


October 1, 2010

MEMORANDUM FOR: NWS Regional Training Managers
FROM: LeRoy Spayd 
Chief, Training Division/OCWWS
SUBJECT: FY 2011 Training Guidance Memorandum

The Office of Climate, Water, and Weather Services (OCWWS) Training Division is providing this training guidance memorandum to assist all Regional Training Managers in developing Regional training plans. Local Office training plans are required per National Weather Service (NWS) Directive 20-106: Office Training Plans Directive. This memorandum includes mandated training items that must be completed by the indicated date by the target audience of the training. This memorandum will be reviewed and updated as needed to reflect unanticipated new requirements or unexpected training delivery delays. All NWS staff are encouraged to utilize the available courses (Cooperative Program for Operational Meteorology, Education and Training (COMET), NWS, SkillSoft) on the NWS Learn Center.

Training priorities for NWS overall include the following:

- Severe Convective Weather – Improving/sustaining warning services; Improving polygon placement for optimum warnings; Warning decision making for optimum warnings; Warning decision making for threats associated with severe weather (hail, high winds, tornadoes, flash flooding).
- Leadership – Improving interpersonal and team building skills
- Decision Support Services – Working with our partners and customers in interpreting weather impacts
- Climate – Understanding and communicating basic understanding of climate variability and climate change as promoted by NOAA climate scientists; New Advanced Climate Variability and Change residence class at COMET for climate focal points
- Aviation Weather – Improving aviation weather services and Center Weather Service Unit (CWSU) support; Distance Learning Aviation Courses (DLAC); New volcanic ash modules to be released by COMET
- Hydrology – Improving/sustaining forecast and warning services
- Forecast Services – Improving/sustaining forecast accuracy and consistency
- Technology – Maintaining proficiency with advances in Advanced Weather Interactive Processing System (AWIPS), Weather Surveillance Radar 88 Doppler (WSR-88D) and office Information Technology (IT) tools and interfaces, including new Dual-Polarization (Dual-Pol) technology

- Tsunami - New modules will be released by COMET for coastal offices with tsunami responsibilities
- Dispersion - New modules will be released by COMET to support NWS Instruction 10-518: [Non-Weather Related Emergency Products Specification](#)
- Incident Meteorologists (IMETs) - (per Directive 10-405: [Fire Weather Services Training and Professional Development](#))
- Marine Training (per Directive 10-340: [Marine Forecaster Training](#))
- New Numerical Weather Prediction (NWP) Series releases

Nationally Mandated Training

1. **Four Weather Event Simulator (WES) Cases** -All Weather Forecast Office (WFO) staff with forecast and warning responsibility are mandated to complete at least four WES simulations per year. CWSU forecasters are encouraged, but not required, to use WES simulations. As part of the four, one appropriate WES simulation must be completed prior to the start of each significant weather season, as defined by the Meteorologist-in-Charge (MIC). WES cases can be administered individually or within a group setting with oversight by the Science and Operations Officer (SOO) / Development and Operations Hydrologist (DOH) or other delegated training officer. See NWS Directive 20-101: [Use of Weather Event Simulator](#).
2. **Tornado Warning/Severe Thunderstorm Warning Best Practices Modules** - All WFO forecasters with warning responsibility will complete these modules (if they did not complete them in FY 2010), which can be found on the NWS Learn Center, before **April 1, 2011**. (Requirement: Corporate-Board-Approved Polygon Action Team, March 2010):
 - Rationale for Warning Best Practices
 - Non-Linear Motion
 - Limiting the Number of Counties in Warnings
 - Minimizing Unnecessary Overlap between Warning Polygons
3. **Safety Training** - Annual safety training released by NOAA must be completed by all employees by the date specified. E-mails are sent to employees with details and instructions for completing the course. Estimated completion time is approximately one hour.
4. **IT Security** - Annual IT security training released by NOAA must be completed by all employees by date specified. E-mails are sent to employees with details and instructions for completing the course. Estimated completion time is approximately one hour.
5. **Management** - All new supervisors must attend 80 hours of training to include the National Weather Service Training Center (NWSTC) [Management and Supervision course](#) or appropriate Office of Personnel Management (OPM)

courses within the first year of their new position ([See Regulation](#)). Warning Coordination Meteorologists (WCMs), SOOs, DOHs, and Service Coordination Hydrologists (SCHs) are eligible for Management and Supervision, as space is available. Lead forecasters are eligible to attend the [Field Operations Management Course](#).

