

Developing a Flood and Drought Early Warning Network for the Upper Missouri River Basin

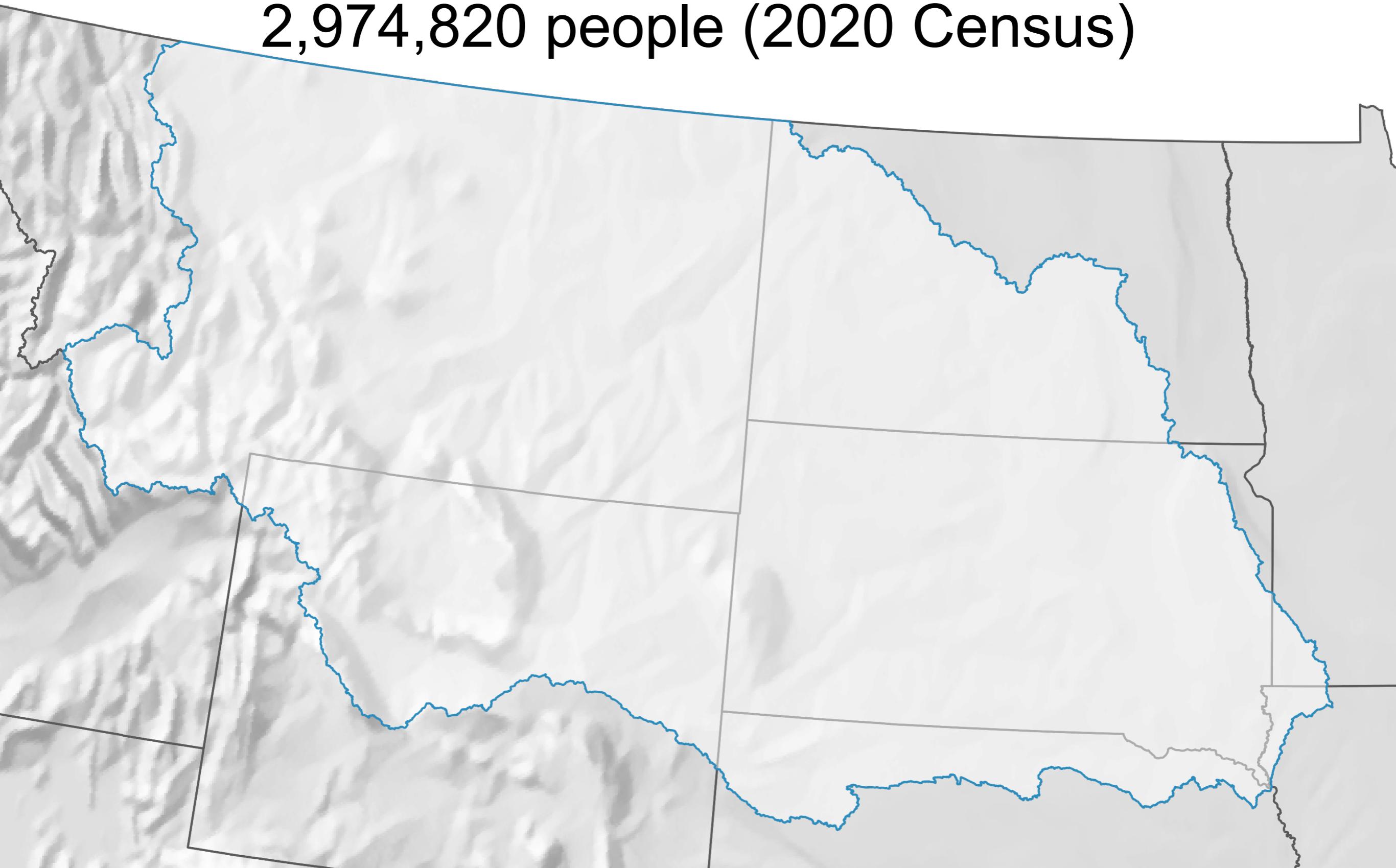
Seeking TCU Collaboration

Kyle Bocinsky
Director of Climate Extension
Montana Climate Office
University of Montana

