



# LakeErieWX

Marine Weather Education and Forecasting Resources

## Mark A. Thornton

### *Curriculum Vitae*



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Mark Thornton has been sailing on Lake Erie for more than 20 years and currently owns *Osprey*, a C&C 35. His interest in weather forecasting grew from his experiences cruising and racing on the lake. 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 is the president of LakeErieWX LLC, a company dedicated to providing marine weather education and forecasting resources for recreational boaters ([www.lakeeriewx.com](http://www.lakeeriewx.com)). He served as race meteorologist for the 2014-2017 Bell's Beer Bayview Race to Mackinac, and is the past president of the Cleveland chapter of the American Meteorological Society. Mark is employed as the Vice-President of Administration for the law firm of Wegman, Hessler & Vanderburg, and as a Teaching Assistant in the *Certificate of Achievement in Weather Forecasting Program* at Penn State University.

### Miscellaneous Activities

#### 2017

- Race Meteorologist, 93rd Bell's Beer Bayview Mackinac Race, July 2017.

### Seminars and Presentations

#### 2017

- Strictly Sail Chicago – *Basic Great Lakes Marine Weather Forecasting*, a one-day seminar
- Strictly Sail Chicago – *Doppler Weather Radar: A Boater's Best Friend* and *Weather Makers: Understanding Low Pressure System*
- Strictly Sail Chicago – *Thunderstorms: A Primer for Coastal and Inland Boaters*
- Strictly Sail Chicago – *Marine Weather Primer*
- Strictly Sail Chicago – *Weather Makers: Understanding Low Pressure Systems*
- Edgewater Yacht Club – *Basic Great Lakes Marine Weather Forecasting*, Weather Savvy Wednesdays
- Columbia Yacht Club – *Basic Great Lakes Marine Weather Forecasting*, a one-day seminar
- Great Lakes Cruising Club – *Weather Savvy Mariner*, four-part webinar series

### Miscellaneous Activities

#### 2016

- Race Meteorologist, 92nd Bell's Beer Bayview Mackinac Race, July 2016.

### Seminars and Presentations

## 2016

- Strictly Sail Chicago – *Great Lakes Wind Forecasting: A Workshop for Sailors*, a one-day seminar
- Strictly Sail Chicago – *Basic Great Lakes Marine Weather Forecasting*, a half-day seminar
- Strictly Sail Chicago – *Doppler Weather Radar: A Boater's Best Friend* and *Weather Makers: Understanding Low Pressure System*
- US Sailing Leadership Conference – *Thunderstorms: A Primer for Coastal and Inland Boaters*
- Ohio Division of Watercraft – *Basic Great Lakes Marine Weather Forecasting*, a half-day seminar
- Great Lakes Cruising Club – *Weather Savvy Mariner*, four-part webinar series
- Edgewater Yacht Club – *Basic Great Lakes Marine Weather Forecasting*, *Weather Savvy Wednesdays*
- Columbia Yacht Club – *Basic Great Lakes Marine Weather Forecasting*, a one-day seminar
- Macatawa Bay Yacht Club – *Great Lakes Wind Forecasting: A Workshop For Sailors*, a one-day seminar
- Bayview Yacht Club – *Great Lakes Wind Forecasting: A Workshop For Sailors*, a one-day seminar
- Detroit Yacht Club – *Basic Great Lakes Marine Weather Forecasting*, a one-day seminar
- Chicago Yacht Club – *Basic Great Lakes Marine Weather Forecasting*, a one-day seminar
- Cruisers University, Annapolis Boat Shows, Annapolis, Maryland – *Coastal Marine Weather Forecasting*.

## Miscellaneous Activities

### 2015

- Race Meteorologist, 91st Bell's Beer Bayview Mackinac Race, July 2015.

## Seminars and Presentations

### 2015

- Strictly Sail Chicago – *Doppler Weather Radar: A Boater's Best Friend; Weather Makers: Understanding Low Pressure Systems; Thunderstorms: A Primer for Coastal and Inland Boaters*
- Strictly Sail Chicago – *Great Lakes Wind Forecasting: A Workshop for Sailors*, a one-day seminar
- Great Lakes Cruising Club – *Doppler Weather Radar: A Boater's Best Friend*, webinar
- Sailing Education Association of Sheboygan – *Basic Marine Weather Forecasting*, one-day seminar
- Great Lakes Cruising Club, *Thunderstorms: A Guide for Coastal and Inland Sailors*, webinar
- South Shore Yacht Club, Milwaukee, WI – *Great Lakes Wind Forecasting: A Workshop For Sailors*, a one-day seminar
- Bayview Yacht Club, Detroit, MI – *Preparing Your Bayview Mac Forecast*, a one-day seminar
- Great Lakes Cruising Club, *The Invisible Forces Controlling The Wind*, webinar
- North Star Sail Club, Harrison Township, MI -- *Great Lakes Wind Forecasting: A Workshop For Sailors*, a one-day seminar
- Wayzata Yacht Club, Wayzata, MN -- *Great Lakes Wind Forecasting: A Workshop For Sailors*, a one-day seminar
- Cruisers University, Annapolis Boat Shows, Annapolis, Maryland – *Coastal and Offshore Marine Weather Forecasting*.
- Macatawa Bay Yacht Club, Holland, MI -- *Basic Marine Weather Forecasting*, one-day seminar
- Cruisers University, Annapolis Boat Shows, Annapolis, Maryland – *Coastal and Offshore Marine Weather Forecasting*.
- Great Lakes Cruising Club, London, Ontario – *Basic Marine Weather Forecasting*, half-day seminar

