Benefits of Collaborating with the CoCoRaHS Network

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CEC, Mexico City
25 September 2019

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SITE LOCATIONS

LEGEND

- OSU/OU Research (17)
- Academic/Foundation (11)
- Federal/City/State (15)
- Airport (10)
- Privately Owned (65)
- ARS Micronets (35)

8/2019

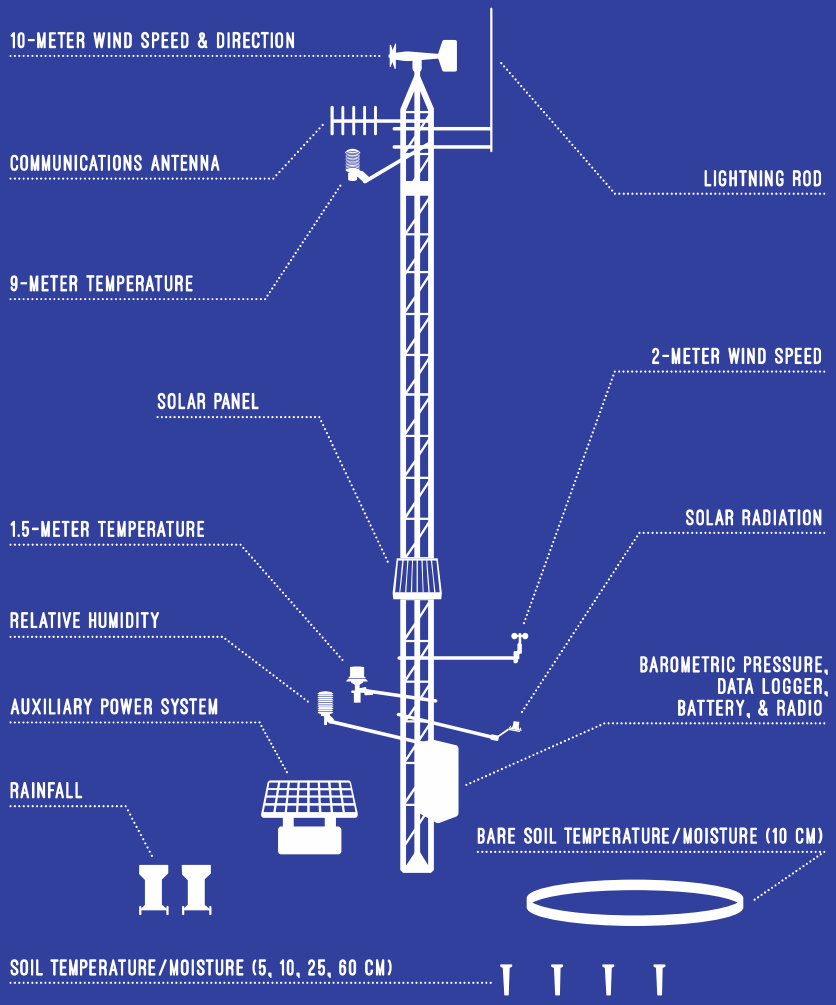
Connect with Mesonet!

Visit **mesonet.org** for the latest weather data.

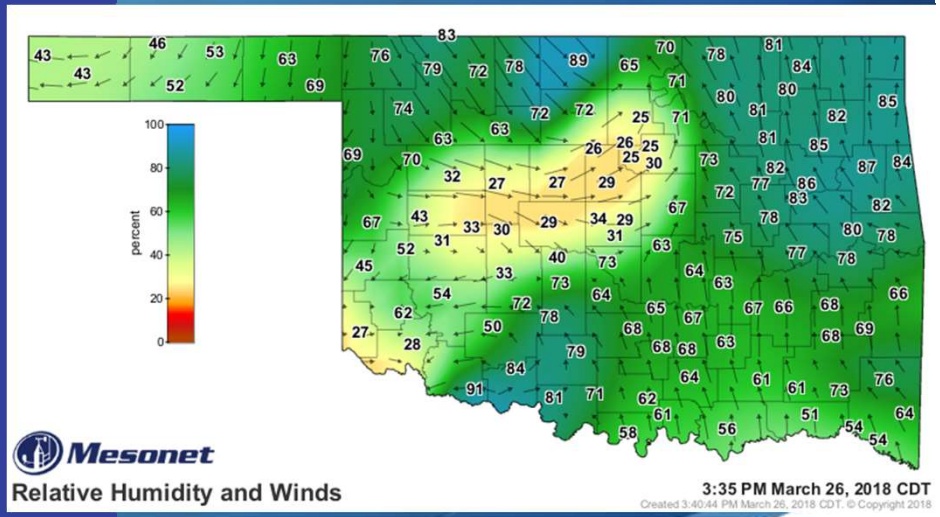
fb.com/mesonet @okmesonet youtube.com/okmesonet

