ONEGULF PRIORITY NEEDS
Community Resilience, Estuarine & Coastal Environments
FY23 Notice of Funding Availability

September 2022

I. Introduction and Background

Texas OneGulf is a consortium of nine research member institutions funded, in part, with federal funding from the Department of the Treasury through the State of Texas (Texas Commission on Environmental Quality) under the RESTORE Act. Our mission is to improve understanding of the Gulf of Mexico large marine ecosystem and its effects on human health and well-being to support a healthy environment and communities in Texas, the Gulf, and beyond. The vision of Texas OneGulf is to become a trusted source of scientific information about the Gulf of Mexico, especially to Texas decision-makers. Texas OneGulf has established the Texas OneGulf Network of Experts (TONE), which consists of more than 160 scientists, policy experts and researchers from the nine-research member consortium, to provide a trusted resource for information and science-driven solutions relevant to Gulf of Mexico issues affecting Texas and the region.

II. Needs Description

In support of the Texas OneGulf vision, the consortium has created the Texas OneGulf Agency Council (Council) to better inform Texas OneGulf on priority decision-making needs and the development of projects. The Council is composed of agency leadership[1] from Texas Commission on Environmental Quality, Texas Division of Emergency Management, Texas General Land Office, Texas Parks and Wildlife Department, and Texas Water Development Board. Drawing from the Texas OneGulf Strategic Research and Action Plan, the Council has identified the following research focus areas and research questions as priorities. This Notice of Funding Availability (NoFA) will support projects that advance actionable science related to one or more of the below Texas OneGulf Priority Research Questions. Actionable science is here defined as research produced with an end-user; it meets the needs of decision-makers by understanding and considering those needs – spatial, temporal, political, otherwise – throughout scientific processes.

Texas OneGulf Priority Research Questions

Community Resilience Research Focus Area:

[1] Council members include:
Ms. Diane Mazuca, Texas Commission on Environmental Quality
Dr. MacGregor Stephenson, Texas Division of Emergency Management
Mr. David Green, Texas General Land Office
Mr. Robin Riechers, Texas Parks and Wildlife Department
Dr. Carla Guthrie, Texas Water Development Board

- *Risk Communication:* What are the top performing methods in disaster risk communications—focusing on misinformation, public distrust, and social media—to minimize the impacts of disasters on human communities?
- *Prioritizing Mitigation Projects:* What analytical tool(s) or scoring mechanism(s)/criteria can best prioritize disaster risk mitigation projects from a state and local perspective, including through identifying data needs and best practices?

Estuarine & Coastal Environments Research Focus Area:

- *Coastal Stressors:* What methods exist to better understand and address linkages between coastal environmental stressors and human communities, including public health and the economy?
- *Integrated Water Resource Management:* What strategies of Integrated Water Resource Management (IWRM), from a flood and water supply perspective, can be applied in Texas to enhance the health of Texas estuaries and the Gulf?

Applicants (i.e., Principal Investigators) must address one of the above Texas OneGulf Priority Research Questions in their response. Importantly, this announcement aims to deepen collaboration among scientists and end-users. Collaboration should result in a better understanding of the decision-making needs and context, key methodologies and inferences, meaning of uncertainty, and potential implications of research results, such that trusted actionable science can be best supported and produced. Not doing so is grounds for dismissal of a proposal. While the level of collaboration will vary across projects, projects supported by this NoFA will strive to empower stakeholders (Figure 1). As such, applicants are expected to involve end-users in project scoping and development as well as throughout the project as an integral member of the project team.

