



## 2019 Gulf Research Program Science Policy Fellow Host Offices

Host offices are located in each of the five Gulf states and may be federal, state, or local government agencies or non-governmental organizations.

The 2019 host offices and placement descriptions are listed below. Please note this list is not comprehensive and will be updated on an ongoing basis during the application period. Applicants should look over these placement descriptions to get a sense of the range of work they might undertake during a fellowship.

Applicants should not contact host offices during the application period. If selected for a fellowship, applicants will be provided contact information and finalized placement descriptions for all of the 2019 host offices.

### 1) The Data Center

*New Orleans, LA*

Website: <https://www.datacenterresearch.org/>

The Data Center-an independent research organization and product of Nonprofit Knowledge Works (NKW)-has been effectively disseminating reliable, trusted and impactful data analysis since 1998 and has a track record of informing key regional decisions by effectively communicating this data analysis to decisionmakers in southeast Louisiana. One of The Data Center's most influential recent publications, The Coastal Index, quantifies much of the public and private investment already at work in Southeast Louisiana's coastal restoration and water management industry and has formed the backbone of our research and analysis on the economic and human effects of coastal land loss, and adaptation efforts. Many private organizations and governmental entities rely on The Data Center's information to guide their research and decisionmaking.

The Fellow will gain critical on-the-ground experience in the interface between data analysis and policy by working with The Data Center on a variety of projects in Southeast Louisiana including potentially:

- Designing an expanded and updated Coastal Index that can inform economic development actors of the challenges and opportunities of the water management and coastal restoration economy, such as the multiplier and spillover effects for the broader regional economy; the extent to which local firms are tapping both internal and external markets; the barriers to investment and innovation in coastal restoration; workforce issues and labor market dynamics;

local fiscal impacts of population and employer displacement; and the costs, risks, and uncertainties associated with changing local economies and communities.

- Developing a “next generation” of scientifically rigorous, practical approaches to projecting future demographic changes and to quantifying changes in community dynamics. This new toolset is intended to inform long-term (20 to 30 year) adaptation planning in the context of coastal change and sea-level rise.

Expanding the collection and production of trend data to help inform community-level decision making about adaptation plans. Such data might include migration data from high-to-low flood risk areas, sub-parish area job growth/decline data, school-specific enrollment trends, and demographic profiles on sub-parish areas that have lost significant population.

## **2) Department of the Interior/U.S. Fish and Wildlife Service**

*Lafayette, LA*

Website: <https://www.fws.gov/southeast/gulf-restoration/>

The U.S. Fish and Wildlife Service is a science-based management agency. The science emanating from the Service – both directly by Service scientists and indirectly through collaboration with researchers in other federal agencies and academia – affects decisions, not only by the agency itself, but also by many of its partners. However, the process by which this science is “socialized” with partners to ensure it has buy-in and meets shared expectations requires extensive communication and coordination at the nexus of science and policy.

We are seeking a NASEM Gulf Research Program Science Policy Fellow to work with the USFWS Gulf Restoration Office. The fellow will gain hands-on science policy experience by aiding the Service with a variety of projects in Louisiana and across the Gulf Coast, including, but not limited to:

1. Representing the Department of the Interior for the [Louisiana Trustee Implementation Group](#)
2. Serving as a core team member for the [Strategic Conservation Assessment of Gulf Coast Landscapes Project](#)
3. Serving on the [Gulf of Mexico Avian Monitoring Network](#) Coordination Committee

By participating on some or all of these projects, the fellow will have a variety of duties, such as:

1. Provide strategic planning and largescale oversight for projects and working groups that are broadly focused on Gulf restoration efforts.
2. Assist with vetting proposed restoration projects and the development and execution of restoration plans within the state of Louisiana.
3. Strategize on implementing science processes within the USFWS Gulf Restoration Office and its partners.
  - 3a. Participate in the execution of these strategies by organizing and facilitating meetings and workshops.

- 3b. Engage directly with scientists to identify how to better align their research with needs of decision-makers in the Gulf.
4. Serve as a key contact in fostering and maintaining conversations that translate science into policy.

Secondary duties related to other aspects of Gulf restoration (e.g., RESTORE, NFWF GEBF, Monitoring and Adaptive Management, and NOAA RESTORE Act Science Program, among others) are additional aspects of this position. We are flexible in the scope of work the fellow will perform based on shared interests and current office needs.

The Fellow will be hosted in Lafayette, LA with the Gulf Restoration Office's Science Coordinator who also serves the Department of the Interior's Louisiana Restoration Area Coordinator. The office is co-located with additional staff from USFWS, NOAA, USGS, National Park Service, Louisiana Department of Wildlife and Fisheries, the Army Corps of Engineers, and NRCS – fostering significant local opportunities for extensive networking and collaboration. Travel to scientific conferences, partnership meetings, coordination forums, and individual partner visits across the Gulf is also anticipated and support provided by the host office.

