

# OKLAHOMA MESONET / ARS QUALITY ASSURANCE REPORT

May 2016

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- Mesonet technicians completed scheduled rotations of 1 datalogger (LOGG), 3 rain gauges (RAIN), 2 batteries (BATV), 2 humidity sensors (RELH), 3 pyranometers (SRAD), 9 wind directions (WDIR), 2 fasttherms (TAIR), 5 wind sentries (WS2M), and 4 wind monitor noses (WSPD).
- Lightning strike at the Westville Mesonet Site (WEST) damaged 10-cm under bare, 25-cm soil sensors, and the current excitation. This caused errant spikes in air temperature, air temperature at 9-m, solar radiation, and soil data in 5-cm and 10-cm under sod. Data were flagged until the damaged soil sensors, current excitation, and datalogger were replaced.
- Current excitation problem at the Haskell Mesonet Site (HASK) caused errant soil moisture data. Replaced current excitation. Data were flagged.

## Mesonet QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
TAIR	Resolved	CARL	29583	Low bias. Rewired all connections.
RELH				
WSPD	Resolved	MINC	29518	Errant high wind gust during precipitation.
WDIR				
PRES	Resolved	MIAM	29609	Barometer reports a constant value. Replaced.
	Resolved	PRYO	29467	Barometer samples sometimes errantly high.
SRAD				

<b>RAIN</b>	<b>Resolved</b>	<b>PUTN</b>	<b>29484</b>	<b>Secondary rain gauge reported 0 when primary rain gauge reported 0.5 inches.</b>
	<b>Current</b>	<b>ELKC</b>	<b>29623</b>	<b>Primary rain gauge routinely reports more than secondary rain gauge.</b>
	<b>Current</b>	<b>VINI</b>	<b>29538</b>	<b>Primary rain gauge started reporting less than secondary rain gauge.</b>
<b>TA9M</b>				
<b>WS2M</b>				
<b>TB10</b>				
<b>TS05</b>	<b>Resolved</b>	<b>CENT</b>	<b>29585</b>	<b>Suspect sensor is at incorrect depth; reburied.</b>
	<b>Resolved</b>	<b>WEBR</b>	<b>29346</b>	<b>Suspect sensor is at incorrect depth; reburied.</b>
	<b>Current</b>	<b>APAC</b>	<b>29586</b>	<b>Suspect sensor is at incorrect depth.</b>
<b>TS10</b>				
<b>TS25</b>				
<b>TS60</b>				
<b>TR05</b>	<b>Resolved</b>	<b>TAHL</b>	<b>29382</b>	<b>Sensor reports -7999. Replaced.</b>
	<b>Resolved</b>	<b>BLAC</b>	<b>29536</b>	<b>Sensor is slow to moistened and dries out fast. Replaced</b>
<b>TRB10</b>	<b>Resolved</b>	<b>WEST</b>	<b>29602</b>	<b>Errant spikes due to a lightning strike. Replaced.</b>

TRS10	Resolved	RING	29610	Sensor is not heating. Replaced.
	Resolved	TIPT	29517	Sensor does moisten as much as expected when exposed to moisture. Moist extreme gradually changes over time. Replaced.
	Current	CHEY	29640	Significant shift towards the dry end after sensor was reburied.
TR25	Resolved	GUTH	29618	Sensor reports small errant spikes in data. Replaced Current Excitation.
	Resolved	WEST	29599	Sensor stopped heating due to a lightning strike. Replaced.
	Current	STUA	29535	Sensor sometimes reports errant spikes.
TR60	Resolved	TULN	29587	Sensor is not heating. Replaced.

### ARS Little Washita Watershed QA Report

Variable	Status	Site	Ticket	Remarks
RAIN				
VW05	Current	A234	29626	Soil moisture reports values near 0 for first 3 voltages.
VW25				
VW45	Resolved	A133	29483	All sensor voltages stepped down to values near 0. Replaced.
	Current	A253	29639	Stepped down to values near 0.

<b>V05T</b>	<b>Current</b>	<b>A132</b>	<b>29615</b>	<b>Suspect sensor is too shallow.</b>
<b>V25T</b>				
<b>V45T</b>				

**ARS Fort Cobb Watershed QA Report**

<b>Variable</b>	<b>Status</b>	<b>Site</b>	<b>Ticket</b>	<b>Remarks</b>
<b>RAIN</b>				
<b>VW05</b>				
<b>VW25</b>				
<b>VW45</b>				
<b>V05T</b>				
<b>V25T</b>				
<b>V45T</b>				

“Current” tickets are unresolved tickets as of the last day of the month OR tickets added after Monthly QA analysis.  
“Resolved” tickets are the sensor problems fixed during the entire month.

Variable	Description
TAIR	Air temperature measured at 1.5 meters
RELH	Relative humidity measured at 1.5 meters
WDIR	Wind direction measured at 10 meters
WSPD	Wind speed measured at 10 meters
PRES	Pressure
SRAD	Incident solar radiation
RAIN	Rainfall
TA9M	Air temperature measured at 9 meters
WS2M	Wind speed measured at 2 meters
TB10	Soil temperature measured at 10 cm under bare sod
TS05	Soil temperature measured at 5 cm under native soil
TS10	Soil temperature measured at 10 cm under native sod
TS25	Soil temperature measured at 25 cm under native soil
TS60	Soil temperature measured at 60 cm under native sod
TR05	Soil moisture: Calibrated DeltaT measured at 5 cm under native sod
TR25	Soil moisture: Calibrated DeltaT measured at 25 cm under native sod
TR60	Soil moisture: Calibrated DeltaT measured at 60 cm under native sod
VW05	Soil moisture: Volumetric water content measured at 5 cm under native sod
VW25	Soil moisture: Volumetric water content measured at 25 cm under native sod
VW45	Soil moisture: Volumetric water content measured at 45 cm under native sod
V05T	Soil Temperature measured at 5cm under native sod
V25T	Soil Temperature measured at 25cm under native sod
V45T	Soil Temperature measured at 45cm under native sod