

Funding Statewide Geospatial Datasets in Alaska

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An aerial photograph of a wide river valley. The river flows from the foreground towards the background, winding through a landscape of green grass and scattered evergreen trees. In the distance, large, rugged mountains with rocky slopes and some forested areas rise against a blue sky with scattered white clouds. The overall scene is a natural, mountainous landscape.

Challenges to Overcome:

- Federal agencies need data for planning and management.
- Statewide datasets rely on Imagery and Digital Elevation – SDMI provided the impetus
- Funding still required to complete the mapping
- No single agency has the resources or mandate to create what is necessary

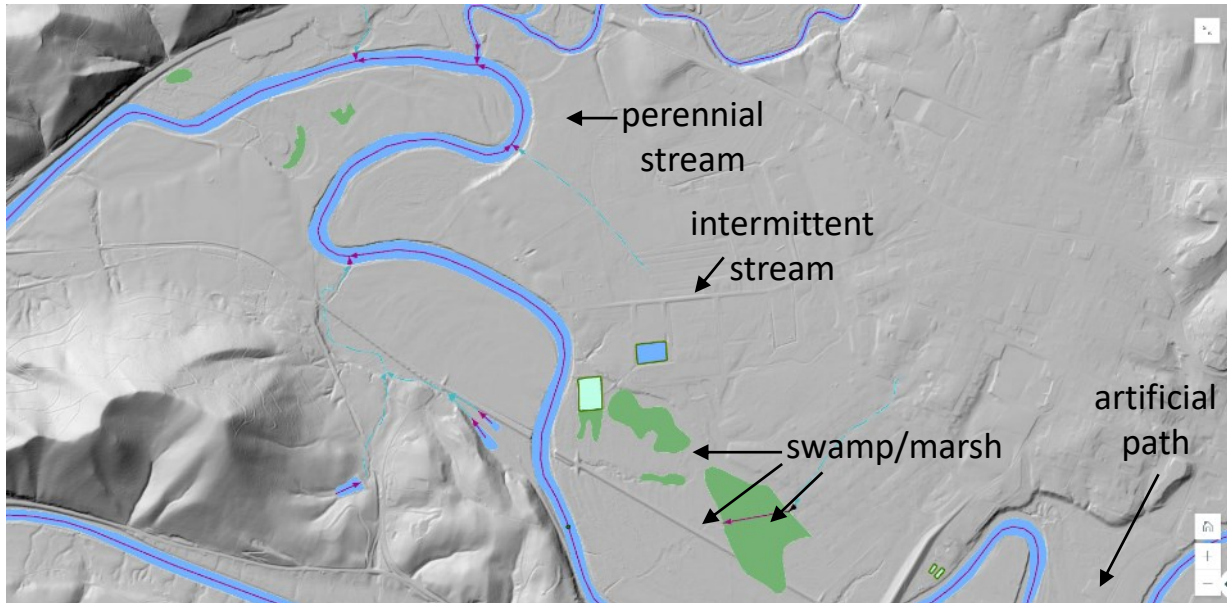
Alaska Mapping Partners (State and Federal)



