

**NATIONAL WEATHER SERVICE INSTRUCTION 10-340
OCTOBER 6, 2014**

***Operations and Services
Marine and Coastal Weather Services, NWSPD 10-3
MARINE FORECASTER TRAINING***

NOTICE: This publication is available at: <http://www.nws.noaa.gov/directives/>.

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SUMMARY OF REVISIONS: This directive supersedes NWSI 10-340, Marine Forecaster Training, dated January 4, 2013.

1. Added link for the Tropical Professional Development Series.
2. Updated dates in section 4.2, Nearshore Wave Prediction System.

Signed September 22, 2014
Andrew D. Stern Date
Acting Director, Office of Climate,
Water, and Weather Services

**Marine Forecaster Training
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1. Introduction. This procedural instruction provides specifications for the minimum level of training of National Weather Service (NWS) marine forecasters. The Meteorologists-in-Charge (MICs) and the appropriate Regional Headquarters, and National Center Branch Chiefs are responsible for ensuring marine weather forecasters are properly trained.

In the past, marine training was generally conducted in classroom or workshop settings. Due to budget reductions, this training is now conducted via distance learning. The Office of Climate, Water, and Weather Services Marine and Coastal Services Branch will continue to advocate for funding for focused or applied marine workshops and classroom training, when needed.

1.1 Mission Connection. NWS marine products and services are used by a wide variety of people such as professional mariners, recreational boaters, the Armed Forces, the media, emergency managers, and the boating public. They are important in supporting and promoting safe transportation and efficient commerce across NWS marine areas of responsibility, both in the oceans and Great Lakes. Advances in science, technology, along with evolving user needs will require a commitment to continuous education and training of our workforce.

2. Marine Forecasters. NWS meteorologists producing, issuing or providing back-up service to any of the suite of core marine weather forecasts or marine advisories/warnings are trained in the basic principles of marine weather, with special emphasis on wind and wave forecasting. Core marine products include Coastal Waters Forecasts, Offshore Forecasts, High Seas Forecasts, Surf Zone Forecasts, Nearshore Marine Forecasts (Great Lakes), Open Lake Forecasts (Great Lakes), Special Marine Warnings, Marine Weather Statements, and Marine Weather Message.

3. Baseline Marine Training. Marine training modules produced by the Cooperative Program for Operational Meteorology, Education and Training (COMET[®]) will provide the basic core resources for marine forecaster training. All NWS marine forecasters are required to complete the following COMET[®] modules (through the NWS Learning Center).

- (1) Wave Types and Characteristics
- (2) Wave Life Cycle I: Generation
- (3) Wave Life Cycle II: Propagation & Dispersion – (Optional for Great Lakes Weather Forecast Offices (WFOs))
- (4) Winds in the Marine Boundary Layer (MBL): A Forecaster's Guide
- (5) Understanding Marine Customers

3.1 Initial Training. New marine forecasters with no previous experience forecasting in the marine environment will complete all baseline marine training modules (as specified in Section 3), along with any additional marine training requirements (if specified by regional supplements to this directive). Forecasters should complete the required training within six months of arrival on station.

3.2 Recurrent Training. Experienced marine forecasters should complete and periodically review the training materials indicated in Section 3 (Baseline Marine Training Modules) as well as other available training materials. This should be done at least once every 5 years, however; the appropriate Regional Headquarters, National Centers, or local WFOs (MIC discretion) may require more specific refresher training.

4. Additional Training

4.1 Marine Professional Development Series. The baseline courses (Section 3) are an integral part of the Marine Professional Development Series (PDS). The PDS contains many marine related courses ranging from detailed scientific analysis, operational forecasting and warning to decision support services. The PDS is designed to train NWS marine forecasters in the core aspects of their job duties as related to marine forecasting. All NWS marine forecasters are urged to complete the courses in the PDS. Necessary courses in the PDS may be determined by local NWS offices and National Centers to satisfy local training requirements.

The Professional Development Series website is located at:

<http://www.nws.noaa.gov/training/marinePDS.php>

The NWS Training portal is located at:

<http://www.nws.noaa.gov/training/>

The Marine Forecaster Training PDS site will contain information on courses important to all NWS marine forecasters and their development.

In appropriate sections of the Marine PDS, there are links to the Tropical Professional Development Series. The Tropical PDS is located at:

<http://www.nws.noaa.gov/training/tropicalPDS.php>

PDS training and marine COMET[®] training modules are located in the NWS Learning Center at: <https://doc.learn.com/noaa/nws>.

NWS employees will receive credit when they complete training through the NWS Learning Center.

4.2 Nearshore Wave Prediction System. Training for the Nearshore Wave Prediction System (NWPS) guidance was made available to test sites in 2014. Finalized training for national deployment of NWPS is scheduled to be available in 2015. Upon deployment of NWPS at WFOs, marine forecasters are strongly encouraged to complete the “Operational Use of the Nearshore Wave Prediction System” training lesson.

To maximize the benefits from the NWPS guidance training, it is recommended a marine forecaster complete COMET[®] modules “Operational Use of Wave Watch III” and “Nearshore Wave Modeling”. “Operational Use of Wave Watch III” provides numerical wave guidance and boundary conditions, while the “Nearshore Wave Modeling” module introduces forecasters to different nearshore wave models.