



Southern New England Weather Conference 2024

Saturday, October 26, 2024

8:00 AM to 4:30 PM

MEDITECH, 7 Blue Hill River Rd, Canton, MA 02021

8:00 AM Registration and Breakfast

8:30 AM Morning Plenary Session

- **Master of Ceremonies— Harvey Leonard, Chief Meteorologist Emeritus, WCVB**
- **Conference Introduction—Charles Orloff, Executive Director, Blue Hill Observatory**

Bio: Harvey Leonard is WCVB Channel 5’s Chief Meteorologist Emeritus. After a fifty-year career in meteorology, with more than forty-five of those years forecasting weather in New England and twenty of those at WCVB, Harvey retired from the helm of StormTeam 5 in May 2022 and transitioned into his emeritus role. In this new position, Harvey continues to serve the community with important information as a periodic contributor to StormTeam 5 coverage and engage in community speaking appearances.

Bio: Charles Orloff, Executive Director, has overseen the Observatory’s important scientific assets for over twenty years since joining the staff in 1998. He was instrumental in establishing the Observatory’s nonprofit Science Center in 1999 and has utilized his background as a former middle school principal to develop high-quality educational programs. Charles holds degrees from Boston University and the University of Hartford and has a “Special Studies in Education” certificate from Harvard Graduate School of Education.

8:40 AM “Advancing National Weather Service Products and Services in a Rapidly Changing Technological World”, Michelle Mainelli, National Weather Service Deputy Director

Abstract: The National Weather Service (NWS) is advancing its mission to save lives and property by becoming a more agile, flexible, and mobile agency, closely aligned with decision-makers. This transformation is designed to enhance the NWS’s ability to mitigate the impacts of weather, water, and climate events through innovative approaches in how people receive, understand, and act on observations, forecasts, and warnings. This presentation will highlight the key accomplishments, ongoing work, and challenges related to this goal. It will cover the NWS priorities, which include our

people, our infrastructure, our future, and enhanced coordination and decision support services with local communities. To reimagine a new operating NWS model, NWS will focus on piloting efforts over the next couple of years with the use of advanced technologies, enhanced delivery services, as well as the use of Artificial Intelligence/Machine Learning techniques and tools.

Bio: Michelle Mainelli is the Deputy Director of the National Weather Service and has served in various leadership roles throughout the NWS for more than 30 years. Michelle has served in various positions, including a forecaster and hurricane specialist at the National Hurricane Center and software development team lead, branch chief and Deputy Director of the National Centers for Environmental Prediction Central Operations, and Director of the Office of Dissemination. Beginning her career at the St. Louis Weather Forecast Office in 1990, Michelle has over 15 years of operational forecasting experience in general, marine, and tropical cyclone forecasting. Ms. Mainelli holds a Bachelor of Science in Meteorology, a Master of Science in Meteorology and Physical Oceanography, and an MBA in Technology Management.

9:25 AM “Climate Ready Workforce”, Frank Niepold, Climate Education Program Manager & Coordinator, Climate Ready Workforce Program Manager, NOAA

Bio: Frank Niepold is the Senior Climate Education Coordinator at NOAA's Climate Program Office (CPO) in Silver Spring Maryland, co-manage the NOAA CPO Communication, Education and Engagement Division, co-manage the Climate Ready Workforce program, Climate.gov Education section lead, a co-chair of the U.S. Global Change Research Program's Climate Engagement and Capacity Building Interagency Group, the U.S. National Communications Report chapter lead on Education, Engagement, Training, and Workforce Development for the U.N. Framework Convention on Climate Change (UNFCCC), former Action for Climate Empowerment National Focal Point for the United States, founding member of the CLEAN Network and co-chair of the CLEAN Network Leadership Board. Frank is the “Teaching Climate” lead for NOAA’s Climate.gov web portal that offers learning activities and curriculum materials, multimedia resources, and professional development opportunities for formal and informal educators who want to incorporate climate science into their work.

