



# Gulf of Mexico Division

Protecting and Preserving  
the Gulf of Mexico

A long wooden pier extends from the right side of the frame into the ocean, receding towards the horizon. The sky is a vibrant mix of orange, pink, and blue, indicating a sunset. The sun is low on the horizon, casting a golden glow across the water. In the foreground, white foam from a wave washes onto a dark sandy beach.

**2020 Annual Report**





## Our Mission

EPA's Gulf of Mexico Division is focused on the health, productivity and restoration of the Gulf of Mexico and the communities that rely on this national resource.



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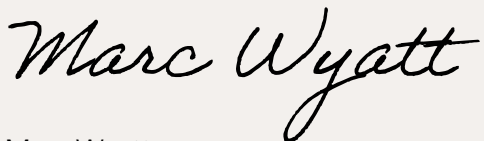
# Message from the Director

From its sea life, to its deep blue waters, to its ability to aesthetically please tourists, the Gulf of Mexico provides vast opportunities to recreate or work. This year's FY 2020 Annual Report for the Gulf of Mexico Division (GMD), which highlights our work and accomplishments from October 1, 2019 to September 30, 2020, unveils the hard work and partnerships essential to preserving this treasured ecosystem.

In March 2020, along with the rest of the nation we were faced with COVID-19, a crisis that required resolute action on many levels to persevere. This involved innovative thinking and action while maintaining a clear strategy for delivering enhanced protection of public health and the environment. GMD's \$7.8 million investment in Trash-Free Waters, \$10 million investment in environmentally sound agricultural practices through the notable Farmer to Farmer Request for Applications, and \$1 million investment in community resilience continue to propel Gulf restoration efforts. Our financial resources are just one piece to a puzzle rich in partnerships; it is our partners' support and level of urgency around protecting the Gulf of Mexico that makes our efforts more impactful and far reaching. FY 2020 has been met with many challenges, and it is a great tribute to everyone in GMD for our countless successes.

This report is dedicated to the staff at GMD. During my first year as Director, I have witnessed firsthand the expertise, hard work and compassion of my talented staff. It is their unwavering devotion and unending resilience that is changing the construct of the Gulf of Mexico for the better. I extend my deepest gratitude for their support and dedication this last year. Looking ahead, GMD's success cannot be attained without our partners—it is their shared vision and interest in the Gulf that strengthens our initiatives. To our partners, thank you for your support, friendship and ingenuity.

Sincerely,

A handwritten signature in black ink that reads "Marc Wyatt". The signature is written in a cursive, flowing style.

Marc Wyatt  
Director, Gulf of Mexico Division

# Who We Are

The Gulf of Mexico Division (GMD) is one of EPA's Great Water Body Programs whose geographic focus is on the major environmental issues of the Gulf of Mexico region and its watershed.

GMD is committed to voluntary, nonregulatory actions and solutions that are based on sound scientific and technical information as substantiated by our work with partners and the public.

## Our program consists of two teams of experienced staff:



### Science Integration and Analysis Team

Promoting and implementing science to benefit the Gulf of Mexico and its communities, this team assists Gulf of Mexico stakeholders by participating in activities such as collecting and testing water samples in the watersheds that flow into the Gulf to monitor water quality.



### Partnerships Team

Encouraging positive behavioral practices and promoting awareness of resources, technologies and environmental practices or initiatives, this team works closely with Gulf partners to identify environmental concerns and provides up-to-date education on how shifts in behavior among Gulf stakeholders and tourists can effect change.

# What We Do

The Gulf of Mexico is recognized worldwide as a vast and productive body of water with tremendous value in ecological, economic and social terms. The Gulf of Mexico Watershed is made up of 33 major rivers draining from 31 U.S. states and a large portion of Mexico. The U.S. Gulf of Mexico coastline is 1,630 miles long. Environmental challenges facing the Gulf of Mexico include excess nutrients that can cause hypoxic conditions, marine debris and degradation of natural features such as wetlands that provide vital ecosystems services.

The Science Integration and Analysis Team and the Partnerships Team work with Gulf of Mexico stakeholders to explore methods to:

- Support the assessment, development and implementation of programs, projects and tools that strengthen community resilience.
- Promote and support environmental education and outreach to inhabitants of the Gulf of Mexico Watershed.
- Protect, enhance and restore coastal and upland habitats within the Gulf of Mexico Watershed.
- Restore and/or improve water and habitat quality to meet water quality standards in watersheds throughout the five Gulf states and the Mississippi River Basin.



# Active Investments

LOCATION	DOLLAR AMOUNT	AGREEMENTS
Mississippi	\$7,363,023	11 Cooperatives, 3 Grants
Louisiana	\$6,133,843	12 Cooperatives, 3 Grants, 1 Interagency
Iowa	\$4,921,764	5 Cooperatives
Alabama	\$4,126,308	8 Cooperatives, 3 Grants
Florida	\$4,116,768	11 Cooperatives, 3 Grants
Texas	\$3,353,506	7 Cooperatives, 4 Grants
Virginia	\$1,999,594	3 Cooperatives, 1 Grant
Arkansas	\$1,150,000	1 Cooperative
Maryland	\$1,000,000	1 Interagency
Tennessee	\$930,064	1 Interagency
Georgia	\$300,000	1 Cooperative
Oklahoma	\$29,947	1 Grant
<b>Total</b>	<b>More than \$35 million</b>	

## Funding Opportunity Results

In 2019, GMD published its first Trash-Free Waters funding opportunity, EPA-GM-2019-TFW, to support innovative projects focused on reducing the amount of trash in our waterways through trash prevention and/or removal. The high quality of proposals received through this funding opportunity resulted in EPA utilizing FY 2019 funding (and FY 2020 funding) to fund 17 projects, for a total of \$7.8 million! These resources are dedicated to improving the Gulf of Mexico Watershed.



# 4 Performance Measures

GMD works with each of the five U.S. Gulf Coast states and other stakeholders in the Gulf of Mexico Watershed including the six Mexican Gulf Coast states on projects that support the following priority areas:



## Water Quality

GMD continuously works with Gulf Coast states to maximize efficiency and utility of water quality monitoring efforts for local managers. GMD supports efforts to improve water and habitat quality to meet water quality standards throughout the five Gulf states and Mississippi River Basin.



**Target:** Improve 6 water quality health indicators



**Results:** Improved indicators in 20 water bodies



## Environmental Education and Outreach

These efforts are cornerstones to environmental stewardship. GMD's goal is to heighten citizens' appreciation of the Gulf, which leads to positive behavior practices. This can be accomplished by developing hands-on environmental initiatives and engaging residents in restoration programs/projects.



**Target:** Reach 10,000 individuals



**Results:** 15,989 individuals reached



## Habitat Restoration

Through funding and partnerships, GMD is restoring habitat in the Gulf states, especially related to wetlands, coastal prairies and stream banks corridors. This work helps provide for protection from storm damage; supports commercial and recreational fisheries; provides nesting and foraging habitat for birds and other wildlife; protects pollinators; and improves water quality for recreational use and aquatic life.