Figure 1: Continuum of end-user engagement (adapted by USGS from Bamzai Dodson et al., 2021)

	Inform	*Consult*	*Participate*	*Empower*
Example Methods	Publications, webinars, fact sheets	Surveys, focus groups, workshops	Sustained 2-way interactions, e.g., advisory boards	Stakeholder input is co-equal part of research , e.g., Co-PI
Guiding questions to inform selection of engagement approach				
Focus of Legitimacy	Legitimacy from scientific independence			Legitimacy from engagement process
Decision Context	Decision roles are well-defined and balanced			Partners have been disenfranchised in the past
Partner/End-user Community	Broad and diverse insights covering many partners			In-depth, focused insights from key partners
Partner/End-user Needs	Well-understood			Poorly understood
Resources for Engagement	Low	(money, time, commitment)		High

In support of this goal, Texas OneGulf seeks assistance from teams with diverse expertise, including biogeophysical and social sciences, policy, communication, and engagement with science end-users to develop a transdisciplinary, intersectoral perspective on producing actionable decision support related to Texas OneGulf Priority Research Questions. Applicants should reference Texas OneGulf's recent workshop results, which focused on strengthening inter/transdisciplinary and co-production processes, available at: https://www.harte.org/project/texas-onegulf-center-excellence

III. Eligibility and Award Information

Approximately $2 million in funding is estimated to be available. It is expected that at least one award will be made in each research focus area, with a project minimum of $500,000 and maximum of $1,000,000. Texas OneGulf reserves the right to modify this expectation as appropriate. The anticipated start date is June 1, 2023, with an estimated project length of two-years. Final dates will be confirmed upon project selection. All work must be completed during this period. To be eligible, the project lead must be a member of TONE; however, collaboration outside of TONE is acceptable and encouraged. An individual may serve as project lead on only one proposal; however, an individual may participate in additional proposals as key personnel.

IV. Key Dates

Letter of Intent (Required): Applicants must submit a letter of intent (LOI) to the Texas OneGulf Online Submission System (TOOSS) Letter of Intent (below) by 5 pm CDT on Wednesday, October 19, 2022, in order to submit a full proposal. The point of contact listed in the LOI will be sent confirmation that the LOI has been received. If confirmation has not been received via email by October 21, 2022, email texasonegulf@tamucc.edu. LOIs will be assessed by the Council for overall relevance to the Texas OneGulf Priority Research Questions. Full proposals will only be invited for projects addressing Texas OneGulf Priority Research Questions and resulting in actionable science through a co-production process. Notification and invitation to submit a full proposal will be sent by email to the point of contact by November 21, 2022. Applicants whose LOIs are not invited may submit a full proposal at their discretion, though they must show evidence of a co-production process with end-users.

Texas OneGulf Knowledge Co-Production (Invited): Applicants of invited proposals will be asked to participate in a knowledge co-production process[2] to discuss project ideas with the Council in early December 2022. More information may be found in Section V. Texas OneGulf Knowledge Co-Production.

Full Proposals: Full proposals are due by 5 pm CDT on January 20, 2023. Proposals must be submitted in PDF format to the TOOSS. Applicants will be sent confirmation that full proposals have been received. If confirmation has not been received via email by January 23, 2023, email texasonegulf@tamucc.edu.

The Texas OneGulf Online Submission System (TOOSS) upload folders may be accessed at:

Texas OneGulf Letters of Intent FY23:
https://www.dropbox.com/request/wJwlqEWkzJOTHLvWmolE

Texas OneGulf Full Proposals FY23:

https://www.dropbox.com/request/HyIcEW3a9qDZG0BFBaFm

[2] Among others, see, e.g., Bamzai Dodson et al., 2021; Beier et al., 2016; DeLorme et al., 2016; Wall et al., 2017.

V. Preparation Instructions

Letter of Intent (Required)

A letter of intent should consist of the following sections:

1) Project title
2) Project personnel (name, title, institution of project lead and key personnel, point of contact)
3) Texas OneGulf Agency Council priority research question(s) addressed
4) Project key words (up to 5 key words)
5) Approximate cost
6) Project summary (up to 800 words) including:
    a. Decision-making context/specific problem being addressed
    b. Goals and objectives
    c. Project partners, including intended end-users and the stage of their collaboration (e.g., to be invited, invited, agreed to participate, etc.)
    d. Project plan
    e. Expected outputs and outcomes

Texas OneGulf Knowledge Co-Production (Invited)

Texas OneGulf Management will facilitate a virtual meeting with the Council and Principal Investigators from each LOI that was invited to move forward. Meetings will provide an initial opportunity for researchers and potential end-users to ask questions, build or strengthen relationships, and identify key aspects necessary for an effective co-production process (Beier et al. 2016), such as: management need, goal or problem, and timeframes; key assumptions and/or constraints of the decision-making context; potentially relevant scientific information; applicable methodologies, models, approaches, data sources, criteria, etc.; and understanding risk and uncertainty. If project end-users are anticipated to be external to Council agencies, Principal Investigators should be prepared to present their perspectives on the management need, or may discuss inviting external end-users to the virtual meeting with Texas OneGulf Management.

