THE FOURTEENTH SOUTHERN NEW ENGLAND WEATHER CONFERENCE

OCTOBER 26, 2013

Medical Information Technology, Inc. (MediTech)

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Blue Hill Observatory Science Center

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UMass-Lowell Student Chapter of the American Meteorological Society

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Foreword

Welcome to the Fourteenth 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 focusing a lot of talks about Superstorm Sandy from 2012. However, we will also cover a wide variety of subject areas, including the 1938 hurricane, blizzards, tornadoes, risk management, decision support services, and some good information for teaching weather in the classroom.

Superstorm Sandy affected New Jersey, New York, and the coasts of CT, RI, and MA. We will hear what it was like to be a forecaster in the New York City (Upton) National Weather Service Forecast Office. We will again hear from the local Emergency Management Director of East Haven, CT. He spoke at the last weather conference about how his town survived Tropical Storm Irene. On the day of the conference, he had to leave to help evacuate his town for Sandy – he will compare and contrast the two storms. A TV meteorologist from Ocean City will share his views about the Sandy warning process and why he feels that many along the Jersey shore were unprepared. The Meteorologist In-Charge of the Taunton, MA Forecast Office will show storm survey images of damage along the Rhode Island coastline that resulted from Sandy.

An interesting topic never before discussed at our conferences has to do with risk management. A representative of the banking industry will discuss crazy stories that have occurred…from all types of severe weather…that had direct impacts on that industry and discuss what kinds of preparations are needed. A study was done that examines radar characteristics of significant Northeast U.S. tornadoes and those results will be presented. Last year, lightning forced the evacuation of the Esplanade just minutes before the Boston Pops Fireworks Spectacular was to go live on national tv. NWS-Taunton was at the command center and was instrumental in the process. The NWS will discuss this and other decision support services. David Mugar is expected to be on hand to answer audience questions, as well. There will be two talks specifically geared toward weather educators…one that gives resources that are available and the other that delves into the molecular level of the atmosphere. A professor at Plymouth State University will review new research about the 1938 hurricane, as detailed in her newly published book “Taken By Storm.” The program will end with a dynamic duo – tv meteorologists Harvey Leonard and Matt Noyes will compare the Blizzard of 1978 and the Blizzard of 2013 – should be a blast!

Once again, there will be a delicious continental breakfast and a fantastic hot lunch buffet (yum!), provided by Rita’s Catering.

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,

<u>The Fourteenth Southern New England Weather Conference Organizing Committee:</u>

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	Foyer / Commonwealth Rm.	TOPIC
7:30 - 8:20	50 min	REGISTRATION (Lobby) BREAKFAST (Atrium) BREAKFAST WITH MATT (Weather Briefing - Foyer)		BREAKFAST & WEATHER BRIEFING
8:30 - 8:45	15 min	**Welcoming Remarks** Glenn Field (National Weather Service-Taunton, MA) Charles Orloff (Blue Hill Observatory Science Center - Milton, MA)		
8:50 - 9:20	30 min	**WSR-88D Characteristics of Significant Tornadoes in New York and New England** Lance Franck and Hayden Frank University of Massachusetts - Lowell / NWS - Taunton, MA		TORNADOES
9:25 - 9:55	30 min	**Devastated Dunes - Sandy's Swipe at the Rhode Island Coast** Robert Thompson NWS - Taunton, MA		SUPERSTORM SANDY Oct. 29, 2012
10:00 - 10:30	30 min	**Irene and Sandy: Reflections of a First Responder** Douglas Jackson East Haven, CT Fire Chief		
10:30 - 10:55	25 min	BREAK	PERSONAL Q/A WITH SPEAKERS (@ Commonwealth Room)	BREAK / Q & A
11:00 - 11:40	40 min	**Hurricane Sandy (2012): A Coastal Catastrophe in the Northeast U.S.** Dr. Nicholas Coch Queens College/C.U.N.Y - New York City, NY		SUPERSTORM SANDY Oct. 29, 2012
11:45 - 12:15	30 min	**Why Many Along the Jersey Shore Were Unprepared for Hurricane Sandy** Dan Skeldon WMGM-TV 40 - Ocean City, NJ		
12:15 - 1:20	65 min	LUNCH (in Atrium)		LUNCH
1:25 - 2:05	40 min	**A Review of NWS New York, NY's Sandy Operations** Gary Conte National Weather Service - Upton, NY		SUPERSTORM SANDY Oct. 29, 2012
2:10 - 2:40	30 min	**The Banking Industry and Severe Weather** David Sidon The Navis Group, Gloucester, MA	**Weather at Your Fingertips - Presenting Weather in Classroom** Eleanor Vallier-Talbot NWS - Taunton, MA (@ Foyer)	RISK MANAGEMENT; EDUCATION
2:45 - 3:15	30 min	**NWS Boston - Keeping Service in Weather** Stephanie Dunten (David Mugar available to answer questions) NWS - Taunton, MA and Mugar Enterprises	**How Heat Transfer and Density Drive Currents** Laura Schofield Ipswich, MA Middle School (@ Foyer)	DECISION SUPPORT ; EDUCATION
3:15 - 3:40	25 min	BREAK	PERSONAL Q/A WITH SPEAKERS (Commonwealth Room)	BREAK / Q & A
3:45 - 4:15	30 min	**75 Years After the Great New England Hurricane** Lourdes B. Avilés Plymouth State University - Plymouth, NH		HURRICANES
4:20 - 5:05	45 min	**Comparing the Blizzards of 1978 and 2013** Harvey Leonard and Matt Noyes WCVB-TV 5 Boston, MA and NECN TV - Newton, MA		WINTER STORMS