**Target:** Restore 350 acres



**Results:** 58,608 acres restored



## Community Resilience

Resilience is the capability to anticipate, prepare for, respond to, and recover from significant multi-hazard threats with minimum damage to social well-being, the economy and the environment. GMD supports community capacity building through vulnerability assessments and development of adaptive capacity or resilience plans to assist communities in preparing for potential changes in the environment or future, disruptive events.



**Target:** Reach 40 communities



**Results:** 88 communities reached





# Water Quality

## Bayou Chico Water Quality Improvement Projects: Jackson Lake / Lanier Drive Managed Aquatic Plants Systems (MAPS)

### Partners

- Escambia County Board of Commissioners
- Pensacola & Perdido Bays Estuary Program
- Escambia County Extension Service
- Santa Rosa County Extension Service
- GulfCorps

### Summary

Escambia County is improving water quality in portions of the Bayou Chico Watershed by installing floating treatment wetlands. Vegetation from the floating treatment wetlands improves water quality via nutrient uptake from detained storm event flows, thereby reducing the amount of excess nutrients. In addition, when the grown vegetation is routinely harvested from the floating treatment wetlands, it will be planted at existing living shoreline restoration projects in the Pensacola Bay Watershed where the vegetation will continue to improve water quality and provide new estuarine habitat. The living shoreline projects will provide cuttings for future plant propagation and the next crop of vegetation for installation in the floating treatment wetlands. Thus, the system is zero waste and self-sustaining.



### Anticipated Cumulative Results

By the project's end, this project will have installed approximately 21,000 square feet of floating wetlands. These floating wetlands will grow several species of wetland grasses, including cordgrass, saltmeadow cordgrass, seashore paspalum, soft rush, pickerel weed and duck potato. Individual plants will be harvested for use in multiple restoration projects throughout Escambia County. The project expects anywhere from a 12% to an 89% reduction in nutrients in Lanier Pond due to the installation of the floating wetlands system.

## A Flood-First Approach to Water Quality Improvement in an Iowa Watershed

### Summary

This project will leverage partnerships and funding from the multiyear Iowa Watershed Approach to install more than \$1 million in built practices to reduce downstream flooding and improve water quality in a rural HUC 12 watershed within the Mississippi River Basin. This project will also measure and assess nitrate reduction associated with the built practices and develop a comprehensive outreach program.

### Anticipated Cumulative Results

Water quality improvements to reduce nitrates by 5% or more; establish streamflow and nitrates sensor network; develop a computational model. To date, sensors have been placed at four locations and sampling has begun at these sites.

### Partners

- University of Iowa
- IWA Campaign
- Middle Creek Watershed Authority
- IIHR
- Iowa Flood Center
- Iowa Geological Survey







## Building on Success: The Story of the Three Mile Creek Watershed

### Partners

- Mobile Bay NEP
- Dog River Clearwater Revival
- Mobile Baykeeper
- City of Mobile
- Tampa Bay NEP

### Summary

In 2018, GMD awarded a grant to the Mobile Bay National Estuary Program (MBNEP) to implement an innovative approach to install prototype trash traps or Litter Gitters that have removed approximately 10,000 pounds of trash from the Three Mile Creek Watershed. Building on the success of this innovative approach, in 2019 GMD awarded the Dog River Clearwater Revival \$328,101 to install Litter Gitters in the neighboring Dog River Watershed. Then in 2020, GMD awarded the city of Mobile \$487,980 that would upgrade the existing Litter Gitters and install 42 marine debris interceptors that would capture trash before it enters the city of Mobile stormwater system.

The MBNEP then worked with the Tampa Bay Estuary Program (TBEP) to apply for and receive a grant from GMD to take their innovative trash management strategies to the Tampa Bay watersheds. TBEP will install Litter Gitters, Water Goats and Sea Bins in strategic locations throughout their watersheds. TBEP will also partner with MBNEP to develop a Community-Based Litter Management and Prevention Plan template that will be able to be applied in other estuary programs and communities.

### Cumulative Results

**Results from completed MBNEP project:** 7 water segments improved; 10,178 pounds of trash removed (2,042 pounds recycled); 341 students educated through SWAMP program

**Results from completed Dog River project:** 3 water segments improved; 3,452 pounds of trash removed (828 pounds recycled); 281 students educated through SWAMP program

**Anticipated results from city of Mobile:** 6 water segments will be improved; 7,000 pounds of trash will be removed; 250 individuals will be reached through SWAMP program

**Anticipated results from TBEP/MBNEP partnership:** 12 water segments will be improved; 3,250 pounds of trash will be removed; 500 individuals will be reached through direct education and outreach

## Water Quality Improvement, Education and Outreach in the Bayou Lafourche Watershed

### Summary

The project is demonstrating, through monitoring of water quality, the benefit of providing incentives and training to private citizens to repair their malfunctioning sewage system. This project reduces water quality pollution and provides education and training about water quality pollution and the benefits of sewage system maintenance to the public at meetings, festivals, summer camps and other educational venues.

### Anticipated Cumulative Results

5% improvement in fecal coliform; over 16,480 families will be trained on maintenance of their individual home sewage systems with a minimum of 200 homes receiving cost-share assistance

### Partners

- Barataria-Terrebonne National Estuary Program
- South Central Planning and Development Commission





# Habitat Restoration

## Apalachicola Regional Stewardship Alliance

### Partners

- The Nature Conservancy
- U.S. Forest Service
- U.S. Fish and Wildlife Service
- U.S. Department of Defense
- Florida Forest Service
- Florida Fish and Wildlife Conservation Commission
- Northwest Florida Water Management District
- Florida State Parks
- Tall Timbers Research Station and Land Conservancy

### Summary

The Apalachicola River has the largest forested floodplain in Florida, covering approximately 112,000 acres, and is up to 5 miles wide. Management of Southern Pine forests directly affects water quality and quantity in downstream habitats. The Southern Pine forest ecosystem is among the most diverse ecosystems in the world thanks to frequent fires that reduce woody vegetation and support understory species. These ecosystems, which historically caught fire naturally, are now largely fire-suppressed and overrun with invasive species. Reintroducing fire and eliminating invasive species are essential to regaining the benefits of these unique ecosystems, which include flood control, drought tolerance, decreased wildfire risk and reduced storm damage. More broadly, it supports productive fisheries, ecotourism and the forest products industry. In addition to forest management, this project is teaching the next generation of citizens and stewards to help maintain the region's long-term resource durability.



### Cumulative Results

**54,590** acres of prescribed fire

**78** individuals reached through virtual career presentations

## Enhancing Shoreline Habitat to Increase Resilience

### Summary

This project is using innovative approaches to create marsh and oyster reef habitats in areas presently devoid of riparian buffers. These activities will reduce and prevent the entry of land-based pollutants from the urbanized watershed into adjacent estuarine areas, and increase the removal and cycling of nutrients. In addition, these activities will create a series of demonstration sites where homeowners, city and municipal staff, and marine contractors can learn about the benefits of living shorelines and their development in a real-world, hands-on fashion, facilitating the extension of pollution prevention and reduction benefits to other communities.

