Overview
The Cooperative Institute for Research in the Atmosphere (CIRA) at Colorado State University seeks to fill a social science research and evaluation position with the National Oceanic and Atmospheric Administration (NOAA) located at the David Skaggs Research Center (DSRC), Global Systems Laboratory (GSL) in Boulder, CO.

The position will be for a social science researcher with a background in qualitative and quantitative social science research and evaluation methods to serve as the Evaluation Researcher for the Fire Weather Testbed (FWT) within GSL. The Evaluation Researcher will design and implement experiments and evaluations in the FWT of new and emerging fire weather products, information, services, technologies, and communication techniques. This will include evaluating how, if at all, weather forecasters use new and existing fire weather and smoke products, how these products support current and future decision-making paradigms, and how these new products and services support risk communication to end-users.

This position sits within the Weather Informatics and Decision Support (WIDS) Division as part of the interdisciplinary FWT team. The incumbent’s office will be in Boulder, CO at a Federal building and requires the ability to pass a National Agency Check with Inquiries (NACI, Tier 1 federal background check). An onsite presence at the GSL in Boulder, CO, with an option for part-time telework, is required for this position.

Background
The Cooperative Institute for Research in the Atmosphere (CIRA) at Colorado State University (CSU) is a multi-million dollar research organization located on CSU's Foothills Campus in Fort Collins, Colorado. CIRA is a cooperative institute that is also a research department within CSU's College of Engineering, in partnership with the Department of Atmospheric Science. Its vision is to conduct interdisciplinary research in the atmospheric sciences by entraining skills beyond the meteorological disciplines, exploiting advances in engineering and computer science, facilitating transitional activity between pure and applied research, leveraging both national and international resources and partnerships, and assisting NOAA, Colorado State University, the State of Colorado, and the Nation through the application of our research to areas of societal benefit.

NOAA's Global Systems Laboratory (GSL) is a federal science and research laboratory under NOAA’s Office of Oceanic and Atmospheric Research. GSL provides the National Weather Service (NWS) and the nation with environmental observing, prediction, computer, visualization, and information systems. These systems deliver data, forecasts, and predictions of weather,
including severe weather events, within the next few minutes to weeks away. GSL is a leader in
the applied research, directed development, and technology transfer of environmental data,
models, products, and services that enhance environmental understanding with the outcome of
supporting commerce, protecting life and property, and promoting a scientifically literate public.

The FWT is a new NOAA testbed dedicated to serving the wildfire communities through
pursuing improvements to fire weather forecasting and decision support services. These
improvements will be achieved by connecting stakeholders and their information needs to the
scientific research and development communities. The FWT is a physical and virtual
environment designed to bring the wildfire community together, with an end goal of a safer
society and healthier environment achieved through scientific and technological advances.
Numerous experiments will be conducted in the FWT and will include a broad spectrum of
science fields including atmospheric, geophysical, hydrologic, and environmental sciences as
well as social and behavioral sciences. The Evaluation Researcher will be expected to design and
implement a wide variety of evaluations from surveys, focus groups, and virtual evaluations to
week-long in-person evaluations and field experiments.

**Position Overview**
The WIDS Division of GSL is seeking a social science researcher with a background in
qualitative and quantitative social science research and evaluation methods. The successful
candidate will design and implement evaluations in the FWT from a human-centric and usability
perspective. This will include evaluating how weather forecasters (NWS Forecasters, Incident
Meteorologists and other forecasters) use new and/or existing information, tools, and products,
and how that information is communicated to and used by (but not limited to) emergency
managers, fire managers and practitioners, incident commanders, government safety officials,
and other users.

The Evaluation Researcher is expected to design, implement, and report on up to a dozen or
more wide-ranging evaluations in the FWT each year. The Evaluation Researcher will work with
Principal Investigators, product developers, and the FWT team to identify questions pertaining to
usability and user-needs to ensure that evaluations are designed to effectively answer those
questions. The researcher will also collaborate closely with the User Needs Assessment Team of
the FWT and GSL’s Social and Behavioral Sciences (SBS) Branch about ongoing fire weather-
specific social science research.