Principal Investigators may receive specific questions related to their project in advance and will be asked to respond to such questions during the meeting. Principal Investigators may also receive additional feedback from Council discussions following the meetings.

For LOIs that are not invited, applicants will need to gather this information on their own to be competitive at the full proposal stage.

Full Proposal

All sections must use Times New Roman 12 pt or larger, or Arial or Helvetica 11 pt or larger. The proposal packet must be sent in PDF format.

A full proposal should be no more than 15 pages and consist of the following sections:

1) Cover sheet (1 page)
2) Executive summary (with keywords) (max 1 page)
3) Project description (max 8 pages; references not included in page limit)
4) Co-production and team integration plan (max 2 pages; references not included in limit)
5) Data Management Plan (max 1 page)
6) Budget narrative (max 2 pages)
7) Budget (not included in page limit)
8) Biosketches of key personnel (max 2 pages per person; not included in page limit)
9) Letters of Support (external to Council agencies; not included in page limit)

Instructions for each section are provided below.

1) Cover Sheet (max 1 page)

   The cover sheet must include the following information:
   - Project title
   - Name, institution, email address, and phone number of the Principal Investigator
   - Names and institutions of all other key personnel
   - Name, institution, email address, and phone number of administrative contact
   - Requested award amount

2) Executive Summary (with Keywords) (max 1 page)

   The Executive Summary should provide a brief statement on the research question being addressed, the decision-making context and identified end-user(s), the proposed approach, and the expected project outcomes and deliverables. Information should then be expanded on to provide additional key details that convey why the project is needed (and by whom), the general qualifications and experience of the team, why the team assembled is best suited to meet the need, and how the project methodology will be advanced to meet the need and provide actionable science. This information should be followed with up to 5 keywords.

3) Project Description (max 8 pages; references not included)

   The project description should include:

   A. *Problem Statement*: What specific problem related to the Texas OneGulf Priority Research Question(s) will the project address? Applicants should include information demonstrating how this is known to be a priority problem, i.e., which end-users have been engaged to provide context for the decision-making need, and how this informed the

framing of the issue. In particular for the Texas OneGulf Priority Research Questions, consider the following needs identified by the Council:

- Community Resilience/Risk Communication: Help communities understand: (a) which disaster measures to prioritize for communicating risk; (b) the best language and platforms for clearly conveying messages about risk; (c) how to build trust in communications and effective strategies for debunking misinformation; (d) how to message long-term trends and the relationship between disasters over time; (e) challenges in operationalizing research outputs/outcomes; and/or (f) how to best provide accessible information to support short- and long-term decisions for flood and drought.
- Community Resilience/Prioritizing Mitigation Projects: Identify mechanisms to better prioritize grant allocations in a scientific manner across flood control, mitigation and drainage projects by: (a) comparing disparate mitigation projects (e.g., structural/non-structural, geographic differences) in a common framework, with a focus on cost-benefit analysis (CBA); (b) quantifying or measuring the societal benefits in a CBA to assess disaster risk mitigation projects; and/or (c) ranking criteria for use by agencies with limited resources and multiple priorities.
- Estuarine & Coastal/Coastal Stressors: Enhance understanding of coastal stressors in Texas, by: (a) exploring persistent, new and/or emerging stressors; (b) developing a better socioeconomic understanding of the community/individual impacts of harmful algal blooms, sediment loss, and other coastal challenges and stressors; and/or (c) developing implementable strategies for delivering freshwater inflows and impacts of potential water management actions.
- Estuarine & Coastal/Integrated Water Resources Management (IWRM): Develop foundational information for the use of IWRM in Texas by: (a) evaluating the understanding of stakeholder interests in using IWRM including limitations and/or benefits of the approach; (b) mechanisms to use IWRM to prioritize risk mitigation projects across flood and water supply; and/or (c) how Texas OneGulf can best support efforts to integrate the benefits of flood mitigation and water supply.

