UNDERSTANDING PERSPECTIVES ON NONSTRUCTURAL STRATEGIES IN LOUISIANA'S SOUTHWEST COASTAL PROJECT

Executive Summary

FENSTERMAKER

RESTORE THE MISSISSIPPI RIVER DELTA

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WHAT IS THE SOUTHWEST COASTAL LOUISIANA PROJECT?

The Southwest Coastal Louisiana Storm Risk Management and Ecosystem Restoration Project (referred to as the SW Coastal project) is a project run by the U.S. Army Corps of Engineers (Corps) to reduce hurricane and storm damage risk in a 4,700 square mile area located in Calcasieu, Cameron, and Vermilion Parishes. Due to the low elevation, flat terrain, and proximity to the Gulf of Mexico in these Parishes, the people, economy, environment and cultural heritage are at risk of flooding from tidal surge and waves from tropical storms. Land subsidence, combined with sea-level rise, is expected to increase the potential for coastal flooding, shoreline erosion, saltwater intrusion, and loss of wetland and Chenier habitats in the future.[1] The Corps intends to combat both chronic and acute weather events by a series of measures including nonstructural measures and ecosystem restoration.

WHAT ARE NONSTRUCTURAL MEASURES?

Nonstructural measures, as described by the Corps, are permanent or contingent measures applied to a structure and/or its contents that prevent or provide resistance to damage from flooding. Nonstructural measures differ from structural measures in that they focus on reducing the consequences of flooding instead of focusing on reducing the probability of flooding.[2] The most common nonstructural practice is voluntary home elevations, which is the focus of this study.

The first home that was elevated as part of the SW Coastal Home elevation project

[1] U.S. Army Corps of Engineers. Southwest Coastal Louisiana Storm Risk Management and Ecosystem Restoration Project https://www.mvr.usace.army.mil/SWCoastal/

[2] USACE National Nonstructural Committee

Nonstructural practices are required to be considered in Corps flood risk management studies and in some cases, are more cost-effective than other measures the Corps analyzes for study areas.

Additionally, nonstructural practices are becoming a preferred measure for residents that want to stay in place. In most cases, nonstructural measures are voluntary and therefore require participation to be successful.

WHAT IS THE PURPOSE OF THIS RESEARCH?

While the Corps has implemented nonstructural projects before, the SW Coastal project is one of the largest, with approximately 3,900 structures eligible for nonstructural upgrades, specifically home elevation. Given the individualized nature of home ownership, nonstructural projects require a unique path to implementation—one that involves collaboration with a large cohort of private owners. Whether communities will embrace these opportunities is central to the success of the project. While the SW Coastal project comes at no cost to any eligible homeowner, with the exception of temporary relocation expenses during construction, thus far, enrollment in the project has been unfortunately low. Additionally, the success of the SW Coastal project is being observed nationwide, as other regions are interested in adopting similar efforts at this scale.

This research study aims to evaluate community perceptions and challenges to nonstructural opportunities as well as perceptions to this specific project. The study aims to elevate existing community engagement and offer recommendations for improved outreach and engagement to bolster the success of this project and future nonstructural projects across the U.S.

RESEARCH PROCESS

The study took a mixed-method approach designed to understand community attitudes towards nonstructural measures. Researchers conducted a literature review on nonstructural mitigation efforts, flooding, and state and federal responses to gather broader context of past projects in other communities.

Second, researchers conducted semi-structured interviews designed to 1) create rich data to be analyzed and 2) create rapport with individuals in the area that can lead to further collaboration. Interviews were divided into three efforts, listed below. The qualitative data was then collated and analyzed using inductive and deductive coding:

Photo from the first focus group meeting at the Calcasieu library

- Practitioners in all three parishes (Calcasieu, Cameron, and Vermilion): Interviewees in this category included local officials, community organizers, and representatives from relevant local organizations.

- Residents in Calcasieu and Vermilion Parishes: Four resident focus groups were conducted—two in Lake Charles and two in Erath.
- Residents in Cameron Parish: One-on-one interviews were conducted in Cameron Parish, given the home destruction from Hurricanes Laura and Delta and remote distribution of residents.

Discussion topics included: Participants' knowledge of and experience with the SW Coastal project (including how they were contacted and any concerns about the project), their experiences with other similar projects and their view of the future, and best methods for engagement personally and for their neighbors and community.

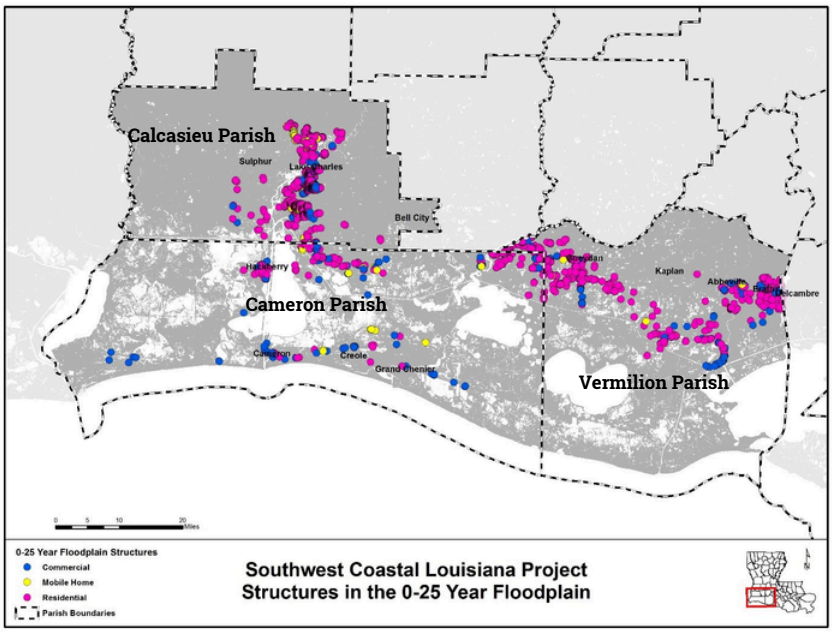
KEY FINDINGS: OUTREACH IS CENTRAL TO NONSTRUCTURAL SUCCESS

Nonstructural projects depend entirely on voluntary homeowner participation. That means outreach isn't optional; it's a core function. Success hinges on trust, transparency, and one-on-one engagement. Technical merit alone is not enough, especially in post-disaster areas where community bonds are strong, but trauma and skepticism are high. Outreach must be rooted in relationships and shaped by a deep understanding of the local context.

For residents, these projects are deeply personal. Elevating a home affects safety, finances, mobility, and daily life. Many residents are eager to reduce their flood risk but are overwhelmed or unclear on key details. They want answers to basic but critical questions: What will it cost? Am I eligible? How long will I be out of my home? Will this affect my insurance, mobility, or ability to stay in my community?

Community mindsets also vary significantly across geographies. In the SW Coastal project context:

- Calcasieu residents expressed greater skepticism towards the project and some dissatisfaction with past outreach.
- Vermilion residents showed strong community ties and more openness to elevation.
- Cameron residents voiced deep frustration and a sense of abandonment by government officials after repeated hurricane impacts.



Despite these differences, shared concerns emerged: lack of clarity on process and timeline, confusion between nonstructural and structural approaches, and feelings of being overlooked or uninformed.

COMMUNITY ENGAGEMENT RECOMMENDATIONS

Successful community engagement on nonstructural projects requires strategic planning, skilled staffing, and disciplined execution. Projects should seek to build trust and credibility with residents, ensuring voluntary measures are not only offered, but embraced. Consider these recommendations:

START WITH LOCAL KNOWLEDGE

Successful engagement begins with listening. Teams should work with local leaders and organizations to understand community history, demographics, and barriers to participation. Outreach strategies must be tailored because what resonates in one parish may not work in another.

COMMUNICATE CLEARLY AND CONSISTENTLY

Residents need accurate, timely, and easy-to-understand information. This includes eligibility criteria, out-of-pocket costs, insurance implications, construction timelines, and physical impacts of home elevation. Visuals like before-and-after images and videos help ground abstract concepts in real outcomes.

STAY PRESENT THROUGHOUT THE PROCESS

Outreach shouldn't stop once residents express interest. Dedicated points of contact should follow up regularly, answer questions, and maintain momentum. Feedback from those who decline should be collected to improve the process.

USE DIVERSE, TWO-WAY COMMUNICATION CHANNELS

Information should be shared through a mix of mailers, text messages, social media, local ads, and in-person outreach. Community members should also have space to ask questions, connect with peers, and share experiences.

BUILD TRUST WITH LOCAL PARTNERSHIPS

The most effective outreach is delivered through trusted messengers. Collaborate with churches, schools, housing agencies, local businesses, and nonprofits. When possible, hire local outreach leads who know the community's language, culture, and concerns.

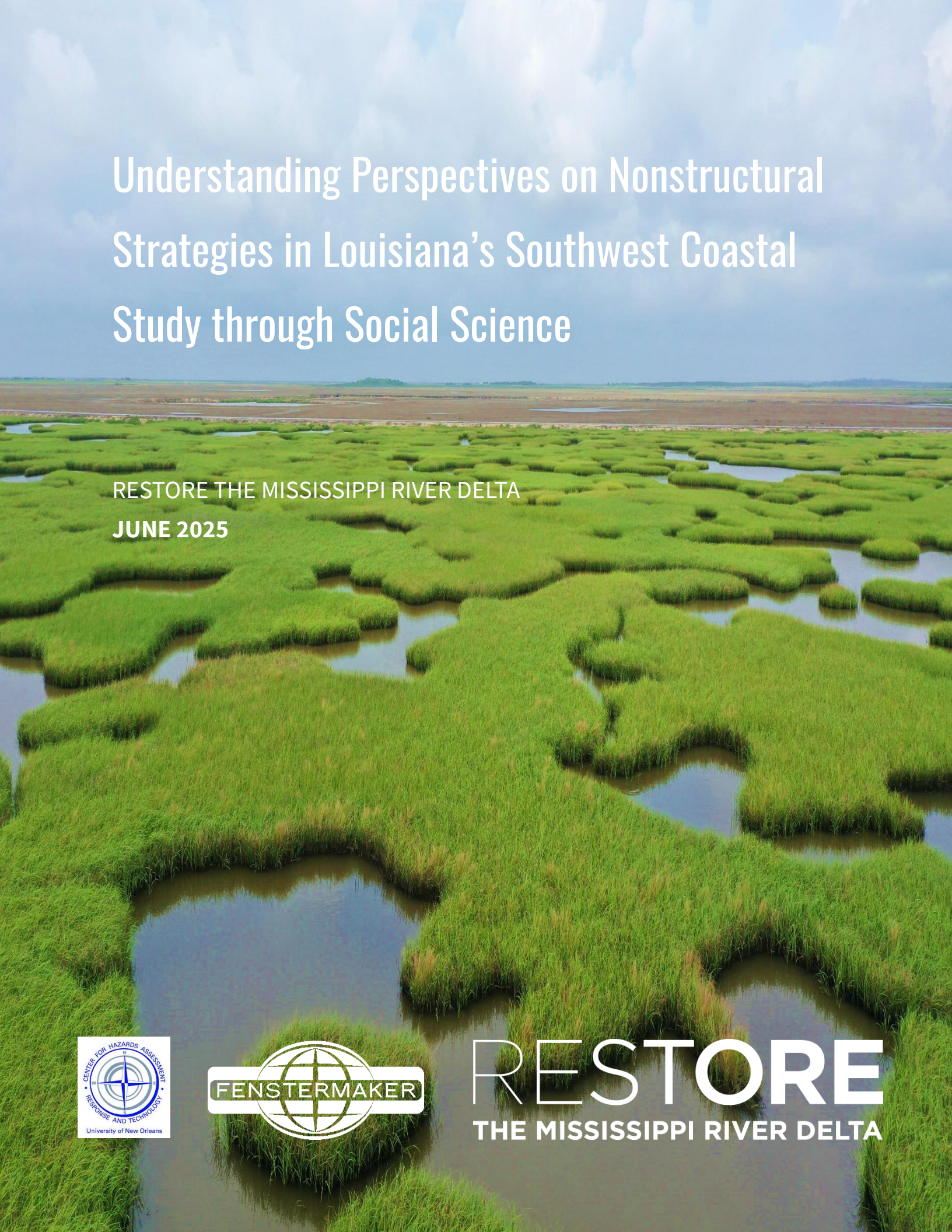
ENGAGE IN-PERSON WHEN POSSIBLE

Small group meetings, open houses, and local forums build understanding and trust. Using existing venues, like council meetings or civic associations, makes it easier for residents to engage. Events like a "Parade of Elevated Homes" can show tangible results and inspire participation.

