BREAKOUT BREAKFAST

HOSTED BY:  
Jordan Regenie  
3DEP FTN Program Manager  
Phil Worrall  
3DHP FTN Project Engineer  
Dennis Pedersen  
3DHP FTN Federal WG Liaison, TN
AGENDA

- Intros
- 3DEP Check In
- 3DHP Check In
- Participant Updates
- Group Discussion
NSGIC 3DEP for the Nation 2024 Activities

Continuing Activities

- **3DEP FTN Interest Group**
  May 9 – Acquisition Platform Panel

- **Data Refresh Funding One-Pager**
  Rallying stakeholders around the need for high quality multitemporal data.

- **Inland and Nearshore Bathymetry**
  Navigating its complexity and limited vendor pool – input needed!

- **State and Regional 3DEP Activities**
  3DEP activities mapped to NERBS and 3DNTM
  Call for Action Part 2: Next Gen 3DEP

- **3DEP FTN Info Hub and NSGIC Knowledge Base**
  Access to project products, surveys, and 3DEP FTN Interest Group presentations

Key 2024 Activity

- **Data Refresh Funding Strategies**
  Develop funding strategy guide for acquisition of Next Gen 3DEP data resources
  - build upon existing *3DEP FTN Data Acquisition Planning Guide*
  - emphasize foundational nature of 3DEP data for derivative products
  - quantifying societal impact of 3DEP data through case studies
3DEP FY24 Data Acquisition

- 9 projects in 8 states accepted so far
  - 63K sqmi
  - $17M total value
  - $9.9M partner funding
  - 2 coops accepted
    - WA
    - NY
- CA, AZ, NM, and NH close to decision
- DCA is still open - don’t hesitate to apply!
3DEP Accomplishments (so far)

- 94.7% of nation mapped @QL2 or better at the end of 2023
  - ~5% contributed data working through intake process
  - only ~1% with no data - biggest holes are tribal lands
- Over $800M invested in 3DEP data acquisition since 2015
  - >$145M in Non-Federal partner funding
- >$150M invested in post processing, data validation, and delivery
- Updated Lidar Base Specification 2024 revision A, adopting ASPRS standards
3DEP Plans

- Continue accepting DCA proposals for FY24
- Release FY25 DCA summer of ‘24
- Complete integration of 3DEP data to cover 100% of nation
- Inland and Near-Shore Bathymetry
- 5 year data refresh cycles at QL1 or better
- Improved contributed data integration process
- Continue to support derivative products, such as 3DHP, to realize 3DNTM objectives
NSGIC 3DHP for the Nation 2024 Activities

Continuing Activities

3DHP FTN Monthly Info Forum
April 17 – seeking a state presentation

Culvert Mapping Good Practices
Culvert Mapping Good Practices Workspace – your input needed!

State and Regional 3DHP Activities
3DHP activities mapped to HRBS (MCAs and BCs) and 3DHP FTN Case Studies

3DHP FTN Interest Group
Meets 3–4 times annually. Join at My.NSGIC.org

3DHP FTN Info Hub and NSGIC Knowledge Base
Access to project products, surveys, and 3DHP FTN Info Forum presentations

Key 2024 Activity

3DNTM Data Acquisition Planning Guide
Develop a planning guide for acquisition of 3DNTM national data resources
- build upon existing 3DEP FTN Data Acquisition Planning Guide
- develop in coordination with 3DEP & 3DEP FTN
- align with forthcoming 3DNTM Call for Action: Next Gen 3DEP

See Phil during the conference to follow-up on any of these or contact Lynda @ Lynda.Wayne@NSGIC.org
3DHP FY24 Data Acquisition

Alaska

- ~314K sq miles available or in progress through FY23
- ~72K sq miles currently planned for FY24

CONUS+

- 3DNTM funding did not change from FY23 so funding for DCA is less than anticipated
- Working to find additional funding sources for FY24 DCA projects – will have final information soon
3DHP Accomplishments (so far)

- Publication of final NHD products and services
- Extending life of HydroAdd for NHD through FY25
- First published Hydrography specifications in decades
- First objective data validation process for hydrography
- Data Collaboration Announcement process
- Acceleration of data update – anticipating more with additional funding
- Simplification of the three data models (NHD, WBD, NHDPlus HR) into a single, hydrology-based system
- Conversion to Mainstems as the persistent (cross-dataset) identifier
3DHP Plans

- 2024 marks the first full year of 3DHP.
- 3DHP is initially available as a service layer based on NHD geometry. NHD geometry will be replaced as new data are collected.
- 3DHP_all as a Web Feature Service. More to come.
- HydroAdd3D release planned for Q4 FY24
- First set of Flow Network Derivatives Q4 FY24
- Continuous flow permanence values Q1 FY25
- First 3DHP staged products in Q1 FY25
- Reinstatement of Markup process
It’s an Awful Acronym, but Man is it Cool!

**AIMLLLMGPT-GIS**

- **AI** – Artificial Intelligence
- **ML** – Machine Learning
- **LLM** – Large Language Models
- **GPT** – Generative Pre-trained Transformers
- **GIS** – Geographic Information Systems

**Wednesday 10:45 – 11:00**
NSGIC’s Expert Advisor for State's Participating in the USGS 3D Hydrography Program (3DHP)

NSGIC’s 3DHP FTN GPT Advisor

How does the 3DHP align with state-specific hydrography needs?

What are the recent changes in the Elevation-Derived Hydrography Acquisition Specifications?

Can you provide insights on funding strategies for 3DHP data development?

List all Uploaded Documents (Knowledge) you use to help answer questions about 3DHP?

If you upload files under Knowledge, conversations with your GPT may include file contents. Files can be downloaded when Code Interpreter is enabled.
NSGIC’s 3DHP FTN GPT Advisor
Supporting geospatial decision-making

ChatGPT
GIGA Prompt
NSGIC’s 3DHP FTN GPT Advisor

You
Should Ice Masses be collected in EDH?

NSGIC’s 3DHP FTN GPT Advisor
Ice Masses are not collected in Elevation-Derived Hydrography (EDH) data. Instead, if a channel is not detectable through an ice mass, an indefinite surface connector (FC ode 33404) is used to maintain connectivity, with a note stating "Ice Mass Connectivity". This approach ensures that the hydrography network remains continuous even when specific features, like ice masses, are present but do not have detectable channels through them. Additionally, it's recommended to use ancillary data sources, like the Randolph Glacier Inventory, to identify glaciers and ice masses and to document the presence of these ice masses in the collection area, including the source used for identification and the date of imagery or source access.

You
Cite your sources for this answer

NSGIC’s 3DHP FTN GPT Advisor
The guidance on handling Ice Masses in Elevation-Derived Hydrography (EDH) data comes from the EDH-Read-Rules-Ref-Merge document. It specifies that ice masses are recognized but not directly collected within EDH data. When a channel through an ice mass is not detectable, an indefinite surface connector is utilized to ensure network connectivity, with a specific note on "Ice Mass Connectivity" included. For identifying ice masses, the document recommends using ancillary data sources like the Randolph Glacier Inventory and stresses the importance of documenting the presence of ice masses, the identification source used, and the date of imagery or source access.

Message NSGIC’s 3DHP FTN GPT Advisor...
I need your Help this week with 3DHP FTN GPT model Testing and Improvements

I’m here through Wednesday

Cell: 317-504-4389
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Funding One Pager

Rallying Funding Stakeholders: One Pager Development Resource
THANK YOU!!

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