10:10 AM—Break

Morning Weather Track

10:25 AM “Forecasting Flash Flood Events Across Varying Time Scales”, Rob Megnia, National Weather Service Meteorologist, Rob Megnia, Senior Service Hydrologist Weather Forecast Office Boston/Norton

Abstract: Recent advances in hydrometeorological modeling and forecasting have enhanced meteorologists' ability to anticipate extreme precipitation events across various time scales. For long-range forecasts (3-7 days), ensemble forecasts can identify potentially anomalous weather patterns, including extreme precipitation events. In contrast, short- to medium-range high- resolution ensemble forecasts are utilized to assess the severity of precipitation events by analyzing rainfall exceedance probabilities and average return intervals (ARIs).

In real-time applications, NWS meteorologists employ Multi Radar-Multi Sensor (MRMS) data to monitor surface streamflow, the ratio of estimated precipitation to flash flood guidance, and rainfall rate return intervals. This information aids in decision-making for Flash Flood Warnings. Additionally, these products serve as indicators for implementing Impact-Based Flash Flood Warnings, which enhance

standard warnings with considerable or catastrophic tags. These tiered warnings activate the Wireless Emergency Alert System (WEA) and employ more urgent language to prompt the public to take swift action when a flood event is deemed unusually severe. These recent advances in modeling and warning dissemination have enabled Weather Forecast Offices nationwide to deliver life-saving information both in the days leading up to and during extreme precipitation events.

Bio: Rob Megnia is a Massachusetts native who was born and raised in Marshfield, MA. He earned his bachelor's and master's in meteorology from Plymouth State University before accepting a position at the National Weather Service Forecast Office in Lake Charles, LA in February 2017. In August 2020, Rob transferred back to MA where he now works at the WFO Boston/Norton and currently serves as the office's Senior Service Hydrologist.

10:55 AM "To Make Wholesale Last Minute Changes: Going Against Prior Messaging during the February 13, 2024 Nor'easter", Hayden Frank, National Weather Service Senior Meteorologist

Abstract: The February 13, 2024 Nor'easter presented an extremely challenging forecast for snowfall across southern New England. Despite initial model consistency leading to high confidence in predictions of 8-12 inches of snow throughout southern New England, areas north of Interstate 90 experienced significantly less snowfall than anticipated. In addition, models trended towards less snow for Connecticut, resulting in a downgrade from a Winter Storm Warning to a Winter Weather Advisory for Hartford County. Unexpectedly, Hartford County received the highest snow accumulation within the office's county warning area, totaling 15 inches, whereas Boston received less than an inch.

The Nor'easter highlighted the complexities and challenges of forecasting for a coastal storm in southern New England and exposed some shortcomings of probabilistic/ensemble forecasting. Many datasets are under-dispersed and heavily weighted towards the GEFS/EPS guidance, whereas GDPS/UKMET guidance, which better predicted the storm's impact, was not as heavily favored. The blended guidance approach, a cornerstone of the modern National Weather Service (NWS) operations and usually the most successful method, requires forecasters to exercise caution when GDPS/UKMET guidance diverges from the EPS/GEFS guidance. Although consistency in messaging is extremely important, forecasters must be prepared to make significant forecast adjustments when guidance shifts. In this case, the NWS in Boston/Norton began communicating these changes 24 hours before the event. The proactive notification was appreciated by many emergency managers in southern New England.

This presentation will qualitatively discuss the challenging balance of maintaining consistent messaging while being ready to implement comprehensive changes if necessary. It will also highlight the significance of the social science aspect, considering the increased expectations of accurate forecasts. Furthermore, the limitations of the High-Resolution Ensemble Forecast (HREF) and the National Blend of Models (NBM) will be examined, particularly their weighting towards certain guidance sets. Additionally, the presentation will explore the benefits of using the Cooperative Institute for Precipitation Systems (CIPS) analog guidance and the Dynamic Ensemble-based Scenarios for Impact Based Decision Support Services (DESI) toolkit to enhance the forecaster's capabilities.

