

**OKLAHOMA MESONET/ARS QUALITY ASSURANCE REPORT**  
September 2008

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- Mesonet technicians performed scheduled rotations of 2 fasttherms, 1 pyranometer, 4 rain gauges, 5 temperature and relative humidity sensors, 9 wind vanes, 7 wind monitor nose cones, and 4 wind sentries.
- Power upgrades were completed at 9 sites.
- Aspirators were installed at 3 sites.
- Washington and Norman supersites were downgraded.
- The datalogger at Stillwater caused a 10 degree Celsius low bias in air temperature at 1.5m and 9m from September 18-19, 2008.
- The datalogger at Burneyville caused errant data in all variables except pressure, maximum wind speed at 10m, wind speed at 2m, maximum wind speed at 2m, and wind speed standard deviation on September 29, 2008.
- The aspirator at Hobart had a loose wire causing the aspirator not to work from September 4-5, 2008.
- The battery at Buffalo had 1 bad cell, the battery was replaced.
- The multiplexer at Watonga was rewired on September 5, 2008.
- The multiplexer at Hobart is causing spikes in soil temperatures beginning September 17, 2008.

**Mesonet QA Report for Standard Variables**

<b>Variable</b>	<b>Status</b>	<b>Ticket</b>	<b>Site</b>	<b>Remarks</b>
<b>TAIR</b>	<b>Current</b>	<b>17292</b>	<b>KING</b>	<b>Reporting errant data</b>
	<b>Resolved</b>	<b>17136</b>	<b>OKCW</b>	<b>Sensor susceptible to moisture</b>
	<b>Resolved</b>	<b>17209</b>	<b>SKIA</b>	<b>Sensor susceptible to moisture</b>
<b>RELH</b>	<b>Current</b>	<b>17294</b>	<b>EUFA</b>	<b>Does not agree with neighbors</b>
	<b>Resolved</b>	<b>17094</b>	<b>WAUR</b>	<b>Sensor separated by horse in enclosure</b>
	<b>Resolved</b>	<b>17149</b>	<b>COOK</b>	<b>Sensor low during high humidity</b>
<b>WSPD</b>	<b>Current</b>	<b>17229</b>	<b>TISH</b>	<b>Starting threshold problem</b>
	<b>Resolved</b>	<b>17079</b>	<b>PAUL</b>	<b>Starting threshold problem</b>
	<b>Resolved</b>	<b>17148</b>	<b>CLRM</b>	<b>Starting threshold problem</b>

<b>WDIR</b>	Current	17321	KING	Has a bias compared to neighbors
	Resolved	17099	APAC	Wires tightened due to 50 degree low bias
<b>PRES</b>				
<b>SRAD</b>				
<b>RAIN</b>				
<b>TA9M</b>				
<b>WS2M</b>	Current	17227	FAIR	Starting threshold problem
	Current	17267	STIG	Starting threshold problem
	Current	17305	CENT	Starting threshold problem
	Resolved	17232	ACME	Starting threshold problem
<b>TS10</b>	Resolved	17225	MADI	Gopher damage
<b>TB10</b>	Resolved	17101	TISH	Sensor had a low bias
	Resolved	17172	WIST	Sensor had a low bias
	Resolved	17150	EUFA	Plot covered in vegetation
	Resolved	17222	RING	Sensor had a low bias
	Resolved	17100	CAMA	Sensor replaced
	Resolved	17296	HOLL	Sensor developed a low bias
<b>TS05</b>	Current	17210	FREE	Reporting errant data
	Current	17230	CLAY	Close in temperature with TB05
	Current	17250	COOK	Sensor has a low bias
	Current	17291	CHEY	Sensor has a low bias
	Current	17326	APAC	Sensor has a low bias
	Resolved	17147	FTCB	Sensor developed a low bias
	Resolved	17224	MADI	Gopher damage
	Resolved	17145	ARNE	Water bath test showed no bias in sensor
	Resolved	17213	ELRE	Sensor had a low bias

<b>TB05</b>	Current	17093	CLOU	Sensor has a low bias
	Current	17146	SHAW	Sensor has a low bias
	Resolved	17096	FTCB	Sensor had a low bias
	Resolved	17155	TISH	Sensor replaced
	Resolved	16954	WIST	Sensor had a high bias
	Resolved	17026	RING	Sensor had a low bias
	Resolved	17212	HOLL	Sensor had a low bias
<b>TS30</b>				
<b>TR05</b>				
<b>TR25</b>	Current	17025	FREE	Sensor stopped heating
<b>TR60</b>				
<b>TR75</b>				

### ARS Little Washita Watershed QA Report

Variable	Status	Ticket	Site	Remarks
<b>TAIR</b>	Current	16985	A144	Reporting errant data
<b>RELH</b>	Current	17177	A149	Sensor has a low bias during high humidity
<b>SRAD</b>				
<b>RAIN</b>				
<b>TS05</b>	Current	17134	A133	Sensor has a low bias
	Resolved	17298	A133	Bath test soil temperature sensors
<b>TS10</b>				

<b>TS15</b>	
<b>TS30</b>	
<b>VW05</b>	<b>Resolved      16956      A148      Voltages report near zero, no apparent problem</b>
<b>VW25</b>	
<b>VW45</b>	

**ARS Ft. Cobb Watershed QA Report**

<b>Variable</b>	<b>Status</b>	<b>Ticket</b>	<b>Site</b>	<b>Remarks</b>
<b>TAIR</b>				
<b>RELH</b>				
<b>SRAD</b>				
<b>RAIN</b>				
<b>TS05</b>	<b>Current</b>	<b>17325</b>	<b>F110</b>	<b>Sensor has a low bias</b>
<b>TS10</b>				
<b>TS15</b>				
<b>TS30</b>				
<b>VW05</b>	<b>Current</b>	<b>17044</b>	<b>F104</b>	<b>Did not react to 0.7 inch rain event</b>
<b>VW25</b>				
<b>VW45</b>				

“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.

<b>Variable</b>	<b>Description</b>
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
TS10	Soil temperature measured at 10 cm under native sod
TB10	Soil temperature measured at 10 cm under bare soil
TS05	Soil temperature measured at 5 cm under native sod
TB05	Soil temperature measured at 5 cm under bare soil
TS15	Soil temperature measured at 15 cm under native sod
TS30	Soil temperature measured at 30 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
TR75	Soil moisture: Calibrated DeltaT measured at 75 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