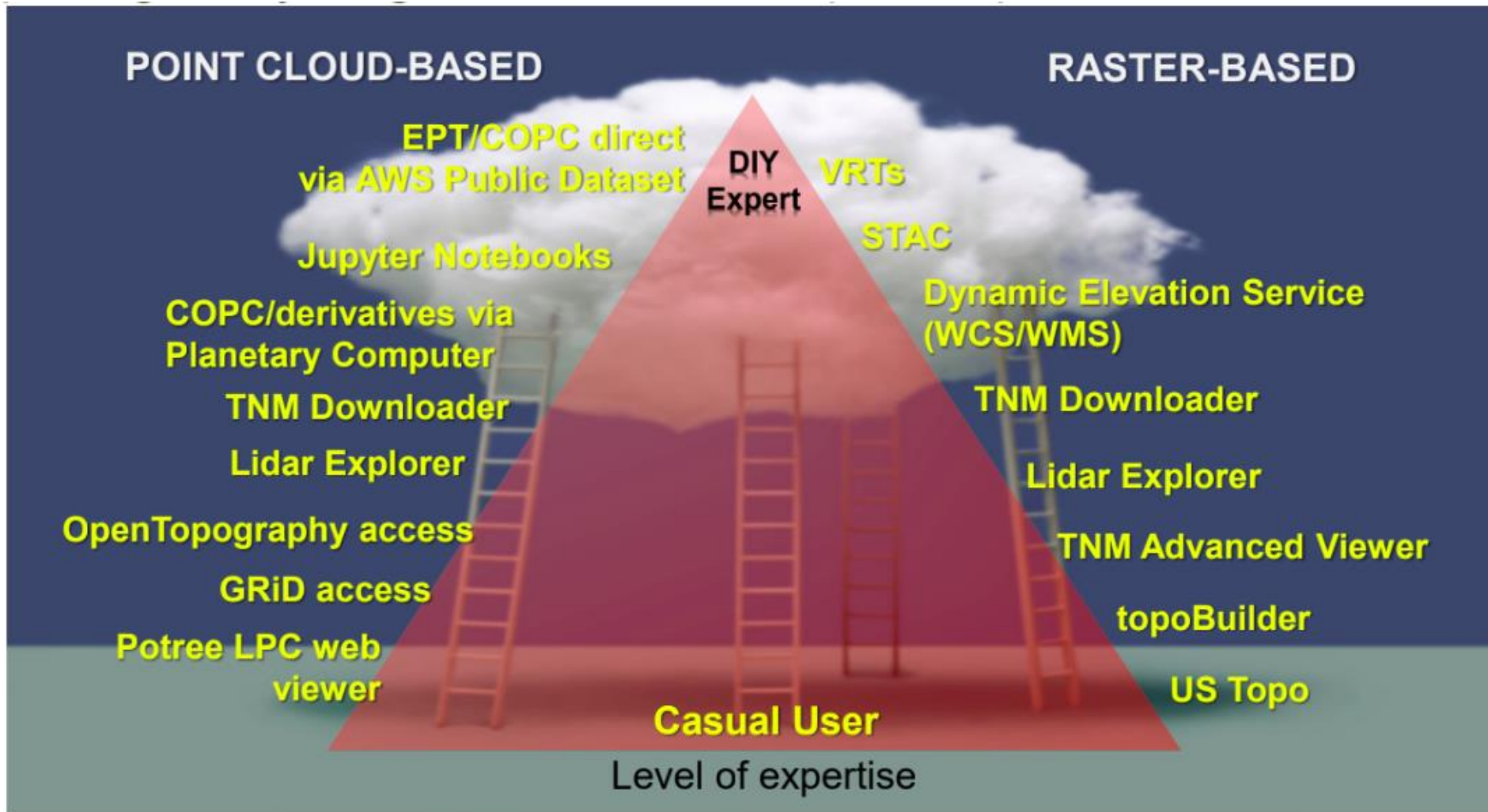
3DEP Data Availability on Seasketch:

http://seasket.ch/2qvO_zviZV



We have a lot of 3DEP data available to us, but our challenge is how to efficiently get to it and use it.