Bio: Hayden Frank is a senior meteorologist with the National Weather Service in Boston/Norton, MA. He is the Severe Weather, Marine and fire weather focal points for the office. He also works on various other programs, including outreach and many research 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 the NWS Boston/Norton office 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.

11:25 AM “10 Years Later, The Science Behind Snowmageddon”, Michael Souza, Massachusetts Emergency Management Agency, Meteorologist

Abstract: During the winter of 2014-2015, Southern New England was impacted by a series of winter storms, often dubbed "Snowmageddon," that delivered record-breaking seasonal snowfall totals. This presentation explores the large-scale meteorological features that drove this exceptional winter season. By analyzing jet stream patterns, surface pressure anomalies, teleconnections, and ENSO phases, the discussion will provide a comprehensive understanding of the factors behind this event. The analysis will be contextualized through comparisons with other notable high-snowfall years, offering valuable insights into the recurring patterns and anomalies associated with extreme winter weather.

Bio: Michael Souza holds a Master of Science degree from the University of Massachusetts Lowell and is an active Certified Consulting Meteorologist through AMS. Michael has served as the Agency Meteorologist for the Massachusetts Emergency Management Agency since January 2022. Prior, Michael spent 2 years in the Washington DC area, working for the National Weather Service Forecast Office in Sterling, VA. Michael comes with nearly a decade of experience in meteorological consulting and decision support for field operations. In addition, Michael remains active in academia as he is an Adjunct Professor at several institutions across the county.

Morning Education Track

10:25 AM “How Do We Use Historical and Real Time Weather Data to Understand Future Weather and Changes to the Environment?”, Krista Fincke, Blue Hill Observatory, Director of STEM Education

Abstract: Put yourself into the shoes of a middle school student and experience authentic data analysis through the lens of our Picture Post curriculum in the "Data Analysis as a Middle Schooler" session. Experience a 25-minute lesson, crafted and implemented by Blue Hill Observatory staff using their 139 years of weather, climate and phenological data. Add to your knowledge as a middle school student by attending the "Using Weather Data to Integrate Data Literacy" session and uncover how Blue Hill Observatory is using its 139 years of weather, climate and phenological data to thoroughly integrate data literacy into authentic exploration of changes atop Great Blue Hill. Educators and non-educators will understand how they can use Blue Hill Observatory's data through and beyond the Picture Post program to integrate data literacy and analysis into their classroom or work.

Bio: Krista Fincke is the Director of STEM Education at the Blue Hill Observatory. She has devoted her career to closing student learning gaps in STEM by growing teachers' instructional practices in the classroom and developing standards-aligned 5th – 8th grade science curriculum. At The Observatory, Krista oversees educational programming, including the pilot program “Picture Post for Environmental Conservation,” a climate education program that leverages The Observatory's climate data to investigate environmental change taking place at Great Blue Hill. Krista will lead the development of other new programs for K-12 educators and students as it expands its impact in the Greater Boston

area. Krista has been a science educator for over 10 years and has a master's in education policy from University of Washington.

11:00 AM "Understanding Weather Extremes with Big Data with Common Online Data Analysis Platform", Brian Fitzgerald, Mount Washington Observatory, Director of Education

Abstract: Building data literacy and graphing skills can be challenging for many students, especially when they are asked to communicate the "story" the data is telling. What's more, data can appear fairly one-dimensional. Using the inspiration of climate scientist and artist Jill Pelto, educators will learn how to use illustration and art as a means of enriching climate graphs with their students. Art supplies and climate data will be provided- just bring your creative side.

Bio: Brian Fitzgerald is the Director of STEM Education at Mount Washington Observatory. Brian began his MW OBS career as a winter intern on the summit in early 2012 after attending the University of New Hampshire where he earned a bachelor's degree in environmental conservation studies. Following intervening seasons as a Backcountry Hut Naturalist and Education Assistant for the Appalachian Mountain Club, Brian returned to the Observatory as a full-time Observer and Educational Specialist on the summit where he performed daily weather observations and led weather station tours, distance learning programs and media interviews.

