

# Aware

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**November 2018**

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## Probabilistic River Outlooks Now Available for Entire Missouri River Basin

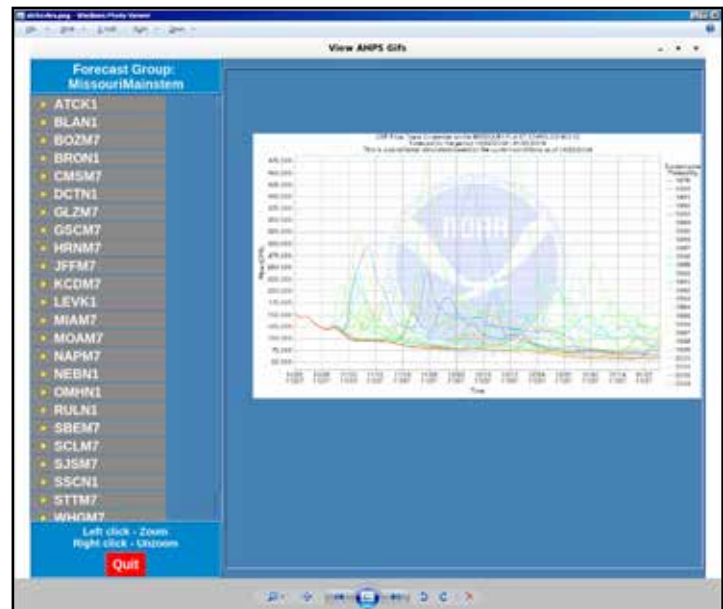
By [Kevin Low](#), Service Coordination Hydrologist, MBRFC

On October 23, 2018, history was made when NWS issued the first probabilistic river outlook at the mouth of the [Missouri River. Missouri Basin River Forecast Center](#) (MBRFC), in Pleasant Hill, MO, completed modeling the entire Missouri River basin in September, making it possible to issue probabilistic outlooks at nearly 500 locations throughout the basin.

The NWS 2000-2005 Strategic Plan, released in 1999, called for the phased national implementation of the NWS Advanced Hydrologic Prediction System (AHPS). Among other benefits, AHPS enables the NWS to extend river stage and streamflow predictions at all official NWS forecast locations weeks and even months into the future. AHPS provides risk-based information for decision makers in the emergency management and water resources management communities.

The Missouri River Basin is highly regulated (i.e., dams and diversion canals). Three of the nation's largest five reservoirs are within the basin. MBRFC decided early on to incorporate robust streamflow regulation algorithms within its river forecasting model in order to simulate anthropogenic influences on watershed response. In the 16 years spanning 2002 to 2018, more than 80 reservoirs and 200 in-stream diversion structures were modeled with the assistance of staff and contract team members in close cooperation with federal partners. Although many MBRFC staff members contributed to this monumental effort, Gregg Schalk, P.E., served as the principal investigator throughout the 16-year process.

With the Missouri River Basin now fully modeled, NWS can provide long-range probabilistic river outlooks downstream to the mouth of the Mississippi River.



*Shown above is the 25-member flow ensemble for the Missouri River at St. Charles, MO, near the mouth.*

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## GOES-West Satellite Transition

For more information, contact [Brian Gockel](#), Meteorologist, NWS office of Observations, Silver Spring, MD

The ongoing [GOES-West satellite transition](#) consists of the following key activities and events:

- ◆ **November 15 to December 10, 2018:** GOES-17 Sectorized Cloud and Moisture Imagery (SCMI) sectors gradually will be added to the Satellite Broadcast Network (SBN). NOAA is planning post-drift tests during this period

to determine availability and fine tuning of SCMI for NWS Pacific, Alaska and west CONUS sectors, Advanced Baseline Imager (ABI) Mode 6, NWS requests for ABI meso sectors, etc.

- ◆ **December 10, 2018:** GOES-17 becomes GOES-West. GOES-17 ABI SCMI becomes available for continuous NWS operational use. The GOES-17 Ground Readiness Project (GRB) stream will become the operational GOES West imagery stream for antenna-fed NWS systems. GOES-15 data will be available to NWS users through GRB, SBN and other services.
- ◆ **May 2019:** NWS plans to phase out GOES-15 products and services.