A Review of NWS New York, NY's Sandy Operations

Gary Conte
National Weather Service
Upton, New York

Meteorologically, Sandy was a "complex" storm to describe and to effectively communicate historic storm surge impacts across the local Tri State area covering northeast New Jersey, Southeast New York, and Southern Connecticut. A comprehensive review of both the routine and decision support services leading up to, during, and following Sandy will be presented by the National Weather Service (NWS) New York, NY Office. Topics will include how key information was provided to decision makers, how well the actual impacts compared to the forecast, and how we can improve service for future storms.

PRESENTER'S BIO:

Gary Conte has worked as a Meteorologist for the National Weather Service (NWS) since 1979, for more than 34 years! Since 1993, he has held the position of Warning Coordination Meteorologist at the NWS New York, NY Office in Upton, at Brookhaven National Lab on Long Island. Gary manages the local warning and service programs for more than 18 million people. This includes advance notifications to and coordination with key customers and partners of potential high impact weather events that require preparation to save lives, protect property and enhance the national economy. As the local NWS Customer Service Representative, Gary is the "main" contact for Outreach. He also serves as a liaison to the local media and works forecast shifts.

Hurricane Sandy (2012) – A Coastal Catastrophe in the Northeast U.S.

Nicholas K. Coch PhD., C.P.G.
School of Earth and Environmental Sciences
Queens College – C.U.N.Y.
New York City, NY

Although Hurricane Sandy was only a Category 1 storm, its immense wind field, turn to the west and the poor mitigation practices in the region enabled it to cause unprecedented damage along the coasts of New Jersey and New York. Loss of power, fuel supplies, flooding of road and mass transit facilities and business interruptions brought parts of the most heavily populated and developed urban coastal region in the U.S. to a standstill.

A combination of meteorological and oceanographic factors, along with minimal shore protection, amplified the damage. As the storm turned to the west, strong winds, high waves and high surge levels devastated *both* the coasts of New York and New Jersey. Because of the Sandy's coast parallel track its effect on Long Island were different from the typical Northeast hurricane.

This talk reviews the unique dynamics of the storm, why it was able to do so much damage in an urban center, the state of our shore protection facilities and the price we paid for our coastal development and management policies. The talk concludes with a discussion of realistic hurricane damage prediction and scenarios that would have made Sandy's damage even worse.

PRESENTER'S BIO:

Nicholas K. Coch received his Ph.D. in 1965 from Yale University with a specialization in sedimentology and coastal geology. He is now a Professor of Geology in the School of Earth and Environmental Sciences at Queens College of C.U.N.Y. and in the PhD program at the Graduate Center of C.U.N.Y. He has co-authored two college geology textbooks (PHYSICAL GEOLOGY) and is the author of GEOHAZARDS (Prentice Hall). His research studies since 1967 have included sedimentation on the Moon, shipboard studies of coastal and continental shelf areas, and ground and aerial studies of the effects of hurricanes on coasts and in urban centers. He has carried out ground and aerial studies of most recent hurricanes as well as forensic studies of older (16th – 20th century) hurricanes.