B. *Current Knowledge & Gaps:* Summarize current knowledge related to the Priority Research Question(s), specific problem(s), and key knowledge gaps, especially from the end-users' perspective (i.e., what data does the end-user already use to address the issue at hand, and what data do they need?).
C. *Methodology and Implementation*: Describe the proposed methodology and research activities in relation to the present state of knowledge, key knowledge gaps, and in relation to previous and current work by the project team. Identify whether this project will help end-users efficiently and effectively identify data and information that are most useful to the problem, and if so, how. Discuss how the latest science and data related to the problem will be summarized for and provided to the intended end-user(s) through simple and sharable communications.
D. *Work Plan & Deliverables:* Provide a list of key personnel, major tasks, identify who will lead each task, and provide a project schedule with specific milestones, showing how the project will be completed within the funding period. Also describe the timing and formats

the project team will use to submit information, including final deliverables and any potential interim deliverables to ensure the project is meeting end-user needs. Discuss any challenges in aligning the timing of deliverables with the timing of decisions being made on the problem, and how those challenges will be addressed.

4) Co-Production & Team Integration Plan (max 2 pages; references not included)

   Applicants are expected to involve end-users in project scoping and development as well as throughout the project as an integral member of the project team. This section should describe: the degree to which intended research end-users are engaged in and committed to the project; roles and responsibilities of end-users and, where applicable, additional stakeholders; and existing workgroups and/or public processes that are ongoing or will occur during the project timeline that may provide connections to decision-making needs, including how the team will engage in such processes. A co-production lead from among the team should be identified, and important collaborators that are not on the project team should be listed, including their current level of engagement. This section should also describe the team science methodology that will be employed to ensure the project is moving toward inter/transdisciplinary integration.

   Applicants should refer to Texas OneGulf's recent workshop results, which focused on strengthening inter/transdisciplinary and co-production processes, available at: https://www.harte.org/project/texas-onegulf-center-excellence

5) Data Management Plan (max 1 page)

   Proposals must provide a detailed Data Management Plan. A typical plan should include descriptions of the types of data and information expected to be created during the project; the tentative date by which data will be shared; the standards to be used for data/metadata format and content; methods for providing data access; approximate total volume of data to be collected; and prior experience in making such data accessible. Note that applicants are required to use the Gulf of Mexico Research Initiative Information and Data Collaborative (GRIIDC) for data management and curation. The costs for data management and curation by GRIIDC supported by 3.75% of direct costs must be included in the budget. Further information may be found in Section X.13 below.

6) Budget Narrative (max. 2 pages)

   Provide narrative details for use of funds requested in each budget category.

7) Budget (not included in page limit)

   Budget should be provided in the following categories:
   - Personnel Support (name personnel, their time commitment, and allocated support)
   - Fringe Benefits
   - Travel
   - Data Management
   - Other (consultants, materials and supplies, etc.)

- Cost Share: though cost share or matching is not required, applicants should note any leveraged resources project partners are able to provide
- Indirect Costs
- Total Costs

8) Biosketches (max. 2 pages per person; not included in page limit)

   A biosketch should be provided for key personnel that includes: name, education, professional positions in reverse chronological order, relevant expertise, and relevant experience and publications.

9) Letters of Support (external to Council agencies; not included in page limit)

   Letters of support from end-users and/or collaborators may be included, however, letters may not be included from agencies participating in the Texas OneGulf Agency Council. If Council agencies are envisioned to be end-users, their participation should be described in section V.4 above.

VI. Evaluation

Texas OneGulf Management will review letters of intent and proposals to ensure each is administratively complete. Evaluation of proposals will then consist of three stages: Stage 1-Independent Science Review; Stage 2-Council Review & Recommendation; and Stage 3-Funding Approval by the Texas OneGulf Consortium Leadership Group.