Understanding Perspectives on Nonstructural Strategies in Louisiana's Southwest Coastal Study through Social Science

RESTORE THE MISSISSIPPI RIVER DELTA

JUNE 2025



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RESTORE
THE MISSISSIPPI RIVER DELTA

Community Perceptions of Place, Mitigation, and Innovative Programs

"The Only Place They've Known"

“It's seeing people living on this ridge in the afternoon, playing music underneath the tree and, eating the seafood that was caught that day, or working cattle and the beautiful pastures that once existed…enjoying the recreational opportunities on the weekend…stories that will hold forever, even if I'm not around, the stories my kids will tell, what they've been involved with, will go on forever because they'll reference that.”

Southwest Coastal Louisiana Storm Risk Management and Ecosystem Restoration Project

The Southwest Coastal Louisiana Storm Risk Management and Ecosystem Restoration Project will provide hurricane and storm damage risk reduction and coastal ecosystem restoration in 4,700 square mile area located in Calcasieu, Cameron, and Vermilion Parishes. Due to its low elevation, flat terrain, and proximity to the Gulf of Mexico, the people, economy, and unique environment and cultural heritage in this southwest Louisiana area are at risk of flooding from tidal surge and waves from tropical storms. Land subsidence, combined with sea-level rise, is expected to increase the potential for coastal flooding, shoreline erosion, saltwater intrusion, and loss of wetland and Chenier habitats in the future. https://www.mvr.usace.army.mil/SWCoastal/

The project above (referred to as SW Coastal) by the U.S. Army Corps of Engineers (Corps) intends to combat both chronic and acute weather events by a series of measures including structural and nonstructural measures, and ecosystem restoration. This report focuses on the nonstructural portion. "Nonstructural measures are permanent or contingent measures applied to a structure and/or its contents that prevent or provide resistance to damage from flooding. Nonstructural measures differ from structural measures in that they focus on reducing the consequences of flooding instead of focusing on reducing the probability of flooding" (USACE National Nonstructural Committee). Historically, the Corps has been at the forefront of structural mitigation efforts (e.g., levees, floodwalls, flood gates and evacuation routes). The Corps has implemented nonstructural projects before, however SW Coastal is the largest of the Corps' nonstructural projects to date, including approximately 3,900 structures preliminarily eligible for nonstructural measures in its final feasibility study report. Nonstructural is becoming a preferred measure for residents that want to stay in place, and in some cases, nonstructural measures are more cost-effective than other measures the Corps analyzes for study areas. This project led by the Corps is a unique program that extends nonstructural mitigation solutions, without cost to homeowners, to a wide group of homeowners across three Louisiana parishes. Whether communities will embrace this change is central to this research project.

The first home that was elevated as part of the SW Coastal Home elevation project

This study is grounded in a systematic and rigorous method for flood risk communication (Rollason, E., Bracken, L. J., Hardy, R. J., & Large, A. R. G. (2018). Skilton, L. et.al. (2022) call for broadening the outreach and engagement of communities about flood risk. Following this research, this project links the context of flood-risk communication to the broader concerns of individuals with a flood-reduction opportunity. At the center of this study is how to communicate with residents and practitioners about flood-risk strategies. **This project reflects the need to not just provide information to communities about flood risk and risk reduction opportunities, but to engage the community in the process.** This report reveals how authentic engagement can change how a community responds to innovative programs.

Introduction

In the wake of escalating coastal hazards, the need to comprehend community perspectives on nonstructural measures has never been more critical. Our approach is deeply rooted in an awareness of the evolving physical and socio-economic landscapes of Southwest Louisiana, reflecting a landscape shaped by both natural and human-induced influences. The research fosters an enriched understanding for nonstructural resilience planning within this complex backdrop. We recognize the unique economic, cultural, and environmental fabrics of Calcasieu, Cameron, and Vermilion Parishes – from Calcasieu Parish's balance between industrial growth and flood risk, Cameron Parish's vulnerability to hurricanes and sea-level rise, and Vermilion Parish's cultural and economic resilience in the face of environmental challenges. Combining the broader objectives of SW Coastal and individual experiences of community members across these parishes contributes meaningfully to the region's resilience narrative through the understanding and use of nonstructural measures. Through collaborative and comprehensive research efforts, this study presents insights into actionable strategies, thereby seeking to enhance the process by which residents are engaged to apply for nonstructural opportunities.

Scope of work

The following outlines how the project team approached the question: how communities in Southwest Louisiana perceive and/or act in response to state and federal nonstructural opportunities? Responding to opportunities for nonstructural measures is not as straightforward as it might seem, as it raises several questions for homeowners and community members. This report uncovers those questions for communities and links these issues to appropriate strategies.

Annotated Bibliography

Included in this report is a detailed bibliography that shows the range of literature about nonstructural mitigation efforts, flooding, and state and federal responses (See Appendix A). This literature, taken as a whole, graphically illustrates the difficulty of mitigation in this climate. It also points out the role that time plays in decision making and community response. Because weather events and their response are random, planning for safety is difficult. Much of the literature is technical in nature, referencing mitigation efforts in infrastructure and construction. However, SW Coastal focuses on how citizens (practitioners and residents) approach the problem. Bingham, Nabatchi & O'Leary (2005)

show the tools that may encourage citizens and government to form partnerships in their communities. Burby (2006) argues that local governments can make significant inroads into safety planning while working with the agencies of the federal government. The relationship between local, state, and federal government is one of the keys to a successful program.

Whether financial incentives or vulnerabilities motivate the community is one question that is highly debated in this area (Chatterjee, Flugman, Jiang, Mozumder, & Chowdhury (2019); Gall and Friedland (2020). Much of the literature focuses on insurance which remains a moving target for homeowners and an incentive for greater protection (Craig 2019). Habib, et.al. (2022) point out the necessity for engaging the communities with education over time, with workshops and tools that link scientific knowledge in a local context. Further, Lavigne, L., & Mitchell (2021) discuss what motivates an individual depends on what others are doing and the perception of mitigation measures themselves. Throughout the report, the issues discussed above emerge.

Design

The project team implemented a mixed-method approach specifically designed to understand community attitudes towards nonstructural measures, such as home elevation. Often community members noted perceived barriers or resistance to nonstructural measures in their own homes and communities. This approach allows the project team to better understand and document the barriers and incentives for support of nonstructural measures.

Each of these parishes is unique with their own specific histories, community members, and economic drivers. Given this diversity, the project team uses two methods that allow the discovery of the barriers to the adoption of nonstructural measures. These methods are qualitative and provide a deeper understanding of how community members view change and how they view efforts to mitigate flooding.

First, we conducted semi-structured qualitative interviews with practitioners in each parish. These interviews serve two purposes :1) it creates rich data that can be analyzed and 2) it creates rapport with individuals in the area that can lead to further collaboration. Use of this method provided insights and unique perspectives regarding communities' attitudes towards nonstructural resilience planning. We identified practitioners through contacts that members of the project team have in each location. We conducted nine interviews in three parishes. The practitioners included local officials, community organizers, and representatives from relevant local organizations.

The second method we used was conducting focus groups based on the analysis of the practitioners' interviews. Focus groups are one of the most efficient methods to elicit information from a wide variety of community members. We intended to conduct two focus groups per parish that included a wide variety of community members. Because so many homes in Cameron Parish were destroyed in Hurricanes Laura and Delta and the remaining population is spread out, we decided to interview individuals from Cameron remotely. We conducted two focus groups in Calcasieu and Vermilion Parishes over a two-day period (four focus groups in total). This two-step process—informant interviews and focus groups—provided us with insights into the language and knowledge of each community. The Calcasieu focus groups included nineteen participants, and the Vermillion focus groups had seventeen participants.

Photo from the first focus group meeting at the Calcasieu library

The interviews and the focus groups were recorded either in person or through Zoom, and then analyzed through Dedoose, a cloud-based web application that supports analysis of qualitative data. Using both deductive and inductive codes, the data provides a view of both the incentives and barriers to nonstructural mitigation strategies, specifically home elevation. Each sentence (data) was analyzed through the codes as the analysis below shows. Also, the interviews and focus groups document the best ways to improve outreach efforts.

The questions were divided into several areas. First, the questions covered the participants' knowledge and experience of SW Coastal. This included how they were contacted and,

more importantly, their concerns about the project. The second set of questions focused on their experiences with other projects and their view of the future. Finally, the questions covered how best to reach them and what they thought would work best for their neighbors and community.

This multifaceted approach guarantees comprehensive coverage and respects the preferences and lifestyles of community members, ensuring a wide range of perspectives. The insights obtained from these engagements could be instrumental in understanding and addressing both general awareness and specific concerns of the community.

The analysis can eventually be displayed in multiple formats such as slide decks (information that all levels can use), a written accessible document, and webinars. Finally, there is a set of recommendations provided that allow the development of wider outreach strategies. The recommendations reflect the literature review and the data plus feedback from the findings.

The Participants

After discussion with all the stakeholders in this research project, the Corps agreed to send out a letter inviting homeowners eligible for SW Coastal to participate in a focus group or interview. Some seventy people responded. Of those, we created a pool for both the Cameron interviews and four focus groups in Vermilion and Calcasieu. In each of the focus groups, a few individuals attended that were not specifically invited or somehow had not gotten a letter. In these tight knit communities, neighbors got their neighbors involved, showing how eager or anxious they were to get more information on the project. In all, three participants in all the focus groups had not received a letter or at least did not know if they had received a letter. Each focus group was scheduled for 90 minutes in length and all but one went over. The afternoon focus group on Vermilion went on for two and half hours, as individuals were excited to share their perspectives. Each resident who participated received a twenty-five-dollar gift card.

Findings

The tables below show the data in several different methods. The codes in bold and capitalized are referred to as a parent (or main) code, the child codes in bold and finally sub-codes in italics. The codes are sometimes in vivo code, which means it is a direct phrase from the interviews. The direct quotes used as in vivo codes can be found at the end of the document. Focus groups 1 and 2 are from Calcasieu Parish, focus groups 3 and 4 are

from Vermilion. Resident interviews are from Cameron Parish. The numbers represent how many times an idea was expressed in interviews or focus groups.

These tables represent the breadth and depth of the interviews and focus groups. There are 780 separate data points. In many ways, the tables are a road map of how to improve outreach and participation in this program and others like it. The data showed both the reluctance of those to participate and their great need for solutions to the chronic flooding and storms. The data shows the push/pull that residents encounter.

