

# OKLAHOMA MESONET/ARS QUALITY ASSURANCE REPORT

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- The majority of the Mesonet staff, including Technicians, began working from the National Weather Center on 29 August 2006!
- Prior to the move, Mesonet Technicians worked hard to resolve over 200 trouble tickets in August! Along with trouble tickets, Technicians conducted routine maintenance at sites and completed other tasks, including:
  - Scheduled rotations of 19 temperature and relative humidity sensors, 5 pyranometers, 2 Fasttherms, 2 barometers, and 2 wind sentries
  - Enclosure upgrades at 2 Mesonet sites
  - SDM-SIO4s were installed at an additional 20 Mesonet sites
- A lightning strike occurred at the Jay Mesonet site (JAYX) on 28 August 2006. The strike damaged the datalogger, multiplexer, radio, RF modem, as well as some soil temperature and soil moisture sensors. All observations were lost from 02:55 on the 28<sup>th</sup> through the 29<sup>th</sup> at 22:50. The soil moisture and soil temperature sensors that were affected are noted below. All problems have been resolved.
- ARS base (ARSXbase) and the Stratford repeater (STRArptr) were decommissioned.

## Mesonet QA Report for Standard Variables

Variable	Status	Ticket	Site	Remarks
TAIR	Resolved	13524	TAHL	Replaced sensor that had developed a bias
RELH	Resolved	13622	ADAX	Replaced sensor that had developed a dry bias
	Resolved	13696	BOIS	Replaced sensor that had failed
WDIR	N/A			
WSPD	N/A			
PRES	Resolved	13623	HOBA	Replaced sensor that had developed a high bias
SRAD	Resolved	13532	TISH	Replaced sensor that had developed a low bias
	Resolved	13533	ACME	Replaced sensor that had developed a low bias
	Resolved	13534	WALT	Replaced sensor that had reported sporadic data

<b>RAIN</b>	<b>N/A</b>			
<b>TA9M</b>	<b>N/A</b>			
<b>WS2M</b>	<b>N/A</b>			
<b>TS10</b>	<b>Current</b>	<b>13773</b>	<b>RING</b>	<b>Data from sensor is offset from previous records</b>
	<b>Resolved</b>	<b>13564</b>	<b>BESS</b>	<b>Replaced sensor that was reporting erratic data</b>
	<b>Resolved</b>	<b>13614</b>	<b>WYNO</b>	<b>Replaced sensor that had developed a low bias</b>
	<b>Resolved</b>	<b>13774</b>	<b>JAYX</b>	<b>Replaced sensor that was damaged by lightning</b>
<b>TB10</b>	<b>Resolved</b>	<b>13476</b>	<b>CHEY</b>	<b>Replaced sensor that had developed a low bias</b>
	<b>Resolved</b>	<b>13709</b>	<b>GRA2</b>	<b>Replaced sensor that had failed</b>
<b>TS05</b>	<b>Resolved</b>	<b>13771</b>	<b>STIL</b>	<b>Replaced sensor that had developed a low bias</b>
<b>TB05</b>	<b>Current</b>	<b>13744</b>	<b>WEST</b>	<b>Sensor has developed an extreme high bias</b>
	<b>Resolved</b>	<b>13656</b>	<b>TIPT</b>	<b>Replaced sensor that was reporting erratic data</b>
	<b>Resolved</b>	<b>13611</b>	<b>NEWK</b>	<b>Replaced sensor that had developed a low bias</b>
	<b>Resolved</b>	<b>13612</b>	<b>HINT</b>	<b>Replaced sensor that had developed a low bias</b>
	<b>Resolved</b>	<b>13613</b>	<b>LANE</b>	<b>Replaced sensor that had developed a low bias</b>
	<b>Resolved</b>	<b>13212</b>	<b>GRA2</b>	<b>Replaced sensor that had developed a low bias</b>
	<b>Resolved</b>	<b>13775</b>	<b>JAYX</b>	<b>Replaced sensor that was damaged by lightning</b>
<b>TS30</b>	<b>N/A</b>			
<b>TR05</b>	<b>Resolved</b>	<b>13610</b>	<b>TIPT</b>	<b>Fixed sensor that had a noise problem</b>
	<b>Resolved</b>	<b>13776</b>	<b>JAYX</b>	<b>Replaced sensor that was damaged by lightning</b>
<b>TR25</b>	<b>Current</b>	<b>13703</b>	<b>GRA2</b>	<b>Sensor has failed</b>
	<b>Current</b>	<b>13707</b>	<b>PAWN</b>	<b>Sensor has failed</b>
	<b>Current</b>	<b>13772</b>	<b>STIL</b>	<b>Sensor has stopped heating</b>
	<b>Resolved</b>	<b>13704</b>	<b>BOIS</b>	<b>Replaced sensor that was damaged by an animal</b>

	Resolved	13777	JAYX	Replaced sensor that was damaged by lightning
TR60	Resolved	13563	PORT	Rewired sensor that had reported erratic data
TR75	N/A			

### ARS Little Washita Watershed QA Report

Variable	Status	Ticket	Site	Remarks
TAIR	N/A			
RELH	N/A			
SRAD	N/A			
RAIN	N/A			
TS05	N/A			
TS10	N/A			
TS15	N/A			
TS30	N/A			
VW05	Resolved	13458	A162	Rewired sensor
	Resolved	13706	A135	Replaced sensor that had been reporting a large diurnal oscillation
VW25	Resolved	13459	A132	Replaced sensor that had failed
VW45	Resolved	13460	A134	Replaced sensor that had failed

### ARS Ft. Cobb Watershed QA Report

Variable	Status	Ticket	Site	Remarks
TAIR	N/A			
RELH	N/A			
SRAD	N/A			
RAIN	Resolved	13778	F109	Replaced corroded switch
TS05	Current	13830	F105	Sensor has developed a low bias
TS10	N/A			
TS15	N/A			
TS30	N/A			
VW05	Resolved	13705	F102	Replaced sensor that had been reporting erratic data
VW25	Resolved	13457	F102	Replaced sensor that had been reporting a large diurnal oscillation
VW45	Resolved	13309	F112	Corrected wiring problem with sensor
	Resolved	13708	F115	Replaced sensor that had failed

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