PROJECT INFORMATION

Project Director's Name*	Carlos Martin
Organization*	Urban Institute
Project Title*	Housing Resilience in Greater New Orleans
Reporting Period*	Final

Note to Grantees: In sections 1 to 5, we ask you to highlight your accomplishments (including outputs and outcomes) through this grant award. These sections of the final grant report will be made available to the public.

1. GOALS AND ACCOMPLISHMENTS

1.1 Please restate the goals and objectives of your project.*

The project's overarching goals at the proposal submission remain the same through to the project's completion, and we believe these goals have been successfully met. They include: 1) contributing to the research on resilience through five activities associated with housing disaster mitigation activities and climate adaptation (insurance, disclosure, property-level physical intervention, risk awareness, and community planning engagement); and 2) building the research capacity and topical program coverage of our local partners through hands-on data collection involvement as well as directing products (such as training materials) that translate the research findings for public dissemination by the partners.

1.2 Describe the accomplishments of your project. You should include both the anticipated accomplishments that you outlined in your project proposal as well as any *unanticipated* accomplishments that have since occurred. Describe any activities you have conducted, programmatic progress made, or project benchmarks and milestones met.*

We categorize the project's accomplishments following the two goals.

First, with regard to the research contribution goals, past progress reports have noted the successful fielding of a pioneering survey of homeowners' insurance, risk, and mitigation activities along with several other qualitative data collection efforts. The findings from this work have been shared at academic conferences, in scholarly blog posts, via the NAS GRP grantee webinar, and this fall will be synthesized into one major report to be published by the Urban Institute this fall (September 2021). The findings will describe the ongoing discrepancies between exposures and actions among Greater New Orleans residents--and the need for policy reforms, programming funding, and capacity building to reduce these disparities.

The second goal related to research capacity among our nonprofit partners has also been accomplished, as all of the original partners as well as two additional ones that were brought into the work, were involved in the data collection efforts for each of the project's studies--including the most qualitative studies that relied on the partners to recruit respondents for interviews and focus groups, and attend (and in several cases, translate) during the data collection. The largest partner, the Louisiana Fair Housing Action Center, was featured in the NAS GRP's research grantee videos last year.

All benchmarks and milestones have been or will be shortly met for both goals, despite the apparent delays brought on by early human subjects reviews and the COVID-19 pandemic.

2. Outputs

Before the form is completed, you may click "Save & Continue Editing" at the bottom of the page at any time to save your work or "Next" to move onto the next page of this form.

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2. OUTPUTS

Outputs are tangible or measurable deliverables, products, data, or publications produced during the project period.

2.1. Please indicate the number of students (K-12, undergraduate, or graduate), postdoctoral scholars, citizen scientists, or other trainees involved in the project. *

Please enter 0 if none were involved.

K-12 students	0
Undergraduate students	8
Graduate students	6
Postdoctoral scholars	3
Citizen Scientists	5
Other Trainees	0

2.2. Has your project generated any data and/or information products? *

Generation of data includes transformations of existing data sets and generation of data from existing resources (e.g., maps and images). Information products include publications, models, software, code, curricula, and digital resources.

(Check all that apply.)

Responses Selected:

Data
Information Products

2.3. Briefly describe how you fulfilled the approved Data Management Plan and, if applicable, any changes from the approved plan. *

After the final report is complete and the data are assembled at an appropriate level of geographic granularity, the project data lead (designated officially this year per NAS GRP request) will upload the data to the designated public access site, to Urban's publicly accessible data catalogue, and be provided under secure transfer to the designated local data partner (the Data Center) for future use in the New Orleans region.

If your project has generated data, please download the Excel worksheet entitled GRP Data Management Reporting. Use the "Data Report" tab in the worksheet to create an inventory of data sets that you produced and to verify deposit in a curation facility. Upon completion, please upload the worksheet to your task list. If you need guidance on how to complete the Data Report, please e-mail gulfgrants@nas.edu. A member of GRP's data management staff will reach out to you.