Table 1

Table 1 shows the range of codes that emerged from the data on the challenges of SW Coastal. This set of codes reflects what individuals (both practitioners and residents) thought about the possibility of success of SW Coastal.

This is the first place that the cost of insurance shows up and, in this case, it reflects the worry that the cost of insurance is one reason that people are not staying in place or investing in their homes. No matter what we asked in the interviews or focus groups, the price of insurance and the frustration that insurance rates seem insurmountable came up repeatedly (even though the program does not require flood insurance to participate). For every question, insurance remains one of the most significant issues for everyone along the coast. “Will doing this bring down my insurance?”

The in vivo code ‘Mr. Federal government’s is at the center of the challenges as perceived by all participants. The distrust of the federal government is a problem to be overcome. While SW Coastal and other federal/state programs are different, they are viewed in the same light and skepticism. The other issues in this table are all concerns and questions about the program. Several practitioners mentioned the need for structural responses in the area instead of elevating and floodproofing homes. The uncertainty and unease that we heard quite clearly is captured in the coding.

“My question is this now, being that the storms are going so heavy and so fast now and stronger, then my question is, if we agree to this project and storms come up and the waters are coming up and everything is there. What will happen if they reevaluate and say, no, this is not going to be enough. This is going to have to be raised higher.”

Table 1 **CHALLENGES TO SW COASTAL**	Practitioners (Cameron, Calcasieu, & Vermilion)	Cameron Parish	Calcasieu Parish		Vermilion Parish		Totals
		Resident Interviews	Focus Group 1	Focus Group 2	Focus Group 3	Focus Group 4	
	89	**45**	**29**	**24**	**14**	**14**	**215**
Cost of Insurance Both home and flood insurance rates increased significantly.	7	10	6	15	9	4	51
Mr. Federal Government- Distrust of federal programs People do not always trust government programs.	17	4	5	1	1	4	32
'Why not my street?' Residents do not understand why some properties or areas are chosen over others.	7	6	6	4	0	0	23
Houses and People are Gone. Parts of the parishes are no longer occupied	16	4	0	2	0	1	23
Ambiguity about 'It's a real deal.' Participants are not sure if the opportunity is valid.	4	4	0	1	1	2	12
Lack of Community Infrastructure There is not enough infrastructure in the community to support these projects – including drainage issues.	2	8	0	0	0	1	11
Access Issues (ADA) Fear about accessibility of elevated homes for elderly and handicapped.	4	0	1	1	3	1	10
Focus on Other Issues There are other issues to focus on – drainage, maintenance, and flood protection.	3	3	3	0	0	1	10
'Late in the game' There have been so many disasters and people have left; this project is too little, too late.	6	2	0	0	0	0	8
'This is my home, and I can live with it.' Residents want to stay the way they are. They believe they are resilient no matter what.	8	0	0	0	0	0	8
Website Issues Participants had trouble accessing or understanding the website.	0	3	4	0	0	0	7
Structural Mitigation Needed Residents and practitioners would like levees or other structural mitigation rather than elevations.	6	0	0	0	0	0	6
'I Can't Do it Anymore.' Some people have given up and want to move or sell their home. They have disaster fatigue.	4	0	0	0	0	0	4
Distrust of Local Government Lack of belief that the local government can help them.	0	0	3	0	0	0	3
Segregated Population Residents describe a divided community.	2	0	0	0	0	0	2
Title/Succession Issues Some homeowners do not have access to a copy of the title for their home.	1	0	1	0	0	0	2
Unconsolidated Government The lack of consolidation in government can cause process issues.	1	1	0	0	0	0	2
Second Homes Some of the homes in the project region are second homes rather than primary homes.	1	0	0	0	0	0	1

Table 2

The sub-code of 'questions about the process' is filled with areas for further investigation. Repeatedly, we heard comments about the selection process (methodology). The selection process needs to be clarified. The second most mentioned concern is the extra costs: how much will it cost me? What are these costs?' The rest of this table reflects concerns about the timeline and contractors. Other questions include: how long will I be displaced? How high will I go? What will it do to the neighborhood?' While the information may seem clear to many, these are questions that came up repeatedly. These questions are based on their lived experience in rebuilding after storms and the vulnerability they express about their homes and their way of life. The relationship between the lack of trust in the system and fear of the unknown makes decision-making difficult.

"We got burned a lot down here from contractors and roofers and everybody else that just either did shabby work or did no work at all and took the money."

Table 2 **QUESTIONS ABOUT PROCESS** Participants questioned the process and methodology of the project.	Practitioners (Cameron, Calcasieu, & Vermilion)	Cameron Parish	Calcasieu Parish		Vermilion Parish		Totals
		Resident Interviews	Focus Group 1	Focus Group 2	Focus Group 3	Focus Group 4	
	0	**32**	**57**	**37**	**38**	**44**	**208**
Methodology- how were people chosen. Participants do not understand how people were chosen to be a part of the project.	0	13	13	18	12	17	73
Extra Costs Residents are worried about the extra costs that may come along with elevation projects – such as access, landscaping, and driveways.	0	6	10	10	8	9	43
Timeline Participants are worried about the length of time the project will take.	0	7	6	5	6	6	30
Contractors Residents have had trouble with contractors in the past.	0	1	10	2	7	1	21
Infrastructure Some people worry about how the project will take other infrastructure into account – garages, decks, and driveways.	0	2	3	1	5	7	18
Displacement Participants are concerned about being displaced from their home for an extended period.	0	1	3	0	0	3	7

Height Residents question how high the house will have to go and if it will feel safe.	0	2	4	0	0	1	7
Neighborhood Fabric Some people worry that their elevated homes will not match the rest of the community homes.	0	0	5	1	0	0	6
Vulnerability to Wind Participants are concerned about wind damage to elevated structures.	0	0	2	0	0	0	2
Aging Structures Residents question whether their aging home can withstand an elevation.	0	0	1	0	0	0	1

Table 3

This chart shows how the participants viewed the strengths of the program. The mailings as an outreach method seemed to produce satisfactory results. The other answers illustrate what was important to the participants about the program. This table, in contrast to the challenges, had fewer responses. Not all practitioners were aware of the program, but those that knew about the program were positive. Residents knew about the program from the original letter and the public meetings. This quote from a practitioner captures the positive response.

"So, we were very much in the mix from the jump, and very appreciative of that. You know, we've got experience doing residential home elevations on a much smaller scale, but still that was a valuable experience, and they were very receptive to hearing what we had to say."

Table 3 **STRENGTHS OF SW COASTAL**	Practitioners (Cameron, Calcasieu, & Vermilion)	Cameron Parish	Calcasieu Parish		Vermilion Parish		Totals
		Resident Interviews	Focus Group 1	Focus Group 2	Focus Group 3	Focus Group 4	
	19	**17**	**9**	**14**	**9**	**10**	**78**
Mailings Participants received a mailing about the project.	2	11	9	12	9	5	48
100% Funded Residents understand that the cost to elevate their homes is completely funded through SW Coastal.	5	3	0	2	0	4	14
Engaging the Locals People learned about the project through local engagement.	8	3	0	0	0	0	11

Flood Insurance Not Required Participants understand that flood insurance is not required for project participation.	3	0	0	0	0	1	4
Holistic Approach Residents admire the integrated approach of the project.	1	0	0	0	0	0	1

Table 4

This table shows how little residents and even practitioners know about the program. Their responses illustrate that knowledge of the program is not widespread and there is an opportunity to provide more information to the public.

"But the problem was the plan has taken so long, and you've had these other storms that have come in, and the homes that were qualified are no longer there, so there's no longer qualifications to be met."

Table 4	Practitioners (Cameron, Calcasieu, & Vermilion)	Cameron Parish	Calcasieu Parish		Vermilion Parish		Totals
		Resident Interviews	Focus Group 1	Focus Group 2	Focus Group 3	Focus Group 4	
INVOLVEMENT IN SW COASTAL Participants have been involved in the project.	**9**	**0**	**0**	**0**	**0**	**0**	**9**
KNOWLEDGE OF SW COASTAL Residents are aware of the project.	Practitioners (Cameron, Calcasieu, & Vermilion)	Cameron Parish	Calcasieu Parish		Vermilion Parish		Totals
		Resident Interviews	Focus Group 1	Focus Group 2	Focus Group 3	Focus Group 4	
	10	**11**	**5**	**0**	**1**	**5**	**32**
Extended Timeline Some people commented on the length of time the project has taken to come about.	6	9	4	0	0	1	20
'I've Heard Nothing About this Program.' A few practitioners and residents had not heard about the program.	4	2	1	0	1	4	12
VIEW OF SW COASTAL Participants have an opinion on the project.	**Practitioners (Cameron, Calcasieu, & Vermilion)**	**Cameron Parish**	**Calcasieu Parish**		**Vermilion Parish**		**Totals**
		Resident Interviews	**Focus Group 1**	**Focus Group 2**	**Focus Group 3**	**Focus Group 4**	
	10	**1**	**0**	**1**	**0**	**0**	**12**
Did Not Involve Local Government Several practitioners did not think that the project involved locals.	7	1	0	0	0	0	8
Positive View of SW Coastal Outreach Residents had a positive view of the outreach that was conducted.	3	0	0	1	0	0	4

Table 5

This table illustrates the complexity of good outreach. These responses can be summed up 'by building relationships and capacity.' We asked all participants for successful examples such as use of social media or videotaping a homeowners' process. What is most important to this group is creating and maintaining local connections. The local knowledge about what outreach might be is sophisticated and provides the project with several examples. This resident's quote shows their view of what should happen.

"Maybe at least once a quarter. And then, as I get close to being approved, I would expect more frequent contracts and then when you actually have a contract, and then I want daily updates."

Table 5 **SUCCESSFUL OUTREACH PROJECTS** The participants were asked what a successful outreach project would look like.	Practitioners (Cameron, Calcasieu, & Vermilion)	Cameron Parish	Calcasieu Parish		Vermilion Parish		Totals
		Resident Interviews	Focus Group 1	Focus Group 2	Focus Group 3	Focus Group 4	
	50	**28**	**27**	**31**	**15**	**28**	**179**
Involvement of Local Officials The practitioners especially wanted the project to involve local officials at all phases of the project.	17	2	2	5	1	0	27
Successful Examples Some people thought seeing examples of other successful projects would be beneficial.	6	3	4	5	1	1	20
Case Management Participants wanted the project leaders to help manage the project from start to finish.	3	1	9	2	0	4	19
Door Knocking Residents thought knocking on doors would be helpful.	4	4	3	0	5	1	17
Find a Local Champion Some people suggested finding a local person to champion the project.	5	3	2	5	1	1	17
Phone Call Some participants would prefer a phone call to learn about the project.	0	7	0	4	3	3	17
Email Some residents prefer email as a form of outreach.	0	3	4	0	2	7	16

Community Meetings Residents (more than practitioners) wanted more public meetings.	0	0	0	4	2	7	13
Social media Participants thought social media would be a successful way to reach out.	6	2	0	2	0	2	12
Outreach through Mail Some residents prefer receiving information through the mail.	0	3	3	4	0	0	10
We Want You to Stay on Your Land People said that a successful project would emphasize that they want people to stay in their communities.	4	0	0	0	0	2	6
Strike at the Core of the Community Participants thought outreach projects should speak to community character.	3	0	0	0	0	0	3
Regional Approach One resident thought taking a regional approach to outreach would be helpful.	1	0	0	0	0	0	1
Signage One practitioner thought placing signs throughout the community would help with outreach.	1	0	0	0	0	0	1

Tables 6 and 7

The two tables below illustrate the participants' view of the future filled with thoughts of the storms and how they plan to protect themselves. From these tables, it is apparent how practitioners and residents think about the future. They remain hopeful, but as the previous data show they are worried about their own future. This view from a Cameron Parish resident is the least hopeful view of the future.

