

Service Climatologist/Drought Specialist Research Associate III

The Colorado Climate Center is seeking an outstanding individual to collect, analyze, investigate, interpret and enthusiastically communicate the complex and highly variable climate of Colorado – including the status, hazard and risks associated with drought and climate variability – to the people of Colorado and beyond.

Background:

The Colorado Climate Center was established by the state in 1974, through the Colorado State University Agricultural Experiment Station, to provide information and expertise on Colorado's complex climate. Through its threefold program of Climate Monitoring (data acquisition, analysis, and archiving), Climate Research and Climate Services, the Center is responding to many climate related questions and problems affecting the state today.

Duties/Responsibilities/Expectations:

The individual in this Service Climatologist/Drought Specialist position, in concert with other staff members of the Colorado Climate Center, will gather, compile and utilize climate data resources collected by the Colorado Climate Center (such as CoAgMet data) and other organizations to track and describe climate patterns, anomalies, variability and extremes – including floods, drought, snowstorms, heatwaves, etc. He/She also will help develop and track quantitative indicators of climate change, contribute to the weekly update process of the U.S. Drought Monitor, and explore new and better ways to communicate climate information to the public and must be proficient in handling and interpreting climate data. Specific duties are as follows:

- Develop and track indicators of climate change. Historic time series of key climatic elements will be routinely updated. In addition to traditional time series of precipitation, snowpack, streamflow and seasonal and annual temperatures, emphasis will be placed on developing integrative indicators that may more effectively identify and describe significant climate fluctuations and changes over time.
- Participate in and eventually lead weekly drought assessment process.
- As a part of the National Integrated Drought Information System (NIDIS), the Colorado Climate Center conducts thorough weekly collaborative drought monitoring focused on Colorado and the Upper Colorado River Basin. This involves weekly data analysis with special emphasize on precipitation, snowpack, streamflow and evaporation. This also requires communication and active coordination with other monitoring agencies and stakeholders from several states culminating in weekly recommendations to the U.S. Drought Monitor weekly author. Results are communicated via e-mail and webpages to hundreds of stakeholders. This is a team effort. The intent is the successful applicant for this position will, with sufficient experience, eventually lead this “drought early warning” activity.
- Develop and promote climate information products and services. The Colorado Climate Center receives base funding from the Colorado Agricultural Experiment Station and works closely with CSU research centers across the State. Climate data and information products and services are needed to provide decision support for Colorado agriculture. Working through the Agricultural Experiment Station, CSU Extension, and the Colorado Water Center we plan to poll the research and extension communities and our stakeholders to prioritize current climate information needs. Utilizing the Colorado Mesonet -- Colorado Agricultural Meteorological Network (CoAgMet) and other data sources, climate information will be developed, displayed and updated to help track soil conditions (moisture and temperature), crop development, yield potential as well as insect pest, weed, and disease development. Tools for long-term planning will be developed in concert with CSU research and Extension faculty and staff.
- Represent the Colorado Climate Center at meetings and in workgroups. Because climate is a key variable affecting many activities, the Colorado Climate Center has frequent opportunities to share climate information and expertise in various formal and informal settings. Some examples of meetings this position will likely participate in and/or support include: the Water Availability Task Force, Colorado Flood Task Force, Colorado extreme precipitation study, Colorado Water Congress, river basin water forums, agricultural and commodities meetings, National Integrated Drought Information

System meetings, American Association of State Climatologists, and other activities as time, interest and resources allow.

- Research and reporting. The Colorado Climate Center participates in applied climate research. This requires occasional active participation in research including helping propose and conduct specific research activities, managing contracts and grants, writing reports, and participating in preparing manuscripts for peer-reviewed publications.
- Collaboration, service and outreach. The Climate of Colorado is an essential natural resource influencing our society, our economy and our environment. This position will have many opportunities to share information and expertise about this climate resource including collaboration with other researchers and outreach to media educators and others. Fort Collins is the home of the US Dept. of Interior North Central Climate Science Center and the USDA Northern Plains Climate Hub. Nearby, the NOAA supported “Western Water Assessment” is in Boulder. We will collaborate as opportunities arise with these programs. Answering questions and providing climate-based advice to businesses, educators, agencies, policy makers and the public will become a regular part of the job.