He is a Fellow of the Geological Society of America and a Member of the American Meteorological Society, Society of Sedimentary Geologists, National Association of Geology Teachers, American Association of Petroleum Geologists, and is a Certified Professional Geologist.

Dr. Coch is an expert on Northern Hurricanes and has been a consultant to the N.Y. City Emergency Management Organization and the N.Y.S. Office of Emergency Management. He has presented hurricane seminars to emergency management and government officials in every county in southern New York as well as insurance, reinsurance and risk management groups nationwide. In 2003, he was chosen as a Sigma Xi Distinguished Lecturer for 2004-2007, and presented lectures on his research at educational and research facilities in the U.S. and Canada.

Programs discussing his research have aired on the Weather, Discovery, National Geographic, and History Channels. Aspects of his research have been included in local, national and international print media. In 2008 he received the President's Award for Teaching Excellence at Queens College, and the John Moss Award for Excellence in College Teaching from the National Association of Geology Teachers.

Irene and Sandy: Reflections of a First Responder

Douglas Jackson
East Haven Fire Department
East Haven, CT

This presentation will discuss some of the damage that was incurred in one community during each of the two storms (Irene and Sandy) and compare and contrast the differences between them. It will also touch on some of the mitigation measures that were in different phases during Irene and the results post-Sandy as well as compare them to structures that were repaired but not mitigated between the storms. Finally it will make a brief statement as to the importance of limiting regulatory delays during projects and some of the events that follow.

Note: ***Mr. Jackson spoke at last year's Southern New England Weather Conference (about Irene) and then had to quickly leave to help evacuate his town for Sandy!***

PRESENTER'S BIO:

Douglas F. Jackson is the Fire Chief and Emergency Management Director for the Town of East Haven Connecticut. He was the 2012 recipient of the Emergency Manager of the Year Award by the Northeast States Emergency Consortium (NESEC) for CT in regards to his command of first responders after T.S. Irene and efforts for the town and homeowners receiving assistance from the state and FEMA in the months that followed the storm. He has been previously recognized for his leadership of local forces responding to ground zero at the World Trade Center in NY on 9-11, and was chosen by former CT Governor Rell to represent CT at the five year anniversary ceremony held there. Chief Jackson has over 29 years of career service to the EHFD, is a state licensed fire inspector, EMT, is Vice-President of the CT Career Chiefs Association, and holds an AS in Fire Science from Naugatuck Valley Community Technical College.

Devastated Dunes – Sandy's Swipe at the Rhode Island Coast

Robert Thompson
National Weather Service
Taunton, MA

Sandy, a hurricane transitioning into a post-tropical storm, devastated portions of the Rhode Island south coast, and for some, brought back memories of hurricanes from decades ago. This presentation will take a look at the impact Sandy had on Misquamicut Beach and then inquire into why the Rhode Island shoreline suffered such a major impact from a storm centered so far away. The presentation will also look at National Weather Service resources that exist now and are being developed to help people prepare and respond to such storms.

PRESENTER'S BIO:

Bob Thompson is the Meteorologist-in-Charge of the Southern New England National Weather Service Forecast Office in Taunton, MA. He is also an adjunct professor at Anna Maria College. Bob grew up in Cohasset, Massachusetts. He received a Bachelor of Science in Meteorology from Florida State University and a Masters Degree in Atmospheric Science from the University of Washington (in Seattle). Bob's career with the National Weather Service started as a summer student trainee at the Boston office during the early 1970s. Subsequent National Weather Service assignments have taken him and his family to Albany, NY, Anchorage, AK, Silver Spring, MD, and Reno, NV before returning to the Boston area in November 1989. Bob is a widower with two grown sons, a lovely daughter-in-law, and two young grandchildren (3 ½ years old and almost 1 year old).
He resides in Westborough, MA.