6. **No Fear Act** – Mandatory completion on a biennial basis is required for all employees. Module will be released by the Department of Commerce and completion date for FY11 is unknown. Estimated completion time is approximately one hour.
7. **Uniformed Services Employment and Reemployment Rights Act (USERRA)**- USERRA training is a mandatory training that must be completed by any NWS Supervisor or Hiring Official that has the ability to select candidates, review cert lists, interview applicants, or recruit for vacancies, etc. If the NWS supervisor or any other NWS HR Specialist has anything to do with staffing, they are required to take this course. This is a mandatory training required by OPM at least once every fiscal year as a part of the Veterans' Benefits Improvement Act of 2008, Public Law (P.L.) 110-389. In FY11, this training must be complete by or before October 25, 2010. It can be accessed on the NWS Learn Center and estimated completion time is one hour.

Mandated Proficiency Training

1. **Property Custodian Training** – Annual refresher training is mandated for property custodians. Visit [Logistics Operations Division](#) for more information.
2. **Government Ethics training** - Refresher training is mandated once every three years for all employees (GS-11 or above) and those who are required to file financial disclosure reports. Annual refresher training is mandated for Property Custodians. Visit <http://www.ogc.doc.gov/ethics.html> for more information. Estimated completion time is approximately one hour.
3. **Purchase Card Training** - Refresher training required annually. Purchase Card/General Services Administration (GSA) SmartPay Training for cardholders and approving officials. Visit [Purchase Card Training](#) for more information.
4. **Travel Card Training** - Refresher training is required once every 3 years. Travel Card/GSA SmartPay Travel Card Training for cardholders and approving officials. Visit [Travel Card Training](#) for more information. Estimated completion time is approximately one hour.
5. **Tower Safety Training** - Mandated training for those involved with climbing towers.

- 6. Contracting Officer Technical Representative (COTR) Refresher Course(s) -**
The purpose of this training is to provide an update of the recent changes that affect COTR responsibilities. This course offers practical guidance on how to implement these changes to meet program needs within an evolving acquisition environment. This course is intended for current and potential COTRs seeking 8 hours of COTR refresher or advanced-level training for purposes of COTR re-certification. Visit the [COTR Training link](#) for more information.
- 7. Mandated Fire Weather Training -** per Directive 10-405: [Fire Weather Services Training and Professional Development](#). Please view link for details.
- 8. Marine –** All NWS Marine Forecasters are required to take marine training modules as specified in Directive 10-340: [Marine Forecaster Training](#). Please view link for details. Five modules take 6-9 hours to complete.

Recommended Training (Priority determined by Regions)

1. Climate Services

All employees of NOAA and the NWS represent the agency to meet mission related activities and interact with the public. Since climate change is regularly in the news, employees are often asked about this. Since most staff are not climate scientists, it is important that all staff understand the science background provided by NOAA scientists concerning the topic.

- a. COMET Meteorology, Education and Training (MetEd) Courses:
http://www.meted.ucar.edu/topics_climate.php.