### Partners

- University of Florida Coastal Management Program
- Gulf Climate and Resilience Community of Practice
- City of Cedar Key

### Cumulative Results

**2.18** high-value acreage restored or enhanced (including oyster reef, coastal wetland, low energy beach, black mangrove)

**367** individuals reached through environmental education methods (in person)

**2** communities strengthened by implementing the living shoreline



## Northwest Florida Endemic Species Habitat Improvement Project

### Partners

- Community Training Works
- St. Marks National Wildlife Refuge
- St. Vincent National Wildlife Refuge
- U.S. Geological Survey
- The Corps Network



### Summary

This project is working to restore habitat for threatened and endangered species. Ephemeral ponds on St. Marks National Wildlife Refuge are vital breeding habitat for the threatened frosted flatwoods salamander. Removing woody plants, peat and duff in and around the ponds will allow herbaceous species ideal for breeding sites to flourish. At the St. Vincent National Wildlife Refuge, removal of downed logs and other woody material, marine debris and litter is restoring beach nesting habitat for threatened loggerhead sea turtles and endangered green sea turtles. This work is providing an educational experience for Conservation Corps crew members who have been trained from communities near the refuges to restore habitat critical for the survival of these endangered species. As educated community members, the restoration crew becomes the next generation of stewards of the public land and waterways ensuring species survival.

### Cumulative Results

**209** acres of critical habitat restored

**46** individuals educated

## Steinhatchee Seagrass Protection and Restoration

### Partners

- Florida Department of Environmental Protection
- Taylor County Sheriff Department
- Florida Sea Grant
- Nature Coast Biological Station
- Sea Hag Marina
- Lower Suwannee National Wildlife Refuge
- Local communities

### Summary

This project aims to restore 2,400 square feet of seagrass habitat at the mouth of the Steinhatchee River, collect a baseline water quality dataset for five years, and increase community awareness of the impact of marine debris by reaching out to at least 360 people over the course of three years at education and outreach events in the Big Bend region. This project addresses the Steinhatchee Seagrass Protection and Restoration Project through community engagement. This project will restore 2,400 square feet of the critical seagrass habitat in Deadman Bay in Steinhatchee, Florida.

### Cumulative Results

**319/4,440** 319 derelict crab traps removed, which equates to 4,440 pounds of marine debris

**120** community members engaged at Fiddler Crab Festival

**1** brochure for marine debris developed







# Environmental Education and Outreach

## Bayous to Beaches



### Partner

- University of Southern Mississippi

### Summary

This project delivers a Meaningful Watershed Educational Experience (MWEE) to K-12 teachers and students using classroom lessons, a research cruise, and use of the MDEQ Beach Monitoring website and NOAA Marine Debris Tracker app. These resources are used to connect common human behaviors on land and the impacts on water quality in coastal waters, showing the link between bacterial contamination and beach closures. K-12 participants will share what they learn through public events.

### Cumulative Results

**43** teachers participated in professional development

**10,000** estimated individuals reached

## Coastal Connections – Environmental Education for Underserved Florida Fifth Graders

### Summary

Nature’s Academy offers free “adventure” programs to underprivileged and underserved fifth grade students in order to motivate their personal involvement in habitat preservation and to advocate sustainable approaches to the use and enjoyment of our natural resources. Title I schools lack the resources to attend optional field trips, so Nature’s Academy provides bus transportation, field instruction, program materials and inspiration—everything essential for a best-in-class environmental education experience.

### Cumulative Results

**8,364** people reached      **416** pounds of trash removed from coastal habitats

**24,358** single-use plastic bottles eliminated

### Partners

- Nature’s Academy
- Manatee County Schools
- Pinellas County Schools



## Gulf Coast Stewards of Tomorrow: Working Toward a Sustainable Future Through At-Sea Learning for South Texas Middle and High School Students

### Partners

- Texas A&M University, Department of Oceanography
- Corpus Christi Schools



### Summary

This project is designed to educate young citizens on local environmental impacts and empower them to work toward improving the environment through stewardship.

Project goals:

- Educate young citizens on the impacts of nonpoint source pollution to Corpus Christi Bay, the importance of water conservation and stormwater sequestration, impacts of everyday actions on the acidity of estuaries and the coastal ocean, and how coastal ecosystems relate to the local economy.
- Empower teachers and students with knowledge to share with their community on the importance of being stewards of the environment.
- Create new classroom lesson plans that focus on the improvement of water quality, preservation of the marine habitat and coastal community resilience.

### Cumulative Results

**45** field trips **1,199** students and adults attended

## Using Problem-Based Learning to Build Water Quality Stewardship with Girl Scouts in the Gulf of Mexico Watershed

### Summary

The University of Texas at Austin developed an environmental education and action-based environmental stewardship program focused on improving water quality in the Gulf of Mexico (GOM) Watershed with Girl Scouts in central and south Texas, particularly targeting underrepresented populations. Project activities include active-learning activities on topics related to water pollution in the GOM and actions for mitigating/preventing that pollution, activity plans for Girl Scout leaders to conduct these activities on their own, semester-long problem-based learning modules for in-depth scientific understanding of topics related to water pollution in the GOM, and cleanup days in beaches and parks in the GOM Watershed.

### Cumulative Results

**782** pollution and water quality stewardship experiences for Girl Scouts

### Partners

- University of Texas at Austin
- Girl Scouts of Greater South Texas





# Community Resilience

## Strengthening Resilience Through Community-Based Flood Planning in Northwest Florida

### Partners

- Pensacola & Perdido Bays Estuary Program
- Santa Rosa County
- Escambia County

### Summary

Gulf Coast communities are experiencing a higher frequency of flooding caused by extreme rain events, resulting in economic and social impacts. GMD will be working with the University of Florida on a three-year project in Escambia County and Santa Rosa County in northwest Florida, focused on strengthening resilience of 12 communities prone to flooding caused by these extreme rain events. The project utilizes EPA’s Storm Water Management Model (SWMM), which is informed by local streamflow and water quality data. The SWMM provides a framework for communities, counties and other stakeholders to assess the risks and opportunities to reduce flooding and pollutants through the use of green infrastructure (GI).

### Cumulative Results

To gather public input on managing areas prone to flooding, public workshops were held in person in 2019 and through distance methods in 2020, focusing on educating county and other municipal staff who may not think of GI as a viable stormwater management method. Ten field sites were established in small urban streams with input from county staff, where streamflow records and water quality data will be collected over the project duration. Also, data on rainfall over the project area and on some stormwater infrastructure in project watersheds were collected to inform stormwater models.

### Anticipated Cumulative Results

By the conclusion of the project, 24 public workshops will be held to discuss project findings (data, model results), GI benefits and local examples, and GI scenarios. Streamflow measurement and water quality sampling will occur at field sites to inform stormwater management models, and GI scenarios will be tested to examine how a variety of GI features may reduce flooding in communities and improve water quality in project streams.



## Improving Coastal Resilience in the Northern Gulf of Mexico with a Regional Sediment Availability and Allocation Decision-Support Tool

### Partner

- Gulf of Mexico Alliance

### Summary

This project supports creation of the Northern Gulf Sediment Availability and Allocation Program (NGSAAP). It will compile existing data on available Gulf sediment resources and develop an ArcGIS-based decision-support tool to assist coastal stakeholders in Alabama, Mississippi, Louisiana and Texas in decision-making regarding habitat creation and restoration.