Why Many Along the Jersey Shore Were Unprepared for Hurricane Sandy

Dan Skeldon
NBC-40 WMGM
Linwood, New Jersey

For the second time in as many years, a tropical system made landfall along the Southern New Jersey coastline, but not a hurricane. In August of 2011, hurricane warnings were posted as Hurricane Irene churned up the East Coast, making landfall just north of Atlantic City on August 28th. Upon further analysis, Irene was later downgraded from a hurricane to a tropical storm at the time of landfall. Fourteen months later, Hurricane Sandy paralleled the United States East Coast in late October of 2012. No hurricane warnings were posted north of the Carolinas and during the evening of October 29th, Sandy made landfall around Atlantic City as a "post-tropical" storm, being downgraded from a hurricane just one hour prior to landfall.

The New Jersey coast had not seen a landfalling hurricane since 1903 and, technically, that distinction still stands since neither Irene nor Sandy were hurricanes at time of landfall. Irene largely spared the Jersey shore its worst devastation, as folks to the north over New England and points south over Virginia and North Carolina were much more significantly impacted. Sandy, however, made the Jersey shore points north towards the New York City metro area ground zero for catastrophic destruction. Sandy was a tropical system for 168 of the 169 hours it was over water before its New Jersey landfall, most as a hurricane. And it was a hurricane up until one hour before its final landfall, yet no hurricane warnings were issued. Sandy brought the winds of a Category 1 hurricane and storm surge of a Category 3 hurricane to an area that had not seen a storm of this magnitude in more than a generation.

While forecasted impacts from both the National Hurricane Center and National Weather Service Regional Offices were stellar, the public was unprepared and underestimated the wrath of Sandy. The lack of warnings was certainly an issue, as was the lack of understanding of storm surge both by the public and public officials. The Mayor of New York City proclaimed that Sandy would not be as bad as Irene and the Mayor of Atlantic City opened shelters on a barrier island, which promptly flooded and had to be evacuated.

As Chief Meteorologist of NBC40, Dan Skeldon worked the 96 hours leading up to, during, and following Sandy's landfall 10 miles from the NBC40 television studios in Linwood, New Jersey. An analysis of the storm, the lack of warnings, the public's misconceptions, and what we learned from Sandy will be discussed.

PRESENTER'S BIO:

Dan Skeldon immediately aspired to become a weatherman when Hurricane Gloria affected his home state of Rhode Island. So after transforming his bedroom into a makeshift weather center and providing his first weather forecasts over the intercom at Cumberland, RI high school, Dan earned a degree in Meteorology from Cornell University in Ithaca, NY.

Dan got his start in the world of broadcast meteorology in 1998, forecasting frequent snowstorms as the morning meteorologist for WLUC-TV6 in Michigan's Upper Peninsula. He then continued his snowbound television career as the weekend and then the chief meteorologist for WVNY-TV ABC22 in Burlington, Vermont. Dan came to NBC40 in December of 2003, spending the last decade predicting the sometimes fickle, sometimes frustrating, occasionally humbling, and always challenging world of South Jersey weather. Dan earned the American Meteorological Society (AMS) Seal of Approval for Broadcast Meteorologists in 2003.

The tumultuous times of late, highlighted by Hurricanes Irene and Sandy as well as our June 2012 derecho reinforce Dan's passion for weather forecasting, and energize his desire to better increase preparedness in advance of all potentially destructive and deadly weather events. To that avail, Dan works with local, county, and state emergency management offices throughout the year. Dan has spoken at weather conferences and on panel discussion at all levels, from Ocean City and Cape May County local emergency preparedness conferences to the National Hurricane Conference in New Orleans, Louisiana in March 2012.

Dan loves to bring the fascinating world of weather to South Jersey kids, as he has visited hundreds of classes and dozens of schools across the area, and also leads group tours of the NBC40 studios.

WSR - 88D Characteristics of Significant Tornadoes in New York and New England

Lance Franck
University of Massachusetts
Lowell, Massachusetts

Hayden Frank
NOAA / National Weather Service
Taunton, MA

In the seventeen year period between 1995 and 2011, 38 significant (F2/EF2 or greater) tornadoes occurred over the New York – New England area, resulting in 7 fatalities and 421 injuries. Since the mid-1990s, the WSR-88D has revolutionized the way in which operational meteorologists detect tornadoes. For each event, WSR-88D Level II (high resolution) data were used to analyze radar reflectivity and storm relative velocity signatures associated with these tornadoes. The findings of this study could aid operational forecasters in identifying radar characteristics of significant tornadoes, possibly leading to enhanced wording in tornado warnings.