Upper Missouri River Basin

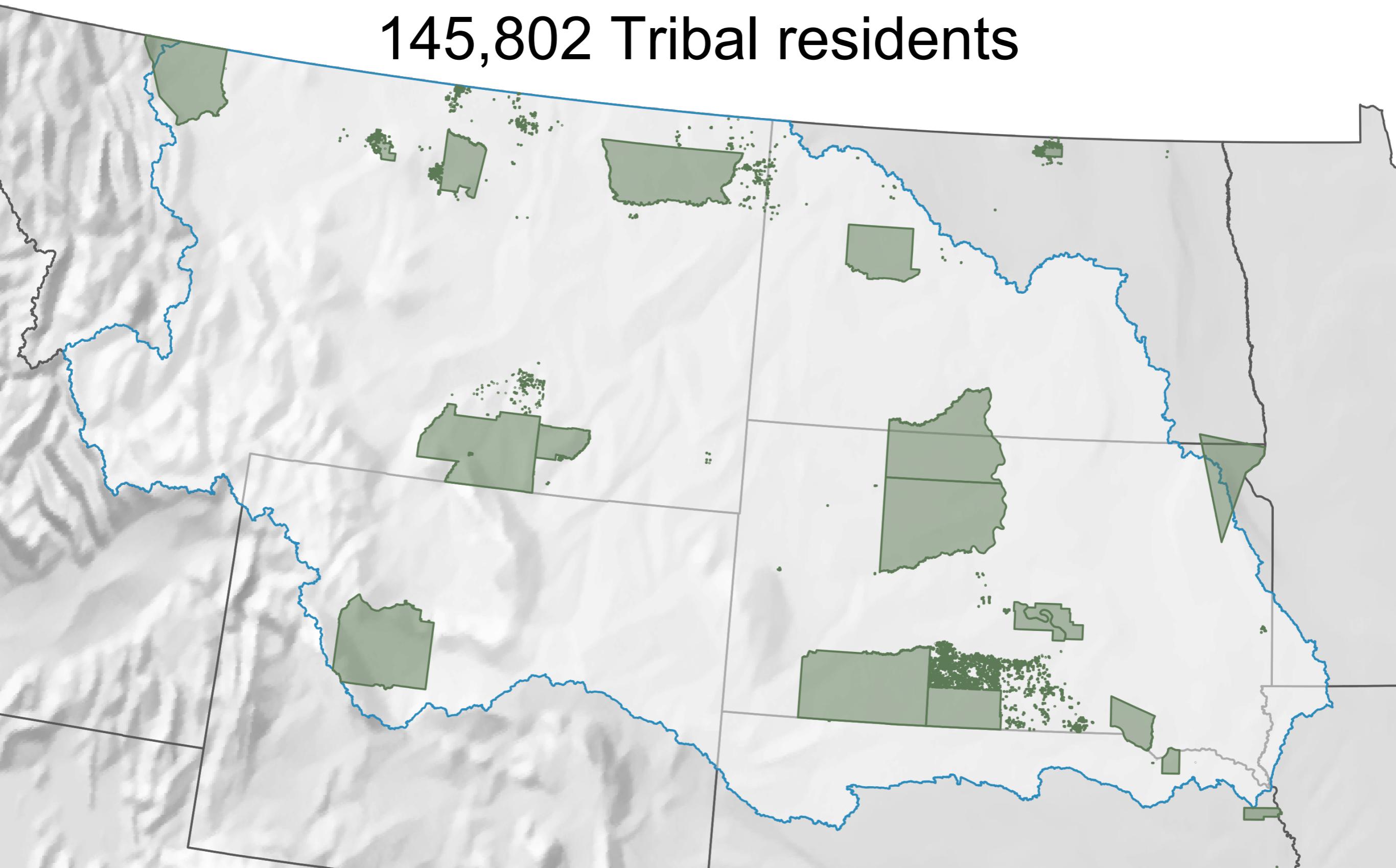


302,000 square miles
2,974,820 people (2020 Census)



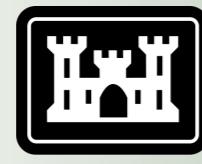
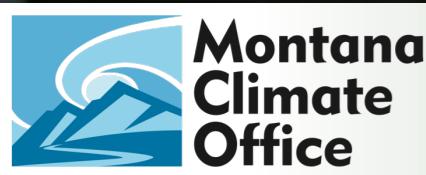
21 Tribal Reservations

145,802 Tribal residents





USACE



Kyle Bocinsky, Montana Climate Office
UMRB Flood and Drought Early Warning: Seeking TCU Collaboration
FALCON 2021 Annual Conference, October 21, 2021



