

Mississippi River Basin / Gulf of Mexico Nutrient Runoff Network Info Bulletin

Sharing information and making connections from the headwaters to the gulf.

April 8, 2021

Welcome!

This bulletin is designed as a way to share information with those interested in nutrient runoff issues and impacts. ***We hope that you find this a valuable resource and encourage you to be a part of the exchange!*** You can share resources or information for inclusion in future bulletins, or join the distribution list, by sending an email to noaa.centralregion@noaa.gov.

Outlooks and Forecasts

NOAA Releases 2021 Spring Outlook

Nearly one-half of the country — stretching from the Pacific Coast to the Great Plains and upper Midwest — is currently experiencing moderate to exceptional drought conditions, and that is expected to continue and expand, according to [NOAA's 2021 Spring Outlook](#). The 2021 Outlook includes information on drought, temperature, precipitation and flood risk. NOAA produces seasonal outlooks to help communities prepare for weather and environmental conditions which are likely during the coming months to minimize impacts on lives and livelihoods. You can also check out the [Spring Outlook Video](#) to learn more.

2021 National Hydrologic Assessment

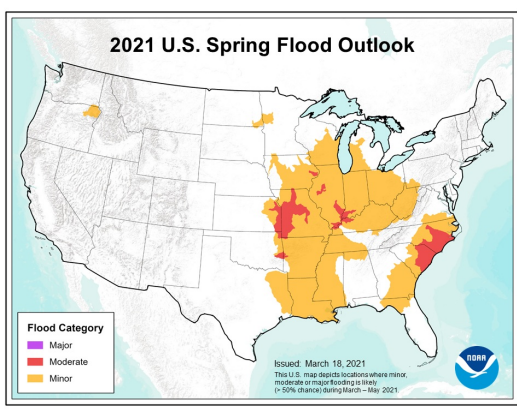
The [2021 National Hydrologic Assessment \(Spring Flood Outlook\)](#) offers an analysis of flood risk, water supply, and ice break-up and jam flooding for spring 2021. The assessment is based on late summer, fall, and winter precipitation, frost depth, soil saturation levels, snowpack, current streamflow, and projected spring weather. NOAA's network of 122 Weather Forecast Offices, 13 River Forecast Centers, National Water Center, and other national centers nationwide assess this risk, summarized here at the national scale.



A wetland is an area of land that is saturated with water, characterized by plants that can tolerate wet soils and low oxygen levels at their roots.

Spotlight: Coastal Wetlands

More than just a pretty view, wetlands are a pivotal part of the natural system, providing tremendous benefits for coastal communities. Coastal wetlands include all wetlands in coastal watersheds—the entire area from which tidal streams drain to the ocean or inland seas. Learn more about these unique lands by checking out several resources. [Marsh Madness 2021](#) is keeping score of all the ways marsh habitat plays an important role in the protection and restoration work NOAA Fisheries does for communities, fish, and wildlife. [Coastal Wetlands: Too Valuable to Lose is a comprehensive resource](#) of information related to the types of wetlands, benefits, why they are important, challenges, and decisions that can be made to help preserve coastal wetlands and maintain their ecological integrity. Finally, check out [New Methodology Combines Observations from Different Satellites for Coastal Wetland Monitoring](#) to learn more about how high quality satellite imagery is available for use at no cost, offering scientists an inexpensive opportunity to monitor change to coastal wetlands throughout the



Overall, a reduced risk of spring flooding exists this year primarily due to a mainly dry fall and winter, along with limited snow still remaining on the ground. Major flooding is not expected this spring season. Minor to moderate flooding is ongoing across portions of the Lower Missouri River Basin with the flood risk predicted to continue through spring.

Winter-Spring Quarterly Climate Summaries and Outlooks

Information from regional Drought Early Warning Systems helps people make better decisions in many sectors, including construction, fish production, and agriculture. NOAA's Regional Climate Services Program creates outlooks to inform the public about recent climate impacts within their respective regions. Summaries and Outlooks are tailored to specific sub-regions: [Midwest](#), [Missouri River Basin](#), [Great Lakes](#), and [Southern Region](#). These take a look back at December 2020 - February 2021 and include climate extremes, impacts, and other climate monitoring information. They also include a section on the April-June outlooks.