PRESENTERS' BIOs:

Lance Franck is a native of Westfield, Massachusetts and can trace his interest in meteorology back to at least the age of eight. He completed a B.S. in Environmental Science at the University of Massachusetts - Lowell, and also interned at the NWS-Taunton Office. Part of Lance's internship involved completing a research project on significant tornadoes with senior forecaster Hayden Frank. Lance currently resides in the Boston area, and is pursuing a Master's degree in civil and environmental engineering.

Hayden Frank is a senior meteorologist with the National Weather Service in Taunton, MA. He is the Doppler Radar, Fire Weather, and Marine Program Leader at the office. He also works on various other programs, including StormReady, research, and many different outreach projects.

Hayden was born in Philadelphia, PA and always had a love for meteorology from a very young age. He graduated from the Pennsylvania State University in 1998 with a Bachelor's Degree in Meteorology. After graduation, Hayden

accepted a temporary job with the National Weather Service in Tulsa, OK. Six months later, he became a permanent National Weather Service employee with the office in Wichita, KS before transferring to Taunton in 2003. Hayden loves all kinds of weather, but always had a special interest in snowstorms, so living in New England is a perfect fit for him. In November 2008, he married Sara Vecchio Frank in Cassenovia, New York. The couple, with their 3 year-old son, resides happily in Westborough, Massachusetts.

The Banking Industry and Severe Weather

David B. Sidon, CPA
The Navis Group
Gloucester, Massachusetts

Dave will tell us how banks prepare for and are impacted by severe weather events. Over the past few years in the Northeast, banking has been disrupted by hurricanes, floods, ice storms and blizzards. Dave works with banks to prepare for such occurrences and has lots of stories to share. He has staged disasters as exercises for banking association programs as well as scenarios for individual banks. The National Weather Service has helped Dave with this "theater" in Massachusetts, Connecticut, and Maryland. For example, did you hear about the bank branch that crashed into the pizza parlor downstream? You can't make this stuff up ……

PRESENTER'S BIO:

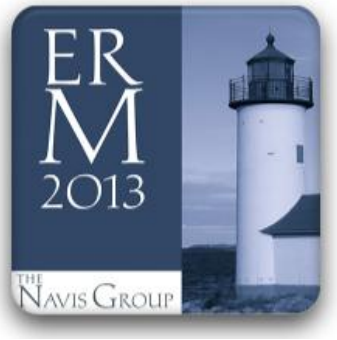
David Sidon's consulting group provides consulting services to financial institutions for organizational, management and technology compliance issues. His thirty years of business experience include public accounting and many facets of financial institution management.

He is a 1975 graduate of Merrimack College, majoring in accounting. Certified by the Commonwealth of Massachusetts in 1978, he went on to attain a Master's degree in finance from Bentley College in 1986. Mr. Sidon is the former president of Gloucester Cooperative Bank and served as Gloucester Bank & Trust's data center manager.

Mr. Sidon is a regular contributor to various banking association publications, and has facilitated day-long seminars for Mass. Bankers, CT Bankers, NY Bankers, Kentucky Bankers and Maryland Bankers, as well as serving as a faculty member for CT Bankers' School for Financial Management.

Mr. Sidon is the author of ERM2013, an IPad-based textbook/resource providing enterprise risk management information for financial institutions.

THE NAVIS GROUP



Weather at Your Fingertips – Presenting Real Time Weather in Your Classroom

Eleanor Vallier-Talbot
National Weather Service
Taunton, MA

So, you do a web search for "weather," and what do you get? You receive literally billions of results from just that one word. But what do you really need to communicate in your classroom? Do you want to do an in-depth study of weather? Or, do you want to use weather as a catalyst to spark an interest in science for your students and engage them in your curriculum?

This presentation will give you a little snippet of current weather information, such as near real time radar and satellite information as well as forecasts, provided by the National Weather Service Forecast Office in Taunton on the Internet. You will see how you can create your own forecast shows, using data you can easily find. You will also learn about a new website that will be fun and educational to help your students learn how to prepare for different types of adverse weather conditions.