Larry Mayer, Billings Gazette



Jenn Ackerman and Tim Gruber for The New York Times

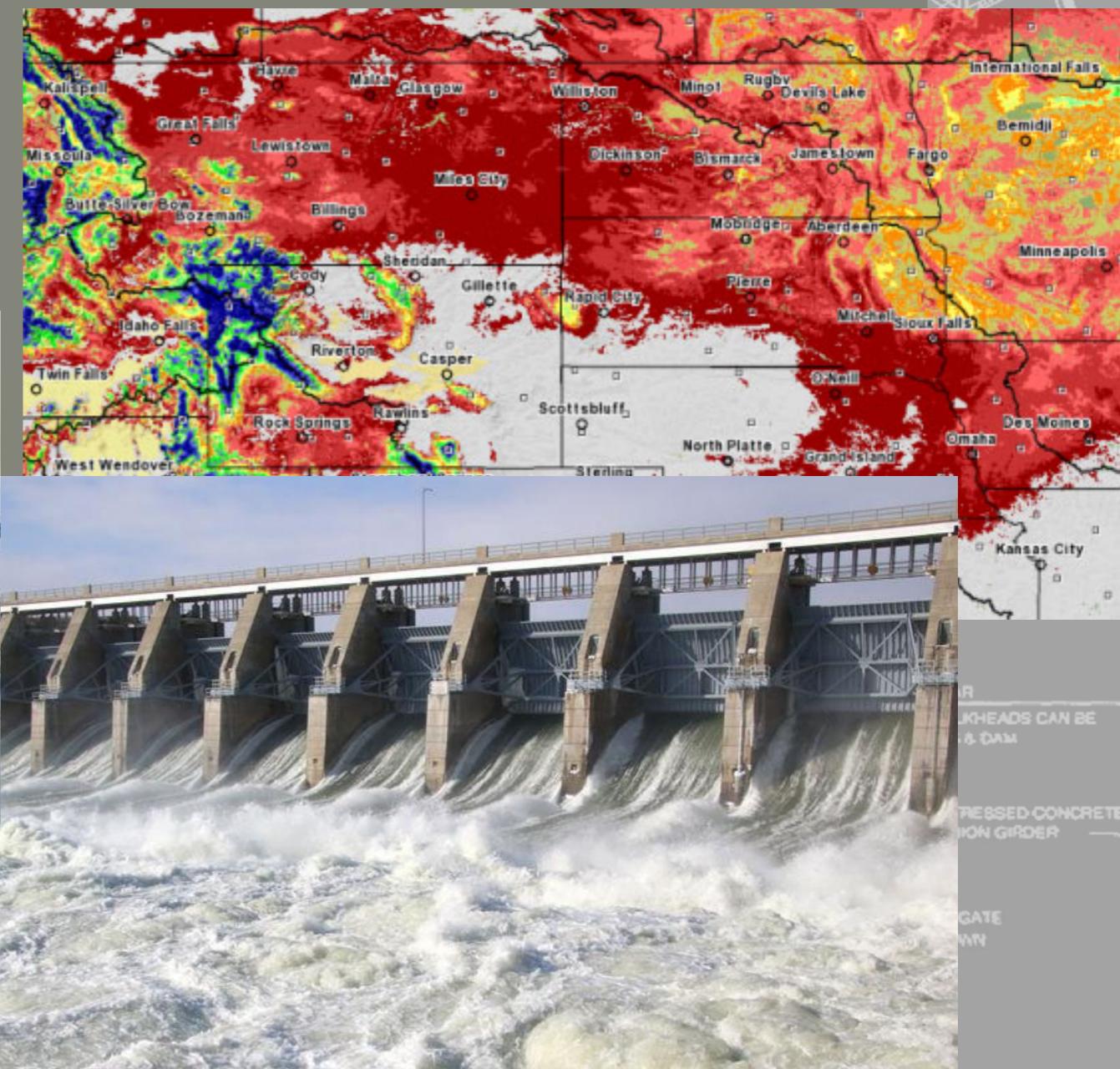