Fellows can expect a challenging and diverse work environment with a need to manage multiple competing priorities. The fellow will have ample opportunities to sharpen their critical thinking and problem solving skills and will leave with enhanced ability to communicate and coordinate with diverse suite of decision-makers ranging from researchers to managers to administrators. Beyond a simple immersion in either science or policy, the fellow will gain an appreciation and mastery of working as a ["boundary runner" in the realm of translational ecology.](#)

### **3) Environmental Protection Agency**

*Gulf of Mexico Program*

*Gulfport, MS*

The fellow will work alongside key leadership and scientists on Gulf restoration planning and policy partnerships, especially with conservation minded landowner groups (e.g. landowner NGOs, farm conservation groups, city/county groups, land trusts, corporate stewardship groups). This fellowship will have the opportunity to work directly with these Gulf of Mexico partners to seek creative strategies to develop and complete Gulf restoration using cooperative and voluntary solutions. This will be a unique opportunity to engage with these important landowner partners on both policy adaptation and making real conservation change that are both so important to the Gulf region.

### **4) Florida Department of Agriculture and Consumer Services**

*Tallahassee, FL*

The Florida Department of Agriculture and Consumer Services offers an outstanding opportunity for a Gulf Research Program Science Policy Fellow. The Fellow will be a critical member of our Science Advisory team, working across the department to foster cutting edge, interdisciplinary studies. With a home office in the state's Capitol in beautiful north-central Florida (or other Florida sites as requested), the Fellow will be able to build a portfolio of work from a wide variety of hands-on projects throughout the state, traveling as little or as much as their interests dictate. A sampling of projects that a Fellow might engage with include: participating in the Division of Aquaculture's development of aquaculture use zones and offshore finfish mariculture in the Gulf of Mexico; the Division of Agricultural Environmental Services' mosquito control activities; implementation of hemp policies by the Division of Plant Industry staff in central Florida; the Division of Animal Industry's laboratory innovation implementation; or the execution of the new FDA Food Safety Modernization Act through the Division of Food Safety.

Additional projects could include working with other Department divisions and offices such as the Office of Water Policy or the Florida Forest Service. A Fellow may also have the opportunity to work with partners from across state and federal agencies, for example, with the Florida Department of Health, Florida Department of Environmental Protection, US Department of Agriculture, or US Environmental Protection Agency, to name a few. Because the Commissioner of Agriculture is an elected official and one of four members of the State Cabinet, the Fellow will have ample opportunity to experience the State's legislative process and participate in policy development and implementation. We look forward to providing an enriching and rewarding fellowship experience.

## **5) Florida Department of Environmental Protection**

*Florida Coastal Office*

*Tallahassee, FL*

Website: <https://floridadep.gov/fco/>

The Department of Environmental Protection's (DEP) Florida Coastal Office (FCO) manages four million acres of submerged and coastal lands including forty-one Aquatic Preserves and, in coordination with the National Oceanic and Atmospheric Administration, three National Estuarine Research Reserves, the Florida Keys National Marine Sanctuary and the Coral Reef Conservation Program. FCO also administers the Florida Coastal Management Program (FCMP) and the Clean Marinas and Vessels Programs as well as reviewing Offshore Projects. FCO's mission is to conserve and restore Florida's coastal, aquatic and offshore resources for the benefit of people and the environment.

A Science-Policy Fellow will be assigned to work with the DEP FCO Deputy Director. The Fellow will work with the Deputy Director and Coastal Projects Manager and each of the place-based management programs on several projects which may include:

1. Establish a state-wide ecological assessment report, The Statewide Ecosystem Assessment of Coastal and Aquatic Resources (SEACAR), supported by the FCMP. The Fellow will coordinate

with FCO staff, scientists, land managers and planners as well as elected officials to present data analyses and gather feedback to finalize project products. The duties may include: compilation and evaluation of protocols and legally defensible data for incorporation in the database and report; technical writing and incorporation of environmental data and GIS technologies into product formats including, but not limited to, a web-based decision support tool and reports; integration of stakeholders' feedback into the data transformation and analysis and reporting process to ensure applicability of information; development of strategies to utilize reports and web-based products beyond FCO boundaries.