All dates are subject to change. [Find the latest information at our website.](#)



### Post-Transition GOES-17 Activities and Events

- ◆ **Other ABI Level 2 Products:** ABI Level 2 derived products, (GOES-17 winds, cloud products, surface temperatures, etc.) will remain at a beta stage of maturity with incremental improvements. NOAA will continue to study the impact of the GOES-17 ABI Loop Heat Pipe issue on these products. As these products are further validated on a product-by-product basis, NWS will make them available for distribution, in some cases, via SBN. NWS may release some products before their provisional maturity stage. Such products will include a “beta validated” caveat. One or more [Service Change Notices](#) will communicate updates to product-maturity status.
- ◆ **Geostationary Lightning Mapper (GLM):** NWS plans to distribute the GOES-17 version of the GLM CONUS-area Flash Extent Density grids via non-operational mechanisms starting in December 2018. This GOES-17 product essentially will be identical to the GOES-16 CONUS-area grid. Additional GOES-16 and -17 GLM-based products (e.g., additional parameters, some with broader geographical coverages) are scheduled to be released early 2019. NOAA also plans to add the GOES-16 and GOES-17 Flash Extent Density grids to the SBN in early 2019.
- ◆ **Space Weather:** The GOES-R program continues to improve the quality of space weather data. NWS hopes to make the new data in late 2019, with additional GOES-16 and -17 space weather processing scheduled for 2020.

The successful completion of these projects will enable full exploitation of GOES-R Series data in NWS operations.

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## Interactive Workshop Helps NWS Work More Effectively with Media

By [Megan Syner](#), WCM, NWS Great Falls, MT

An interactive workshop on messaging helped bring media partners and local WFO staff in sync. The half day workshop included a communication exercise during which media, Emergency Managers (EM), and NWS staff split into groups and come up with a public message based on a weather-related scenario.

The goal of this exercise was for each group to work together on creating a message and then share these messages. The goal was to see the similarities as well as understand how to better leverage each other’s area of expertise to create consistent messages. The most interesting part of this exercise was the challenge that the media groups faced because they each have different ways of communicating and disseminating messages. Despite these challenges, they were able to work together to craft a safety message for their community.

The half day workshop was held in late-September at NWS Great Falls, MT. Local media from across the state, emergency, and a local social scientist gathered at NWS Great Falls to learn about our latest tools and technology in weather and hydrology, probabilistic forecasts, and improving messaging while also strengthening partner collaboration. Attendees also took part in an office tour.

The workshop lasted 4 hours and the theme was winter weather. Meteorologist-In-Charge Don Britton shared the value of both emergency management and media partnership, then Meteorologist Jane Fogleman led a



Meteorologist Jason Anglin presents information on probabilistic snowfall forecasts.

tour of our office. Lead Meteorologist Dr. Paul Nutter shared information on the latest tools and technology that we are using, including GOES-16/17, National Blend of Models, Forecast Builder, climate, and data quality. Senior Service Hydrologist Arin Peters discussed how to properly interpret hydrographs and how water information can be accessed. Meteorologist Jason Anglin showcased our website.

During the second half of the workshop, Jason delved into probabilistic snowfall forecasts with a tabletop discussion on decision-making based off of scenarios from the 2017/18 winter season. Warning Coordination Meteorologist Megan Syner ended the day with a discussion of messaging and collaboration with a focus on partner feedback of specific products such as watch/warnings/advisories, Area Forecast Discussion, email notifications, and weather stories.

The EM community found the relationship building with media partners especially valuable. In a future workshop, participants are interested in learning more about weather and terrain interaction as well as communication and messaging.

