# Gulf Sea Level Variation and Rise – Cycle II

# **REQUEST FOR APPLICATIONS**



NATIONAL Sciences Engineering Medicine

**GULF RESEARCH PROGRAM** 

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# GULF SEA LEVEL VARIATION AND RISE CYCLE II

The National Academies of Sciences, Engineering, and Medicine's <u>Gulf Research Program</u> (GRP) is committed to advancing scientific understanding of sea level variation and rise in the Gulf of America in order to support more accurate, actionable, and regionally relevant projections. Through this effort, GRP aims to improve the capacity of communities, agencies, and decision makers across the Gulf to prepare for and respond to the impacts of sea level rise. The GSLVR Research Grant Program builds on prior GRP investments in sea level science and continues GRP's commitment to supporting research that informs long-term coastal resilience and environmental stewardship.

This funding opportunity follows the first cycle of the Gulf Sea Level Variation and Rise (GSLVR) grant program (2022 – 2026). In GSLVR Cycle I, GRP has supported three collaborative research teams focused on advancing the scientific understanding of relative sea level change and enhancing projection capabilities for the Gulf coast. These teams have worked in partnership with federal end users such as the NASA's Sea Level Change Team and NOAA's Center for Operational Oceanographic Products and Services (CO-OPS). Their work has contributed to national sea level forecasting efforts and regional and local planning efforts. To learn more about the initial GSLVR program, visit https://www.nationalacademies.org/our-work/gulf-sea-level-variation-and-rise-grants.

With Cycle II of the GSLVR Grant Program, GRP is seeking applications for interdisciplinary research projects that will refine projections of relative sea level rise in the Gulf region by improving the understanding of key physical processes and translating that knowledge into usable tools and information products. This includes emissions-dependent probabilistic projections, forecasting tools, and scenario-based products that account for gravitational, rotational, and deformational changes, vertical land motion, ocean dynamics, and/or other region-specific factors. Proposed projects must demonstrate relevance to end users (federal agencies, state and local planners, resource managers, etc.) and should be designed to improve long-term planning, preparedness, and resilience to sea level hazards across the Gulf of America. This program will also align grantees with other GRP sea level rise efforts, including calling on grantees to share their science with end-users of their data products.

A total of up to \$7 million is available for this funding opportunity. Funding will be awarded to support projects of up to five years in duration. The number of awards

made will depend on the quantity, quality, and budgets of the applications received. Applicants must propose budgets that are commensurate with the scope and scale of the work described.

# **KEY DATES**

- May 16, 2025: Online Notice of Intent (NOI) submission opens
- **June 6, 2025**: NOI due by 5:00 p.m. Eastern Time
- June 9, 2025: Online Full Proposal submission opens (only to Applicants who submitted a NOI)
- July 18, 2025: Deadline for submissions of applications due by 5:00 p.m. Eastern
   Time
- August September 2025: Award selection and notification
- **November 2025**: Anticipated funding start date
- Online submission website: https://gulfresearchprogram.smapply.io/

# **AWARD INFORMATION**

- **Total funding available**: up to \$7 million
- **Award duration**: Grants will be awarded to support projects up to 60 months in duration.
- Estimated number of awards: To be determined. The budget request of any application should not exceed the total amount available and should be commensurate with the scope of the work proposed. Resources made available for any successful application will depend on its merits and budget proposed, including justification. The Gulf Research Program (GRP) reserves the right to select for negotiation all, some, one, or none of the applications received in response to this solicitation.
- Award notification: August September, 2025

# **ELIGIBILITY**

These terms are defined as follows when referenced:

- **Applicant**: The organization under which an application is being submitted (i.e., applying organization).
- Project Director: The individual who will lead the proposed project. The
  Project Director is responsible for the direction and intellectual design of the
  project and has primary responsibility for project execution and the
  submission of all required reports to the GRP. Project Directors usually initiate

- applications that are officially submitted by their employing organizations (the Applicant). When initiating an application, the Project Director is responsible for ensuring it meets all the requirements outlined by the GRP as well as any requirements set by the applying organization.
- Key Personnel: Individuals who share in the responsibility of the direction or intellectual design of the proposed project and/or contribute to the execution of the proposed project in a substantive, measurable way.
- **End-User**: For the purpose of this RFA, an end-user is defined as an entity that uses sea-level fore- casts and projections to plan or implement hazard preparedness, environmental management, or other decision-making purposes.

