



***THE FIFTEENTH SOUTHERN NEW ENGLAND
WEATHER CONFERENCE***



OCTOBER 25, 2014

Medical Information Technology, Inc. (MediTech)

Canton, MA

Sponsored by:

Blue Hill Observatory Science Center

National Weather Service - Taunton, MA

UMass-Lowell Student Chapter of the American Meteorological Society

Lyndon State College Chapter of the AMS/National Weather Association

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Foreword

Welcome to the Fifteenth Southern New England Weather Conference! The purpose of the conference is to enhance professional development and communication among private and public sector meteorologists, teachers, emergency management officials, and weather enthusiasts. This year, we will be covering a wide variety of topics – something for everyone.

First, during the registration hour, please partake of Rita's Catering's continental breakfast...and you are allowed to carry the food into the foyer, where Matt Doody, from NWS-Taunton will be giving "Breakfast With Matt," a weather briefing and a look at various weather websites.

We will then take a look at climate change, not from a controversial standpoint, but from the perspective of the past 4,000,000,000 years. The new GOES-R satellite is getting ready to be launched and we'll get a glimpse into some amazing new features that it will have. We'll reflect back on last winter's snow storms, two of which occurred with very frigid temperatures, yet the snow:liquid ratios were vastly different. After a short break, we'll delve into hurricanes. This September was the 60th anniversary of devastating Hurricane Carol and we're due for a repeat one of these years. Our speaker from farthest away is Dr. Phil Klotzbach, from Colorado State University – he is now the one who, with Dr. Bill Gray, produces the Atlantic Basin seasonal hurricane forecasts (in addition to NOAA). He'll discuss why we've had a couple of lean years now and explain what goes into making the predictions.

After a fantastic hot lunch buffet, sponsored by Rita's Catering of Boston (yum!), we'll resume the second half of the conference. We'll have presentations on what it was like to call for the evacuation of Fenway Park in the middle of winter (Frozen Fenway) due to lightning strike potential. Have you always wondered what the secret is to the Old Farmer's Almanac? Well, we may not find out the exact recipe, but we'll have a look at some of the history (and mystery) behind this famous publication! Last year, we discussed how weather impacted the banking industry. This year, we'll continue the theme of business continuity and risk management, for both the insurance and pharmaceutical industries. It's been a while since we discussed fire weather forecasting, but wildfire activity can be very important in southern New England, where the urban/wildland interface is very tight. We'll hear from the MA Dept. of Conservation & Recreation on this topic. Two sets of storm chasers – one a novice and the other(s) more seasoned, will share their experiences with recent tornado chasing. And the Snow Country Ski Association would like to throw in a pitch that it's never too cold to ski and how weather forecasts impact the ski industry.

When you registered, you had the opportunity to ask a question for our tv meteorologist/broadcaster panel discussion. We've picked some of the more intriguing questions and we'll close out the conference with what always ends up being a fun and entertaining session!

Thank you for continuing to make this conference a success. We also encourage you to fill out the questionnaires, located at the end of this booklet, at the completion of the conference. Please leave them in the feedback box at the registration desk. Your comments are extremely beneficial to us and we strive to make the conference better and better each year. We would like to thank all presenters, volunteers, and attendees for making this conference possible. A very special thanks to MediTech, Inc. for hosting this conference. We hope you have an enjoyable and educational experience at the conference.

Sincerely,

The Fifteenth Southern New England Weather Conference Organizing Committee:

Glenn Field, Warning Coordination Meteorologist, National Weather Service – Taunton, MA
Matt Doody, Forecaster, National Weather Service – Taunton, MA
Charles Orloff, Executive Director, Blue Hill Observatory Science Center – Milton, MA
Don McCasland, Program Director, Blue Hill Observatory Science Center – Milton, MA
Scott Kaplan, Frey Scientific – Nashua, NH (and conference webmaster)
David Towle, Former President of Greater Boston AMS Chapter -- Manchester By-the-Sea, MA
Donald Towle, Former Vice-President of Greater Boston AMS Chapter -- Manchester By-the-Sea, MA
Nick Morganelli, Meteorologist, CBS-3 TV – Springfield, MA
John Marletta, Weather Enthusiast Extraordinaire – Manchester-By-the-Sea, MA
Brian Treanor, Director of IT and Operations, Peabody & Arnold LLP - Boston, MA (Web Developer)
Lance Franck, Student, University of Massachusetts – Lowell, MA
Mike Sosnowski, Student, University of Massachusetts – Lowell, MA
Linda Hutchins, Hydrologist, MA Dept. of Conservation and Resources – Boston, MA

AGENDA :

Time		Auditorium	TOPIC
7:30 - 8:20	70 min	REGISTRATION (Lobby) BREAKFAST (Atrium) BREAKFAST WITH MATT (Weather Briefing - Foyer)	BREAKFAST AND WEATHER BRIEFING
8:30 - 8:40	10 min	Welcoming Remarks Glenn Field (National Weather Service-Taunton, MA) Charles Orloff (Blue Hill Observatory Science Center - Milton, MA)	
8:40 - 9:10	30 min	Four Billion Years of Climate Change on Planet Earth Jonathan Byrne Weymouth, MA High School	CLIMATE CHANGE
9:15 - 9:40	25 min	The GOES-R Satellite: A New Eye in the Sky Eleanor Vallier-Talbot NOAA / NWS - Taunton, MA	SATELLITE WEATHER
9:45 - 10:10	25 min	Two Frigid 2014 Snow Storms - A Look at Snow:Liquid Ratios Kevin Cadima NOAA / NWS - Taunton, MA	WINTER WEATHER
10:10 - 10:30	20 min	BREAK	BREAK
10:30 - 11:10	40 min	Hurricane Carol - Such a Beautiful Name for a Deadly Storm David Vallee and Charles Orloff NOAA/NWS/NERFC-Taunton, MA (Dave); Blue Hill Observ. (Charles)	HURRICANES
11:15 - 11:55	40 min	Atlantic Basin Seasonal Hurricane Prediction Dr. Phil Klotzbach Colorado State University - Fort Collins, CO	HURRICANES
11:55 - 12:55	60 min	LUNCH (in Atrium)	LUNCH
1:00 - 1:15	15 min	Playing with Weather at Fenway (Frozen Fenway lightning, etc.) Kevin Lemanowicz and Sara Wroblewski FOX25 TV - Boston/Dedham, MA	LIGHTNING SAFETY
1:20 - 1:50	30 min	The History and the Mystery Behind <i>The Old Farmer's Almanac</i> Janice Stillman The Old Farmer's Almanac - Dublin, NH	LONG-TERM FORECASTING
1:55 - 2:25	30 min	How Businesses 'Weather the Storm' Kenneth Otis CVS Caremark - Woonsocket, RI	RISK MANAGEMENT
2:25 - 2:45	20 min	BREAK	BREAK
2:45 - 3:15	30 min	Southern New England Wildfire Activity & Fire Weather Forecasting David Celino MA Dept. of Conservation & Recreation - Boston, MA	FIRE WEATHER
3:20 - 3:40	20 min	Storm Chasing in the Plains - A Novice's Perspective Quincy Vagell quincyvagell.com	STORM CHASING
3:45 - 4:05	20 min	Tornado Chase: Bowdle, SD - May 22, 2010 Dr. Rich Yablonsky and Tracy McCormick University of Rhode Island	STORM CHASING
4:10 - 4:20	10 min	It's Never Too Cold to Ski Tom Horrocks SnoCountry Ski Areas Association	SKI INDUSTRY
4:20 - 5:15	55 min	TV Weather Broadcaster Panel-Answers to Submitted Questions Harvey Leonard, Eric Fisher, Steve Cascione, Kevin Lemanowicz, Nick Morganelli, Brian Lapis	MEDIA PANEL