Knowing how important it is for you to understand the material that you will present to your students, there is a great website where you can take online classes to learn about a wide variety of weather topics. A listing of websites that will help you bring weather to your classroom will also be provided.

PRESENTER'S BIO:

Eleanor Vallier-Talbot has been a meteorologist with the National Weather Service since 1985, serving at the Taunton forecast office from 1993-98 and again since 2001. She has also worked at NWS offices in Providence, Rhode Island; Portland, Maine and Charleston, South Carolina. Prior to her NWS career, she worked as weekend observer at the Blue Hill Observatory.

Eleanor has served on the Outreach Team at NWS Taunton since her first work assignment in 1993. She has visited numerous schools, scout troops, civic and philanthropic organizations, and has presented at regional and national education and meteorological conferences. For her work with the American Meteorological Society's DataStreme Atmosphere Project, she became a Weather Education Resource "Teacher." She is the Satellite Program Leader for the office, and assists with SKYWARN spotter training

and marine weather programs. She also serves as Co-Chair of the National Weather Association Education Committee.

Eleanor attended the University of Lowell (now the University of Massachusetts at Lowell) for two years before transferring to Lyndon State College, where she received her Bachelor of Science degree in Meteorology in 1982. She resides in Taunton with her husband Dean and their two kitties, Christy and Ollie.

NWS Boston – Keeping Service in Weather

Stephanie Dunten
National Weather Service
Taunton, Massachusetts

In 2004, NWS Boston provided on-site support for federal/state/local customers at the National Democratic Convention. Fast-forward to 2012 where NWS Boston once again provided on-site support during the War of 1812 Commemoration and the July 4th Esplanade Concert and Fireworks Spectacular held in Boston. This nationally-televised event provided an opportunity to showcase the importance of Decision Support Services with respect to public safety, as an evacuation call was order due to an approaching thunderstorm. This talk will focus on NWS Taunton's push towards Decision Support Services as well as some recent on-site events including: the Boston Marathon, Boston Pops Concert and Firework Display on July 4th 2012 & 2013, and the War of 1812 Commemoration.

PRESENTER'S BIO:

Stephanie Dunten is a meteorologist at the National Weather Service (NWS) Office in Taunton, Massachusetts. She was born and raised in Lafayette, IN. Stephanie always had a love for weather, especially after an F-2 tornado hit the north side of her hometown. Afterwards you would see her watching the Weather Channel constantly and participating in many Weather projects for school and for 4-H.

Stephanie attended Valparaiso University in Valparaiso, IN. There she received her meteorology degree with minors in mathematics and geography. After her sophomore year at school, Stephanie volunteered at the Louisville, KY NWS office. After volunteering for 40 hours per week throughout the summer, she wanted the NWS to be her career path. Stephanie's career in the Weather Service began when she was selected to be a part of the NWS's Student Career Experience Program (SCEP). This program allows for students to attend school and work for the NWS. After completing school, they would have a job waiting for them at a NWS office. The summer before her senior year of college, Stephanie went back and worked for the Louisville, KY office, then during the semester she worked at the Northern Indiana and

the Chicago forecast offices. After graduation, Stephanie became a Meteorologist Intern for the Wichita, KS forecast office and learned a great deal about forecasting and working in tornado alley.

Stephanie joined the team in Taunton, Massachusetts in August of 2011. While in New England, she hopes to learn a great deal about nor'easters and hurricane forecasting. Stephanie is a member of the Taunton Outreach, GIS, Web and Decision Support Services (DSS) Teams. She is also the Fire Weather and Dual-Pol Radar Focal Point as well as the Social Media Assistant Focal Point.

NWS Boston – Keeping Service in Weather

David Mugar
Mugar Enterprises
Boston, Massachusetts

Note: ***Mr. Mugar worked closely with Stephanie Dunten at the command center for the Esplanade Boston Pops Fireworks Spectacular. He will be available to answer questions regarding the evacuation of the Esplanade, etc.***

BIO – David G. Mugar

David G. Mugar is chairman and CEO of Mugar Enterprises, Inc., a privately held, family investment firm for over 50 years. He is also co-founder and executive producer of the televised, July 4th Boston Pops Fireworks Spectacular. His wide ranging philanthropic and entrepreneurial projects, from New England to the Caribbean have his commitment to excellence in business, philanthropy and preserving traditions.