The Evaluation Researcher will provide subject-matter expertise in the areas of mixed-method,
qualitative and quantitative social science. This includes, but is not limited to, evaluation
research, workflow and/or task load analysis, and/or decision analysis. The Evaluation
Researcher will be responsible for working closely with the other members of the WIDS SBS
Branch, as well as meteorologists and developers. Evaluation topics will be driven by our key
partners through the FWT user-needs assessment, ranging from process evaluations of new fire
weather applications, product development and refinement, and usability assessments of various
fire weather products and services.

The Evaluation Researcher will be expected to lead the development of evaluation reports
following each evaluation, as well as scientific publications and presentation of findings at
scientific meetings and conferences. This position works very closely with the Federal FWT
Manager/Lead Scientist and the SBS Branch Chief, and formally reports to the CIRA Social and
Behavioral Scientist. This position will be assigned a classification of Research Associate III or
IV based on education and experience as listed in the required qualifications.

Decision Making Statement
RA III

Decision making depends on the analysis of the project requirements, evaluation constraints, or
technical issues involved with each evaluation activity; the chosen implementation approach may
need to be selected from many alternatives. This position normally receives little instruction in
day-to-day work and receives general guidance on the overall research conducted. The individual
will set priorities that accurately reflect the relative importance of the specific evaluation and
other work activities.

RA IV

Decision making depends on the scale of each assignment and issues involved; the chosen course
of action may need to be selected from many solutions, dependent upon the end user and
technological requirements, and may require coordination with other members of the project
team to reach a final decision. Decisions include the assessment of unusual circumstances,
varyations in approach, and handling of incomplete or conflicting data. This position requires
making many decisions concerning things such as interpreting a considerable amount of data,
planning the work, or refining methods and techniques. This independent position involves
working in coordination with the GSL FWT staff and SBS Branch staff to go over progress,
outcomes, and next steps for each evaluation. The individual will set priorities that correspond to
importance and/or urgency of particular upgrades and other work activities.

Position Responsibilities:

Preparation and Design of Evaluations, 55%

- Develop measurable evaluation questions specific to each evaluation in collaboration
  with product developers and the FWT team. Design evaluations of new fire weather-
related tools, technologies, products, services and end-user risk communication from the
  forecaster to the end-user.
• Conduct relevant literature reviews to ensure evaluation designs, tools and approaches are aligned with best practice in the field.

• Lead and collaborate on developing qualitative (e.g., interview protocols) and quantitative (e.g., surveys) data collection instruments (and associated data management and archival plans) to evaluate how the real-time use of new weather-related forecast technologies, information, products and services are integrated by operational weather forecasters who provide fire weather forecasts and decision support services.

• Lead and collaborate on developing human-centric research approaches for assessing how new fire weather products, information, and services are communicated to different stakeholder groups (e.g., emergency managers, fire managers, incident commanders, government safety officials) and how that information helps them perform their job duties (e.g., observing emergency managers’ evacuation decisions).

Conducting and Analyzing Evaluations, 20%

• Co-lead, or assist in the leading of FWT evaluations using qualitative and quantitative evaluation techniques as referenced above (virtual and/or in-person), analyzing collected data, synthesizing findings, codebook development, and communicating findings (to include scientific publications) to diverse audiences (e.g., Lab Leadership, OAR Leadership, scientific presentations, written reports, etc.).

• Conduct human-computer interaction usability evaluations of users interacting with products, services, systems, or other information and collect behavioral data using techniques and methods common to academic and industry, including but not limited to: one-on-one and focus group interviews, experimental survey design, cognitive workload analysis, eye tracking, mental modeling, and cognitive task analysis.

• Collaborate with the SBS Branch and FWT User Needs Team to identify themes and areas for research exploration as a result of evaluation efforts, as well as areas for improvement in the development of FWT experiments and evaluations.

