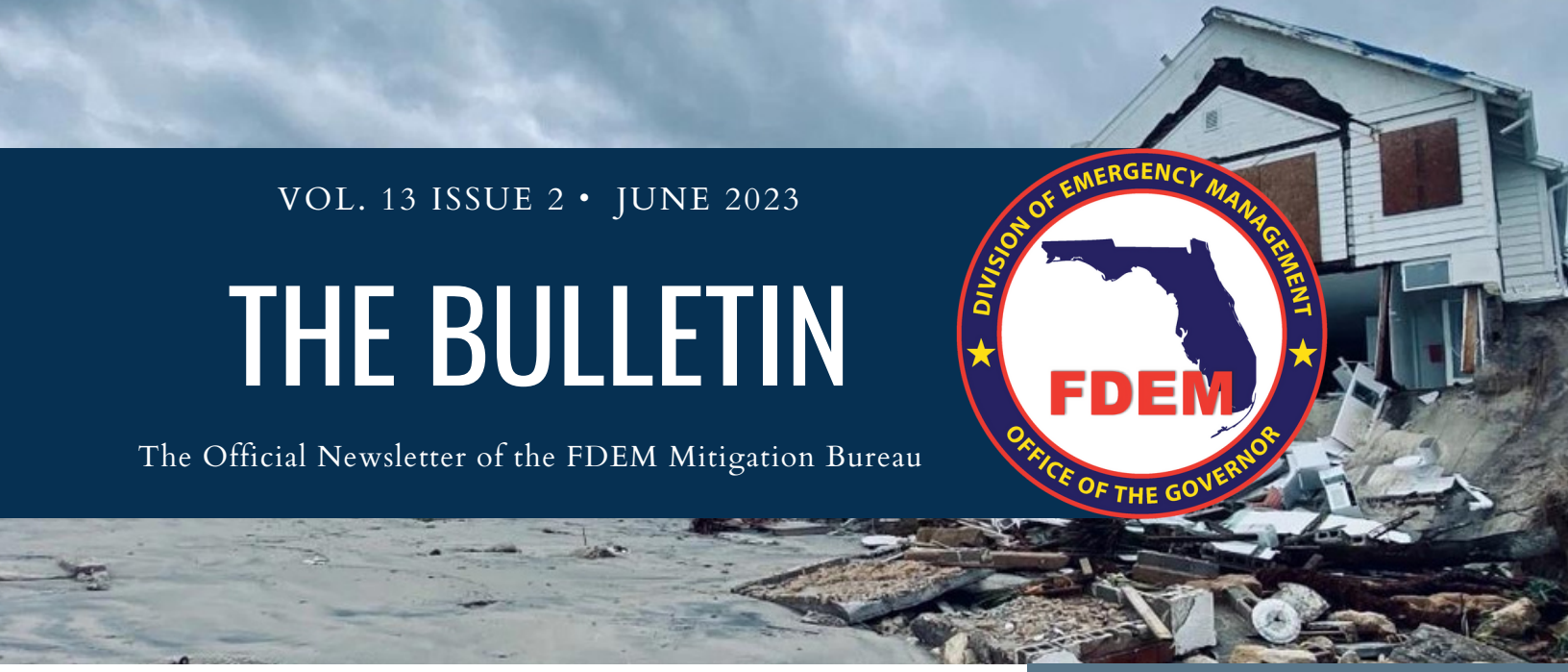


VOL. 13 ISSUE 2 • JUNE 2023

THE BULLETIN

The Official Newsletter of the FDEM Mitigation Bureau

Florida Enhanced State Hazard Mitigation Plan

2023 Update

Visit flshmp-floridadisaster.hub.arcgis.com/ to view the new SHMP website

NOW OPEN FOR PUBLIC COMMENT

We want to hear from you! Take our survey to provide feedback

www surveymonkey.com/r/2023shmpupdategeneral

Thank you all for participating and sharing your valuable input with the Planning Team. You're the best!

