



Thirsting for Knowledge

—by Stephanie Bowen

Imagine having the opportunity to spend six days at the National Weather Center learning about the weather from meteorologists working there. In June, the Oklahoma Mesonet Weather Camp, led by Andrea Melvin, Mesonet Educational Outreach Coordinator, provided that opportunity to 21 students in 7th, 8th and 9th grades from eight states across the nation.

“The children were starving for meteorological information,” said Danny Mattox, Oklahoma Mesonet Weather Camp Counselor and science teacher at Norman’s Irving Middle School. “Everyday, a student would walk up to me, and ask me a question. I would answer it, and then another kid would hear and want more information, then another and another. You would offer them a morsel of something, then they all wanted more.”

Lessons and activities about weather not available in most public or private schools were provided to students. Students learned about instability and severe weather, climate, and the hazards that come with the weather we have. They also had the opportunity to interact with and ask questions of the meteorology students acting as camp counselors.

“The kids went above and beyond the classroom learning about meteorology,” Mattox said. “They participated in several hands-on activities investigating weather phenomenon. One favorite activity was calibrating tipping bucket rain gauges.”

Hands-on activities involving pressure included water rockets and pop canisters. Others involved solar radiation such as running solar cars, simulating atmosphere circulations using energy from the sun, and making solar prints.

“These activities gave them something to take home – a tangible piece of evidence they were at weather camp,” Mattox said.

Students also had the opportunity to tour several facilities including the National Weather Center where they saw the National Oceanic and Atmospheric Administration Operations, the National Weather Center Forecast Office and Storm Prediction Center, the Oklahoma Mesonet lab, and the University of Oklahoma School of Meteorology.

Outside of campus, students were taken to KOCO News Channel 5’s weather station where they met with Rick Mitchell, Chief Meteorologist. They also went to the Oklahoma Science Museum and watched Tornado Alley in IMAX.

“All the kids were really interested in weather,” Mattox said. “They weren’t here for something to do; they were here to learn about weather. They all had radar apps on their phone and were checking them in the middle of the night. Everyone who is in the meteorology school pays attention to the weather across the nation and world, and that is what these kids did too.” ■

The students participated in an activity involving pressure to create rockets. They took two liter bottles, filled them about halfway with water, and added air pressure using a bike pump. Students experimented with different variables such as water levels, number of fins, and adding weight to see how the different changes affected how high the rockets would fly.

