



Aware

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Cross Office Exercises Tests Innovation

By [Michael S. Lewis](#), WCM, NWS Northern Indiana

In October, NWS Northern Indiana, Indianapolis, IN, and Wilmington, OH, joined forces in the Ohio-Indiana Multi-State Exercise. This exercise was designed to address communications interoperability and included several county-based HazMat exercises and flooding response activities.

The scenario was based on a squall-line sweeping across Indiana and impacting the counties bordering either side of the Ohio/Indiana border (see figure, right). The NWS was asked to develop a Master Scenario Event List (MSEL) using a squall-line episode from the southeastern United States.

Using existing radar data, the NWS team generated a loop to provide an approximate timeline. The test assumed a forward speed of 50 mph. NWS staff incorporated a series of watch, warning and local storm reports into a Google® Sheet then generated products and Local Storm Reports to help set the stage for the requested area. This MSEL served as the baseline for generating standardized links and metatags. These links and tags were then automatically scripted to inject into a preassigned NWSChat room (iwxexercise.)



Simulated squall line for exercise

The injects provided a sense of realism to the exercise and allowed partners to interact with NWS forecasters in “displaced real time.” Additionally, other partner groups such as amateur radio operators and Emergency Management Agencies injected comments to support local exercise requirements. At the height of the exercise, more than 40 people were in the chatroom.

NWS Northern Indiana Meteorologist Geoffrey Heidelberger automated the process by writing script to read the MSEL spreadsheet. The script generated the scenario in the proper format and pushed it at designated times into the NWSChat iwxexercise chatroom. NWS Northern Indiana hosted links to the products to provide a sense of realism for the NWSChat interaction.

Using a MSEL to automatically post messages to NWSChat was really effective and NWS is looking at using it more often as well as providing redundancy and external hosting of the NWSChat Inject software will be explored. The exercise showed how valuable cross office teamwork is when delivering Impact-based Decision Support Services for our partners.

NWS Decision Support Tested After Las Vegas Concert Tragedy

By [Reid Wolcott](#), Senior Forecaster, NWS Las Vegas, NV

Over the past 5 years, NWS Las Vegas has worked hard to integrate its staff into the operations of its core partners in emergency management (EM). For several years, meteorologists provided on-site support to first responders for high profile events such as New Year’s Eve and the NASCAR Kobalt 400. As a result, NWS Las Vegas is considered part of the public safety team, and EMs send notifications when a short notice activation occurs.

At 10:05 pm on the night of October 1, 2017, a gunman opened fire on a crowd of over 22,000 people at the Route 91 Harvest music festival on the Las Vegas Strip. The gunfire would go on for around 10 minutes, and it would be several hours before the true extent of the impact was known, some 58 dead and nearly 500 injured. Shortly

before midnight, Clark County activated its Multi-Agency Coordination Center (MACC) for all agencies. NWS Las Vegas responded by deploying a meteorologist to the MACC within an hour of activation and would provide support to responders well into the following week.

In his After Action Review, Lead Forecaster Reid Wolcott shared, “Since this tragedy was not significantly impacted by weather, I kept tabs on the incident situation, messaging from partner agencies and current weather conditions. Our quick response and presence at the MACC were appreciated by many, including Clark County EM Chief John Steinbeck, who thanked me as I departed.”



Notable items highlighted by this incident included the importance of coordinated public information messaging. NWS Las Vegas was able to share information from other responding agencies in the incident’s aftermath. In addition, this event highlighted a need for a simple staff head count checklist. NWS Las Vegas created this list on-the-fly but it will be incorporated into

procedures for future major incidents. Fortunately, there were no members of the NWS Las Vegas staff impacted by this tragedy, but many staff members had friends affected. Our thoughts remain with them.

NWS Las Vegas training and preparation over the last few years resulted in its ability to swiftly and effectively respond to this incident. “When I walked into the MACC, I knew just about everyone. This familiarity led to immediate confidence that we could work through this incident effectively,” said Wolcott.

Impact-based Decision Support is not simply providing support during high impact weather events or weather sensitive incidents. It’s the integration of the NWS into the all-hazards emergency response community as part of the team, no matter the weather.

US Navy and NWS Deploy 2 Marine Corps Radars to Puerto Rico from San Diego

By [NWS Communications Staff](#), Silver Spring, MD

When Hurricane Maria tore through Puerto Rico, it severely damaged the FAA’s WSR-88D radar that covers Puerto Rico and the U.S. Virgin Islands. Technicians determined it would take months to repair.

Working with FEMA, NWS asked the Department of Defense (DOD) to deploy military tactical X-band radars to provide coverage, specifically Marine Corps radars capable of exporting NEXGEN Level 3 data.

This venture marks the first time NWS requested use of military assets. The radar equipment was housed at the Space and Naval Warfare Systems Command (SPAWAR) in San Diego. NWS staff first visited SPAWAR to determine if the Navy portable radars were compatible with the NWS systems or would require testing and modifications to the data to display the radar data in AWIPS at NWS San Juan.

Next, NWS called in its Radar Operation Center specialists to work with Navy staff on the complex deployment. The radar and AWIPS team worked diligently to get the radars configured correctly and the data massaged to format into AWIPS.

DOD agreed to deploy and deliver two mobile radars, one on each side of Puerto Rico. This joint Navy and NWS endeavor came to fruition on October 21. Radar products for the area starting displaying in AWIPS on October 30. With the hard work done, the door is open for future collaborations in the event of extreme weather disasters such as Hurricane Maria.



