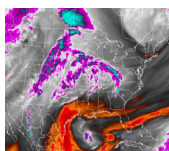
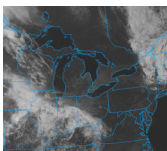
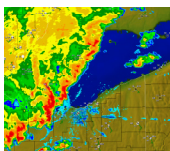


# Great Lakes Basic Marine Weather Seminars

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*Learn Basic Forecasting Skills*



[www.LakeErieWX.com](http://www.LakeErieWX.com)

# Offer your members a unique educational opportunity.

Boating on Lake Erie requires many skills, but perhaps none is more important or challenging than understanding marine weather.

The **Great Lakes Basic Marine Weather Seminar** is a one-day seminar designed to provide boaters with an understanding of basic meteorology. Attendees will learn about the forces controlling the wind, the formation and movement of low pressure systems, and how to identify the conditions favoring the development of severe weather. Attendees will develop a basic forecasting resource kit based upon publicly available government and university websites.

Enhance cruise planning skills.

Improve racing performance.

Add value to publicly available weather forecasts.

Reduce the likelihood of being exposed to uncomfortable or hazardous weather conditions.

## For more information

Contact Mark Thornton by phone at **440.250.9179** or by email ([lakeeriewx@wowway](mailto:lakeeriewx@wowway)) for details on how a Basic Marine Weather seminar can meet the educational, safety, and membership goals of your yacht club or group.

Additional seminar information is available online at [www.lakeeriewx.com/Seminars/Seminars.html](http://www.lakeeriewx.com/Seminars/Seminars.html)

# Seminar Outline

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## **Section 1—Introduction**

My background and a discussion of the seminar's structure.

## **Section 2—A Solid Foundation**

An understanding of the weather requires a familiarity with basic physical and meteorological principles. This section will address concepts such as barometric pressure, pressure gradient, evaporation, condensation, air masses, etc. in order to build a foundation for the remainder of the seminar.

## **Section 3—Interpreting Weather Graphics**

Weather charts contain a confusing array of symbols and other meteorological shorthand. The symbols identifying high and low pressure systems, frontal boundaries, troughs, and ridges. will be explained using historical weather charts.

## **Section 4—The Invisible Forces Controlling the Wind**

Mariners have attempted to explain the capricious nature of the wind for thousands of years. This section will explain the forces that drive the wind and review a variety of online resources that can improve your ability to predict its speed and direction. Lake and land breezes will also be presented.

## **Section 5—Clouds & Precipitation**

The sectors of low pressure systems signal their intentions by the types of clouds they produce. In the absence of on-line resources, "reading" the clouds can help to fill in the weather picture. We'll examine the common types of clouds and the weather associated with them.

## **Section 6—Dissecting a Low Pressure System**

Most of the weather that grabs boaters' attention is associated with the passage of low pressure systems. An idealized conceptual model of their formation and development will be ex-

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amined in detail. An understanding of this conceptual model, and a few pattern recognition skills, will help reduce the uncertainty associated with these weather-makers.

### **Section 7—Observational Tools: Radar and Satellite Imagery**

There are many satellite and surface-based products used by professional forecasters. This section examines what satellite imagery and Doppler radar has to offer a weather-savvy mariner. Want to know how fast that nasty squall line is moving? Doppler radar can provide the answer.

### **Section 8—Thunderstorms**

Thunderstorms can quickly ruin an outing. This section will cover thunderstorm types and the dynamics of their formation. Learn to use readily available Internet forecasting resources to dramatically reduce your chances of a hair-raising encounter. Bad weather doesn't have to be a surprise.

### **Section 9—Waves**

Wave heights and direction can make all the difference between a pleasant trip and a wet, uncomfortable one. This section explains the dynamics of wave formation and the forces that sustain them.

### **Section 10—A Daily Forecast Routine**

This section will include a hands-on exercise to reinforce the seminar's meteorological concepts and increase your familiarity with a variety of online forecasting resources.

### **Section 11—On-board Forecasting Resources**

Access to weather-related data and forecasts becomes more difficult when you leave the dock. This section will examine several tools and resources that will allow you to monitor developing weather conditions while underway.

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# Testimonials

**“The presentation was excellent.**

The information you provided over the weekend was invaluable. I would encourage all boaters, sail and power, to attend one of Mark’s seminars.”

—*Chip S.*

**“I have been racing and long distance cruising for the better part of 45 years and have a fairly good knowledge of Great Lakes weather systems and basic forecasting. At least I thought I had things in hand until I attended Mark’s one-day weather seminar. The information he presents, the forecasting exercises and follow-up resources available on his website and other online sources substantially increased my weather knowledge, understanding and future safety on the water. The session is only enhanced by Mark’s outstanding presentation skills. Whether you’re an old hand, just starting out or simply interested in learning more about Great Lakes weather, I highly recommend signing up for the next session.”**

—*Dave H.*

**“Thank you again for a great day on Saturday. Your Great Lakes Marine Weather Seminar was phenomenal. Both Mike and I enjoyed it tremendously. We definitely walked away more knowledgeable sailors than when we walked in. Thanks again for sharing your knowledge. And by the way, we are both interested in any future seminar/classes that you may have.”**

—*Tammy B.*

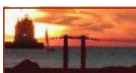
# The Presenter

**Mark Thornton** began sailing on Lake Erie in 1994, and he and his wife Susan currently own *Osprey*, a 1985 C&C 35.



His interest in weather forecasting grew from his experiences cruising and racing on the lake. In addition to sailing and forecasting, Mark enjoys publishing summaries of interesting weather events and teaching Great Lakes sailors basic weather forecasting skills.

Mark is a 2006 graduate of the Penn State University Certificate of Achievement in Weather Forecasting, a two-year program that develops skills in general, tropical, and severe weather forecasting. He maintains a website ([www.lakeeriewx.com](http://www.lakeeriewx.com)) devoted to Great Lakes Weather and is the current president of the local chapter of the American Meteorological Society. Mark is employed as the Vice-President of Administration for the law firm of Wegman, Hessler & Vanderburg.



**LakeErieWX**

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