2. Organize the Fifth Annual FCMP Meeting. The FCMP annual meeting brings together federal, state and local stakeholders to broaden awareness of the Program's activities, expand partnerships and collaborations within the coastal management community and discuss local coastal management issues. The Fellow will work with FCMP staff to provide consultation, coordination and implementation support, to include assistance with organizing, negotiating and preparing for the FCMP Annual Meeting. The duties may include: coordinate and facilitate various pre-conference planning meetings; coordinate the selection and contract agreement with meeting venue; develop and administer a webpage for information and registration; develop an agenda and list of potential presenters; provide onsite logistical management prior to and during the meeting.
3. Research and analyze best management practices for marina facility operations as they relate to resiliency. The Fellow will coordinate with staff from Clean Boating Program, FCO and outreach on needed content. Responsibilities may include research and compilation of findings regarding existing Clean Marinas, encompassing the successful management practices for Clean and Resilient Marinas; the permitting and reporting needed; and photo documentation and examples as necessary. Reported findings and recommendations will include analysis of potential reduction of environmental impacts and permitting and potential improvements in water conservation, water quality, energy savings, air quality, environmental protection and services to the boating population.

This position will provide a GRP Fellow the opportunity to learn about coastal policy and management at the state level, to participate in FCO outreach and collaborative activities and to network with statewide FCO staff and partners (e.g., other state, local and federal agencies, universities and non-governmental organizations). The projects will allow a Fellow to develop and exercise diverse work-skills including project and meeting planning and management, communication and technical skills, grant writing and data analysis.

## **6) Gulf Coast Ecosystem Restoration Council**

*New Orleans, LA*

Website: [www.restorethegulf.gov](http://www.restorethegulf.gov)

In July 2012, the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act (RESTORE Act) established the Gulf Coast Ecosystem Restoration Council (Council), which is comprised of governors from the five affected Gulf States, and the Secretaries from six federal agencies. Over the next 15-20 years, the Council will be overseeing ~\$3.2 billion in restoration activities across the Gulf. In 2015, the Council approved ~\$156.6 million in funding for restoration activities such as hydrologic restoration, land conservation, and planning for large-scale restoration projects. Each of these approved projects were evaluated with respect to Budget, Science, Environmental Compliance, and consistency with the RESTORE Act and the Council's Initial Comprehensive Plan.

The Council is an independent Federal entity and has a staff composed of approximately 20 employees. The staff is divided into Programs, Grants, and Administrative Staff. The Programs side of the Council staff includes a Deputy Director, an Assistant Director of Programs and Planning, an Assistant Director of Policy and Environmental Compliance, a Science Advisor and Coordinator, a Director of Public and Tribal Affairs, and three Ecosystem Restoration Specialists. A GRP Science Policy Fellow with the Council would be working in the Programs staff with the Science Advisor, the Assistant Director of Programs and Planning and other staff to support the Council as it allocates funding to approved restoration projects.

The RESTORE Council is scheduled to finalize its third Funded Priorities List (FPL3) in mid-2020. The coming year will be ripe with opportunity for the GRP fellow to support this process through a variety of projects/tasks. The Council is committed to implementing restoration projects based on the Best Available Sciences. To that end, the GRP fellow will support coordination of Best Available Science review panels as part of the FPL 3 submission review process and other tasks related to the use of Best Available Science. The fellow may also have opportunity to become involved in public engagement activities during the FPL3 public comment period.

Other activities include: assisting Council staff in developing and implementing an adaptive management policy; reviewing grant applications, assisting Council staff in implementing adaptive management; reviewing monitoring and data management plans; and aiding in setting up restoration project-specific data monitoring protocols. There will also be opportunities to facilitate coordination among other Gulf agencies and non-profit organizations, and attend RESTORE Council meetings across the Gulf. Previous fellows have helped coordinate workshops among Gulf of Mexico scientists, assist with coordination of adaptive management across agencies/projects, collaborate on grant proposals, and present on Council activities at National conferences. A small Council staff means no task is too big or small for anyone, so the opportunities for a GRP fellow to dive head first into a world where science meets policy abound!

## **7) Harris County Public Health**

*Houston, TX*

(Placement description pending)

## **8) Louisiana Coastal Protection and Restoration Authority**

*Baton Rouge, LA*

The Louisiana Coastal Protection and Restoration Authority (CPRA) is the single state entity tasked with authority to articulate a clear statement of priorities and to focus development and implementation efforts to achieve comprehensive coastal protection for Louisiana. CPRA develops and implements the Louisiana Coastal Master Plan, a \$50 billion, 50 year plan to reduce land loss and protect and preserve coastal environments and communities. A Gulf Research Program (GRP) Science Policy Fellow could work on a diverse array of projects in several divisions at CPRA such as Planning and Research, Outreach and Engagement, as well as the Louisiana Governor's Office of Coastal Activities.