ANATOMY OF A MESONET TOWER

MESONET.ORG



- Fully automated
- Report every 5 minutes



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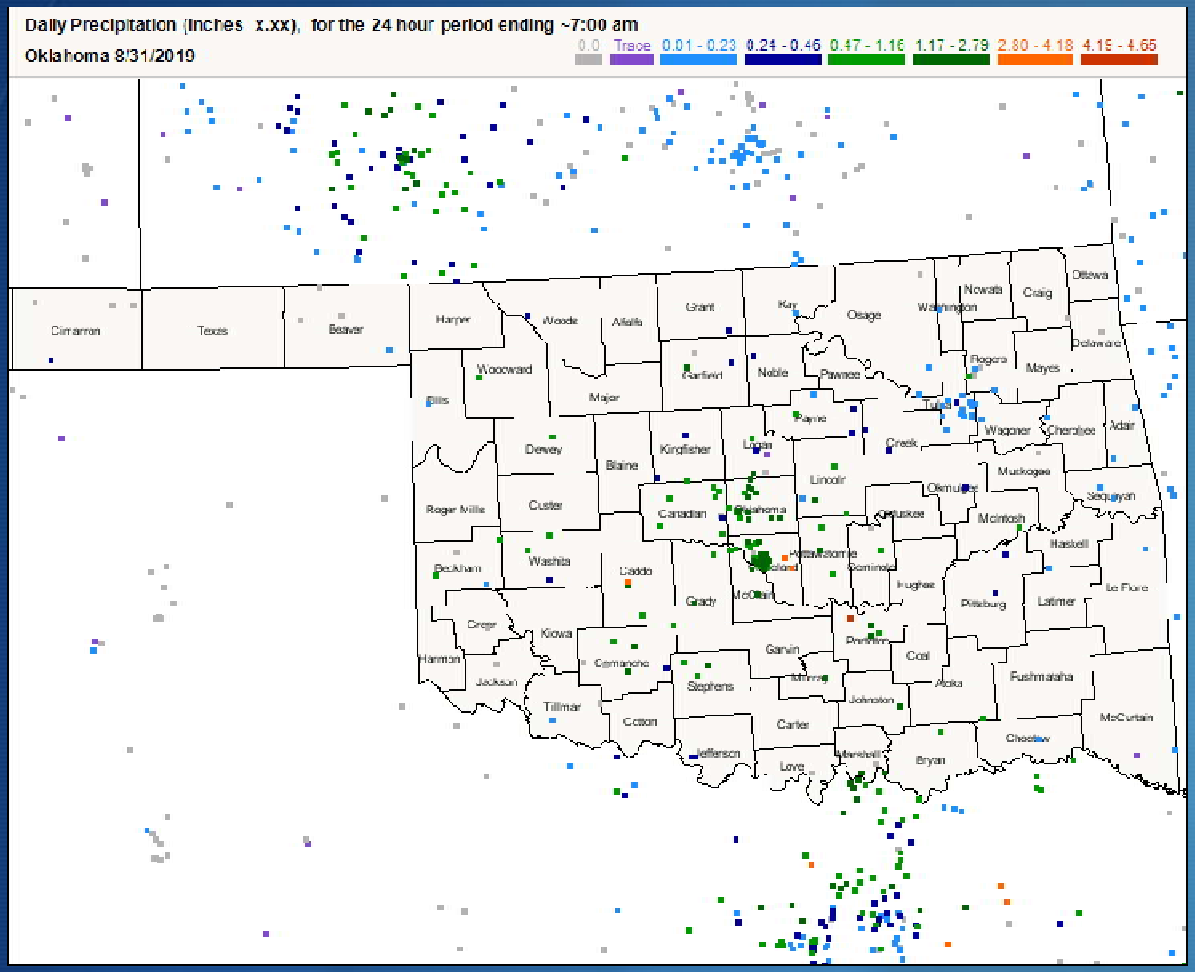
Oklahoma CoCoRaHS