### Cumulative Results

To date, it has compiled available regional sediment management information and identified data gaps in Alabama, Mississippi, Louisiana and Texas.





## Tampa Bay Regional Resiliency Coalition

### Partners

- Tampa Bay Regional Planning Council
- Citrus County
- Hernando County
- Hillsborough County
- Manatee County
- Pasco County
- Pinellas County
- Bradenton
- Bradenton Beach
- Clearwater
- Dunedin
- Gulfport
- Holmes Beach
- Indian Rocks Beach
- Indian Shores
- Largo
- Madeira Beach
- New Port Richey
- Oldsmar
- Palmetto
- Redington Beach
- Safety Harbor
- Sarasota
- Seminole
- South Pasadena
- St. Petersburg
- St. Pete Beach
- Tampa
- Tarpon Springs
- Treasure Island

### Summary

This project aims to conduct workshops to identify vulnerabilities and resiliency needs throughout the Tampa Bay region. This will feed into a Regional Resiliency Action Plan that can be implemented by the local governments in the region. This action plan is intended to provide guidance to local governments on how they can be more resilient in the future, and will be a living document.

### Cumulative Results

**27** jurisdictions participating in the Resiliency Coalition



## Homeowners Handbook to Prepare for Coastal Hazards

### Summary

GOMA, GMD and NOAA along with the five Gulf states formed a partnership to help Gulf residents improve their resilience to natural disasters by creating the Homeowners Handbooks to Prepare for Coastal Hazards. Customized for each state, these handbooks provide coastal property owners with information on natural hazards and how to best prepare for them, including construction and retrofit practices, evacuation supply lists and procedures, and emergency contact information.

The Coastal Homeowners Resilience app will correct several limitations of the current handbooks, allowing the content to be updated as necessary and making the handbooks more actionable, personal and relevant. The app will allow the handbooks to stay current by utilizing existing material with newer technology and maximizing capacity to improve the resilience of coastal residents of the Gulf of Mexico.

### Homeowners Handbook

[http://masgc.org/assets/uploads/publications/802/20-012\\_mississippi.pdf](http://masgc.org/assets/uploads/publications/802/20-012_mississippi.pdf)

### Anticipated Cumulative Results

This project will create a Coastal Homeowners Resilience app that can be used as a broad toolbox that contains each state's handbooks, in both English and Spanish, to help people protect themselves and their property from natural hazards.

- Increased number of people starting or improving their disaster supply kits
- More property owners taking steps to improve the storm-readiness of their home

### Partners

GOMA Resilience Team members who worked on the Homeowners Handbook updates:

- TX General Lands Office
- HRI
- LA Sea Grant and LA Department of Natural Resources
- MS/AL Sea Grant
- MS Department of Marine Resources
- AL DCNR
- FL DEP
- Smart Home America





# Farmer to Farmer

## EPA Farmer to Farmer Grants

GMD supports projects to improve water quality, habitat and environmental education through farmer-led or farm-focused organizations in the upper and lower Mississippi River basins.

## Farmer-Driven Water Quality Through Conservation Grazing in the Kickapoo River Watershed

### Partners

- Winrock International
- Kickapoo River Watershed – Valley Stewardship Network
- Tainter Creek Farmer-Led Watershed Council

### Summary

Working with the Tainter Creek Farmer-Led Watershed Council and local partners, the Wallace Center is using farmer-to-farmer outreach and technical support to increase the adoption of conservation grazing practices, which will increase farmer incomes and improve water quality. The project is developing a cutting-edge land management decision-support tool to guide management decisions and use rigorous science to evaluate improvements in water quality.

### Anticipated Cumulative Results

Reduce turbidity or phosphorus in the Tainter Creek Subwatershed by at least 5%; conservation grazing practices adopted on over 1,000 acres of land



## Iowa Transforming Drainage Demonstration Project



### Partners

- Iowa Department of Agriculture and Land Stewardship
- Iowa State University
- Iowa Soybean Association
- Iowa Agriculture Water Alliance
- Iowa Corn Growers Association

### Summary

The goal of the Iowa Transforming Drainage Demonstration Project is to advance knowledge and implementation of alternative drainage systems in the Des Moines River Basin to improve downstream water quality while improving crop production and yield stability, sustainably secure and manage irrigation water, and enhance wildlife habitat. This will support the integration of systems utilized to sustainably use and manage water to produce crops and reduce nutrient losses during variable annual/seasonal conditions.

### Cumulative Results

5 (4 saturated buffers, 1 bioreactor) projects installed; approximately 2 acres of enhanced habitat acres on footprint of installed saturated buffers and bioreactor; 12,600 individuals reached through outreach and workshops



## Multistate Collaboration to Improve Mississippi River and Gulf of Mexico Water Quality Through Farmer-Led Initiatives and Farmer-Driven Data

### Summary

This multistate collaborative project will decrease nutrient loss to multiple water bodies within the Mississippi River Basin. This will be accomplished by using the robust Cooperative Extension networks of the SERA-46 members to educate farmers, and by working directly with farmers to implement NRCS and university-recommended agricultural conservation practices proven to improve water quality. Farmer-led demonstrations will facilitate information and technology transfer of conservation practices between farmers at multiple scales using transparent and measurable approaches.

### Partners

- Mississippi State University Extension
- Land Grant Universities
- Farmer-led Research Farms
- Local Farmers
- SERA-46 Partners

### Cumulative Results

270 acres of cover crop in Illinois; subaward went out for solicitation;  
1 Farmer to Farmer Exchange; QAPP developed



## Practical Farmers of Iowa – Roots for Water Quality: A Farmer-to-Farmer Model for a Sustainable Mississippi River Basin

### Summary

Led by Practical Farmers of Iowa's farmer board of directors and farmer membership, this project will equip Iowa farmers with tools to accelerate implementation of cover crops through shifting the tone of mainstream agriculture, doubling the number of cover crop champions, lowering barriers to implementation and measuring a 5% improvement in water quality. This project will train farmers to become "cover crop champions" and compensate them for successfully educating groups and mentoring middle-adopter farmers.

### Partner

- Iowa Soybean Association

### Cumulative Results

**18,188** people reached







# Trash-Free Waters



Common trash from consumer goods makes up the majority of trash and litter that is polluting our waterways and flowing downstream into our oceans. Over the last four years, GMD has awarded \$9.42 million in trash removal and prevention grants across the five Gulf Coast states to do just that. These projects fund activities related to trash removal and prevention, education and outreach, and research.

## Plastics and Trash Pollution Reduction and Prevention Along the Texas Upper Coast Through Coordinated Cleanups and Community Engagement

**Recipient:** American Bird Conservancy      **Award:** \$499,773

The American Bird Conservancy intends to improve water quality on the upper Texas coastline by directly reducing trash accumulating on coastal beaches. A coordinated education and outreach campaign will be launched to engage the local communities, stakeholders and natural resource managers impacted by trash and plastic pollution. This project will launch an innovative online platform to collect data and engage the public.

