

THE BULLETIN

The Official Newsletter of the FDEM Mitigation Bureau



The Digital SHMP is Approved!

The Mitigation Bureau and Mitigation Planning Unit are proud to announce that the Florida Enhanced State Hazard Mitigation Plan (SHMP) has been approved by FEMA through 2028. The 2023 FL SHMP is the first in the nation to utilize the Esri ArcGIS Hub platform to move the once 500-page PDF document to a new web-based, [interactive site](#). Transitioning the SHMP online was important to increase accessibility for stakeholders and the public, enable easier navigation through the plan, and streamline the update process.

The planning team has been able to showcase the new SHMP at multiple events and conferences, gathering valuable feedback along the way. Most recently, the team, along with FDEM GIS, showcased their newly launched site at the Esri Safety and Security Summit and at the User Conference in July. The photo (see right) shows the team holding office hours at the Esri Public Safety booth, where conference attendees could ask questions and interact with the website.



FDEM Mitigation Planning and GIS teams at the Esri User Conference.

While GIS is not typically a focus of mitigation planning, the Hub platform enabled the team to completely transform the SHMP making it more useful to local communities and stakeholders. The website is full of data-rich maps and insightful narratives that support local communities' access to complex data and analyses, strengthening Florida's ability to implement mitigation initiatives.

So why is the SHMP so important? For one thing, the SHMP provides detailed profiles about Florida's risk to natural, human-caused, and technological hazards. The hazard profiles are instrumental in developing the State's mitigation strategy - the goals and objectives for how the state will reduce that risk. Just as important, is that a FEMA-approved SHMP is required to have access to the following federal grant funds: Hazard Mitigation Grant Program, HMGP Post-Fire, Building Resilient Infrastructure and Communities, Flood Mitigation Assistance, Public Assistance (C-G), Fire Management Assistance Grant.

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Generating More HMGP Funding: A Recipe for Success

A Note from FDEM Director Kevin Guthrie

As I travel the state, I sit with emergency managers of all types: private sector, university systems, municipal, county, even state counterparts. You would be surprised how many of them don't really know how states get hazard mitigation grant funding from the Federal Emergency Management Agency (FEMA). The Division is on a fast-moving roller coaster to get better, faster, and more accurate at response, why? MITIGATION. Most simply stated, the state receives a percentage of all federal disaster assistance obligated at the 1-year anniversary of a declared disaster for the Hazard Mitigation Grant Program (HMGP). In Florida, we are an enhanced state which means we get 20 percent of the disaster assistance for HMGP, rather than the usual 15 percent. Just as preparedness generates response, which generates recovery, which generates mitigation, so too is the life of HMGP.

As the greater emergency management community, we are constantly preparing. But what are we preparing for? First, are you preparing your documentation, contracts, procurements, policy, and procedures for the response? Frequently, we conduct exercises that identify gaps in communication, operational coordination, logistics, etc., but we rarely conduct a functional exercise on completing documentation. The second challenge I have for you is to take the time to look at your recovery through the lens of preparedness. When I said recovery, you may have immediately jumped to project worksheets (PW) – I am glad you did! That is where HMGP funding is rooted! Now ask yourself, have I ever actually filled out a PW? What if you had every operational/logistical person complete a PW on their own with a handful of documents from your last disaster? Do you think it would give them perspective on why we ask for accurate and complete documentation? What if we actively prepared to recover, not only to respond? While I have only talked about documentation here, the fact is that nearly all de-obligations from FEMA for Florida agencies center around documentation, contracting, procurement, and policy. As such, we have to prepare in these areas just as much as we train on the debris piles, traffic management, secure scenes, and transport of mock patients. I would be remiss if I didn't mention Florida's Recovery Obligation Calculation (F-ROC) is at the epicenter of "preparing for recovery" and would encourage you to check it out on our website [here](#).