Some Like It Hot! Some Like It Cold! Four Billion Years of Climate Change on Planet Earth: The “Cook’s Tour”

Jonathan Forest Byrne
AMS, Earth Science Consultant
Boston, Massachusetts

Beginning with the formation of the terrestrial atmosphere at the commencement of the Archean eon at approximately 4×10^9 yr BP, the earth’s climate has been subject to significant spatial and temporal oscillations ranging in scale from decades to millions of years. Such oscillations are the product of a complex interaction of a spectrum forcings both internal and external to the earth’s environment. These forcings include shifts in earth-sun geometry (Milankovitch cycles), solar cycles, fluctuations in atmospheric composition, changes in the lithosphere and hydrosphere including plate tectonics, volcanism, orogenesis, and shifts in oceanic composition impacting over-turning circulation patterns. Consequently climate oscillations have ranged from ice free “hothouse” periods when the mean global surface temperature has exceeded 30 deg Celsius during the Archean eon, to the so-called “snowball earth” periods during the Proterozoic era between approximately 7×10^8 yr BP and 6×10^8 yr BP. The objective of this presentation will be to provide an historic overview of climate change within the context of interrelationships between earth systems.

PRESENTER’S BIO:

A former forecaster **Jonathans Byrne’s** weather interests have turned to researching hybrid super storms and most recently abrupt climate change. An experienced conference speaker Jonathan has presented at numerous venues in meteorology, climate change, and science education both nationally and internationally. (Jonathan’s most recent AMS presentation on the Younger Drayas Oscillation is available on line via google search using his full name.) Additionally Jonathan is an annual speaker at the Northeast Storm Conference and was a contributing author to the *Life Cycles of Extratropical Cyclones*, a monograph used in atmospheric science programs worldwide. Jonathan holds a B.S. in earth and space sciences and an M. Ed in secondary science education from Boston University and the University of Massachusetts, Boston. Jonathan is a member of the American Meteorological Society, and the National Science Teachers Association, Jonathan currently teaches earth and space sciences at Weymouth High School and also runs his consulting business.

The GOES-R Satellite: A New Eye in the Sky

Eleanor Vallier-Talbot
National Weather Service
Taunton, MA

Well before the last Geostationary Operational Environmental Satellite (GOES) was launched in March 2010, research and development was underway to build and launch the next generation of GOES satellites to take the scientific community well into the 21st century. With the continual, rapid technological increase and the ability to build new hardware to be launched into orbit, developers from both the National Oceanic and Atmospheric Administration (NOAA) and the National Aeronautics and Space Administration (NASA) have worked to improve and increase the GOES satellites' capabilities. The GOES-R Series will be the first time there has been a major upgrade since 1994, taking advantage of new equipment as well as improving upon proven technologies that have been in use for years. The GOES-R satellite, tentatively scheduled to launch in early 2016, will bring enormous increases in temporal, spatial, radiometric and spectral resolutions of current data, and introduce new data sets for use in weather and space forecasting. This increase will assist weather forecasters in severe weather monitoring and warning operations, and help to improve aviation safety and flight planning. One new instrument aboard GOES-R is the Geostationary Lightning Mapper (GLM), which will provide continuous total lightning, including in-cloud and cloud to cloud, covering both land and ocean within GOES coverage areas in an 8 km spatial resolution. Updated space weather sensors will improve sun and space environmental observations, which will provide increased timeliness to disseminate warnings for a wide variety of customers. Improved monitoring will also be gleaned for hydrologic, oceanic and climatic data.

An important aspect of the GOES-R product development has been to ensure that satellite data users will be ready to incorporate the new data into operations. To that end, background and education components for development and assimilation of the new capabilities are under the auspices of the GOES-R Proving Ground (PG). Proxy and simulated GOES-R products using current GOES, NASA Moderate Resolution Imaging Spectroradiometer (MODIS) data aboard the Terra and Aqua polar orbiting satellites and model synthetic satellite data are under development and evaluation. The PG is a part of NOAA's Hazardous Weather Testbed, with new algorithms and products being developed at the National Centers for Environmental Prediction (NCEP), which will eventually be used across the country. The GOES-R Program Office also has a collateral effort in place with a variety of NOAA, NWS and NASA entities and testbeds to evaluate the

proxy and simulated products and their future use in the field. It is hoped that these projects will increase forecaster confidence in using the new products which, in turn, will lengthen warning lead times. The user community is already learning about the GOES-R capabilities through presentations at scientific conferences, development of online educational resources and improvement of communications through social media and other outreach efforts. A variety of online and printed training materials are available through many different sources.

This presentation will describe the new and improved GOES-R satellite capabilities, show how one can use the simulated products through the GOES-R Proving Ground, and show the availability of online classes for details on the GOES-R series through the GOES-R website (www.goes-r.gov).

