



Tribal SCAN Network: Web Portal for Climate Station Data and Decision Tools

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OBJECTIVES of PRESENTATION

- Brief Overview and Status of TSCAN
- Demonstration of website with decision support tools:

<https://scantools.rcc-acis.org/>





Tribal Soil Climate Analysis Network

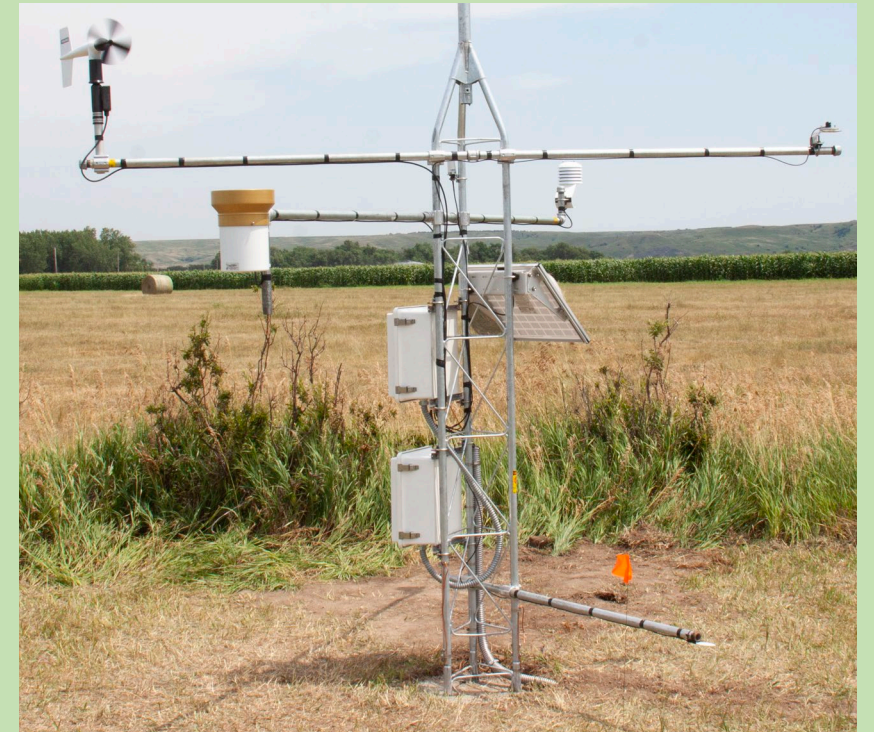
OBJECTIVES of PROJECT

- Provide *improved soil and climate data* to selected tribes for agricultural and forestry management decisions
- *Strengthen outreach* for improving production management as well as Ag and STEM education
- *Connecting the tribe* with local support (BIA, universities, NRCS, NOAA, Hubs) and generate *more partnerships*

2017: Project initiated

2018: First stations installed

2020: Decision Support website on-line



**Tribal Soil Climate Analysis Network station
= Modified SCAN station**





**Soil Moisture/Temperature
(4, 8, and 20 inch depths)**



**Air temp/relative
Humidity**



**Leaf Wetness
Sensor**



Rainfall



**Cellular
Transmitter**



**Wind Speed/
Direction**



**Electrical
Panel**

Battery



Solar Power



**Solar
Radiation**

Climate Stations to support agricultural operations on Tribal Lands

Partnership:

- Tribes
- Natural Resources Conservation Service
- Bureau of Indian Affairs
- USDA Climate Hubs
- NOAA/Cornell University



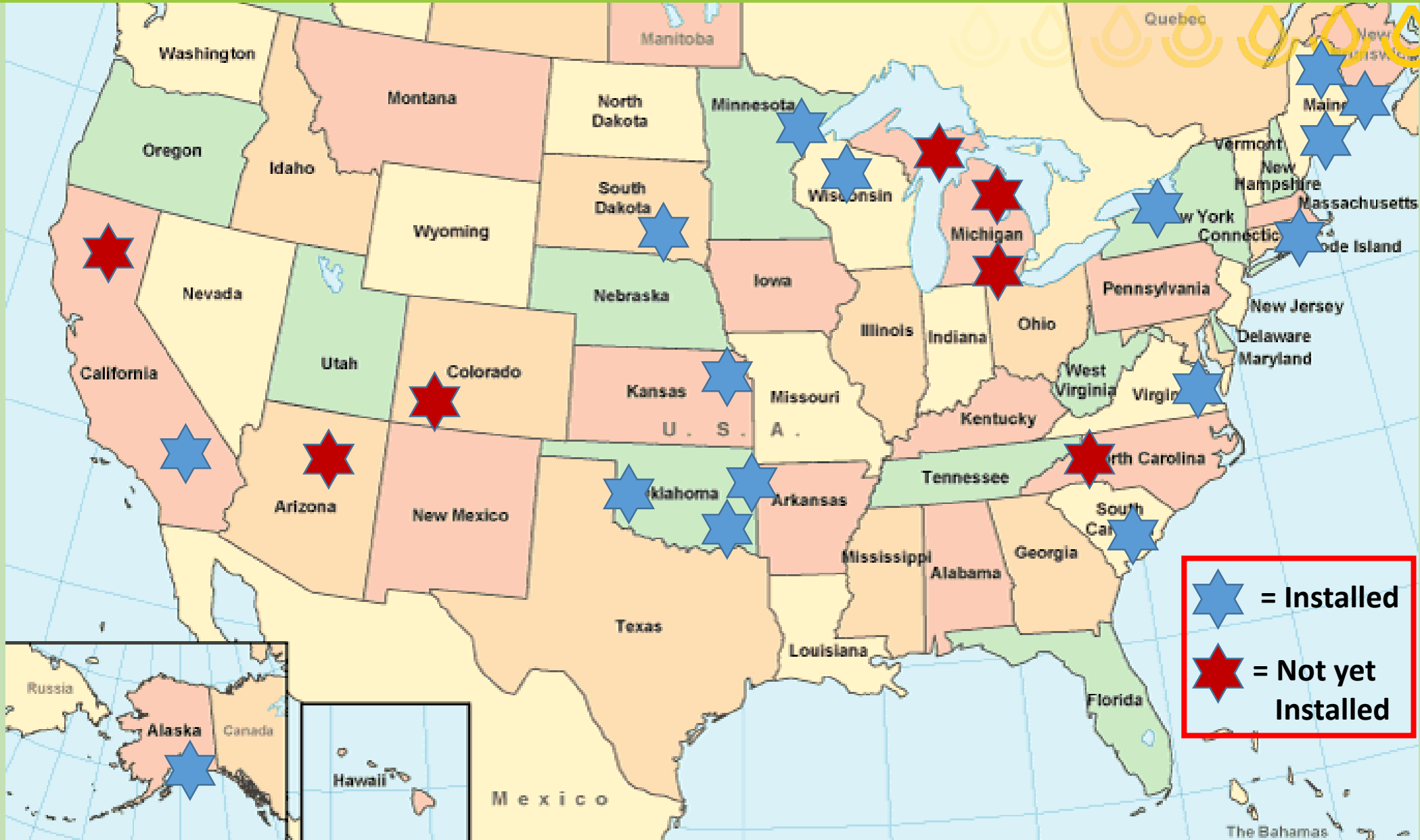
A tribal project that brings agencies together on tribal lands