Applications must adhere to the following to be eligible:

- U.S. organizations (excluding federal agencies) that have a valid federal tax ID number are eligible to apply.
- This funding opportunity is for distinct activities only. Proposed activities that
  are part of a broader, existing effort, program, or project may only be eligible
  if the application clearly demonstrates that the funding request is for distinct
  activities that would not otherwise occur.
- Activities currently under consideration for funding from other sources are not eligible. The status of "currently under consideration for funding from other sources" is intended to mean that full or final application materials have been submitted to another entity to request funding. Submission of a Letter or Notice of Intent or Pre-Proposal to another funding source does not constitute an activity being "currently under consideration for funding from other sources" if that submission is a step that precedes submission of full or final application materials in an application process.
- U.S. organizations may partner with international organizations; a U.S. organization must be the Applicant, but Applicants may include Key Personnel from and subawards to non-U.S. organizations. Legal restrictions may prohibit transactions, including subawards, between U.S. entities and entities within certain foreign countries.
- U.S. federal agencies are not eligible to receive GRP funding as Applicants or sub-awardees, al- though their employees may be non-funded collaborators. Any proposed collaboration with employees of a U.S. federal agency should not involve any transfer of GRP funding to the agency and must be in compliance with all applicable federal statutes and regulations. This will be reviewed on a case-by-case basis to determine if this requirement is met.
- Federally Funded Research and Development Centers (FFRDCs) and University Affiliated Re- search Centers (UARCs) can be named as sub-

awardees, however, these Centers must have the authority to obtain funding for work outside of the relevant federal sponsor contract and not be proposing to do work that is otherwise being done under the federal sponsor contract.

- BP Exploration and Production, Inc. (BP), Transocean Deepwater, Inc. (Transocean), their affiliates, and employees are not eligible to receive grant funding or to participate in any grant.
- Activities involving political advocacy or lobbying are not eligible.

Individuals named as Project Director or Key Personnel in an application must adhere to the following:

- An individual may be named as Project Director in only one application.
- An individual, including a Project Director, may be named as Key Personnel in any number of other applications.
- If an individual appears on multiple proposals, a clear description should be included to explain how the proposed work is complementary, not duplicate, of other proposed efforts and how the participant will budget his or her time.
- Should an individual appear on two or more proposals as Project Director, all proposals listing an individual as Project Director will be disqualified and eliminated from the review process. It is the responsibility of the Project Directors to confirm that each member of the entire team is within the eligibility guidelines.

# CONTEXT, APPROACH, FOCUS AREAS, AND PROJECT GUIDELINES

#### Context

Changes in relative sea level (RSL)—the height of the sea surface relative to the land—are projected to play a major role in shaping the future of ecosystems and communities along the Gulf of America. These changes are driven by a combination of global factors, such as melting land ice and ocean expansion, and regional influences like land subsidence and ocean dynamics. Given the Gulf's low elevation and complex coastal processes, more reliable and regionally nuanced projections of RSL are essential to support effective natural resource management, restoration planning, and community resilience efforts. A critical gap remains in our ability to track and understand both the variability and long-term changes in Gulf sea levels across time and space, particularly at the finer spatial scales needed for decision-making (NASEM, 2018).

The factors contributing to changes in sea level along the Gulf Coast include changes in the volume of the global ocean due to the expansion of warming waters and the

melting of glaciers and ice sheets; changes in the earth's gravitation, rotation, and deformation (GRD) caused by redistributions of land ice and water; changes in vertical land motion due to tectonics, subsurface extractions, soil compaction, and the redistribution of mass around the world; and the dynamics of atmospheric and oceanic processes within the Gulf region such as the Loop Current System (NASEM, 2018). The recent NOAA report, Global and Regional Sea Level Rise Scenarios for the United States (Sweet, et al., 2022), projected that sea levels along U.S. coastlines will rise by 10 to 12 inches on average by 2050, equivalent to the total rise observed over the past century. Such accelerated rise will lead to increased coastal flooding, more frequent high-tide flooding, and greater impacts from storms, even in the absence of hurricanes or major weather events.

Future Gulf sea levels depend primarily on the pace of continued global warming, which in turn is dependent on greenhouse gas concentrations and emissions. Thus, studies on the prediction and variability of future Gulf sea level should incorporate projections of various warming scenarios in line with international and national scientific convention. The Shared Socioeconomic Pathways (SSPs), represent the current international standard for emissions and socioeconomic scenarios (Riahi, et al., 2017). Applicants are encouraged to use SSPs for consistency and comparability, unless a clear rationale for alternative scenarios is provided.

