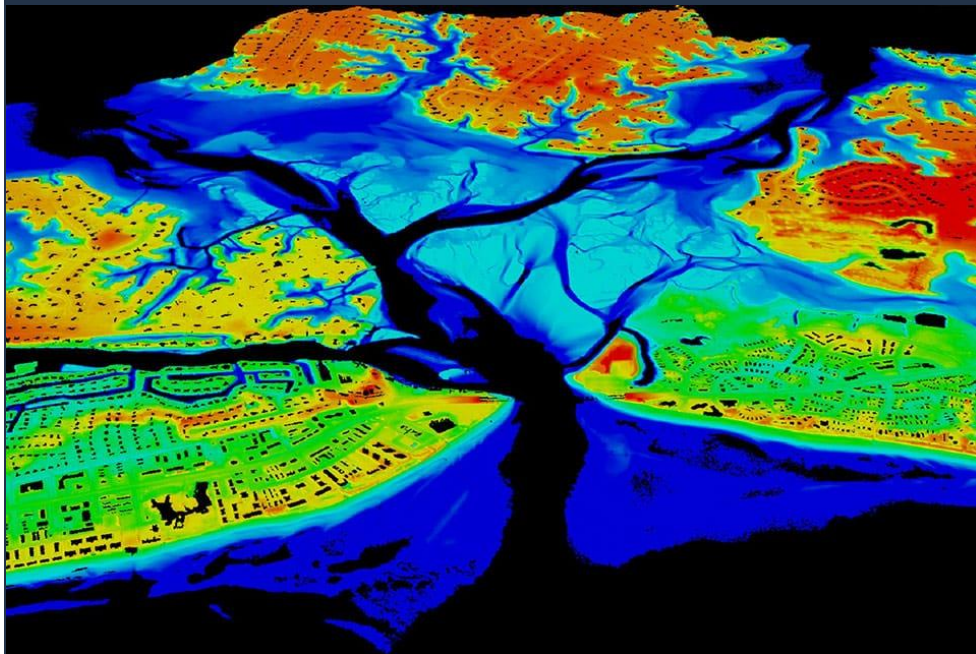


# NSGIC Data for the Nation

## 3D Elevation and 3D Hydrography Projects



**Mark Yacucci**

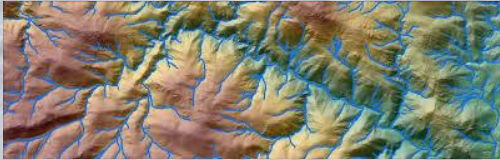
Section Head – Geoscience Information  
Illinois State Geological Survey  
NSGIC 3DEP Interest Group Chair

# NSGIC Data for the Nation



NSGIC and USGS cooperative agreements to engage state and local governments, and their private sector partners, in the acquisition of 3DEP lidar (IfSAR in Alaska) data and the creation of a modernized national hydrography dataset derived from and aligned with the elevation data.

# NSGIC 3DEP State Engagement



## Planning

- Stakeholder Engagement
- Areas of Interest
- Funding Partnerships
- Gap Analysis
- Maintenance and Update

## Data Acquisition

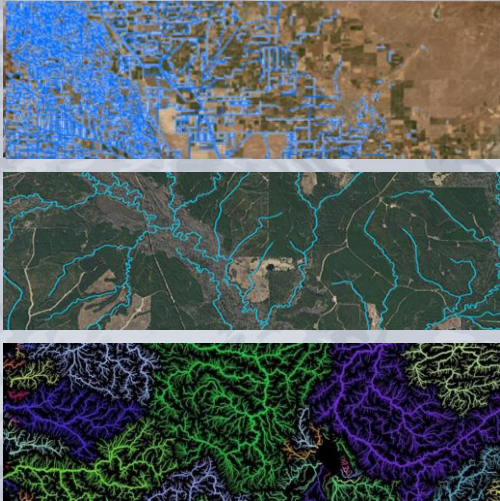
- Acquisition Contractor Selection
- BAA Proposal

## Distribution of Derived Products

- Data Formatting
- Storage Location
- Distribution Applications
- Staff and Supporting Resources

## Outreach and Education

- Educate Stakeholders in the Application of 3DEP Data
- Outreach to Administrators to Support State 3DEP



### Knowledge Sharing

- 3DHP Monthly Forum
- 3DHP Working Group
- 3DHP Interest Group

### 3DHP Resource Development

- Critical Factors Compilation
- Information and Resource Needs Assessment
- Information and Resource Development
- USGS EDH Specification Updates