Potential projects that a GRP Science Policy Fellow could work on include, but are not limited to:

- Policy research for natural resource management and/or regulatory efficiencies: Research background information, including laws, policies, and regulations, to create work products that address user-group conflicts or assist CPRA with identifying environmental regulatory efficiencies.
- Flood risk and resilience: Advance effective methods for implementation of nonstructural projects, research funding sources, and assist in developing grant proposals to expedite program implementation. Support the development of a web-based database to facilitate nonstructural application submission by coastal parishes. .
- Assessment, synthesis, and adaptive management: Build on past and current CPRA efforts to assess and synthesize socioeconomic and biogeophysical data to evaluate project and program performance. This includes linking project performance to program goals and objectives.
- Science communication: Create story boards for CPRA restoration projects outlining project implementation from planning to engineering and design, operations, maintenance, and monitoring.
- CPRA-Parish Matching Program: Assist with streamlining and implementation of the CPRA's RESTORE Act Spill Impact Component Parish Matching Program.

Previous fellows at CPRA have participated in a variety of additional activities such as grant writing, assessment, grant proposal review and selection, development of requests for proposals, and production of factsheets.

## **9) Mississippi-Alabama Sea Grant Legal Program**

*Choice of Oxford, Biloxi, or Ocean Springs, MS, or Mobile, AL*

The Mississippi-Alabama Sea Grant Consortium (MASGC), created in 1972, is one of 33 Sea Grant programs. The mission of MASGC is to provide integrated university- and college-based research, communications, education, extension and legal programs to coastal communities that lead to the responsible use of ocean and coastal resources in Alabama and Mississippi and the Gulf of Mexico through informed personal, policy and management decisions.

The Mississippi-Alabama Sea Grant Legal Program (MASGLP), housed at the University of Mississippi School of Law, is seeking a NASEM Gulf Research Program Science Policy Fellow to coordinate the development of an outreach initiative for policy-makers and other professionals on *K. brevis* blooms in the northern Gulf of Mexico.

In December 2015 and again in November 2018, the Northern Gulf Coast experienced harmful algal blooms (HAB) of the single-celled phytoplankton, *Karenia brevis*, forcing closure of shellfish harvesting. Each bloom started off the southern Gulf coast of Florida and migrated northwest forcing the closure of beaches and oyster reefs up to and including Alabama. In 2015, the bloom spread to Mississippi and Louisiana forcing closures there, too. *K. brevis* blooms are common in Florida and Texas, but rare in the northern Gulf of Mexico. They are likely to become more common as water temperatures increase in the northern Gulf.

There are data gaps in understanding the causes of and responses to HAB events. As a result, states in the Northern Gulf of Mexico are not prepared to respond to and mitigate the impacts of more frequent HAB events. For example, the states of Mississippi and Alabama do not have laboratory facilities to test shellfish to confirm they are *K. brevis* free. Additionally, there are two problems with HAB closures: beach closures throughout the Gulf lack a uniform HAB monitoring or management program; and the system for shellfish closures and reopenings is cumbersome and relies on outdated science. Because of the economic harm a red tide can cause, even by just the threat of an event, the Gulf of Mexico needs a uniform response plan based on good science.

The MASGLP is undertaking a study of responses to *K. brevis* blooms in the Gulf to develop model state practices and policies for responding to HABs for both shellfish closures and beach closures. The results of the research would yield uniform standards and voluntary procedures for the Gulf states that would be protective of human health and incorporate the best science available. The Gulf Research Program Science Fellow would assist the Legal Program by:

- Representing the Legal Program at relevant Sea Grant and professional meetings and conferences, as well as potentially serving on committees.
- Preparing a report for policymakers on HABs in the Gulf of Mexico. This “state of the science” report would summarize current scientific knowledge of the causes of HABs to inform monitoring and management efforts. It would also compile for each Gulf state shellfish and any beach closure standards, including required testing methods and levels at which reopening may occur. The Gulf of Mexico Alliance and Gulf of Mexico Coastal Observing System released “A Primer on Gulf of Mexico Harmful Algal Blooms” in October 2013 that provides some basic information on HABs. However, more specific scientific information is needed for policymakers.
- Organizing and leading a series of workshops with HAB professionals from around the Gulf of Mexico to discuss scientific analyses of *K. brevis* causes, and to propose scientific standards and practices for beach closures, shellfish closures, and reopenings. These workshops will have the goal of producing voluntary uniform guidelines for cities, communities, and shellfish owners from around the Gulf that will provide the same strictness as the ISSC standards (to allow for interstate



shipments) but with more scientific rigor to allow faster analyses of conditions and that also specifically address human health assessments for beach closures.

## 10) NOAA Office of Response and Restoration

*Mobile, AL*

NOAA's Office of Response and Restoration (OR&R) is a center of expertise in preparing for, evaluating, and responding to threats to coastal environments, including oil and chemical spills, releases from hazardous waste sites, and marine debris. To fulfill its mission of protecting and restoring NOAA trust resources, the Office of Response and Restoration: Provides scientific and technical support to prepare for and respond to oil and chemical releases; Determines damage to natural resources from these releases; Protects and restores marine and coastal ecosystems, including coral reefs; and Works with communities to address critical local and regional coastal challenges.