The intent of the Gulf Research Program's Gulf Sea Level Variation and Rise Grants is to improve the accuracy and usefulness of relative sea level rise forecasts and projections for the Gulf of America. The program will advance scientific understanding of the many components that influence relative sea level change across the region and integrate that knowledge into practical, decision-relevant products. These products may include probabilistic and emissions-dependent sea level projections, forecasting tools for short-and long-term variability, visualizations, decision support systems, or other resources tailored to the needs of end-users such as federal agencies, state and local planners, community leaders, and resource managers. Grantees of this program will also be expected to engage with other GRP sea level rise efforts.

# **Focus Areas**

With this RFA, the GRP invites applications for research that

- Significantly advance understanding of the regional components of sea level variation and rise, and then
- Incorporate this understanding into more reliable forecast models and century-scale projections of relative sea level rise along with available other data.

To this end, project teams **must significantly address and advance understanding** of one or more of the following focus areas:

- The Gulf regional sea level change associated with vertical land motion, including a range of human consumption and use scenarios for extracted materials (i.e., oil and gas, water, etc.).
- The Gulf regional sea level change associated with steric variability and ocean dynamics, including the changes in the Atlantic Meridional Overturning Circulation.
- The Gulf regional sea level change associated with inter- and intra-annual meteorological phenomena, exclusive of tropical storm surges.
- The Gulf regional signature of sea level on short and long timescales caused by global redistributions of land ice and water.

# Approach

Research teams must develop emissions-dependent probabilistic projections, comparable projections, forecasting tools, or other information products useful for planning or implementing hazard mitigation or preparedness, environmental management, or other decision-making purposes. These products must include:

- **Probabilistic and comparable projections** of Gulf sea-level rise around the entire Gulf Coast for the greenhouse gas emissions pathways standard to the field (SSP, RCP), at least 100 years into the future, that take into account GRD changes, vertical land motion, steric variability, and ocean dynamics.
- **Forecast tools** to estimate the likelihood, duration, and amount of inter- and intra-annual variation in sea level over time, excluding tropical storm surges.

Importantly, it is expected that these models, projections, and information products be useful for end-users. Applicants are also encouraged to collaborate with decision-makers across levels, natural-resource managers, planners, and other federal, state, and local entities.

#### Related Information:

- The probabilistic projections should take into account those being developed by NOAA and NASA for national planning efforts.
- Probabilistic projections should be completed for a minimum of four of the Shared Socioeconomic Pathways (SSP) scenarios and based on climate models coordinated by the Coupled Model Intercomparison Project (CMIP6).
   If a different set of scenarios is preferred, please include rationale for use.

• The comparable projections of vertical land motion should take into account those used in NOAA's projections based on tide-gauge data.

# **Project Guidelines**

To be considered competitive for this RFA, applications must:

- Clearly describe how the proposed project will advance understanding of factors affecting the regional components of sea level variation and rise in the Gulf Basin.
- Clearly specify which focus area(s) the proposed project addresses and how the team plans to approach significantly advancing understanding of that focus area(s).
- Clearly describe the project team's approach to incorporating their focus area research with available data of other contributing factors to regional sea level change to develop forecasting tools, emissions-dependent and comparable projections, and other information products.
- Clearly articulate how the project results and/or outputs will be useful to
  intended end-users either now or in the future to advance related decisionmaking or management actions in the promotion of preparedness and
  resilience for sea level rise and related hazards.
- Clearly describe how the proposed work will contribute to the efforts of federal agencies, state and local governments, community planners, and/or resource managers.
- Include key personnel affiliated with research institutions in the U.S. Gulf region.

## Other Relevant Information

- It is expected that research teams will produce data and information projects that address short-term (e.g., years to decades) and long-term (e.g., decades to century) relative sea level rise estimates.
- It is expected that research teams consider and communicate relevant uncertainties.
- Storm surge modeling is beyond the scope of this RFA and will not be considered for funding.
- If proposals intend to focus on generating projections for vertical land motion and subsidence, then they should include scientifically appropriate usage scenarios for subsurface extraction.

- The GRP reserves the right to reject without review proposals that are not relevant to this funding opportunity, that is, projects that do not clearly address one or more focus areas or the required approaches.
- The GRP aims to fund several applicants whose projects are complementary to each other to accomplish the goals of the Gulf Sea Level Variation and Rise Grants; thus, the GRP reserves the right to significantly negotiate project scope during contract negotiations to assure this complementarity.