- 180 Volunteer Observers

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May 2015 Historic Rain Event

- Statewide monthly record of 366.8 mm (14.44 inches)
- Area around Norman, OK received between 492 and 647 mm (19.37 to 25.47 inches)
- Exceeded 200-year return interval

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May 2015 Historic Rain Event

- Cluster of 31 gauges observed the rain event
  - 26 CoCoRaHS gauges
  - 3 Mesonet gauges
  - 1 Weighing gauge
  - 1 NWS COOP Gauge
  - Nearby NWS Radar

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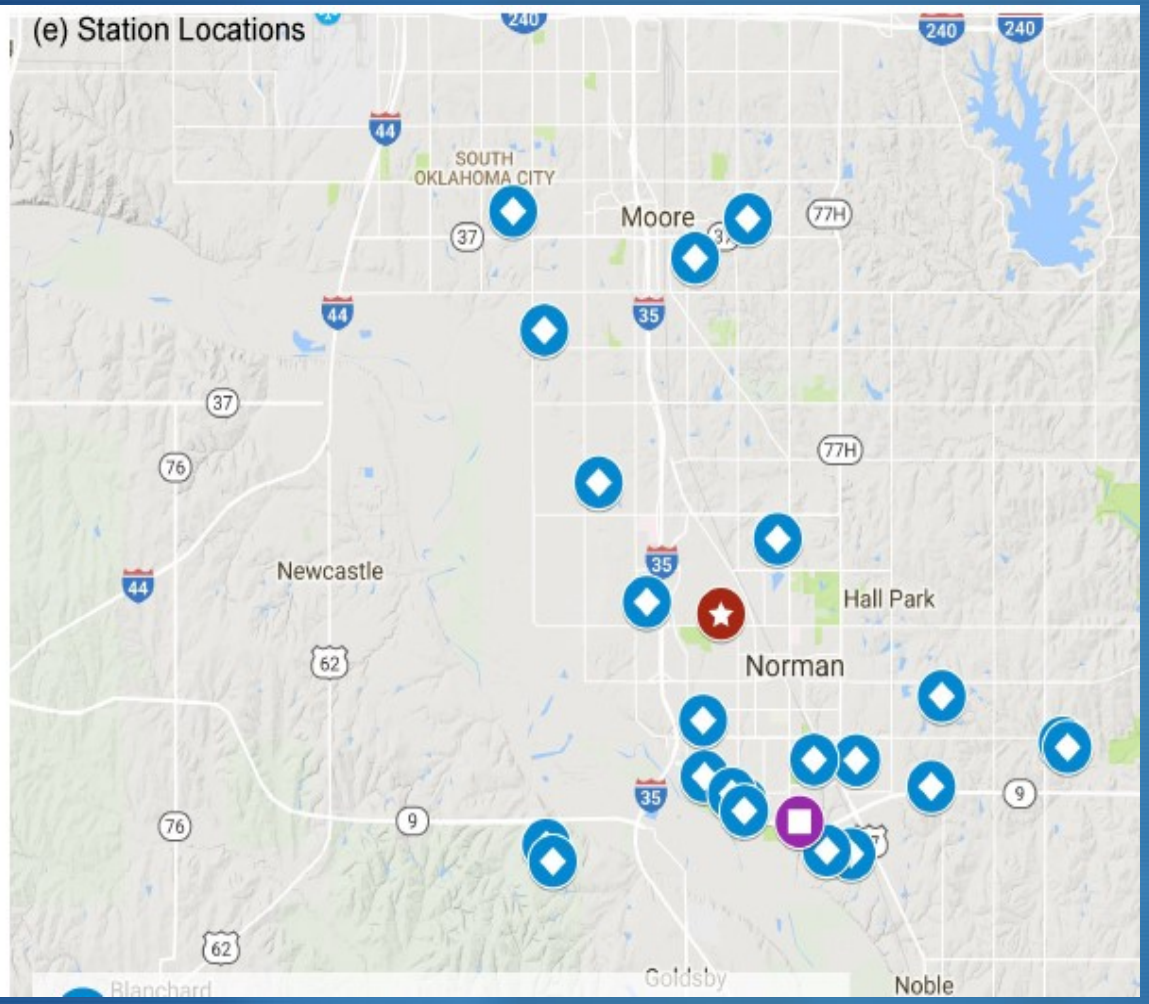
(a) CoCoRaHS