Keloland Media Group

UPPER MISSOURI RIVER BASIN PLAINS SNOWPACK & SOIL MOISTURE MONITORING NETWORK

USACE Omaha District

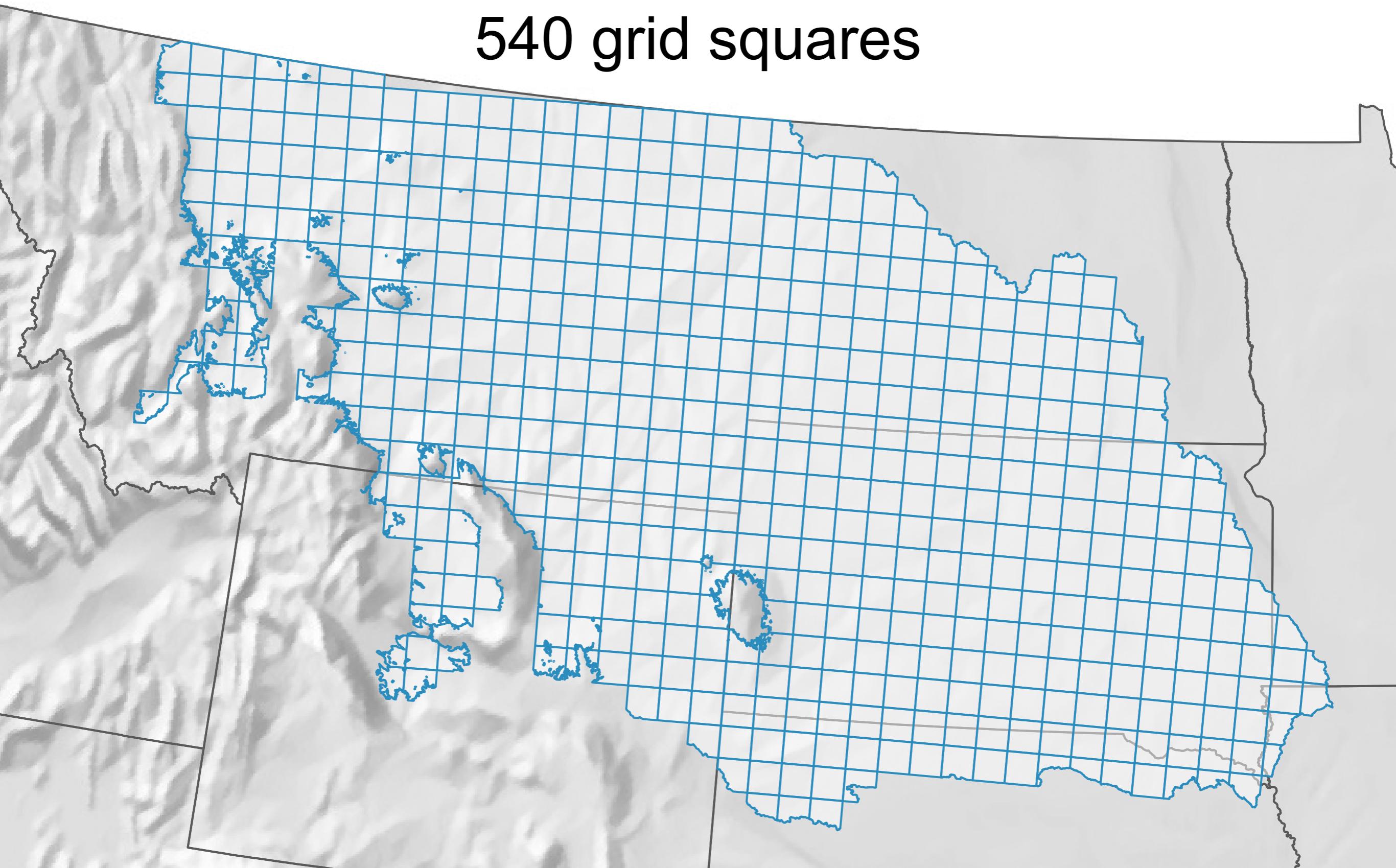




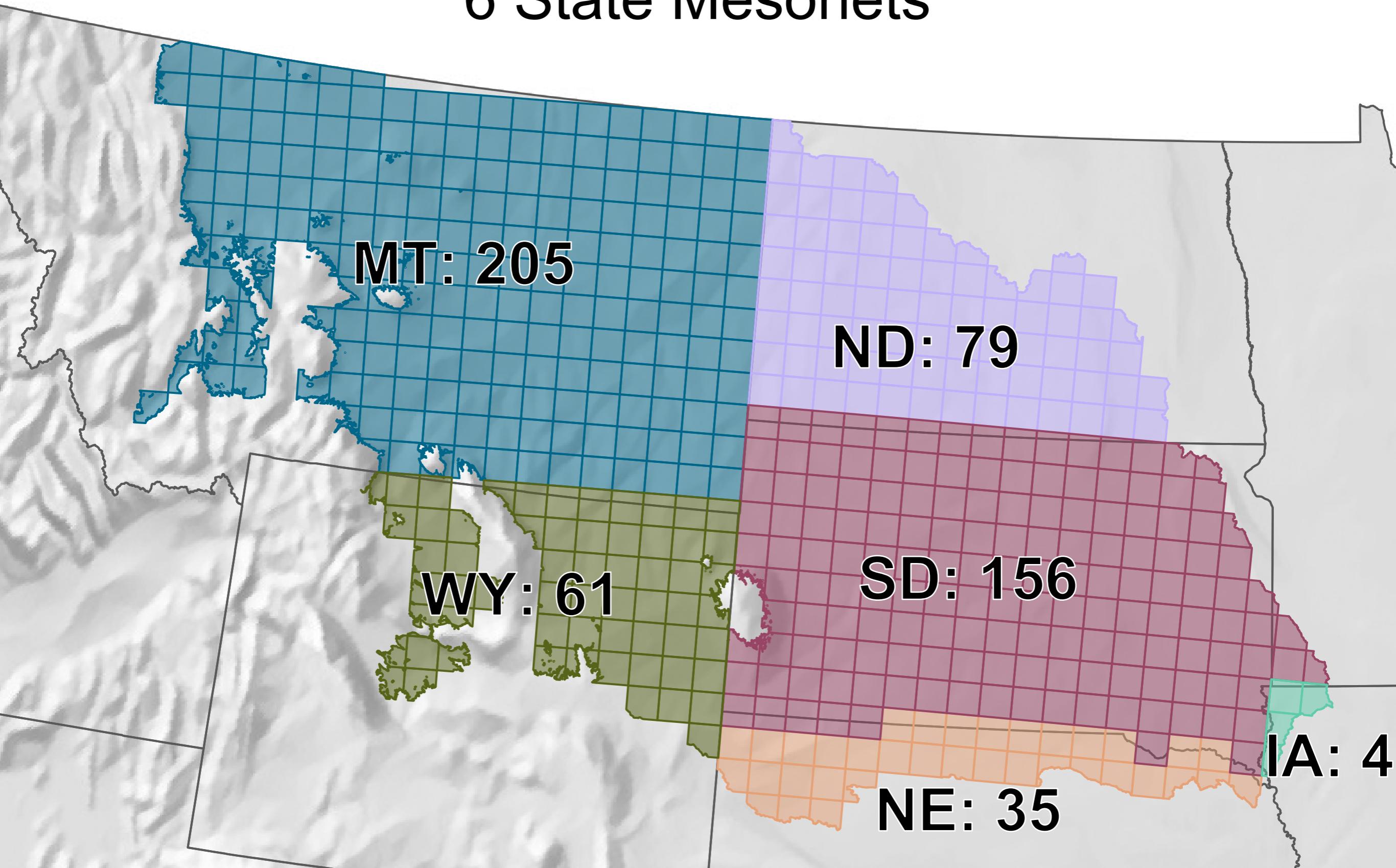
UMRB below 5,500 feet