OR&R is comprised of four divisions: [Emergency Response](#), [Assessment and Restoration](#), [Marine Debris](#), and the [Disaster Preparedness Program](#). Collectively, the Office of Response and Restoration provides comprehensive solutions to marine pollution.

The Emergency Response Division (ERD) of NOAA's Office of Response and Restoration (OR&R) provides scientific expertise to support an incident response. Under the National Contingency Plan, NOAA has responsibility for providing scientific support to the [Federal On-Scene Coordinator \(FOSC\)](#) for oil and hazardous material spills. To support this mandate, ERD provides 24-hour, 7 day a week response to spill events.

Sea Grant College Programs are located throughout the country and have been serving coastal communities for more than fifty years. [The Gulf of Mexico Research Initiative \(GoMRI\)](#) was established by a \$500 million commitment from BP in response to the 2010 Deepwater Horizon oil spill. The 10-year research program aims to mitigate the impacts of hydrocarbon pollution and stressors on the marine environment and public health from the spill, as well as improve society's understanding of oil spill issues. GoMRI provides support to the Sea Grant programs of the Gulf of Mexico (Florida, Mississippi-Alabama, Louisiana and Texas) for an extension and outreach effort to increase the use of oil spill science by people whose livelihoods depend on a healthy Gulf. This is a new model of a private entity engaging with the four Sea Grant programs in the Gulf of Mexico to develop a regional outreach program.

The potential Fellow will work within NOAA's ERD and the Gulf-wide [Sea Grant Oil Spill Outreach](#) program in Mobile, AL to learn how ERD and NOAA uses science in its management of the technological and natural disasters. The fellow will gain hands-on science policy experience by aiding the agencies with a variety of projects in Mobile and across the Gulf Coast. Specifically, the fellow will:

- Update documents, PowerPoints, and infographics for ERD and Sea Grant
  - Engage with Sea Grant graphic design partners in developing additional graphics

- Work with local US Coast Guard Area Committee (AC) on local plans
  - Serve in a support role helping organize AC meeting agendas, inviting speakers, etc.
- Help plan a GoMOSES 2020 session on response & research collaborations
- Participate in planning the Clean Gulf 2019 conference
- Gain familiarization with response operations and regulations; including participating in oil spill exercises and workshops
- Integrate and assist with outreach of NOAA National Centers for Environmental Information data and products (e.g. including DIVER and many others)
- Assist in development of an Oil Spill In-Situ Burning field guide
- Contribute to program evaluation

Additional projects working on the Human Dimensions impacts of spills – i.e. health, social, economic will also be considered.

## **11) NOAA Restore Science Program**

*Stennis Space Center, MS*

The [National Oceanic and Atmospheric Administration's \(NOAA's\) RESTORE Science Program](#) is seeking a science policy fellow from the National Academy of Sciences, Engineering, and Medicines' Gulf Research Program to assist with 1) execution of funding competitions, which includes selection of research priorities, review of applications, and granting of awards; 2) technical monitoring of funded projects; 3) engagement with scientists and resource managers in the Gulf of Mexico region to learn their needs and raise awareness of the findings and tools developed by projects funded by the program; and 4) coordination with other science and restoration initiatives in the Gulf region. The fellow will gain new knowledge and experience about the intersection of science, management, and policy by contributing to the design and execution of a sponsored research program within the federal government. As part of the Science Program, the fellow will grow their professional network and understanding by:

- Working with the Gulf of Mexico science and resource management community to ensure that the research the program sponsors meets their needs;
- Coordinating (and perhaps collaborating) with other regional research programs to ensure that our sponsored research complements and/or augments the investments of others;
- Learning about and communicating the state of the science for the Science Program's identified priorities; and
- Experiencing how NOAA, a science-driven service agency, operates from policy and operational points of view.

## **12) Texas General Land Office**

*Austin, TX*

The GLO recently published the first Texas Coastal Resiliency Master Plan, and will be working on Phase 2 of that Plan over the next two years. There will be an opportunity to work on Phase 2 of the Plan, which will entail continued coordination with coastal experts to refine and enhance Phase 1. This will include modeling studies that identifies storm impacts, and how the identified projects protect coastal ecosystems and critical infrastructure. Phase 2 will also utilize subsidence, erosion and other data to implement adaptive management into the plan. Phase 2 will also include coordinating other stakeholders and reviewing their research, and continued education of decision makers on the resiliency strategies identified in the plan.

The GLO is also the nonfederal sponsor for Coastal Texas Study with the USACE, which is researching the feasibility of constructing environmental restoration and coastal storm risk management structures for the entire Texas Coast. The Tentatively Selected Plan for the Coastal Texas Study will also be during the next two years. The fellow could help finalize the selection process and began the in-depth evaluation of the selected alternatives. One of the determining selection factors is the direct and indirect environmental impacts of the storm surge protection system for Galveston Bay. The evaluation will be based on output from new 3d models for Galveston Bay, and using the outputs to determine impacts salinity, sediment flow and recruitment. This will also require coordination with resource agencies, NGO's, and other stakeholders.