PRESENTER'S BIO

Eleanor Vallier-Talbot has served in her capacity as a meteorologist with the National Weather Service since May 1985. Spending most of her career at NWS Taunton, she began her career at the former Weather Service Office in Providence, R.I. She also worked at the NWS Forecast Offices in Charleston, S.C. and Portland, Maine. Prior to joining the NWS, she worked as a part time weather observer at the Blue Hill Observatory.

Eleanor has passionately served in several capacities on the NWS Taunton Outreach Team, currently as Outreach Coordinator. She has assisted on the SKYWARN Team and marine weather program. She also keeps the climate record for the Cooperative Weather Station at the office, which began in October 1996.

Eleanor has taken the lead as Satellite Program Leader for the office, sharing new techniques and developments in the national satellite program, including updates on the GOES-R program. She continues to serve on the National Weather Association (NWA) Education Committee, recently stepping down as Co-Chair after six busy years (2007 to 2013).

Eleanor attended the University of Lowell (now the University of Massachusetts at Lowell) for two years, transferring to Lyndon State College where she received her Bachelor of Science degree in Meteorology in 1982. She met the love of her life, her husband Dean, while working at Blue Hill. Married since 1992, they have two "fur babies," their cats, Christy and Ollie.

Two Frigid 2014 Snow Storms – A Look at Snow To Liquid Ratios

Kevin Cadima
National Weather Service
Taunton, MA

Two January snowstorms, both categorized by anomalously cold surface temperatures, affected southern New England during the 2013-2014 winter season. Despite similarly cold temperatures the storms exhibited very different snow to liquid ratios. This presentation will look at the role snow microphysics and low level temperature anomalies played in the different ratios.

PRESENTER'S BIO:

Kevin Cadima is a senior meteorologist with the National Weather Service in Taunton, MA. Kevin grew up in Fall River, MA and credits the great Blizzard of 1978 for piquing his interest in weather. He received his BS degree in Meteorology from Lyndon State College in 1989 and began his career with the National Weather Service as a student trainee at the New York City office prior to his senior year. His first permanent NWS position was at the NWS in Binghamton, NY in 1989 followed by Providence, RI. He then worked at the NWS in Burlington, VT for 11 years before joining the Taunton forecast office in 2005.

Hurricane Carol; Such A Beautiful Name For A Deadly Storm; Examining The Meteorology and Devastating Impacts Hurricane Carol

David R. Vallee
NOAA/NWS/Northeast River Forecast Center
and
Charles Talcott Orloff
Blue Hill Observatory

The summer of 1954 was a remarkable one at that featured two power-house Hurricanes; Carol and Edna just 11 days apart. Carol was the most impactful, making a direct and deadly strike on southern New England as her center came ashore near the mouth of the Thames River. Hurricane force winds drove an 8 to 15 foot storm surge through the heart of southeast New England. Edna though no less powerful, was more merciful passing over Martha's Vineyard and Cape Cod; a track which spared most of the region from her violent wind field but one which produced significant river flooding from 4 to nearly 10 inches of rainfall.

The first portion of this presentation will review the meteorology behind these two very different hurricanes; Edna as a Classic Cape Verde system and Carol as a powerful Bahama-based storm. Aspects of the powerful jet interactions, recurvature and acceleration, storm surge, wind field, and heavy rainfall production will be discussed. The second portion of the presentation will discuss the tremendous impacts produced by Hurricane Carol, focusing on the devastation brought by hurricane force winds and storm surge.

PRESENTERS' BIOS:

David Vallee is the Hydrologist-in-Charge of the National Weather Service's Northeast River Forecast Center. The center provides detailed water resource and life-saving flood forecasting services to National Weather Service Forecast Offices and the hundreds of federal, state and local water resource entities throughout the Northeast and New York.

David has worked for the National Weather Service for 27 years, serving in a variety of positions including Senior Service Hydrologist at the Taunton Weather Forecast Office from 1993-2000 and as Science and Operations Officer from 2001-2006. David has extensive experience leading hydrometeorological forecast and warning operations and directing weather research and training programs. David's research activities span a variety of topics including flooding, severe weather forecasting and orographically enhanced heavy rainfall in southern New England. David has served as the NWS lead investigator with the State University of New York, at Albany, on a

multi-year project addressing Land Falling Tropical Cyclones in the Northeastern United States. This has improved the forecasting of heavy precipitation associated with these land falling tropical cyclones as well as developing a better understanding the mechanisms which lead to the recurvature and rapid acceleration of tropical cyclones as they approach the Northeast. David led the initiative to develop a short-range ensemble river forecast system which leverages short range numerical weather prediction guidance to drive a suite of probabilistic river forecasts for the region. Recently, David has been leading an effort at the Northeast River Forecast Center to examine changes in precipitation and temperature patterns across New England and its impact on flood behavior.

David is most known locally for his outreach and education work on the behavior of New England Hurricanes, including many appearances on local radio and T.V. networks as well as the Weather Channel, the History Channel and the Discovery Channel. David has been the recipient of numerous regional and national awards including the prestigious National Isaac Cline Award for Leadership. David is a graduate of Lyndon State College. He is a life-long resident of the Rhode Island, living in the northeast part of Cumberland, with his wife and two sets of now teenage twins! He considers it a tremendous privilege to be serving the people of the very region he calls home.

Charles Talcott Orloff is currently the Executive Director of Blue Hill Meteorological Observatory in Milton, Massachusetts. He holds a certificate from the American Meteorological Society (AMS) as an Atmospheric Education Resource Agent. As a student in the AMS Project Atmosphere program he completed five summer institutes in meteorology.

Mr. Orloff received a Bachelor of Science degree from Boston University and a Master of Education degree from the University of Hartford. He completed a year of Special Studies in Education at Harvard University and served as a Leadership Academy Fellow with the Massachusetts Department of Education. Before coming to Blue Hill Observatory Mr. Orloff had worked in education for his entire career, first as a teacher and then as both an elementary and middle school principal for 25 years. He was President of the Massachusetts Elementary Principal's Association for three years.

Mr. Orloff has lectured extensively on education and weather related topics. He is the author of "Carol at 50: Remembering Her Fury" and co-author of "Hurricane Bob, a Brief History."

Mr. Orloff was raised in Wellesley, Massachusetts and summered at his grandparents' home in Eastern Point, Groton, Connecticut. It was at that house that he first witnessed the awesome fury of Hurricane Carol and has been fascinated by, and a student of the weather ever since.

