Aware

Aware is published by NOAA's National Weather Service to enhance communications between NWS and the Emergency Management Community and other government and Private Sector Partners.

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NWS Creates Cold Water Safety Website to Better Protect Public

*By **Deborah Jones**, NWS Marine and Coastal Services, Silver Spring, MD*

Roughly 20 percent of those who fall into water below 70 degrees die in the first minute of immersion due to cold water shock. Even strong swimmers will lose muscle control in about 10 minutes. Body heat can be lost 25 times faster in cold water than in cold air. Wearing a life jacket significantly increases chances of survival.

Because of the dangers of cold water, a Cold Water Team was formed December 2017, tasked with the job of creating a safety page, resources and tips on how to protect yourself and your community. The page emphasizes the danger of cold water even when the air temperature is warm. The public often believes that warm air also means warm water. This misunderstanding can result in severe injury and even death. The new cold water safety page offers a range of tips as well as infographics and other resources you are encourage to use in your community.

NWS Explores Forecast "Confidence" with Emergency Managers and Media

*Posted by **NWS Communications Staff**, Silver Spring, MD*

Confidence, as an outward expression of NWS's internal trust of the forecast outcome, is not a helpful or well-understood term according to a room full of Alaska's Emergency Managers (EM).

Attendees of the Alaska Division of Homeland Security & Emergency Management Spring Preparedness Conference prefer straight answers for weather decision-making. NWS Anchorage Warning Coordination Meteorologist Louise Fode led an open discussion with EMs and members of the media and learned that the audience members recognize that weather forecasts don't come with a strict "yes" or a "no" solution.

While they accept that weather forecasting lacks guarantees, these partners prefer forecasters plainly state what is "most likely" to happen and use a range of high and low values to further limit the possibilities. According to attendees, "confidence" sounds like a forecaster's ability to forecast, rather than the NWS's trust in the forecast outcome.

Louise Fode, WFO Anchorage's Warning Coordination Meteorologist, leads an open discussion with state Emergency Managers at the Alaska Spring Preparedness Conference.

This audience expressed strong feelings that NWS staff should not issue forecasts for which it has little confidence. One EM said when the NWS makes a social media post about an upcoming weather event, EMs believe the message to be important and the confidence scale creates doubt and confusion. Further, confusion worsens when confidence is included in the mid or long-range forecast, especially low confidence. These partners suggested people understand that Alaska weather conditions will change over time and that as an event nears, forecast confidence will improve.

EMs suggested future NWS messages contain the word "likely" and not the word "confidence." Audience members agreed that a message indicating what is "most likely" would be more helpful an indication of how "confident" the NWS is in a particular outcome.

The Winds of Change, Fourth Graders Reach Higher

*By **Michael Lewis**, WCM, NWS Northern Indiana*

This spring, NWS El Paso, TX, meteorologist Tim Brice conducted a Google Hangout session with a group of elementary school students in Elkhart County, IN. Students from four elementary schools took part in the session to learn the basics of weather. In addition to Brice, the presenters included NWS National Weather Center hydrologist Patrick Hyland and NWS Northern Indiana warning coordination meteorologist Michael Lewis.

The students and teachers were enthusiastic and asked great questions, and the most interesting question was about what kind of experiments students could conduct on the schools' "payload platforms" that would be launched into the upper atmosphere, suspended below large weather balloons.

Inspired by the question, on Fridays in May at 10 am, students from four elementary schools prepared and launched weather balloons and lofted a payload platform with their experiments attached. A goal of the exercise was for each student to project where the payload would land.

Ox Bow, IN, 4th grade class prepares the high altitude weather balloon for launch on May 4th. This balloon would eventually land in Dashwood, Ontario, Canada. Picture provided by Elizabeth King, Ox Bow Elementary School Teacher.

The weather patterns varied widely each Friday as students filled the balloons and attached the payload and parachute. Watching the launch, the energy and enthusiasm soared skyward like the weather balloon as it lofted into the atmosphere carrying the hopes and enthusiasm of students and teachers.