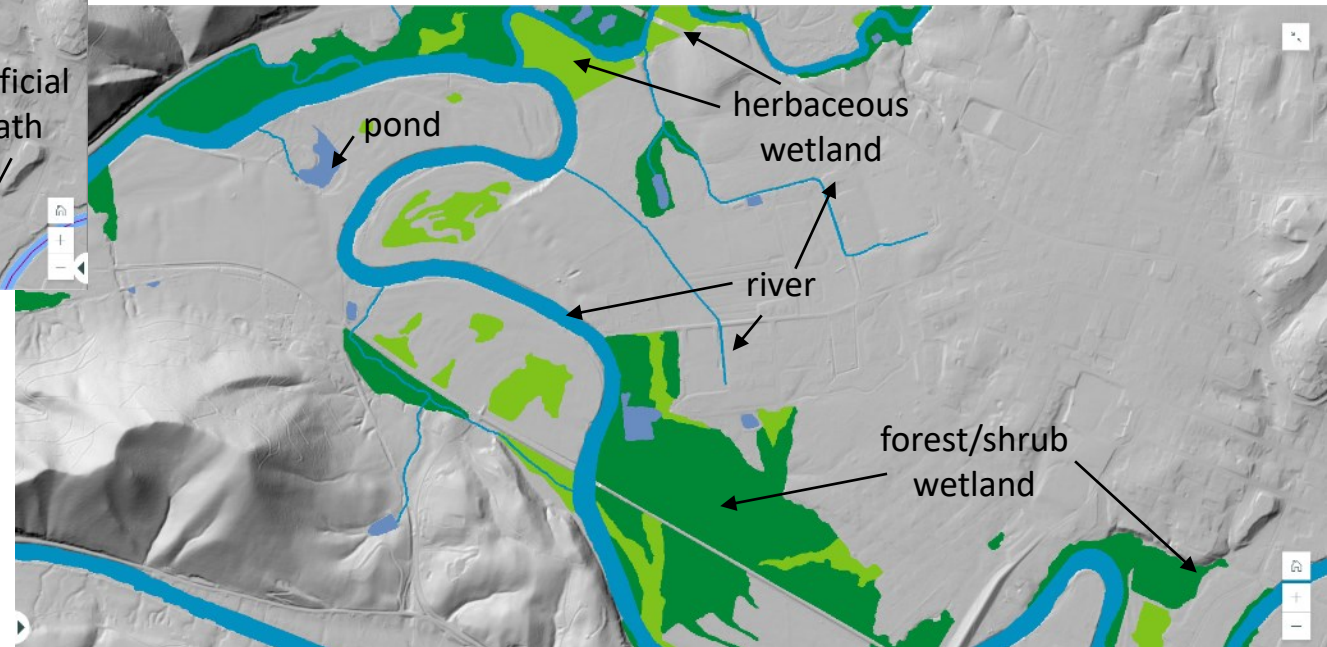
Alaska
Geospatial
Council



National Wetlands Inventory (NWI) National Hydrography Dataset (NHD) and 3Dimensional Hydrography Program (3DHP)



2015 started concurrent NWI and NHD production based on goals to:

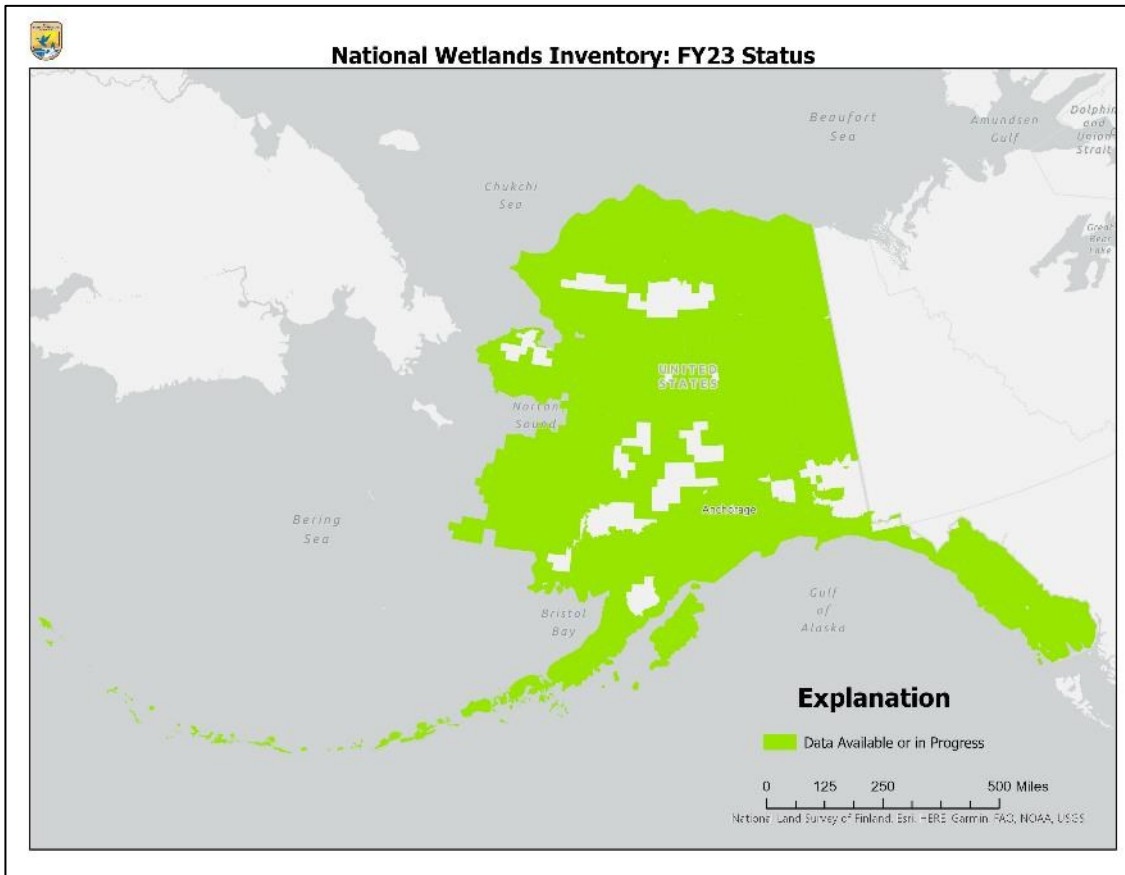


- Document the location and interconnected nature of wetlands, rivers, lakes, estuaries
- Provide data to support planning for climate change, infrastructure, fisheries and subsistence.
- Reduce duplication of efforts and ensure better integration of NWI and NHD features

