

Richard Clark, Ph.D.

President-Elect, American Meteorological Society and Chair, Department of Earth Sciences and Professor of Meteorology, Millersville University

Speaker Bio:

Richard D. Clark is the Chair of the Department of Earth Sciences and Professor of Meteorology at Millersville University. Rich is 2021 AMS President-Elect and Fellow and served as a member of AMS Council (2008-11) and currently serves on several AMS Committees. He served two terms as an at-large member of the UCAR Board of Trustees (2009-2015) and served on UCAR governance committees. His research interests span boundary layers and turbulence and air chemistry with a special emphasis on field observations and instrumentation using airborne and balloon-borne platforms. He recently completed a collaborative effort with NCAR and COMET to produce a 10-lesson interactive online course on atmospheric instrumentation and measurement. Rich is the program coordinator of two graduate programs: the M.S. in Integrated Scientific Applications, which is focused on creating business-ready scientists, and a Graduate Certificate Program in Space Weather and Environment: Science, Policy, and Communication. He is the recipient of the 2006 Unidata DeSouza Award and the 2008 AMS Teaching Excellence Award. Rich has a Ph.D. in atmospheric science from the University of Wyoming ('87).

Presentation:

The Nexus of Meteorology and Emergency Management

Since NOAA started keeping records in 1980, there have been 285 billion-dollar disasters in the U.S. with losses of \$1.875 trillion. Globally, climate change and increasingly extreme weather events, have caused a surge in natural disasters over the past 50 years disproportionately impacting poorer countries. The U.S. saw a historical 22 weather-related disasters in 2020, including the most named Atlantic storms, wildfires burning millions of acres, rain and flooding leading to the

evacuation of tens of thousands, and over 1000 tornadoes. While the economic losses continue to increase, the number of deaths and injuries due to weather-related disasters has been declining for decades. It is difficult to quantify the reason for this decrease, but it is likely that it is attributable to the common purpose of two principal agencies, the National Weather Service (NWS) and the Federal Emergency Management Agency (FEMA). Weather prediction and the communication of weather advisories are complemented by a risk-based emergency management program of planning, preparedness, response, and recovery. This nexus of meteorology and emergency management is an imperative if we are to mitigate the human toll even as weather disasters increase in response to climate change. There is a need for a workforce that can bring together the scientific, technical, operational, practical, social, communication, and leadership skills, typically not found in a single individual, but in a collaborative arena whose purpose is to enable a unified response for the protection of life and property. This translates to the need for educational programs that braid traditional fields of meteorology/atmospheric science or emergency management with other disciplines that will give the necessary breadth, so that the effectiveness of this collaboration is not stymied by communication barriers. This presentation will discuss approaches to creating a responsive workforce whose acumen is as deep as it is broad.