NRCS National Water and Climate Center Staff

- Station design
- Component selection
- Equipment ordering
- Transportation and shipping
- Installation expertise/training
- Data monitoring
- Guidance for repairs



TSCAN LOCATIONS (March 2020)



TSCAN units collect data every hour and transmits it via a cellular service to the **NRCS National Water Climate Center**:

<https://www.wcc.nrcs.usda.gov/tribalscan/index.html>

The website contains:

- **current and historic data for each site (tabular format)**
- **soil pedon information**
- **site photo**
- **link to the KSSL database for soil characterization data**

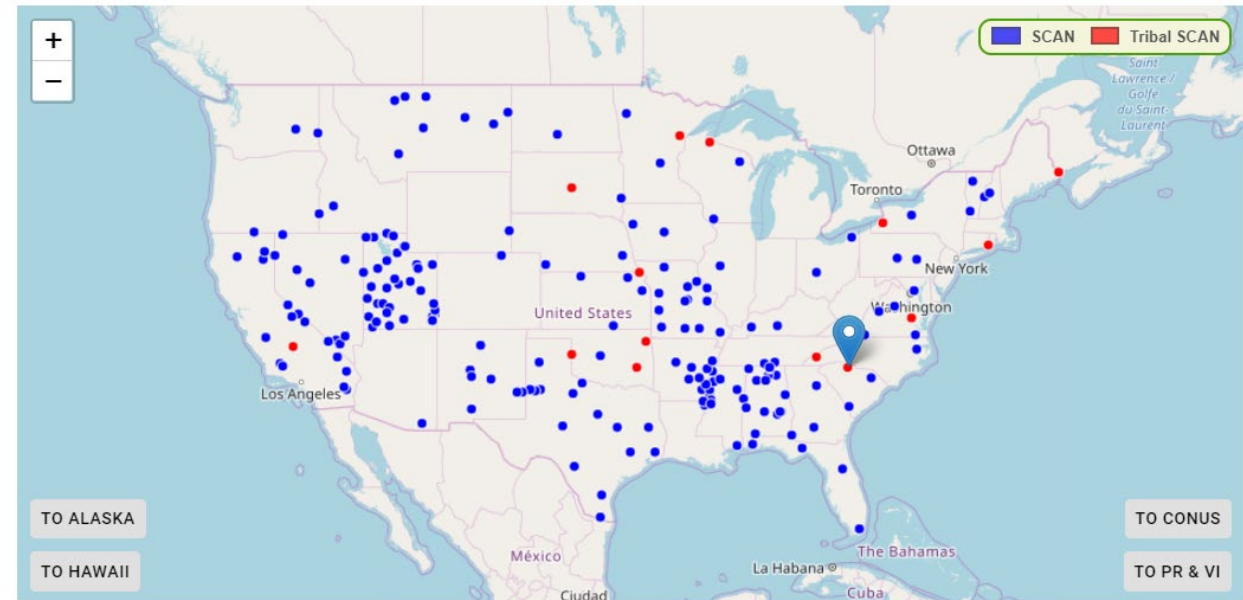
The screenshot shows the NRCS National Water and Climate Center website. The main heading is "Tribal Soil Climate Analysis Network Data & Products". Below this, there is a map of the United States titled "Tribal SCAN Sites" with several blue location pins. On the left sidebar, the "Climate Monitoring" section is circled in red and contains the following links:

- ▶ SNOTEL & Snow Course Data
- ▶ SCAN Data
- ▶ Tribal SCAN Data
- ▶ Other Climate Data
- ▶ 30 Year Normals

- Second website: <https://scantools.rcc-acis.org/>
- Developed with NOAA Northeast Regional Climate Center at Cornell University
- Improves utility of data of both SCAN and TSCAN networks
- Links data to useful agricultural production tools
- Forum for tribal students to enhance scientific understanding of climate, land use and other STEM topics

Decision Tools for the Soil Climate Analysis Network

Powered by ACIS, the Applied Climate Information System





Next-- Brian Belcher
**Demonstration of website with decision support
tools: <https://scantools.rcc-acis.org/>**