Stage 1: Independent Science Review

All proposals will be reviewed by an independent panel of qualified, unbiased reviewers who will review and rank each proposal on its intellectual merits. Review criteria are below. Given a low overall score, some projects may not advance to Stage 2.

- Project Management (15%)
- Project Responsiveness to Research Priorities (40%)
- Degree of Co-Production and Interdisciplinary Integration (30%)
- Broader Impacts (15%)

Category (Weight)	Criteria
Project Management (15%)	• Expertise and track record of PI(s) in the proposed research (**5 pts**) • Realistic research timeline and availability of appropriate and resources for duration of the grant (*Note: Inability to meet this requirement is grounds for disqualification of proposal)* (**10 pts**)
Project Responsiveness to Research Priorities (40%)	• Measurable outcomes/outputs relevant to one or more of the Texas OneGulf Priority Research Questions (**10 pts**) • Quality and soundness of the proposed research (**10 pts**) • Depth of collaboration among Texas OneGulf institutions and/or partnership with other entities to ensure a holistic response (university, nongovernmental, governmental, industry, and/or public) (**10 pts**)

	• Demonstrated use of the "best available science" as defined by the U.S. Code of Federal Regulations [Title31, Chapter 1, Subpart A: (34.2)], as well as the integration of interdisciplinary methods, data and information as appropriate, including from the socioeconomic sciences (**10 pts**)
Degree of Co-Production and Interdisciplinary Integration (30%)	• Identified end-user who has agreed to serve specific role in project (**5 pts**) • Description of critical insights gained from engagement with end-users (**10 pts**) • Expertise of inter/transdisciplinarity team to address complex issue (**10 pts**) • Team integration methodology (**5 pts**)
Broader Impacts (15%)	• Demonstrated connection of the proposed research to positively impact Texas OneGulf research focus areas (**10 pts**) • Availability and dissemination of results to a broad audience including publication and other outreach activities (**5pts**)

Stage 2: Texas OneGulf Agency Council Review & Recommendation

The Council will consider proposals, independent science reviews and their agency's assessment of relevance to decision-making needs to provide funding recommendations.

Stage 3: Funding Recommendation

The Texas OneGulf Consortium Leaderships Group will review all information and provide the final funding recommendation.

VII. Contact Information

Questions may be directed to the Texas OneGulf Executive Management Team at Texas OneGulf Center of Excellence: texasonegulf@tamucc.edu

VIII. Award Terms and Conditions:

1. By applying in response to this Notice of Funding Availability, each Project Team, including the Principal Investigator (PI), agrees to be bound by all terms and conditions of the Texas OneGulf Center of Excellence Rules and Policies, as well as, applicable RESTORE Terms and Conditions.
2. All proposals will be treated as new efforts; each proposal must be a stand-alone document without need to review or consider linked material.
3. As required by the RESTORE Act [Sec. 1603 (33-34)], all efforts must be located in and applicable to Texas.
4. Grants must be led by a PI or Co-PI that is currently a member of the TONE. Collaboration outside of TONE is acceptable and encouraged.
5. Other partnering entities (including non-profits, governmental agencies, and public or private companies) from within or outside of Texas are encouraged. Personnel from any number of partnering institutions should be reimbursed appropriately for their time

commitment to the research program based on the salary structures at their home institutions. The tasks they lead will be open in nature and may include work by undergraduate or graduate students, and postdoctoral research associates as appropriate.