"I have a different outlook, because being a Cameron Parish resident, I almost feel like, with the cost of everything, the cost of flood insurance, the cost of just everything in general, especially with since the passing of law, it's almost like they could care less If we come back to Cameron Parish or not."

Table 6 **IMPORTANT ISSUES FOR THE FUTURE** Participants were asked about their thoughts about the future, and what issues could emerge.	Practitioners (Cameron, Calcasieu, & Vermilion)	Cameron Parish	Calcasieu Parish		Vermilion Parish		Totals
		Resident Interviews	Focus Group 1	Focus Group 2	Focus Group 3	Focus Group 4	
	27	**15**	**15**	**9**	**19**	**8**	**93**
Cascading Disasters The cycle of disasters impacts their everyday lives on an ongoing basis.	5	9	5	2	8	5	34
Protect Yourself Some people emphasized the need to protect themselves and their homes from future risks.	0	0	6	5	8	1	20
Structural Mitigation Needed Some participants emphasized the need for levees and other protection projects in the future.	9	0	1	0	0	2	12
Work Together Some residents underlined the need to work together as a community to combat risks in the future.	6	1	3	0	1	0	11
Aging Population Practitioners and residents expressed concerns about the increasingly aging populations that remain in vulnerable areas.	2	3	0	2	2	0	9
Extended Case Management Some practitioners and residents thought case management of the project well into the future was needed.	4	2	0	0	0	0	6
Industry One practitioner stated that there was a need to bring more industry into the region in the future.	1	0	0	0	0	0	1

Table 7 **VIEW OF THE FUTURE** Participants were asked how they view the future in their communities.	Practitioners (Cameron, Calcasieu, & Vermilion)	Cameron Parish	Calcasieu Parish		Vermilion Parish		Totals
		Resident Interviews	Focus Group 1	Focus Group 2	Focus Group 3	Focus Group 4	
	21	**24**	**1**	**3**	**9**	**2**	**60**
'The Only Place They've Known' This quote and code refer to how important this project is for people to stay in their own home.	8	5	1	0	4	1	19
Affordable Insurance Residents would like insurance costs to be reduced.	2	12	0	2	1	0	17
Economic Development Practitioners and residents think that there must be economic development for the area to survive.	3	6	0	1	0	1	11
Pursuing Funding Practitioners especially see the need for future funding.	8	0	0	0	0	0	8
Tight Knit Community These residents want to keep their tight knit communities together.	0	1	0	0	4	0	5

Summary of Data

From the interviews and focus groups, the concerns of the community are described in some detail to guide how best to build an approach to nonstructural mitigation. First, they are concerned about insurance. This concern cannot be dismissed by saying that the Corps does not require insurance for this program; they are worried about the impact of this program on their future. Second, they do not trust the federal government to 'fix their problem.' More importantly, even though they received letters of their possible eligibility, and some attended the public meetings, there is still a lack of knowledge about the program. Table 5 provides some ideas about outreach that could effectively and quickly be used. The need to build local partnerships with people the community trusts is critical as is using other sources of communication including phone calls and emails. Tables 6 and 7 reflect their desires to remain in their community. What we as researchers discovered is that they are desperate for information from trusted individuals and on a more frequent basis.

Recommendations

It is important not to think of Calcasieu, Vermilion, and Cameron Parishes from an essentialist perspective. While they share some history, these parishes are not the same. Calcasieu is the most urban with a greater diversity of residents. Both Calcasieu focus groups showed greater reluctance and distrust of the project. Vermilion Parish has a strong formal and informal kinship system. People know each other in ways that reveal a multi-generational history. They want their homes raised. Cameron Parish is the most vulnerable of all three entities. The residents from Cameron think they have been abandoned by the state and federal governments. However, both practitioners and residents think that there are ways to save their parish and its residents.

Outreach and Strategies Over Time

Outreach is a process over the entirety of the project. What is unusual about this project is that the outreach is ongoing over a lengthy time period. The outreach methods then need to reflect that timeframe.

Phase 1:

Initial outreach: Letters and public meetings

We recommend that homeowners be contacted in a systematic and regular fashion. When we talked to residents about their eligibility letters, there was some confusion. According to the residents' reports, they were not sure that they were still qualified. To address this confusion, some of which might be caused by irregular connections / contact points with residents, we recommend a letter (or other form of contact) at least every month or every other month. Letters were certainly effective, but also phone calls, emails, and social media can be successful mechanisms for outreach.

We heard varying reports about the public meetings that have been conducted up until the time of our focus groups and interviews. Some Calcasieu residents thought the meetings were useful; others thought they were not helpful. In Calcasieu Parish, some residents thought the meetings were too crowded and they did not think they could ask a question. The Vermilion residents reported more positive views of the meetings, some residents mentioning that Corps representatives stayed after the formal meeting to answer additional questions they had for the project team. The Cameron residents did not directly refer to public meetings.

We recommend that the meetings have more opportunities for residents to talk in small groups with project managers and/or agency representatives in a more informal setting. Both Louisiana's Strategic Adaptations for Future Environments (LA SAFE) and the state's Coastal Protection and Restoration Authority's Coastal Master Plan Community Conversations successfully engaged residents using more informal methods. These examples have a history of meetings that engage the public in deeper and more meaningful ways, designed to create an atmosphere where communication flows freely.

We suggest a meeting format that utilizes small group table conversations and limited, short formal presentations to kick off discussion. Each table should have a facilitator, a representative from each agency, and members of the community that are able to discuss questions/issues that residents may have on the project. It may also be prudent to invite residents that have undergone the process, local community members with local knowledge, and local contractors working to elevate homes to answer questions about project implementation. The small group table meeting format provides a more manageable discussion atmosphere than a formal presentation and limited Q&A session. Importantly, we also recommend that meetings be held in locations most convenient for residents, with more than one meeting throughout the day to break up attendance and

catch residents with varying working schedules. Public meetings can build relationships and capacity for the future, but they cannot be one-way conversations or just expert presentations.

Phase 2:

During construction

There is a need to formalize the method of negotiating the relationship between contractors and homeowners, as there is widespread mistrust in contractor work in the parishes of interest. One of the biggest concerns we heard from residents was about the contractors. In areas where there are repeated storms, nearly all residents had a negative contractor experience. It would be helpful to document in some detail that residents' concerns about contractors and their knowledge of local trusted contractors, offering a vehicle for input from residents about trusted or familiar contractors in the region.

There is a need to document the process of the construction. With the permission of the homeowner, short videos of the construction project can be used on social media or another platform that reaches the intended audience like the project website. For example, videos could include homeowner interviews about the process, before and after videos of completed elevations, and interviews with expert contractors. Satisfied homeowners could be the best way to recruit new participants.

Building cohorts

One way to get community support is to intentionally build cohorts among those who are qualified. Residents can learn and talk together which will create bonds that can last through the project. We suggest having the pilot group of SW Coastal home elevations, consisting of eighteen homeowners, come together for a meeting. Then, the next group could be built as construction progresses. This is a strategy that would grow the program. Also, these cohorts could be used to show other neighbors or community members how the program has worked.

Using local knowledge

We found that as residents talked among themselves, there was useful information shared, and some misinformation expressed. Local, trusted experts would be useful here. Some

have been identified through the Corp's work, but also think about using the local realtor associations, school personnel and other trusted local leaders that can be on-the-ground ambassadors for the program. A small effort to bring local community leaders together and up to speed on the project could pay dividends as they spread the word about the project to their communities.

Communication Tools

The residents offered numerous ways to successfully reach them, including regular contact through mail, emails, and phone calls. Also, many of the residents use social media including Instagram and Facebook, making these websites an attractive tool for information sharing. We recommend creating a social media page for the project that includes regular updates, project timelines/deadlines, homeowner and/or contractor testimonials, and before/after pictures or videos for the public to digest and interact with. It is important that a page like this is regularly updated and attended to, ideally with resident questions answered in a prompt fashion and agency contact information readily available for more complex or unique questions.

Conclusion

Our proposed plan embodied a comprehensive approach to understanding community perspectives on nonstructural measures in coastal Southwest Louisiana. Through a blend of methodical research, community engagement, and thoughtful analysis, we bridged the gap between the current opportunities and community perceptions. If the metric for success is people applying and getting their home elevated, there must be a concerted effort of outreach and engagement strategies for the project to engage the eligible residents. The Corps has a unique opportunity here to make this project the standard for community engagement and successful nonstructural mitigation efforts.

Major Takeaways:

1) This project should take into consideration the entirety of the residents' lived experience. Agreeing to have their home raised is a difficult and frightening experience for many. Addressing those fears and concerns should be one of the priorities of the project going forward.
2) The homeowners want to understand the process before agreeing. The project needs to answer larger questions such as: Why was my house chosen and not my neighbors? What does it mean for the view in my neighborhood if I raise my house and my neighbor's house isn't raised?

3) Specific questions need to be answered as well: How long will it take? Who will do it? How much control will the homeowner have with the contractor? What happens if my possessions are damaged? How long will I have to be out of my house?
4) How these questions are answered is just as important. These homeowners have local knowledge about what has worked and what has not worked in their communities. They have skepticism of the ability of the government at any level to respond to their needs. This is an opportunity to show these communities that this is a program concerned about their safety.
5) One-way conversations from the project team are the least efficient method. The time spent at the front end of the project building trust and increasing residents' decision-making capacity will allow the program to be successful.
6) Residents desperately want a solution to their increasing vulnerability. They are flummoxed by the increase in insurance and the fear that they are going to lose their home. This program could be an important way to increase their safety, but they must trust the process first.
7) There is often an expectation that the residents will be grateful for this opportunity. In the focus groups, we didn't hear much gratitude; we heard instead the concern that this was not actually going to happen.
8) Because SW Coastal is ongoing, we urge the project team to document in some detail how this process is occurring. If it goes well, the success of this pilot will dictate how successful the rest of the project's future will be.
9) Throughout the research, residents and practitioners talked about ways to reach them – mailing, email, phone, text, door knocking, or social media. Some mentioned signage as a tool. Others mentioned making a video of the process of home elevation.
10) This project has enormous potential. The way forward is to systematically and rigorously organize the way to build relationships with local practitioners and residents. Then, to build capacity with these relationships to reach out to others.

Ultimately, the activities described above are all intended to build trust. These communities have experienced climate trauma, cascading from one storm to another. They have had uneven experience with government at all levels. They are, however, anxious for help. At the same time, they have taught themselves as much as they can about the process. They need information that is accessible and accurate. This project could be a model for successfully building capacity for nonstructural mitigation efforts.

Nonstructural measures for flood risk mitigation are trending upwards as a popular option amongst residents wanting to stay in place. It is important to note here that the implications of what happens with SW Coastal will be felt nationwide, as other regions begin to take on similar efforts at this scale. There is an enormous opportunity to bolster the success of this project by continuing to improve outreach and engagement strategies. Outreach is a core project function—not an add-on. Successful community engagement on nonstructural projects requires strategic planning, skilled staffing, and disciplined execution. The goal should be to build trust and credibility with residents, ensuring voluntary measures are not only offered, but embraced.

Appendix A: Annotated Bibliography

Aerts, J., & Botzen, W. (2011). Flood Resilient Waterfront Development in New York City: Bridging Flood Insurance, Building Codes and Flood Zoning. Annals of The New York Academy of Sciences: Flood Resilient Waterfront Development in NYC. https://core.ac.uk/download/pdf/15480318.pdf.

