# QUALITY ASSURANCE REPORT
# OKLAHOMA MESONET / ARS / OKCnet

November 2008

Prepared by Cindy Morgan & Alex McCombs
gamgr@mesonet.org

- Mesonet technicians performed scheduled rotations of 42 fasttherms, 7 pyranometers, 6 rain gauges, 7 temperature and relative humidity sensors, 8 wind monitor nose cones, 10 wind vanes, 22 wind sentries, and 2 barometers
- Temperature aspirators were installed at 35 sites
- The aspirator fan at the Ninnekah Mesonet site began reporting 0 rpm on November 28, 2008. Air temperature data are currently flagged as "suspect"
- The multiplexer at the Beaver Mesonet site caused errant data in all soil moisture and soil temperature measurements from October 20 – November 17, 2008
- In December, the air temperature, relative humidity, and solar radiation sensors will be removed from the ARS Micronets. In addition, the measurement depths for soil temperature will transition to 5, 25, and 45 cm
- OKCnet stations KNE102 and KNW102 were moved to KNE202 and KNW202.

## Mesonet QA Report for Standard Variables

| Variable | Status | Ticket | Site | Remarks |
|---|---|---|---|---|
| | | | | |
| **TAIR** | **Resolved** | **17832** | **VANO** | **Mouse damaged sensor cable** |
| | | | | |
| **RELH** | | | | |
| | | | | |
| **WSPD** | **Resolved** | **17676** | **ACME** | **Sensor had a starting threshold problem** |
| | **Resolved** | **17884** | **SULP** | **Sensor had a starting threshold problem** |
| | | | | |
| **WDIR** | | | | |
| | | | | |
| **PRES** | | | | |
| | | | | |
| **SRAD** | **Current** | **17913** | **KENT** | **Sensor has a high bias** |
| | **Resolved** | **17833** | **MRSH** | **Sensor had a low bias** |
| | | | | |
| **RAIN** | | | | |
| | | | | |

| | | | | |
|---|---|---|---|---|
| **TA9M** | **Current** | **17835** | **GRA2** | **Sensor reporting -273.1C** |
| | | | | |
| **WS2M** | **Resolved** | **17675** | **VANO** | **Sensor had a starting threshold problem** |
| | **Resolved** | **17678** | **MANG** | **Sensor had a starting threshold problem** |
| | | | | |
| **TS10** | **Resolved** | **17543** | **RETR** | **Sensor damaged by rodent** |
| | **Resolved** | **17761** | **OKCN** | **Sensor failed** |
| | **Resolved** | **17840** | **PAWN** | **Sensor had a low bias** |
| | | | | |
| **TB10** | | | | |
| | | | | |
| **TS05** | **Current** | **17814** | **NEWP** | **Sensor failing** |
| | **Resolved** | **17326** | **APAC** | **Sensor had a low bias** |
| | **Resolved** | **17291** | **CHEY** | **Sensor had a low bias** |
| | **Resolved** | **17692** | **BESS** | **Sensor had no bias, no action taken** |
| | **Resolved** | **17544** | **PAWN** | **Sensor reported errant data** |
| | | | | |
| **TB05** | **Current** | **17885** | **CAMA** | **Sensor reporting large negative values** |
| | **Resolved** | **17495** | **BUTL** | **Sensor had a low bias** |
| | | | | |
| **TS30** | **Resolved** | **17699** | **APAC** | **Sensor had a high bias** |
| | **Resolved** | **17839** | **PAWN** | **TS30 damaged** |
| | | | | |
| **TR05** | **Resolved** | **17333** | **GRA2** | **Loose wire** |
| | | | | |
| **TR25** | | | | |
| | | | | |
| **TR60** | | | | |
| | | | | |
| **TR75** | | | | |
| | | | | |

## ARS Little Washita Watershed QA Report

| Variable | Status | Ticket | Site | Remarks |
|---|---|---|---|---|
| | | | | |
| **TAIR** | **Current** | **16985** | **A144** | **Sensor failed** |
| | | | | |
| **RELH** | **Current** | **17177** | **A149** | **Sensor has a low bias** |
| | | | | |
| **SRAD** | | | | |
| | | | | |
| **RAIN** | **Resolved** | **17693** | **A136** | **Switch failed on rain gauge** |
| | | | | |
| **TS05** | **Current** | **17134** | **A133** | **Sensor has a low bias** |
| | **Current** | **17677** | **A152** | **Sensor has a low bias** |
| | | | | |
| **TS10** | | | | |
| | | | | |
| **TS15** | | | | |
| | | | | |
| **TS30** | | | | |
| | | | | |
| **VW05** | | | | |
| | | | | |
| **VW25** | | | | |
| | | | | |
| **VW45** | | | | |
| | | | | |

## ARS Ft. Cobb Watershed QA Report

| Variable | Status | Ticket | Site | Remarks |
|---|---|---|---|---|
| | | | | |
| **TAIR** | | | | |
| | | | | |
| **RELH** | | | | |
| | | | | |
| **SRAD** | | | | |
| | | | | |
| **RAIN** | | | | |
| | | | | |

| | | | | |
|---|---|---|---|---|
| **TS05** | **Current** | **17325** | **F110** | **Sensor has a low bias** |
| | | | | |
| | | | | |
| **TS10** | | | | |
| | | | | |
| **TS15** | | | | |
| | | | | |
| **TS30** | | | | |
| | | | | |
| **VW05** | | | | |
| | | | | |
| **VW25** | **Resolved** | **17674** | **F111** | **Sensor failed** |
| | | | | |
| **VW45** | **Current** | **17887** | **F108** | **Data spikes to zero** |
| | | | | |

## Oklahoma City Micronet QA Report

| Variable | Status | Ticket | Site | Remarks |
|---|---|---|---|---|
| | | | | |
| **TAIR** | | | | |
| | | | | |
| **RELH** | **Current** | **17886** | **KSW108** | **Sensor has become susceptible to moisture** |
| | **Resolved** | **17684** | **KNE101** | **Spikes in RELH during high humidity** |
| | | | | |
| **PRES** | **Resolved** | **17295** | **KSW111** | **Barometer errors** |
| | | | | |
| **RAIN** | | | | |
| | | | | |
| **WSPD** | | | | |
| | | | | |
| **WDIR** | | | | |
| | | | | |

“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 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 |