• Work alongside SBS researchers, FWT User Needs Team, and developers to co-interpret and share evaluation results, implications, and next steps for additional research and future FWT activities.

Documentation and Reporting, 25%

• Document findings and recommendations from each evaluation and co-write evaluation reports with the FWT Team.

• Present results and findings to internal audiences (e.g., coworkers, Leadership, etc.) and/or external audiences at workshops and professional meetings and conferences (e.g., the American Meteorological Society, American Evaluation Association, and local, regional, or national fire weather-related conferences).
Required Qualifications

In your cover letter, please specifically address EACH requirement as relates to your experience. A cover letter that fails to address the required qualifications for this position may not be considered further after review by the search committee.

RA III Requirements

- M.S. in a relevant field* described below plus
  - Two (2) years of related professional experience.

  -OR--

- Ph.D. in a relevant field* described below.

  *Formal education required in a relevant social or behavioral science or interdisciplinary field such as, but not limited to: evaluation, risk communication, decision science, psychology, sociology, or related field.

RA IV Requirements

- M.S. in a relevant field* described below plus
  - five (5) years relevant work experience.

  -OR--

- Ph.D. in a relevant field* described below plus
  - two (2) years relevant work experience.

  *Formal education required in a relevant social or behavioral science or interdisciplinary field such as, but not limited to: evaluation, risk communication, decision science, psychology, sociology, or related field.

Required qualifications for both classifications

- Ability to pass a National Agency Check with Inquiries (NACI, Tier 1 federal background check), due to the position being located inside a Federal facility;
- Must be legally authorized to work in the United States by the start date. CIRA will not sponsor a visa for this position now nor at any point in the future.
- Well-developed knowledge of and experience employing qualitative and/or quantitative social science and evaluation research methods, including evaluation design, evaluation implementation, collection and monitoring of data, analysis of data, and evaluation reporting. This includes (but is not limited to): at least two (2) years experience
conducting qualitative and/or quantitative human subjects social science and evaluation data collection and analysis, including but not limited to, focus groups, workshops, and other methods for gathering participant feedback.

- Leadership and/or project management experience with research and evaluation projects.

**Desired Qualifications**

**In your cover letter, please specifically address the applicable preferred qualifications for this position. A cover letter that fails to address the preferred qualifications for this position may not be considered further after review by the search committee.**

- Familiarity with Institutional Review Board training and regulations (including CITI certification/training).
- General understanding of hazardous weather phenomena.
- General familiarity with the types of end-users of fire weather information (e.g., Firefighters, Incident Management Teams, Emergency Managers, etc.)
- Experience building and fostering relationships with end-users.
- Demonstrated ability to work independently and as part of an interdisciplinary research team.
- Interest in the interactions between weather information and weather-related decision making in the context of public safety and wildfires.
- Effective written and oral communication skills, both within field of expertise and across disciplinary boundaries, evidenced by cover letter and publishing record.

**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 National Agency Check with Inquiries (NACI, Tier 1 federal background 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 and Details
Applications will be accepted until all positions are filled; however, to ensure full consideration applications should be submitted by midnight Monday, April 29.

Apply electronically by clicking “Apply to this Job” at the following website: [https://jobs.colostate.edu/postings/142793](https://jobs.colostate.edu/postings/142793).

Applications must be submitted via online portal. We will not accept materials sent via email or other mode. NOTE: In your cover letter, please specifically address the required and preferred qualifications of this position. A cover letter that fails to address the qualifications of this position may not be further considered after review by the search committee. Likewise, an online application with a generic cover letter or missing a cover letter, and/or an application that does not include current/correct reference contact information may not be further considered after review by the search committee. Applications will be accepted until the position is filled; however, to ensure full consideration applications should be submitted by 11:59 PM MT on Monday April 29, 2024.

CSU is committed to full inclusion of qualified individuals. If you need assistance or accommodations with the search process, please reach out to the listed search contact.

To apply, please upload a cover letter that addresses the required and preferred job qualifications, a resume, and the contact information for three professional references. References will not be contacted without prior notification to candidates.