Oklahoma Mesonet / ARS
Quality Assurance Report

August 2018

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- Mesonet technicians completed scheduled rotations of 8 batteries (BATV/BVAS), 6 barometers (PRES), 7 rain gauges (RAIN), 10 relative humidity sensors (RELH/TSLO), 6 pyranometers (SRAD), 4 PRT thermometers (TAIR/TA9M), 3 wind sentries (WS2M), 3 wind monitor nose cones (WSPD), and 4 current excitations.
- A lightning strike at the May Ranch site (MAYR) caused data loss on August 8.
- The Inola site (INOL) was impacted by an EF1 tornado on August 19.

MESO QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
TAIR				
RELH	**Resolved**	**PUTN**	**35559**	**Relative humidity and slow air temperature report errant values. Replaced sensor.**
WSPD				
WDIR				
PRES				
SRAD				
RAIN	**Resolved**	**COOK**	**36282**	**Both rain gauges missed or significantly under-reported during rain events. Fixed damaged cable.**
	Resolved	**COOK**	**36287**	**Both rain gauges missed or significantly under-reported during rain events. Fixed damaged cable.**

	Resolved	**INOL**	**36531**	**Rain gauge top knocked off by alter screen during severe wind gust. Replaced.**
	Resolved	**INOL**	**36540**	**Verify TIP2 functioning as expected following tornado impact. Cleaned and drip tested fine.**
	Resolved	**PRYO**	**36263**	**Primary rain gauge sometimes over 10 percent low during heavy rain events. Replaced top of sensor.**
	Resolved	**JAYX**	**36258**	**Secondary rain gauge sometimes misses part of rain events. Cleaned and drip tested fine.**
	Resolved	**NOWA**	**35557**	**Secondary rain gauge reported less than expected. Replaced sensor.**
	Resolved	**SULP**	**36451**	**Secondary rain gauge drip tested 3 tips low pre- and post-cleaning. Replaced.**
	Current	**SULP**	**36599**	**Primary rain gauge reports significantly less than secondary during rain events.**
TA9M				
WS2M				
TB10	**Resolved**	**HUGO**	**36248**	**10 cm under bare reports errant values. Replaced.**
TS05	**Resolved**	**NEWP**	**36275**	**5cm and 10cm soil temperature are cooler than expected. Reburied sensor.**
TS10	**Resolved**	**ADAX**	**36253**	**10 cm under sod reports errant values. Replaced.**
	Resolved	**NEWP**	**36278**	**5cm and 10cm soil temperature under sod are cooler than expected. Reburied sensor.**
TS25				
TS60				
TR05	**Resolved**	**BURB**	**35568**	**5 cm under sod reports errant values. Replaced.**
	Resolved	**CLOU**	**36367**	**5 cm sod not heating properly. Replaced.**

TRB10	**Resolved**	**BESS**	**35567**	**10 cm Bare Soil reports errant values. Replaced.**
	Resolved	**PAUL**	**36464**	**10 cm Bare Soil stopped heating. Replaced.**
	Resolved	**SEIL**	**35359**	**10cm bare soil moisture stopped heating. Replaced.**
	Resolved	**SEIL**	**36365**	**10cm bare soil moisture stopped heating. Replaced.**
	Current	**BOIS**	**36589**	**10 cm under bare soil reports errant values.**
TRS10				
TR25	**Resolved**	**WAUR**	**35462**	**25 cm sod stopped heating. Replaced.**
TR60	**Resolved**	**WAUR**	**36368**	**60cm sod stopped heating. Replaced.**

ARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
RAIN				
VW05				
VW25	**Current**	**A235**	**36553**	**25 cm soil moisture frequently reports 0 for voltages 1-3.**
	Current	**A249**	**36594**	**25 cm soil moisture errantly reports values near 0 for voltages 1-3.**
VW45	**Current**	**A282**	**36549**	**45 cm soil moisture errantly reports values near 0 for voltages 1-3.**
V05T				
V25T				

V45T	

FCARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
RAIN				
VW05				
VW25	**Resolved**	**F113**	**36523**	**25 cm soil moisture reports values near 0 for voltages 2-4. Replaced.**
VW45				
V05T				
V25T				
V45T				

'Current' tickets are the unresolved tickets as of the last day of the month OR those tickets added based on the Monthly QA analysis.

'Resolved' tickets are the sensor problems that were fixed during the entire month.

Variable	Description
TAIR	**Air temperature at 1.5 meters**
RELH	**Relative humidity at 1.5 meters**
WDIR	**Wind direction at 10 meters**
WSPD	**Wind speed at 10 meters**
PRES	**Air pressure**
SRAD	**Incident solar radiation**
RAIN	**Rainfall**
TA9M	**Air temperature at 9 meters**
WS2M	**Wind speed at 2 meters**
TB10	**Soil temperature at 10 cm under bare soil**
TS05	**Soil temperature at 5 cm under native sod**
TS10	**Soil temperature at 10 cm under native sod**
TS25	**Soil temperature at 25 cm under native sod**
TS60	**Soil temperature at 60 cm under native sod**
TR05	**Soil moisture: Calibrated DeltaT at 5 cm under native sod**
TRB10	**Soil moisture: Calibrated DeltaT at 10 cm under bare soil**
TRS10	**Soil moisture: Calibrated DeltaT at 10 cm under native sod**
TR25	**Soil moisture: Calibrated DeltaT at 25 cm under native sod**
TR60	**Soil moisture: Calibrated DeltaT at 60 cm under native sod**
VW05	**Soil moisture: Volumetric water content at 5 cm under native sod**
VW25	**Soil moisture: Volumetric water content at 25 cm under native sod**
VW45	**Soil moisture: Volumetric water content at 45 cm under native sod**
V05T	**Soil temperature at 5 cm under native sod**
V25T	**Soil temperature at 25 cm under native sod**
V45T	**Soil temperature at 45 cm under native sod**