The Florida Climate Center

2007 Annual Report

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About the Office

The Florida Climate Center is housed at the Center for Ocean-Atmospheric Prediction Studies (COAPS) in the Fuqua Research Complex at Innovation Park. Though physically located off-campus, COAPS and the Florida Climate Center are part of the Department of Meteorology at Florida State University. The Florida Climate Center is public service center sponsored by the Institute of Science and Public Affairs. The office space, facilities, and equipment are provided by COAPS, but the Climate Center receives ongoing state financial support that covers the salaries of 1.5 full-time employees. The Florida Climate Center full-time staff currently consists of David F. Zierden, current State Climatologist, Melissa Griffin, assistant state climatologist, and Marcus William. Joining the Climate Center in 2004 as a part-time researcher is Preston Leftwich, retired from the National Weather Service Central Region Headquarters. He now is a part-time research associate and teaches an introductory meteorology course to undergraduates in the main department on campus. Also contributing is Dr. Mort Winsberg, author of *Florida's Weather* and professor emeritus of geography at FSU. Of course, Dr. J. J. O'Brien, former State Climatologist and Professor Emeritus, remains involved and provides welcome leadership to the Florida Climate Center.

The Florida Climate is an American Association of State Climatologists (AASC) Recognized State Climate Office (ARSCO) and works in partnership with the National Climatic Data Center, Southeast Regional Climate Center, and National Weather Service to provide data and climate services to the citizens of the State of Florida. The State Climatologist Emeritus is a noted expert in ocean modeling, El Niño and climate variability, and he uses this office to conduct further research and to educate the citizens and institutions of the state in the new science of climate prediction. To this end, we perform research developing downscaled climate forecasts and products tailored to specific user groups.

Information Services

One of the primary missions of the office is to provide routine climate data and services. In addition to the inquiries that come straight to the office, they are also referred to us from NCDC, the regional climate centers, and the National Weather Service Forecast Offices. The Florida Climate Center receives dozens of phone calls, emails and faxes each day requesting everything from answers to simple climate and weather questions to detailed data requests.

A wealth of climate information is distributed through the climate center's website. Information on normals, detailed monthly and daily data sets, and links to other climate resources are all available free of charge through our website (www.coaps.fsu.edu/climate_center). Recently, we have added a detailed wind climatology for the first-order stations, complete with wind roses for each month of the year. These new products were developed as a result of frequent requests.

More specific data requests are filled by the staff, drawing from data sets located in house, at the regional climate centers, and at NCDC. The Florida Climate Center does charge a fee for our services, with set prices for various types of data or at a set hourly rate for more unique requests. Fees are commonly waived for requests by private citizens, students, and other research facilities. The Florida Climate Center has embraced the opportunity to provide services to the legal community. Common services include certifying data, rendering expert opinions, and giving expert testimony in depositions and the court of law.

Research

The Florida Climate Center is the leading authority on climate variability in Florida, particularly as related to ENSO. The climate Center is involved with the Southeast Climate Consortium, one of the Regional Integrated Science and Assessment (RISA) teams funded by NOAA's Office of Global Programs. Through this involvement, we conduct research into downscaled and localized climate forecasts and their application to the sectors of agriculture, forestry, and water resources. Recent expansion of the consortium now includes the State Climate Offices of Georgia and Alabama, as well as agriculturist, hydrologists, and social scientists from the University of Florida, University of Miami, University of Georgia, University of Alabama Huntsville, and Auburn University. The Southeast Climate Consortium now receives additional funding through USDA and USDA Risk Management Agency.

An example of the climate information products developed by Florida Climate Center is a method of forecasting wildfire threat based on the Keetch-Byram Drought Index (KBDI). The experimental forecast expresses wildfire threat in probabilistic terms and is used by the Florida Division of Forestry for planning management strategies and allocation of

resources. This year the wildfire threat forecast was expanded include the states of Georgia and Alabama. These results were presented at the National Seasonal Assessment Workshop, Eastern and Southern States in January of 2006. The KBDI forecast for the Southeast was included as guidance in the final report.