Atlantic Basin Seasonal Hurricane Prediction

Phil Klotzbach
Department of Atmospheric Science
Colorado State University
Fort Collins, CO

This presentation will cover various facets of Atlantic basin seasonal hurricane prediction. The Atlantic basin is observed to go through 25-35 year periods where hurricane activity is more frequent and intense, followed by similar length periods that are much quieter. The causes of this multi-decadal variability will be discussed. An extensive discussion of the predictions for the 2014 Atlantic hurricane season as well as observed activity through mid-October will be considered. Significant intra-seasonal variability also exists in Atlantic basin storm activity, in part driven by the Madden-Julian Oscillation (MJO). The MJO and a variety of other tools are utilized by the forecast team at Colorado State University to issue two-week predictions during the peak months of the Atlantic hurricane season from August-October.

PRESENTER'S BIO:

Phil Klotzbach is a research scientist in the Department of Atmospheric Science at Colorado State University. He was born and raised in Plymouth, Massachusetts and attended Bridgewater State University where he obtained his undergraduate degree in Geography. He obtained his Masters and Ph.D. from Colorado State University under the guidance of Dr. Bill Gray, the pioneer of seasonal hurricane prediction. Phil has been involved with the seasonal hurricane forecasts issued by CSU since 2000 and has been lead author since 2006. While not studying hurricanes, he is typically outside running, cycling or hiking. He thru-hiked the Appalachian Trail (2100+ miles) in 2002 and has climbed all 54 of the 14,000 foot peaks in Colorado. He has also completed seven marathons and four ultra-marathons.

PLAYING WITH WEATHER AT FENWAY

Kevin Lemanowicz and Sarah Wroblewski
Fox 25 Television (WFXT)
Dedham, Massachusetts

The last couple of seasons have given us an extraordinary opportunity to be affiliated with the Boston Red Sox. While you may see other station's meteorologists on NESN in other markets in New England, the FOX 25 meteorologists are in close contact with the Red Sox on a daily basis. We've found ourselves on the phone with the grounds crew, director of operations, NESN television crews, and even the umpires when weather threatens a game, concert, or any other Fenway event.

Beyond the tracking of showers for those events, safety is the primary concern. Last January, during a Frozen Fenway hockey game on the field, lightning became an issue. Warning was given by Sarah to the Red Sox ahead of the storm so the crowd could take cover. The Red Sox have since worked with us and the National Weather Service to be sure there is a plan if lightning threatens again.

We will tell you how we work with the Red Sox and you will likely be amazed of the detail required. We will use video and graphics to demonstrate.

PRESENTERS' BIOS:

Sarah Wroblewski is the weekend meteorologist on FOX25 News. You can see her Saturdays on "FOX25 News at 10:00" and Sundays on "FOX25 News at 10:00 & 11:00." Sarah joined the FOX25 Weather Team in 2011 as a fill-in meteorologist and environmental reporter.

Sarah enjoys the different approach she is able to take in covering New England's changing weather. She loves the unexpected in her job at FOX25 where no two days are the same. She may be writing and producing a feature story for a newscast in the morning, tracking a storm through the day, and preparing New Englanders with on-air forecasts at night.

Before coming to FOX25 Sarah was a media sales engineer at Weather Services International in Andover, MA. She also worked as a weather programmer at WSI, preparing and creating graphics for television clients across the country as well as appearing on-camera for several twenty-four hour weather channels. Sarah previously worked at WBZ from 2005 to 2010 as a weather producer and then as a weekend morning meteorologist.

Sarah is a graduate of the University of Massachusetts Lowell where she earned her bachelor's degree in atmospheric science, and was captain of the woman's soccer team. While an undergraduate, she was involved in research for NASA's Earth Observing System (EOS) satellites, Aqua and Aura. In 2008, that work was published in the scientific Journal of Molecular Spectroscopy.

Kevin Lemanowicz was the first chief meteorologist for FOX25 News at Ten in 1996, and has guided viewers through all the twists and turns of New England weather for nearly two decades.

Kevin loves the challenge of forecasting the changeable New England weather. A native New Englander, he has had the opportunity to see what a powerful impact weather has on the lives of New England residents.

From severe winter storms to severe thunderstorms in the summer, Kevin's expertise helps bring in-depth forecasting and informed reporting to viewers across the region. Viewers have become used to seeing him day and night during winter storms, choosing meteorology over sleep every time.

Before coming to FOX25, Kevin was chief meteorologist at WTIC in Hartford, CT. He has also worked at the New England Weather Service in Hartford, providing forecasts for private industry and radio stations. Prior to that, Kevin was a staff meteorologist at Fleetweather, Inc., where he tracked storms for radio, schools, private industry and the Weather Channel. Kevin began his career as a meteorologist at WVIT-TV in Hartford, CT.

Kevin is a recognized Certified Broadcast Meteorologist by the American Meteorological Society and has been nominated 14 times for an Emmy for New England's Best Meteorologist. He is a 1991 graduate from Cornell University with a Bachelor of Science degree in Meteorology.

The History & the Mystery behind *The Old Farmer's Almanac*

Janice Stillman
Editor, *The Old Farmer's Almanac*
Dublin, NH

Since 1792, readers have turned to *The Old Farmer's Almanac* for its traditionally 80 percent-accurate weather forecasts. This presentation provides the inside story of North America's oldest continuously published periodical, including the methodology behind the Almanac's long-standing predictions and how it has changed over the years while still staying true to the original formula devised by founder Robert B. Thomas. Presenter and Almanac Editor Janice Stillman will also share stories about how the Almanac's forecasts have shaped history and provide a sneak peek at the Almanac's weather predictions for this winter.

PRESENTER'S BIO:

When **Janice Stillman** joined *The Old Farmer's Almanac* as Editor in 2000, she made history not only as the 13th editor in the book's history, but also as the first female to hold the title.

In her role as Editor, Janice oversees the development of the Almanac itself, the Almanac for Kids, *The All-Seasons Garden Guide*, the Web site Almanac.com, and the Almanac's line of calendars and cookbooks, working closely with writers and other editors to develop new and interesting content for all products on a continual basis. She also consults frequently with the Almanac's weather prognosticator on updates to the annual forecast for *The Old Farmer's Almanac Monthly* magazine.

Raised in Norwood, Massachusetts, Janice earned a degree in English from Fitchburg State and holds a master's in mass communication from Emerson College.