To protect against changing land use and vulnerability to flood risks, this study looks at the existing legislation on flood insurance, zoning policies, and building codes in New York. It illustrates the need for improved cooperation among the National Flood Insurance Program (NFIP) coordinated by the Federal Emergency Management Agency (FEMA), the NYC Department of Buildings, and the NYC Department of City Planning to ensure that all existing regulations are applied with maximum efficiency. The study presents international examples of such cooperation and how they could be applied in New York City. It recommends additional regulation to incentivize homeowners to floodproof their homes above the BFE level.

Albright, E., & Crow, D. (2016). Learning in the Aftermath of Extreme Floods: Community Damage and Stakeholder Perceptions of Future Risk. Policy Studies Organization. Wiley Periodicals. 309-328. https://sciencepolicy.colorado.edu/admin/publication_files/2016.03.pdf.

The study explores the factors that shape stakeholder beliefs on future potential risks. Data from in-depth interviews, stakeholder surveys, public meeting documents, and community demographics were used to analyze stakeholder risk perceptions in seven Colorado communities that were flooded in 2013. The results suggest that perceptions of problem severity are linked to past flood experiences, type of expertise, and job position. Individuals who work and participate in flood recovery also influence how flood risk is perceived at the community level. The results of policy changes may vary across communities as they differ in flood task force members, elected officials, and other relevant authorities.

Atreya, A., Ferreira, S., & Kriesel, W. (2013). Forgetting the Flood? An Analysis of the Flood Risk Discount over Time. Land Economics, 89(4), 577-596. www.jstor.org/stable/24243692.

The authors examine whether there exist property price differentials reflecting flood risk increases following a large flood event and whether this change is temporary or permanent. They used single-family residential property sales in a difference-in-differences spatial hedonic model framework to investigate changes in property

prices following the 1994 flood in Dougherty County, Georgia. In spatial hedonic models that explicitly incorporate both linear and nonlinear temporal flood-zone effects, the study shows that the flood risk discount disappeared between four and nine years after the flood. Flood elevation of the first floor of the structure relative to the flood depth (i.e. freeboard) on the floodplain determines property-specific flood risk data to guide any future construction and insurance decisions.

Berke, P., Song, Y., & Stevens, M. (2009). Integrating Hazard Mitigation into New Urban and Conventional Developments. Journal of Planning Education and Research, 28. 441-455. https://www.researchgate.net/publication/249694507_Integrating_Hazard_Mitigation_into_New_Urban_and_Conventional_Developments.

This article examines how New Urban developments located in hazardous areas incorporate hazard mitigation techniques. Although New Urban developments rely more on structural protection techniques, which include freeboard, the distinction between New Urbanism and conventional developments does not make a difference in advancing nonstructural hazard mitigation techniques or preventing development in environmentally sensitive areas. Findings indicate that New Urbanism developments are compounding the growing risk of hazards by potentially adding higher-density development than in the past

Bingham, L., Nabatchi, T. & O'Leary, R. (2005). "The New Governance: Practices and Processes for Stakeholder and Citizen Participation in the Work of Government." Public Administration Review **65**(5): 547-558. https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1540-6210.2005.00482.x?casa_token=dxgI6ObyNKgAAAAA:6EfSFQOSG83DZDN1HVmlMP7aXaIlgqQkX8eQeJrLnKe7YYu9krjZSsuvYxQAcrK8xIDWuChJWbqOEdAk.

The study explores how elected officials use tools and instruments for governance through networks of public, private, and nonprofit organizations. The authors put forward that new governance involves people (i.e., the tool makers and tool users) and the processes through which they participate in government-related initiatives. They assess the existing legal infrastructure authorizing public managers to use new governance processes and discuss a selection of quasi-legislative and quasi-judicial new governance processes in international, federal, state, and local public institutions. Residents play an important role in public policy and decision-making; they have the right to decide what is important to them and how they can best achieve the set objectives. The new governance processes provide ways to engage

individual stakeholders in governing and policymaking. Public administration recognizes its unique task to reengage the public in governance.

Bixler, R. P., Paul, S., Jones, J., Preisser, M., & Passalacqua, P. (2022). Unpacking adaptive capacity to flooding in urban environments: Social capital, social vulnerability, and risk perception. *Urban Studies*, 59(6), 1255-1272. https://www.frontiersin.org/journals/water/articles/10.3389/frwa.2021.728730/full.

An examination of how social capital and social vulnerability shape risk perception and household flood mitigation actions. The study, based on a metropolitan-wide survey of households in Austin, Texas, USA, suggests that bonding social capital (personal networks, neighborhood cohesion, and trust) is positively related to mitigation behavior and that social vulnerability is negatively related to risk perception. The research demonstrates a positive and significant effect of social capital on adaptive behavior even when controlling for the social vulnerability of a neighborhood. This suggests that policies and programs that strengthen the social connectedness within neighborhoods can increase adaptive behaviors thus improving community resilience to flood events.

Bohn, F. (2013). Design flood elevations beyond code requirements and current best practices. MS Thesis, Louisiana State University. https://digitalcommons.lsu.edu/cgi/viewcontent.cgi?article=1068&context=gradschool_theses.

This study looks into how building code requirements for flood elevation are linked to the National Flood Insurance Program (NFIP) insurance policies and how they represent the minimum requirement for building elevation. Current elevation procedures are limited to the 100-year base flood elevation. Although code plus resources are available to highlight best practices for practitioners, there still exist gaps in the research that may lead to lower design elevations than warranted for a particular risk level. The thesis provides generalized guidance to aid practitioners in decision-making by consolidating current codes, best practices, and characteristics of the changing coastal environment.

Botzen, W. J. W., Aerts, J. C. J. H., & van den Bergh, J. C. J. M. (2009). Willingness of homeowners to mitigate climate risk through insurance. Ecological Economics, 68(8–9), 2265–2277. https://doi.org/10.1016/j.ecolecon.2009.02.019.

A survey, conducted by Botzen, Aert, and van den Bergh, indicates that homeowners in the Netherlands can be incentivized to invest in flood mitigation by offering

certain benefits on insurance policies. Preliminary estimates of the effectiveness of incentivizing mitigation with insurance suggest that the prevented damage and reduced flood risk would be substantial.

Broadt, L. (2013, September 12). County Commission Reviews Floodplain Ordinance Update. The Chronicle. https://www.chronline.com/stories/county-commission-reviews-floodplain-ordinance-update,94592 .

FEMA recommends that the county's freeboard standard be raised from 1 foot to 3 feet above the base flood elevation. Mandating the increase could have financial benefits under FEMA's insurance policies.

Brown, P. (2019, September 18). Weather watch: Do 30-year mortgages make sense as sea levels rise faster annually? https://www.theguardian.com/news/2019/sep/18/weatherwatch-do-30-year-mortgages-make-sense-as-sea-levels-rise-faster-annually.

The article questions the viability of 30-year mortgages considering that by 2050 sea level rise will have overwhelmed many properties. Looking at the standard searches that solicitors undertake for buyers, it is clear that environmental matters such as drains and contaminated land are carefully examined, along with the dangers of local flooding from overflowing rivers or flash flooding from rainfall. Wider searches to see whether many square miles at or below sea level might be in danger of being overwhelmed by a storm surge are, however, not considered. With sea levels rising faster each year, this might soon be a costly oversight. This could also be a factor for calculating the overall 30-year insurance saving for the homeowners.

Burby, R.J., 2006. Katrina and the paradoxes of government disaster policy: Bringing about wise governmental decisions for hazardous areas. The Annals of the American Academy of Political and Social Science 604(1): 171-191. https://www-jstor-org.ezproxy.uno.edu/stable/25097787.

The author puts forward that the extensive damage from Hurricane Katrina can be explained by two paradoxes. The first is named the safe development paradox, which argues that federal policies and programs (especially subsidized flood insurance and the construction of levees) meant to make hazard-prone areas safer have instead incentivized development in areas prone to catastrophic disasters. The second, called the local government paradox, states that despite local governments being most directly affected by the human and financial costs of disasters, local governments have been reluctant to take steps to limit hazard vulnerability in their

jurisdictions. The author argues that losses can be limited if local governments take a more proactive role in limiting hazard vulnerability. They recommend that the Flood Insurance Act and Disaster Mitigation Act of 2000 be revised to make local comprehensive plans with mitigation components requisite for participation in the National Flood Insurance Program and to require mitigation updates. The author also argues that the NFIP should be revised so that participation is at the community level, instead of at the level of individual properties.

Byrd, B. (2016, October). Regular Meetings. Louisiana State Uniform Construction Code Council. Baton Rouge, LA. https://dpsweb.dps.louisiana.gov/lsuccc.nsf/Type

Discussion on previously approved amendments to 2015 IRC Section 322.2.1(1) A representative from FEMA was present to speak to the council. The Chair introduced two letters provided to the council of Enterprise Community Partners, Inc. and the National Ready Mixed Concrete Association concerning the removal of freeboard from the 2015 IRC. Mr. Scott Masterson, from the City of Zachary, and several others from the audience spoke concerning freeboard.

Byrd, B. (2018, February). Technical Codes and Advisory Committee. Louisiana State Uniform Construction Code Council. Baton Rouge, LA. https://dpsweb.dps.louisiana.gov/lsuccc.nsf/Type.

A major concern was raised regarding the amendment (regarding freeboard removal) due to recent flash floods in the Lafayette area. Considering the unique characteristics of each area, Mr. Joiner recommended turning the matter over to local jurisdiction. Legal concurred, on the condition that the course of action taken did not conflict with the codes established by the LSUCCC. If the matter was noted as an elevation concern, it could be addressed as such and would not require a local ordinance. With a requirement already in place that addresses this, then a local ordinance would not be needed.

Chatterjee, C., Flugman, E., Jiang, F., Mozumder, P., & Chowdhury, A. G. (2019). Insights from a Stated Preference Experiment of Florida Residents: Role of Information and Incentives in Hurricane Risk Mitigation. *Natural Hazards Review*, *20*(1). https://doi.org/10.1061/(ASCE)NH.1527-6996.0000316.

The study by Chatterjee, Jiang, Mozumder, and Chowdhury explores the effectiveness of vulnerability information and financial assistance programs to facilitate mitigation. Using online survey responses from households across Florida, they investigated ways to maximize the use of constrained funding allocated for

resilience policies. The survey was designed to test preferences for low- and high-cost roofing and opening protection measures to reduce hurricane-related damages in the context of information and incentive treatments. Empirical analysis indicated that financial incentives were preferred to vulnerability information to foster mitigation. The authors believe that the findings from this study will provide useful insights in designing effective policies to encourage more households to adopt risk mitigation measures.

Chivers, J., & Flores, N. (2002). Market Failure in Information: The National Flood Insurance Program. Land Economics, 78(4), 515-521. www.jstor.org/stable/3146850.

The authors examine how NFIP could greatly improve the economic efficiency of floodplain occupancy in the U.S. To realize the efficiency gains suggested, property owners need sufficient information about flood risk and insurance premiums to make well-informed home purchase decisions. Data collected through a survey evidence information asymmetry on the NFIP, with regards to the degree of flood risk and the cost of insurance premiums during home-buying negotiations. Developers can thus benefit from building in the cheaper flood-prone areas, and then selling the properties to uninformed buyers.

Clark, B. (2020, January 31). Building Resilience. National Association of Realtors, On Common Ground. https://www.nar.realtor/on-common-ground/building-resilience.