After nearly three winters on the summit, Brian headed south to work as the Chief Weather Observer at Blue Hill Observatory. In early 2016, Brian graduated from Boston University with a Master of Education degree with a focus in Science Education and moved back to the Mount Washington Valley to serve as Mount Washington Observatory's Director of Education.

11:30 AM "Students and Citizen Scientists Collecting and Sharing Climate Data with GLOBE", Peter Garik, Boston University GLOBE

Abstract: Teachers will be shown how to help their students to observe their environment through GLOBE (Global Learning and Observations to Benefit the Environment) protocols drawn from the atmosphere, hydrosphere, biosphere and pedosphere, as well as use NASA satellite imagery and learning activities. The GLOBE Program is an international science and education program that focuses on promoting scientific literacy and building connections between people passionate about the environment. GLOBE has three primary goals: increasing environmental awareness, contributing to increased scientific understanding of the Earth and supporting improved student achievement in science and mathematics.

Bio: Dr. Peter Garik is a Clinical Associate Professor of Science Education at the Wheelock College of Education and Human Development at Boston University. His Ph.D. (Cornell 1981) is in theoretical physics. He did postdoctoral work at the University of Michigan, both theoretically and experimentally, on pattern formation during aggregation, fluid flow, and solidification. During this time he oversaw undergraduate research and subsequently joined a NSF funded education project at Boston University on fractal growth. Peter is currently co-Investigator on the NASA funded GLOBE Mission Earth project whose principal objective is to engage K-12 students in environmental research. By participating in GLOBE, students, teachers, researchers and lifelong learners can connect with the program's global community.

12 Noon—Lunch

Afternoon Plenary

1:00 PM “*A Storm Too Soon: A True Story of Disaster, Survival, and Incredible Rescue*”, Michael Tougias, Author and Speaker

Abstract: Tougias, a New York Times Bestselling author and coauthor of 30 books, will chronicle how seventy-foot waves batter a tattered life raft 250 miles out to sea in one of the world’s most dangerous places, the Gulf Stream. Hanging onto the raft are three men, a Canadian, a Brit, and their captain, JP DeLutz, a dual citizen of America and France. The waves repeatedly toss the men out of their tiny vessel, and JP, with 9 broken ribs, is hypothermic and on the verge of death. The captain, however, is a tough-minded character, having survived a sadistic, physically abusive father during his boyhood, and now he’s got to rely on those same inner resources to outlast the storm.

Trying to reach these survivors before it’s too late are four Coast Guardsmen battling hurricane force winds in their Jayhawk helicopter. They know the waves in the Gulf Stream will be extreme, but when they arrive they are astounded to find crashing seas of seventy feet, with some waves topping eighty feet. To lower the helicopter and then drop a rescue swimmer into such chaos is a high-risk proposition. The pilots wonder if they have a realistic chance of saving the sailors clinging to the broken life raft, and if they will be able to retrieve their own rescue swimmer from the towering seas. Once they commit to the rescue, they find themselves in almost as much trouble as the survivors, facing several life and death decisions.

Three other vessels with 10 people aboard were caught in the storm, and only 6 survived. Four Rhode Islanders perished on the sailboat *Flying Colours*. This 2007 disaster prompted one of the largest and most intense rescues in Coast Guard history.

Author Michael Tougias will use slides of the storm, the survivors, and the rescue. Amazingly the Coast Guard helicopter crew photographed the men in the raft being pounded by towering waves. “I enjoy doing these programs,” says Tougias, “because I like to transport the audience into the heart of the storm so that they ask themselves ‘*what would I have done.*’ I don’t like to do author readings because I think they are boring, but with a slide presentation, the viewer can visually relive the adventure. It’s like watching a movie with the author giving behind the scene details.” A book signing will follow the program, and the presentation is suitable for all ages.