Janice has been interviewed about the Almanac's weather predictions and methodology by a number of national and regional news outlets, including The Weather Channel, CNN, ABC-TV's *Nightline*, *Good Morning America*, and *WSJ Live*, among others.

How Businesses can “Weather the Storm”

Kenneth Otis
CVS Caremark
Woonsocket, RI

As you know, weather is a major part of our lives and it impacts everything we do. We all know we must take personal precautions before, during, and after a storm, and business and industry should also be prepared. Sadly, many small and large businesses in the US and elsewhere are not properly prepared for the aftermath of a storm. Over the years, as a result of significant events such as the San Francisco Bay earthquakes, Hurricane Andrew, Katrina, blizzards such as Nemo, and numerous tornado outbreaks, to name a few, a new profession has evolved, focusing on improving operational resiliency. This new profession has evolved using the lessons learned from natural and manmade catastrophic events to create a business contingency framework that will enable businesses to better prepare for both the unexpected and anticipated weather events, allowing them to sustain, or quickly restore operations, so that they can continue to provide the products and services to their customers. Additionally, there are also new regulatory requirements, international standards, as well as 3rd party and customer demands for improved business contingency programs. This presentation will introduce a basic methodology for “weathering the storm”.

PRESENTER’S BIO:

Kenneth Otis is a Certified Business Continuity Professional with 25 years professional experience and 15+ years of hands-on Business Continuity experience. He spent the first part of his career as an industrial hygiene consultant and the most recent half working with varying industries including Electronics, Pharmaceutical, Insurance and Healthcare industries. He has been responsible for implementing all phases of incident management; emergency response, crisis management, and business continuity. Under his direction these programs have been successfully implemented both domestically and internationally (Americas, Europe and Asia).

Relevant Professional Experience:

- CVS Caremark; Director, Business Continuity Management; 2014 - Present
- Liberty Mutual Insurance; Director, Business Continuity & Physical Security; 2008-2014
- Pfizer Inc; Associate Director, Business Continuity; 2003-2008
- Solectron; Corporate Regional Director of Business Continuity; 2000-2003

Southern New England Wildfire Activity and Fire Weather Forecasting

Dave Celino, Chief Fire Warden
Massachusetts Department of Conservation and Recreation
Boston, MA

Dave will discuss fire history in Southern New England, current trends and the importance of Fire Weather Information sharing throughout the fire community and the public. Dave will briefly discuss wildland fire behavior and the environmental influences, including weather, and talk about the importance of fire weather forecasting and use of prescribed fire.

PRESENTER'S BIO:

Dave Celino is the Chief Forest Fire Warden for the Massachusetts Department of Conservation and Recreation. He received a degree in Forestry and Surveying from Paul Smiths College before embarking on a career in private lands forest management throughout Southern New England, where he eventually started his own Forest Management Consulting business in 1990. He became a Massachusetts Volunteer Firefighter in 1986 and later combined that interest with his Forestry interests when he became a member of the Massachusetts Wildfire Crew in 1994 taking him to almost every western state on fire wildfire assignments until 2007 when he took the reigns as Chief Fire Warden at DCR. He has been Wildland Fire Instructor at academies in both New York and Colorado. He is currently the chair of the Northeastern Fire Supervisors Group, representing the 20 northeastern states in national matters concerning the business of wildland fire.

Storm Chasing - Starting Out and Thrown into the Fire

Quincy Vagell
Freelance Meteorologist / quincyvagell.com
Naugatuck, Connecticut

Many meteorologists and weather enthusiasts dream of going out to the Plains to storm chase. This presentation will look at both the thrills and challenges of getting started with storm chasing. The 2014 severe weather season, aside from a late April outbreak in Dixie Alley, was virtually nonexistent through mid-June. This talk will show how persistence pays off, as a volatile three-day stretch from June 16th through 18th produced several intense, and in some cases historic, tornadic supercells.

PRESENTER'S BIO:

Quincy Vagell is a meteorologist who most recently served the Executive Producer of Weather for WTNH-TV in New Haven, CT up until April 2014. He took off the remainder of the spring and summer seasons to pursue his dreams of storm chasing in the Plains and focus on his ongoing research of severe thunderstorms and other aspects of meteorology.

Quincy served as a student meteorologist for Western Connecticut State University's Weather Center for four years, as he was working on a B.S. degree in Operational Meteorology. Upon earning his degree in 2009, he remained active within the University, returning as a University Assistant and volunteer for the next five years. Quincy was also a meteorologist for AOL Patch from 2010 through 2011, where he provided breaking weather updates leading up to and during Tropical Storm Irene.

He first joined WTNH-TV's Storm Team 8 in the fall of 2011, where he was brought on to help develop their unique website for all things weather, WXedge.com. During his time with Storm Team 8, he served as a Web Meteorologist, was brought on-air for severe weather updates, published over 1,300 articles for WXedge.com and visited schools across Connecticut to educate students about meteorology.

While Quincy is dedicated to weather, he is also passionate about photography and research. Not only is it important for him to chase down a storm, but his goal is to capture the beauty of nature through photos and videos. For research, he has extensively worked on a forecast technique that utilizes 850mb temperatures to predict 2-meter high temperatures. To become a better meteorologist and storm chaser, Quincy believes it is critical to look back at and re-analyze both day-to-day forecasts and severe weather events.

Tornado Chase: Bowdle, South Dakota – May 22, 2010

Dr. Richard Yablonsky & Tracy McCormick
University of Rhode Island
Kingston, RI

During the afternoon of May 22, 2010, our chase team (Dr. Richard Yablonsky, Tracy McCormick, and Michael McCormick), with remote forecasting and logistical support from Hayden Frank, drove north on Highway 83 and then east onto Highway 12 to get into position west of Bowdle, South Dakota. We reached our position around the time of convective initiation of the supercell that eventually produced the EF4 tornado north of Bowdle. We chose this position by revising our earlier model-guided target, which was farther south, as midday surface analyses clearly showed the warm front surging northward through central South Dakota. As we drove northward towards our new target in the early afternoon, the frontal boundary became clear visually as a cluster of fair-weather cumulus clouds (the first clouds we had seen in many hours of driving). It then became a simple matter of positioning ourselves to the northeast of the boundary where we believed that convective initiation would occur, and indeed, the tornado-producing supercell subsequently developed (very quickly) to our southwest once the capping inversion was broken. This supercell moved towards us, producing a sequence of picturesque tornadoes with a variety of visual appearances, evolutions, and propagation speeds/directions. We continued to observe and videotape the tornado sequence, including the EF4 north of Bowdle, with occasional breaks in our observational capabilities as we drove eastward to stay a safe distance ahead of the parent supercell. Eventually, when the mesocyclone (and embedded tornado) had passed completely to our north, we drove westward to escape the developing squall line of merged, tornadic supercells. We believe that this day was our most successful and well-executed storm chase to date.

