

OKLAHOMA MESONET / ARS QUALITY ASSURANCE REPORT

July 2011

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- Mesonet technicians performed scheduled rotations of 2 data loggers (LOGG), 4 barometers (PRES), 2 pyranometers (SRAD), 2 temperature and relative humidity sensors (RELH), and 3 windsentries (WS2M).
- The multiplexer at the Oklahoma City North (OKCN) site caused errant spikes in soil moisture and soil temperature data from 15 July 2011 to 27 July 2011, appropriate data flagged as erroneous.
- Data logger at Little Washita ARS site A249 caused all data to report errant values on the 18 July 2011, appropriate data flagged as erroneous.
- Summer Pass 2011 began on 1 July 2011.

Mesonet QA Report for Standard Variables

| Variable | Status | Ticket | Site | Remarks |
|-------------|----------|--------|-------|---|
| TAIR | Resolved | 21627 | FOR A | Air temperature had a 10-15 degree high bias |
| | Resolved | 21705 | LAHO | Air temperature had a high bias |
| RELH | | | | |
| WSPD | Resolved | 21625 | ADAX | Wind speed dropped to 0m/s for several hours |
| | Resolved | 21664 | HOLL | Sensor had a starting threshold problem |
| WDIR | | | | |
| PRES | Resolved | 21669 | BUTL | Pressure stuck at one value for several hours |
| SRAD | Resolved | 21670 | ANT2 | Sensor had a low bias |
| | Current | 21712 | HOLL | Sensor has a low bias |
| | Current | 21713 | BOWL | Sensor has a low bias |

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|-------------|----------|--------|------|---|
| RAIN | Current | 21715 | STIL | Rain gauge missed rain event |
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| TA9M | Resolved | 217007 | LAHO | Air temperature reporting large negative values |
| | Current | 21657 | WIST | Sensor has a high bias after rainfall |
| | | | | |
| WS2M | Resolved | 21678 | CHIC | Sensor has a starting threshold problem |
| | Current | 21679 | INOL | Sensor has a starting threshold problem |
| | | | | |
| TS10 | Current | 21606 | FTCB | Sensor has a low bias |
| | | | | |
| TB10 | Resolved | 21594 | KIN2 | Bare plot sensors were 3cm too shallow |
| | Resolved | 21663 | OILT | Sensor had a low bias |
| | Current | 21593 | WEAT | Bare plot diurnal cycle is muted |
| | Current | 21595 | HOBA | Sensor has a low bias |
| | | | | |
| TS05 | Current | 21620 | ALV2 | Sensor has a low bias |
| | Current | 21716 | SEIL | Sensor has a low bias |
| | | | | |
| TB05 | Resolved | 21662 | ACME | Bare plot sensors were 2cm too shallow |
| | Resolved | 21674 | WATO | Bare plot sensors were 4cm too shallow |
| | Current | 21658 | FREE | Sensor has a low bias |
| | Current | 21666 | HOLD | Sensor has a high bias after rainfall |
| | Current | 21667 | WYNO | Sensor has a high bias after rainfall |
| | Current | 21704 | CHAN | Bare plot has a large diurnal cycle |
| | | | | |
| TS30 | Resolved | 21584 | BUTL | Sensor had a low bias |
| | Resolved | 21619 | COPA | Sensor had a low bias |
| | Resolved | 21661 | BEAV | Sensor had a low bias |
| | Current | 21665 | SALL | Sensor has a low bias |
| | | | | |
| TR05 | Current | 21626 | CHER | Sensor has never moistened |
| | | | | |
| TR25 | Current | 21659 | ELRE | Sensor is reporting errant values |

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|-------------|-----------------|--------------|-------------|--|
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| TR60 | Resolved | 21578 | SALL | Sensor damaged by lightning |
| | Current | 21607 | DURA | Sensor is reporting errant values |
| | | | | |
| TR75 | | | | |
| | | | | |

ARS Little Washita Watershed QA Report

| Variable | Status | Ticket | Site | Remarks |
|-----------------|-----------------|---------------|-------------|--|
| | | | | |
| RAIN | | | | |
| | | | | |
| VW05 | Current | 21710 | A131 | Erroneous spikes in soil moisture data |
| | Current | 21714 | A249 | Soil moisture stuck at 0.00 |
| | Resolved | 21656 | A249 | Errant variations in soil moisture data |
| | | | | |
| VW25 | | | | |
| | | | | |
| VW45 | | | | |
| | | | | |
| V05T | | | | |
| | | | | |
| V25T | | | | |
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| V45T | | | | |
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ARS Ft. Cobb Watershed QA Report

| Variable | Status | Ticket | Site | Remarks |
|-------------|----------|--------|------|--|
| RAIN | | | | |
| VW05 | Current | 21675 | F103 | Errant spikes in soil moisture datas |
| VW25 | Resolved | 21660 | F106 | Erroneous spikes in soil moisture data |
| | Resolved | 21676 | F113 | Sensor does not react to rainfall |
| | Resolved | 21706 | F109 | Sensor reporting erroneous soil moisture values |
| | Current | 21671 | F106 | Soil moisture moistens despite no rainfall at site |
| VW45 | Resolved | 21621 | F114 | Sensor reporting errant increases and decreases |
| | Resolved | 21623 | F102 | Errant spikes in soil moisture at 25cm and 45cm |
| | Resolved | 21624 | F105 | Errant spikes in soil moisture data |
| | Current | 21672 | F114 | Errant spikes in soil moisture data |
| V05T | Resolved | 21677 | F104 | Sensor was 3cm too shallow |
| 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 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 |
| V05T | Soil Temperature measured at 5 cm under native sod |
| V25T | Soil Temperature measured at 25cm under native sod |
| V45T | Soil Temperature measured at 45cm under native sod |