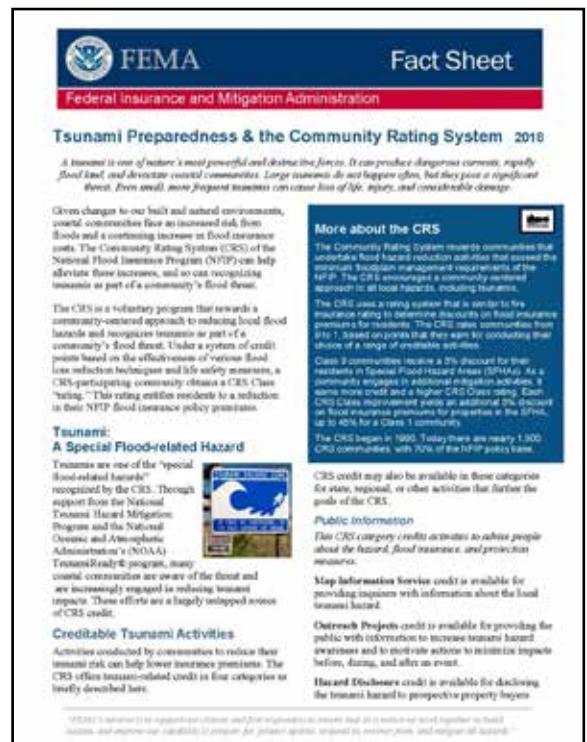
## New FEMA Fact Sheets Aim to Help Communities Reduce Tsunami Impacts

By [Christa Rabenold](#), Mitigation Specialist, Tsunami Service Program, Silver Spring, MD

The [National Tsunami Hazard Mitigation Program](#) (NTHMP), in cooperation with FEMA’s [Community Rating System](#) (CRS), has produced two new fact sheets that explain the relationship between the CRS and tsunami programs.

The CRS is a voluntary program that rewards a community-centered approach to reducing local flood hazards and recognizes tsunamis as part of a community’s flood threat. Under a system of credit points based on the effectiveness of various flood loss reduction techniques and life safety measures, a CRS-participating community obtains a CRS Class “rating.” This rating may entitle residents to a reduction in their National Flood Insurance Program policy premiums.

Through support from the NTHMP and the NWS’ [TsunamiReady® program](#), many coastal communities are aware of the tsunami threat and are increasingly engaged in reducing tsunami impacts. These efforts are a largely untapped source of CRS credit. The CRS offers tsunami-related credit in four categories: Public Information, Mapping and Regulations, Flood Damage Reduction, and Warning and Response. By working together on tsunamis, EMs and floodplain managers can better incorporate the hazard into floodplain regulations, planning and public information activities to improve a community’s CRS Class



rating. The end result? Communities are better prepared for tsunamis and local residents in these areas may get a greater insurance discount.

The new fact sheets, "[Tsunami Preparedness & the Community Rating System](#)" and "[Tsunami Outreach & the Community Rating System](#)," can be downloaded from the FEMA website.

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## Preparing for Earthquakes Can Pay Dividends

For more information, contact [Audrey Rubel](#), Physical Scientist, Alaska Region Headquarters, Anchorage, AK

Alaska is the most seismically active U.S. state, home to four of the [largest 20 earthquake events in the world](#), including [The Great M9.2 Alaska Earthquake and Tsunami of March 27, 1964](#). This [USGS video](#) captures the movement of the Frontier Building in downtown Anchorage during a [magnitude 7.1 earthquake on January 24, 2016](#). But many other areas of the continental United States and Hawaii are also subject to earthquakes

On October 18, NWS Alaska Regional office and Weather Forecast Offices joined more than 140,000 Alaskans taking part in the annual statewide [Great Alaska ShakeOut Earthquake Drill](#). NWS Alaska shared earthquake safety messages and videos with staff, and announced the drill on social media in advance to encourage widespread participation by partners and the public. In addition, staff practiced the "[Drop, Cover, and Hold On](#)" safety actions during the ShakeOut Earthquake Drill and shared participation on social media pages.



From left, Renee Tatusko, Arctic and International Policy Coordinator; Alex Young, WFO Fairbanks Forecaster; and Gene Petrescu, Director of Arctic Testbed, take part in the Great Alaska ShakeOut.

The drill's website explains that ground shaking during an earthquake is rarely the cause of injury. Most earthquake-related injuries and deaths are caused by collapsing walls and roofs, flying glass and falling objects. It is extremely important for a person to move as little as possible to reach the place of safety he or she has identified because most injuries occur when people try to move more than a short distance during the shaking.

If you live in or travel to a seismically active area, please take the time to prepare for the next big earthquake so you can survive and recover as quickly as possible. For more information about preparedness for earthquakes and other emergencies, please visit [FEMA – Be Informed](#).

**Aware**

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