## Miscellaneous Activities

### 2014

- Race Meteorologist, 90<sup>th</sup> Bell's Beer Bayview Mackinac Race, July 2014.

## Seminars and Presentations

## 2014

- Strictly Sail Chicago, *Doppler Weather Radar: A Boater's Best Friend; Weather Makers: Understanding Low Pressure Systems; Thunderstorms: A Primer for Coastal and Inland Boaters.*
- Grand Traverse Yacht Club, Traverse City, MI —*Basic Marine Weather Forecasting*, one-day seminar
- Grand Traverse Yacht Club, Traverse City, MI —*Advanced Wind Forecasting: A Workshop For Sailors*, one-day seminar
- Edgewater Yacht Club, Cleveland, OH —*Advanced Wind Forecasting: A Workshop For Sailors*, one-day seminar
- Bayview Yacht Club, Detroit, MI —*Advanced Wind Forecasting: A Workshop For Sailors*, one-day seminar
- Sandusky Sailing Club, Sandusky, OH —*Advanced Wind Forecasting: A Workshop For Sailors*, one-day seminar
- Safety At Sea, Chicago Yacht Club, Chicago, IL — *Marine Weather*
- Cruisers University, Annapolis Boat Shows, Annapolis, Maryland – Coastal and Offshore Marine Weather Forecasting.
- Port Clinton Yacht Club, Port Clinton, OH —*Basic Marine Weather Forecasting*, one-day seminar
- Great Lakes Cruising Club – Doppler Weather Radar: A Boater's Best Friend, webinar

## 2013

- Sandusky Sailing Club, Sandusky, OH—*Basic Marine Weather Forecasting*, one-day seminar
- Chicago Yacht Club, Chicago, IL—*Advanced Wind Forecasting: A Workshop for Sailors*, one-day seminar
- Grand River Sailing Club, Fairport Harbor, OH—*Basic Marine Weather Forecasting*, half-day seminar
- Erie Yacht Club, Erie, PA—*Basic Marine Weather Forecasting*, one-day seminar
- Bay City Yacht Club, Bay City, MI—*Advanced Wind Forecasting: A Workshop for Sailors*, one-day seminar
- Edgewater Yacht Club, Cleveland, OH—*Basic Marine Weather Forecasting*, one-day seminar
- Lorain Sailing and Yacht Club, Lorain, OH—*Basic Marine Weather Forecasting*, one-day seminar

## 2012

- Passenger Vessel Association (regional meeting presentation), Cleveland, OH—*Tragedy Strikes the 2011 Chicago-Mac*
- Catawba Island Club, Port Clinton, OH—*Basic Marine Weather Forecasting*, one-day seminar
- Grand River Sailing Club, Grand River, OH—*Tragedy Strikes the 2011 Chicago-Mac*, presentation
- Chicago Yacht Club, Chicago, IL—*Basic Marine Weather Forecasting*, one-day seminar
- 20th Annual Great Lakes Operational Meteorology Conference Presentation, Chicago, IL—*Tragedy Strikes the 2011 Chicago-Mac*.  
Received the *Brian Murphy Award* for most noteworthy presentation.
- Bay City Yacht Club—*Basic Marine Weather Forecasting*, one-day seminar
- Edgewater Yacht Club—*Basic Marine Weather Forecasting*, one-day seminar
- Northeast Ohio Chapter of the American Meteorological Society—*Tragedy Strikes the 2011 Chicago-Mac*, presentation
- Lorain Sailing and Yacht Club—*Basic Marine Weather Forecasting*, one-day seminar.

## 2011

- Coast Guard Auxiliary "About Boating Safely" class presentation—*Basic Marine Weather*
- Junior Fleet at Lorain Sailing & Yacht Club—*Basic Marine Weather*, presentation.
- Edgewater Yacht Club—*Basic Marine Weather Forecasting*, one-day seminar

- Lorain Sailing and Yacht Club—*Basic Marine Weather Forecasting*, one-day seminar

## 2010

- Edgewater Yacht Club—*Basic Marine Weather*, half-day seminar
- Sandusky Sailing Club—*Basic Marine Weather Forecasting*, two-day seminar
- Lorain Sailing & Yacht Club—*Basic Marine Weather*, presentation

## 2009

- Cleveland Amateur Boatbuilding and Boating Society—*Basic Marine Weather* presentation
- Sandusky Sailing Club—*Basic Marine Weather*, presentation
- Northeast Ohio Chapter of the American Meteorological Society—*Radar: A to dBZ*, presentation on the use and interpretation of Doppler Weather Radar

## Awards

- *Brian Murphy Award* for the most noteworthy presentation: *Tragedy Strikes the 2011 Chicago-Mac*. Great Lakes Operational Meteorology Conference, Chicago, IL. March 2012.