- Mitty the Gator

This Issue:

Hazard Mitigation Grant Program

DR-4680 Hurricane Nicole Notice of Funding Availability

The Florida Division of Emergency Management (FDEM) is pleased to announce the Notice of Funding Availability (NOFA) for the Hazard Mitigation Grant Program (HMGP) for Hurricane Nicole DR-4680 has been published to the Florida Administrative Register (FAR) and is available on our state HMGP page. We ask that everyone **take the time to read through the entire NOFA.**

The Division will continue to use the FDEM Portal for digital application submissions. Additional details can be found in the NOFA and on the HMGP website. The application deadline for this event is October 20, 2023 at 11:59 p.m. (EDT). Do note that if you are submitting through the FDEM Portal, FDEM must receive your access request by 5:00 p.m. (EDT) on October 20, 2023. We look forward to working with you all.

APPLICATION DEADLINE

DR-4680 Hurricane Nicole

Apply digitally using the FDEM Portal. Instructions can be found in the NOFA.

OCT 20, 2023, 11:59 PM (EDT)

For more information please see the following contacts

Jared.Jaworski@em.myflorida.com

dem_hazardmitigationgrantprogram@em.myflorida.com

Looking for technical assistance?

DR-4673 Hurricane Ian Subapplication Development

The Florida Division of Emergency Management Bureau of Mitigation is offering technical assistance with development of subapplications for the Hazard Mitigation Grant Program (HMGP) DR-4673 Hurricane Ian funding.

Scan the QR code above and complete the survey to get started

Technical assistance will include assistance with completing subapplications and gathering supporting documentation for Benefit-Cost Analyses and Environmental and Historic Preservation requirements.

This assistance is only available to potential sub-applicants that have not hired a contractor for subapplication development support for HMGP. It will be offered at no cost to the potential subapplicants and will be onsite at your preferred location or virtual, upon request via the HMGP Subapplication Development Technical Assistance Survey.

After completion of the survey, staff will reach out to the point of contact provided to learn about specific needs and begin scheduling onsite assistance.

For more information, please email IanMitigation@em.myflorida.com.

Silver Jackets in the Wild: Exploring Nature-Based Solutions

By: Stephanie Verhulst

Natural and nature-based features, also known as Nature-Based Solutions (NBS), use landscapes or features that have been engineered to mimic natural conditions and/or processes to aid communities in preparing for, resisting, recovering from, and adapting to flood risks. Nature-Based Solutions are important features in coastal and inland regions of Florida. In 2021, Engineering With Nature published the *International Guidelines on Natural and Nature Based Features for Flood Risk Management*. While these guidelines provide substantial details on NBS, the Florida Silver Jackets team saw an opportunity to adapt and tailor the broad guidelines to the Florida landscape.

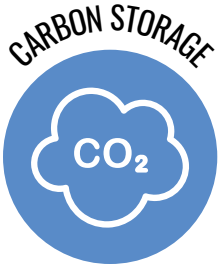
The Florida Silver Jackets team received funding in October 2022 to collaboratively develop Florida-centric educational materials that inform local governments, community members, and engineers on types of natural solutions used in Florida, methods of implementation, funding opportunities, and community level guidance to include NBS in planning and flood risk management options. Goals of the Silver Jackets project include integrating information on NBS with examples of features already present in Florida communities; increasing awareness, knowledge, and familiarity of NBS; and increasing public and private sector awareness of flood mitigation strategies.

The Florida Silver Jackets team, made up of state and federal agencies, local community planners, universities, and non-profit organizations, visited project sites in North Florida to see firsthand how projects have been implemented. Touring both inland and coastal sites enabled the team hear about successful strategies, lessons learned, and future NBS planned for coastal and inland communities.