PRESENTERS' BIOS:

Dr. Richard M. Yablonsky is a Marine Research Scientist at the University of Rhode Island (URI) Graduate School of Oceanography in Narragansett, Rhode Island. Richard was born in Brooklyn, NY and raised in Durham, North Carolina. He earned a B.S. in Meteorology and a B.A. in Chemistry at North Carolina State University (NCSU) in Raleigh, North Carolina in 2002. He then continued his studies at NCSU, where he earned a M.S. in Atmospheric Sciences under the advisement of Professor Gary Lackmann in 2004; for his master's thesis, he investigated the importance of the precipitation mass sink on hurricane intensity. Next, Richard moved to Rhode Island, where he continued his studies at the URI and earned a Ph.D. in

Oceanography under the advisement of Professor Isaac Ginis in 2009; for his doctoral dissertation, he modeled the interaction between hurricanes and ocean eddies.

Under URI grants from NOAA's Hurricane Forecast Improvement Project, the Joint Hurricane Testbed, and the U.S. Navy, Dr. Yablonsky has developed, tested, evaluated, and implemented improvements to the ocean model component (POM-TC) of NOAA's and the U.S. Navy's operational hurricane forecast models (HWRF, GFDL, and GFDN). Dr. Yablonsky is involved with assessing the impact of ocean model initialization, physics, and resolution on the ocean response to hurricane wind forcing, as well as the subsequent hurricane intensity impact. Dr. Yablonsky recently developed a brand new version of POM-TC that runs on multiple computer processors (MPIPOM-TC), which in 2014 was implemented operationally in the HWRF and GFDL hurricane models. Under a URI grant from the National Science Foundation, Richard wrote the hurricane science, modeling, and forecasting content for the educational website *Hurricanes: Science and Society* (hurricanescience.org).

During the past few years, Dr. Yablonsky has helped to advise numerous graduate and undergraduate students on their oceanographic and meteorological research projects, and he regularly teaches short courses, gives educational outreach lectures, and does media interviews on hurricanes, storm surge, tornadoes, thunderstorms, flooding, meteotsunamis, and other meteorologically-based hazards. Last but not least, Dr. Yablonsky is an avid storm chaser, having taken annual storm chase trips to the Midwest nearly every May for the past 14 years.

Tracy L. McCormick was a Hydrologist with the National Weather Service (NWS) Northeast River Forecast Center (NERFC) in Taunton, Massachusetts. Tracy was born and raised in Bellingham, Massachusetts. Tracy earned a B.S. in Meteorology and a B.A. in Mathematics at Lyndon State College in Lyndonville, Vermont in May 2001. She then continued her studies at North Carolina State University (NCSU) in Raleigh, North Carolina, where she earned her M.S. in Atmospheric Sciences under the advisement of Dr. Larry Carey. Her Master's research focused on three-dimensional radar and lightning characteristics of Mesoscale Convective Systems.

During her college career, Tracy participated in various summer meteorological internships, including WPRI-TV 12 in Providence, Rhode Island, Weather Services International (WSI) in Billerica, Massachusetts, Science Applications International Corporation (SAIC) in Hampton, Virginia, and the Research Experiences for Undergraduates (REU) at the National Severe Storms Laboratory (NSSL) in Norman, Oklahoma. Perhaps the most life-changing internship was the REU, where not only did Tracy catch the

storm chasing 'bug,' but she also met her future husband, Richard M. Yablonsky, a fellow REU participant that summer!

After graduating with her M.S. Degree from NCSU, Tracy began her NWS Career as a Meteorologist Intern at the Taunton, Massachusetts Weather Forecast Office. In May of 2006, Tracy was promoted to a Hydrologist at the co-located NERFC. Along with her husband, brother, and co-worker (NWS Taunton Senior Forecaster, Hayden Frank), Tracy takes almost yearly storm chase vacations to the Midwest to pursue her passion for chasing storms.

It's Never Too Cold to Ski

Tom Horrocks
SnoCountry Ski Areas Association
Lebanon, NH

Weather is the lifeblood of the New England Ski Industry. During the winter months, ski area operators and meteorologists are partners at many levels. The ski areas rely on accurate forecasting for scheduling snowmaking operations, staffing of personnel and predicting anticipated skier/snowboarder attendance. Ski areas and the mountain environments also provide ideal locations for meteorologists to use for informative weather-related stories on how to dress appropriately; unique outdoor jobs; the science of snowmaking; and snow grooming technology just to name a few. Two-way communication between the New England meteorology community and the ski industry is critical so both sides have a clear understanding of how the weather information is presented to the public to make factual and safe decisions on how they may wish to spend their leisure time during the winter. Representatives of the New England Ski Industry will be on hand to begin a dialogue to help forge an even stronger tie between both groups in the future.

PRESENTER'S BIO

Tom Horrocks has been working in and around the ski and snowboard industry for more than 24 years. His experience includes both the journalistic and public relations side of the business as both a reporter and resort public relations representative. In addition, Tom worked for the U.S. Ski Team in events and public relations, and the Salt Lake Organizing Committee for the 2002 Olympic Winter Games. Tom is the Marketing Communications Director for SnoCountry Ski Areas Association, which distributes snow conditions, mountain weather, events and general ski resort information to thousands of media outlets daily. Originally from Colorado where he learned to ski at Loveland, Winter Park and Arapahoe Basin, Tom now calls Vermont home with his wife Meg and two daughters, who participate in Alpine racing programs through the Pico Ski Club.

2014 Media Panel

Harvey Leonard
News Chanel 5 (WCVB)
Needham, MA

Harvey Leonard is WCVB-TV Channel 5's chief meteorologist. He joined the station in 2002 as Storm Team 5's co-chief meteorologist with his longtime friend Dick Albert, who retired in 2009. Leonard forecasts for NewsCenter 5's early evening and late newscasts, as well as the station's website, www.WCVB.com.