If your project has produced publications, websites or data portals, GIS applications, models or simulations, software packages or digital tools, code, curricula, or other interactive media, please download the Excel worksheet entitled [GRP Information Management Reporting](). Use the "Information Products Report" tab in the worksheet to create an inventory of these products and to verify deposit in a curation facility. Upon completion, please upload the worksheet to your task list. If you need guidance on how to complete the Information Products Report, please e-mail [gulfgrants@nas.edu](). A member of GRP's data management staff will reach out to you.

2.4. Aside from data and information products, what other tangible or measurable deliverables or products (e.g., workshops, trainings, and outreach events) were produced during the project period? *

Upon completion of this form, you may upload supplemental material that represent the tangible or measurable deliverables or products to complement this narrative report.

Previous reports noted the ongoing blog post series through which the team was able to provide early analyses. In the final year, the team has also produced two conference papers: the UCLA 2020 Climate Adaptation Research Symposium held May 8; and the 2021 Nonprofit and Voluntary Sector Quarterly Special Climate Issue Summit held August 2. Further, this project was featured in the first episode of the NAS GRP Thriving Communities Webinar Series held July 20, 2021.

The final report currently in production will be the final immediate product, but derivate blog posts, journal articles, and conference papers will be produced through 2021 and into 2022. The final list will be sent to NAS GRP periodically.

3. Data Management

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3. DATA MANAGEMENT

In this section, please provide a response to each question to complement the **Data Report** in the GRP Data Reporting Excel worksheet.

3.1 If you listed multiple data sets in the data reporting table, please briefly describe how these data sets relate to one another. *

> There were four datasets noted in previous progress reporting: 1) property valuation/transaction data purchased from a secondary source; 2) flood risk data mapped manually from current FEMA reporting; 3) the data collected from the survey of post-Katrina homebuyers fielded in 2019-2020; 4) multiple qualitative datasets including interview and focus group transcripts. These four sets are relevant to all five of the project's studies.

3.2. Please provide a list of additional documentation to describe the data listed in the reporting table (e.g., code books, lab manuals, workflow procedures). Enter none if you did not produce any additional documentation to describe the data. *

> The research team continues to compile the final data dictionary from the survey response data, which will be released with data after the final report is published.

3.3. Beyond depositing data and metadata in a repository, what other activities have you undertaken or will undertake to ensure that others (e.g., researchers, decision makers, and the public) can easily discover project data? What other activities have you undertaken to ensure that others can access and re-use these data in the future? *

The team will also deliver the survey data to another local data provider, the Data Center, to make them accessible to community users in the Greater New Orleans area. T

3.4. Are any data products you produced sensitive, confidential, and/or proprietary? *

Yes

3.4a (yes). Were these sensitive, confidential, and/or proprietary data products described in the data management plan of the approved project plan? *

Yes

3.4b (yes). If your plans for managing restricted access to and re-use of confidential data have changed since the approval of the project plan, briefly describe the new plans and procedures.*

No change to previous reporting.

4. Information Products

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4. INFORMATION PRODUCTS

In this section, please provide a response to each question to complement the **Information Products Report** in the **GRP Information Products Management** Excel worksheet.

4.1. Please select the type(s) of information products that your project produced. *

Responses Selected:

1. Scholarly publications, reports or monographs, workshop summaries, or conference proceedings
3. Curricula for education and training

Scholarly publications, reports or monographs, workshop summaries, or conference proceedings *

Please provide a list of citations for project publication, reports and monographs, workshop summaries, and conference proceedings.

> The full list of expected scholarly products are not available at the time of mandatory project reporting as the final report is expected September 2021, followed by collateral scholarly submissions that will require at least a year for peer review before publication. This list will be provided to the NAS GRP leadership, however, as it grows.

Curricula for education and training, GIS applications, Models or simulations, Software packages or digital tools, or other interactive media, and Other *

If you produced any additional documentation to describe information products, please provide a list of this documentation (e.g., model or simulation documentation, software manuals, source code annotation).