Alaska Wetlands and Hydrography Status

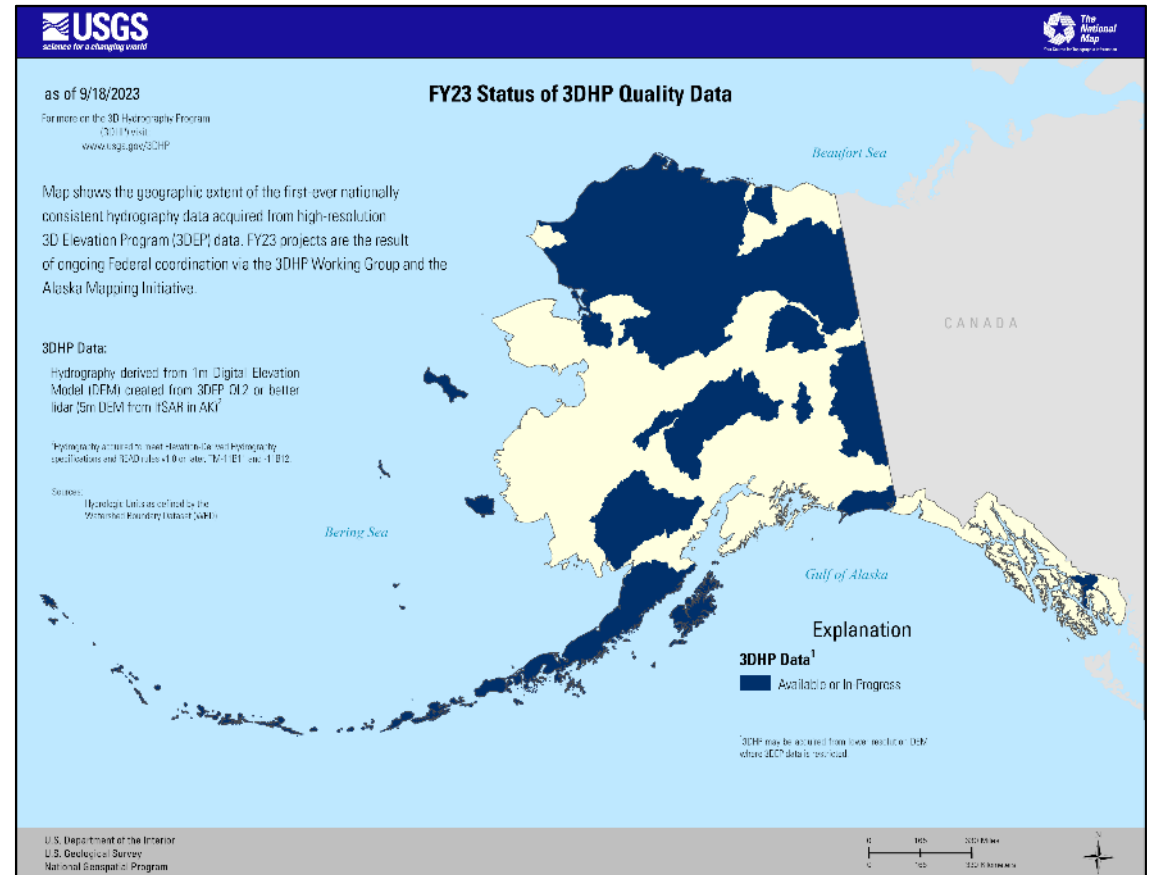
National Wetlands Inventory

- 2013: 40% state coverage of NWI data
- **Today: Over 80% of Alaska has NWI available or in progress.**



3DHP

- 2013: 1:63,000 scale NHD based on analog data
- **Today: Alaska is leading the nation for 3DHP production.**



Statewide Mapping Momentum and Cooperation

Wetlands Working Group

*Mapping the critical transition areas between uplands and lowlands;
where green meets blue.*



The NWI (wetlands) and NHD (surface water) can be used in conjunction with one another to better understand and explain surface water and wetland connectivity. This information helps land managers consider the flow of waters, saturation of wetland habitats, and complexity of ecosystem processes that support plant and animal species and their movements.

Overall, NWI (wetlands) and NHD (surface water) facilitate a better understanding of where surface water and ground saturation exists, how it is connected and how water moves through a watershed.

