IAEM PLUGGED IN
Virtual Conference
May 9, 2025

Presentation Title: Upper Atmospherics and Amplified Climate Hazards Impacts to Emergency Management

Chief Meteorologist Sunny Wescott specializes in extreme weather events impacting emergency response, supply chain, and critical infrastructure. During her time in the US Air Force as a Lead Meteorologist, Ms. Wescott trained on continental and oceanic weather as the Top Forecaster for her support region and is considered a subject matter expert for multiple climatological events such as drought, subsidence, wildfires, tropical cyclones, and winter storms. Ms. Wescott also graduated top of her class for her degrees in Homeland Security Management, Public Safety Administration, and Atmospheric Sciences. Ms. Wescott focuses on operational forecasting by providing focused impact reports for regions, sites, security, and key interdependencies such as energy and telecommunications before, during, and after disasters.

About the Presentation

Recent changes in extreme weather fueled by climate change have increased the frequency of emergency response needs, the intensity of the response level, and the recovery time required by both the community and the responder themselves. Recent studies have showcased the impacts of these events on mental health across the industry of emergency response but have often overlooked the contributing atmospheric impacts to the physical health of the human body and the wildlife around us. Changes in atmospheric stability can result in increased pressure to joints, the sinus cavity, blood pressure, lactic acid buildup, and nervous systems which, coupled with heightened emotions due to being overworked and over stressed from the weather hazards and emergency response can result in increased swings of aggression or violence and depression or suicidal ideation. This presentation can provide a quick and easy understanding of upper atmospherics and how they play into surface weather, understanding that threat better, and the cascading impacts to sites, society, and security as well as the strain on resources. Having a better understanding of the physics at play can help responders to adjust accordingly ahead of weather events and major atmospheric changes.