**USGS PRESENTATION BY ROB DOLLISON,
RICK BROWN, AND JASON STOKER
– JUNE 30, 2022 [[LINK](#)]**

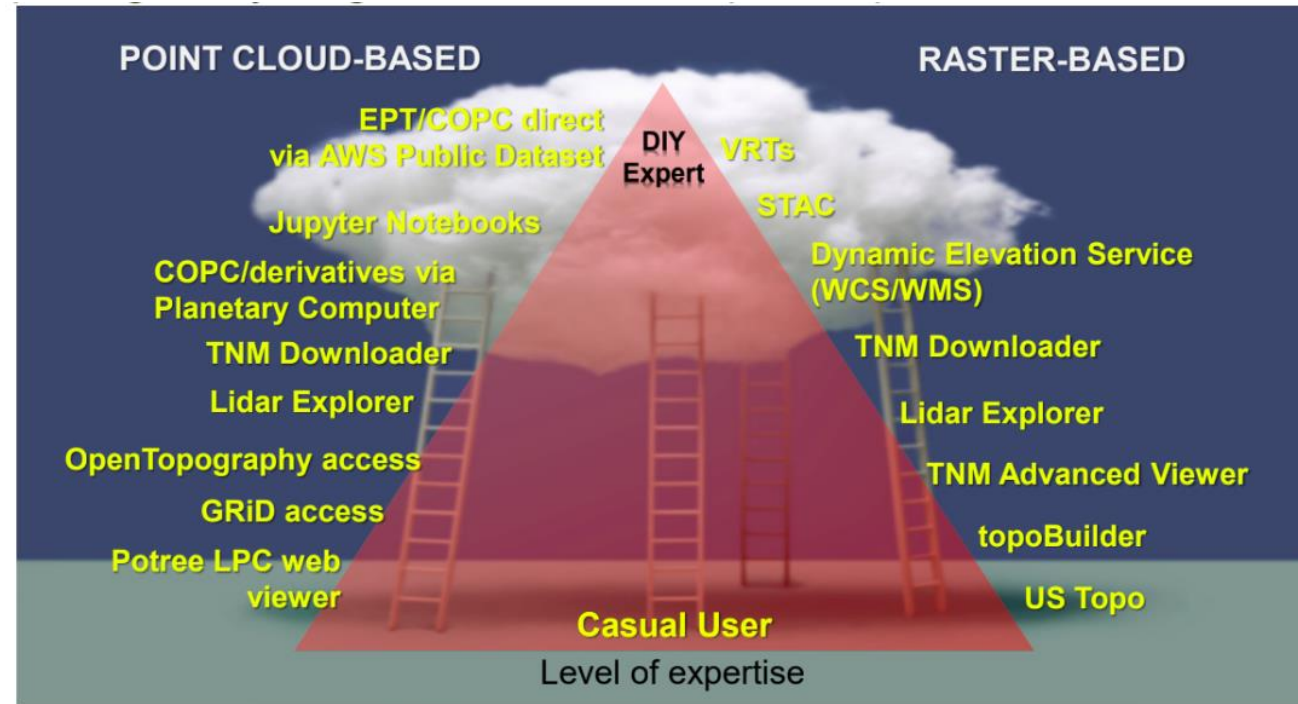


3DEP DATA DISTRIBUTION SERVICES AND APPLICATIONS

This USGS pyramid shows data available both Raster and Point-Cloud data formats, plus tools/applications available for both expert and casual users of these data.

There is a lot to unpack here!

- 11 standard 3DEP data products
- 16 derivative 3DEP data products
- 25 applications (tools and methods) to access and use these data



OPPORTUNITIES FOR STATES TO LEVERAGE THESE RESOURCES

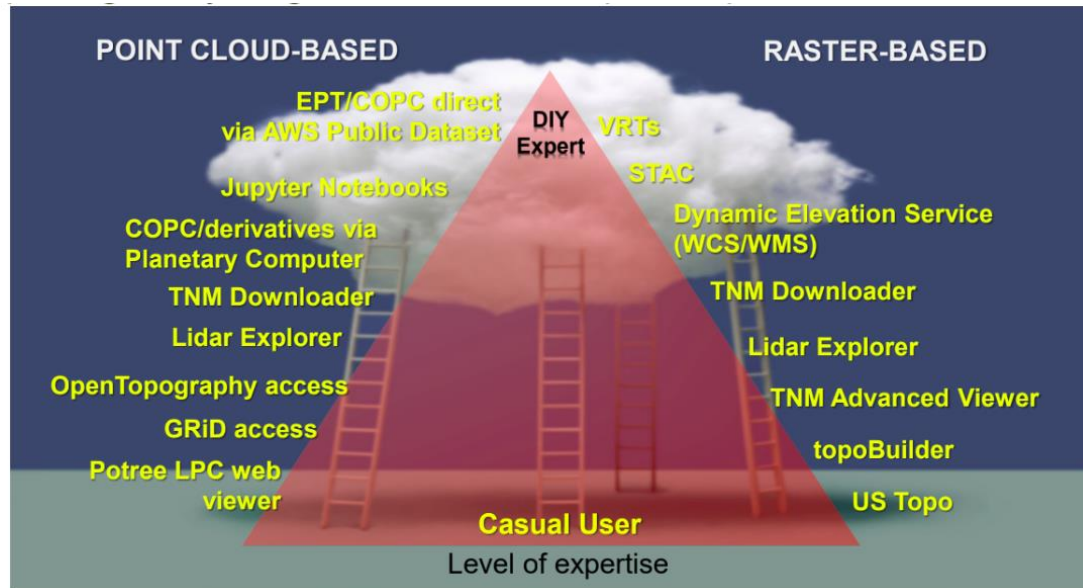
States are looking for and developing new ways to make the 3DEP data in their state readily available to their end-users