Further information on the ongoing GLO coastal studies can be found on the GLO's website here:

<http://www.glo.texas.gov/coast/coastal-management/hurricane-preparedness/index.html>

## **13) Texas Parks and Wildlife Department**

*Coastal Fisheries Office*

*Austin, TX*

Website: [www.tpwd.texas.gov](http://www.tpwd.texas.gov)

The following topics/issues or data programs are program areas that the fellowship opportunity will afford. Some of these will require interaction with outside interest groups, other TPWD and outside agency personnel.

Oyster Fishery License Buyback Program – Recent legislation enabled an oyster fishery license buyback program. This will enable the Department to establish an oyster license buyback program similar to other commercial license buyback programs previously established in Texas. The framework for the bidding procedures and the valuation of the licenses has been established but will be ongoing in the next year. There is also a component of grant funding or other donation solicitation to help assist the buyback program.

Oyster Lease Program Renewal & Incentive Based Oyster Bed Restoration – Currently, the oyster lease (certificate of location) program is confined to Galveston Bay and was developed around the notion of transplanting oysters from polluted areas to non-polluted areas to allow them to depurate and then after cleansing themselves they then become marketable. These 15 year leases were up for renewal in March of 2017. This renewal and current ongoing legislative discussion regarding ways to incentivize oyster restoration in Texas bays may lead to an expansion of the historical lease program. This activity will require further regulatory action by the Texas Parks and Wildlife Commission and will require a review that considers impacts to all user groups in the bays, leasing and valuation criteria, impacts to the ecological aspects of the bay and oyster reefs including current public and private reefs and future reefs.

Oyster Mariculture – Currently, building on the oyster lease program discussion above there is filed legislation that would provide the authority to the Texas Parks and Wildlife Commission to create an off-bottom mariculture program in Texas. If the legislation is passed it provides a timeline for the Commission to put forth a program to do this by August 2020. This program would include permitting requirements, siting on the facilities, and other regulatory and reporting activities required under the permit.

Habitat Monitoring System – Texas Parks and Wildlife Coastal Fisheries Department is well known for the 30+ year program it has for monitoring fish and other aquatic organisms (fishery independent data program) and the long-term angler catch data programs (fishery dependent) programs. Currently, a pilot program is being designed and will be tested to add key habitat components to that type of monitoring programs. The goal of such a program is to understand the efficacy of that type of program in an ecosystem monitoring approach. Baseline seagrass sampling, oyster reef mapping and other habitat monitoring has been established but this is an attempt to begin a pilot to determine the needs in a more routine sampling effort.

Red Snapper issues – Red Snapper management is the most controversial management issue in the Gulf of Mexico. In the Gulf of Mexico Fishery Management Council reallocation measures (to re-allocate percentage shares between fishery sectors), regional management strategies and various fishery monitoring strategies are being considered. In addition, various congressional actions have funded research to be conducted to determine the actual stock size of red snapper in the Gulf. The Gulf Council is poised to pass a regional management approach to managing the private recreational fishery. Under all of these situations, TPWD has undertaken more state site sampling of recreational catches and this will continue. Consideration is being given to more resource (fishery independent) sampling off of Texas is being considered as well. These various sampling programs and issues are ongoing and will continue into the next year.

Recreational Angler Surveys – Texas has routinely worked cooperatively with Texas A&M University and independently to complete mail surveys to understand the attitudes, motivations, expenditures, constraints and expenditure patterns of various angler groups. Next, year the routine (every 3-5 year survey) that we execute for all Texas anglers (both fresh and salt water) will be conducted. Other surveys based on need may also be executed but along with new collection there is a wealth of historic

information which can be relied on to analyze as various management issues arise in both inland and coastal fisheries.

Water issues – Texas, like other western states, has been facing increasing competition for water resources. This issue has given rise to efforts for water planning and specifically for Texas Parks and Wildlife concern over instream flows and flows to the bays and estuaries. Much study and effort has gone into the science to create basin-by-basin recommendations which relied heavily on the long-term monitoring data of the coastal fisheries division and which many TPWD experts served as part of the science capacity speaking to wildlife and fishery needs. These discussions are ongoing and ways to think about incentive based water right acquisition, donation, etc. is being studied. TPWD is starting to think about the execution and understanding of various water rights and how you might prioritize those using biological criteria.

TPWD Coastal Fisheries Routine Monitoring – This 30+ year sampling program is well renowned for the long-term routine nature of the sampling. The resource sampling consists of gill nets (spring and fall), bag seines, and gulf trawls. This data has proven invaluable in managing and justifying fishery regulations, but has also provided tremendous value in freshwater inflow studies and other more localized issues. This is also matched by a long-term creel (dockside) recreational survey. Both surveys provide the data foundation for the management and policy for coastal fisheries.