This is why we are engaging so much technology in response for the purpose of documenting what we do. If we can get all mutual aid, debris, housing, basically all Category A and B – Debris Removal and Emergency Protective Measures – obligated by FEMA before the 1-year anniversary of a disaster, then our HMGP funding grows higher and higher. In one area, we were able to reduce the time it took to process statewide mutual aid claims by over 300 days, just by digitizing how we move the claims. In short, the goal is simply to get as much obligated by the 1-year anniversary as possible.

While preparing for recovery and engaging technology are extremely important, is your recovery team ready? For many of you, your recovery team is your finance department, or maybe a grant management unit. When is the last disaster they had for FEMA reimbursement? You must make sure that your team is ready to prepare the documentation and get it in the system. As of this writing (8/2/2023), nearly \$1.333B in PWs have been obligated for Hurricane Ian, \$320M from local PWs and \$994M from state PWs. If every jurisdiction submitted all their Category B and 50 percent of their Category A, that total would have been \$4.627B (based on projects in formulation)! So again, I ask, what are we doing in response and recovery to get more MITIGATION dollars.

My goal is to take every single penny we can from FEMA for mitigation so that we can build and re-build more resilient communities. As indicated previously, HMGP funding comes from the 20 percent of all obligated funds from a disaster. This includes money from Public Assistance, as well as money obligated for Individual Assistance and Small Business Administration loans. Based on our \$1.333B obligated for Hurricane Ian (so far) and funding obligated for IA in Florida, Florida is estimated to receive \$1.1B in HMGP funding, with over \$300M going to Lee County alone. This is the most HMGP we have received in the history of the Division by over \$400B. Oh boy, do I wish we could get that extra \$600M for the projects in development! So now that you know where the money comes from – how can you help your city, county, jurisdiction? Prepare for response by looking at your documents and prepare for recovery by being ready to start the recovery process from the point of declaration. Doing these things will better prepare you to receive the wonderful HMGP funding!



What's the Buzz? A Silver Jackets Update

By: Brigette Carrillo

Big news! All four of the Florida Team's FY24 project proposals have been approved and selected for funding! See the following for a short synopsis and anticipated impacts of these proposals:



Jacksonville Green Roadway Design Charrette: Conduct a green roadway design charrette and publish an associated report of outcomes and design descriptions for the public. This effort will encourage local communities to be more proactive in incorporating green roadway designs.



Utilizing the Community Rating System in Florida: Create a Program for Public Information document, which lists outreach projects for participating communities, and plan for future monitoring and evaluation. Participating communities will be able to get CRS points if the PPI is approved.



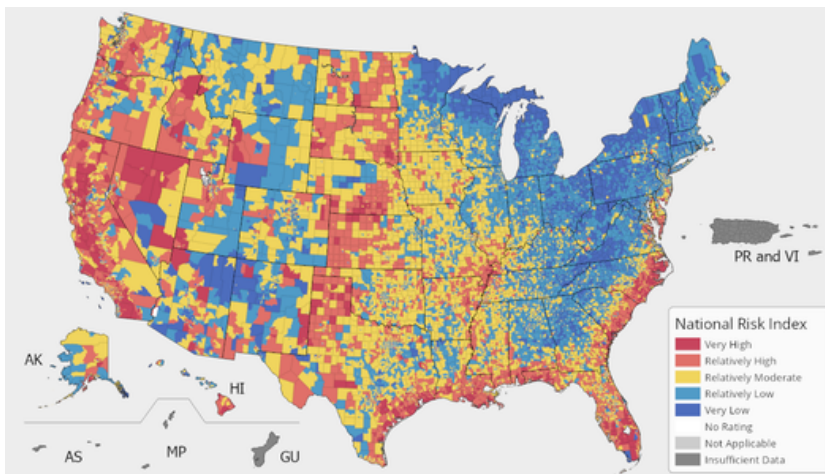
Incorporating Corals into Florida's HMGP: Produce educational materials which include consistent language for coral and hybrid reefs, case studies of successful pilot-scale reef implementation for flood risk reduction, and strategies for the inclusion of reefs in the application process.