Tougias, known for his fast-paced writing style and character-driven stories, tells this true saga in the present tense to give the reader an “edge of your seat, you are there” experience. Kirkus Book Reviews had this to say about *A Storm Too Soon*: “By depicting the event from the perspective of both the rescued and the rescuers and focusing only on key moments and details, Tougias creates a suspenseful, tautly rendered story that leaves readers breathless but well- satisfied. Heart-pounding action for the avid armchair adventurer.”

Bio: **Michael J. Tougias** is a New York Times Bestselling author and co-author of 30 books for adults and nine books for young adults. He is best known for his non-fiction narratives of survival and rescue stories. His book *The Finest Hours* has been made into a Disney movie. Tougias speaks to both business groups and at public libraries across the country. (www.michaeltougias.com)

Afternoon Education Track

1:50 PM "Illustrated Graphs: Using Art to Enliven Climate Data", Brian Fitzgerald, Mount Washington Observatory, Director of Education

Abstract: Building data literacy and graphing skills can be challenging for many students, especially when they are asked to communicate the “story” the data is telling. What’s more, data can appear fairly one-dimensional. Using the inspiration of climate scientist and artist Jill Pelto, educators will learn how to use illustration and art as a means of enriching climate graphs with their students. Art supplies and climate data will be provided- just bring your creative side.

2:15 PM "Using Weather Data to Integrate Data Literacy", Krista Fincke, Blue Hill Observatory, Director of STEM Education

Abstract: Uncover how Blue Hill Observatory is using its 139 years of weather, climate and phenological data to thoroughly integrate data literacy into authentic exploration of changes atop Great Blue Hill. Educators and non-educators will understand how they can use Blue Hill Observatory's data through and beyond the Picture Post program to integrate data literacy and analysis into their classroom or work.

Afternoon Climate Track

1:50 PM "Weather Extremes at Blue Hill Observatory: How Fast Are They Changing?", Micheal Iacono, Blue Hill Observatory, Chief Scientist

Abstract: The extensive and historic climate record of the Blue Hill Observatory, now covering more than 139 years, is an exceptional resource for climate research and education. Time series of annual mean temperature, precipitation, snowfall, wind speed, sunshine and many other parameters available at this site illustrate the character of decadal and longer-scale variations that represent the long-term changes in local climate over time. While a necessary component of climate analysis, mean changes documented over very long time periods are difficult to perceive, and it is equally essential to examine short-term variations to fully understand the scope of climate impacts. Our perception of climate change can be enhanced by making it relatable to shifts in everyday weather, especially extreme events. This presentation will examine changes at the Blue Hill Observatory since the 19th century in daily high and low temperature extremes, the amount and duration of heavy rainfall and snowfall events, the number of days with high wind speeds, extremes in atmospheric moisture and surface pressure, the number of overcast and clear days, and other measures of short-term variability to illustrate how examining shifts in weather extremes over many years can improve our understanding of our changing climate.

Bio: Michael Iacono has been affiliated with the Blue Hill Observatory since 1987, where he served as a part-time observer for over thirty years, and he currently volunteers as the organization’s Chief Scientist. In that role, he leads climate research, prepares and presents studies on local climate change, supports educational programs, and leads an effort to prepare a digital archive of the extensive Blue Hill daily observations. Mr. Iacono manages and is a primary developer of the organization’s website. He has a Master of Science degree in Atmospheric Science from the State University of New York at Albany, and he is also a Senior Staff Scientist at Atmospheric and Environmental Research in Lexington, MA, where, since 1987, he has conducted research on atmospheric radiation and the improvement and evaluation of weather and climate models. Since 2023, Mr. Iacono has been a member of the Climate Science Advisory Panel, which is supporting the Massachusetts Office of Climate Science.