Stock Enhancement Program – The Texas Coastal Fisheries Stock Enhancement program is well renowned throughout the country. We have 3 hatcheries where we have predominantly raised red drum and spotted seatrout in large-scale hatchery production type of operations. Recently, the stock enhancement program has focused on research to establish the techniques and protocols to raise flounder in a hatchery setting in numbers large enough to support a stock enhancement effort.

Habitat Restoration – TPWD as one of the Texas Natural Resource Damage Assessment Trustees was assigned the lead role in coordinating activities with the National Fish and Wildlife Foundation Gulf Environmental Benefit Fund. To date over \$32 million dollars has been targeted for key restoration projects on the Texas coast. These projects come in the form of traditional restoration like oyster reefs, dune, marsh restoration or restoration through key acquisition. This effort requires coordination with other state and federal agencies, NGOs and ultimately NFWF.

Groundwater to the Gulf – The Texas Parks and Wildlife Department participates alongside twelve local and state agencies to host an annual science teacher education program called Groundwater to the Gulf. Eighth grade science teachers travel from all across Texas to participate in this three-day hands on activity and field trip based education program about Texas hydrology and associated ecosystems. The objective of the program is to establish a personal connection between teachers and scientists/science education coordinators from Texas agencies, educate teachers about Texas hydrology and associated environmental issues, and provide hands on activities and curricula for the teachers to take back to their classrooms. Hosts of the program meet monthly to plan and coordinate the event.

Outreach and Education – TPWD and coastal fisheries is always looking for better ways to communicate to both our teams across the agency and our external partners and stakeholders as well. In coastal

fisheries we already have an outreach and education team that helps facilitate outreach events, specific messaging campaigns as well as routine messaging on social media and other communication platforms. Certainly, participation with this group would be warranted if working with Coastal and there may also be an opportunity to create a project specifically supporting communication of science based work to the various audiences.

#### **14) Texas Sea Grant**

*Choice of College Station or Corpus Christi, TX*

Texas Sea Grant proposes to host a Science Policy Fellow at Texas A&M University that will focus his/her efforts in one of four focus areas: resilient communities and economies, healthy coastal ecosystems, sustainable fisheries and aquaculture, or STEM Literacy and workforce development. Specific projects and tasks will be developed via a work plan in agreement with Texas Sea Grant, the National Sea Grant Office, and the NASEM Gulf Research Program. The fellow will assist with translating science into policy through plan and policy analysis, development of interactive tools, synthesis of policy research, and the development of outreach materials. The fellow will learn the Research and Extension Integration model that guides the Texas Sea Grant program, how it is used and implemented, and how such a model can be used to further policy and science-based decision making.

#### **15) U.S. Geological Survey - Wetland and Aquatic Research Center**

*New Orleans, LA*

The U.S. Geological Survey (USGS) serves as the U.S. Department of the Interior's science bureau, providing impartial scientific information about natural resources. The USGS Wetland and Aquatic Research Center (WARC) spans the southeastern U.S., focuses on producing and disseminating scientific information needed to understand, manage, conserve, and restore wetlands and other aquatic and coastal ecosystems. This research provides critical information to policymakers and aids managers in their stewardship of natural resources and in regulatory functions. USGS WARC scientists are actively involved in restoration activities in the Gulf of Mexico region following the 2010 Deepwater Horizon (DWH) oil spill, including monitoring and assessment, implementing targeted research for restoration planning, and developing predictive models and decision analytical tools to inform science-based management decisions. WARC scientists are also leading and participating in multi-agency collaborations with state and federal agencies to develop monitoring, assessment, and adaptive management frameworks at multiple spatial scales that advance the use of science in natural resource decisions.

USGS WARC seeks a NAS Gulf Research Program Science Policy Fellow to assist in applied science activities that span the Gulf of Mexico. This fellow will have the opportunity to work on a number of efforts including, but not limited to:

1. Developing and implementing monitoring and adaptive management frameworks for multiple programs and projects;
2. Aggregating monitoring data and information across projects to inform habitats, species, and/or watershed-scale assessments;
3. Generating reporting options and structures for those assessments;
4. Synthesizing new science emerging in the Gulf of Mexico;
5. Compiling science and restoration program needs and updates to share with other WARC field offices across the Gulf of Mexico;
6. Organizing, facilitating, and/or participating in interagency collaboration meetings.

We anticipate the fellow will have opportunities to attend Gulf-based conferences, collaborate with USGS personnel located in Baton Rouge and Lafayette field offices, and work with state (LA, TX, MS, AL, FL) and federal agencies (USACE, EPA, NOAA, USDA, DOI) across the Gulf of Mexico on restoration issues.

