

**OKLAHOMA MESONET / ARS
QUALITY ASSURANCE REPORT**

May 2015

Cindy Luttrell and Amanda Ilk
qamgr@mesonet.org

- Mesonet technicians completed scheduled rotations of 3 batteries (BATV), 4 barometers (PRES), 3 rain gauges (RAIN), 1 humidity sensor (RELH), 2 pyranometers (SRAD), and 1 wind monitor direction (WDIR)
- A failing battery at the Bessie Mesonet Site (BESS) caused the datalogger to sometimes stop taking observations. Data were lost 2015-05-04 19:10 - 2015-05-05 13:40, 2015-05-07 18:45 - 19:00, 2015-05-16 02:15 - 2015-05-16 14:35, 2015-05-18 23:25 - 2015-05-19 07:45, and 2015-05-28 00:00 - 14:10.
- The Boise City Mesonet Site (BOIS) stopped sampling soil moisture correctly. Soil temperature data are not affected.
- The Idabel Mesonet Site (IDAB) sometimes reports errant spikes in soil moisture data. Data flagged as needed.
- Lightning strike at the Bowlegs Mesonet Site (BOWL) caused loss of data from 2015-05-17 04:00 - 2015-05-18 18:00. The ground was covered in too much water to replace soil sensors. All soil moisture, 25-, and 60-cm soil temperature data remain flagged until sensors replaced.
- Lightning strike at the Hugo Mesonet Site (HUGO) caused loss of data from 2015-05-09 17:30 - 2015-05-11 20:00. Ground was covered in too much water to replace damaged soil sensors. Soil moisture 5-cm under sod and 10-cm under bare remain flagged until ground dry enough to replace sensors.
- The Putnam Mesonet Site (PUTN) sometimes reports small, errant spikes in soil moisture data. Data are flagged as needed.
- Datalogger at Little Washita ARS Site A136 was replaced due to small errant spikes in soil temperature data. Data were flagged as needed.
- Little Washita ARS Site A256 sometimes reported errant values for all data. Datalogger was replaced.

Mesonet QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
TAIR	Resolved	CARL	28197	Replaced sensor that had moisture bias.
	Current	PUTN	28170	Air temperature reports -200 degrees Celsius.
	Current	SPEN	28195	Air temperature has moisture bias.

RELH	Resolved	HOBA	28171	Replaced sensor that had moisture bias.
WSPD	Current	RETR	28184	Starting threshold problem.
WDIR	Current	APAC	27999	Grounding defect could cause errant gusts.
PRES	Resolved	ELRE	28194	Replaced sensor that had high bias.
SRAD				
RAIN	Resolved	ACME	28196	Replaced gauge that stopped reporting.
	Resolved	HOBA	28104	Reattached loose gauge cover.
TA9M	Current	ALV2	28205	Sensor has humidity bias.
WS2M				
TB10	Current	HOLL	28211	Vegetation on bare plot.
TS05	Current	SALL	28113	Sensor too shallow.
TS10				

TS25				
TS60				
TR05	Current	BOWL	28210	Damaged by lightning.
	Current	HECT	28060	Very slow response to moisture.
	Current	HUGO	28150	Damaged by lightning.
	Current	SKIA	28061	Slow response to moisture.
	Current	TALI	28063	Slow response to moisture.
TRB10	Current	BOWL	28179	Damaged by lightning.
	Current	CAMA	28059	Slow to respond to moisture.
	Current	HUGO	28151	Damaged by lightning.
TRS10	Current	BOWL	28178	Damaged by lightning.
	Current	MADI	28073	Errant soil moisture spikes.
TR25	Current	BOWL	28176	Damaged by lightning.
TR60	Current	BOWL	28177	Damaged by lightning.

ARS Little Washita Watershed QA Report

Variable	Status	Site	Ticket	Remarks
RAIN				
VW05	Current	A146	28209	Errant spikes.
VW25				
VW45				
V05T				
V25T				
V45T				

ARS Fort Cobb Watershed QA Report

Variable	Status	Site	Ticket	Remarks
RAIN				
VW05				
VW25				

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 soil
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
TRB10	Soil moisture: Calibrated DeltaT measured at 10 cm under bare soil
TRS10	Soil moisture: Calibrated DeltaT measured at 10 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