# APPLICATION MATERIALS AND PROCEDURES

Applications for this funding opportunity have two stages with different required components: 1) a Notice of Intent (NOI) and 2) a Full Proposal. Project directors are advised to review the application preparation and submission instructions carefully and submit any questions to gulfgrants@nas.edu well in advance of the submission deadlines. Although the GRP strives to respond to applicants' questions within two business days, the response time depends on the volume of questions received and the complexity of the question asked. The GRP does not guarantee that applicants' questions will be answered before submission deadlines. Applicants are advised to submit applications well in advance of the submission deadlines as a precaution against unanticipated delays.

Please be advised that the GRP expects applicants to have reviewed the Grant Agreement (see "Grant Terms and Conditions") prior to applying to ensure that the applicant is aware of the applicable terms under which the grant is offered. It is the policy of NASEM to entertain potential modifications to the Grant Agreement only under exceptional circumstances. Rather, successful applicants are strongly encouraged to sign the Grant Agreement as presented.

# **NOTICE OF INTENT**

A Notice of Intent (NOI) is required for this funding opportunity and must be submitted via the online application system by June 6, 2025, at 5:00 p.m. ET. NOIs submitted by other means (including mail, fax, or e-mail) will not be considered. The NOI application materials must be submitted in English; other languages will not be considered.

The purpose of submitting a Notice of Intent is to inform GRP of the number of applicants and to assist with the recruitment of peer reviewers. Notices of Intent will not be used for the assessment of relevance or scientific merit and specific feedback will not be given. The Applicant may update and revise project information and Key Personal in the Full Proposal, except for the Applicant.

The NOI must include the following elements:

- 1. Contact Information
  - Applicant (Applying Organization)
  - Project Director (including ORCID)
  - Key Personnel
  - Involvement of Project director or Key Personnel in other applications
  - Authorized Organizational Representative (AOR)
  - Grant Administrator (if different from AOR)
  - Optional Information:
    - Suggestions for reviewers: The suggestions may be considered for the peer review of Full Proposals, but the selection of reviewers is the responsibility of the GRP.
    - How did you hear about this funding opportunity?
    - Demographic information
- 2. Eligibility Information
- 3. Project Information:
  - Project Title (maximum 15 words)
  - Project Acronym (if applicable)
  - Project Key Words (maximum 5 key words)
  - Project Summary (up to 1,000 words) including:
    - Basic project background/context
    - General project plan and main goals/objectives
    - Anticipated outputs and outcomes

# FULL PROPOSAL

Proposals must be submitted via the <u>online application system</u> by **July 18**, **2025**, **at 5:00 p.m. ET**. Proposals submitted by other means (including mail, fax, or e-mail) will not be considered. Proposal application materials submitted in any language other than English will not be considered. The online form for submission of a full proposal will be available on June 9, 2025, to applicants who have submitted an NOI. Conformance of proposals to instructions provided is required and will be strictly enforced. The GRP may reject, without review, any applications with required attachments that are missing requested information or that are not consistent with the instructions outlined. The GRP may also reject inclusion of any optional attachments in the review process if the attachments are not consistent with the instructions outlined.

The information provided in the NOI is non-binding. At the full proposal stage, you have the opportunity to change or update project information. You may not change the applicant (i.e., applying organization).

The Full Proposal must include the following elements:

#### 1. Project Personnel:

- Project Director
- ORCID (Open Research and Contributor ID)
- Key Personnel
- Involvement of Project Director or Key Personnel in other applications

# 2. Project Details:

- Project Title (maximum 15 words). The title should clearly represent the project
  and help articulate the importance and goals of the project to a nontechnical reader. Titles serve as the primary reference for projects. The titles of
  awarded projects will be announced publicly and should not sacrifice clarity
  for novelty.
- Project Acronym (if available)
- Project Key Words (maximum 5 words).
- Project Summary (maximum 300 words). The project summary should be an
  overview of the proposed project written in the third person, informative to
  other persons working in the same or related fields, and, to the extent
  possible, understandable to a scientifically or technically literate lay reader. It
  should include:
  - o The problem, context, and what the project aims to achieve;
  - o The general approach to address the problem;
  - How the project results and/or outputs will advance understanding of the regional components of sea level variation and rise; and
  - How the project team will incorporate this understanding into other forecast models and century-scale projections of relative sea level rise germane to specific end-users.
- Project Description (maximum 5,000 words). Provide a clear statement of the work to be undertaken and a plan for implementation. It should address the following:
  - The Problem/Background: The context for the research question, issue, and/or gap to be addressed and the current state of knowledge on the issue.
  - Goal and Objectives: The overall goal of the project and its specific SMART (Specific, Measurable, Achievable, Relevant, Time-oriented) objectives.
  - Project approach, methodology, and implementation: Details about the proposed activities to be undertaken and methods, tools, and analyses