In 1969, he led a group of Boston citizens to challenge the Federal Communication Commission's (FCC) broadcast license of Boston's then CBS affiliate WNAC Channel 7. In a legal battle lasting 13 years, the lawsuit went all way to the United States Supreme Court resulting in a landmark ruling in 1982. The ruling granted Mugar's alliance, New England Television Corporation, WNAC's television broadcasting license. Under the new call letters WNEV-TV, New England Television took over station operations on May 22, 1982. As Chairman and CEO, Mugar oversaw the operation of the station for nearly 12 years and helped launch the careers of nationally recognized television personalities including Bill O'Reilly, Matt Lauer, Mike Taibii and Rehema Ellis.

In 1974, Mugar and his close friend Arthur Fiedler, sought to revitalize Boston's 4th of July concerts on the Charles River Esplanade by playing Tchaikovsky's "1812 Overture" with cannon fire, ringing of area church bells and fireworks over the Charles River. Mugar was the sole sponsor of the event for 27 years. In 1998, Embankment Road near Beacon Hill in Boston was renamed David G. Mugar Way to honor his 25 year dedication to the event. For 40 years, the Boston Pops Fireworks Spectacular has gained national popularity and has featured many renowned performers including Neil Diamond, John Mellencamp, Steven Tyler, Toby Keith and Martina McBride.

Mugar has 3 grown children and lives in Boston.

How Heat Transfer and Density Drive Currents

Laura F. Schofield
Ipswich Middle School
Ipswich, Massachusetts

Molecules are constantly moving, exchanging heat energy, changing phases and creating different densities within a substance; understanding the concepts of density and heat transfer is vital to understanding the weather. Simple interactive activity that addresses these concepts will be presented along with materials that address misconception.

PRESENTER'S BIO:

Laura F. Schofield has taught Earth Science to middle school since 1999. She currently teaches in Ipswich, MA and is a LIT educator for Datastreme Atmosphere, a hybrid graduate course in Meteorology for K-12 teachers that is jointly funded by AMS and NOAA.

Seventy-Five Years After the Great New England Hurricane

Lourdes B. Avilés, Ph.D.
Plymouth State University
Plymouth, NH

The Great New England Hurricane of 1938, the one to which all other hurricanes in the region are sooner or later compared, arrived mostly unannounced and slammed into Long Island and southern New England on Wednesday, September 21, 1938. It killed hundreds and left behind a large swath of devastation that spanned from the coast to the forests of northern New England. Seventy- five years later we are still learning new information about its science and history! Professor Avilés will tell some of the many stories of the Hurricane, focusing on how the U.S. Weather Bureau handled the storm at the time, the incredible damages that it produced throughout the region and the massive relief activities that followed. She will also highlight new pieces of information that she has uncovered through her research on the storm during the last five years.

PRESENTER'S BIO:

Lourdes B. Avilés is a professor of meteorology at Plymouth State University in Plymouth, New Hampshire. She is originally from the southwestern coast of Puerto Rico, where she grew up fascinated with hurricanes as well as more mundane questions like why the sky is blue and how rainbows form. She holds B.S. and M.S. degrees in physics, but eventually went on to obtain a doctorate in atmospheric sciences at the University of Illinois at Urbana-Champaign. She is currently a member of the American Meteorological Society's Board on Higher Education and the Committee on the History of Atmospheric Sciences.

She teaches a variety of courses such as severe weather, tropical meteorology, air quality, and dynamic and physical meteorology. Her current area of research is historical meteorology and she has spent the past five years studying the many aspects of the 1938 Hurricane. Her book on the storm, *Taken By Storm, 1938: the Social and Meteorological History of the Great New England Hurricane*, was just published by the American Meteorological Society.

Comparing the Blizzards of 1978 & 2013

Harvey Leonard
WCVB-TV 5
Needham, MA

Matt Noyes
New England Cable News
Newton, MA

Two storms: the Blizzard of 1978 and the Blizzard of 2013 - separated by 35 years, but so similar in their Southern New England impacts.

