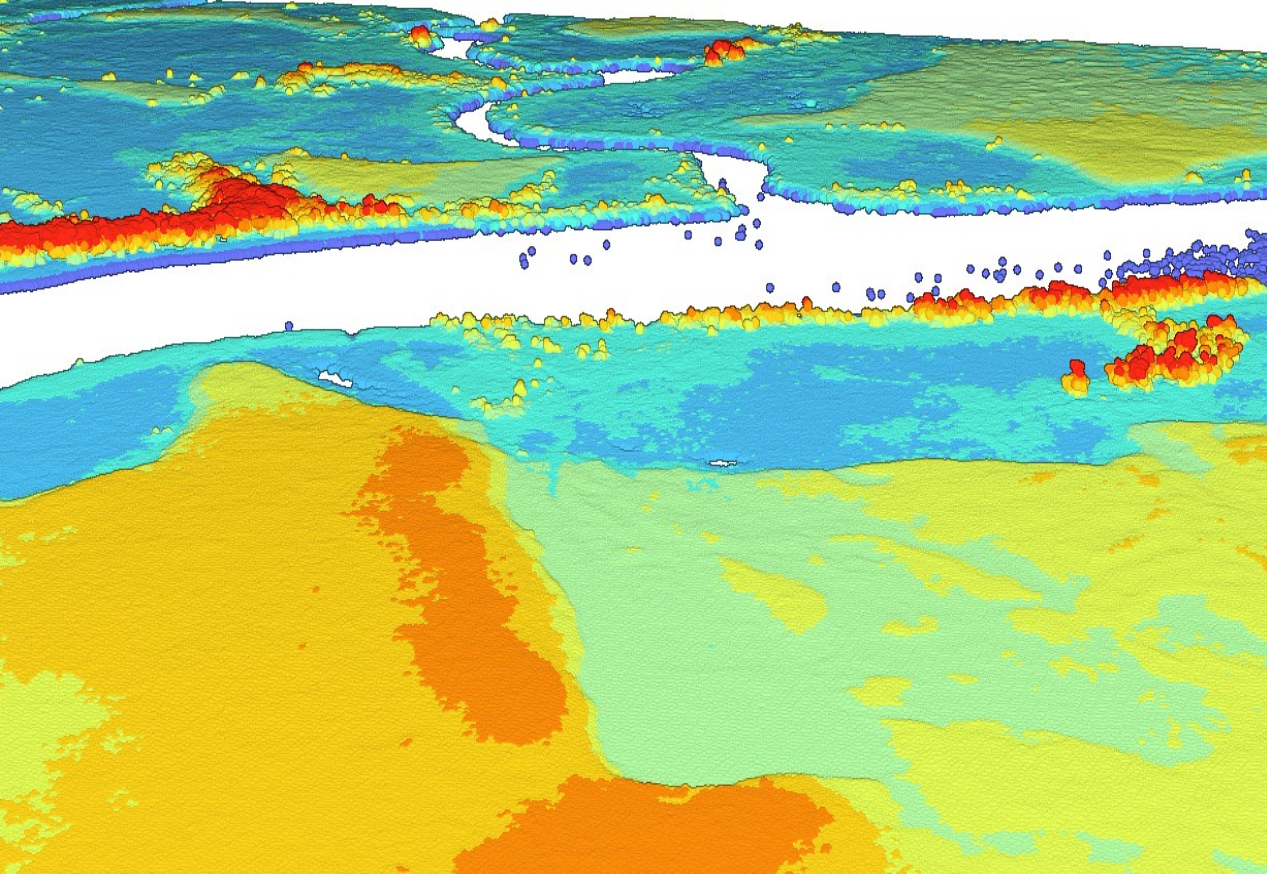




United States Department of Agriculture



# Lidar for Alaska Flood Protection

Drew Lane  
USDA-FPAC-GEO

FARM PRODUCTION AND CONSERVATION  
FSA | NRCS | RMA | Business Center

# Introduction

## Locally Led Watershed Solutions

### Watershed Protection & Flood Prevention Operations Program:

- Flood prevention, Agricultural Water Management, Municipal & Industrial Water Supply, Public Fish and Wildlife
- Project Criteria: Public Sponsorship, Watersheds 250k acres or smaller, ag benefits at least 20% of total benefits for the project

### Emergency Watershed Protection Program (EWP):

- Relocation of at-risk structures, removing debris clogging streams/waterways, stabilizing eroding streambanks or levees



# Project Details

In 2022 – 16 Alaska Native communities were selected for WFPO projects totaling \$40.2M in federal funding and 7 Alaska Native communities were selected for EWP projects totaling \$12.6M

## Timeline

- Acquisition started in FY22
- 3 villages remaining to be acquired in FY24 – Tununak, Chefornek & Savoonga

## Data acquisitions specs

- 453 sq miles total over 14 villages (avg 32 sq miles/AOI)
- Mostly QL2 (Kivalina mod for QL1)