Leonard has worked as a meteorologist in New England for 40 years. Prior to joining WCVB, Leonard served as chief meteorologist for WHDH-TV from May 1977 to April 2002. He also served as chief meteorologist at WPRI-TV in Providence, RI. Leonard began his forecasting career as a meteorologist for Universal Weather Services, Inc, preparing forecasts for aviation and industry.

Widely regarded as one of Boston's top meteorologists, Leonard and Albert were honored by the Associated Press in 2005 for Best Weathercast in New England. In 2003, Leonard was recognized with the Silver Circle Award from NATSNE (National Academy of Arts and Sciences New England Chapter) for more than twenty-five years of broadcast excellence. He was the 1999 winner of the prestigious "Award for Outstanding Service by a Broadcast Meteorologist" from the American Meteorological Society. In addition, Leonard earned four New England Emmy Awards for outstanding achievement in television weathercasting, and he has been named "Best Meteorologist" by Boston Magazine four times. In addition, he has been dubbed the Hub's "favorite forecaster" by the Improper Bostonian. Leonard is a Fellow of the American Meteorologist Society and is credited as the first meteorologist to correctly predict the impact and intensity of the Blizzard of '78.

An active member of the community, Leonard is involved in numerous local organizations including the Huntington's Disease Society of America, for which he participates in annual fundraisers to help find a cure while providing support and services for those living with the disease and their families. For several years running, he has lent his time and talent to the Walk to End Alzheimer's event as co-master of ceremonies, and he has served as master of ceremonies for Boston Prostate Cancer Walk.

Leonard has also lent his support to Boston Medical Center, the primary teaching affiliate for the Boston University School of Medicine. Additionally,

he has been a speaker at educational seminars held by the Massachusetts Emergency Management Association and an avid supporter of the Blue Hill Weather Observatory. Leonard has also served as an honored guest speaker at Harvard Business School and the Massachusetts Institute of Technology (MIT).

Over the years, Leonard has visited and spoken to hundreds of school and adult groups. He has been a mentor to numerous aspiring meteorologists and today more than a dozen of his protégé serve as on-air meteorologists in markets across the country.

Leonard received a Bachelor of Science degree in meteorology from City College of New York and earned a Master of Science degree in meteorology from New York University, where he also served as an instructor in meteorology.

Leonard is an avid tennis player and enjoys hiking trails, particularly around Walden Pond and Woods Hole. He currently resides in Natick, MA, with his wife. They are the proud parents of two daughters and are grandparents to three beautiful grandchildren.

Kevin Lemanowicz
Fox 25 Television (WFXT)
Dedham, MA

Kevin Lemanowicz was the first chief meteorologist for FOX25 News at Ten in 1996, and has guided viewers through all the twists and turns of New England weather for nearly two decades.

Kevin loves the challenge of forecasting the changeable New England weather. A native New Englander, he has had the opportunity to see what a powerful impact weather has on the lives of New England residents.

From severe winter storms to severe thunderstorms in the summer, Kevin's expertise helps bring in-depth forecasting and informed reporting to viewers across the region. Viewers have become used to seeing him day and night during winter storms, choosing meteorology over sleep every time.

Before coming to FOX25, Kevin was chief meteorologist at WTIC in Hartford, CT. He has also worked at the New England Weather Service in Hartford, providing forecasts for private industry and radio stations. Prior to that, Kevin was a staff meteorologist at Fleetweather, Inc., where he tracked storms for radio, schools, private industry and the Weather Channel. Kevin began his career as a meteorologist at WVIT-TV in Hartford, CT.

Kevin is a recognized Certified Broadcast Meteorologist by the American Meteorological Society and has been nominated 14 times for an Emmy for New England's Best Meteorologist. He is a 1991 graduate from Cornell University with a Bachelor of Science degree in Meteorology.

Steve Cascione
ABC6 Rhode Island (WLNE)
Providence, RI

Native Rhode Islander **Steve Cascione** graduated from the University of Rhode Island with a BA in Geography and Meteorology. He briefly attended MIT, taking graduate classes in weather forecasting.

In 1978, Cascione moved to State College, Pennsylvania, and began work for Accu Weather as a Forecast Meteorologist. In 1980, he moved back to Rhode Island to work for WLNE TV-6. He began a weather consulting business called Ocean State Weather, which he still runs. Steve holds the Broadcast Seal of Approval from the AMS.

In February 2002, after 22 years at WLNE, Steve moved to WPRI 12 and WNAC FOX Providence for five years. He is now happy to be back at ABC6, and can be seen weekdays from 5-7 AM and at Noon.

Steve covered Hurricane Gloria in 1986, Hurricane Bob in 1991, and all the major snowstorms to hit Southern New England over the last 28 years. He also hosts a news segment entitled Eat Well, a cooking show featuring local chef Walter Potenza's' recipes. This segment can be seen on ABC 6 at noon on Wednesday's. Steve Also hosts Pick of the Litter each Tuesday at noon too. .

In November 2006, Steve was given the Silver Circle Award by the New England Chapter of the National Television Academy. The Silver Circle recognizes individuals who have made significant contributions to television over 25 years or more.

Steve celebrated 34 years of television broadcasting in May 2014, 29 of them right here at ABC6.

Steve and his family live in Rhode Island.

Eric Fisher
WBZ-TV
Boston, MA

Eric Fisher is the Chief Meteorologist for WBZ-TV in Boston. Eric is also the main weather correspondent for CBS News - covering national weather stories when severe weather impacts the U.S. Originally from Southwick in Western Massachusetts, he was drawn into the world of weather by events like the March 1993 Superstorm, the Great Barrington tornado of 1995, and the Blizzard of 96. He received a degree in Atmospheric Science from SUNY Albany, and spent several years covering severe weather around the nation for the Weather Channel - including several major blizzards, the tornado Superoutbreak, Moore, Oklahoma, and hurricanes such Sandy, Irene, and Isaac. Yes, Jim Cantore is as awesome and intense as he seems. If you use twitter, hit Eric up! Actively attempting to get weather information out online, Eric is the most followed Meteorologist in New England.