After the launch, the students and faculty monitored the trajectory in real-time using telemetry data. Student teams then loaded onto buses and followed the balloons, recovering the payload when possible on the same day as the launch. What a glorious way to integrate, grow and support atmospheric sciences.

NWS Northern Indiana sent a staff member to each of the launches and every one of these staff members mentioned the same level of anticipation. Praise goes to all the teachers and students involved, but the real innovators behind these events are the students from Elkhart, who launched a weather balloon in fourth grade, something this old dog didn't have the opportunity to do until he was 26 years old. The winds of change are blowing strong and they have the trajectory maps as proof!

Annual Wildland Fire Exercise Gain Spotlight

*By **Alex Tardy**, WCM, NWS San Diego, CA*

Over 100 fire fighters participate in the annual wildland fire exercise.

Dry conditions in southern California combined with abnormally warm temperatures since 2013 are making for unprecedented and year-round fire danger in the San Diego County area. These conditions have put a spotlight on the 3-day wildfire functional exercise in the county, which draws hundreds of fire fighters from across San Diego County and parts of Riverside County. This year the exercise was held on the Pala Indian Reservation.

NWS incident meteorologist Jimmy Taeger led the opening day weather planning briefing. NWS forecasters Brett Albright and Brandt Maxwell also provided morning weather briefings. Calfire, City of San Diego Fire and Rescue, and the U.S. Forest Service are the core agencies leading this exercise. The exercise is the largest of its type in California and includes laying down water lines and helicopter water drops. NWS meteorologist Matt Moreland and warning coordination meteorologist Alex Tardy also visited the exercise to meet up with partners. Fuel conditions are near record low in southern California after the driest water year on record for parts of the region.

Full Scale Exercise Focuses on Animal-Transmitted Disease

*By NWS Incident Meteorologist **Kari Fleegel**, NWS Aberdeen, SD*

Meteorologists from all three South Dakota (SD) offices joined for a full scale emergency exercise May 8-10. The incident was geared toward animal-transmitted diseases where weather played a significant role. The exercise allowed NWS to strengthen partnerships with the emergency management community across South Dakota. NWS personnel worked as a team to ensure a consistent message throughout the exercise.

The main exercise participants included the SD Incident Management Assistance Team, SD Animal Industry Board, SD emergency management associations, and other partners from Lake and Stanley

NWS employees Renee Wise at the South Dakota Emergency Operations Center (EOC), and Matthew Dux at the Lake County EOC.

counties. NWS participants included Renee Wise, Travis Tarver, and Kari Fleegel from NWS Aberdeen; Jon Chamberlain from NWS Rapid City; and Matthew Dux and Alex Ferguson from NWS Sioux Falls. These NWS staff members were stationed at three separate locations across the state.

Flood Risk Management Community of Practice Silver Jackets Workshop

*By **Victor Hom**, Hydrologist, NWS headquarters, Silver Spring, MD*

In May, NWS took part in the 2018 Interagency Flood Risk Management (FRM) Workshop in Indianapolis, IN. The workshop helped to unify the 49 Silver Jacket teams. Silver Jackets teams in states across the country bring together multiple state, federal, and sometimes tribal and local agencies together to learn from one another and apply their knowledge to reduce the risk of flooding and other natural disasters in the United States, and to enhance response and recovery efforts when such events do occur. There are a growing number of states applying to join the Silver Jackets program; the ultimate goal is a state-led interagency team in every state.

Indiana Silver Jackets Team representatives accepting award. NOAA Reps are Link Crawford, Ohio River Forecast Center (2nd from right), Al Shipe, NWS Indianapolis, IN, (3rd from right), Megan Dodson, NWS Northern Indiana, (3rd from left)

The meeting offered an opportunity to share repeatable and achievable interagency successes and to enhance interagency capacity to deliver integrated and adaptive approaches to flood risk management.

NWS staff also helped produce a special edition of the Silver Jacket BUZZ newsletter to complement workshop discussions. NWS staff also hosted an Exhibition Booth to share information on NOAA's complementary water-related activities. The workshop culminated with recognition of partnership contributions and with the Indiana Silver Jackets being awarded 2018 Team of the Year.

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