# Areas of Collection



# McGrath





**Atmautluak**



**Tuntutuliak**



**Kivalina**

# Expected Support & Outcomes

## EWP & WPFO Projects

- Data will be used for:
  - Locate higher elevations (to move structures/houses)
  - Determine flood inundation zones
  - Most of the villages are tied to watershed protection, flood damage reduction/prevention or wildlife – depends on location
  - Use in PIFR (Preliminary Investigation and Feasibility Report) at these locations
    - Current project stage for most communities
    - Once approved to continue – lidar will be used for everything from moving structures to higher ground, building roadways, build elevated walkways/boardwalks for ATV trail use to subsistence gathering/hunting grounds, and watershed/flood modeling



# Challenges

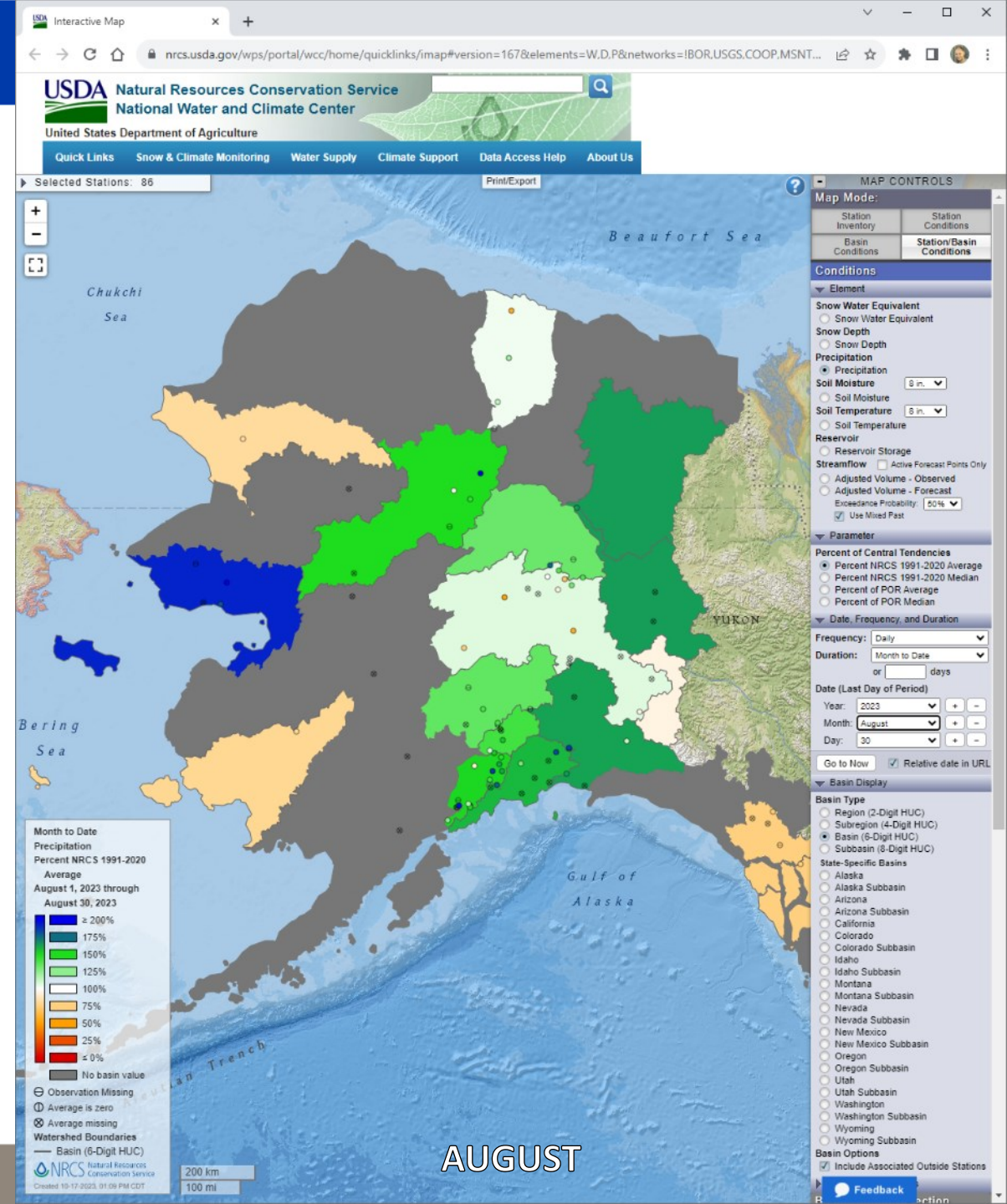
## Challenges of Collecting lidar in remote AK

Remoteness  
Weather

**Anchorage is on track to set a record for the most rainy and snowy days in a year. But this summer wasn't as cold as you may think.**

**Record low fire season caused by precipitation and humidity**

Southwestern Alaska is having its cloudiest summer in 30 years, climatologists say





# Next Steps

## Just the beginning...

- Applications to NRCS completed
- NRCS will use data in Preliminary Investigation and Feasibility Report (PIFR) (6-12 months)
- Watershed Development Plan (12-24 months)
- Project Design (12-24 months)
- Project Construction (12-24 months)