States are looking for ways to create and make custom 3DEP derivative products available

In addition to the traditional data download capabilities, we see in this pyramid a transition away from a download-first paradigm. With a focus on standardization, data management, and provisioning, the pyramid includes not only web-services but also emerging open-source Cloud-Native Geospatial solutions

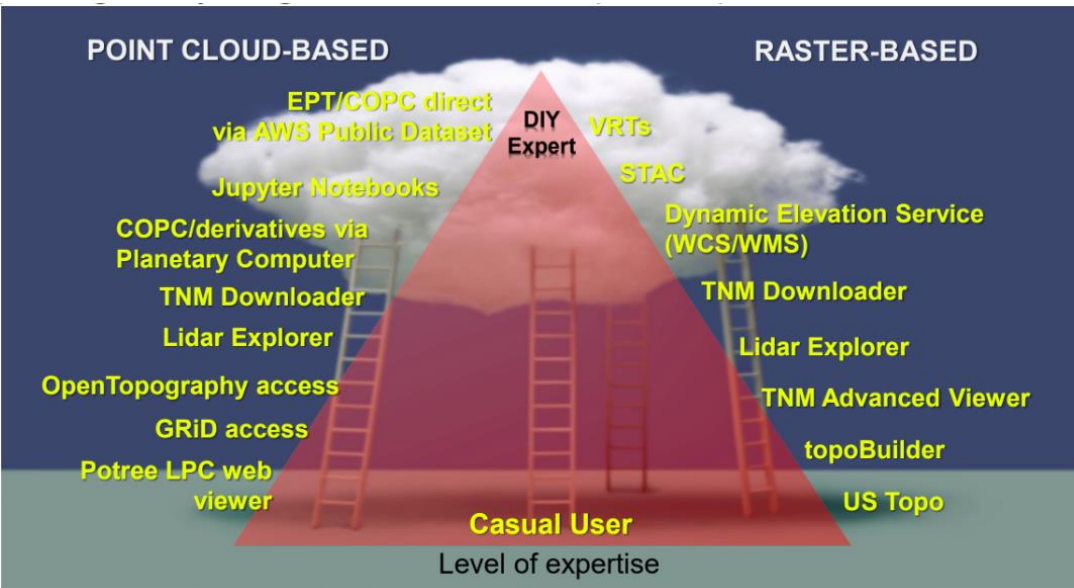
It is in the best interest of states to avoid both duplication of efforts and duplication of data by taking advantage of existing nationwide 3DEP resources by embracing NSGIC's notable "build-once, and use a bunch" model,

But to do so states must first understand what, when, where, and how these existing resources can be used in their GIS environments. **How do we do this?**