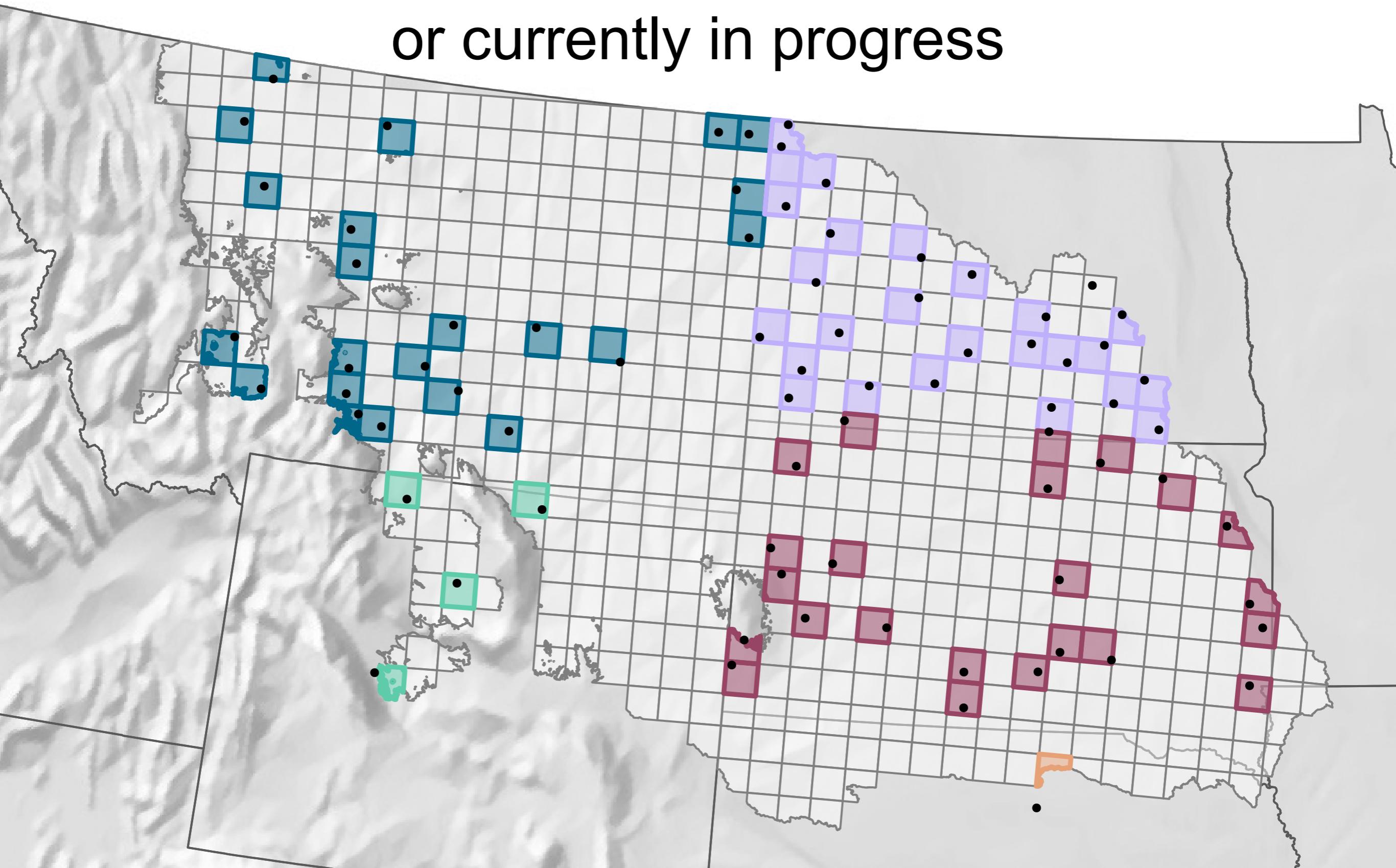
500 square mile grid 540 grid squares



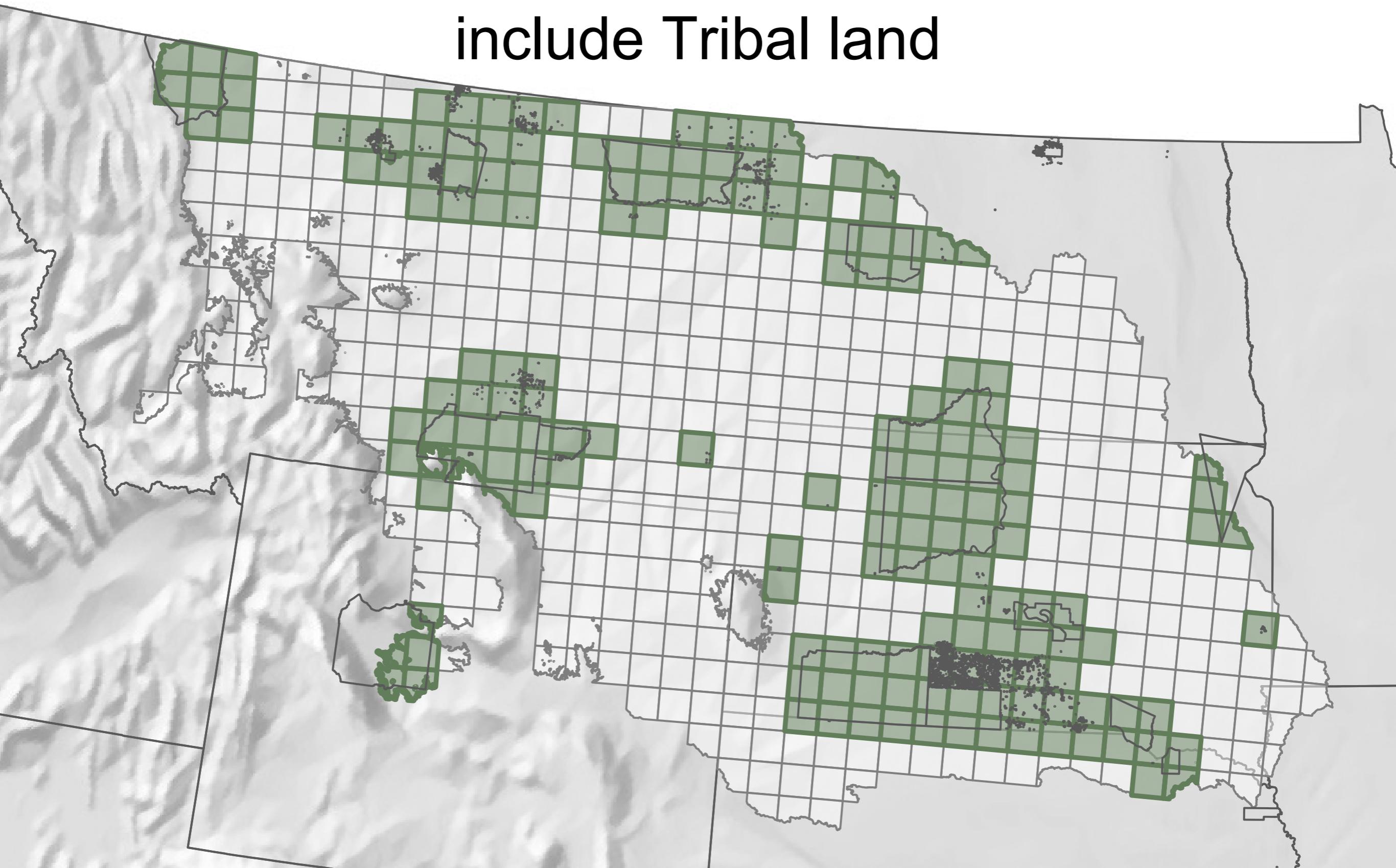