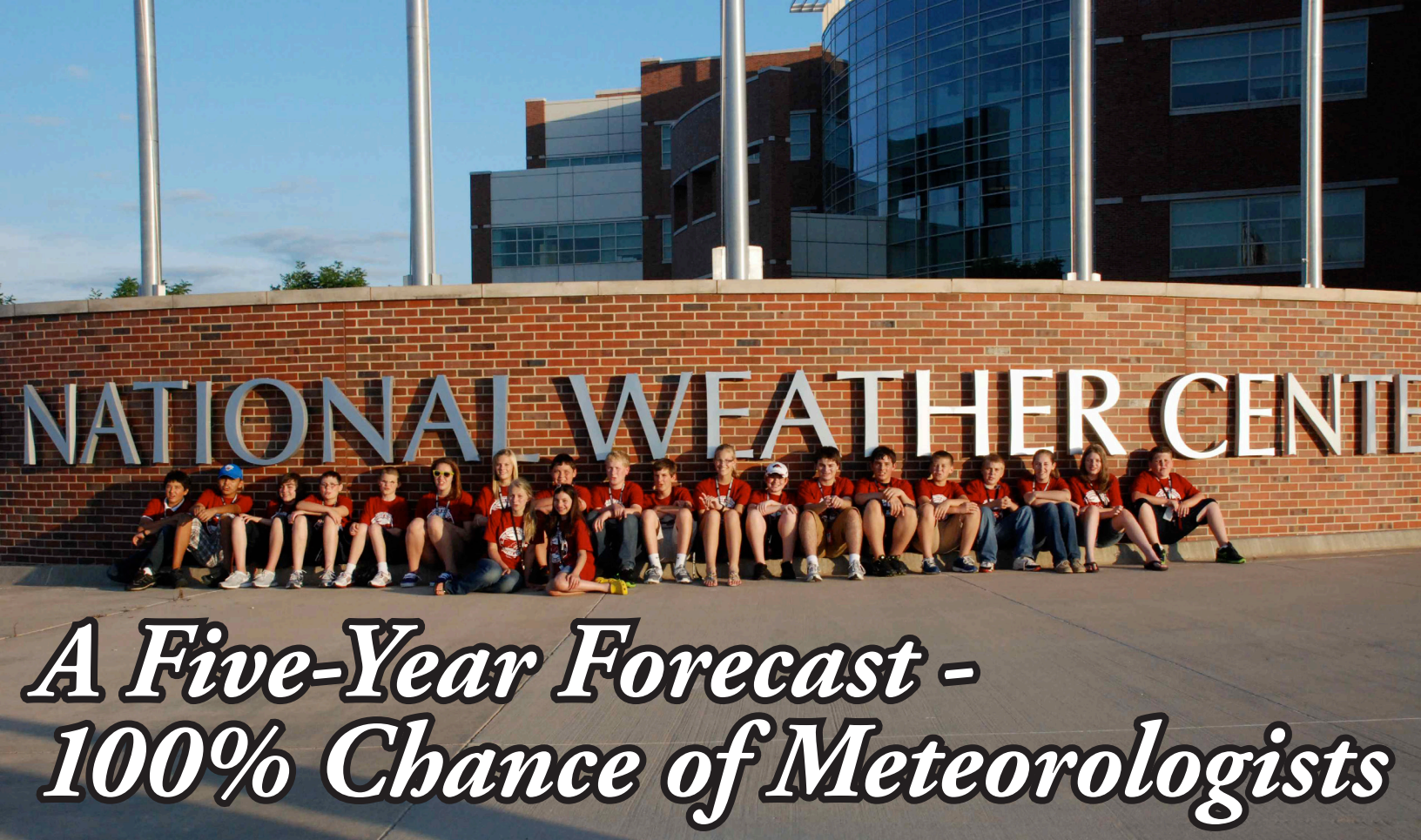


2012 Oklahoma Mesonet Weather Camp



MESONET IN PICTURES





—by Kevin Kloesel

It seems like just yesterday we were making manual weather observations and rejoicing over new technologies such as satellite observations and Doppler radar. It was into this environment in 1994 that the Oklahoma Mesonet was born. But ask anyone who has ever accessed weather data on a smart phone, or visited the Mesonet's home in the National Weather Center in Norman, and they will each agree that the way we observe and study weather today is changing. Rapidly! And, we're not just talking about the climate!

New sensor systems such as dual polarization and phased array radar, new imagers on satellites, and new ways of bringing Oklahoma weather data into your daily decision-making are being rolled out as often as our atmosphere produces 100-degree heat, and this flood of technological advancements presents a significant challenge to our existing work force. Where do we find the inquisitive, math-savvy scientists of the future to help us roll out these new radars or new Mesonet data?

The OU College of Atmospheric and Geographic Sciences graduated great students this past year, but they are already in new jobs making great use of the existing technologies in our weather and climate tool kit. The Oklahoma State University College of Agricultural Sciences and Natural Resources did the same, and those students are some of the most capable in the world at using existing weather and climate information. But, what about the exciting developments that we have planned for implementation in 2017 and beyond?

It might seem premature to think about the importance of the skill set of the 2017 high school graduate, but that next generation student scientist headed for OSU or OU will need to be prepared well beyond the capabilities of our current students. The knowledge and skills necessary to keep up with the pace at which we are revolutionizing the study of weather and climate continues to expand. And where are the students now that are slated to be the high school graduates of 2017? You will currently find them in Middle School!

The Oklahoma Mesonet recognizes that unless the high school graduates of 2017 are well prepared in the areas of applying math and science concepts to the study of weather and climate, our current international leadership in weather and climate cannot be guaranteed. Therefore, the Oklahoma Mesonet staff has committed to spend a portion of their summer working with middle school students who have demonstrated a passion and aptitude for the study of Meteorology. This year marked the second year of the Oklahoma Mesonet Summer Weather Camp, and we hosted students from eight states. This emerging pipeline of weather passionate students will allow us to continue to have the necessary human resources to make significant strides in our understanding of the atmosphere around us. The existence of this pipeline of avid middle school meteorologists-to-be is great news for the internationally recognized higher education programs in our state, and great news for anyone planning on relying upon weather information for life and property saving decisions, both in Oklahoma and around the world. ■