Hydrography Technical Working Group

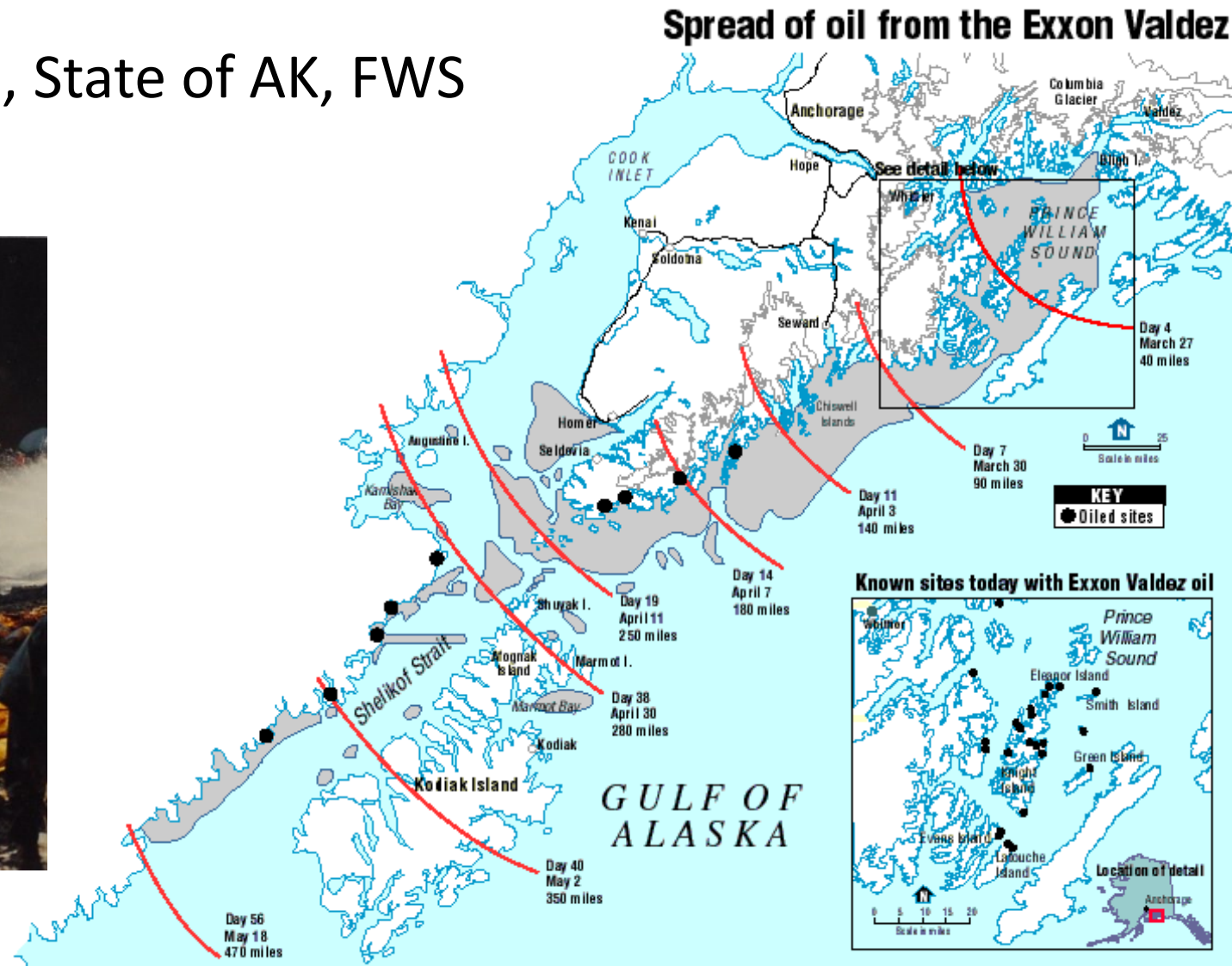
Mapping Alaska's waters from source to sea



Exxon Valdez Oil Spill Trustee Council (EVOSTC)