2:15 PM “How Massachusetts is Preparing for Climate Change”, Edwin Sumargo, Climate Scientist, Margot Mansfield, Assistant Climate Scientist, and Caitlin Spence, Assistant Climate Scientist, Massachusetts Office of Climate Science

Abstract: The statewide annual average temperature in MA has increased by 3.5 F since the early 1900s and is expected to continue to increase in the 21st century. This warming trend is accompanied by sea level rise and changes in precipitation pattern, causing extreme heat, extreme precipitation, and coastal flooding to become more frequent. To name a few, the September 2023 flood in Leominster, the January 2024 coastal storms, and the June 2024 U.S. Northeast heatwave were examples of such threats. The 2022 MA Climate Change Assessment accordingly identified these three threats as the state’s priority climate hazards with significant impacts on MA populations, built infrastructure, natural resources, governance, and economy. The 2023 ResilientMass Plan subsequently rolled out over 120 state agency actions to support climate mitigation and adaptation, one of which was launching the Office of Climate Science (OCS). Since its conception in October 2023, the OCS serves as the statewide point of contact for climate science and data resources and provides technical assistance to state agencies, municipalities, and their partners with their climate resilience projects. In early 2024, the OCS formed a Climate Science Advisory Panel of 21 experts to help ensure the state’s climate initiatives were informed by the latest science. With the panel and stakeholders’ inputs, the OCS has identified critical science and data gaps in MA, such as a data hub for statewide climate records, a climate-informed riverine & pluvial flood data, and the development of a statewide climate science report.

Bio: Edwin Sumargo is a Climate Scientist with the Massachusetts Executive Office of Energy and Environmental Affairs (EEA). He leads the Office of Climate Science—the point of contact within the Commonwealth for climate data resources, guidance, and technical assistances since its conception in July 2023. He has led the team in the stakeholder relationship building, inter- agency coordination, and team capacity building. Before joining the EEA, Edwin was a hydrometeorology and hydroclimatology researcher at the Scripps Institution of Oceanography in La Jolla, CA. He brings in expertise in precipitation-runoff processes, model validation, and sensor network design and analysis. Edwin obtained his Ph.D. in climate science from the same institution in 2018.

Bio: Margot Mansfield is an Assistant Climate Scientist/Coastal Hazards Specialist with the MA Executive Office of Energy and Environmental Affairs (EEA). Her responsibilities are split across two offices within EEA, the Office of Climate Science and the Office of Coastal Zone Management. She staffs these offices by providing technical support and subject matter expertise on coastal hazards and related state climate data, models, and communication products. She supports local implementation of coastal resilience/adaptation efforts, the Commonwealth’s ongoing ResilientCoasts initiative, and supports the Massachusetts Coastal Storm Damage Assessment Team. Margot has Bachelors and Masters Degrees in Earth Science/Geology from the University of Washington and University of Maine, respectively, and has been with EEA/CZM for over 10 years.

Bio: Caitlin Spence is the Assistant Climate Scientist focusing on Hydroclimatology within EEA’s Office of Climate Science. She provides technical assistance, project coordination, and data service strategy related to the Commonwealth’s climate change projections. Before joining EEA Caitlin worked in climate-informed stormwater modelling in engineering consulting, analytics and data service provision at MAPC, and as a climate risk management researcher at Penn State University. Caitlin is an author on several peer-reviewed publications on flood risk management under uncertain future climate and of several research and data release reports on climate vulnerability, extreme heat, flooding, water

resources, clean energy siting, and housing production in Greater Boston. She obtained her Ph.D. in water resources engineering from the University of Massachusetts Amherst in 2017.

2:50 PM—Break

Late Afternoon Plenary

3:00 PM “*New England Uncharted: The Dynamic Dance of Extreme Weather and Climate*”, Chris Gloninger, NBC Boston Channel 10, Meteorologist

Abstract: New England has experienced a marked increase in extreme weather events, ranging from intense coastal storms to unpredictable temperature shifts. This presentation explores the intricate relationship between weather and climate, highlighting how the region's day-to-day weather patterns are influenced by broader climate trends, and vice versa. We will delve into how New England's unique geography amplifies its vulnerability to climate-driven weather extremes, such as rising sea levels exacerbating storm surges. By examining the latest data on storm frequency, precipitation, and seasonal changes, this presentation will emphasize the need for adaptive strategies in urban planning, coastal management, and emergency response.