> The training materials are not research-related, but community driven. The team produced organizing slides and handouts for its local partners to describe the significant of housing-level protections from future climate risks.

4.2. Beyond depositing information products in a repository, what other activities have you undertaken or will undertake to ensure that others (e.g., researchers, decision makers, and the public) can easily discover and access the listed information products? *

> Urban will publish the synthesis report in September 2021 on urban.org, where it will be archived permanently. Additions to Urban's website repository includes social media campaigns and media pitches, the results of which will be shared as part the post-grant product reporting to the NAS GRP.

4.3. Are any of the information products you produced confidential, proprietary, or subject to special license agreements? *

> No

5. Project Outcomes

Before the form is completed, you may click "Save & Continue Editing" at the bottom of the page at any time to save your work or "Next" to move onto the next page of this form.

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* denotes required fields

5. PROJECT OUTCOMES

Outcomes refer to the **impact(s), consequence(s), result(s), or effect(s)** that occur from carrying out the activities or outputs of the project. Outcomes may be environmental, behavioral, health-related, or programmatic. Example outcomes include, but are not limited to: increased learning, knowledge, skills, and motivation; policy changes; actions taken by a group as a result of information generated by your project.

5.1. Please describe the outcomes achieved during your project and how they were assessed. For this question, we are interested in learning about the immediate short-term outcomes that have already occurred during or as a result of your project. Do not include long-term outcomes you foresee your work contributing to beyond the end of the project. *

In relation to the two project goals, the team has received significant media and scholarly interest in the upcoming findings' release. Local partners have also benefited from this attention, but are benefitting directly from the training materials provided as part of their participation in the work.

5.2. We're interested in hearing not just the results of your project but what are their implications for or contributions to:

- **offshore energy system safety,**
- **environmental protection and stewardship, and/or**
- **health and community resilience**

Please describe what you consider to be the most remarkable accomplishment or finding of your project. What can others learn from your accomplishment and finding? How do you see it fitting in with your greater field of study or community of practice? *

Housing is a critical component of community resilience, but one that is typically overlooked because of the focus on larger environmental change and major infrastructure debates. Homes can serve as the frontline defense for individuals--provided they receive the investment they need equitably, in direct relation to their exposure, and with occupant learning.

6. Communication

Before the form is completed, you may click "Save & Continue Editing" at the bottom of the page at any time to save your work or "Next" to move onto the next page of this form.

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Note to Grantees: In Section 6, we seek input from you to help us evaluate the Gulf Research Program's funding strategy. <u>This section will not be made available to the public.</u>

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6. Information to Inform GRP Evaluations

6.1. Sharing the difficulties you encountered helps us learn from your experience. Describe any challenges you encountered in your project and how you addressed or overcame them. Challenges are inherent to conducting any complex project. These may include (but are not limited to): unexpected staffing changes, changes in the community you are working in, appearance of a new technology or dataset in the field you are working in, challenges accessing a field site, policy or regulatory changes that affect the issue you are addressing, low recruitment rates, delays in setting up services, or other problems in implementing and conducting your project. *

There were two major and unanticipated challenges that the project faced: the first was the difficulty in responsiveness to data collection requests from residents and institutions in the New Orleans area. Though much literature has pointed to this, operationalizing a response to mitigate that challenge required extensive investments in multi-mode survey fielding and significant accompanying human subjects protection reviews. The second main challenge in the work was the onset of the COVID-19 pandemic in the midst of major data collection efforts (both survey and qualitative fieldwork). While the multi-mode options were able to address the challenge to the survey, the qualitative interviews and focus groups had to be completely revamped given that in-person collection was no longer possible.

6.2. We like to hear about what you learned from your work and how you feel it affects future work or the work of others. Think back on your project strategies, methods, and activities, what worked and what did not? Is there anything you would do differently in the future? If so, tell us what and why. *

The massive resources required for the survey fielding could be a lesson to share with other researchers who need primary data from populations that have notably research fatigue--which is essentially the entire Gulf region. Researchers should explore all possible secondary sources (such as social media, public administrative data, and local business data) to get around this gap though, for the subject area and research questions in our research, we could not get around primary data collection.