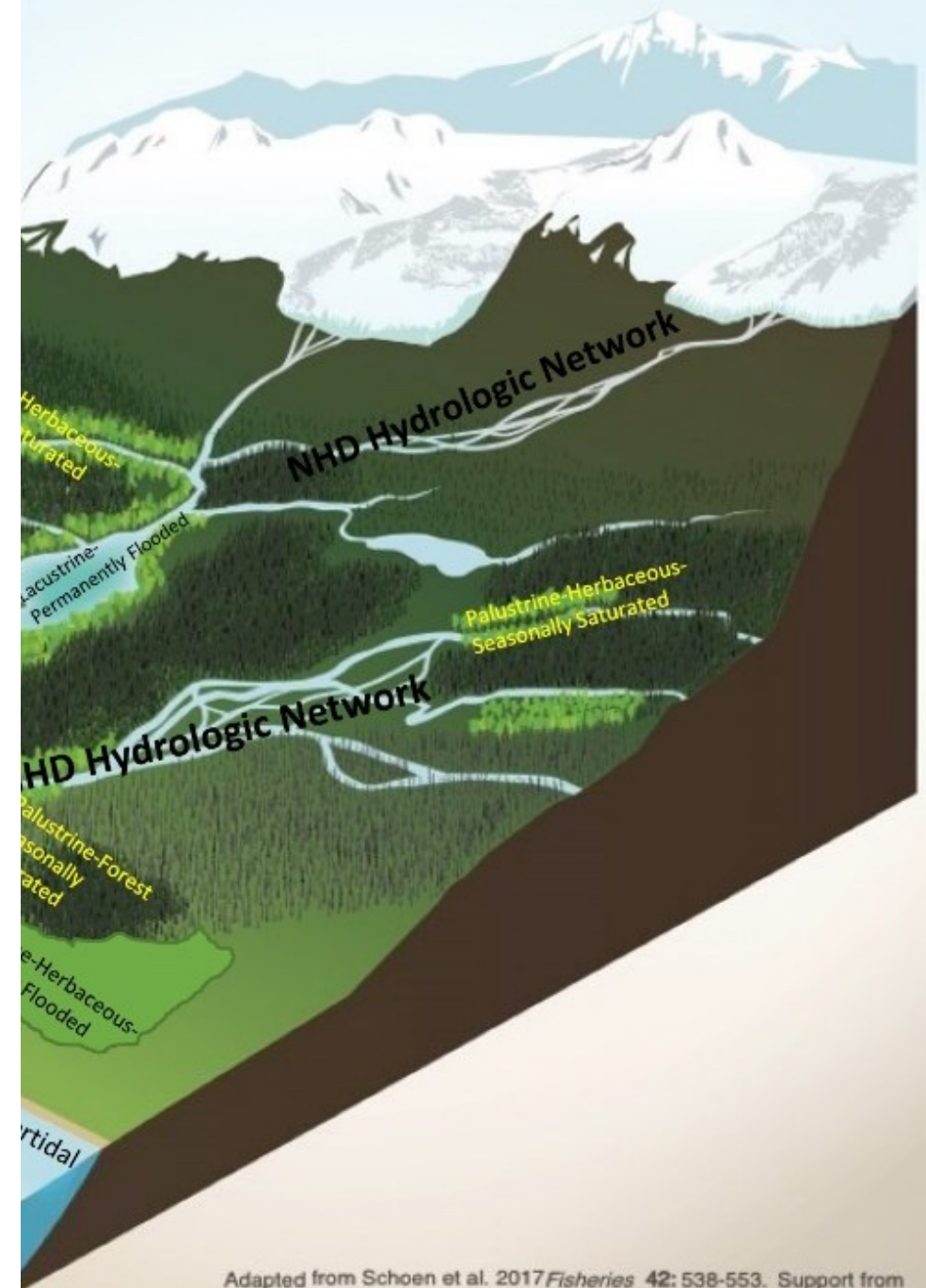
Natural Resource Damage Assessment Program

- Principal Investigators: USGS, State of AK, FWS
- 5 year funding: \$5.5 Million



EVOSTC Funds for Resource Restoration

- EVOSTC is a unique NRDA situation, but other mapping projects are occurring on NRDA sites in CONUS.
- Past studies focused on direct impacts to species.
- Our proposal focused on a need to consider an **ecological approach** from headwaters to oceans.
- The first year was funded for NHD/3DHP and NWI.
- Future project years are funded for 3DHP, NWI and select LiDAR.



Adapted from Schoen et al. 2017 *Fisheries* 42: 538-553. Support from Alaska EPSCoR NSF award #OIA-1208927 and the state of Alaska.



National Fish and Wildlife Foundation

Public-Private partnership with a multitude of grant opportunities

- America the Beautiful Challenge Grant
 - Up to \$2M for planning
- Alaska Fish and Wildlife Fund
 - Conservation of species and habitat in AK
- National Coastal Resilience Grant
 - Incorporate data creation into restoration project planning
- Other regional restoration and conservation grants





America the Beautiful Challenge Grant



- National Fish and Wildlife Foundation award to Bristol Bay Native Corporation
- Goal: Map wetlands and provide professional development opportunities to learn about creating and using geospatial datasets.





America the Beautiful Challenge Grant, Expanded Data Acquisitions



- NFWF funding: \$1 Million
- Leveraged resources provided by DOI agencies: \$1 Million +
- Project at current funding levels will:
 - Map 20 million acres of 1 acre TMU NWI and 5 million acres of 3DHP
 - Provided employment, internship and learning opportunities to community members
 - Provide outreach to communities regarding the value of geospatial data for planning, habitat modeling and conservation



Lessons Learned

- Be creative, **apply, apply, apply**
 - Grant reviewers need to see more requests (and justifications) for geospatial data production
- **Economy of Scale**—large volumes of work can reduce costs
- **Collaboration** often stretches the dollar
- End users want **complementary age, scale and types of data**

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