### Stakeholder Roles and Responsibilities

- State Role
- NHD and WBD Steward Role
- Local Government Role

### Education and Outreach

- Educate Stakeholders in the Application of 3DHP Data
- Outreach to Administrators to Support State 3DHP

# NSGIC 3DHP

## State Engagement

### Motivations for State 3DEP and 3DHP Participation



**Tennessee**  
Dennis Pedersen



**Michigan**  
Mark Holmes

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### Innovative State 3DEP and 3DHP Partnerships



**Alaska**  
Leslie Jones



**Washington**  
Joanne Markert  
Joshua Greenberg

# Tennessee: Motivations for Participation



- Surveying and Engineering - Transportation
- Mine land Reclamation - Environment and Conservation
- Soil Conservation - USDA/NRCS
- Stormwater Modeling and Flood Risk Mapping - FEMA
- Property Assessment and Land Development - Local Assessors
- Hydrologic Modeling - USACE and TVA
- Many, Many others!



- TN has existing hydro dataset but with issues, need improvements in:
- Feature standardization (hydro features/density vary by county)
  - Missing features with existing 1:24K NHD, poor alignment with base layers

# Tennessee: Motivations for Participation (cont.)



- TN Wildlife Resources Agency
  - Fisheries management, Biodiversity management
- TN Environment and Conservation
  - Endangered species management, environmental permitting
- Forestry
  - Riparian zone management
- USACE/TVA
  - Hydrologic modeling
- “Field of Dreams” - Build it and they will come!

# Michigan: Motivations for Participation



Building out new statewide elevation base as foundation to other programs



Leverage statewide QL2 LiDAR to improve much needed flowlines, water bodies and water areas

- New contract with Quantum Spatial and Michigan State University to begin regional buildout of hydrography data to 3DHP standard and integration to NHD
- Need to coordinate with USGS and other stakeholders throughout project to ensure alignment with specifications and NHD integration
- Hydrography data improvement benefits many stakeholders and programs



# Michigan: Motivations for Participation

## USE CASES

Emergency Management	Fish Stocking	Minerals	Real Estate	Nutrient Load Modeling
Parks and Recreation	Habitat Management	Invasive Species	Natural Rivers Program	Charter Fishing Program
Forest Inventory	Conservation Enforcement	Wetlands Protection	Hydrologic Modeling	Wildlife Management
Fire Management	Oil and Gas Mining	Hydrologic Studies	Floodplain Program	Endangered Species
Watershed Delineations	Geologic Mapping	Containment Investigations	Coastal Management	Water Table Mapping
Navigation	Tourism	Environmental Assessments	Cartography	Asset Management

# Alaska: Innovative Partnerships

## Federal Coordination

### Alaska Mapping Executive Committee

The Alaska Mapping Executive Committee (AMEC) coordinates the modernization of critical Alaska map layers. Executives from multiple federal agencies and the State meet twice annually to prioritize mapping objectives. AMEC currently promotes acquisition of several digital map layers including Imagery, Elevation, Terrestrial Hydrography, Wetlands, Coastal Shorelines and Bathymetry, and GRAV-D.