## Up2U Litter Campaign: Cultivating Personal Responsibility for Litter Prevention in the Texas Coastal Bend

**Recipient:** Coastal Bend Bays and Estuaries Program      **Award:** \$422,857

The Coastal Bend Bays and Estuaries Program intends to improve water quality through a litter prevention program. The Up2U litter prevention program will be expanded from the headwaters of the Nueces River Basin to 10 watersheds within the Coastal Bend. This project will include strategic billboards, radio spots, litter bag distribution points and community cleanup events.

## Keep the Gulf Clean: A Regional Collaborative to Promote Trash-Free Watersheds

**Recipient:** Groundwork New Orleans      **Award:** \$500,000

Groundwork New Orleans intends to improve water quality by removing trash from urban drainage systems and providing community education on trash prevention. This project will also help to restore habitats by encouraging green infrastructure and other best water management practices in three Gulf of Mexico watersheds.

## Salt Flats Ditch Trash Reduction & Prevention Project

**Recipient:** Port of Corpus Christi Authority      **Award:** \$471,324

The Port of Corpus Christi Authority of Nueces County, Texas, intends to improve the water quality of Salt Flats Ditch in Corpus Christi, Texas, by deploying a mobile trash skimming device. An education and outreach campaign will improve community awareness regarding how trash enters the natural waterways via the municipal stormwater system, and it will highlight the impacts of trash on aquatic ecosystems.

## Louisiana's University Watershed Movement

**Recipient:** University of Louisiana at Lafayette      **Award:** \$495,006

This project aims to educate and engage the next generation of business owners and community leaders on environmental issues, such as waste reduction, litter prevention and marine debris, that have long-term effects on the Gulf of Mexico. This project will provide students hands-on experience with data collection while fostering their development into change agents who are informed and capable of implementing thoughtful, effective solutions to the environmental, social and economic challenges we face at local, national and global scales.



## Geauxing Green: Sustainable Festival Planning

**Recipient:** LA UniMarCon – Louisiana State University dba LA Universities Marine Consortium **Award:** \$469,819

The goal of this project is to improve water quality through the reduction of waste by prevention and to improve community resilience through education. Two different festivals will be encouraged to use single-use plastic, vendors will be required to use sustainable alternatives to plastic, and recycling and composting will be provided.

## Trash-Free Texas: Basin-Wide Community Engagement Strategies to Reduce Aquatic Debris

**Recipient:** North Central Texas Council of Governments **Award:** \$500,000

This program will implement trash prevention, community outreach and engagement, and trash reduction projects aimed at changing behaviors and business practices and reducing aquatic debris from six basins in the Dallas-Fort Worth and Houston regions that drain to Galveston Bay and adjacent areas of the Gulf of Mexico.

## A Comprehensive Trash Abatement Program for Two Central Alabama Watersheds

**Recipient:** Freshwater Land Trust **Award:** \$500,000

This project will use an innovative in-stream trash removal approach and source assessment in the Black Warrior and Cahaba watersheds and a community outreach and education program to arouse citizen action to reduce the volume of trash entering U.S. waterways. All the partners assembled for collaboration have long worked in the community on clean water issues, such as cleanups, habitat restoration and water quality testing programs. By bringing them together, their institutional knowledge, collective energy and resources will be put to work to improve water quality, enhance habitat and educate citizens.

## City of Mobile Environmental Litter Prevention Program

**Recipient:** City of Mobile **Award:** \$487,980

The City of Mobile Environmental Litter Prevention Program will employ a three-pronged approach of prevention, removal and outreach/education. This will include the installation of 48 trash capture devices in the Three Mile Creek Watershed, the creation of an electronic trash tracking system that will map device locations throughout the city and allow staff to upload and download maintenance data, and partnering with Mobile Baykeeper to provide robust, citywide education and outreach with an emphasis on urban areas surrounding the Three Mile Creek Watershed.

## Keep Lignumvitae Lovely: A Holistic Marine Debris Program in Lignumvitae Key Aquatic Preserve

**Recipient:** FLDEP **Award:** \$339,056

This project will implement a four-phase plan to remove marine debris within the 7,500 acres of LKAP and prevent future accumulation. The project will lead to long-term trash reduction through outreach with tourists and 6,500 residents.

## Enhancing Community Resilience Through Water-Borne Trash Removal & Reduction

**Recipient:** Pensacola & Perdido Bays Estuary Program via the Escambia County Board of Commissioners  
**Award:** \$297,220

This project will identify and mitigate potential sources and contributors of water-borne trash in three creeks of the Pensacola Bay System. This project will engage the community in trash removal and prevention. The Pensacola & Perdido Bays Estuary Program is working with local businesses, grassroots organizations and area schools to reduce water-borne trash and improve the safety, health and beauty of local creeks.



## Expanding a Comprehensive Strategy to Create Trash-Free Waters Across the Gulf of Mexico Through a National Estuary Programs Partnership

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**Recipient:** Tampa Bay Estuary Program      **Award:** \$492,829

This project aims to improve water quality by directly removing trash from two estuaries of national significance in the Gulf of Mexico, expanding the use of marine debris removal technologies and directly engaging communities and businesses in trash removal activities.

## Plastic Free Gulf Coast

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**Recipient:** Mississippi State University      **Award:** \$491,434

This project is focused on eliminating the use of plastic before it becomes waste. This project offers a pilot program to support communities in taking immediate, sustainable action. Plastic Free Gulf Coast shares experience, research and data publicly through one-on-one meetings, presentations, online and traditional media, and public events.

## Integrating Immersive Virtual Reality and Litter Gitters to Prevent and Remove Land-Based Litter in the Mississippi Gulf Coast Region

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**Recipient:** Mississippi State University – Industrial and Systems Engineering Department      **Award:** \$385,419

This project will use effective trash capture technology to improve stream habitat and water quality in an affected stream and engage communities through outreach and education activities. An immersive VR module will be developed to increase participants' awareness of hazards of litter to change the community's behavior and prevent litter. This project will utilize a trash capture device to collect litter in an affected stream.

## Addressing Trash Pollution Through Development and Expansion of Cooperative Extension Programs

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**Recipient:** MS/AL Sea Grant (Mississippi State University)      **Award:** \$499,970

Mississippi State University intends to improve water quality through the expansion of the Mississippi Coastal Cleanup Program and continuation of a derelict crab trap removal program with commercial shrimpers. Implementation of these programs will improve water quality by: 1) removing trash pollution through community-based cleanups across the state and continuation of a derelict crab trap removal program for commercial shrimpers, and 2) preventing trash pollution through the development and expansion of a cohesive statewide MSU Cooperative Extension Program focused on trash prevention and removal.

## Reduction and Prevention of Trash in Texas and the Gulf of Mexico Watershed

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**Recipient:** Keep Texas Beautiful      **Award:** \$428,591

This project will improve water quality by providing technical assistance, programmatic solutions and educational best practices related to litter cleanup and prevention for three areas of Texas. Project activities will include community site visits, stakeholder meetings, development of an individual work plan for each community, plan implementation, and a summary of findings to develop litter cleanup and prevention best practices to be shared throughout the state and beyond.