Florida Basin-Level Flood Assessment Inventory: Compile an inventory of high-resolution flood data, available models, and a framework that prioritizes data gathering and modeling efforts for communities missing data. This inventory will show gaps in data statewide and help lawmakers distribute resources.

To view past projects such as the Coastal Resilience Workshops, visit the Florida Team's new and improved website [here](#). For questions about Silver Jackets, email Brigette Carrillo at Brigette.Carrillo@em.myflorida.com.

Updates to the National Risk Index



The National Risk Index (NRI) is an online mapping tool that shows risk within communities to 18 different natural hazards. The tool can be used to support mitigation planning, emergency management, resilience building, response, and recovery. Since its debut in August 2021, the NRI has served as an easy-to-use, interactive tool that helps identify communities most vulnerable to these hazards.

FEMA recently released major updates to the NRI tool that provide new data, methodologies, and resources to enhance the user's experience. This includes the addition of agricultural loss data (heat waves, hurricanes, tornados, wildfires, and winter weather) for every state and U.S. territory.

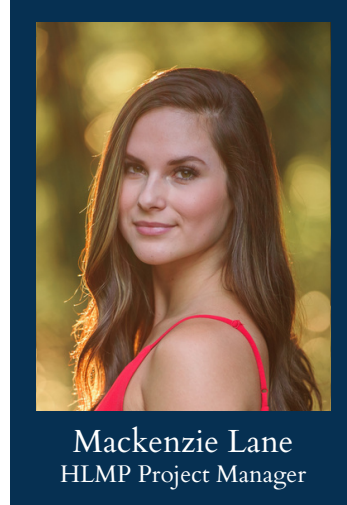
These updates have also improved FEMA's estimates of Expected Annual Loss values. For example, the Expected Annual Loss for hurricanes has increased tremendously - from \$3 billion to \$22 billion. FEMA will continue to update the NRI in accordance with the Community Disaster Resilience Zones Act of 2022. The image above depicts the overall national risk throughout the United States and its territories.

To learn more about the National Risk Index and its most recent updates visit FEMA's NRI [website](#).



New Employee Spotlight

If you see these new faces in the halls, help us welcome our new Mitigation staff to the team!



Mighty Mitigator of the Quarter



This quarter we are celebrating the Mitigation Planning Team here at FDEM! Over the past two years, the Team has been working on updating the State Hazard Mitigation Plan (SHMP). In addition to the usual update, the Team led the effort to digitize the SHMP using ArcGIS Hub. Florida is the first state in the nation to utilize this platform to host the Plan.

Thank you to the Mitigation Planning Team for their extensive efforts. Keep up the good work!



Harvesting the Future

By: Angie Speir

Over a year ago, AECOM began working with the family-run May Nursery in Havana, Florida to reduce the algae growth in one of their on-site ponds. The May family first noticed increased levels of phosphorus and nitrogen in the water which, when present in excess amounts, can encourage the growth of algal blooms. These algal blooms can turn into harmful algal blooms (HABs) when their growth becomes uncontrollable, resulting in the production of toxic chemical byproducts that can have harmful effects on people and animals. AECOM teamed up with Ecosa Process Technologies to devise a solution to May Nursery’s growing HAB issue.



Pictured above is an algae harvester in action!

Together, AECOM and Ecosa Process Technologies developed a process of recovering algae from waterbodies, harvesting nutrients produced by the algae, and returning clean, renewed water to the waterbody. This system is comprised of three separation systems. First, in the “coagulation zone” wastewater chemicals are added to the algae-ridden water to encourage the algae to coagulate or clump together. The coagulated algae then move into the “flocculation zone” where aluminum chloride is added to help float the algae to the top of the processing tank, or “flotation zone”. In the “flotation zone”, clumps of algae are propelled to the surface by jets of dissolved oxygen and skimmed into a separate holding tank. The purified water at the bottom of the tank is gravity-fed into a discharge canal then back into the waterbody.

