



Mesonet Summer Camps

–by Danny Mattox

IMAGINE YOU ARE A TEENAGER. You are obsessed with meteorology. You have seen Twister so many times, you have the script memorized, and you know the science is bad, really bad. Your mom tells you it is about to rain because of the way the clouds are moving, and you inform her that it is just the morning low-level jet. The rain will come later in the day, after solar radiation leads to surface heating which helps erode the cap, allowing supercells to form (if shear is adequate, that is). Then your mom goes silent for ten seconds, says your teachers need a raise, and declares she needs a break from you for a week because you are “eroding her cap”. Where do you go? To one of the two weather camps organized by the Oklahoma Mesonet, of course!

For the third consecutive year, the Oklahoma Mesonet has developed curriculum and activities for week-long weather camps in the National Weather Center. This year was a little different because there were two weather camps; one for middle schoolers funded by the Mesonet and camp fees, and one for high schoolers fully funded by the Oklahoma Regents for Higher Education. In the previous two years, there was only one camp each summer for middle school-aged children. Both camps are competitive. In addition to simply applying, the applicants must submit multiple letters of recommendation from teachers and community members and write an essay about why they want to attend camp.

During the day, camp is held at the National Weather Center, and after a day of meteorology and weather-based activities, they return to the dorms for dinner and evening entertainment organized by the OU Precollegiate Program.

The two camps are similar in that they both cover meteorology above and beyond what students receive in the classroom.

“In the Mesonet camp, we try to break down concepts into physical things students can manipulate rather than analyzing a lot of data,” said Andrea Melvin, Outreach Program Manager for the Oklahoma Mesonet. “The Regent’s Camp has more data analysis and map interpretation.”

During the camps this summer, students participated in a number of activities including weather balloon launches, storm spotter training, upper air map analysis, rain gauge calibration and forecast competitions. Each student in the Regent’s Camp received a weather radio they programmed to receive alerts for their area. Dozens of meteorologists and graduate students contributed to the two camps in some way, either by instructing lessons or providing information about college and career paths in meteorology. Next summer, the Mesonet camp for middle schoolers is scheduled to be June 22-27, 2014, and the Regent’s Camp for high schoolers will be July 13-18, 2014.

“The Mesonet Camp for middle schoolers gives us an opportunity to really engage students at a time when we see them becoming less interested in science,” said Kevin Kloesel, Director of the Oklahoma Climatological Survey. “In the Regent’s Camp for high schoolers, we really get an opportunity to visit with some impressive young high school students who have science and meteorology as their career path. We get an opportunity to develop their skills as well as give them a first hand feel of what its like to be in a professional meteorological setting.” ■

Middle school students at the Oklahoma Mesonet Camp observe a weather balloon launch as part of their camp activities. Weather balloon launches occur twice a day at approximately 6 a.m. and 6 p.m. CST.



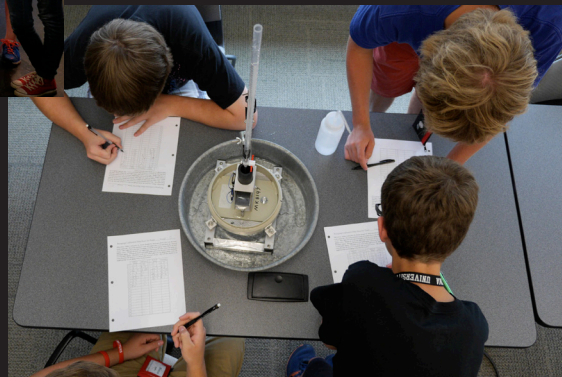
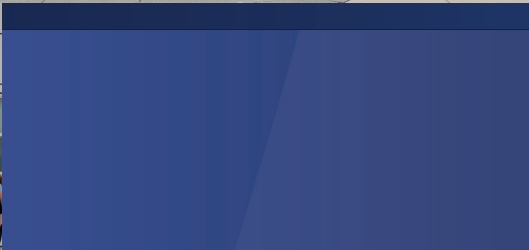
MESONET IN PICTURES

Oklahoma Mesonet Camp for Middle School Students



MESONET IN PICTURES

Oklahoma Regents for Higher Education Mesonet Camp



The Mesonet Returns to its Roots

—by Stephanie Bowen

ALMOST 30 YEARS AGO, a tragic event in Tulsa led to the beginnings of the Oklahoma Mesonet. According to the City of Tulsa’s website, “The 1984 Memorial Day Flood killed 14, injured 288, damaged or destroyed nearly 7,000 buildings, and left \$180 million in damages.” On June 25, 2013, the Mesonet installed a station in Tulsa, bringing the events of the flood full circle.

“After the Memorial Day Flood, city and emergency management officials decided we could do better,” said Phil Browder, Mesonet Field Technician. “There was little warning, and creek waters rose faster than anticipated. We needed a way to find how much water was falling. The seeds were planted then that led to the Oklahoma Mesonet. That is why it is important we came back to Tulsa, to visit where it all started.”

The Mesonet has been helping decision makers by providing quality data for almost 20 years now. Our data is collected every five minutes from 120 sites across Oklahoma.

“Any decision maker is limited by the quality of data they have access to, whether you are a forecaster, city manager or emergency management,” Browder said. “Good timely data is critical to making good timely decisions. That is what the Mesonet is about – providing decision makers with accurate, timely weather data that they can then use to make accurate, timely decisions.”