## State Coordination



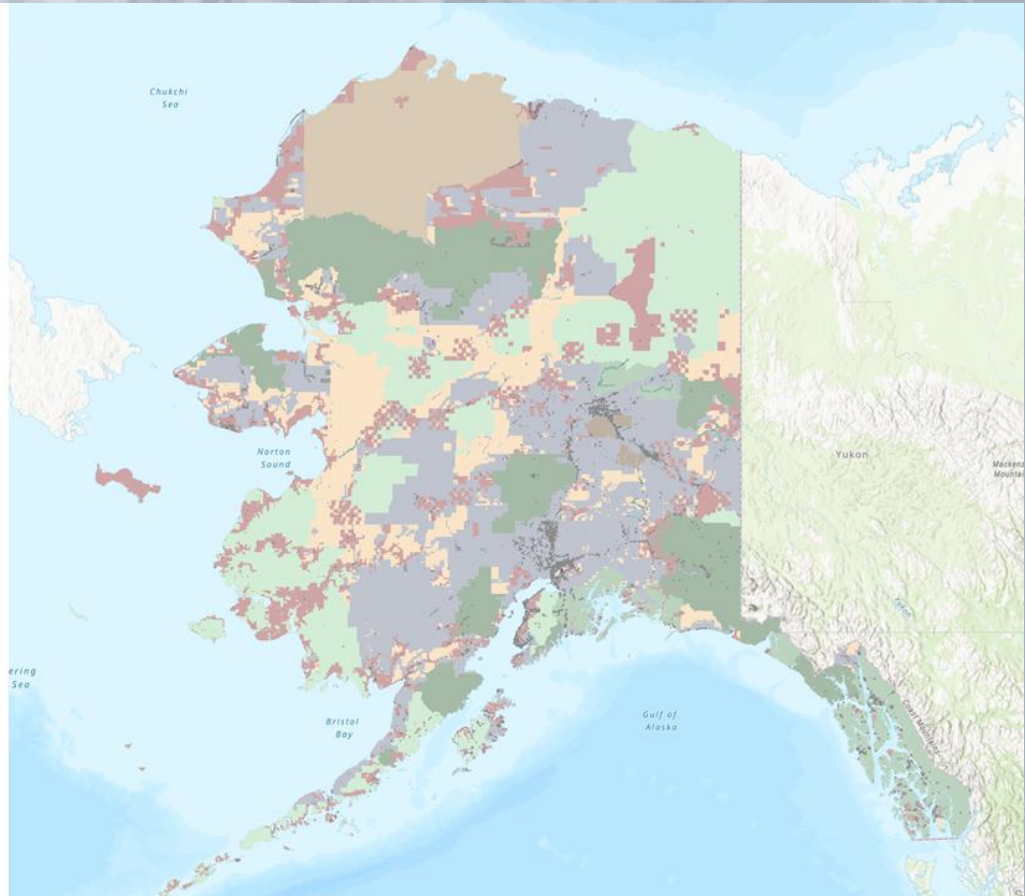
Hydrography Technical Working Group



# Alaska: Innovative Partnerships

## Land Ownership

- 24% State land
- 22% BLM
- 21% USFWS
- 14% NPS
- 6% USFS

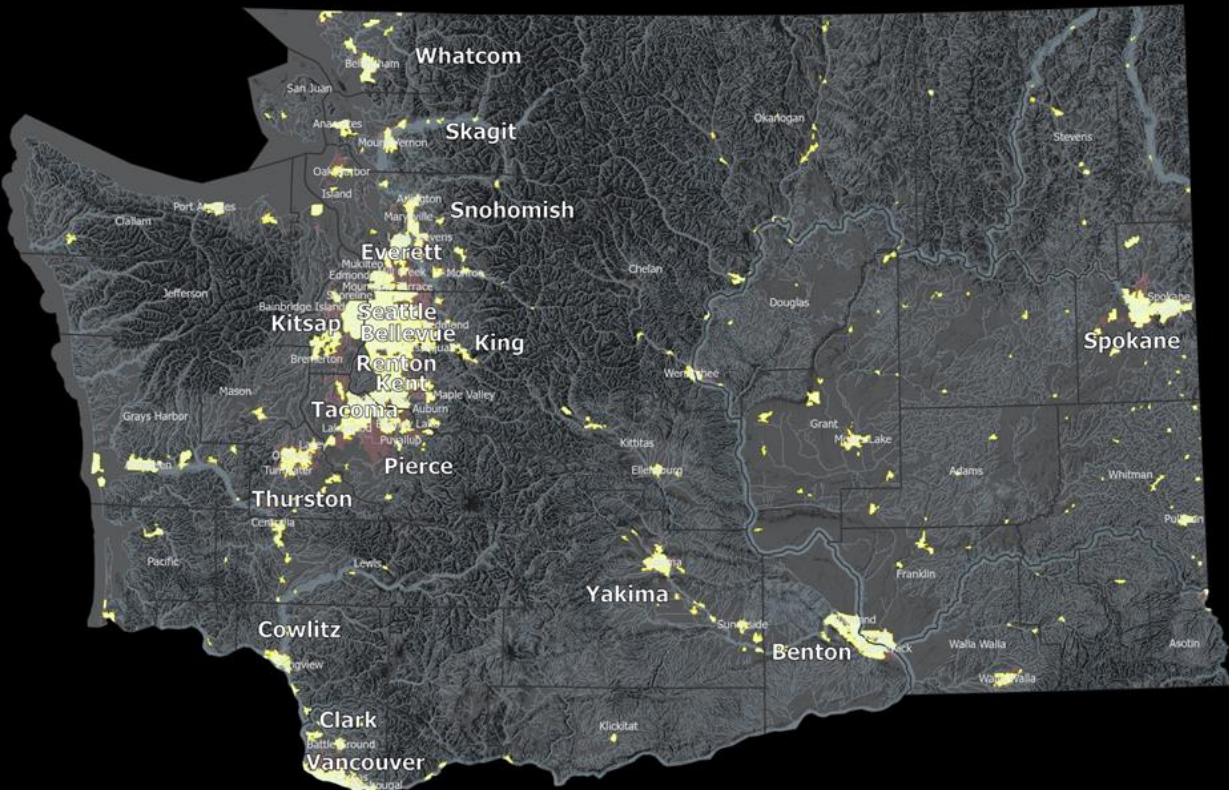


# Washington: Innovative Partnerships

- Partnership between Dept of Natural Resources and State Geospatial Program
- Started a stakeholder group fall of 2018
- Meet twice a year, 50+ participants
- Discuss priorities, state plan and refresh
- Main focus is natural hazards, wildfires and agricultural uses