Communication and Outreach

The Florida Climate Center provides outreach and education is several different ways. One is through our website, where users can learn about the different aspects of Florida's climate through a variety of climate maps, data tables, raw data sets, and links to other resources. We have cooperated with Mort Winsberg in the second edition of his book entitled *Florida Weather,* the definitive reference for climate and weather issues in Florida. The State Climatologist and staff are also active with community service groups, routinely giving presentation on various climate topics to such groups such as the Rotary Club, Alumni Association, The North Florida Gulf Fishing Club, Lion's Club, etc. The State Climatologist will also brief state agencies such as the Agriculture Commissioner's office, Public Service Association, Public Health Center on current climate issues. The State Climatologist Emeritus serves on Florida Commission on Hurricane Loss Projection Methodology, which advises the insurance commissioner and industry on coping with the hurricane threat.

The Florida Climate Center has been involved in a major outreach and extension activity this past year through our partnership in the Southeast Climate Consortium. The Climate Center has been a key participant in the development of *AgClimate* (www.agclimate.org), a web-based decision support system facilitating the effective use of climate forecast information in agriculture and forestry in the Southeast U.S. *AgClimate* displays information on ENSO climate variability based on historical weather data from over 200 cooperative observer stations in the Southeast. In addition, *AgClimate* provides probabilistic information how climate variability effects yields of such crops as peanuts, tomatoes, and potatoes. *AgClimate* also provides background information on ENSO and climate as well as management options of crops and forests during the various ENSO phases.

A key to the effective use of the information in *AgClimate* is the proper education and outreach to the users. The agriculture extension services in Florida, Georgia, and Alabama is a key partner in this outreach. The Florida Climate Center has participated in many extension-sponsored workshops in recent months and will continue to provide training and to promote *AgClimate* in the coming year.

For those who live to fish -- or fish to live -- along the Southeastern coast from the Outer Banks of North Carolina to Alabama, climate scientists from Florida State University and the University of Georgia have recently unveiled a unique online source for all manner of regional data on weather and fishing conditions: COASTALCLIMATE.ORG. COASTALCLIMATE.ORG shares onshore climate data such as temperatures, rainfall and winds for each month and each phase of El Nino/La Nina, while offshore data

includes water and ocean bottom temperatures and buoy-generated wind readings. Anglers can access extensive data on the region's various fish types -- plus a handy tide generator for every harbor along the Southeast coast. Visitors to COASTALCLIMATE.ORG also will find detailed histories of hurricane tracks and occurrence statistics for each Southeastern state's coastline. Funded by the National Oceanic and Atmospheric Administration (NOAA), O'Brien co-led the Web site's yearlong development with UGA Assistant Professor David Stooksbury. COASTALCLIMATE.ORG is a key component of the Southeast Coastal Climatology Project, a multidisciplinary, multi-institutional team within the Southeast Climate Consortium that forms partnerships with user communities.

Finally, the State Climatologist and staff are always available to the media for facts and opinions on current climate issues. We have a working relationship with such newspapers as the *USA today, Tampa Tribune, St. Petersburg Times, Tallahassee Democrat, Gainesville Sun, News-Press, Florida Today* to name a few, and television outlets such as the *Florida News Channel.* The State Climatologist and staff comment on such issues as global climate change, drought, El Niño, hurricanes, and damaging freezes.

Changes this past year

Dr. James J. O'Brien, former Florida State Climatologist and founder and director of the Center for Ocean-Atmospheric Prediction Studies (COAPS) at Florida State University, retired at the end of 2006. Assuming the role of director of COAPS is Dr. Eric Chassignet. Dr. Chassignet's areas of interest are general oceanic circulation from the complementary perspectives of ocean modeling and ocean observations. Taking over the role of State Climatologist is David Zierden, the Assistant State Climatologist since 1999. Although retired, Dr. O'Brien remains highly involved in the climate research, services, and applications efforts performed at COAPS through our partnership in the Southeast Climate Consortium and activities of the state climate office. Dr. O'Brien continues an active presence in the climate services and applications community, including AASC.