(b) MetOne

(c) Geonor

(d) COOP

(e) Station Locations



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Data Comparison

- The two closest CoCoRaHS stations (separated by 0.21 km) agreed within 1.4%.
- The second closest set of CoCoRaHS stations (separated by 0.24 km) agreed within 2.3%.
- Despite low-tech nature of CoCoRaHS gauges, it is evident that the data can be very reliable

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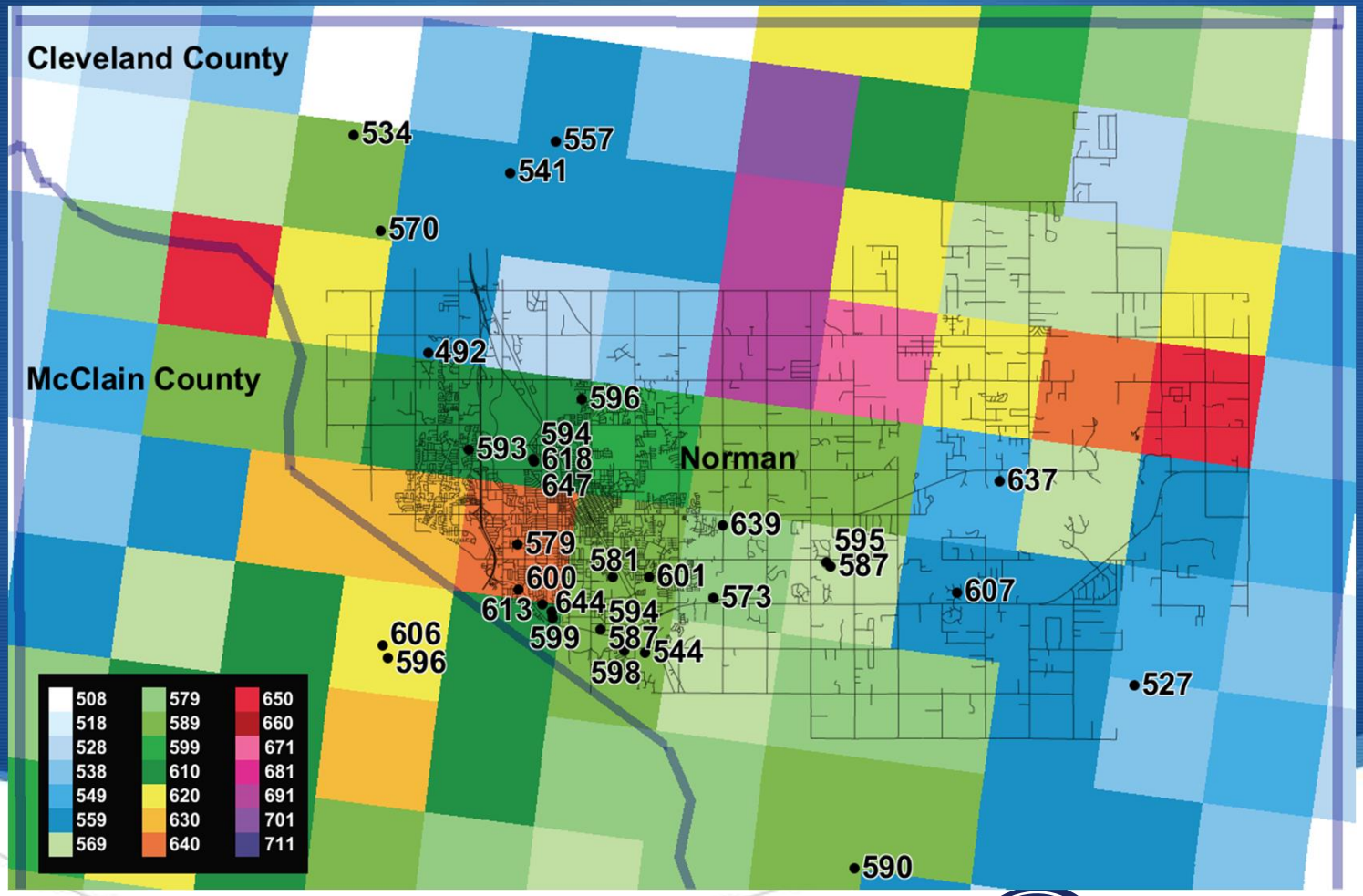
Radar Estimated Rain Totals