Your Attention Please: Destroy! Don't Dump!

In early March U.S. Geological Survey (USGS) scientists were notified that zebra mussels were found attached and inside moss balls sold as aquarium plants. [Zebra mussels](#) are regarded as [one of the most destructive invasive species](#) in North America.

year.

Spotlight: Sea Turtles Rescued

February brought historic winter temps to a good portion of the country - and the Gulf of Mexico was no exception. [Check out this story to learn more](#) about the heroic efforts to rescue, rehabilitate, and release thousands of sea turtles. Additionally, the National Fish and Wildlife Foundation has announced more than [\\$1.2 million to support sea turtle conservation and respond to the cold-stun event in Texas](#).



A green sea turtle slides down the ramp into warmer waters of the Gulf of Mexico after recovering. Activities authorized by NOAA Fisheries and U.S. Fish and Wildlife Service.

Spotlight: Sea Grant Funding Opportunities

Sea Grant has numerous [funding opportunities](#) available related to a broad array of topic areas. Two of particular interest in the Mississippi River Basin are related to [Mitigating Runoff and Pollution Impacts on Freshwater Systems](#), as well as [Emerging Contaminants](#).

Spotlight: Dr. Steve Ashby

With this issue of the bulletin we would like to recognize and appreciate the career achievements and contributions of Dr. Steve Ashby. Steve was the Co-Director for the Northern Gulf Institute, a NOAA Cooperative Institute, from October 2011 until his retirement from Mississippi State University



Zebra mussels can quickly take over once they get established in a waterbody and cause significant damage including disrupting the food chain, changing the chemistry of the water (which can cause more blue green algae outbreaks or offensive taste), and clogging water intake and delivery systems. The concern is that live mussels released into a storm drain or flushed could be introduced into a waterway. As of mid-March at least 32 states have reported the presence of both live and dead zebra mussels at other retailers. [The U.S. Fish & Wildlife Service has created a comprehensive page to support the massive effort underway to spread the message of “Destroy! Don’t Dump!”](#). You are encouraged to share this information with those in your networks and communities.

Hypoxia Related Highlights

Hypoxia Task Force Updates

At the [Fall 2020 Virtual Hypoxia Task Force Meeting](#) each of the ten workgroups reported on activities and progress, including seven workgroups formed to address state priorities for collaboration on implementing nutrient reduction strategies. Through active leadership by state, federal, tribal, and sub-basin coordinating committee members, states continue to make progress on their nutrient reduction efforts.

How’s My Waterway Tool Provides Water Quality Information Nationwide

The EPA- developed web application, [How’s My Waterway](#), provides the public with a comprehensive picture of water quality in their community and at state and national levels. The application integrates data from multiple systems and was built with an interface that is easy to access and understand on a mobile phone or laptop computer. [A short video tutorial is available to learn more.](#)

in January 2021. During his tenure he served on several NOAA teams and participated in NOAA projects researching causes and ecosystem impacts of hypoxia in the Gulf of Mexico and processes associated with algal blooms. Prior to working for NGI, Steve was a research scientist and a program manager for the U.S. Army Corps of Engineers, Engineer Research and Development Center in Vicksburg, MS where his research focused on aquatic processes in rivers and reservoirs and nutrient runoff impacts on water quality.



Steve was actively involved in several collaborative efforts and will be missed by his colleagues. However, we all look forward to crossing paths with Steve again as we continue to support efforts related to the reduction of nutrients and hypoxia in the Gulf of Mexico. Best wishes to Steve as he starts another exciting chapter!