6. An individual may only be the lead Principal Investigator (PI) on one Texas OneGulf grant proposal but may participate in others in any other capacity. It is the responsibility of the submitters to confirm that each member of the entire team is eligible.
7. All personnel conducting activities financed, directly or indirectly, wholly or in part, by Texas OneGulf are subject to and must comply with the terms of the Texas OneGulf Center of Excellence Rules and Policies and applicable RESTORE Terms and Conditions. All activities must be carried out under professional standards of responsible conduct in research [e.g., as defined by the best practices outlined and described in the United States National Academies of Science "On Being a Scientist: A Guide to Responsible Conduct in Research, Third Edition" (2009), National Academies Press.
8. Each PI, Co-PI and anyone being paid salary from a Texas OneGulf grant will be required to submit a Conflict of Interest Disclosure Statement form.
9. Cost sharing or matching is not required for Texas OneGulf grants.
10. Consistency and uniformity standards for allowable costs, and audit standards requirements for non-profit organizations expending federal awards, including their grant recipients, are defined in the federal Uniform Grant Guidance (2 CFR 200); Subpart F applies to audits of the recipient's fiscal years beginning on or after December 26, 2014.
11. PIs are responsible for compliance with local, state or federal requirements related to their research program, including ensuring they have any permits required to conduct their research; if applicable, copies must be provided to Texas OneGulf.
12. Intellectual property funded by a Texas OneGulf grant will reside with the responsible investigator's home entity. Texas OneGulf, in consultation with PIs, may at any time use photos, data, results, and appropriate documentation to highlight and publicly share Texas OneGulf accomplishments and outcomes. Whenever possible, work conducted under Texas OneGulf grants is expected to result in publications in peer-reviewed (refereed) journals, or equivalent media. Publications and datasets that contribute to the published work must be assigned a Digital Object Identifier (DOI) to facilitate public access.
13. Texas OneGulf uses the Gulf of Mexico Research Initiative Information and Data Collaborative (GRIIDC) to archive metadata records. All projects must include data management and curation by GRIIDC supported by 3.75% of direct costs. All data and derived data products and metadata must be made publicly available within one year of data acquisition, before publication that relies on the data, or before the end of the grant, whichever is soonest. Metadata records submitted to GRIIDC must be accompanied by the related datasets, regardless of where they are permanently archived; they are needed to

confirm metadata records. These requirements are intended to promote reproducibility, integration with other research programs, and advancement of knowledge and utility to engineers, researchers, and managers.

14. Texas OneGulf grant recipients will be required: to submit quarterly progress reports with financial statements (in order to justify cost-reimbursable quarterly payments), in specified format as defined in grant sub-agreement terms and conditions. The Texas OneGulf program office will coordinate with grantees to fulfill reporting requirements, and will maintain records for all grants, publications, presentations, reports, and activities of each grant. These will inform semi-annual reports to the Treasury Office of Gulf Restoration, and an annual report for the Gulf Coast Ecosystem Restoration Council, as required for continuation of program funding; these reports will be made publicly available via the Texas OneGulf website.
15. Funded projects will be required to participate in an evaluation survey of all project participants. The survey will collect both quantitative and qualitative measures to determine the extent to which co-production leads to the application of OneGulf science to decision-making, as well as the extent to which interdisciplinary research is enhanced. A sample of the questions is as follows:
    a. How many end users were involved in developing or implementing the project?
    b. Who/why were the end users involved in developing or implementing the project?
    c. What development or implementation activities did end users contribute to?
    d. How did end users influence project development?
    e. What datasets were submitted to repositories that are available to the end user?
    f. How many trainings were provided for end users to ensure that they know how to use the science that was co-produced?
    g. How many presentations, meetings, or other gatherings were organized to facilitate the use of actionable science by end users?
    h. How many science extension products resulting from this research were delivered directly to the end user?

References

Bamzai-Dodson, A., A.E. Cravens, A. Wade, R. McPherson. 2021. Engaging with Stakeholders to Produce Actionable Science: A Framework and Guidance. Weather, Climate and Society, 13(4): 15. doi: 10.1175/WCAS-D-21-0046.1

Beier, P., L.J. Hansen, L. Helbrecht and D. Behar. 2016. A how-to guide for coproduction of actionable science. Conservation Letters, 10:288-296. doi: 10.1111/conl.12300.

DeLorme, D.E., D. Kidwell, S.C. Hagen, and S.H. Stephens. 2016. Developing and managing transdisciplinary and transformative research on the coastal dynamics of sea level rise: Experiences and lessons learned, Earth's Future, 4, 194–209, doi:10.1002/2015EF000346

Wall, T.U., E. McNie, G.M. Garfin. 2017. Use-inspired science: making science usable by and useful to decision makers. Frontiers in Ecology, 15(10): 551–559, doi: 10.1002/fee.1735