## Alabama Litter Abatement

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**Recipient:** ADEM      **Award:** \$500,000

This litter reduction initiative helps citizens prevent litter from reaching waterways by abating sources of trash at litter collection sculpture sites while educating them about the watershed and promoting long-term sustainable voluntary practices to reduce pollution. Outreach to specific disadvantaged communities about abating littering and education about the importance of watershed health will be provided at priority locations within local schools.







# Updates and Events

## Central Wetlands Tree Planting

EPA staff, fellows and interns worked with the Coalition to Restore Coastal Louisiana and other volunteers to plant over 700 cypress trees in the Central Wetlands Unit in Violet, Louisiana. The Central Wetlands were heavily impacted by logging in the early part of the last century. In the early 1950s, the Central Wetlands Unit was primarily a freshwater system dominated by cypress swamps and freshwater marshes. After the construction of MRGO, saltwater came into the freshwater system, killing the remaining cypress trees and freshwater marsh grass species, ultimately converting the area into open water. The closure of MRGO has allowed the Central Wetlands Unit to return to a freshwater-brackish system that can support cypress swamp and freshwater marsh ecosystems.

To plant trees, a sled full of saplings and supplies was given to each group of two to three people and then pulled through the very wet wetlands (several people got stuck in the mud) to the planting area, where trees were spaced 15 feet apart. As part of the planting, the trunks of the trees were encased in a plastic shield to protect the young trees from voracious nutria.



### Results

**700+** cypress trees planted



## Enhancing Watershed Knowledge Through Microbial Source Tracking with Poarch Band of Creek Indians

Over the last year, GMD has worked closely with the Poarch Band of Creek Indians (PBCI), whose reservation is in Escambia County, Alabama. Together with PBCI, GMD provided support in learning more about the potential sources of fecal contamination within Escambia Creek. Since on the reservation Escambia Creek is commonly used for recreation, sites along the creek were identified for regular sampling by PBCI. Through the collaboration, GMD helped PBCI gain the capacity and knowledge to process and preserve their microbial source tracking samples. Moving forward, GMD plans to continue helping PBCI by processing their preserved samples using Quantitative Polymerase Chain Reaction (qPCR).

## NEJAC

GMD staff participated in the National Environmental Justice Advisory Council (NEJAC) annual in-person meeting in Jacksonville, Florida. NEJAC provides a forum where its national members bring familiar yet varying degrees of expertise in environmental justice to the forefront, advising EPA on its current policies based on the needs and concerns of the disproportionate/disadvantaged population. Much of this year's meeting emphasized the environmental impacts on vulnerable communities as a result of natural disasters and toxins associated with pesticide use on farmland. Federal and state agencies, NGOs and public citizens were given the opportunity to share their take on the current state of our environment, whether it be a need for attention or a highlight of success.

## Paddle the Gulf

Paddle the Gulf is an initiative to inspire people to become more connected to nature by exploring coastal streams and rivers that flow into the Gulf of Mexico. Staff participated in an event in Diamondhead, Mississippi, where participants paddled 4 miles around the local bayou. Over 100 people attended the event.





# Deepwater Horizon Natural Resource Damage Assessment and Restoration

2020 marked the 10-year anniversary of the *Deepwater Horizon* (DWH) oil spill that killed 11 people, resulted in the largest spill of oil in U.S. history and prompted the broadest Natural Resource Damage Assessment (NRDA) ever undertaken. Many activities marked the anniversary of this tragic event. To acknowledge the work that has since been completed to restore Gulf of Mexico natural resources, messages of hope were shared to highlight the more than 200 restoration projects that have come to fruition in the past 10 years. GMD staff were honored to participate in EPA's 10-year video "Restoring Gulf Natural Resources" available at: <https://www.epa.gov/deepwaterhorizon>

As a member of the DWH NRDA Trustee Council, EPA supports eight Trustee Implementation Groups (TIGs). GMD staff serve as primary and alternate EPA Trustee representatives on the TIGs for Alabama, Florida and Mississippi, as well as the Region-wide TIG. Supporting the Office of Water lead for NRDA, GMD staff also provide technical expertise to the five Gulf states related to monitoring and adaptive management, and approaches to restore oysters and sturgeon injured by the oil spill. As a result of the NRDA restoration efforts, measurable results-oriented projects are being implemented to directly benefit the Gulf of Mexico ecosystem and the natural resources injured by the DWH oil spill by: restoring and conserving habitat, providing and enhancing recreational use, restoring water quality, and replenishing and protecting injured species.

## Examples of specific DWH NRDA work being supported by GMD staff

### Florida TIG

Work with the DWH NRDA co-Trustees is ongoing to develop the Florida TIG's Restoration Plan II and Environmental Assessment that will include projects for birds, sea turtles, marine mammals, habitat on federally managed lands and recreational use restoration types.

### Louisiana TIG

The Louisiana TIG in January 2020 initiated development of a Monitoring and Adaptive Management (MAM) strategy for the Louisiana Restoration Area.

GMD staff represent EPA on the MAM workgroup in developing MAM priorities for the TIG.

### Mississippi TIG

The Mississippi TIG published its Restoration Plan II and Environmental Assessment, which includes four projects in the wetlands, coastal and nearshore habitats, and oysters restoration types valued at approximately \$15.4 million.

GMD staff continued water quality field monitoring for the Upper Pascagoula River nutrient reduction project.

### Texas TIG

The Texas TIG is planning on working on oyster engineering designs for possible restoration in Galveston Bay.

### Region-wide TIG

The Region-wide TIG is drafting its first Restoration Plan and Environmental Assessment, which could include projects in the birds, sea turtles, oysters and marine mammals restoration types.

### Open Ocean TIG

The Open Ocean TIG released an updated Open Ocean Monitoring and Adaptive Management Strategy. The strategy includes the Trustees' initial priorities for information needed to help evaluate the outcomes of restoration, assess progress toward restoration goals, and inform restoration planning and implementation.

GMD staff supported the EPA Office of Water on the MAM workgroup in developing the MAM strategy and will continue support in FY 2021 in the next phase of MAM priorities development.



# Gulf Coast Ecosystem Restoration Council

Following the catastrophic 2010 *Deepwater Horizon* oil spill, Congress passed the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast Act of 2012 (RESTORE Act). The RESTORE Act established the Gulf Coast Ecosystem Restoration Council (the Council) and the Gulf Coast Restoration Trust Fund. The Council membership includes the governors of the states of Alabama, Florida, Louisiana, Mississippi and Texas, as well as the secretaries of the U.S. Departments of Agriculture, Army, Commerce, Homeland Security and the Interior, and the Administrator for EPA. EPA currently serves as the chair of the Council. If you are interested in reading more about the RESTORE Act or the Council, please visit: [www.RestoreTheGulf.gov](http://www.RestoreTheGulf.gov)

On December 9, 2015, the RESTORE Council approved the Initial Funded Priorities List (Initial FPL). Under the Initial FPL, EPA is the implementing member for these four projects:



## Mobile Bay National Estuary Program (MBNEP)

Awarded \$1.65 million in 2020

This project will:

- Restore approximately 1,800 linear feet of stream on the headwaters of Twelve Mile Creek, a tributary of Three Mile Creek
- Implement an extensive Invasive Species Control Plan in priority areas identified in the Three Mile Creek Watershed
- Address stressors affecting water quality and habitat in the Three Mile Creek Watershed

## Pensacola & Perdido Bays Estuary Program (PPBEP)

Awarded \$2 million in 2018

- The PPBEP Management Conference has been established and is made up of the Policy Board, the Technical Advisory Committee, the Education and Outreach Committee and the Business Advisory Committee.
- Committees are actively participating in the development of PPBEP's first Comprehensive Conservation Management Plan (CCMP).
- The PPBEP has also been successful in securing additional funding from the Florida State Legislature as well as other sources to further the goals of the program and to help ensure the long-term sustainability of this new estuary program.