This article discusses how buildings and communities need to be better prepared to deal with the effects of climate change. Local governments have been looking for solutions to protect against climate change for years, but the real estate industry has historically overlooked the issue. Industry leaders, by incorporating resilience considerations in their designs, are getting ahead of the issue.

Coulbourne, W. (2010). Foundation Designs for Sustainability in Coastal Flood Zones. Research Gate. https://www.researchgate.net/publication/228356378.

This paper explores the foundation damage that has occurred along the U.S. coastlines and suggests design approaches that engineers should consider using to help ensure a higher success rate of foundation stability. The current foundation design guide does not make sufficient considerations for extreme coastal storm surges. The still water and the storm surge elevations do not include the height of the waves. The study suggests an elevation of 2 ft freeboard would provide as much

protection as possible, considering building costs, height restrictions, and the 100-year floodplain map. It also recommends additional barriers to compensate for the loss of soil due to erosion.

Craig, R. (2019). Coastal adaptation, government-subsidized insurance, and perverse incentives to stay. *Climatic Change, 152*, 215-226. https://ideas.repec.org/a/spr/climat/v152y2019i2d10.1007_s10584-018-2203-5.html .

The study examines the National Flood Insurance Program (NFIP) and its flawed payout system that is becoming stretched ever-so-thin in a warming world experiencing more intense storms and the mounting costs of storm-related damages and payouts. Due to the U.S. Supreme Court's legal precedent of siding with private property owners in high-risk areas over local and state governmental policies that favor retreat, as well as the concept of buyouts being politically unpalatable, the NFIP has continued to allow a perpetuating cycle of recovery-rebuild-repeat in hazardous areas, which has dwindled its coffers to the point that the program is no longer sustainable. To remedy this, the study proposes a "twice and out" alternative where homeowners whose property is destroyed by a natural disaster will be allowed to rebuild once, but if it is destroyed a second time or the owners receive over twice the home's market value in insurance payments, the property is considered sold to the government and converted to green space.

Crumbacker, R. (2008, May 7). Tie Stall Vote Freeboard Building Mandate. Crisfield Time. pp.5. https://www.cityofcrisfield-md.gov/press-notices .

Commission voted 2-2 on a motion to require a minimum elevation of two feet, with electrical furnishings at least three feet above base flood elevation. The planning and zoning commission had previously recommended all electrical and mechanical equipment - including ductwork and HVAC - have at least three feet of freeboard above the 100-year floodplain. From recent history, following Hurricane Katrina, people tend to leave and abandon their property if the damage to it is too severe. Freeboard will limit this damage. The additional elevation will lower insurance premiums and reduce claims.

Danielson, L. (2015). Patching the Leaks: Reforming British Columbia's Policy Approach to Property-level Flood Resilience. Simon Fraser University Library. https://summit.sfu.ca/item/15372.

This study examines the gaps in British Columbia's current flood policy framework that are inhibiting the uptake of floodproofing including the elevation of structures. Interviews in the study identify an institutional context, a lack of resources and information, and low public awareness as key barriers. A jurisdictional scan examines different options to overcome these barriers, which include the private sector response of creating an overland flood insurance market. The author recommends a provincial floodplain-mapping scheme as a necessary precondition for further actions and explores how programs that offer floodproofing grants to vulnerable households should be piloted.

de Koning, K., Filatova, T., Need, A., & Bin, O. (2019). Avoiding or mitigating flooding: Bottom-up drivers of urban resilience to climate change in the USA. *Global Environmental Change*, *59*. https://doi.org/10.1016/j.gloenvcha.2019.101981.

This study explores several private-entity responses to flood risk that are driven by different behavioral triggers. The authors examine what behavioral motives drive the choices for flood damage mitigation and relocation among property buyers and sellers. The research finds that households rely on hazardous events to trigger a protective action. The authors highlight that major flooding events may cause potential large-scale outmigration and demographic changes in flood-prone areas, putting more low-income households at risk.

Degener, R. (2013, March 21). Cape May to Seek Reimbursement for Extra Flood Insurance Costs at New Convention Hall. Press of Atlantic City. https://atlanticcityweekly.com/cape-may-to-seek-reimbursement-for-extra-flood-insurance-costs-at-new-convention-hall/article_de9140eb-1578-5aae-a897-716405fc4ca4.html .

The city plans to seek reimbursement for additional flood insurance costs incurred because part of the new Cape May Convention Hall was built below base flood elevation. At $101,000 for $8 million in flood coverage, insuring the building is estimated to cost 4 times what it would have had it been constructed above 15 feet. The city has placed the architect, engineers, construction manager, and general contractor on notice and instructed them to notify their insurance providers of the impending claim. Although FEMA does not have regulatory authority over construction, its elevation standards do impact flood insurance premiums.

Federal Emergency Management Agency (2020). Using FEMA's Freeboard Depth Grids to

Inform Smarter Building Standards that Increase Community Resilience. DHS, Washington, DC. https://www.fema.gov/sites/default/files/documents/fema_national-resilience-guidance_august2024.pdf

Freeboard depth grids allow community officials and property owners to see the specific areas that would be flooded if floodwaters rise beyond the floodplain boundaries depicted on the FIRM. Using this mapping tool, local leaders can make informed decisions on stricter building and zoning requirements and provide property owners with a compelling argument for flood insurance. The long-term benefits of elevating the buildings far outweighed the short-term costs. In addition to avoiding flooding damage, the study also noted that the market value of elevated homes would be higher than their counterparts.

Federal Emergency Management Agency (2021). FEMA Elevation Standards and Guidelines for Coastal Areas. Washington, DC: FEMA. https://www.fema.gov/about/organization/region-6

This guide addresses FEMA's elevation standards specifically tailored to coastal areas (Region 6), including Louisiana. It covers the use of elevation maps, calculating flood risks, and FEMA's recommendations for elevation practices. FEMA Region 6 is responsible for coordinating disaster response and recovery efforts across Texas, Louisiana, Arkansas, Oklahoma, and New Mexico. It works to improve disaster resilience through regional partnerships, planning, and mitigation initiatives. The region focuses on enhancing preparedness, ensuring effective emergency response, and supporting long-term recovery in areas affected by natural disasters. FEMA Region 6 provides guidance on flood management, mitigation strategies, and federal assistance for affected communities.

Federal Emergency Management Agency. (2018). National Flood Insurance Program, Community Rating System. DHS, Washington, DC. Community Rating System (fema.gov).

The NFIP's Community Rating System (CRS) credits community effort beyond the minimum standards for reducing flood insurance premiums paid by the community's property owners. The CRS is similar to but separate from, the private insurance industry's programs that grade communities on the effectiveness of their fire suppression and building code enforcement efforts.

Federal Emergency Management Agency. (2018). National Hazard Mitigation Saves Interim Report. DHS, Washington, DC. https://iccsafe.org/wp-content/uploads/NIBS_MSv2-2018_Interim-Report-summary.pdf

Given the rising frequency of disaster events and the increasing cost of disaster recovery across the nation, mitigation actions are crucial for saving money, property, and, most importantly, lives. Activities designed to reduce disaster losses also may spur job growth and other forms of economic development. This Interim Study examined four sets of mitigation strategies and found that society saves a benefit-cost ratio (BCR) of 4:1 for investments to exceed select provisions of the 2015 International Residential Code (IRC) and International Building Code (IBC), the model building codes developed by the International Code Council (also known as the I-Codes); a BCR of 11:1 for adopting the 2018 IRC and IBC, versus codes represented by 1990-era design; a BCR of 4:1 for a select number of utilities and transportation infrastructure study cases; and a BCR of $6 for every $1 spent through mitigation grants funded through select federal agencies.

Federal Emergency Management Agency. (2019). FEMA Flood Risk Communication Toolkit for Community Officials: Social Media Guide. DHS, Washington, DC. https://www.fema.gov/sites/default/files/documents/fema_cx-toolkit-social-media-guide.pdf

The role of a community official includes communicating the risks associated with natural hazards and steps that can be taken to minimize these risks or their impact. One important avenue for this communication is social media platforms. The Federal Emergency Management Agency's (FEMA) Risk Mapping, Assessment, and Planning (Risk MAP) program provides flood maps and informational tools for communities to better assess their flood risks. The Social Media Guide is a component of the Flood Risk Communication Toolkit that helps community officials convey information on flood risk to the communities during the flood mapping process.

Federal Emergency Management Agency. (2020). Building Codes Save: A Nationwide Study Loss Prevention, Avoided as a Result of Adopting Hazard-Resistant Building Codes. DHS, Washington, DC. https://www.fema.gov/emergency-managers/risk-management/building-science/building-codes-save-study.

FEMA has been working with local and state governments to reduce losses from natural disasters by developing risk-based hazard maps. FEMA also develops recommendations for making building codes more hazard-resistant. The Mitigation Assessment Team has been working with state and local officials to analyze the performance of buildings and infrastructure after a disaster. The CRS an NFIP voluntary program, uses discounted insurance premiums as an incentive to encourage communities to adopt more hazard-resistant building codes.

Federal Emergency Management Agency. (2020). Building Higher in Flood Zones: Freeboard – Reduce Your Risk, Reduce Your Premium. DHS, Washington, DC. https://www.carteretcountync.gov/DocumentCenter/View/2238/Benefits-of-Freeboard

There are many benefits to incorporating freeboard into new construction plans including the property being safer, incurring less damage in a flood, substantial savings in flood insurance premiums, and the CRS discounts rewards. The up-front cost, for each foot of freeboard, is generally about 0.25 to 1.5 percent of the total construction costs

Fitzpatrick, M. (2020, August 19). Cost of Flood Insurance in Louisiana and How Coverage Works. Value Penguin. https://www.valuepenguin.com/flood-insurance/louisiana.

Flood insurance is not legally mandated statewide in Louisiana. The two main options for flood insurance are: coverage purchased through the National Flood Insurance Program (NFIP), a public entity run by FEMA, or coverage from a private insurer as a secondary choice. Homeowners in high-risk areas, however, need to purchase flood insurance to qualify for a federally backed mortgage loan. Louisiana residents can purchase flood insurance through the NFIP with coverage limits of up to $250,000 for the structure of their home and $100,000 for its contents. Damage to the structure is paid to replacement cost value (RCV), meaning depreciation is not taken into account, for a single-family home, that is the primary residence. Personal property is paid to actual cash value (ACV), meaning depreciation is taken into account. Flood insurance does not reimburse for loss of use, living expenses, or loss of business as a result of flooding. The average price of NFIP flood insurance in Louisiana is $726 per year. Factors that influence insurance premiums include the location (elevation above sea or river level, distance from a body of water), presence of flood mitigation mechanisms, height of the lowest floor, whether there is a basement, coverage levels, deductible, etc.

Fox, S. (2014). This is adaptation: The elimination of subsidies under the national flood insurance program. *Columbia Journal of Environmental Law, 39*(2), 205-250. https://heinonline.org/HOL/Page?handle=hein.journals/cjel39&div=10&g_sent=1&casa_token=kqMXkQLsMHwAAAAA:HIv-1Lk6qky8lX2doQ14XxyutmOHV9RpSs5rEQ_J5EFCAM-yJ1Vgh9-gmRoBNu1FvqiLvf-qiGk&collection=journals.

The author makes a case for drastically reducing federal flood insurance subsidies. They assert that current policies have encouraged continued development in high-risk coastal areas and special flood hazard areas as well as rebuilding in these same places after natural disasters. They attribute this to the National Flood Insurance Program offering extremely discounted flood insurance and shelling out the majority of disaster relief post-storm. Citing case law and statutes, the author insists that the federal government has the authority and obligation to end these practices, as allowing the status quo to continue in a world increasingly affected by sea level rise will inevitably intensify both the amount of damage, costs, and number of people impacted by disasters.

