OKLAHOMA MESONET/ARS QUALITY ASSURANCE REPORT

June 2005

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- The Mesonet Technicians were again busy in the month of June. A total of 193 trouble tickets were resolved last month!
    - At the ARS Fort Cobb Watershed, 6 more micronet sites were installed (F101, F104, F106, F107, F111, F114).
    - An initial installation of a 60 cm soil moisture sensor was performed at the Slapout site.
    - HMP-45C Temp/RelH sensors were installed at 8 additional Mesonet sites. The network-wide upgrade of these sensors has been completed.
    - Krypton hygrometers were removed from 4 Mesonet super sites. All kryptons have been removed from the network.
    - A bad data logger was replaced at the Bixby site. Data were minimally affected.
    - Additional work included the 13 PROM upgrades, 3 enclosure upgrades, as well as the scheduled rotations of 4 air temperature sensor pairs, 5 wind monitor nose cones, and 9 wind sentries.
- Lightning strikes occurred at the Altus base and the Wann repeater.
- The Burneyville site was downgraded from a super site to an OASIS site.

Mesonet QA Report for Standard Variables

Variable	Status	Ticket	Site	Remarks
TAIR	**Current**	**11648**	**PORT**	**Sensor reporting dips in temperature of nearly 15°C**
	Resolved	**11392**	**ARD2**	**Cleaned and rewired sensor that was reporting biased temperature data**
	Resolved	**11614**	**NOWA**	**Replaced sensor that had developed a 1 deg C high bias**
	Resolved	**11479**	**WYNO**	**Replaced sensor that was reporting 15 deg C temperature dips**
RELH	**Resolved**	**11627**	**ALV2**	**Replaced sensor that had been reporting erratic relative humidity values**
WDIR	**Current**	**11652**	**MANG**	**Sensor reporting wind direction values that are not consistent with neighboring sites**
WSPD	**Resolved**	**11568**	**ANTL**	**Reinstalled prop that had been knocked loose during a squall line**

PRES	**Current**	**11771**	**MTHE**	**Sensor has developed a 1 mb high bias**
	Resolved	**11455**	**RETR**	**Cleaned tube of pressure sensor that had been plugged by insects**
	Resolved	**11559**	**FITT**	**Replace sensor that was reporting errors**
SRAD	**Resolved**	**11349**	**SLAP**	**Replaced sensor that had developed a low bias**
	Resolved	**11548**	**SPEN**	**Replaced sensor that had developed a low bias**
RAIN	**Resolved**	**11469**	**MARE**	**Cleaned spider webs out of bucket**
	Resolved	**11470**	**SEIL**	**Re-aligned gauge housing to prevent switch from getting stuck again**
	Resolved	**11542**	**TAHL**	**Cleaned spider webs out of bucket**
TA9M	**Current**	**11650**	**DURA**	**Sensor is hanging outside of radiation shield**
	Resolved	**11391**	**ARD2**	**Fixed wiring on sensor that was reporting erroneous data**
WS2M	**N/A**			
TS10	**Resolved**	**11549**	**CENT**	**Replaced sensor that had failed a water bath test**
TB10	**Resolved**	**11428**	**KETC**	**Replaced sensor that had been damaged by lightning**
	Resolved	**11405**	**SPEN**	**Replaced sensor that had reported 1 to 2 deg C temperature spikes**
TS05	**Current**	**11461**	**HOBA**	**Sensor has developed a high bias**
	Resolved	**11586**	**CENT**	**Replaced sensor that had failed a water bath test**
	Resolved	**11429**	**KETC**	**Replaced sensor that had been damaged by lightning**
	Resolved	**11249**	**SLAP**	**Returned sensor to correct depth**
TB05	**Current**	**11770**	**GOOD**	**Sensor appears to be exposed**
	Current	**11617**	**PUTN**	**Sensor reporting spiking and dipping soil temperature values**
	Resolved	**11427**	**KETC**	**Replaced sensor that had been damaged by lightning**
TS30	**Current**	**11468**	**HOLL**	**Sensor had developed a 3^{o}C low bias**
	Resolved	**11505**	**BLAC**	**Replaced sensor that had been reporting temperature values that were spiking and dipping**
	Resolved	**11430**	**KETC**	**Replaced sensor that had been damaged by lightning**
TR05	**Current**	**11644**	**BESS**	**Sensor has stopped heating**
	Current	**11466**	**MAYR**	**Noise has developed in soil moisture sensor**
	Current	**11618**	**PUTN**	**Sensors reporting out-of-range data values**
	Resolved	**11421**	**KETC**	**Replaced sensor that had been damaged by lightning**

TR25	**Current**	**11681**	**BESS**	**Sensor has reported erratic data then stopped heating**
	Current	**11646**	**BIXB**	**Sensor has failed**
	Resolved	**11422**	**KETC**	**Replaced sensor that had been damaged by lightning**
TR60	**Current**	**11645**	**MIAM**	**Sensor has stopped heating**
	Resolved	**11423**	**KETC**	**Replaced sensor that had been damaged by lightning**
TR75	**Resolved**	**11424**	**KETC**	**Replaced sensor that had been damaged by lightning**

ARS Little Washita Watershed QA Report

Variable	Status	Ticket	Site	Remarks
TAIR	**Current**	**11772**	**A144**	**Sensor has developed a 2 ^{o}C high bias**
	Resolved	**11624**	**F113**	**Rewired sensor that was reporting erroneous data**
RELH	**N/A**			
SRAD	**N/A**			
RAIN	**Resolved**	**11558**	**A147**	**Cleaned spider webs out of bucket**
	Resolved	**11462**	**A156**	**Replaced switch that had failed**
TS05	**N/A**			
TS10	**Current**	**11653**	**A150**	**Sensor has developed a high bias**
TS15	**N/A**			
TS30	**N/A**			

ARS Ft. Cobb Watershed QA Report

Variable	Status	Ticket	Site	Remarks
TAIR	**Resolved**	**11624**	**F113**	**Rewired sensor that was reporting erroneous data**
RELH	**N/A**			
SRAD	**N/A**			
RAIN	**N/A**			
TS05	**N/A**			
TS10	**N/A**			
TS15	**N/A**			
TS30	**N/A**			
VW05	**N/A**			
VW25	**N/A**			
VW45	**N/A**			

"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