Image from the Silver Jacket Team's tour of Project GreenShores in Pensacola

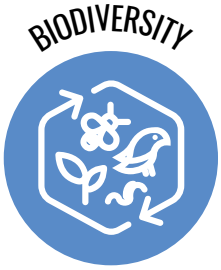
The team met in Pensacola to tour projects that provide the community with increased flood protection, improved water quality, and integration of recreational use and wildlife habitat. Project GreenShores, in downtown Pensacola, uses a combination of NBS including planted saltmarsh vegetation along the shoreline and on created marsh islands, artificial oyster reefs, submerged breakwaters, and seagrass habitat to stabilize shoreline while also providing habitat for birds, marine mammals, fish, and oysters. The graphic below shows some of the many benefits Nature-Based Solutions provide to marshlands in Florida.

Nature-Based Solutions are also being implemented in inland communities as flood risk mitigation options. The Silver Jackets team toured the Groundwork Jacksonville-McCoys Creek project currently under construction in Jacksonville's urban core that incorporates urban parks for improved water quality and river floodplain restoration to reduce neighborhood flooding. The team is currently working on creating educational materials that will be made available to the public later in 2023.



One square mile of salt marsh can store the carbon equivalent of 76,000 gallons of gas annually

Marshes trap sediments from tidal waters, allowing them to grow in elevation as sea level rises



Living shorelines increase biodiversity by improving water quality and providing habitats for natural wildlife

Marshes act as natural barriers to waves, and 15 feet of marsh can absorb 50% of incoming wave energy

Living shorelines are more resilient against storms than hard shoreline structures like bulkheads

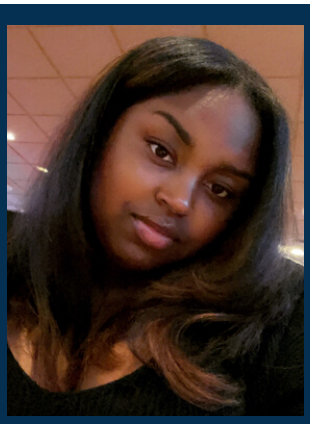
New Employee Spotlight

Wave to these new faces in the halls and kelp us welcome our new Mitigation staff!

Samantha Chaganis
Grants Specialist

Kristi Coppenger
Accounting Systems Analyst

Buddy Pettit
Grants Specialist



Trinitee Harrell
Grants Specialist

Scott Gaines
Floodplain Specialist

Alaijah Marshall
Engineering Planner

Mighty Mitigator of the Quarter

Congratulations to Nicole Giordano for her promotion to Mitigation Finance Manager as of June 1st.

Nicole started working with FDEM as an intern and has worked with the Mitigation Bureau since December 2017.

Nicole is always there to lend a helping hand and brings joy to everyone in the office.

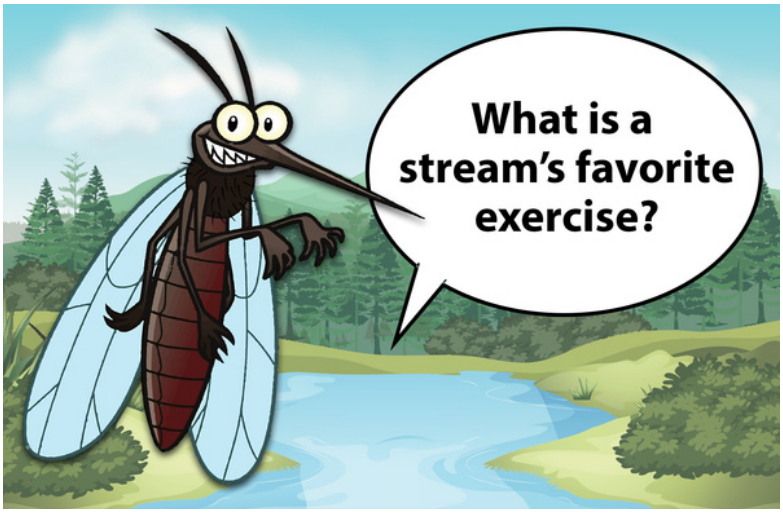
Help us congratulate Nicole on her new position!