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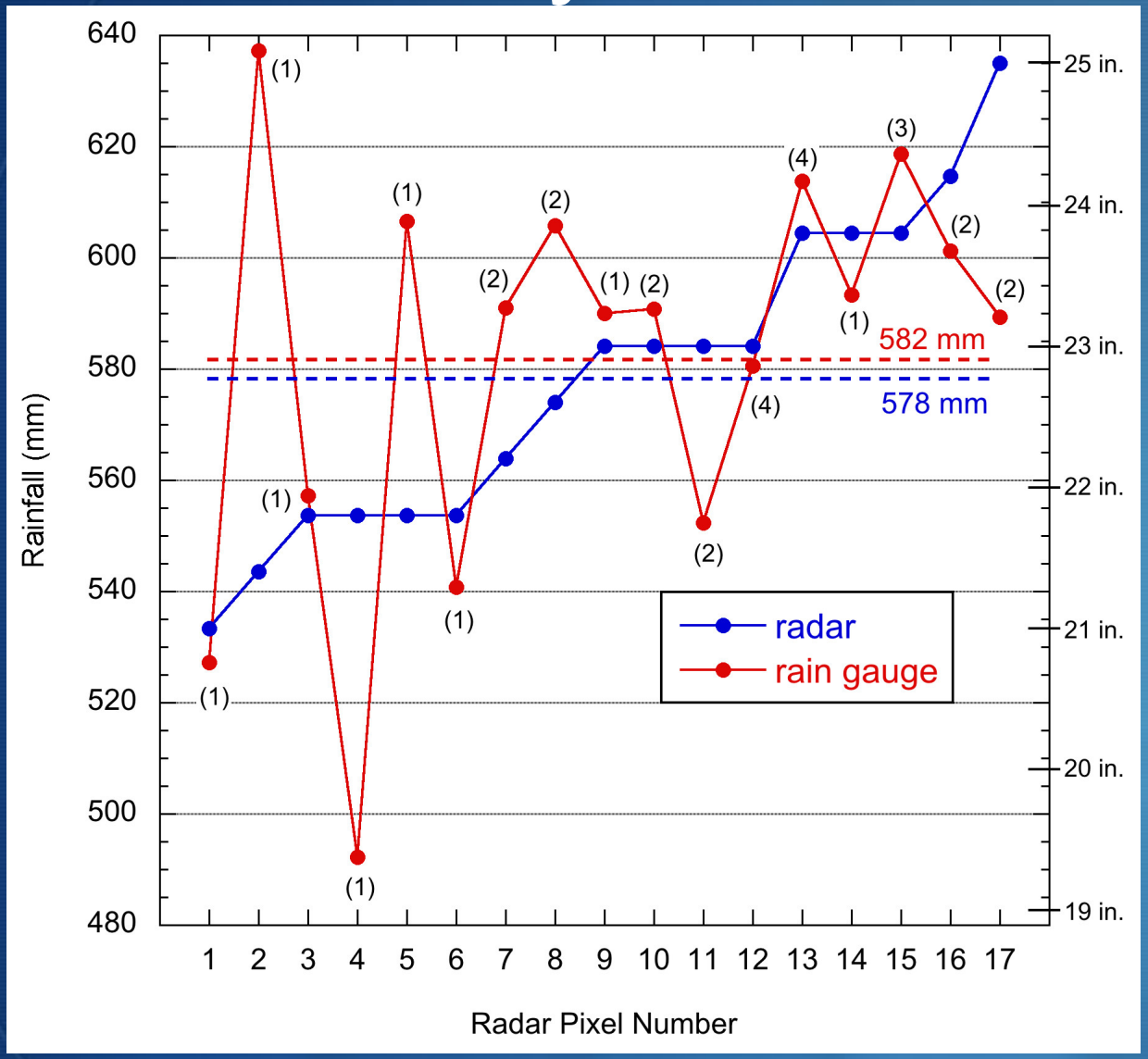
Pixel by Pixel Comparison