This highly efficient system enables up to one million gallons of water to be treated in a single day. In heavily algae contaminated water, upwards of 500 gallons of algae slurry may be produced. Harvested algae can be used to create valuable products for commercial use, such as algae biofoam, algae biofertilizer, and algae biocrude. Visit AECOM's [website](#) to learn more about innovative HAB technology.

Ice, Ice, Baby!

Featuring an original cartoon by Michael Burchette

With Florida experiencing record high temperatures and humidity levels, I thought a cooler cartoon would help us all survive the summer heat. In floodplain management, an ice jam is an accumulation of ice in a river, stream, or other flooding source that reduces the cross-sectional area available to carry the flow and increases the water-surface elevation. Ice usually accumulates at a natural or manmade obstruction or at a relatively sudden change in slope, alignment, or cross-section shape or depth.

Ice jams are common in tributary streams entering a large river where the channel slope changes from relatively steep to mild. Ice jams often cause considerable increases in upstream water-surface elevation, and flooding usually occurs quite rapidly after the jam forms. In the northern United States, where rivers can develop relatively thick ice covers during the winter, ice jams can contribute significantly to flood hazards.

Although flow discharges may be low relative to free-flow floods, the stages of ice jam flooding event may be among the highest on record. Ice jam flooding tends to be local and highly site-specific, and even occurs repeatedly in the exact same locations.

Hope I didn’t give y’all a brain freeze with this one, and until next time - stay frosty!

What music do Ice Cubes listen to?



Ice Jams!!



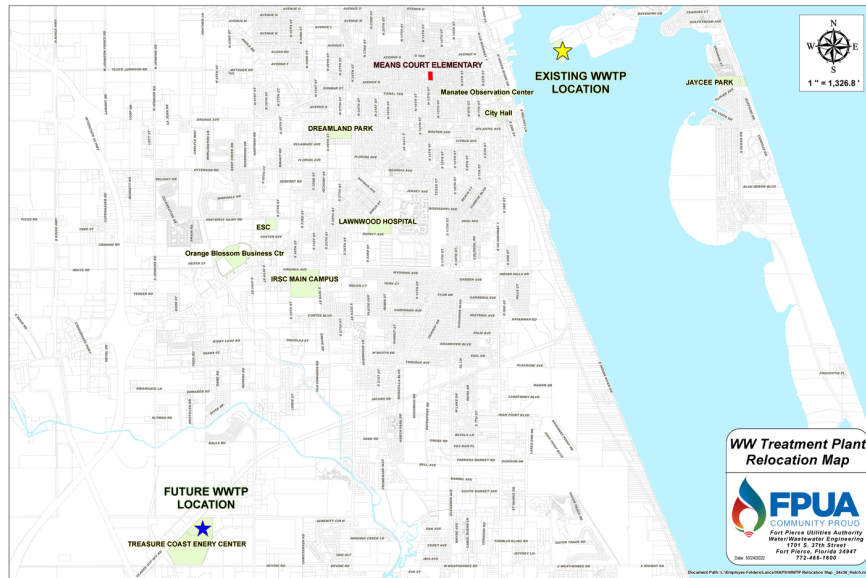


Environmental Stewardship: Leading the Way in Mitigation!

By: Rachel Tennant and Ashley Levin

Fort Pierce Utilities Authority (FPUA), one of Florida’s 33 publicly-owned utility providers, is leading the way with initiatives that will mitigate from storms and protect the nationally recognized Indian River Lagoon. Risk mitigation efforts include relocating the historic Water Reclamation Facility off of South Hutchinson Island, utility-wide sewer pipe rehabilitation, septic-to-sewer conversions, and seagrass restoration initiatives, which are further described below.

