

OKLAHOMA MESONETWORK QUALITY ASSURANCE REPORT
for the month of August, 1996

Based upon observations taken at 1800 UTC each day

Prepared by Curtis Marshall (curtis@mesnet.mesonet.uoknor.edu)

Notes:

Not much to speak about this month, and I suppose that's unfortunate after the big spiel before the Steering Committee on the revolutionary improvements to the visual QA process.

The biggest problem in August was lightning. CLAY took a strike which fried just about everything there (I believe this is the 2nd time in this site's history that this has happened). Many of the soil probes and the pyra at STIG also fell victim to the Mesonet's greatest enemy in nature (I'm still referring to lightning, please don't let your imaginations wander too far).

On the other side of the interface, gopher's seem united with the intention of destroying soil probes on site (as was discovered at BRIS early in August).

Other than that, I think it's about time for fall. Perhaps some cool weather will help out the Sooners (no comments from the Stillwater gang, please).

=====

TAIR (Air Temperature at 1.5 meters):

Looks good.
Current t-tkts: None.
Added: None.
Resolved: None.

TDEW/RELH (RH is measured at 1.5 meters):

Current t-tkts: #974 RING Low bias in July QA.
#1003 WOOD Was reporting 114%.
Added: #1079 EUFA August MAX RH 95.4%. Low compared to neighbors.
Resolved: #1007 NOWA Sensor replaced after erratic behavior.
#1001 ADAX Sensor replaced.
#790 ADAX T-tkt superseded by #1001.
#1052 BIXB High bias noted in July QA likely due to nearby irrigation. Sensor replaced anyway.
#1036 RETR Replaced sensor that was KO'd by lightning.
#1073 CLAY Replaced after lightning strike.
#1050 BESS Replaced. Reporting erratically at time of tech visit.

WDIR (Wind Direction at 10 meters):

Current t-tkts: None.
Added: None.
Resolved: #1071 CLAY Replaced after lightning strike (sensor was 180 deg off after the bolt).

WSPD (Wind Speed at 10 meters):

Current t-tkts: None.
Added: None.
Resolved: #1072 CLAY Not damaged by lightning, but replaced as complete unit with WDIR.
#1054 HOLL Replaced. Brought in old sensor to be tested (NWS expressed concern over comparison with nearby COOP observations).

PRES/PALT (Sea level Pressure):

Current t-tkts: #1074 CHAN Reading became "hung up." Likely due to wiring problem, not sensor itself.
Added: None.
Resolved: #1021 APAC Sensor replaced.
#662 WASH Ticket dismissed due to lack of evidence in subsequent months for apparent bias.
#1062 WILB Replaced due to sand and bug in tube.

SRAD (Incident Solar Radiation):

Despite the list below, this field looks good. Several tickets for standard rotations take up the space, and of course these are not critical at all.

Current t-tkts: #780 BURN Standard rotation. Now in field 49 months.
#781 MARE Standard rotation. In field 50 months.
#782 PERK Standard rotation. In field 50 months.
#785 BOWL Standard rotation. In field 48 months.
#786 PAUL Standard rotation. In field 48 months.
#787 SHAW Standard rotation. In field 48 months.
#788 GUTH Standard rotation. In field 48 months.
#996 HUGO QA suggests ~10% low reading.

Added: None.
Resolved: #856 CLAR QA suggested slight low bias. Replaced.
#1022 STIG Replaced after lightning strike.
#930 OILT Replaced. QA suggested low bias.
#1070 CLAY Replaced after lightning strike.
#1039 BREC Replaced. Reporting low values (as noted in July QA). Tech notes possible lightning.

RAIN (Fairly self-explanatory):

Current t-tkts: None.
Added: None.
Resolved: #1032 NOWA Did on-site repair. Found bucket out of carriage.
#1045 PERK Replaced gauge that was double tipping.
#1047 PRES Replaced funnel and leveled gauge.
#1041 RING Already taken care of by t-tkt #1028.
#1038 SPEN Cleaned gauge and bucket. Drip calibration showed sensor OK.
#1015 WATO Field calibration check showed sensor OK.
#1051 BREC Broken mercury switch. Was not reporting.

TA9M (Air Temperature at 9 meters):

Current t-tkts: None.
Added: None.

Resolved: #1034 TISH Confirmed miswire with Brotzge's TA15 experimental instrument. On site repair.
#1063 CLAY Replaced after lightning strike.

WS2M (Wind Run at 2 meters):
Current t-tkts: #1044 PRES Vandalized. Tech temporarily fixed. Will replaced next visit
Added: #1078 WEBB QA suggests wind speed 50-75% low.
Resolved: None.

TS10 (Soil temperature at 10 cm under native sod):
Current t-tkts: #963 NORM QA shows ~2 deg warm bias.
Added: None.
Resolved: #1023 STIG No action taken on sensor itself. Replaced CR10T (weak excitation voltage) after apparent lightning strike.
#1065 CLAY Replaced after lightning strike.

TB10 (Soil temperature at 10 cm under bare soil):
Current t-tkts: #925 HASK Long-term QA suggests ~3 deg cool bias.
#1076 WALT Sensor quickly began reporting readings >20 deg warmer than neighbors and thus failing spatial test in automated QA.
Added: None.
Resolved: #1033 PERK Replaced. Gopher damage.
#1024 STIG No action taken on sensor itself. Replaced CR10T (weak excitation voltage) after apparent lightning strike.
#1035 ADAX Tech found bare plot ~80% covered with grass. Scalped and applied sterilizer.
#854 REDR Replaced bad sensor.
#969 STIL No action taken. Field test showed sensor within spec.
#1048 WEST Tech notes TB10=26.78, Test=28.48. Cool bias as suspected.
#855 OKMU Field test showed sensor within spec.
#1067 CLAY Replaced after lightning strike.

TS05 (Soil temperature at 5 cm under native sod):
Current t-tkts: #967 NORM QA continues to show ~4-5 deg warm bias.
Added: None.
Resolved: #1066 CLAY Replaced after lightning strike.

TB05 (Soil temperature at 5 cm under bare soil):
Current t-tkts: #924 HASK QA suggests ~2 deg cool bias.
Added: None.
Resolved: #970 CHIC Replaced sensor. Tech notes top soil is old road bed composed of gravel.
#923 BIXB No action taken. Field test showed OK.
#1025 STIG No action taken on sensor itself. Replaced CR10T (weak excitation voltage) after lightning strike.
#1040 BRIS Replaced. Gopher damage.
#1068 CLAY Replaced after lightning strike.

TS30 (Soil temperature at 30 cm under native sod):

Current t-tkts: None.
Added: #1077 ALVA QA shows sensor reading >20 deg warm.
Resolved: #1016 PERK Replaced. Gopher damage.
#1064 CLAY Replaced after lightning strike.

Curtis H. Marshall, Jr.
9 September 1996