6 State Mesonets



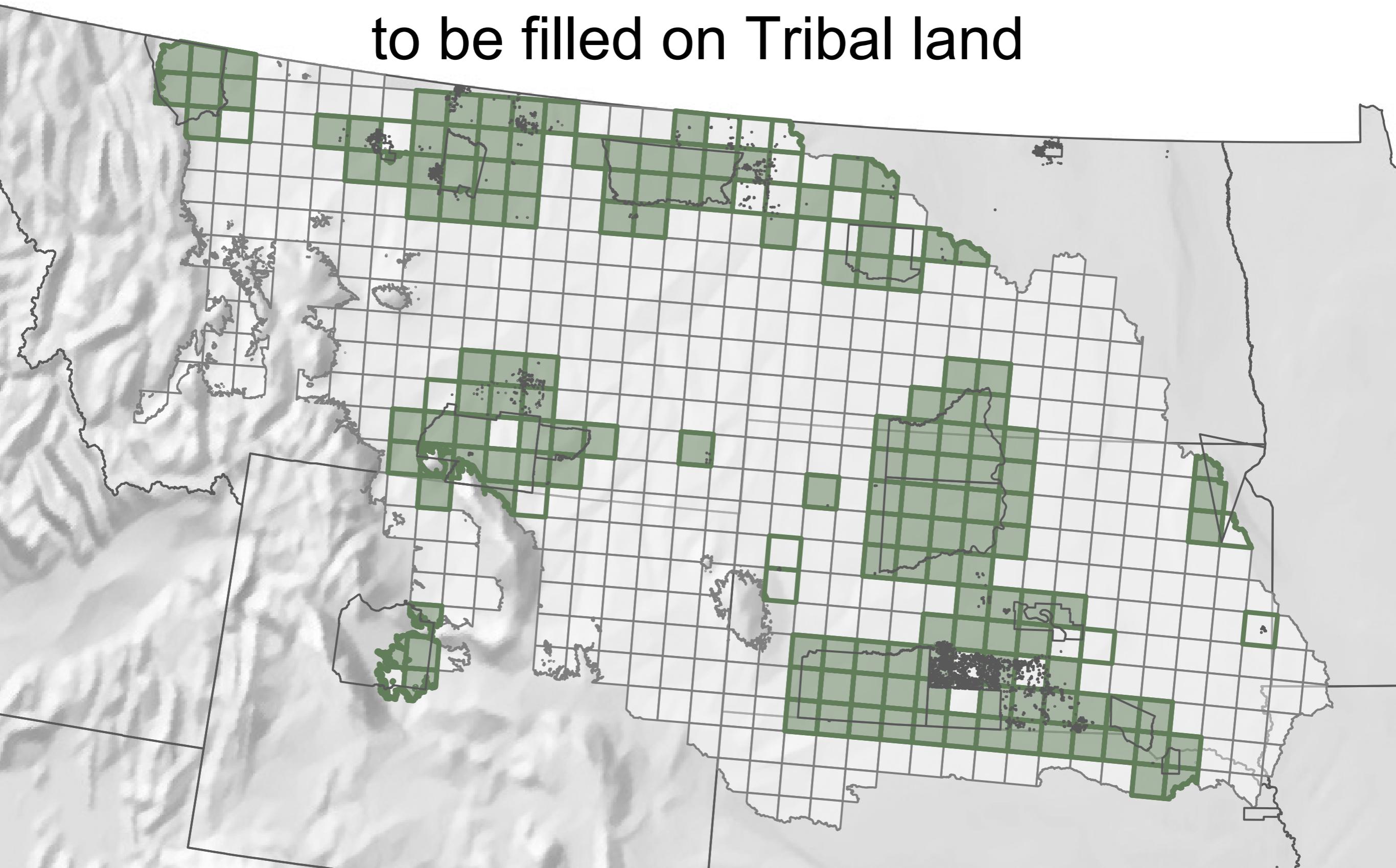
75 stations completed or currently in progress