6.3. What are the next steps for this work, either for you and your project team or other researchers? Has this project led to other opportunities to work in this area? *

This work has been enlightening for the whole team, and the importance of repeating this analysis in other places along the Gulf (and the US) which are experiencing different disaster histories and have very different housing inventories will be critical to define patterns. This is a primary research vision coming out of this project, though a variety of new questions related to the dynamic interplay of individual housing with community infrastructure, of an evolving policy framework, and of changing local demographics with regard to capacity for moving from exposed places (eg "climate migrants") are secondary questions that this project has exposed.

6.4. Have you developed new collaborations or partnerships (formal or informal) as a result of this work? If yes, please describe the new collaborations or partnerships. *

The local community groups were instrumental in collecting our data and providing many needed supports, but two of these were particularly new to the research team due to this project: Louisiana Language Access and Mary Queen of Vietnam. We anticipate ongoing work with these as well as our long-standing partners in the New Orleans region.

6.5. What, if any, positive changes in policy or practice do you foresee as a result of your work? *

Policy change has been a focus of this work since the research questions were formulated. We anticipate several policy discussions to evolve from it:

1) the reform of NFIP as the insurer of last resort for many Gulf households (to that end, the PI has been in contact with US Congressmembers regarding the lessons from the work);

2) the changing role of state property disclosure laws (the PI has been in touch with Pew Flood Prepared Communities and the American Flood Coalition to expand and improve disclosure laws through its State Flood Resilience Partnership);

3) improvements to mitigation funding and their equity (as evidence by the recent investments in FEMA BRIC)

4) changes to flood maps and their dissemination (per FEMA Rating System 2.0 reforms); and

5) the inclusion of local community organizers as intermediaries in community engagement and, eventually, public implementation projects.

6.6. If you could make one recommendation to the Gulf Research Program for how best to build on the work you conducted in this project, what would it be? *

Policy change is desperately needed in this space. Given its lobbying restrictions, the GRP may seek to develop a formal process to educate policymakers both in the legislative and executive branches with necessary evidence from all of the TC grantees. Compiling the lessons as well as the policy recommendations across the studies and then disseminating them appropriately could prove to be a valuable function for the GRP.

7. Communication and Dissemination

Before the form is completed, you may click "Save & Continue Editing" at the bottom of the page at any time to save your work or "Next" to move onto the next page of this form.

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Note to Grantees: In Section 7, we ask you to help us communicate the importance, progress, and accomplishments of your work. Information provided in this section will be used by the Gulf Research Program to highlight its funded projects in print and electronic informational and promotional materials. The intended audience for the information provided in this section is different and should be thought of as a general audience. When you return to the dashboard, you may upload images that represent and illustrate the work of your project.

7.1. Please describe the most exciting or surprising thing you have learned while working on this project in a way that is understandable by a general audience. *

Though reported in previous progress reports, the challenge of reaching households in the Greater New Orleans area continues to astound me. There is a reticence to share histories, behavioral information, and otherwise impersonal data that suggests an ongoing challenge for researchers in the area but will also present obstacles for local policymakers and community activists trying to improve civic engagement.

7.2. Do you have any stories that capture the impact of this project? (optional)

If so, please share one or two. Examples of what we are interested in include stories of people/communities that the project has helped; lives that have changed; work that led to policy change, such as legislation or regulation; and research breakthroughs.

(No response)

7.3. Have any communications, outreach, or dissemination activities occurred in relation to your project?*

Please describe:

- Any press releases issued (other than that issued by the National Academies of Sciences, Engineering, and Medicine) about the project.
- Any media coverage or news stories about the project.
- Any social media accounts, websites, listservs, or other communication vehicles used to communicate information about this project. Please include relevant web addresses if available.

Only the blog posts with preliminary analyses have been released. These were disclosed to the GRP in previous progress reports.