This community-funded effort is supported by ratepayers and grants obtained by a newly-established grants department at the utility. Grant support includes funds from the Florida Department of Environmental Protection (FDEP) Resilient Florida grant program, which includes restoration of 2.23 acres of seagrass in the IRL, and State Appropriations. The map pictured to the right depicts both the future and existing locations of the waste water treatment plant as determined by the Fort Pierce Utility Authority.



Map featuring the relocation site of the historic Water Reclamation Facility in Brevard County

Water Reclamation Facility relocation

FPUA is relocating its Water Reclamation Facility to an industrial area far away from residences and the Indian River Lagoon, which is recognized as the most biodiverse estuary in North America. The new facility will be next door to the Treasure Coast Energy Center (TCEC) natural gas power plant. Once operational, the new facility will provide TCEC with reuse water for its cooling towers – an important conservation effort reducing the draw from the natural aquifers by nearly two million gallons per day.

Utility-wide sewer pipe restoration

FPUA is storm-hardening aging clay sewer pipes through a Cured-in-Place piping sewer lining process to prevent storm water from entering the sewer system and untreated sewage leaking into the groundwater. Over 100 miles of old clay pipes will be rehabilitated through this process, which costs about one-tenth of conventional pipe replacement.

Septic-to-sewer conversions

Septic systems pose a risk to the Indian River Lagoon by leaching nutrient rich effluent which causes algal blooms. Customers can convert from septic to FPUA’s sewer system at a heavily discounted rate through grant funding provided to FPUA through the Florida Department of Commerce and the Indian River Lagoon National Estuary Program (IRLNEP). Currently, an estimated 3,000 households within the FPUA wastewater service territory utilize septic tanks.

Seagrass restoration

Seagrass is vital to the Indian River Lagoon because it improves water quality by cycling out excess nutrients, oxygenates the water column for plant and animal life, stabilizes the sediment, and sequesters carbon to help offset climate change. In addition to restoration, FPUA is bringing research funded by the IRLNEP to help restoration experts identify the best species and blends of seagrass for effective restoration in the area.

Fort Pierce Utilities Authority is a municipal, not-for-profit utility provider. FPUA’s mission is to provide our customers with economical, reliable, and friendly service in a continuous effort to enhance the quality of life in our community. Additional information is available at www.fpua.com.



Remembering September 11

FEMA Developments in Emergency Management

Today marks the 22nd anniversary of the Sept. 11, 2001 terrorist attacks. We remember the sorrow of that day but also the dedication, commitment, and strength of those who responded to the tragic events. Since then, incident prevention, disruption, and mitigation strategies have continued to evolve, impacting more than two million first responders. Information sharing, community outreach, and integration of intelligence into law enforcement’s strategic and operational response plans are cornerstones of this effort.

Terrorist threats require a tremendous commitment from the first responder community to evaluate and change traditional practices as needed and to ensure training, tactics, and operational procedures effectively and lawfully counter these threats. Terrorists remain focused on conducting attacks, challenging first responders to hone their threat awareness while striving to adopt the tactics, techniques, and procedures (TTPs) necessary to ensure public safety and prevent terrorism.



Fire, emergency services, and law enforcement personnel continue to enhance their communications, coordination, operations, planning, and training to improve the survivability of victims and the safety of first responders in an increasingly complicated threat environment. This evolution in procedures and processes (combined with first responder awareness) has improved the critical response to incidents, as well as efforts to detect, deter, and disrupt potential terrorist attacks.

The first responder community has made numerous operational changes since 9/11. This includes developing and sharing best practices such as exercises and trainings, broadening investigations and response, and promoting interagency cooperation by promoting collaborative relationships and information sharing. Though 441 first responders were killed on 9/11, their heroism and bravery helped thousands of people survive, demonstrating compassion, kindness, and hope. Thank you to all first responders for your continuous efforts in serving and protecting our nation.

Need More Information?

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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.