Joint NWS/Navy/Marine Corps team with one radar in Roosevelt Roads, Puerto Rico

World's First National Park Receives Four Safety Recognitions

By [Tim Troutman](#), WCM, NWS Riverton, WY.

In October, the NWS Riverton, WY, outreach team completed a 15-year project involving the recognition of Yellowstone National Park becoming StormReady, a Weather-Ready Nation Ambassador, Wildfire Ready and a Lightning Safety Toolkit partner.

Yellowstone National Park, the world's first National Park, recently completed the necessary requirements to receive these recognitions. NWS Riverton presented the recognition signs at a ceremony at Yellowstone National Park headquarters at Mammoth Hot Springs on October 30.



With help from NWS Riverton WCM Tim Troutman, Yellowstone National Park accepts multiple signs for its outstanding commitment to protecting visitors and staff from weather hazards.

New Water Level Observation Supports WRN in Bering Sea Communities

By [Audrey Rubel](#), Physical Scientist, Alaska Region Headquarters, Anchorage, AK

NWS Alaska Region is partnering with the National Ocean Service (NOS) to reduce observational gaps along Alaska's western and northern coasts. The NWS needs water level measurements to monitor, model and alert stakeholders of coastal hazards; the NOS requires the data for navigation services including tidal predictions and chart making.

Alaska's west coast is among the nation's most vulnerable to extra-tropical storm surge and coastal erosion, but is severely lacking observations for water levels, ocean waves and river discharge to support flood warnings and forecasts. Weather instruments used to measure storm damage are extremely sparse on this remote shoreline that experiences some of the country's most intense weather. Many local communities are being forced to consider relocating because of the erosion and frequent storm damage. In addition, the gaps in the coastal observing system limit the NWS' ability to provide useful marine and sea ice forecasts, especially in the Arctic, critical for shipping, energy and other industries. These observations also are critical to marine navigators bringing food, fuel and other supplies in this area that has no road system.

To reduce this gap, NWS worked with NOS to install a National Water Level Observation Network (NWLON) tide station at the Unalakleet city dock in September. NWS Alaska Regional Director Carven Scott and Fairbanks WCM Ed Plumb conducted the ceremony along with the community's mayor and the 5th grade class. They also used the occasion to educate local leaders about the NWS Weather-Ready Nation program, conduct erosion monitoring field work with the Alaska Division of Geological and Geophysical Surveys, and provide interviews to the local radio station.



Celebrating new NWLON station are from left, Unalakleet, AK, 5th grade class, NWS Alaska Regional Direction Carven Scott, Unalakleet, Mayor Leona Grishkowsky and NWS WCM Fairbanks, AK, Ed Plumb.

In addition to providing tidal and critical storm surge observations, the Unalakleet NWLON includes a meteorological station that measures winds, air temperature and barometric pressure. Nationally, NWLONs are considered the gold standard for water level observations. The new NWLON in Unalakleet is one of only two in the northern Bering Sea. Seasonal sea ice, steep operational costs in remote Alaska and few existing structures account for their scarcity in western Alaska. This site will help improve coastal flood forecasts not only for Unalakleet but for other Bering Sea communities. The data has already provided essential storm surge information to forecasters during Bering Sea storms this fall. The NWS looks forward to increasing observational capability in this region.

NWS Contributes to Oil Spill Exercise on Gulf Coast



NWS meteorologists issue weather and marine forecasts during the Phillips 66 Oil Spill Exercise in Lake Charles, LA.

By [NWS Communications Staff](#), Silver Spring, MD

On October 11, NWS Lake Charles, LA, took part in a Phillips 66 Oil Spill Exercise. As part of the Planning Section within a large incident command system, NWS staff provided simulated weather data and forecasts to support response operations for a worst case oil spill event. Specifically, the meteorologists provided hourly short-term forecasts for thunderstorm potential, winds and tides. Besides providing weather support, NWS meteorologists facilitated discussions with NOAA Response and Recovery on oil spill trajectory forecasts.

At the request of the U.S. Coast Guard, Meteorologist in Charge Andy Patrick took part as an evaluator for the environmental response. Patrick commented, “This exercise was a great experience for our staff. We provided timely weather and marine forecasts as different conditions were injected into this scenario. The staff also got to experience how an incident command for a potential major disaster worked.”

“An oil spill like this affects a wide variety of operations, especially related to commerce, transportation and the environment. Timely and accurate weather forecasts and decision support services are critical to response and recovery.”

Online Education: Communicating Winter Weather Surface Impacts

By [Vanessa Vicente](#), COMET Program Staff

The COMET Program has just released a new continuing education class entitled, “[Communicating Winter Weather Surface Impacts](#).” This online class introduces EMs and NWS forecasters to the benefits of pre-season coordination between decision makers, particularly state and local Departments of Transportation (DOT). The class also discusses strategies used by DOT staff to mitigate road impacts during the winter and how other team members can best support their needs. The course offers insights into common methods of collaboration with DOT during different types of winter weather events. The program offers time to practice communicating winter weather forecast information to best support DOT, including working through a simulation to see the effects of communication choices on DOT decisions. The lesson will take about an hour to complete.

For best viewing of content on the MetEd website, please ensure that you have a browser updated to its latest version with JavaScript enabled. For technical support, please visit our [Registration and Support FAQs](#). COMET welcomes comments or questions you may have regarding the content, instructional approach, or use of this lesson. Please email your comments or questions to [Vanessa Vicente](#).

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Managing Editor: [Melody Magnus](#), Editors: [Donna Franklin](#), [Nancy Lee](#)
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Subscribe/Unsubscribe: melody.magnus@noaa.gov