Two meteorologists: Harvey Leonard and Matt Noyes - separated by 8 inches of height – a moderate Boston snowfall - but so similar in their approaches to covering big New England storms that dump more than four times their height difference on the region.

In February of 1978, 29 year-old Harvey Leonard's analytic mind was working overtime beneath a neatly coiffed, full head of hair, wrapping around the prospect of a crippling, multi-day blizzard; Matt Noyes had no such concerns, as he was still three months shy of conception. Three and a half decades later, each meteorologist analyzed the Blizzard of 2013 from their respective Weather Centers, two miles apart, united in a common cause to accurately forecast the storm, convey critical information to the public, and at all costs, avoid referring to the storm as "Nemo." Both dissected the storm parameter by parameter – one drawing on experience from the last crippling blizzard he steered Boston through -- and the other drawing inspiration from the storm he'd been waiting for after a lifetime of studying textbooks, photographs and stories told by every New Englander alive in '78.

Now, some 16 years after Harvey Leonard mentored Matt Noyes in a summertime internship, and 11 years after Matt joined Harvey on the Boston TV circuit, the two friends and broadcast competitors join forces to examine two historic New England storms. In this presentation, Leonard and Noyes compare and contrast the Boston blizzards – their meteorological merit, and their impact on New England - from different perspectives but through the same lens, in a unique examination of what has changed in 35 years between blockbuster storms, and what has stayed the same.

PRESENTERS' BIOs:

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, TheBostonChannel.com. 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. Leonard celebrated his 36th year on air in Boston in May.

Widely regarded as 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* in 1984, 1986, 1988 and 1994 and has been dubbed the Hub's "favorite forecaster" by the *Improper Bostonian*.

Leonard is a fellow of the American Meteorological 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 will serve as master of ceremonies for this year's 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 Agency 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.

Matt Noyes is the primetime weeknight meteorologist and Executive Producer of Meteorology for New England Cable News (NECN), the nation's largest and most honored 24-hour regional news network, broadcasting to nearly four million households in all six New England states. He began as the weekend meteorologist at NECN in 2002, and served as weekday morning meteorologist from 2004 until 2010.

Matt holds a Bachelor of Science degree in Meteorology from Cornell University, and is a member of both the American Meteorological Society and the National Weather Association. Matt enjoys making the weather interesting and accessible to all, speaking at various weather conferences and keeps the network's weather team on the cutting edge of forecast and presentation technology. Noyes has traveled across the nation serving as a consultant for TV weather graphics, served as sole media representative on a national panel for the Climate Prediction Center and has worked closely with the Northeast River Forecast Center in evaluation of operational forecast products.

In addition to his forecasting experience, Noyes was an instructor of Introductory Meteorology at the college level in Binghamton, NY, and has traveled across New England to bring the science of meteorology into school classrooms, visiting 10,000 school children per year, and receiving a commendation from the Massachusetts State Senate for his educational efforts with children.

Matt's community dedication also earned him the Massachusetts State Police Public Service Award for assisting the organization in preparation for a major hurricane strike to New England, and he provided street level weather forecasting and analysis to the State Police Integrated Command Center during the Democratic National Convention in Boston in 2004. Noyes also conducts private forecasting for aviators, providing forecasts that have led to national victories in races requiring no use of instrumentation during flight, and to private mariners.

Before joining the NECN family, Matt was the Morning Meteorologist at NewsChannel 34 in Binghamton, NY, and a meteorologist at NewsChannel 9 in Syracuse, NY.

Fourteenth Annual Southern New England Weather Conference

Quality Critique

We need your input to determine the level of success of the Fourteenth 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.

- ☐ NWS website
- ☐ NWS Facebook
- ☐ NWS Twitter
- ☐ Blue Hill Observatory website
- ☐ Blue Hill Observatory newsletter
- ☐ Email from conference committee (attended previously)
- ☐ NOAA Weather Radio
- ☐ TV station – please specify which _____
- ☐ Emergency Mgmt announcement
- ☐ Word of Mouth
- ☐ Conference website
- ☐ Teacher organization
- ☐ Eastern U.S. Weather Forum
- ☐ U-Mass Lowell
- ☐ Amateur radio announcements
- ☐ 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.