2. All Warning-Related Delta Training modules (any changes in or about the Warning Program) as available. All WFO forecasters with warning responsibilities should take these courses. These modules, which can be accessed on the NWS Learn Center, include:

- AWIPS I Warning-Related Delta Training
- Updated modules for Advanced Warning Operations Course (AWOC) (Winter, Severe, and Core) to include:
 - a. AWIPS OB9.2 Radar Color Tables (20 minutes, AWIPS OB9.2)
 - b. AWOC Core Instructional Component (IC) 2: Lesson 5 - Maintaining Situational Awareness by Managing the Unexpected (25 minutes, Core IC2)
 - c. AWOC Core IC3: Lesson 4 - Incident Decision and Support (15 minutes, Core IC3)
 - d. AWOC Severe IC2: Lesson 3 - Threat Assessment of Quasi-Linear Convective Systems (QLCS) (30 minutes, Severe IC2)
 - e. AWOC Severe IC3: Section 3 - Supercell Collapse Phase (20 minutes, Severe IC3)
 - f. AWOC Severe IC3: Section 5 - Storm Interrogation Strategies of QLCS Mesovortices (50 minutes, Severe IC3)

g. AWOC Winter IC3: User Needs to Mitigate Societal Impacts: Road Weather (3.5 hours, Winter IC3)

3. Severe Weather

To provide the best warning service, forecasters need to maintain their proficiency. This requires scenario practice (see WES Scenario requirements) and staying up to date with changes to NWS policy, changes to technology (AWIPS) and updated science and conceptual models.

- a. Dual-Pol Operations Course: (Not available yet! Complete prior to implementation at your office). [Dual-Pol Training Pages](#).
- b. Communicating High-Impact Events (Recommendation: Mother's Day Service Assessment).
- c. Decision Support Services 101: The Integrated Warning Team.

4. Hydrology

The following modules, which are located on the NWS Learn Center, are recommended by the OCWWS Hydrologic Services Division. The target audience includes WFO forecasters, WFO Hydrologic Program Managers (HPM), and RFC forecasters and hydrologists, as noted below:

a) Science and Techniques:

1. Quantitative Precipitation Forecasting Overview (WFO, RFC)
2. Flash Flood Case Studies (WFO)
3. Dams and Dam Failure – Modules 1 and 2 (WFO HPM, RFC)
4. Introduction to Distributed Hydrologic Modeling (WFO HPM, RFC)
5. The NWS Hydrologic Ensemble Forecast System (WFO HPM, RFC)
6. Introduction to Verification of Hydrologic Forecasts (RFC)
7. Impacts of a Vertical Datum Conversion on NWS Hydrology Program and Customers.(WFO HPM, RFC)
8. Precipitation Estimates, Part 1: Measurement (WFO, RF)
9. Precipitation Estimates, Part 2: Analysis (WFO, RFC)

b) Operational Software:

1. Introduction to Hydrology Software in AWIPS (WFO)
2. Using Riverpro (WFO)
3. Hydroview 101 (WFO)
4. SSHP for WFOs (WFO)

5. Aviation

Many of the modules included on COMET's MetEd site are part of the two distance courses: DLAC 1 (Forecasting Fog/Low Stratus for Aviation Operations), which takes approximately 22-26 hours to complete, and DLAC 2 (Producing Customer-Focused TAFs) which takes approximately 10-13 hours to complete.

http://www.meted.ucar.edu/topics_aviation.php

6. Leadership

Local leadership enrichment programs at each office will recommend leadership training opportunities for all employees.

7. Electronics Technician (ET)/Electronics System Analyst (ESA)/Information Technology Officer (ITO) Training

- a. Dual-Pol: Maintenance training for those offices starting deployment.
- b. AWIPS II Operational Test and Evaluation (OT&E): The ESA and ITO will attend the AWIPS II Systems Administration class for OT&E and early deployment sites (according to April 2010 schedule).

8. AWIPS II

Application Focal Point Training and Variance Training will be provided prior to OT&E at early deployment sites (according to April 2010 schedule).

9. Flash Flood Warning Best Practices- Will be available on the NWS Learn Center in the second quarter of FY11.

Current Training Division Directives

- a. [20-101 Use of Weather Event Simulator](#)
- b. [20-102 NSTEP and Annual IP for Training and Education](#)
- c. [20-104 University Assignment Program](#)
- d. [20-105 Individual Development Planning](#)
- e. [20-106 Office Training Plans](#)

Other Applicable Directives

- a. [10-340 Marine Forecaster Training](#)
- b. [10-405 Fire Weather Services Training and Professional Development](#)