- that will be employed to carry out the project, along with an explanation of how these are appropriate for accomplishing the specific aims of the project.
- A clear description/plan for implementation that demonstrates the feasibility of the activities to be undertaken, including explanations of the feasibility of access to specific data sets, people, or settings required to successfully implement the project and the mechanism to assess success.
- Anticipated Outputs and Outcomes, including details of projections, forecasting tools, and other information products as well as their benefit to specific end-users.
- o **A description of each Key Personnel's role**, including the Project Director.
- Outputs and End-Users (maximum 500 words). Describe how the research
  addresses end-user needs and how end-users will use the outputs of the
  project.
- References Cited
- **Timeline**. A timeline, as a Gantt chart, showing key project activities or events, including tasks, milestones, outputs, or deliverables is required. The timeline will be used by reviewers to assess project feasibility. For funded projects, the timeline allows Project Directors to track progress and allows GRP staff to monitor the project schedule. Project activities or events listed in the timeline should serve as unambiguous indicators and measures of progress. The timeline should include sufficient key activities or events so that the portrayed, overall progress of the project can be reasonably tracked over distinct time periods. The timeline Gantt charts should be uploaded as a PDF as a separate document.
- Facilities, Equipment, and Other Resources (maximum 500 words). This section of the proposal will be used to assess the adequacy of the resources available to perform the proposed project. Include an aggregated description of the internal and external resources (both physical and personnel) that the organization and its collaborators will provide to the project, should it be funded. The description should be narrative in nature and must not include any quantifiable financial information. Although these resources are not considered cost sharing, the GRP expects that the resources identified in the Facilities, Equipment, and Other Resources section will be provided, or made available, should the proposal be funded. In particular, please discuss the computational and storage needs of the project and the plan for managing these resources, including potential uncertainties.
- Data Management Plan (maximum 1,500 words). Describe how project data will be collected, managed, stored, protected, and made accessible

throughout the lifetime of the project. Certain exceptions apply for evaluation data and projects whose main goal is education. Please refer to the <u>GRP's Data Management Policy</u> for explicit instructions on developing the project's Data Management Plan.

Research Involving Human Subjects (if applicable)

## 3. Project Budget:

- Total budget requested
- **Budget justification** (maximum 2,000 words) View a sample budget justification.
- Budget Form. Download and complete this form through the online application portal to provide information on the proposed budget. Budget requests should be developed commensurate with the support needed to achieve the project goals.
- **Sub-award to FFRDCs or UARCs** (if applicable) The FFRDC(s) and/or UARC(s) named as sub-awardees in the Full Proposal must have the authority to obtain funding for work outside of the relevant federal sponsor contract and not be proposing to do work that it is otherwise doing under the federal sponsor contact.
- 4. Resumes: A resume is required for the Project Director and every individual identified as Key Personnel. Resumes may not exceed two pages per person. All resumes should be combined into a single PDF document before uploading as a separate document. Resumes for Individuals not named as a Project Director or Key Personnel in the "Project Personnel" section should not be included. It is the responsibility of the Project Director to ensure that the Key Personnel listed in the "Project Personnel" section are correct and match the resumes submitted.
- 5. <u>Current and Pending Support Form</u>: Complete this form to provide information on support from projects or activities currently underway and pending support for future projects or activities of the Project Director and all Key Personnel named in the "Project Personnel" section. All current or pending support from whatever source (e.g., federal, state, local or foreign government agencies, public or private foundations, industrial or other commercial organizations) must be listed for every member of the project team. The project proposed in this application and all other projects or activities requiring a portion of time of the Project Director or Key Personnel must be included, even if an individual receives no salary support from the projects or activities. If an individual does not have any other current or pending support or is unable to document that information for whatever reason, this must be indicated within the section of the form for that individual. The total award amount for the entire award period covered (including indirect costs) must be shown as well as the number of person-months per

year to be devoted to the project, regardless of source of support. It is the responsibility of the Project Director to ensure that the Key Personnel listed in the "Project Personnel" section are correct and match those listed in the Current and Pending Support Form.