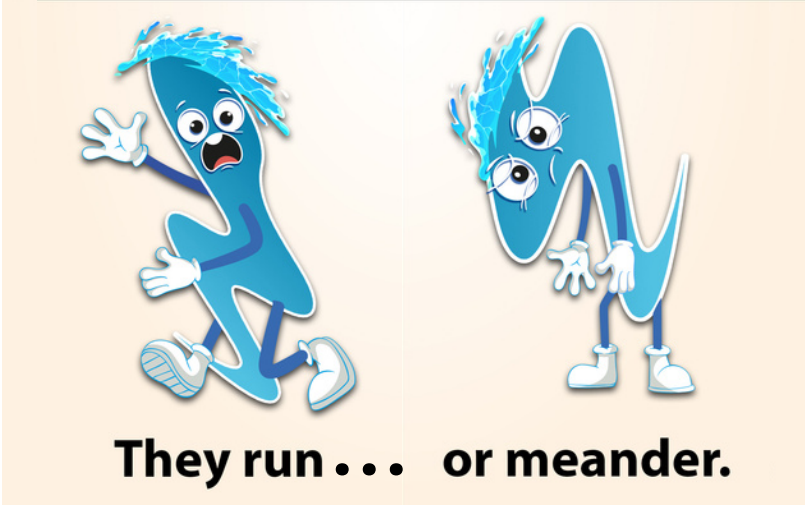
What's a meander with you?

Featuring an original cartoon by Michael Burchette

A meander is when water flows in a curvy, bendy path, like a snake. As a river makes its way through an area that is relatively flat, it often develops bends as it erodes its way through the path of least resistance. Once a meander starts, it often becomes more and more exaggerated. Why is this? Water is pushed to the outside of a bend, and erodes the curve further, while water on the inside is slower and deposits sediment. This is why you often see sand bars and beaches on the inside of the curve. Due to erosion on the outside of a bend and deposition on the inside, the shape of a meander changes over time.

Can you find a meander in your area? If you don't see a river, see if you can spot a sidewalk or path that meanders, or watch how a drop of rainwater flows down a slightly sloped surface - does it make a straight or curvy path?





The New Frontier of Hurricane Resilience: Harmful Algal Blooms

By: Dan Levy, AECOM

Over the past decade, harmful algal blooms (HABs) have been spreading geographically, occurring more frequently, lasting longer, and increasing in toxicity. One of the primary causes is nutrient pollution, which occurs when excessive amounts of nutrients such as phosphorus and nitrogen enter bodies of water through runoff from agricultural practices, wastewater treatment plants, and urbanization. These nutrients act as a fertilizer for algae, causing them to grow and multiply rapidly, leading to the formation of HABs. The toxic byproducts produced by HABs harm flora and fauna which can result in business closures, reductions in property values, higher costs to treat drinking water, loss of tourism, and even fatalities among animals. By economic numbers, HABs are as devastating as any natural disaster, inflicting an estimated $1 billion in damages to the U.S. tourism industry each year.

Algae thrive in warmer waters, and as water temperatures continue to rise, HABS are predicted to become more prevalent. Those higher temperatures also lead to more frequent and intense weather events which can further exacerbate HABs. As vulnerable regions update wind and flood maps to adapt to stronger storms, they must consider HABs in decision making.

Large blue-green algae bloom present at Lake Okeechobee

NOAA issues forecasts to monitor bloom conditions and the potential for impacts. The Harmful Algal Bloom Forecasting Branch (HAB FB) of the National Centers for Coastal Ocean Science (NCCOS) produces several remote sensing products to aid resource managers and public health officials in responding to fresh and saltwater HABs. NOAA currently uses a combination of satellite imagery and water samples of the algae (specifically Karenia brevis) collected from the field by local partners to forecast the location and intensity of red tide events. Additionally, this allows them to test potentially affected shellfish beds more precisely and for shorter periods of time and, if necessary, post advisories in coastal areas where there is a direct health risk. The image to the left depicts a massive blue-green algae bloom present at Lake Okeechobee, which the National Oceanic and Atmospheric Administration estimated covered over 35 percent of the lake as of May 24, 2023.

