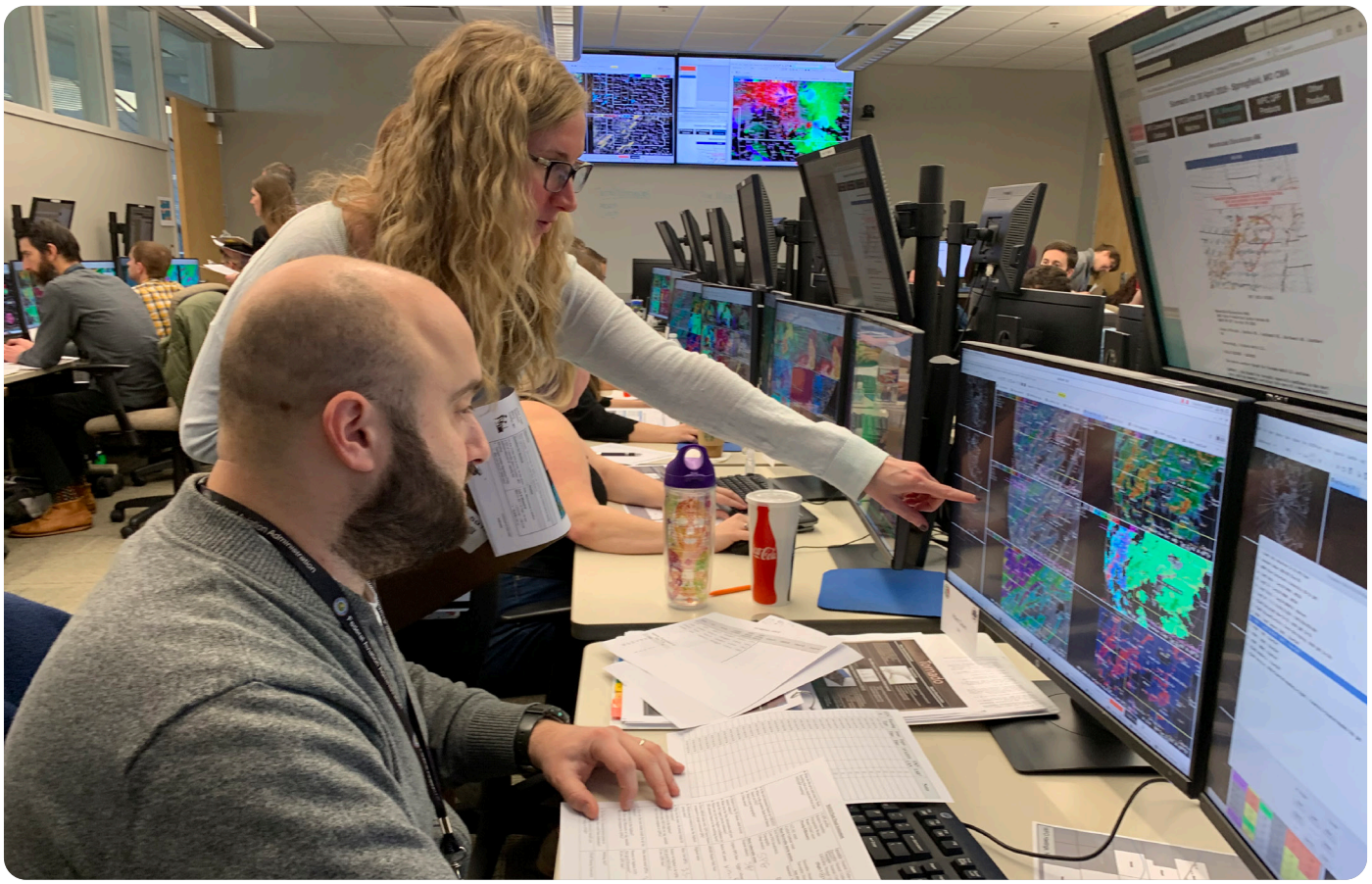
OTU

OPERATIONS TRAINING UNIT

National Weather Center
University of Oklahoma



For decades, the training team at the University of Oklahoma's Cooperative Institute has trained forecasters for the National Weather Service (NWS). The NWS historically staffs approximately 2,000 operational meteorologists, who require highly specialized training in science, technology, and human factors. CIWRO employees, together with federal instructor counterparts, provide initial training for new meteorologists and refresher courses for experienced forecasters.