OPPORTUNITIES FOR STATES TO LEVERAGE THESE RESOURCES

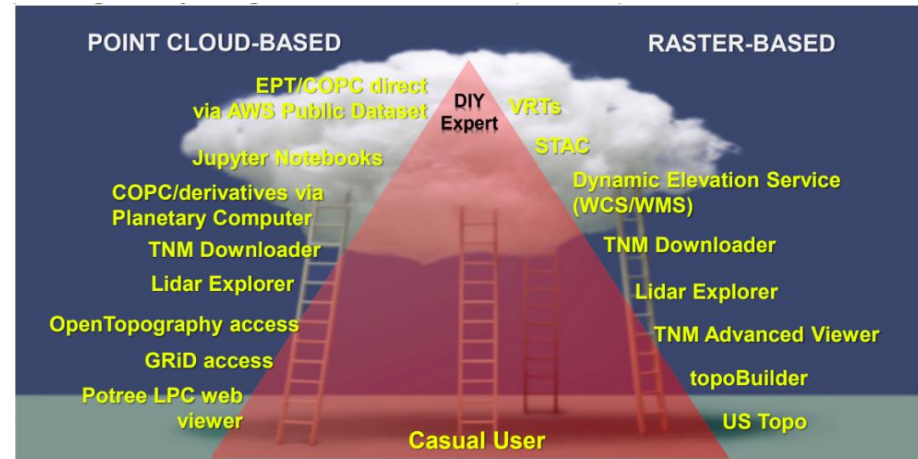
We developed a template to create a series of Frequently Asked Question (FAQ) documents, one FAQ for each of these existing data sources and applications.



Draft 1 of these FAQ documents is what we are sharing with you today. They are all available on NSGIC's Google Drive where they can be viewed, commented on, and used in your state's enterprise GIS environment as you see fit.

All we ask is that you share your experiences and feedback back with the NSGIC community [and that's includes our federal 3DEP partners]

NSGIC COMMUNITY FAQ: 3DEP DATA DISTRIBUTION SERVICES AND APPLICATIONS



NSGIC Review of Existing, Standard, and Derivative 3DEP Data Products and Applications [DRAFT 1.2, Updated 12/07/2022]
3DEP Data Storage, Distribution, Derivatives and Application Options

APPS	Standard 3DEP Data Products:											Derivative 3DEP Data Products:																				
	1.1.	1.2.	1.3.	1.4.	1.5.	1.6.	1.7.	1.8.	1.9.	1.10.	1.11.	2.1.	2.2.	3.	4.	5.1.	5.1.1.	5.1.2.	5.1.3.	5.2.	5.2.1.	5.2.2.	5.2.3.	5.2.5.	5.2.6.	5.2.7.	5.2.8.	5.2.9.	5.3.	5.3.1.	5.3.2.	
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Legend
 Blue highlighted cells indicate Application and Data Product compatibility
 Green cells are NSGIC data product and application recommended consideration
 Orange cells indicate where data product and application recommended considerations intersect

Each FAQ document explores a 3DEP resource available at the time of writing this report...

- eleven (11) standard 3DEP data products available from the USGS,
- sixteen (16) different derivative 3DEP data products provided by the USGS and other sources.
- over twenty-five (25) existing 3DEP data tools and access methods (applications)

Use the Introduction document to access each of the FAQ documents [[HERE](#)]

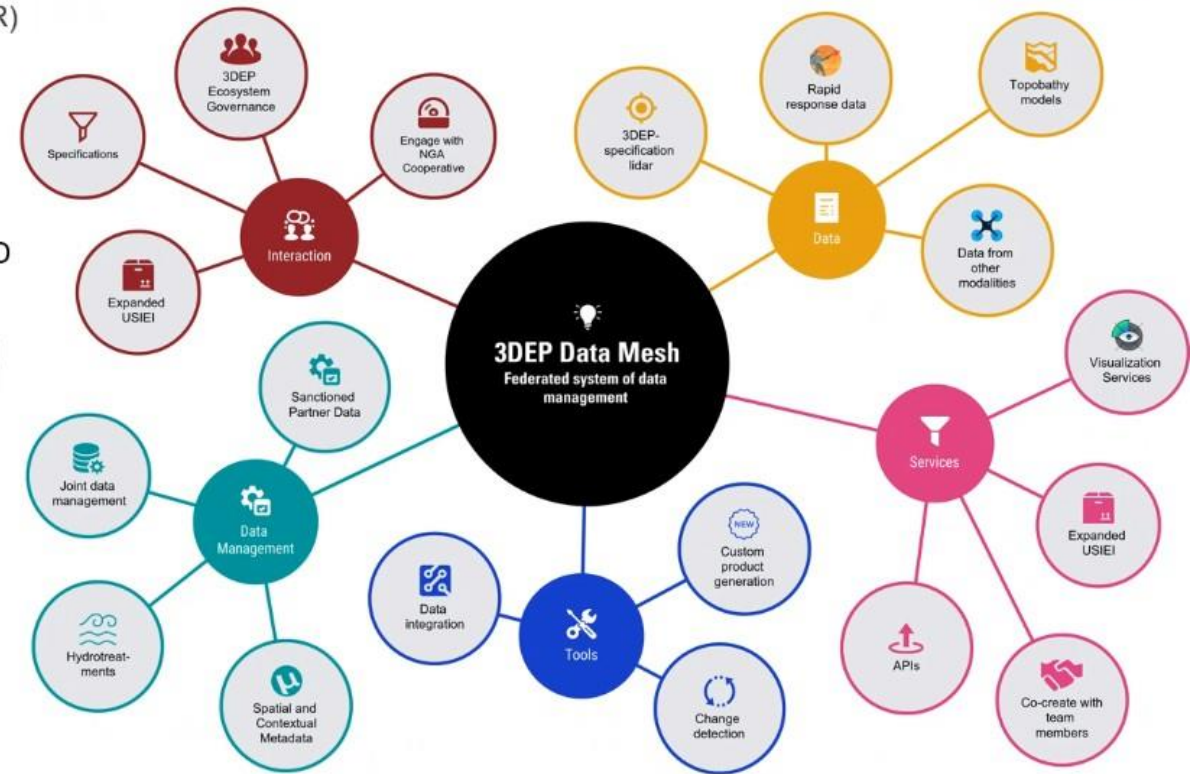
We also developed a matrix to show the 3DEP data sources that are available to use with each of the 3DEP applications [[HERE](#)]

