



# The National Coordinated Soil Moisture Monitoring Network:

## *A Focus on the MRB*

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Midwest and MRB DEWS Partners Meeting  
Marina Skumanich | Oct 13, 2022

# National Coordinated Soil Moisture Monitoring Network “NCSMMN”

*Coordinated, high-quality,  
nationwide soil moisture  
information for the public good*



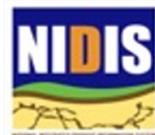
- **Network of Networks**

- State and Federal Mesonets
- Private, citizen science
- ... and satellite / model-based data

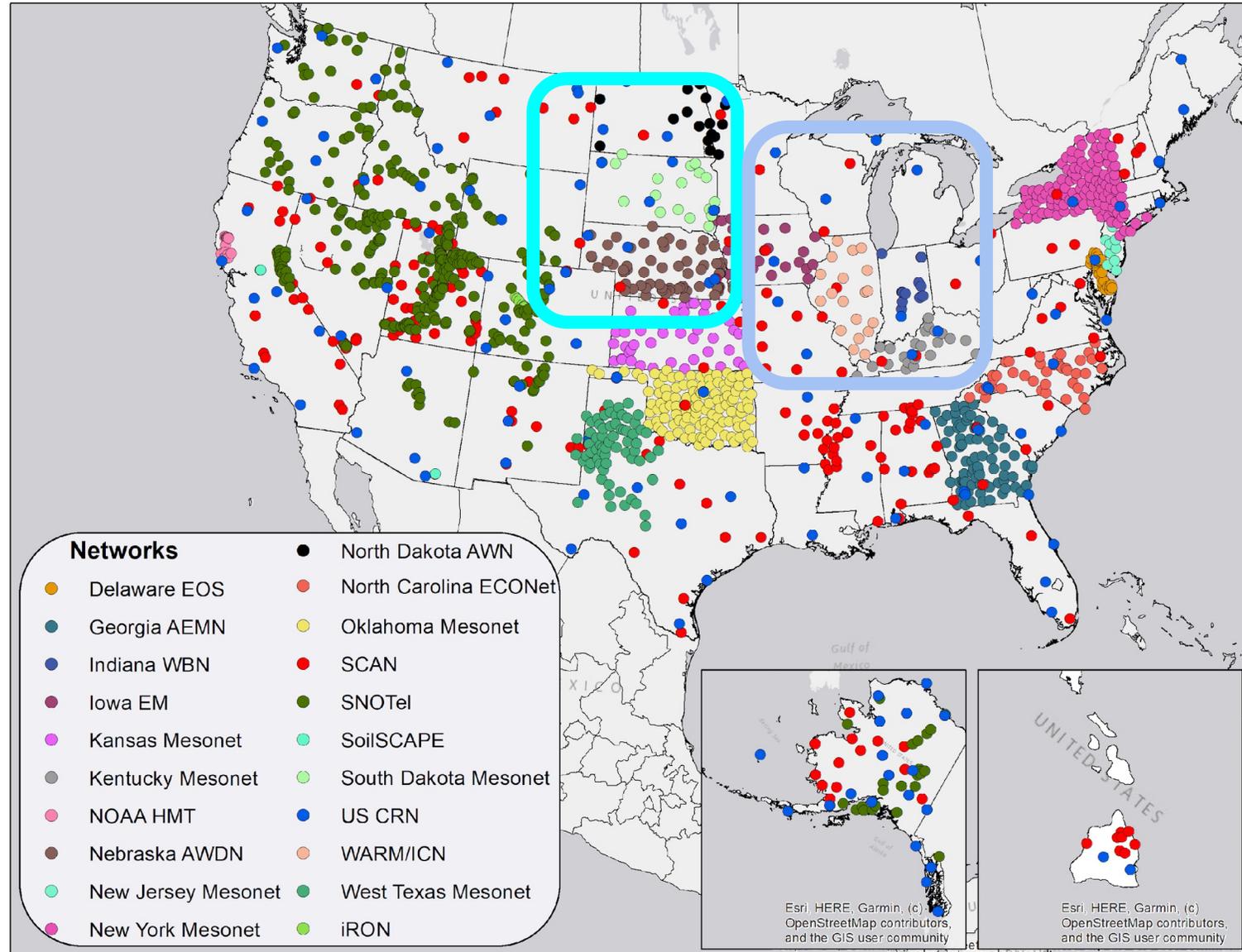
- **Network of People**

- Data providers
- Researchers, model & tool developers
- End user community

→ *All of you!*



# In Situ Soil Moisture Networks



# Activities to Highlight

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- Upcoming: Installation Protocol & Video Training
- Midwest DEWS: Soil Moisture Product Review & (Experimental) Dashboard
- Webinars and Workshops:
  - November 16th: Soil Moisture and Wildfire Seminar
  - Spring 2023: 2nd Network Operators Workshop
- NCSMMN Listserv
- ***UMRB Buildout & Data Value Study***



# UMRB Soil Moisture & Plains Snowpack Build-out Project

- **US Army Corps of Engineers Build-out:**
  - Contracting with 5 state mesonets: MT, ND, SD, NE, WY
  - 540 stations in ~7 years | ~40 installed to date
  - High-quality “total water” data systems
- **NOAA NWS Data Acquisition & Use Pilot Program:**
  - Data access via contracts & \$\$
  - Served via MADIS or similar platform
  - Available to all federal agencies & beyond
- **NOAA NIDIS:**
  - Data Value Study



# Data Value Study

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- 4-yr, \$1 million - report to Congress end of FY25
- Inter-agency team:
  - NIDIS lead
  - NOAA, USACE, USGS, NRCS, BuRec, NASA, UMRB states
- Study components:
  - Value of soil moisture & snowpack data for a (*WIDE!*) range of applications
  - Viability of the data acquisition structure
- Process:
  - Organize working group
  - Develop 4-year study workplan
  - Start research projects - FY23

# Applications & Challenges

- **Applications:**

- Weather & climate forecasting: local, regional, national
- Drought & flood early warning
- Calibrate/validate remote sensing (satellite) products
- Other applications (e.g., wildfire)

- **Challenges:**

- Won't have system built-out before research is due
- Not much time or \$\$

- **Will require creative project definition!**

- Smaller case studies
- Surrogate data
- Look for overlapping interests

- ***On list: Regional Data User Engagement Project***

← *Signup sheet*



# Thank You

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