Average radar versus observation <1 %

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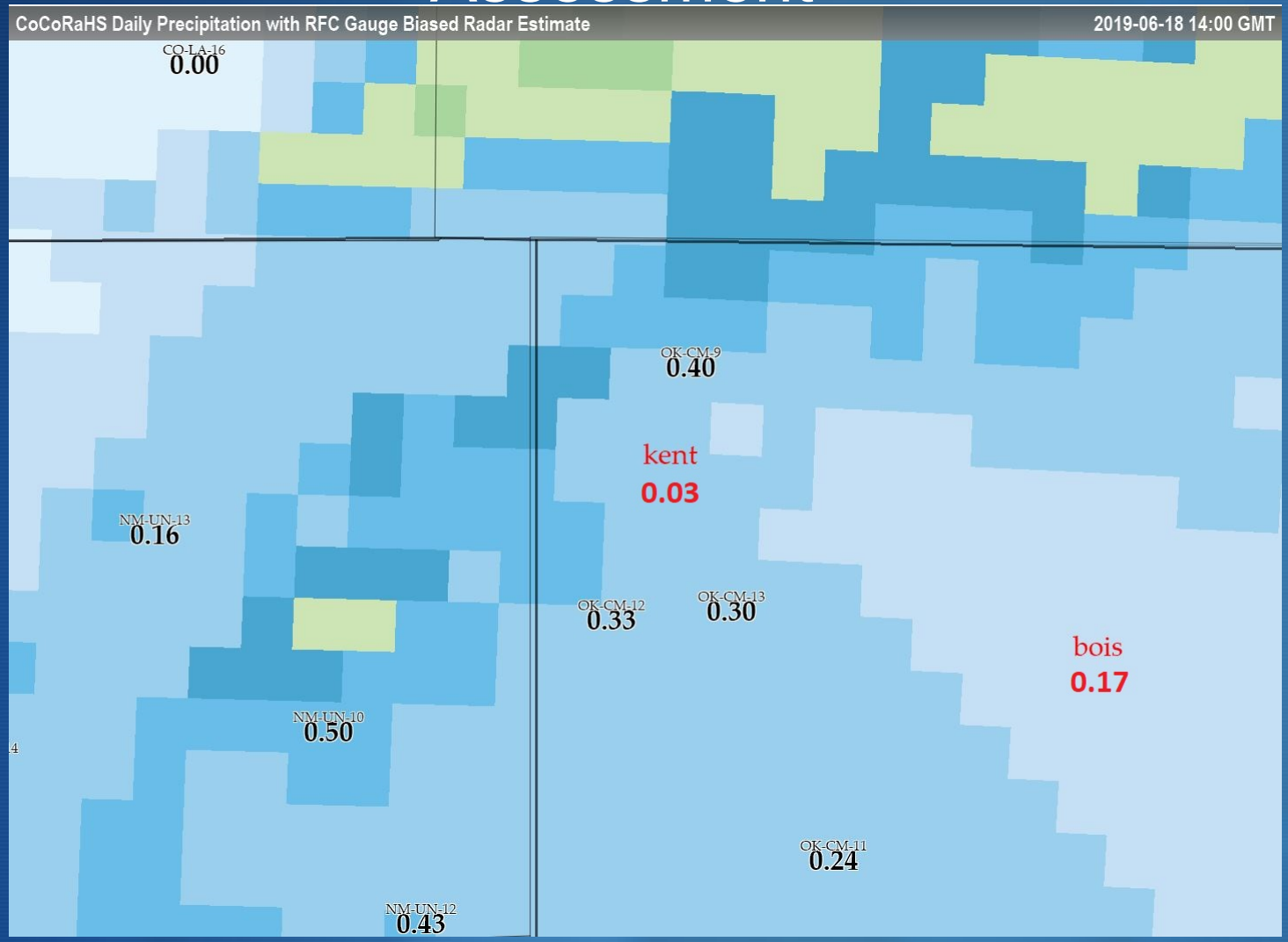
CoCoRaHS Use in Data Quality Assessment



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Additional CoCoRaHS Benefits

- Adds human connection and eyes on the ground as a valuable resource
- Increases spatial coverage of observations of precipitation above and beyond what a network of automated stations could afford
- Gives local constituents (e.g., agricultural users) and advocates a chance to participate

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Alameda Drive at Lake Thunderbird

#okwx

Flooding at Lake Thunderbird in Norman.

14,174 views • Published on May 24, 2015

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