Frisaro, F. (2022, June 1). Here's how the government wants to disaster-proof your home. Associated Press. https://www.wwltv.com/article/news/nation-world/how-the-government-wants-to-disaster-proof-your-home/507-c3a417dd-d02e-4a37-80ab-fb104030159c.

Updated building codes that would apply to new construction and buildings that are rebuilt due to damage. Education will be a key element of the modernized building codes. Communities that have adopted modern building codes are already saving an estimated $1.6 billion a year in avoided damage from major disasters.

Gall, M. and Friedland, C. (2020). "If Mitigation Saves $6 Per Every $1 Spent, Then Why Are We Not Investing More? A Louisiana Perspective on a National Issue." Natural Hazards Review **21**(1): (04019013-)04019011-04019016. https://ascelibrary.org/doi/pdf/10.1061/%28ASCE%29NH.1527-6996.0000342.

This paper provides an accounting of where and when mitigation and recovery investments have occurred in Louisiana, thereby generating a mitigation investment portfolio for the state. Louisiana relies heavily on funding from the Hazard Mitigation Grant Program (HMGP), which is largely spent on home elevations and acquisitions with limited utilization of other mitigation actions. A more strategic approach to hazard mitigation, less driven by federal funding, is needed to reduce damage and the damage-to-mitigation ratio. Louisiana needs to view hazard mitigation planning

not as a compliance exercise with mitigation grant programs but must integrate mitigation into comprehensive community planning and devise state programs that help and incentivize local municipalities and residents to invest.

Ge, Y., Peacock, W., & Lindell, M. (2011). Florida Households' Expected Responses to Hurricane Hazard Mitigation Incentives. Risk Analysis, 31(10), 1676–1691. https://doi.org/10.1111/j.1539-6924.2011.01606.x.

A survey, that includes responses from 599 Florida households, was conducted to predict the likelihood of participating in hazard mitigation incentive programs. The authors used a modified form of the protective action decision model to understand potential relationships between psychological factors, demographic factors, and exposure factors in predicting the likelihood of participation in different incentive programs, both economic and non-economic. The authors found the psychological factors of hazard intrusiveness and risk perception to be the best indicators of program participation. They recommend that policies consistently remind homeowners of the negative consequences of hazards to encourage protective decisions. They also found the results from demographic factors to be inconsistent. Age was the only demographic factor found to be statistically significant, with a negative relationship to program participation.

Gleason, B. (2014, January 11). Freeboard Revisited. North Port Sun, pp. B. https://original-ufdc.uflib.ufl.edu/AA00016616/00218.

Impending increases in flood insurance rates have received a lot of attention in recent months, but a proposed change in county building codes within the 100-floodplain could saddle homeowners with crippling costs if their homes are damaged or destroyed in a future hurricane, flood, or other disaster. The change, one of many in the draft floodplain ordinance, would require homes within the floodplain that are damaged more than 50 percent of their values to be rebuilt 1 foot above the required base elevation (i.e. freeboard). The last time the county sought to add the freeboard elevation to its floodplain ordinance was in 2003 when it was stripped from that ordinance after a local engineer raised concerns about the cost of replacing homes. Adding the freeboard elevation to the floodplain ordinance would reduce homeowners' flood insurance premiums.

Grothmann, T. & Reusswig, F. (2006). People at risk of flooding: Why some residents take precautionary action while others do not. *Natural Hazards, 38*(1), 101-120. https://www.academia.edu/10092852/People_at_Risk_of_Flooding_Why_Some_Residents_Take_Precautionary_Action_While_Others_Do_Not.

To answer the question of why some people take precautionary action while others do not, a socio-psychological model based on Protection Motivation Theory (PMT) is developed, explaining private precautionary damage prevention by residents' perceptions of previous flood experience, risk of future floods, reliability of public flood protection, the efficacy and costs of self-protective behavior, their perceived ability to perform these actions, and non-protective responses like wishful thinking. The validity of the proposed model is explored through representative quantitative telephone surveys and regression analyses and compared with a socio-economic model (including residents' age, gender, income, school degree, and being owner or tenant). Participants were 157 residents of flood-prone homes in Cologne, Germany, a city that has traditionally been subject to minor and major flood events. Results of the study show the explanatory power of the socio-psychological model, with important implications for public risk communication efforts. To motivate residents in flood-prone areas to take their share in damage prevention, it is essential to communicate not only the risk of flooding and its potential consequences but also the possibility, effectiveness, and cost of private precautionary measures.

Habib, E. H., Miles, B., Skilton, L., ElSaadani, M., Osland, A. C., Willis, E., Miller, R., Do, T., & Barnes, S. R. (2022). Anchoring tools to communities: Insights into perceptions of flood informational tools from a flood-prone community in Louisiana, USA. *Frontiers in Water*, https://www.frontiersin.org/journals/water/articles/10.3389/frwa.2023.1087076/full.

This study reports on a set of workshops that the authors conducted with various groups (citizens, city engineers and planners, realtors and builders, and media representatives) within a flood-prone community to evaluate how novel hydro informatics tools that include hydrodynamic modeling, geospatial visualization, and socioeconomic analysis can enhance understanding of flood risk and engagement in flood risk mitigation among diverse community members. The workshops were designed to help identify stakeholder preferences regarding key functionality needed for integrated hydro informatics technologies and socioeconomic analyses for flood risk reduction. The study results are focused on the following main themes and how flood tools can address them: (1) improving the understanding of flood risk and engagement in flood risk mitigation, (2) reducing the gap between individual and community risk, (3) challenges in communicating flood risk information, (4) enhancing relevance to and engagement of the community, and (5) enabling actionable information. The research demonstrates the need for community-

anchored tools and technologies that can illustrate local context, include local historical and simulated events at multiple levels of community impact, enable analyses by flood professionals while also providing simplified tools of use by citizens, and allow individuals to expand their knowledge beyond their homes, businesses, and places of work.

Hauer, M., Evans, J., & Mishra, D. (2016). Millions projected to be at risk from sea-level rise in the continental United States. Nature Climate Change, p.6. https://www.nature.com/articles/nclimate2961 .

The authors design an extrapolation model for projecting coastal populations potentially affected by sea level rise by 2100 and ascertain that, under a 1.8 m scenario, 13.1 million people will be at risk in the continental United States. The authors also suggest that population forecasts underestimate risk, and current adaptation strategies of proposed coastal infrastructure fortifications are inadequate. The researchers conclude that finding areas in which to relocate coastal communities could prove problematic with increased population growth and development in high-risk areas, as well as the exorbitant cost of relocation per resident. The study therefore looks to growth management as a more cost-effective option for adaptation but acknowledges that research in this area is lacking.

Henstra, D., & Thistlethwaite, J. (2019). Managing Urban Flood Risk: A Framework for Evaluating Alternative Policy Instruments. Centre for International Governance Innovation. Policy Brief No. 147. https://www.jstor.org/stable/resrep21056?seq=1 .

This policy brief offers a framework for city officials to evaluate flood risk management policy instruments. Its purpose is to explore trade-offs between three different policy objectives, and how the prioritization of one or more objectives over others might be suitable in different local contexts. The brief concludes with recommendations for policymakers to reduce uncertainty in selecting policy instruments for flood risk management e.g. when selecting policy instruments to implement flood risk management objectives, consider the various evaluation criteria; Recognize that there are trade-offs between resilience, efficiency, and legitimacy, and select policy instruments that are most suitable for the local context.

Hersher, B., & Sommer, L. (2020, August 26). Major Real Estate Website Now Shows Flood Risk. NPR.

https://www.npr.org/2020/08/26/905551631/major-real-estate-website-now-shows-flood-risk-should-they-all.

The article discusses how Realtor.com discloses information about a home's flood risk and how climate change could increase that risk in the coming decades, signaling a major shift in consumers' access to information about climate threats. Other websites such as Redfin, Zillow, and Trulia contrastingly do not share such information, with representatives citing home sellers fear it would decrease the value of the homes. Homeowners in these cases risk buying a property that is likely to be hit by a natural disaster over the course of a 30-year mortgage.

Highfield, W., Peacock, W., & Van Zandt, S. (2014). Mitigation planning: Why hazard exposure, structural vulnerability matter. *Journal of Planning Education and Research, 34*(3): 287-300. https://journals.sagepub.com/doi/abs/10.1177/0739456X14531828?casa_token=uqlbjFNXGOUAAAAA%3A7iEowW5S3JQNQ-_3ZXpCnPvQ5jU_AH4SM_pitBpi96oys89DajdIEOhbsaiXLOFa2TnNABKH8-SNlw.

This study finds a link between more stringent building codes and decreased levels of damage from hurricanes on Galveston Island and Bolivar, TX. The authors conducted approximately 1,500 damage assessments of single-family residential units that scaled four variables and included social vulnerability indicators (based on race/ethnicity and pre-storm assessed improvement values), to create a reliable damage index. Findings in the study area reveal that people of color experience more damage and are more vulnerable to hurricane risks than their wealthier, white counterparts, although not due to living in riskier areas. The authors determine that, in the study area, wealthier populations had increasingly settled in higher risk areas, but where homes were newer and had been built to stricter codes and more mitigation efforts were in place. Older homes built in less hazardous areas also suffered less damage from storms, particularly those with higher improvement values.

Hino, M., Burke, M. (2020). Does Information About Climate Risk Affect Property Value? The National Bureau of Economic Research. No. 26807. https://www.nber.org/papers/w26807.

This article explores how by incorporating climate risk into asset prices, markets can discourage excessive development in hazardous areas. The authors measure the effect of information about flood risk on residential property values in the United States. Using multiple empirical approaches and two decades of sales data

covering the universe of homes in the US, the authors find little evidence that housing markets fully price information about flood risk in aggregate. However, the price penalty for flood risk is larger for commercial buyers and in states where sellers must disclose information about flood risk to potential buyers, suggesting that policies to improve risk communication could influence market outcomes. The study findings indicate that floodplain homes in the US are currently overvalued, raising concerns about the stability of real estate markets as climate risks become more salient and severe.

Hollar, M. (2017). Reducing the Flood Hazard Exposure of HUD-Assisted Properties. Cityscape, 19(2), 281-300. https://www.jstor.org/stable/26328341?seq=1.

The study examines the evidence on past and predicted sea level changes and riverine flooding and establishes the Federal Flood Risk Management Standard. HUD proposed new elevation standards for its funded and assisted residential properties, due to the increased sea level and frequency of riverine flooding. The new standard also addresses issues that affect the insurance industry, including a market failure of information, asymmetric information on occupant flood mitigation efforts, and the moral hazard associated with insured properties and the assumption of governmental disaster relief.

Horn, D. (2017). 21st Century Flood Reform Act: Reforming the National Flood Insurance Program. Congressional Research Service. (H.R. 2874). https://aquadoc.typepad.com/files/crs_flood_ins_reform_act_13nov2017.pdf.

The National Flood Insurance Program (NFIP) is authorized by the National Flood Insurance Act of 1968 and was reauthorized on September 30, 2017, by the Biggert-Waters Flood Insurance Reform Act of 2012 (BW-12). The NFIP has two main policy goals: to provide access to primary flood insurance, thereby allowing for the transfer of some of the financial risk of property owners to the federal government; and to mitigate and reduce the nation's comprehensive flood risk through the development and implementation of floodplain management standards. A longer-term objective of the NFIP is to reduce federal expenditure on disaster assistance after floods. As of September 2017, the NFIP had 4.94 million flood insurance policies providing nearly $1.24 trillion in coverage, with over 22,000 communities in 50 states and 6 other jurisdictions participating in the NFIP.