## Articles and Publications

- *Deciphering Surface Weather Maps-Part 2* (published February 2017)
- *Deciphering Surface Weather Maps-Part 1* (published March 2017)
- *A Little Excitement on Race Night: August 24, 2016 on Lake St. Clair* (published September 2016)
- *A Challenging Start to the 2016 Chicago-Mac* (published August 2016)
- *Doppler Weather Radar: It Isn't Live But It's Getting Better* (published June 2016)
- *Understanding Meteorological Time* (published June 2016)
- *Sloshing and Surfing on Lake Erie* (published January 2016)
- *Trans Superior International Yacht Race: Weather Resources* (published June 2015)
- *2015 Mills Invitational Trophy Race: A Meteorological Summery* (published June 2015)
- *Tragedy Strikes the 2015 Dauphin Island Race* (published June 2015)
- *Bell's Beer Bayview Mackinaw Race: Weather Resources* (published May 2015)
- *Chicago Yacht Club's Race to Mackinaw: Weather Resources* (published May 2015)
- *Feeling the Pressure: A Primer on Barometers* (published August 2014)
- *Doppler Weather Radar: When Storms Aren't Storms* (published August 2014)
- *A New Spin On Waterspout Forecasting* (published August 2014)
- *Dramatic Differences: The Effects of Lake Temperature on Gusty Winds* (published July 2014)
- *Marine Model Output Statistics: A Unique Wind Forecasting Resource* (July 2014)
- *Superstorm Sandy and Lake Erie* (November 2013)
- *Safety Thursday* articles for the Chicago Yacht Club addressing weather resources for the club's annual Race to Mackinac. (Part 1—May 30; Part 2—June 20)
- *Memorial Day 2012: An Unexpected Wind* (September 2012)
- *Opti National Championship Regatta Waterspout* (July 2012)
- *Chicago-Mackinac Sailboat Race: 2011* (August 2011) Special Note: My report was referenced by the *US Sailing Inquiry Into The Chicago Yacht Club-Race To Mackinac Capsize And Fatalities* published in October 2011.
- *Forces Governing the Wind* (July 2011)
- *A Wet Spring in Northern Ohio* (July 2011)
- *2010 Lake Ontario 300 Challenge* (May 2011)
- *Lake Erie Ice Transitions* (March 2011)
- *A Marina Takes a Hit: Thunderstorm Outflow* (September 2010)
- *Echo Tops on Doppler Radar Imagery* (August 2010)

- *A Stormy Trip* (August 2009)
- *Splitting Supercell Thunderstorm* (April 2008)
- *Lake Erie Displacement—December 23-24, 2007* (March 2008)
- *Chaff on Doppler Weather Radar* (March 2008)
- *Concentric Rings on Radar Imagery* (January 2008)
- *Ship Tracks (Plumes) on Visible Satellite Imagery* (December 2007)
- *March 30, 2006 -Tornado Watch # 110* (April 2006)
- *March 12, 2006 Severe Weather Outbreak* (April 2006)
- *February 16, 2006 Severe Weather Outbreak* (March 2006)
- *December 22-23, 2004 Winter Storm* (February 2006)
- *Hurricane Wilma* (December 2005)
- *India's Summer Monsoon* (November 2005)
- *General Circulation in the Southern Hemisphere* (October 2005)
- *Hurricane Charley* (September 2005)

### **Educational Achievements and Activities**

- 20th Annual Great Lakes Operational Meteorology Conference presenter, National Weather Service, March 2012. Presentation *Tragedy Strikes the 2011 Chicago-Mac* received the *Brian Murphy Award* for the most noteworthy presentation.
- 19th Annual Great Lakes Operational Meteorology Conference, National Weather Service, March 2011.
- 18th Annual Great Lakes Operational Meteorology Conference, National Weather Service/Environment Canada, March 2010.
- College of DuPage Severe Weather Symposium, November 2009.
- The 7th Annual Great Lakes Meteorology Conference, Valparaiso University, March 2009.
- National Severe Weather Workshop, Storm Prediction Center/National Weather Service, March 2009.
- The AMS 24th Annual Severe Local Storm Conference, American Meteorological Society, October 2008.
- Great Lakes Operational Meteorology Conference, National Weather Service, September 2007.
- Ranked 58 of 1258 competitors in the *Fall 2006 WX Challenge*, a collegiate weather forecasting competition.
- Graduate of the *Certificate of Achievement in Weather Forecasting* program, Penn State University, December 2006.