Nick Morganelli
CBS3 Springfield
Springfield, MA

Nick Morganelli, a New England native, wanted to be a broadcast meteorologist since age 5. He realized that dream graduating from Lyndon State College in Vermont with a B.S. Degree in Meteorology in 1991. A member of the American Meteorological Society since 1986, Nick holds their AMS Seal of approval for broadcasting excellence. He celebrated his 25th year broadcasting New England weather in 2012 and was recently recognized as 'Best TV Personality' for 2013 from the Massachusetts Broadcasters Association.

Nick's broadcasting career has taken him to every state in New England except Rhode Island. He began in Vermont in 1987, and then found freelance work in New Hampshire and Maine. Landing full time employment at WMUR in NH didn't last long before Nick accepted an offer as chief meteorologist at WWLP where he worked from 1996-2002. While there, he visited countless schools and civic organizations with his weather presentations and was voted best weathercast by his viewers.

Nick taught the first in-class introductory course in Meteorology in 2006 as an adjunct professor at Holyoke Community College. He's also taught secondary science part time at Community Christian School in Westfield. Nick owns and operates an internet-based business and because of his recent interest in government, he ran for public office in 2007, and served two terms as City Councilor At-Large in his hometown of Westfield. Nick has served on the

Board of Directors for the American Lung Association of Massachusetts from 1998 - 2013

Nick and his wife Jeanne celebrated their 16th wedding anniversary in Sept. of 2014. They have 4 home-schooled children, three boys and a girl grades 2 to 10. They reside in Westfield and worship at Our Lady of the Blessed Sacrament where he is involved with the parish youth. Since 1986, he has been a staff member for a week-long Catholic Christian camping retreat for teens.

Nick's favorites? Color is aqua blue, animal is the humpback whale, and food is fruit salad, home-made pesto and sun dried tomato pizza, chocolate chip ice cream, a garden tomato; Well, he's half Italian, and he can't pick just one food of course. He loves hot air balloons, roller coasters, and the beach. What's his take on climate change? You'll have to ask him yourself. There's not enough space here to talk about it.

Nick says: "I'm ecstatic to be back on-air serving the people of Western Massachusetts with my weather forecasting ability and I look forward to reconnecting with them."

Brian Lapis
22News (WWLP)
Springfield, MA

Brian Lapis joined the 22News Storm Team in September of 1996. He can be seen on 22News each weeknight starting at 5pm.

Brian got his start in broadcasting at the age of 15 at radio station WILI, in his hometown of Willimantic, CT. He's worked as a radio on-air talent for KISS 95.7 in Hartford, CT; WIOQ in Philadelphia, PA; WYYY and WJPZ in Syracuse, NY; and WPRO-FM in Providence, RI.

Brian has a Bachelor's degree in Television Radio Film Management from Syracuse University. In addition he holds a certificate in Broadcast Meteorology from Mississippi State University.

It wasn't all work and no play for Brian at Syracuse University. In his senior year, he was "Otto The Orange," the mascot for the basketball and football teams!

In 2000 and 2007, Brian, along with the 22News Storm Team, was awarded the Massachusetts & Rhode Island Associated Press award for best weathercast. He also has earned the National Weather Association Broadcast Seal of Approval.

When he's not at 22News, Brian is out in the community, talking to dozens of school groups and civic organizations each year about weather, climate and television news. An advocate for broadcasting in the public interest and media justice, Brian is chair of the board of directors of the Office of Communication Inc. of the United Church of Christ. He is a long time, active member in the UCC.

Brian loves living in western Massachusetts! Brian and his twin daughters can be seen hiking at The Notch and Mt. Holyoke, biking on the Norwottuck Rail Trail, skiing in the Berkshires, buying local food from local farmers and eating at our fabulous local restaurants!

Fifteenth Annual Southern New England Weather Conference

Quality Critique

We need your input to determine the level of success of the Fifteenth Annual Southern New England Weather Conference. Please answer the following questions, on a scale from 1 to 5 (circle the number):

Note: If you would like to be contacted by someone on the Conference Committee, please leave your name and phone number here: _____

1. How beneficial did you find the Fourteenth Annual Southern New England Weather Conference?

1 2 3 4 5
Not Beneficial Fairly Beneficial Very Beneficial

2. How would you rate the Canton MediTech, Inc. conference facility?

1 2 3 4 5
Poor Fair Excellent

3. In general, how would you rate the quality of the speakers?

1 2 3 4 5
Poor Fair Excellent

4. How would you rate the continental breakfast?

1 2 3 4 5
Poor Fair Excellent

5. How would you rate the lunch buffet?

1 2 3 4 5
Poor Fair Excellent

6. How did you hear about this year's conference? Check all that apply.

- | | |
|--|--|
| <input type="checkbox"/> NWS website | <input type="checkbox"/> Emergency Mgmt announcement |
| <input type="checkbox"/> NWS Facebook | <input type="checkbox"/> Word of Mouth |
| <input type="checkbox"/> NWS Twitter | <input type="checkbox"/> Conference website |
| <input type="checkbox"/> Blue Hill Observatory website | <input type="checkbox"/> Teacher organization |
| <input type="checkbox"/> Blue Hill Observatory newsletter | <input type="checkbox"/> Eastern U.S. Weather Forum |
| <input type="checkbox"/> Email from conference committee (attended previously) | <input type="checkbox"/> U-Mass Lowell |
| <input type="checkbox"/> NOAA Weather Radio | <input type="checkbox"/> Amateur radio announcements |
| <input type="checkbox"/> TV station – please specify which _____ | <input type="checkbox"/> Other ... please specify: |

Cont'd on back →

7. a) When deciding whether to come to the conference, which sessions interested you the most?

b) Did they live up to your expectations?

8. Please rank from 1 to 4 (1 = best), the top 4 talks that you attended:

1. _____
2. _____
3. _____
4. _____

9. What did you like most about the conference?

10. What did you like least about the conference?

11. Was it a good value for the price?

12. Please supply us with any suggestions for making the conference better. Any other facilities that you'd like to suggest for future locations of the Southern New England Weather Conference?

13. Would you come back for another conference? YES or NO

14. In the future, would you be interested in having a tour of the Blue Hill Observatory as part of the conference – in lieu of some of the talks (ie., either have a breakfast there and start conference at 10 AM... or end the conference earlier and have an evening event at Blue Hill)?

YES or NO Comments:

15. For statistical purposes, please provide the following:

Occupation:

City, State:

Thank you very much for taking the time to fill out this form and thank you for attending this year's conference!!! PLEASE RETURN THIS FORM TO THE REGISTRATION DESK.