6. <u>Collaborators and Other Affiliations Form</u>: The purpose of this form is to help us eliminate potential conflicts of interest during our reviewer recruitment. Complete this form to provide information on the following for the Project Director and all Key Personnel named in the "Project Personnel" section:

- All persons (including their current organizational affiliations) who are
  currently or who have been collaborators (i.e. an individual with whom
  you work closely to co-design or conduct a project) or co-authors with the
  individual on a project, book, article, report, abstract, or paper during the
  48 months preceding the submission of the application.
- The individual's own graduate and postdoctoral advisor(s) and their current organizational affiliations.
- All persons (including their current organizational affiliations) with whom the individual has had an association as a graduate or postdoctoral advisor.
- If an individual does not have any collaborators or other affiliations pertaining to the above situations, that must be indicated within the section of the form for that individual. It is the responsibility of the Project Director to ensure that the Key Personnel listed in the "Project Personnel" section are correct and match those listed in the Collaborators and Other Affiliations Form.

#### 7. Optional attachments:

**Equations and visual elements**: The text box for the "Project Description" does not support equations or visual elements (e.g., figures, tables, images, maps). Applicants may upload a single PDF document with 1) a one-page list of equations and 2) up to five visual elements, each on one page, to support the information included in the project description. Visual elements must be labeled sequentially (e.g., Figure 1, Table 1). The total number of pages of visual elements in the PDF may not exceed five pages. Only equations and visual elements can be included in this attachment and only information that is directly relevant to the equations or visual elements included (e.g., figure legends) is acceptable. Attempts to use this attachment to provide any information beyond this stated purpose may result in removal of the attachment from the review process.

**Letters of commitment**: Applicants may upload a PDF with letters of commitment from collaborators or organizations/individuals anticipated to inform or participate in the project in a substantial way. Each letter of commitment should be brief and no longer

than one page. Letters of commitment must not include itemized budgets or other information that is required in other sections of the application. All letters of support should be combined into a single PDF before uploading as an attachment.

# APPLICATION SUBMISSION

Applicants can apply for this funding opportunity via the <u>online application system</u>. Applications submitted by other means (e.g., mail, fax, or email) will not be considered. Application materials must be submitted in English.

Project directors should review the application preparation and submission instructions and submit any questions to <a href="mailto:gulfgrants@nas.edu">gulfgrants@nas.edu</a> prior to the submission deadlines. The Gulf Research Program strives to respond to applicants' questions within two business days but cannot guarantee that applicants' questions will be answered before submission deadlines.

# PROPOSAL REVIEW AND SELECTION

All complete applications will be provided to external reviewers who will constitute a review panel for evaluation that is based on the Merit Review Criteria. The review panel will discuss the merit of each application and score the applications. The GRP will make reasonable efforts to develop a review panel in which external reviewers are not affiliated with institutions that submitted applications. Any external reviewer with any conflict(s) of interest will be recused from reviewing or participating in any discussion of any application(s) with which s/he has a conflict of interest. Program staff will examine the applications and prepare a grant-funding plan taking into consideration the review panel's ranking of the applications, summaries from the panel discussion, the program's funding availability, and the program's portfolio, objectives, and goals. The final decision for funding of projects will be made by the National Academies of Sciences, Engineering, and Medicine.

All complete applications will be reviewed by an external review panel and evaluated using the <u>Merit Review Criteria</u>.

# MERIT REVIEW CRITERIA

Applications will be evaluated using three broad review criteria. The points associated with each criterion provide guidance for proposers and peer reviewers on priority areas for this RFA; the points are illustrative and not intended to be all encompassing.

Reviewers may raise additional issues that are not covered by the bullets under each criterion.

## Relevance (40%)

- Does the proposal appropriately and clearly address at least one focus area?
- How effectively might the proposed project contribute advancing understanding of the factors affecting the regional components of sea level rise in the Gulf Basin?
- Does the proposal clearly articulate an effective and appropriate approach to developing forecasting tools, emissions-dependent and comparable projections, and other information products?
  - Does this approach include projections for multiple SSPs? If not using SSPs, is there acceptable reasoning presented for using a different set of scenarios? Multiple emissions scenarios must still be modeled.
  - Does this approach include forecasts of inter- and intra-annual variation of sea-level in the Gulf?
- Does the proposal articulate how the work of the project team will contribute to the efforts of federal agencies, state or local governments, community planners, and/or resource managers.
- Does the proposal clearly address how the proposed project results and/or outputs will be useful to intended end-users either now or in the future for planning or implementing hazard prepared- ness, environmental management, or other decision-making purposes?
- Does the project team include key personnel from research institutions in the U.S. Gulf region?