No matter where you are in Oklahoma, you are no more than 15 miles from a Mesonet site, approximately. The new station in Tulsa helps increase our spatial density, and it is a good representation of the partnerships we have built within the educational community.

“Our secondary goal is educating the public about timely, accurate data,” Browder said. “That is why it is important to have these relationships. We are grateful to have our site at Tulsa Community College, and they have been gracious to host us.” ■

Oklahoma Mesonet Field Technician Phil Browder, with Mesonet Student Assistants Amanda Ilk and Arielle Abrens, installs the soil moisture sensor at the new Tulsa Mesonet site, located on Tulsa Community College’s campus.





An Uncommon July Brings Drought Relief

By Gary McManus, Associate State Climatologist

JULY WRAP-UP

It was not the wettest July on record in Oklahoma, at least not on a statewide basis. That mark belongs to 1950's statewide average of 9.26 inches. Nor was it the coolest. That title is held by 1906's statewide average of 75.9 degrees. Nevertheless, this July will be remembered as one of the wettest and mildest in recent memory, especially compared to the blast furnace versions of the last few summers. It featured a July 4th holiday with highs in the 80s and lows in the 50s, and enough rain to kick drought to the curb across much of the state. According to preliminary data from the Oklahoma Mesonet, July's statewide average precipitation total was 5.11 inches, a surplus of 2.37 inches and ranked as the 15th wettest since records began in 1895. The statewide average temperature was a very pleasant 79.6 degrees, 2 degrees below normal and the 28th coolest July on record. The highest temperature recorded during the month was 107 degrees at Alva, Buffalo and Freedom on the ninth, and again at Grandfield on the 11th. The lowest temperature reported was an unseasonably chilly 49 degrees at Seiling on July 2.

While nearly all areas of the state received beneficial rain, a wide discrepancy existed between locations. The Mesonet's Kingfisher site led the state with 10.99 inches of rainfall during July while Goodwell brought up the rear at 1.02 inches. Oklahoma City's total of 9.84 inches, 6.91 inches above normal, ranked this July as its second wettest on record, bested only by 1996's 11.9 inches. That also keeps Oklahoma City on pace to have its wettest calendar year on record with a January-July total of 41.69 inches, more than 3 inches ahead of 2007's total of 38.15 inches over the same period. The calendar year record for Oklahoma City currently stands at 56.95 inches from that same year of 2007. Records for Oklahoma City date back to 1891. On the other side of the moisture spectrum, the Mesonet site at Goodwell has recorded a meager 5.2 inches of rain since the first of the year. That's the third driest January-July for that area since 1910. Not surprisingly, 2011 earned the driest mark for Goodwell with 1.73 inches.

The latest U.S. Drought Monitor report reflects the abundant July rainfall, especially across the eastern two-thirds of the state. Only 1.4 percent of the state is labeled within exceptional drought. That is a reduction from 8.7 percent at the end of June. Over 62 percent of the state is now drought free, primarily from central through eastern Oklahoma. Only 41 percent of the state was free from drought at the end of May, according to the Drought Monitor. The entire state was labeled in some intensity of drought at the beginning of the year, including 37 percent of the state in the exceptional category. The far western edge, including the Panhandle, remains in drought categorized as being at least in the extreme category. The Drought Monitor's intensity scale slides from moderate-severe-extreme-exceptional, with exceptional being the worst category.

79.6°F

average statewide temperature
for July

5.11"

PRECIPITATION

statewide average for July

15th WETTEST

July since records began in 1895

62

PERCENT

of the state is drought free

CALENDAR

AUGUST

- ▶ 8th-9th: Women in Ag Conference, Moore Norman Technology Center
- ▶ 10th: Southern Plains Beef Symposium, Ardmore
- ▶ 19th: OK-First Re-certification class at OEMA conference training day, Norman
- ▶ 20th-22nd: OK-First at Oklahoma Emergency Management Conference, Norman
- ▶ 26th-29th: OK-First Certification class, Norman
- ▶ 28th: Steering committee meeting, Stillwater

SEPTEMBER

- ▶ 4th-5th: OK-First Assistants Class, Norman
- ▶ 10th: OK-First Re-certification Class, Tulsa
- ▶ 12th: OK-First Re-certification Class, Ardmore
- ▶ 17th: OK-First Re-certification Class, McAlester
- ▶ 19th: OK-First Re-certification Class, Edmond

CONTACTS

Accessing recent (within the past 7 days)
Mesonet data

Contact: [Mesonet Operator](#)

Instrumentation, telecommunications, or
other technical specifications

Contact: [Chris Fiebrich](#)

Mesonet agricultural data and products

Contact: [Al Sutherland](#)

Mesonet meteorological data

Contact: [OCS Data Requests](#)

Earthstorm - K-12 educational outreach

Contact: [Andrea Melvin](#)

OK-First - Public safety outreach

Contact: [James Hocker](#)

OK-FIRE - Fire management outreach

Contact: [J.D. Carlson](#)

Not sure?

Contact: 405-325-2541 or [Chris Fiebrich](#).

FORECAST FOR AUGUST

[Click here to view the original maps from the Climate Prediction Center.](#)

Chance for above normal temperatures

DISCUSSION: Equal chance for above-, below- and near-normal precipitation for Oklahoma. Increased chance for above normal temperatures across much of western Oklahoma.

**Equal chance for above-,
below- and near-normal
precipitation statewide**