## Tampa Bay Estuary Program (TBEP)

Awarded \$1.4 million in 2018

The TBEP will implement five water quality and habitat improvement projects throughout the Tampa Bay watersheds:

- Biosolids to Energy (City of St. Petersburg)
- Copeland Park Stormwater Enhancements (City of Tampa)
- Coastal Invasive Plant Removal/Cockroach Bay Aquatic Reserve (Hillsborough County)
- Robinson Preserve Water Quality and Habitat Restoration (Manatee County)
- Ft. De Soto Recirculation and Seagrass Recovery (Pinellas County)

## Conservation Enhancement Grant Program

Awarded \$2.5 million in 2020

This project will enhance public-private partnerships that support land protection and conservation across the Gulf Coast region:

- Funding Opportunity issued selected eight projects for funding across the region
- RESTORE Council will enter into an interagency agreement
- GMD will enter into cooperative agreements with selected projects







# Senior Environmental Employment (SEE)

Through a cooperative agreement with the National Caucus & Center on Black Aging, Inc., GMD employs enrollees of the Senior Environmental Employment (SEE) Program. These enrollees have helped and continue to help GMD with making significant progress in reaching communities and establishing relationships. The work of the enrollees has catapulted education and engagement initiatives leading to resilient communities.



## Collaborating with Minority Scientific Research & Development Laboratories and Institutes

GMD SEE staff continue outreach and collaborative efforts to expand and create infrastructure that sets the stage for long-term involvement in environmental studies, initiatives and activities across the Gulf of Mexico region. By partnering and collaborating with minority scientific research and development laboratories and institutes like Baaheth Laboratories at the University of South Alabama campus in Mobile, Alabama, SEEs assist in ongoing strategic planning and development initiatives that focus on increasing participation by community outreach organizations, HBCUs across the region and school-age children to strengthen their ability to connect to the Gulf of Mexico and its watershed. Such partnerships and collaborative activities continue to provide opportunities that encourage stewardship and future internships at the laboratory and institute, and increase environment-related employment opportunities.

## Making the Mark with Tutoring

### Scope of Effort

A program designed to dedicate one-on-one time with students in formal and informal settings. Providing students with knowledge and information on how to reconstruct complex issues and solve problems. Centering the learning experience around closing achievement gaps, eliminating barriers that hinder students from mastering difficult subjects and challenges that help them rethink possibilities, discovering resources that life depends on, and deepening their learning capabilities to increase and change their conditions. Concentrating on transferring skill sets for learning and making learning a meaningful tool that will link to each student's interest and prepare them for a promising future and greater opportunities and resilience.

### Summary

The tutoring program was created on the idea that students build resilience in themselves, their families and the communities where they live, work and play. We hoped that tutoring would bridge gaps, help students grasp foundational concepts, give students unique learning experiences, and add advantages for complete understanding of the challenges they may face later in life.

### Results

This year more than 150 students in coastal states received core benefits from seeking tutoring services. This service enabled students to develop better study habits, improve persistence, increase self-esteem and satisfy many of their goals. These innovations were designed across all dimensions of the student's experience, from the classroom, partnerships, and with the broader community.

### Partners

- Gulfport Job Corps Center
- North Bay Elementary School
- Bay/Waveland Boys and Girls Club
- Helping Hands – Afterschool Program
- Local Workforce Development Agency (WIOA)
- Gulf States Health Policy Center

## Symposium with Indigenous Black Indian Tribal Bands

GMD SEE staff partnered with several indigenous Black Indian tribal bands across regions 4 and 6 to host the first symposium on special issues that directly impact Black indigenous tribal bands. Much of the focus was on emergency disaster preparedness, human health, environmental health and environmental injustice training needs. The symposium was held on the Trail of Tears, hosted by the mayor of Wrightsville, Arkansas, and attended by several tribal chiefs and tribal members from various tribal bands in regions 4 and 6. As an outcome of symposium discussions, SEEs worked with Region 6 staff to coordinate with tribal members to create innovative efforts to meet specific emergency disaster training needs, and to collaborate with other federal agencies and organizations in Region 6 to provide additional resources, information and training.





# National Academy of Sciences (NAS) Fellows

The NAS Gulf Research Program's Science Policy Fellowship program helps scientists hone their skills by putting them to practice for the benefit of Gulf Coast communities and ecosystems. Fellows gain firsthand experience at the interface of science and policy as they spend one year assigned to staff of federal, state, local or non-governmental environmental, natural resource, oil and gas, and public health agencies in the Gulf of Mexico region.



## Huy Vu

Dr. Huy Vu has partnered with the Boy Scouts of America and a local homeowner association in Texas to restore a section of a neighborhood park to its native state. The newly created pocket prairie, consisting of more than 80 native prairie plants, will provide a habitat for birds and pollinators. In addition, the pocket prairie will educate the public on the importance of the endangered coastal prairie ecosystem and the benefits that it provides to the local community.

Dr. Vu was involved in various outreach events that educated 389 individuals in five communities along the Gulf Coast on important topics affecting coastal communities, such as resource conservation, marine debris, nurdles, the Gulf of Mexico ecosystem and microplastics. Also, Dr. Vu has partnered with local schools in Georgia and Mississippi to teach K-12 students about opportunities and careers in the STEM fields.



Dr. Vu is currently working on a project, PLAN-it Beach, to increase science education and conservation awareness among high school students. PLAN-it Beach will provide students with hands-on experience in the scientific process by allowing them to create their own independent research projects, and will give them the opportunity to participate in restoring sand dunes along the beaches in Gulfport, Mississippi.

## Abbey Hotard

Abbey Hotard was key in completing the Story Map that showcases GMD's projects and their locations across the Gulf of Mexico Watershed. The Story Map is located here: <https://arcg.is/1mHaqb>

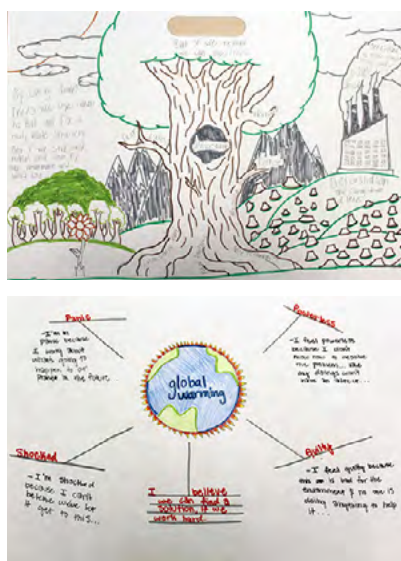
Projects can be viewed by type, including water quality, habitat, environmental education, community resilience, Trash-Free Waters and Farmer to Farmer. To help future Story Map development and expansion, Abbey created an SOP on how to create, update and manage the Story Map. Abbey served on the Trash-Free Waters grant review team and the Farmer to Farmer grant request writing team. Some of Abbey's favorite partnership activities included participating in the Turkey Creek Steering Committee in Gulfport, Mississippi, and participating in the Gulf pollinator project site visit with the Poarch Band of Creek Indians. With all this on her plate, she also received her Floodplain Manager certification while at GMD.





