

# OKLAHOMA MESONET / ARS QUALITY ASSURANCE REPORT

June 2016

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- Mesonet technicians completed scheduled rotations of 4 barometers (PRES), 7 rain gauges (RAIN), 7 batteries (BATV), 2 humidity sensors (RELH), 5 pyranometers (SRAD), 19 wind directions (WDIR), 1 fasttherm (TAIR), 7 wind sentries (WS2M), and 8 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.
- Current excitation problem at the Hinton Mesonet Site (HINT) caused soil moisture to stopped heating. Replaced current excitation. Data were flagged.
- Datalogger problem at the F114 Micronet Site caused errant spikes in soil temperature. Replaced Datalogger. Data were flagged.

## Mesonet QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
TAIR				
RELH				
WSPD				
WDIR				
PRES	Resolved	MIAM	29609	Barometer reports a constant value. Replaced.

<b>SRAD</b>				
<b>RAIN</b>	<b>Resolved</b>	<b>ELKC</b>	<b>29623</b>	<b>Primary rain gauge reports more than expected; replaced cover.</b>
	<b>Resolved</b>	<b>VINI</b>	<b>29538</b>	<b>Primary rain gauge under reported; replaced.</b>
	<b>Current</b>	<b>ARNE</b>	<b>30438</b>	<b>Primary rain gauge reports less than secondary gauge.</b>
	<b>Current</b>	<b>FAIR</b>	<b>30451</b>	<b>Rain gauges stops reporting during storms.</b>
	<b>Current</b>	<b>GOOD</b>	<b>29652</b>	<b>Rain gauges stops reporting during storms.</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>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>Current</b>	<b>GOOD</b>	<b>29660</b>	<b>Sensor reports -7999 for a few observations.</b>
	<b>Current</b>	<b>SULP</b>	<b>29653</b>	<b>Values errantly drift over time.</b>
<b>TRB10</b>	<b>Resolved</b>	<b>OKCN</b>	<b>29647</b>	<b>Sensor stopped heating. Replaced.</b>

	Resolved	PAWN	30442	Sensor overheats. Replaced.
	Resolved	WEST	29602	Errant spikes due to a lightning strike. Replaced.
	Current	BEAV	30434	Sensor reports -7999 for a few observations.
	Current	BROK	29667	Sensor reports -7999 for a few observations.
	Current	DURA	29670	Sensor reports -7999.
	Current	GRA2	30439	Sensor extremes continue to drift over time.
	Current	MIAM	30443	Sensor reports small errant spikes in the final temperature.
TRS10	Resolved	RING	29610	Sensor is not heating. Replaced.
	Resolved	TIPT	29517	Moist extreme gradually changes over time. Replaced.
	Resolved	CHEY	29640	Significant shift towards the dry end after sensor was reburied. Replaced
TR25	Resolved	GUTH	29618	Sensor reports small errant spikes in data. Replaced Current Excitation.
	Resolved	GUTH	29645	Sensor does not heat well. Replaced.
	Resolved	WEST	29599	Lightning strike. Replaced.
	Resolved	STUA	29535	Sensor sometimes reports errant spikes. Replaced
	Current	BYAR	29669	Sensor reports -7999.
TR60	Resolved	TULN	29587	Sensor is not heating. Replaced.

**ARS Little Washita 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>Resolved</b>	<b>A234</b>	<b>29626</b>	<b>Soil moisture reports values near 0 for first 3 voltages. Replaced.</b>
	<b>Resolved</b>	<b>A132</b>	<b>29615</b>	<b>Suspect sensor is at incorrect depth; reburied.</b>
<b>VW25</b>				
<b>VW45</b>	<b>Resolved</b>	<b>A253</b>	<b>29639</b>	<b>Stepped down to values near 0. Reburied.</b>
	<b>Current</b>	<b>A159</b>	<b>30444</b>	<b>Sensor is having erroneous spikes in data.</b>
<b>V05T</b>				
<b>V25T</b>				
<b>V45T</b>				

### ARS Fort Cobb Watershed QA Report

Variable	Status	Site	Ticket	Remarks
RAIN				
VW05				
VW25	Current	F109	30445	Data consistently drier than other depths.
VW45				
V05T				
V25T				
V45T				

“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