An important part of this job is carefully tracking weather conditions on a weekly, monthly, annual and as-needed basis to identify, quantify and describe climatic patterns, anomalies, variability and extreme events. Data from primary sources such as the National Weather Service, USDA Natural Resources Conservation Service and US Geological Survey may serve as the backbone for long-term monitoring. But other local, state and federal datasets may also be utilized. Existing integration and analyses products and software may be used, but customized solutions may be needed. Climate monitoring products will be uploaded to the Colorado Climate Center website and will be used in presentations, publications, social media communication and in answering specific user requests. Precipitation, snowfall, and temperature will be the primary elements monitored, but all other climate elements such as humidity, soil temperatures, soil moisture, evaporation, wind, clouds and solar energy may be investigated. Creative new ways to display and communicate climate information will be pursued. Connecting climate anomalies and extremes with environmental and societal impact will be encouraged.

The individual in this position must be a competent and motivated communicator, utilizing writing, speaking, social media, and other forms of communication, as he/she will have frequent opportunities to share climate information and expertise with a wide range of audiences from scientists, academics and students to agribusiness leaders and other business practitioners, resource managers, public officials, policy makers, media and the general public. The individual in this position also must have a keen appreciation for the complexities and costly impacts of drought and the challenges of maintaining healthy ecosystems, sustainable agriculture, healthy small communities and large cities in our semiarid and drought-prone region of the country. Additionally, he/she must be an eager learner, good listener and have a strong spirit of collaboration, working with others to share information, expertise and available resources to help answer questions, solve problems and overcome challenges.

Required Qualifications:

- M.S. Atmospheric Science/Climatology/Water Resources/Civil Engineering/Agricultural Meteorology or related degree (or degree work completed and degree pending). If degree is not in atmospheric science, applicant must have a strong understanding and aptitude for the essential atmospheric processes including forcings for atmospheric motions, radiation and energy balance, water balance, cloud physics, mountain meteorology, tropical meteorology and must have the willingness and prerequisites to take additional courses to achieve competency.
- Minimum of 3 years of experience working with weather, climate and/or water resources data including point data and gridded products – ideally from Colorado or other mountain environments.
- Experience and proven success working with, for, or in association with one or more of the following organizations (or equivalent): Regional Climate Centers, NOAA National Center for Environmental Information, State Climate Offices, Western Water Assessment, US Dept. of Interior Climate Science Centers, Colorado Water Conservation Board, the Colorado Water Institute, USGS Water Science Centers, USDA Climate Hubs, National Integrated Drought Information System,

- Excellent communications talent and ability to communicate challenging technical content in understandable ways to diverse audiences.

Preferred Qualifications:

Skills, knowledge and experience in the following areas:

- Climate applications in agriculture and natural resources
- Previous track record publishing in peer reviewed scientific journals (ideally lead author in one or more papers)
- Knowledge in climate trends and variability in the Rocky Mountain / Great Plains regions
- Statistical including non-parametric methods, time series analysis, geospatial analysis methods.
- Scientific computer programming
- Data management and use of database software
- Familiarity with and ability to process output from Global Climate Models
- Fundamentals of web design and web-based communication
- Water resources and hydrology
- Remote sensing science and applications
- Air quality
- Paleoclimate
- Applied climatology and climate services
- Climate and public policy
- Colorado Water Law

Background Check:

Colorado State University is committed to providing a safe and productive learning and living community. To achieve that goal, we conduct background investigations for all final candidates being considered for employment. Background checks may include, but are not limited to, criminal history, national sex offender search, and motor vehicle history. In addition, the final candidate will be required to pass a federal Security Assurance Check because the job is in a federally occupied building.

Commitment to Diversity and Inclusion:

Reflecting departmental and institutional values, candidates are expected to have the ability to advance the Department's commitment to diversity and inclusion.

Application Deadline: Applications will be accepted until all positions are filled; however, to ensure full consideration applications should be submitted by 11:59 PM on **February 21st, 2016**. Apply electronically by clicking "Apply to this Job" at the following website: <http://jobs.colostate.edu/postings/30375>

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