- Building partnerships with rural areas of eastern Washington



# Washington: Innovative Partnerships



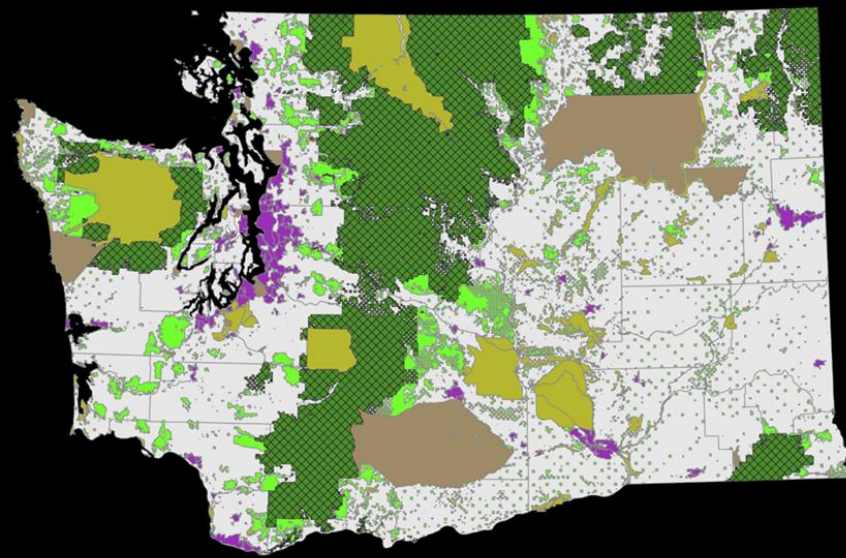
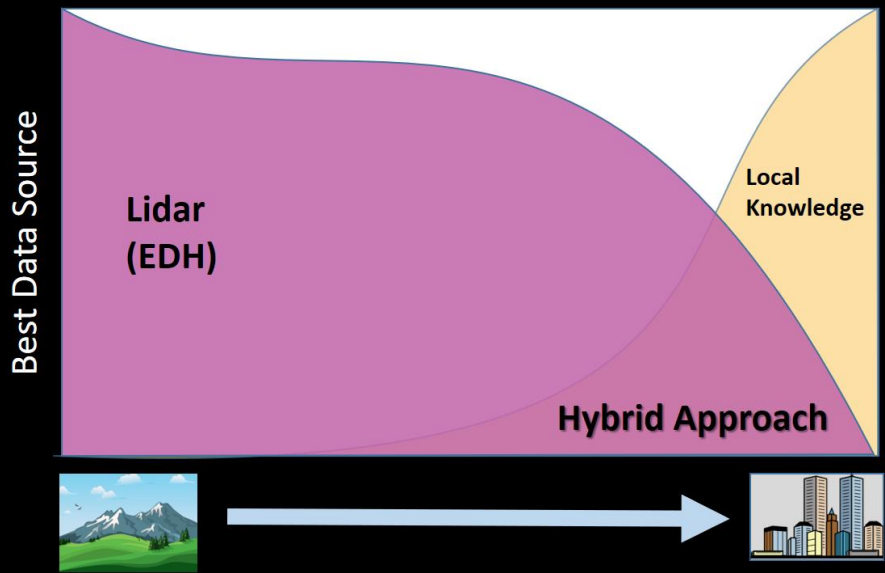
- Federal
- State
- County
- City
- Tribal

- ❖ Working together
- ❖ Single dataset

# Washington: Innovative Partnerships

## Assumptions

- Lidar and Local knowledge together are necessary
- Overlap of jurisdictions require communication
- Creating win-win scenarios





**Questions?**

**3DEP for  
the Nation**

**3DHP for  
the Nation**

**NSGIC Data for the Nation**

**Lynda Wayne**

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