## Technical and Scientific Merit (40%)

- Is there evidence that the proposed project team understands the current state of knowledge of the issue(s) to be addressed?
- Does the proposed project demonstrate a scientifically and/or technically valid and appropriate overall approach, strategy, methodology, and analyses to accomplish the specific aims of the project?
- Is the implementation plan of proposed activities well-reasoned, wellorganized, and based on a sound rationale?
- Is the timeline of the proposed work reasonable and feasible?
- Is the budget commensurate with the proposed work?
- Does the proposal include a data management plan that is appropriate for the scope of work and in line with GRP policy?

# Project Personnel and Organizational Support (20%)

- Relative to the stage of career, how well qualified are the Project Director and Key Personnel to conduct the proposed activities?
- Are the disciplines and perspectives represented by the personnel and institutions appropriate for the scope of the project?
- Does the application demonstrate that the project personnel would have adequate resources (for example, institutional support, equipment, and/or other physical resources) to conduct the proposed project?

# RESEARCH INVOLVING HUMAN SUBJECTS

All projects involving human subjects must be submitted to an institutional review board (IRB) for review and either receive IRB approval or be granted exemption from human subjects' regulations before an award can be made. Proposers should file their application with their local IRB at the same time the application is submitted to the GRP so that any approval procedure determined as necessary will not delay the award process. An application may be submitted to the GRP prior to receiving IRB approval or being granted exemption; however, if the application is selected for funding, the award will be made conditional upon IRB granting approval or exemption from human subjects' regulations within 60 days of the notice of conditional award. If a proposed project involving human subjects is granted exemption from human subjects' regulations [see 45 CFR 46.101(b)], the Applicant must provide documentation that an IRB (or the appropriate authority other than the Project Director or Key Personnel) has declared the project exempt from the human subjects regulations. Documentation should include the specific category justifying the exemption. Organizations without internal access to an IRB must seek approval or exemption from an independent review board or other appropriate authority.

# **DATA MANAGEMENT**

All applications must submit a Data Management Plan. Certain exceptions apply for evaluation data and projects whose main goal is education. Please refer to Section 2 of the GRP's <u>Data Management Policy</u> for the requirements regarding your application.

Most funded activities produce data. The Federal government defines data in Title 48 of the Code of Federal Regulations (CFR) Section 27.401 as "recorded information, regardless of form or the media on which it may be recorded." The Office of Management and Budget (OMB) further defines data in Memorandum M-13-13 on Open Data as "structured information" which is to be "contrasted with unstructured

information (commonly referred to as "content") such as press releases and fact sheets." Unstructured information is commonly referred to as information products.

The GRP currently maintains a contract with GRIIDC, a Gulf science data repository, to help manage and store data and information products produced by recipients of GRP funding. This contract supports the GRP's goal of making data Findable, Accessible, Interoperable, and Reusable (FAIR), and allows recipients of GRP funding to receive data management training, and to submit data and information products to GRIIDC at no additional cost.

Please refer to Section 3 of the GRP' <u>Data Management Policy</u> for specific instructions on how to format your plan.

The GRP's <u>Data Management Policy</u> and <u>Data Management web page</u> provide additional information on what must be included in the data management plan submitted as part of an application.

# MAKING THE AWARD

#### **Selection Notice**

Following completion of evaluation of all applications received, the Project Director identified on an ap-plication will be notified via email that (1) the application has been selected for funding pending content, contract, or other negotiations, or (2) the application has not been selected. For selected applications, the GRP reserves the right to request additional or clarifying information for any reason deemed necessary, including, but not limited to, indirect cost information or other budget information. GRP also reserves the right to negotiate project scope. Awardees are free to accept or reject the grant agreement as offered.

## Award Notice

The GRP transmits award notices to organizations via e-mail. The award is not finalized and the National Academies of Sciences, Engineering, and Medicine is not obligated to provide any funding until a signed copy of the award agreement has been received by the Academies.

#### **Grant Periods**

Upon receipt of the award notice, the awardee should note the effective date and the expiration date. The effective date is the date specified in the grant notice on or after which expenditures may be charged to the grant. Charging expenditures to the grant prior to the effective date is prohibited. The expiration date is the date specified in the grant notice after which expenditures may not be charged against the grant except to satisfy obligations to pay allowable project costs committed on or before that date. Once an award is made, the effective date cannot be changed. The expiration date

may be changed as a result of approval of a request for a no-cost extension. If approved, the GRP will issue an amendment to the grant.