Extension, Outreach, and Education Efforts

North Central Region Water Network

This is an extension-led partnership of 12 land-grant universities, ensuring safe and sufficient water supplies and sustainable, resilient communities. [The North Central Region Water Network](#) is dedicated to enhancing connectivity and learning, sharing the latest Extension research and

Compendium of Conservation Tracking Tools Released

In November, the Hypoxia Task Force published a [compilation of technologies that are available to characterize crop areas, cover crops, riparian vegetation, and pasture-based practice for overall conservation system assessment and tracking](#). These technologies (some of which are free and publicly available, some commercial, and some available on a state-specific basis) can be used to document agricultural conservation across a wide range of areas, providing one way to track interim progress on implementation while waiting for longer-term water quality results. The compendium includes a brief introduction, a simple table summarizing the tools, as well as a one-page summary of each technology.

Visit the Hypoxia Task Force Website

To learn more about the work of the Hypoxia Task Force, visit the [Hypoxia Task Force Homepage](#), which features recent reports and measurements, important documents, upcoming actions, and learning opportunities. The “in the Spotlight” section provides a great introduction. Another way to learn more is to subscribe to the Mississippi River/Gulf of Mexico Hypoxia Task Force Newsletter which includes HTF activities and provides a snapshot of recent state activities, federal agency activities, publications, and resources. The creators of this Bulletin include some of the content (and are appreciative of the opportunity to do so) - but we encourage you to subscribe to the HTF Newsletter for a much deeper dive into the important issues and initiatives related to hypoxia and nutrient reduction. [Sign up for the newsletter](#).

Additional Items of Interest

NIDIS Unveils New Website and Hosts Ecological Drought Webinar Series

On January 14, 2021, the National Integrated Drought Information System (NIDIS) relaunched the U.S. Drought Portal ([drought.gov](#)) with new and updated content and design, enhanced mobile experience, and current drought conditions and forecasts at city, county, and watershed scales to global levels. The new Drought Portal will not only make it easy for users to access and share drought information, it will also contain interactive data and maps that display drought in new ways. The Drought Portal will also focus on drought interactions with various economic sectors, such as agriculture, energy, water utilities, and tourism and

knowledge across the region, strengthening the resource base for Extension education, and coordinating initiatives with measurable short and long term impacts. While there are MANY resources available of interest, one place to start is checking out their wide array of applicable webinars. [The Current Webinar Series](#) is a speed networking series for professionals engaged in water-related Extension, research, and conservation activities. Each month, they highlight the best water-related research and Extension programming throughout the region.

Gulf of Mexico Alliance Continues to "Embrace the Gulf" in 2021

Building on the success of the “Embrace the Gulf” 2020 campaign, [the Gulf of Mexico Alliance is continuing the initiative this year with a new focus on improving the health of the Gulf](#). This year’s goal is to turn awareness into action through easy steps that make a difference in coastal communities, habitats, and wildlife.

OneNOAA Science Seminar Series

The [OneNOAA Science Seminar Series](#) is a voluntary NOAA staff effort to enable all NOAA offices, irrespective of geographic location to come together, integrate, and openly share in one online location and common format publicly accessible science-based seminars. It provides discovery and access to over 500 seminars a year! The seminars provide a small window into the environmental work NOAA does for the nation. Seminars are open to anyone to attend online and remote access to the seminars is available on a first-come first-served basis. Some seminars are recorded for later viewing. To stay informed on the series and upcoming webinars, send an email with the word 'subscribe' in the subject or body to OneNOAAscienceseminars-request@list.woc.noaa.gov.

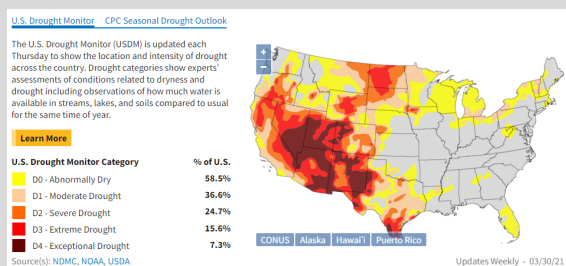
NOAA's Teacher at Sea Program

recreation.

