

**OKLAHOMA MESONET / ARS
QUALITY ASSURANCE REPORT**

July 2015

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- Mesonet technicians completed scheduled rotations of 10 batteries (BATV), 5 barometers (PRES), 4 rain gauges (RAIN), 8 humidity sensor (RELH), 9 pyranometers (SRAD), 2 fasttherms (TAIR), 6 wind monitor directions (WDIR), 4 wind monitor nose cones, and 3 wind sentries.
- Little Washita site A256 sometimes reported -7999 for some or all values. Replaced cable from battery to the logger, power cable, fuse holder, and all connections.
- Stigler Mesonet site's (STIG) 1.5-m air temperature radiation shield fan stopped working, causing air temperature to be warmer than expected on sunny days. Air temperature data flagged until fan is fixed.
- Current excitation problem at the Spencer Mesonet site (SPEN) caused errant soil moisture data. Replaced current excitation. Data were flagged as needed.

Mesonet QA Report for Standard Variables

| Variable | Status | Site | Ticket | Remarks |
|-----------------|-----------------|-------------|---------------|---------------------------------------------------|
| TAIR | Resolved | SLAP | 28356 | Sensor exposed by broken shield. Replaced. |
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| RELH | | | | |
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| WSPD | Resolved | LANE | 28764 | Starting threshold problem. Replaced. |
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| WDIR | | | | |
| | | | | |
| PRES | | | | |
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|-------------|-----------------|-------------|--------------|--------------------------------------------------------|
| SRAD | | | | |
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| RAIN | Resolved | BIXB | 28744 | Second gauge clogged after nearby field mowed. |
| | Current | MANG | 28531 | Second gauge stopped reporting during storm. |
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| TA9M | Resolved | ALV2 | 28205 | Sensor sometimes has low bias. Replaced. |
| | Resolved | HASK | 27657 | Low bias during high humidity. Replaced. |
| | Current | NEWK | 28595 | Sensor sometimes has large low bias. |
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| WS2M | | | | |
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| TB10 | Resolved | LAHO | 28352 | Secured insulating panel cover to reduce noise. |
| | Resolved | OILT | 28353 | Verified wires secure and panel in place. |
| | Current | MIAM | 28757 | Sensor is too shallow. |
| | | | | |
| TS05 | Resolved | FREE | 28385 | Roots pushed sensor too deep. Replaced. |
| | Resolved | MRSH | 28384 | Reburied sensor at correct depth. |
| | Current | BURB | 28361 | Sensor at incorrect depth. |
| | Current | VINI | 28767 | Sensor at incorrect depth. |
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| TS10 | | | | |
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| TS25 | Current | OILT | 28762 | Spikes in 25cm soil data. |

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|--------------|-----------------|-------------|--------------|--------------------------------------------------------|
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| TS60 | | | | |
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| TR05 | Resolved | BOWL | 28210 | Replaced sensor damaged by lightning. |
| | Resolved | HECT | 28060 | Does not moisten as expected. Replaced. |
| | Resolved | SKIA | 28061 | Does not moisten as expected. Replaced. |
| | Current | ELKC | 28760 | Sensor stopped heating. |
| | Current | GOOD | 28719 | Reports -7999 |
| | | | | |
| TRB10 | Resolved | GUTH | 28716 | Sometimes reports -7999. Tightened connections. |
| | Resolved | GUTH | 28740 | Sometimes reports -7999. Replaced. |
| | | | | |
| TRS10 | Resolved | BOWL | 28178 | Damaged by lightning. Replaced. |
| | Resolved | HECT | 28253 | Does not respond to rain as expected. Replaced. |
| | | | | |
| TR25 | Resolved | BOWL | 28176 | Damaged by lightning. Replaced. |
| | Resolved | CENT | 28722 | Stopped heating. Replaced. |
| | Resolved | STIG | 28761 | Does not moisten as expected. Replaced. |
| | Current | FORA | 28730 | Sensor stopped heating. |
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| TR60 | Resolved | BOWL | 28177 | Damaged by lightning. Replaced. |

ARS Little Washita Watershed QA Report

| Variable | Status | Site | Ticket | Remarks |
|----------|----------|------|--------|------------------------------------|
| RAIN | | | | |
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| VW05 | Resolved | A256 | 28729 | Reports -7999. Replaced connector. |
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| VW25 | Resolved | A159 | 28728 | Spikes in data. Replaced. |
| | Current | A148 | 28751 | Sometimes reports 0. |
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| VW45 | | | | |
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| V05T | | | | |
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| V25T | | | | |
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| V45T | | | | |

ARS Fort Cobb Watershed QA Report

| Variable | Status | Site | Ticket | Remarks |
|----------|---------|------|--------|-------------------------------|
| RAIN | | | | |
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| VW05 | | | | |
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| VW25 | Current | F114 | 28724 | Voltages lower than expected. |
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|-------------|----------------|-------------|--------------|--------------------------------------|
| VW45 | Current | F112 | 28734 | Voltages lower than expected. |
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| V05T | | | | |
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| 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 |