Technical Attachment

New Severe Convection Professional Development Series

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Working with experts in the field of severe weather, the Warning Decision Training Branch has streamlined the Professional Development Series (PDS) dealing with severe convection. The new PDS consolidates and replaces two previous PDSs on forecasting severe weather and the convective warning process. The NWS Training Portal is being updated to reflect the new PDS, but in the meantime the new severe convection PDS can be accessed at:

http://www.wdtb.noaa.gov/resources/PDS/newconvectpds.htm

The goals of the new PDS are two-fold: First, it will serve as an integrated framework that defines the knowledge, skills and abilities associated with the convective forecasting and warning process. Second, the PDS provides a guide to related training that addresses the collective skills, knowledge and abilities required to perform the job tasks of an WS warning forecaster - including the warning decision process.

Nine Professional Competency Units (PCUs) are identified in the PDS. The PCUs are grouped into the following categories based on associated specific job tasks in an effective forecasting and warning methodology. They are:

1. Optimizing office strategies
2. Assessing climatology
3. Assessing the synoptic scale environment
4. Assessing the mesoscale environment
5. Analyzing the structure of convective storms
6. The warning decision
7. Composing and disseminating the warning product
8. Monitoring the convective event
9. Post event assessment

Each PCU contains available (and still to be developed) training materials or opportunities which are termed Instructional Components (ICs), and which may take a variety of forms depending on the scope and objective. For example, if a forecaster requires training related to analyzing and assessing the mesoscale environment, they would find a list of available training resources under PCU 4. Some ICs under that and other PCUs may be readily available as Web-based training materials, others are available on CD-ROM, some are offered as instructor-led teletraining, some are designed as a simulation "case" for use on the Weather Event Simulator (WES), and still others may take the form of in-residence training such as the WDTB Severe Weather Warning Decision Making Workshop (see IC 6.1).

In addition to the ICs, each PCU contains a list of recommended readings which are intended to provide references to some of the more important recent findings in the three areas of science, technology and human factors in the convective warning and forecasting process. Some of the readings provide results of leading-edge research in tornado forecasting, for example, and have not yet been directly incorporated into training material.

The Severe Convection Professional Development Series should help all NWS forecasters, and especially SOOs, DOHs and others who may serve as training leaders, to assess individual training needs in the subject area, and locate available training materials to address the needs. It should also serve as a good tool for implementing individual professional development plans. For more information on this PDS, contact Ed Mahoney or Brad Grant at the WDTB.