The private industry is working on new and exciting projects, searching for ways to mitigate and remove HABs. For example, AECOM recently conducted the first ever field-scale algae to biocrude oil demonstration project in the U.S. The project utilized Hydrothermal Processing which transforms recovered algae biomass (wet waste) into carbon neutral energy, biocrude oil, and Renewable Natural Gas (RNG) to help reduce our dependence on fossil fuels. This process was proven highly effective and demonstrated how innovative technologies can be used to deliver a sustainable solution to HABs with little to no waste.

Shown above is Hydronucleation Flotation Technology in action

Another algae mitigation strategy is algae extraction using Hydronucleation Flotation Technology (HFT). This process separates and extracts algae from the water and returns clean clarified water to its source, safely and sustainably. By physically removing algae without damaging the cells, the key nutrients that fuel algae growth (phosphorus and nitrogen) are also removed, along with any carbon and algae toxins that might be present. Minimizing these nutrients can reduce and potentially eliminate the threat of future HABs.

Click here to learn more about harmful algal blooms and the innovative technologies being used to mitigate their future impacts.

Learning the HMGP Way!

By: Jared Jaworski

Mitigation funding assistance does not come around too often, especially with the Hazard Mitigation Grant Program (HMGP), which requires a major disaster declaration to start. Since funding from the HMGP is staggered at times, it can bring other challenges. Those being the familiarity with the program, and any changes that may have occurred since the last application period. Add in the chaotic nature of storm impacts in the state and some level of expected turnover, and you have a knowledge gap that has noticeable effects on an application's health.

Mitigation staff at the Lee Workshop

FDEM conducts post-disaster workshops. The first of which is a state-wide webinar, usually conducted around the Notice of Funding Availability (NOFA) publication. The purpose of this webinar is to bring everyone up to speed on the program's purpose, timeline, important dates, best practices, and changes since the last disaster. The best people to invite to this webinar is anyone that will be involved in the HMGP process at the local level.

The second type of workshop is the in-person/virtual workshop which typically happen a couple months after the NOFA's release. The purpose of these workshops is to allow our local counterparts to do a deep dive on their applications with Division staff to make them stronger prior to submittal. Our team always includes programmatic, engineering, and environmental specialists. The best people to invite to these workshops are those that are working directly on application development or have specific questions regarding applications they are thinking about submitting for the HMGP. These workshops are intended to be community-driven, and they will get more out of them the more they put into it.

A state-wide webinar for Hurricane Ian was conducted on March 28, 2023 which had over 500 participants. Nine in-person workshops were held in Lee, Lake, DeSoto, Highlands, Orange, Seminole, Polk, Volusia, and Sarasota counties, in addition to two virtual workshops for Manatee and Collier counties. There are currently three remaining virtual workshops to conduct for Charlotte, Hardee, and Osceola counties.

Need More Information?

Kristin Lentz: Kristin.Lentz@em.myflorida.com

Brigette Carrillo: Brigette.Carrillo@em.myflorida.com

Jantzen Heberle: Jantzen.Heberle@em.myflorida.com

Angie Speir: Angie.Speir@em.myflorida.com

The Bureau of Mitigation

Mitigation is an integral part of the Florida Division of Emergency Management (FDEM). Mitigation actions reduce or eliminate the loss of life and property by lessening the impact of disasters. Due to Florida's weather, geography, and miles of coastline, the state is highly vulnerable to disasters. Disasters can be very costly to both the citizens and government.

Under the direction of Division Executive Director Kevin Guthrie and State Hazard Mitigation Officer, Laura Dhuwe, the Bureau of Mitigation administers several federal mitigation grant programs including the Hazard Mitigation Grant Program, the Building Resilient Infrastructure and Communities Program, and the Flood Mitigation Assistance Program. The Bureau also administers a state funded mitigation program called the Hurricane Loss Mitigation Program.

If you would like to know more about mitigation in Florida, visit www.floridadisaster.org/mitigation.