174 grid squares include Tribal land

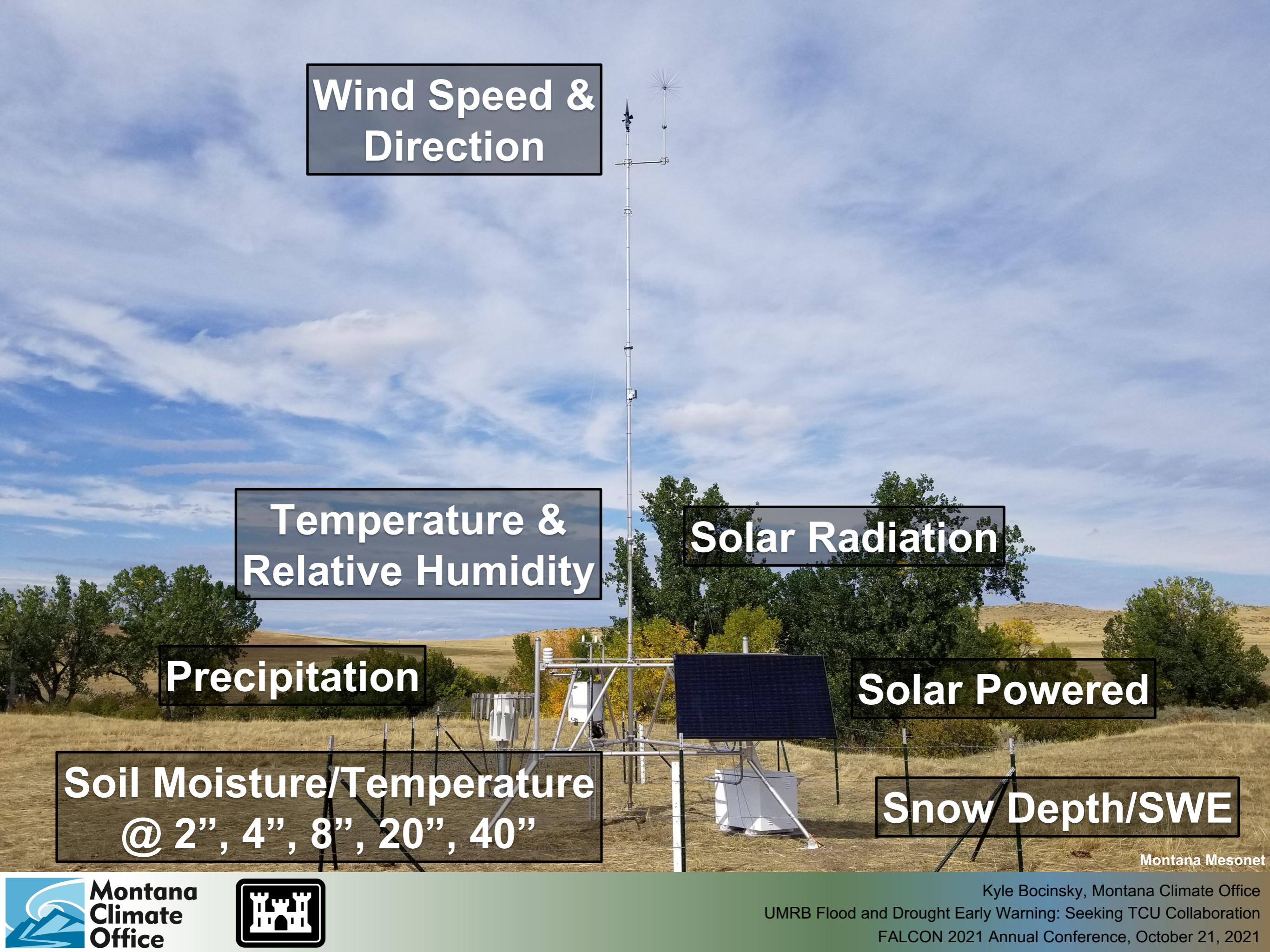


151 potential grid squares to be filled on Tribal land





Montana Mesonet



Wind Speed & Direction

Temperature & Relative Humidity

Precipitation

Soil Moisture/Temperature
@ 2", 4", 8", 20", 40"

Solar Radiation

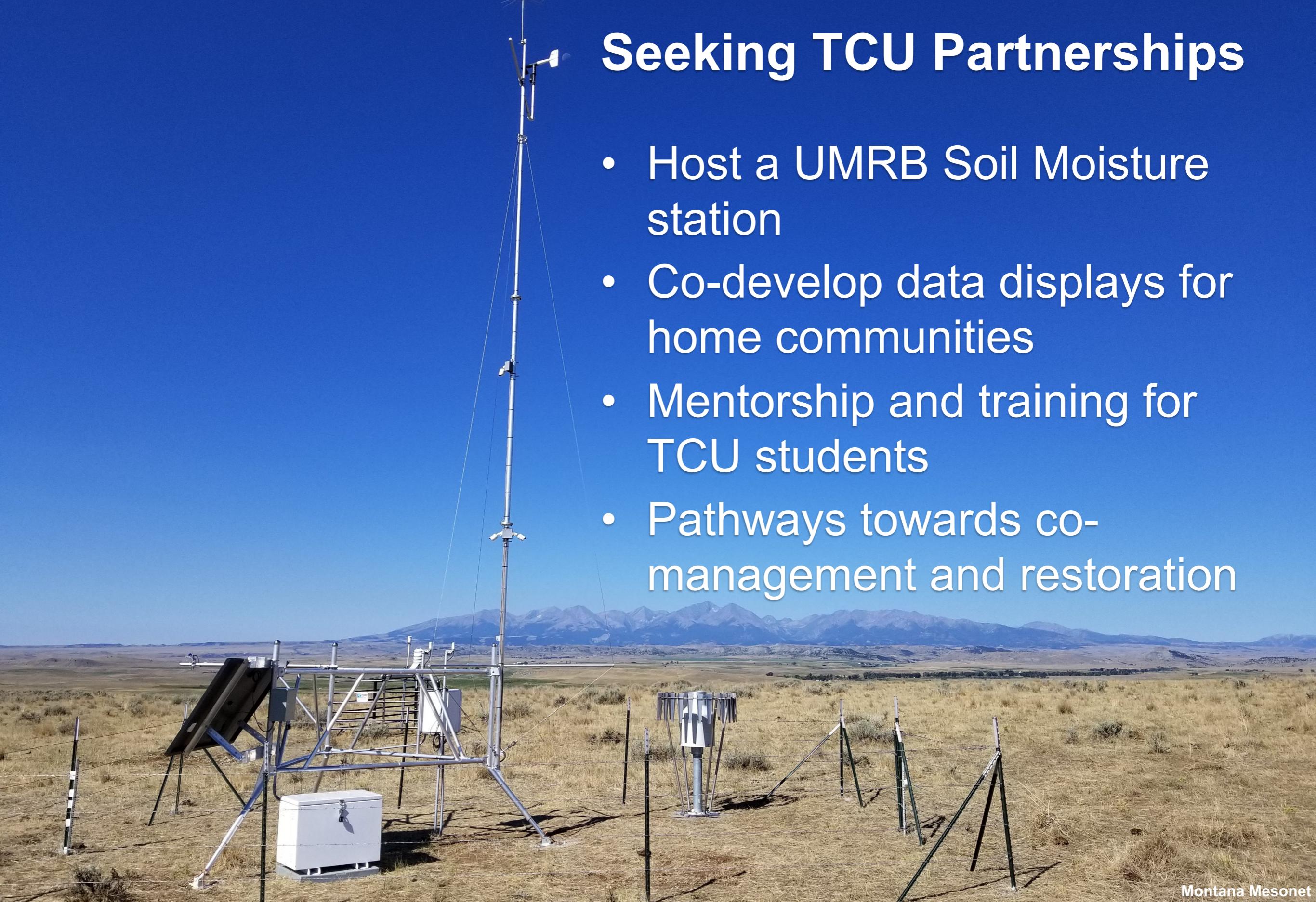
Solar Powered

Snow Depth/SWE

Montana Mesonet

Seeking TCU Partnerships

- Host a UMRB Soil Moisture station
- Co-develop data displays for home communities
- Mentorship and training for TCU students
- Pathways towards co-management and restoration



Montana Mesonet



Thank You!

Questions?

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Montana Mesonet