Every new NWS forecaster travels to the OTU lab for intensive simulation-based workshops after completing 60 hours of online OTU training in their home states. Refreshers consist of online lessons, job aids, simulations, consultations, and webinars.

Science topics relate to severe storms, winter storms, and flash flooding. Human factor courses build teamwork and communications skills. Technology training covers state-of-the-art tools forecasters use to analyze weather data and issue severe weather warnings when flash flooding, destructive thunderstorms, or tornadoes are imminent. The NWS formed OTU in 2026, within its new Human Capital Management Division by combining divisions within its former Office of the Chief Learning Officer.

CIWRO produces training for all 122 NWS weather forecast offices. The training provides baseline knowledge on the latest research, awareness on NWS operational considerations, and workflows designed for the pace of real-time data analysis -- all topics not normally covered in college.

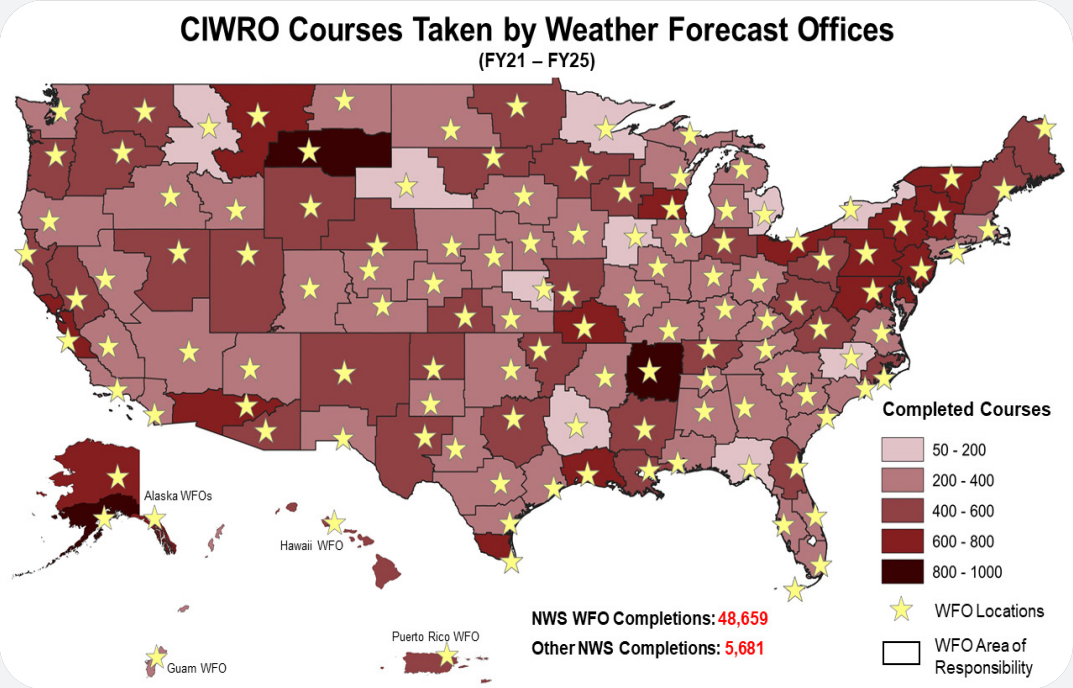
100%
of NWS forecast offices receive CIWRO training

455
newly hired NWS forecasters trained on warning operations since 2021

>95%
NWS forecasters trained in last 25 years

121,354
training hours of CIWRO-produced content completed by NWS personnel since 2021

2,221
forecasters trained using experiential learning since 2021



ROBUST REAL-LIFE TRAINING

CIWRO provides the NWS with the world's only "flight simulator" for meteorologists. The simulator replays real weather events that unfold exactly like they did in real time with the same software forecasters use for actual events. CIWRO is curating a vast library of case studies so forecasters can practice a variety of scenarios. The simulator powers the lab facility for in-person workshops, while a new Cloud version lets forecasters practice anywhere. OTU offers additional forecast exercises for both severe storms and winter weather where forecasters are scored and debriefed, receiving instant expert feedback.

The UNIVERSITY of OKLAHOMA