

**NATIONAL WEATHER SERVICE INSTRUCTION 10-340
SEPTEMBER 9, 2010**

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 August 22, 2008.

1. Added information on the marine Professional Development Series in the Additional Training section.

signed
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August 26, 2010

Date

Marine Forecaster Training

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1. Introduction. This procedural instruction provides specifications for the 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.

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, 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 will complete the following COMET modules:

- (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 Users

Marine COMET training modules are located in the DOC Learning Center [at: https://doc.learn.com/noaa/nws](https://doc.learn.com/noaa/nws). NWS employees will receive credit when they complete training through the DOC Learning Center.

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), once every 5 years as well as other available and relevant training materials. If required by the appropriate Regional Headquarters, National Centers, or by local WFOs (MIC discretion), more specific refresher training requirements may be defined.

4. Additional Training. The baseline courses are in 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 all aspects of marine meteorology. 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. Specifically, the following courses are important to all NWS marine forecasters and their development.

- (1) Advances in Microwave Sensing: Ocean Wind Speed and Direction
- (2) Remote Sensing of Ocean Wind Speed and Direction: An Introduction to Scatterometry
- (3) Shallow Water Waves
- (4) Rip Currents: NWS Mission and Partnerships
- (5) Rip Currents: Nearshore Fundamentals
- (6) Rip Currents: Forecasting
- (7) Jason – 2 Using Satellite Altimetry to Monitor the Ocean
- (8) Operational Use of Wave Watch III

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- (9) Mesoscale Ocean Circulation Models
- (10) Wave Ensembles in the Marine Forecast Process
- (11) Introduction to Ocean Models
- (12) Introduction to Ocean Currents
- (13) Introduction to Ocean Tides

PDS training and marine COMET training modules are located in the DOC Learning Center at: <https://doc.learn.com/noaa/nws>. NWS employees will receive credit when they complete training through the DOC Learning Center.