Bio: Chris Gloninger is a meteorologist and climate communicator. With a career dedicated to bridging the gap between weather science and public understanding, Chris is known for tackling the urgent challenges of climate change through insightful storytelling and expert analysis. He spent nearly two decades as a broadcast meteorologist, spending the majority of his career at NBC Boston. As part of his role at Woods Hole Group, he focuses on the impacts of climate change on New England and beyond, regularly speaking at conferences, conducting training sessions for journalists, and appearing on network news outlets as a subject matter expert. Chris is committed to helping the public and policymakers navigate the evolving climate landscape and its effects on weather patterns and disaster preparedness.

3:35 PM “*Seasonal Outlooks at the Climate Prediction Center and the NOAA 2024-2025 Winter Outlook*”, Jon Gottschalck, NOAA Climate Prediction Center, Chief, Operational Prediction Branch

Abstract: The Climate Prediction Center (CPC) prepares and disseminates operational outlooks from Week 2 out to about 1 year especially targeting the subseasonal to seasonal (S2S) forecast time scale. NOAA, including CPC, are responsible for advancing the science and products and services in this arena in response to the "The Weather Research and Forecasting Innovation Act of 2017" and its subsequent reauthorization in 2023. This talk plans to (1) provide a brief overview of the CPC mission, operational outlooks and related services and (2) describe the CPC seasonal outlook, how to properly interpret, outline the forecast process and highlight the tools utilized in preparing the outlook. Also, the NOAA Winter Outlook for 2024-2025 will be presented along with the forecast rationale and other related information for what to expect this coming winter.

Bio: Jon Gottschalck currently works at the Climate Prediction Center (CPC, since 2004) within NOAA's National Weather Service. He is the Chief of the Operational Prediction Branch within CPC and is responsible for preparation and dissemination of CPC operational outlooks and related products and services. Prior to this, Mr. Gottschalck served as CPC Head of Forecast Operations and as the Madden-Julian Oscillation (MJO) operational team lead. Mr. Gottschalck

earned both a B.S. and M.S. degree in meteorology from the Pennsylvania State University in 1994 and 1996 respectively. Prior to CPC, Mr. Gottschalck worked at the Rosenstiel School of Marine and Atmospheric Science (RSMAS) at the University of Miami from 1997-2001 and at NASA's Goddard Space Flight Center from 2001-2004.

3:55 PM Panel Discussion: "Winter 2024-2025 Outlook," Jon Gottschalck, NOAA, Climate Prediction Center, Chief, Operational Prediction Branch; Jeremy Reiner, Meteorologist WHDH; and Harvey Leonard, Chief Meteorologist Emeritus, WCVB Channel 5.

Abstract: It is a tradition each year at the Blue Hill Observatory to put forth to the public the expertise of a meteorologist who predictions the "highs and the lows" of the approaching winter season in New England. This year we will line-up the best in meteorology for a discussion on the winter to come.

Bio: Meteorologist Jeremy Reiner brings a wealth of knowledge & experience in weather forecasting back home to New England. A native of the Berkshires, Jeremy has always been fascinated with the New England climate. Whether it was a raging nor'easter or a chilly sea breeze in April, Jeremy loved it all. So much so, that he attended Lyndon State college in Vermont where he received a B.S. degree in meteorology in 1993.

After brief stints in Minnesota & Maine, Jeremy settled in Charlotte, NC at WSOC-TV for several years. In 2005, while in Charlotte, Jeremy received the Certified Broadcast Meteorologist seal from the American Meteorological Society—the first TV meteorologist to receive this seal in the Charlotte television market. The CBM seal, as it's known, is a newer, more rigorous certification. This is a distinct certification that he carries with him to 7NEWS. When he's not tracking cumulus clouds, Jeremy can be found hitting golf balls all over New England as well as learning to play guitar.

4:30 PM—Adjourn