

# OKLAHOMA MESONET / ARS QUALITY ASSURANCE REPORT

August 2016

Prepared by Cindy Luttrell and Amanda Ilk  
qamgr@mesonet.org

- Mesonet technicians completed scheduled rotations of 7 dataloggers (LOGG), 4 barometers (PRES), 6 rain gauges (RAIN), 9 batteries (BATV), 9 humidity sensors (RELH), 7 pyranometers (SRAD), 4 thermometers (TAIR), 2 wind sentries (WS2M), and 3 wind monitor noses (WSPD).
- Battery problem at the Grandfield Mesonet Site (GRA2) caused the battery to drop below 12V at night.
- Current excitation problem at the Talihina Mesonet Site (TALI) caused soil moisture to have erroneous spikes in data. Data were flagged.
- Current excitation problem at the Fittstown Mesonet Site (FITT) caused soil moisture to have erroneous spikes in data. Data were flagged.

## Mesonet QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
TAIR	Resolved	PAWN	30929	Air temperature had a 4C high bias after the earthquake.
RELH				
WSPD				
WDIR				
PRES	Resolved	CARL	30844	Tubing prone to water entrapment.
	Resolved	OKMU	30846	Tubing prone to water entrapment.
	Resolved	STIL	30845	Tubing prone to water entrapment.

<b>SRAD</b>				
<b>RAIN</b>	<b>Resolved</b>	<b>APAC</b>	<b>30904</b>	<b>Secondary gauge reports less than primary gauge.</b>
	<b>Current</b>	<b>BYAR</b>	<b>30923</b>	<b>Primary rain gauge reports less than secondary gauge.</b>
	<b>Current</b>	<b>BIXB</b>	<b>30927</b>	<b>Secondary gauge sometimes does not report tips during light rain events.</b>
	<b>Current</b>	<b>BRIS</b>	<b>30926</b>	<b>Secondary gauge reports less than primary gauge.</b>
<b>TA9M</b>				
<b>WS2M</b>	<b>Resolved</b>	<b>30854</b>	<b>FORA</b>	<b>Starting threshold problem. Replaced.</b>
<b>TB10</b>				
<b>TS05</b>	<b>Resolved</b>	<b>APAC</b>	<b>29586</b>	<b>Suspect sensor is at incorrect depth. Reburied.</b>
	<b>Current</b>	<b>HUGO</b>	<b>30852</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>HASK</b>	<b>30921</b>	<b>Sensor reports values much higher than expected. Replaced.</b>

<b>TRB10</b>	<b>Resolved</b>	<b>DURA</b>	<b>29670</b>	<b>Sensor reports -7999. Replaced.</b>
	<b>Resolved</b>	<b>GRA2</b>	<b>30439</b>	<b>Sensor extremes continue to drift over time. Replaced.</b>
	<b>Resolved</b>	<b>TULN</b>	<b>30890</b>	<b>Sensor reports -7999. Rewired sensor.</b>
	<b>Resolved</b>	<b>TULN</b>	<b>30918</b>	<b>Sensor reports -7999. Replaced.</b>
	<b>Current</b>	<b>ANT2</b>	<b>30866</b>	<b>Sensor stopped heating.</b>
	<b>Current</b>	<b>VALL</b>	<b>30922</b>	<b>Sensor stopped heating.</b>
<b>TRS10</b>	<b>Resolved</b>	<b>CHAN</b>	<b>30839</b>	<b>Lightning strike. Replaced.</b>
<b>TR25</b>	<b>Resolved</b>	<b>CHAN</b>	<b>30838</b>	<b>Lightning strike. Replaced.</b>
	<b>Current</b>	<b>APAC</b>	<b>30873</b>	<b>Sensor stopped heating.</b>
	<b>Current</b>	<b>IDAB</b>	<b>30930</b>	<b>Sensor having a 6C high bias.</b>
	<b>Current</b>	<b>WASH</b>	<b>30938</b>	<b>Sensor having a 20C high bias.</b>
<b>TR60</b>				

ARS Little Washita Watershed QA Report

Variable	Status	Site	Ticket	Remarks
RAIN				
VW05				
VW25				
VW45				
V05T				
V25T				
V45T				

### ARS Fort Cobb Watershed QA Report

Variable	Status	Site	Ticket	Remarks
RAIN				
VW05				
VW25	Resolved	F109	30445	Data consistently drier than other depths. Reburied.
VW45	Resolved	F110	30824	First three voltages stepped down to values near 0. Replaced.
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