The fellow will be hosted at the USGS field office located in New Orleans, LA. The field office is located at the U.S. Army Corps of Engineers New Orleans District and also includes personnel from the U.S. Fish and Wildlife Service. New Orleans is home to offices for the Bureau of Ocean and Energy Management, National Park Service, and RESTORE Council Staff, providing opportunities for regular collaboration opportunities with multiple DOI bureaus and other federal agencies. New Orleans also serves as a central location for regularly-held meetings with collaborators across the Gulf of Mexico.

## **16) U.S. Fish and Wildlife Service**

### *Deepwater Horizon Gulf Restoration Office*

*Fairhope, AL*

The Deepwater Horizon Gulf Restoration Office (GRO) was established in 2010 to lead the U.S. Fish and Wildlife Service (FWS) Natural Resource Damage Assessment and Restoration (NRDAR) activities for the Deepwater Horizon (DWH) Oil Spill. Since global settlement of the DWH case in 2016, the office has shifted focus from injury assessment to restoration implementation. In addition to the NRDAR activities, the GRO coordinates with restoration implemented under the RESTORE Act and National Fish and Wildlife Foundation Gulf Environmental Benefit Fund (GEBF) to facilitate the efficient and effective use of funds dedicated to the restoration of the Gulf of Mexico. The GRO includes 21 technical and support staff members, with 11 staff located in the Fairhope Alabama Office. The GRO closely coordinates with other FWS offices, Department of the Interior Bureaus, and State and Federal agencies involved in Gulf Restoration.

The primary role of the Science Policy Fellow in 2019-20 will include working as part of a team to design and implement a Monitoring and Adaptive Management (MAM) Program for Gulf of Mexico restoration. The MAM Program is intended to promote the effective and efficient use of available restoration funds

to appropriately compensate the public for resources injured by the spill. Monitoring will occur at the project-level, resource-level, and ecosystem-level. Specific duties will include: 1) development of MAM methodologies and guidance documents, 2) coordination across multiple State and Federal agencies and other stake holders to promote consistent and coordinated monitoring for multiple resource categories across the northern Gulf, 3) participation in restoration planning to promote the incorporation of MAM goals and objectives into all restoration projects, and 4) consolidation and reporting of monitoring results across multiple restoration projects and resource categories.

The Fellow will also assist with other FWS NRDAR efforts in and around the Gulf of Mexico. NRDAR actions are expected to include assessment and restoration planning for natural resource injuries resulting from oil spills and releases of hazardous materials. Specific duties will include: 1) coordination and planning within the Department and with co-trustees, 2) the design and implementation of damage assessment and restoration activities, 3) development of various case documents, and 4) coordination with parties responsible for the release of oil and/or hazardous materials which result in injury to natural resources.

## **17) The Water Institute of the Gulf**

*Baton Rouge, LA*

The Water Institute of the Gulf is a not-for-profit, independent research and technical services resource with a mission to support resilient coasts and sustainable water systems worldwide. Founded in late 2011 through a collaborative effort involving the State of Louisiana, Senator Mary Landrieu, and the Baton Rouge Area Foundation (BRAAF), the Institute connects academic, public, and private research providers and conducts applied research to serve communities and industry. In all endeavors, the goal is to increase understanding of natural and human aspects of deltaic, coastal, and water systems; to develop tools that apply knowledge to restore coasts and ecosystems; and to reduce risk for people and infrastructure. In 2014, the Institute was selected as the Resources and Ecosystem Sustainability, Tourism Opportunities, and Revived Economy of the Gulf Coast (RESTORE) Act Center of Excellence for Louisiana.

The Institute's work helps ensure livable communities and a thriving economy and environment. Today, the Institute is at work conducting applied research that will help coastal communities and economies become more resilient to land subsidence, storms, rising sea levels, and other coastal threats. Key initiatives include development of numerical modeling and decision support tools, real-time forecasting, and comprehensive integrated risk assessment modeling to establish scientific benchmarks and provide guidance that will better inform policy makers, communities, and businesses. By leveraging the knowledge and tools of the Institute, government, business, industry, and philanthropic interests may thoughtfully plan for sustainable infrastructure, landscapes, ecosystems and economies, and emergency preparedness.

A Fellow at the Institute could work on an array of projects depending on their background and interests. They could range from social sciences to sediment transport to coastal ecology to water



quality and include applied research projects, from large-scale plans and decision support tools to targeted research. The Fellow could also conduct field work if interested, meeting with decision makers where science is utilized to inform management, or help as part of the Institute's team for the RESTORE Act Center of Excellence for Louisiana. The range of expertise of our team members is extensive and the Fellow would have opportunities to interact or work with many of them and be exposed to working across disciplines with an array of partners, helping address and solve complex coastal, deltaic, and water systems challenges worldwide.