NIDIS also recently hosted a four-part webinar series to raise awareness of ecological drought, share actions that strengthen ecosystem resilience and mitigate the impacts of droughts, and discuss research and management needs for future drought planning and preparedness. The series was co-hosted by NIDIS and the USGS National Climate Adaptation and Science Center, with expert speakers from the research community, tribal nations, and government agencies.

Recordings of the webinar series are available for you to learn more on several specific topics related to Ecological Drought:

[Ecological Drought: An Introduction](#)
[Planning for Resilience](#)
[Drought, Wildfire, and Recovery](#)
[Impacts on Coastal Systems](#)



The U.S. Drought Monitor, available on drougt.gov, is updated each Thursday to show the location and intensity of drought across the country using a five-category system.

NOAA's Updated U.S. Climate Data Will Establish "New Normals"

NOAA will soon release a much-anticipated update of U.S. climate data for placing recent weather conditions - such as heat waves and flooding rain - into historical context. This new 30-year dataset will span from 1991 to 2020 and is scheduled for release in May 2021. It will serve as the nation's updated climate "normals" for the next 10 years.

[Read more about this effort from the National Centers for Environmental Information.](#)

Midwest and Great Plains Harmful Algal Blooms Conference Proceedings Now Available

[Information from the 2020 workshop is now posted and available.](#) Organizers ask for your help to spread the news and share widely within your professional networks.

Upcoming Webinar: Nutrient Reduction Best Management Practices in Cold

Since 1990, more than 850 teachers have sailed on NOAA or NOAA-partner vessels through the Teacher at Sea Program, which provides a unique opportunity for kindergarten through college-level teachers to sail and work at sea with world-renowned NOAA scientists.



Research cruises provide hands-on, real-world experience and invaluable insight into oceanic and atmospheric research. Teachers conduct research, gather data, and document their experiences via blogs, photos, and more. Check out the [2020 Year in Review](#) to learn more about the program and the [NOAA Teacher at Sea Alumni Story Map](#) to hear from the educators who have participated in over 30 years of research.

NOAA Live! Features a NOAA Open House Series

The NOAA Live! webinar series is designed to capture the imagination of young learners, but is of interest to viewers of all ages. Each weekly webinar features a different NOAA expert/topic and a moderated question and answer session. The audience comes away with a feel for what NOAA staff do within their area of expertise. In March a "[NOAA Open House](#)" Series was also delivered to provide an opportunity to virtually travel across the country to six different NOAA facilities to showcase some of the amazing places NOAA scientists, engineers, educators, technicians and interns work. To learn more, register for upcoming webinars, and view past episodes, go to [NOAA Live!](#)

Climates

In April 2019 partners across the Red River Basin of the North came together for a workshop to examine the available research on the effectiveness and suitability of nutrient reduction agricultural beneficial management practices (BMPs) in cold climates. [A report was recently released](#) summarizing the information and discussion and documenting the consensus regarding BMP recommendations to the agricultural community. The North Central Region Water Network's The Current Webinar series will feature three workshop organizers who will discuss the workshop, how it came together and why more discussion around nutrient reduction BMPs in cold climates is needed. Speakers will also share the main research gaps identified and the BMPs the group broadly agreed were highly effective in reducing nitrogen and/or phosphorus loading in the basin. [Register for the April 14 Webinar here.](#)

2021 Conferences

UCOWR/NIWR Annual Water Resources Conference June 8- 10 ([Registration](#))

Coastal and Estuarine Research Federation 26th Biennial Conference
November 1 - 4 and 8 - 11, 2021
([Registration](#))

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**NOAA Regional
Collaboration
NETWORK**

This bulletin is compiled by the NOAA Central Region Collaboration Team and Gulf of Mexico Regional Collaboration Teams nutrient runoff working group.

Members represent Minnesota, Louisiana, and Mississippi-Alabama Sea Grant Programs, National Water Extension Program, Northern Gulf Institute, Mississippi State University, University of Minnesota Water Resources Center, NOAA National Center for Coastal Ocean Science, NOAA National Weather Service Forecast Offices and River Forecast Centers.

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NOAA Regional Collaboration: Improving NOAA's service to the Nation