# Oak Ridge Institute for Science and Education (ORISE) Participants

The Internship and Research Participation Programs at EPA are managed by the Oak Ridge Institute for Science and Education (ORISE) under an interagency agreement between EPA and the U.S. Department of Energy. The ORISE Internship and Research Participation Programs at EPA are STEM-related educational and training programs designed to provide students, recent graduates and university faculty opportunities to participate in project-specific EPA research and developmental activities.



## Colby McClain

Colby McClain has focused on a project that uses mind mapping as a tool to identify, evaluate and discuss environmental concerns of students in order to gauge their overall environmental knowledge. Mind maps are a way of visually organizing associative information and can therefore provide an effective representation of student concerns so that educators can positively respond to the thoughts and feelings of their students. In the exercise, students are asked to reflect on what they perceive as the largest environmental threat and create a mind map centered around it. Then through individual and classroom discussion, students are provided an outlet to share their perspectives and think critically about the issues and possible solutions. In addition, students and teachers are provided with resources tailored to the responses, as well as continued contact and support.

## Rochelle Cole

Rochelle Cole has been continuing her research on the Lake Pontchartrain Urban Waters Federal Partnership (UWFP) program, where she has partnered with the Pontchartrain Conservancy, Friends of Lafitte Greenway, the Great New Orleans Foundation, Sewerage and Water Board of New Orleans, and Adaptation Strategies in New Orleans, Louisiana. The UWFP is seeking to help communities, especially underserved communities, as they work to access, improve and benefit from their urban waters and the surrounding land. The UWFP aims to make it easier for residents to access Lake Pontchartrain and make use of the recreational amenities and environmental resources the lake can afford. Rochelle assists federal and local partners through the facilitation of workgroup meetings designed to foster increased connection, understanding and stewardship of Lake Pontchartrain.







## Richard Grady

Richard Grady is an undergraduate student studying Environmental Biology at the University of Southern Mississippi. While assigned to GMD he has worked in water quality research on the Turkey Creek project and assisted Dr. Nancy Rabalais with the 2018 Shelf-wide project. During these projects he has gained experience in quantitative polymerase chain reaction (qPCR), PhyloChip and IDEXX bacterial testing, as well as sediment and soil sampling. Richard is currently working toward publishing a literature review about soil health and microbiology in agriculture, with plans to continue water quality research along Turkey Creek by deploying new, long-term sensors for water quality data collection.

## Amy Moody

Amy Moody has been continuing her work of looking at submarine groundwater discharge (SGD) in Mississippi Sound. Her data analysis indicated that while water flux from SGD is low (maybe 5% to 40% of riverine input), the nutrient flux from groundwater is equal to or greater than river input. She is now trying to determine how much of the SGD is freshwater flow from the main aquifer and how much is recirculating seawater intruding into the aquifer. This is being done by analyzing oxygen and radium isotopes from sample collections in the sound and in the local groundwater. She is also continuing to process radium samples for the long-lived isotopes in order to better constrain the water flux from SGD.



## Kate Doering

Kate Doering's primary project for this year has been the NFWF Quarterly Oyster Project with MS DEQ. This project has included collection of hydrographic profile data and of water for nutrient and chlorophyll analysis. Along with collecting water samples for this project, Kate has also been looking through previous years' data and making correlations between the quarters.





# EPA Awards

## National Honor Awards

The EPA National Honor Awards are EPA's highest awards, given to celebrate the extraordinary achievements of EPA employees and their contributions to EPA's mission of protecting human health and the environment.



### Russell Train Sustainability Award

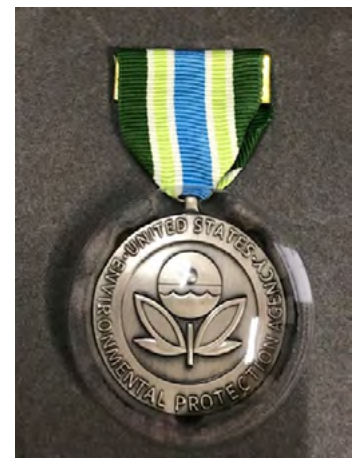
Dr. Troy Pierce, GMD's Chief Scientist, received the Russell Train Sustainability Award along with three of his EPA headquarters colleagues for their several years of international work with counterparts from other countries in the Wider Caribbean Region, which includes the Gulf of Mexico, to finalize the very first State of the Convention Area Report for the Land-Based Sources Protocol to the Cartagena Convention.

Established in 2012 in honor of former Administrator Russell E. Train, an innovative, collaborative and widely respected champion of environmental protection and conservation, this award recognizes the achievements of an EPA employee or group of employees who show outstanding leadership in assisting stakeholders to achieve sustainability, as demonstrated by outcomes that have long-term environmental, economic and social impacts, through the application of innovative, collaborative and systemic approaches to problem-solving.

### Silver Medal for Exceptional Service

The Trash-Free Waters Team, comprised of Amy Newbold, Bruce Binder, Calista Mills, Chris Plymale, Danny Wiegand, Doug Jacobson, Elizabeth January, Geraldine Martin, Jeanne Allen, Kathryn Millard, Rachel Houge, Renee Bellew, Robin Allen, Romell Nandi, Tripp Boone, Troy Pierce and William Beiser, received a Silver Medal for Exceptional Service for their commitment to reducing and preventing trash from entering waterways and for efforts to stimulate positive environmental practices through education and outreach.

By demonstrating outstanding abilities in devising and implementing the major agency program of Trash-Free Waters (TFW) and directly supporting the Administrator's priority for TFW, the TFW Team received the Silver Medal for creating and implementing EPA's largest TFW effort. This effort included a \$7.8 million partnership funding program that was recently awarded to partners in the five Gulf states; three TFW projects that have already been funded in Alabama and Mississippi and with the Choctaw Nation of Oklahoma (all in the Gulf of Mexico Watershed); and hands-on cleanup efforts with partners in multiple watersheds. This investment supports novel, experimental and/or innovative technologies and approaches to prevent and remove trash in watersheds and advance education and support to community-led efforts.



This award ranks second among EPA's honor awards and is used to recognize an individual or team for highly meritorious service to the mission of environmental protection, unusual courage or competence in an employment-related emergency, or excellence in supervision and leadership.

Congratulations to the Trash-Free Waters Team on their selection and continued great work!









Protecting Human Health  
and the Environment



**GMD** | GULF OF MEXICO DIVISION  
[www.epa.gov/gulfofmexico](http://www.epa.gov/gulfofmexico)

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