NEXT GENERATION 3DEP DATA DISTRIBUTION AND+APPLICATIONS

3DEP Ecosystem

Definition: A complex network or interconnected system

- Today 3DEP is a single data repository that various groups partner to acquire standardized lidar (IfSAR) that meets multiple uses
- Next gen 3DEP will retain a primary function of partnering on authoritative data but will expand its facilitation and coordination role to manage additional resources under a federated big data governance model to support broader needs for 3D information
- For example, direct data contributions and sharing of tools and code among 3DEP WG members will assist users in turning data into information and allow for the ability to compare and use various datasets interchangeably
- Goal to provide a more **holistic** program for 3D elevation that embraces the full lifecycle management and support for the elevation (and hydrography) theme(s)

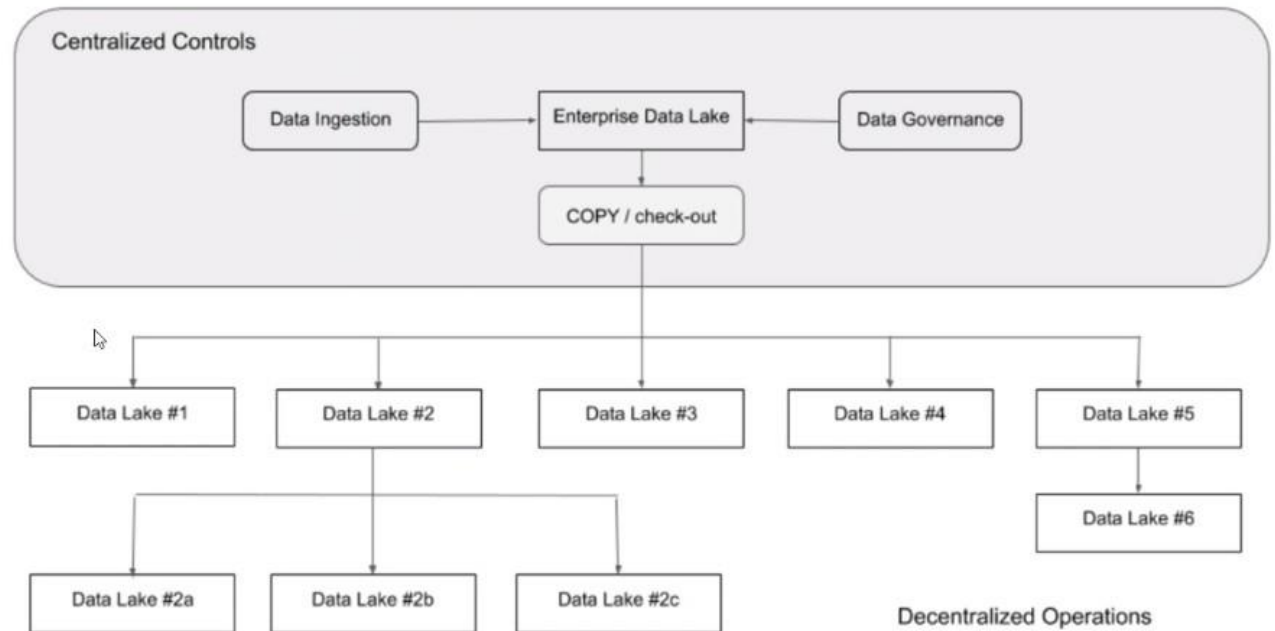


NEXT GENERATION 3DEP DATA DISTRIBUTION AND APPLICATIONS

Federated Big Data Governance

What do we mean by building a “Data Mesh”?