June Ends On A Scorching Note

By Gary McManus, Associate State Climatologist

JUNE WRAP-UP

A blistering final week and a return to drought transformed June from a mildly hot month into a scorcher, rekindling memories of the brutal 2011 summer. Temperatures routinely reached triple-digits across Oklahoma during the month's final week. According to data from the Oklahoma Mesonet, the statewide average temperature finished at 79.2 degrees to rank as the 19th warmest June on record, 2.7 degrees above normal. Statewide average records date back to 1895. June's warmth follows a pattern that began over two years ago with 22 out of the last 27 months being warmer than normal. The January-June statewide average entered the record books at 60.1 degrees, 4.9 degrees above normal. That obliterates the previous record mark of 58.9 degrees from the same period in 2006 as the state continues on a possible path towards its warmest year on record. Oklahoma's warmest year on record came in 1954 with a statewide average of 62.8 degrees. The January-June statewide average that year was 57.4 degrees.

The highest temperature recorded during the month was 112 degrees at Buffalo and Freedom on the 26th and again at Buffalo on the 27th. High temperatures across parts of the state were in the 70s as late as June 21. The lowest temperature recorded during the month was 44 degrees at Oilton and Cookson on the first.

The month was also the 29th driest June on record with a statewide average precipitation total of 2.54 inches, nearly 2 inches below normal. A few localized areas received significant moisture during the first two weeks of the month before the state adopted the much more summer-like pattern. The Mesonet site at Skiatook led June's rain totals with 6.86 inches while the small town of Cloudy brought up the rear with 0.45 inches. The state saw significant drought relief from October 2011 through March of this year, but the rains have since dwindled. The southeast and east central sections of the state were below 50 percent of normal since April 1, a slowdown that encompassed the entirety of Oklahoma's primary rainy season. Statewide, the average total of 8.2 inches is 4.5 inches below normal, the 14th driest such period on record.

Fueled by oppressive heat, intense sunshine, dwindling soil moisture and the recent lack of rainfall, drought continued to develop rapidly across the state. Over 48 percent of the state is now considered to be in drought according to the latest U.S. Drought Monitor report. For the first time since November 15, 2011, the entire state is now considered at least "abnormally dry." That designation is a drought pre-cursor that identifies an area that is dry, but not yet in drought. The dryness that has continued to intensify across Oklahoma is hardly confined to our state, with 72 percent of the country now labeled in the abnormally dry category or worse. That is the largest such extent covering the United States since the Drought Monitor effort began in 1999. More than 51 percent of the country is considered to be in drought, the largest such extent since September 2003.

19th WARMEST

June since records began in 1895

79.2°F

average statewide temperature for June

112°F

highest temperature recorded during the month at Buffalo and Freedom

2.54" RAINFALL

average statewide precipitation for June

CALENDAR

JULY

- ▶ 8th-10th: OAEAA Conference, Bartlesville
- ▶ 9th: Precollegiate Program's Horizons Unlimited Camp, National Weather Center, Norman
- ▶ 25th: Planet Reeves Summer Camp
- ▶ 26th-28th: OK Cattlemen's Convention, Midwest City
- ▶ 30th-Aug 3: Precollegiate Programs' Mini College Camp

AUGUST

- ▶ 20th: OK-First Re-certification Course, Oklahoma Emergency Management Association Training Day, Norman
- ▶ 20th: OK-FIRE full-day workshop, OEMA Training Day, Norman. Register at: http://www.ok.gov/triton/modules/calendar/calendar.php?calendar_seq=5
- ▶ 21st-23rd: OK-First, OEMA Conference, Norman
- ▶ 27th-30th: OK-First Full Certification Course, Norman
- ▶ 31st: OK-FIRE full-day workshop, Norman

Thank you for 20 years of partnership!

- ▶ **Marena - OAES - Installed July 15, 1992**
- ▶ **Chickasha - OAES - Installed July 30, 1992**
- ▶ **Minco - Joe McComas - July 30, 1992**

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](#)

K-12 educational outreach

Contact: [Andrea Melvin](#)

OK-First public safety outreach

Contact: [James Hocker](#)

OK-FIRE fire decision support outreach

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

Not sure?

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

FORECAST FOR JULY

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