If additional time beyond the performance period and the established expiration date is required to assure adequate completion of the original scope of work with the funds already made available, the awardee may apply for a one-time, no-cost extension of up to six months. A formal request must be submitted to the GRP at least 45 days prior to the expiration date of the grant. The request must explain the need for the extension and include an estimate of the unobligated funds remaining and a plan for their use. This one-time extension will not be approved solely for the purpose of using the unliquidated balances.

# POST-AWARD MANAGEMENT

# **Reporting Requirements**

After an award is conferred, the awardee shall provide an annual financial report to the GRP to report on expenditures to date under the award. The awardee shall provide an annual written report to the GRP to report on activities being carried out under the award, including but not limited to project accomplishments to date and expenditures. No later than sixty (60) days after the expiration of the award, the awardee shall provide in writing a final report that addresses the original objectives of the project as identified in the application, describe any changes in objectives that were approved by the GRP, describe the final project accomplishments, and include a final project accounting of all award funds.

#### Collaboration

Applicants are expected to engage with the GRP, federal, state, or community endusers, and other Gulf Sea Level Variation and Rise grantees. This will minimally include working with the GRP Program Officer(s) and other staff, participation in at least one inperson meeting annually as well as other teleconferences. The travel expenses for the annual meeting will be reimbursed by the GRP. Project Directors must actively participate in cross-project collaboration and collaboration initiated by the GRP with federal, state, and community end-users. Further, Project Directors and/or other Key Personnel will be expected to participate with other GRP funded programming related to sea level variation and rise in the Gulf, including but not limited to a community adaptive planning program being developed concurrently with this research program. The GRP will be substantially involved by coordinating partners and teams to

accomplish the work. Failure to participate in collaborative activities may result in withheld payments.

# Data Management

Implementation of a data management plan will be monitored through the annual and final report process, as well as through regular communication with GRIIDC. All awardees must set up an account with GRIIDC within 3 months of the project start date and will be monitored regarding their submission of Dataset Information Forms and final datasets.

Specific timelines can be found in the GRP's <u>Data Management Policy</u>.

# **SCIENTIFIC INTEGRITY**

A fundamental purpose of the GRP is to facilitate the advancement of knowledge and the application of the science to address challenges relevant to the Program's mission. All activities of the GRP will be conducted to meet the highest standards of scientific integrity. All grantees have a responsibility to use the funds as specified in the application to advance the project goals and objectives. To continue the emphasis on scientific integrity throughout the award period, the GRP will ask all researchers, trainees, and fellows to comply with professional standards as defined by the NASEM report On Being A Scientist: A Guide to Responsible Conduct in Research.

# GRANT AGREEMENT TERMS AND CONDITIONS

The GRP expects Applicants to review the Grant Agreement prior to submitting an application to ensure that the Applicant is aware of the applicable terms under which the grant is offered. It is the policy of National Academies of Sciences, Engineering, and Medicine to entertain potential modifications to the Grant Agreement only under the most exceptional circumstances. Rather, successful Applicants are strongly encouraged to sign the Grant Agreement as presented.

- View a sample grant agreement if the applicant is a public institution.
- View a sample agreement if the applicant is a private institution.

# ABOUT THE GULF RESEARCH PROGRAM

<u>The National Academies</u>' Gulf Research Program (GRP) is an independent, science-based program founded in 2013 as part of legal settlements with the companies involved in the 2010 Deepwater Horizon disaster. The GRP's mission is to develop, translate, and apply science to enhance the safety of offshore energy, the

environment, and the wellbeing of the people of the Gulf region for generations to come. It supports innovative science, guides data design and monitoring, and builds and sustains networks to generate long-term benefits for the Gulf region and the nation.

# **RFA CITATIONS**

National Academies of Sciences, Engineering, and Medicine, Understanding the Long-Term Evolution of the Coupled Natural-Human Coastal System: The Future of the U.S. Gulf Coast (Washington, DC: The National Academies Press, 2018), https://doi.org/10.17226/25108.

Sweet, William V., Greg Dusek, Vernon R. Leatherman, et al. *Global and Regional Sea Level Rise Scenarios for the United States: NOAA Technical Report NOS CO-OPS 083.*Silver Spring, MD: National Oceanic and Atmospheric Administration, 2022.
<a href="https://oceanservice.noaa.gov/hazards/sealevelrise/sealevelrise-tech-report.html">https://oceanservice.noaa.gov/hazards/sealevelrise/sealevelrise-tech-report.html</a>.

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