Federated Big Data Governance





Flathead River
lidar visualization
by Daniel E Coe, 2018

DISCUSSION

3DEP FTN UPDATES

- 3DEP FTN project ends May 14, 2023
5 years!!
 - outreach/inquiry to USGS to establish a new cooperative agreement
- Project resources available at the NSGIC 3DEP Info Hub
 - Community FAQ: 3DEP Data Distribution Services and Applications – **coming soon**
 - Checklist for Maintaining 3DEP Momentum - **NEW**
 - 3DEP FTN Acquisition Planning Guide
 - 3DEP FTN Planning App
 - State 3DEP Coordination Best Practices
 - GPS Time Application to derive location-specific acquisition time period information
 - State 3DEP Profiles and Planning Products
 - 3DEP Training and Outreach Materials
 - and more!

Hub URL in chat and slide notes



NSGIC
3DEP
FOR THE NATION

State 3DEP Coordination Best Practices

The National Geographic Information Council (NGIC) is pleased to announce the release of the State 3DEP Coordination Best Practices document. This document provides guidance on how to coordinate 3DEP data acquisition and distribution across state boundaries. It is intended for use by state and local government agencies, as well as private industry and academia.

NSGIC 3DEP STATE
PLANNING - MAPS
AND APPS
IMPLEMENTATION
GUIDE
VERSION 1.0, APRIL 2020

NSGIC
3DEP
FOR THE NATION

National States Geographic Information Council (NSGIC)

State Guide to the Development of an Enhanced Elevation (Lidar) Acquisition Plan

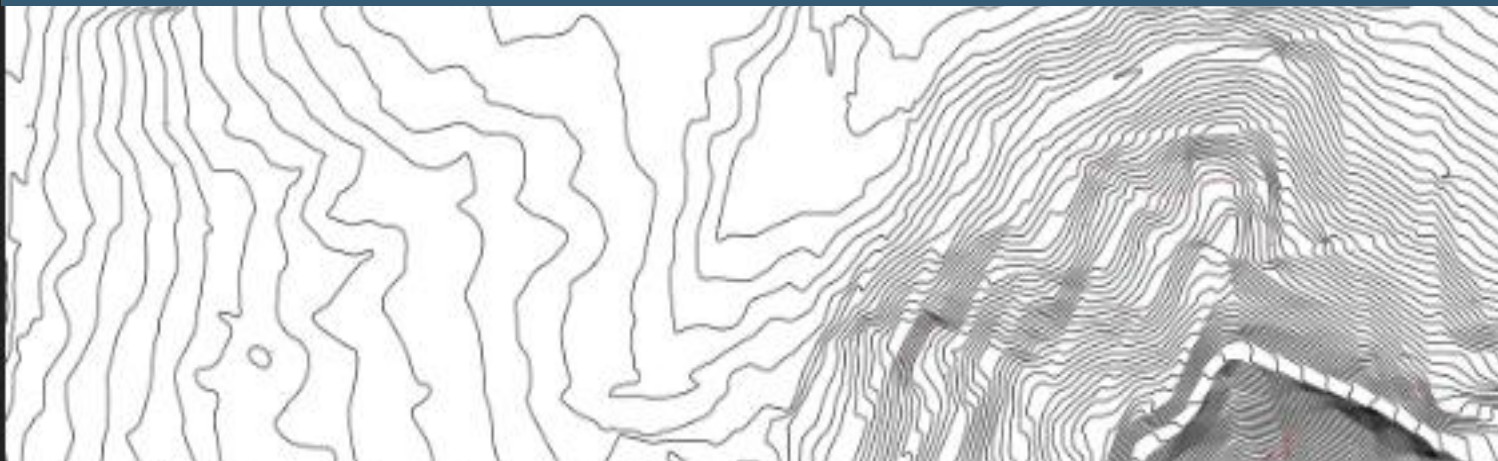
Version
June 15, 2020

Developed in cooperation with the
U.S. Geological Survey (USGS) National Geospatial Program (NGP)
3D Elevation Program (3DEP)

Download the NSGIC 3DEP Planning Bundle!

3DHP FTN Info Forum

Wednesday, January 18, 2023, 3:00-4:30 pm E



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