Horn, D., & Webel, B. (2019). Private Flood Insurance and the National Flood Insurance Program. Congressional Research Service.

https://www.congress.gov/crs-product/R45242:

This report describes the current role of private insurers in U.S. flood insurance and discusses barriers to expanding private sector involvement. The report considers the potential effects of increased private sector involvement in the U.S. flood market, both for the NFIP and for consumers. It further outlines the provisions relevant to private flood insurance in the House and Senate NFIP reauthorization bills.

Indaco, A., Ortega, F., & Taşpınar, S. (2019). The Effects of Flood Insurance on Housing Markets. Cityscape, 21(2), 129-156. www.jstor.org/stable/26696379

The authors analyze the role of flood insurance in the housing markets of coastal areas. The study assembled a parcel-level dataset of the universe of residential sales for two coastal urban areas in the United States—Miami-Dade County (2008–15) and Virginia Beach (2000–16)—matched with FEMA flood maps. The authors compare trends in housing values and sales activity among properties on the floodplain, as defined by the NFIP, relative to properties located elsewhere within the same area. Despite the heightened flood risk in the past two decades, they do not find evidence of divergent trends. Additionally, the study analyzes the effects of the recent reforms to the NFIP. The study findings reveal that flood insurance reform has the potential to affect housing values and, hence, shape households' location decisions.

Insurance Information Institute. (2022). Facts + Statistics: Hurricanes. Malvern, PA. https://www.iii.org/fact-statistic/facts-statistics-hurricanes

This resource provides facts and summary statistics, presented in table form, of insured losses in dollars for the top 10 costliest hurricanes in the United States when they occurred and in 2024 dollars adjusted for inflation. According to Aon, Katrina was the costliest hurricane on record, causing $65 billion in insured losses in 2005, including losses from the National Flood Insurance Program (NFIP). Losses from Katrina totaled $104.5 billion in 2024 dollars.

Jacobs, D. (2019, November 5). Louisiana Officials Debate House Elevation Standards. New Orleans City Business. https://neworleanscitybusiness.com/blog/2019/11/05/louisiana-officials-debate-house-elevation-standards/

Louisiana should enact stricter home construction standards to mitigate flood risk, but as mentioned by an industry expert, this would make houses unaffordable for

the middle class. Cindy O'Neal, state floodplain management coordinator highlighted that building above the base flood elevation reduces risk and flood insurance costs. The adoption of new standards needs to be statewide, otherwise developers would just move to build in the cheaper parishes. Jerry Passman, a representative of the Louisiana Home Builders Association pointed out how expensive and unattainable the new home values would be for middle-class citizens.

James, A. (Nov. 23, 2020). FEMA releases new National Risk Index measuring natural disaster risk, vulnerability. WPDE. https://wpde.com/news/local/fema-releases-new-national-risk-index-measuring-natural-disaster-risk-vulnerability.

The National Risk Index is a new resource that helps illustrate communities most at risk from natural hazards. This online mapping application analyzes risk factors from 18 natural hazards. Additionally, to provide a holistic view of community risk, the application includes expected annual losses, social vulnerability, and community resilience layers. This release makes the underlying data available for use by state, local, tribal, and territorial partners. The interactive mapping tool can help communities, especially those with limited flood mapping and risk assessment capabilities, better prepare for natural hazards by providing standardized risk data for mitigation planning and an overview of multiple risk factors. This data can help in developing a FEMA-approved hazard mitigation plan to help increase community resilience.

Javeline, D., and Kijewski-Correa, T. (2019). Coastal homeowners in a changing climate. Climatic Change, 152(2), 259–274. https://doi.org/10.1007/s10584-018-2257-4.

The article examines a methodology to measure a home's level of structural vulnerability to hurricanes. They create three new standardized indices to represent home protection, homeowner action to achieve that level of protection, and homeowner intention to mitigate structural vulnerabilities in the near future. Given that homeowners in most vulnerable coastal areas are currently not required to upgrade structural features in preparation for intensified climate hazards, identifying motivators of voluntary homeowner risk reduction is critical for coastal adaptation. The author's findings suggest that many homeowners lacked knowledge about the specific structural vulnerabilities of their homes and that affordability of structural mitigation actions was a limited factor in influencing the decision to take further action.

Johnson, D., Fischbach, J., & Ortiz, D. (2013). Estimating Surge-Based Flood Risk with the Coastal Louisiana Risk Assessment Model. Journal of Coastal Research, 109-126. https://www.jstor.org/stable/23486540?seq=1.

This study examines the Coastal Louisiana Risk Assessment model (CLARA) that was designed to facilitate comparisons of current and future flood risk under a variety of protection system configurations in a wide range of environmental, operational, and economic uncertainties. It builds on previous studies of coastal risk by incorporating system fragility and a larger number of future scenarios than previously analyzed. Flood depths and direct economic damage from a wide range of simulated storm events are aggregated to produce a statistical summary of coastal risk under different assumptions about future conditions.

Jones, C., Coulbourne, W., Marshall, J., & Rogers, S. (2006). Evaluation of the National Flood Insurance Program's Building Standards. American Institutes for Research. https://www.fema.gov/sites/default/files/2020-07/fema_nfip_eval_building_standards.pdf

The study evaluates design and construction requirements, with particular emphasis on the damages prevented by those minimum requirements, and the costs and benefits of modifying the minimum requirements to reduce building damages during flooding. The study found that the cost of adding freeboard or installing a more flood-resistant foundation at the time of construction is modest but the benefit of doing so can be great, particularly in coastal areas subject to wave effects and riverine floodplains with small flood hazard factors.

Jorgensen, J. (2013, January 29). FEMA Remaps East and South - Big Implications for Borough Homeowners in New Base Flood Elevations. Staten Island Advance, pp. A01. https://www.silive.com/news/2013/06/new_fema_flood_zone_maps_show.html.

Building to the Advisory Base Flood greatly reduces the chances of being impacted by another storm. Another reason is the reduction in insurance premiums because of reduced flooding risk. Homeowners who choose to remain below the base flood elevation can expect a financial hit when new maps are adopted.

Knowles, A. (2020, October 8). Want to Reduce Virginia's Flooding Problem? There's a Tool for That. Dogwood, Environment. https://vadogwood.com/2020/10/08/want-to-reduce-virginias-flooding-problem-theres-a-tool-for-that/.

The Virginia Department of Conservation and Recreation created the Virginia Flood Risk Information System as a tool to help communities, real estate agents, property buyers, and property owners discern an area's flood risk. Users are able to upload shape files and download flood insurance studies and flood risk reports. Angela Davis, a certified floodplain manager recommended the tool to drive conversations on areas of mitigation interest, large-scale flood-control infrastructure projects, and targeted outreach.

Kousky, C., & Shabman, L. (2015). *Understanding flood risk decision-making: Implications for flood risk communication program design*. Rochester, NY: Social Science Research Network. https://media.rff.org/documents/RFF-DP-15-01.pdf.

The study examines floodplain land-use decisions made by individuals in households, businesses, and local governments. Whatever the venue, the decisions made are the outcome of multiple interacting influences, with one being the consideration of flood risk. The goal of a flood risk communication program is to improve the understanding of flood risk among those making decisions. An alternative goal is to change the decisions made. Understanding how individuals make decisions and the mental strategies they employ, as well as understanding the larger context of decision-making, will contribute to better defining the goals of a flood risk communication program and then designing a program that will secure those goals.

Larson, L., and Plasencia, D. (2001). No Adverse Impact: A New Direction in Floodplain Management Policy. Natural Hazards Review Volume 2 Issue 4. https://ascelibrary.org/doi/abs/10.1061/(ASCE)1527-6988(2001)2:4(167).

This study explores federal policies that have encouraged at-risk development with insufficient consideration of flood impact. The study goes into how policies justified flood control projects based on a benefit-to-cost ratio that favors an intensification of land uses and engendered an unhealthy reliance on federal resources by state and local governments. Although freeboard is an essential strategy for minimizing the potential of flooding to new construction, it does little to address the potential for induced flood damage to existing structures in or near the floodplain. The authors propose a new no adverse impact floodplain approach that shifts the focus from the techniques and standards used for flood-prone development to how adverse impacts resulting from those land use changes can be planned for and mitigated. The proposed policy promotes fairness, responsibility, community

involvement and planning, sustainable development, and local land use management, while not infringing on private property rights.

Lavigne, L., & Mitchell, S. (2021). *The Cost-Benefit of House Elevation in Flood-Prone Areas: Evidence from the Gulf Coast. Journal of Flood Risk Management*, 14(2), e12667. https://doi.org/10.1111/jfr3.12667.

Through the use of the Theory of Planned Behavior (TPB), this study investigates the factors that influence the intention of homeowners to mitigate. The study used surveys that were sent to a random sample of 2,500 coastal North Carolina homeowners. Binary logistic regression was used to compute homeowners' intention to adopt eight separate mitigation actions for their homes. The findings show limited support for the influence of emotion and risk perception on the intention to mitigate. The findings, however, indicate relationships between intention to mitigate and the influence of others. These findings provide insights into future mitigation policies and adaptation of voluntary programs.

Louisiana Coastal Protection and Restoration Authority (CPRA). (2022). *Coastal Master Plan 2023 Update.* Baton Rouge, LA. https://coastal.la.gov/

This document provides an updated strategic plan for Louisiana's coastal restoration and protection, detailing measures to address erosion and flood risks in the state's southwestern parishes.

Louisiana Coastal Protection and Restoration Authority (CPRA). (2023). *Louisiana's Comprehensive Master Plan for a Sustainable Coast*. Baton Rouge, LA. https://cims.coastal.louisiana.gov/outreach/factsheets/Parishes/parish_factsheet?parish=Calcasieu.

This document outlines Louisiana's ongoing efforts to protect and restore the coastal ecosystems, with a focus on reducing flood risks in the state's vulnerable southwest parishes.

Louisiana Floodplain Management Association (LFMA). (n.d.). *Flood Risk Management and Community Engagement in Louisiana: Focus Groups and Qualitative* LFMA.

LFMA provides resources on floodplain management in Louisiana, promoting community engagement through workshops and qualitative research methods like focus groups to capture local perspectives on flood risk and mitigation strategies.

Louisiana State Uniform Construction Code Council (2018). U.C. Codes Amendments. https://lsuccc.dps.louisiana.gov/codes-and-standards/

This resource provides a list of uniform construction codes as well as the successive amendments as provided by the Louisiana State Uniform Construction Code Council. The primary function of the council is to review, amend, and adopt the state uniform construction code, provide training and education of code officials, and accept all requests for amendments to the code, except the Louisiana State Plumbing Code [Part XIV (Plumbing) of the State Sanitary Code]. The council establishes the requirements and process for the certification and continuing education of code enforcement officers, code enforcement inspectors, third-party providers, and building officials and determines whether amendments to the state uniform construction code are justified. If the council determines that an amendment is justified, it enacts such an amendment after finding on the record that the modification provides a reasonable degree of public health, safety, and welfare.

Louisiana State Uniform Construction Code Council. (2017, February). Regular Meetings. Louisiana State Uniform Construction Code Council. Baton Rouge, LA. https://dpsweb.dps.louisiana.gov/lsuccc.nsf/Type.

The local jurisdictions support the council's decision to remove freeboard from the code and leave the decision-making to the local jurisdictions and floodplain managers. Most of the opposition originates from outside parties and other states. Mr. Metcalf noted that, even with the opposition, and the letters being received, FEMA's (NFIP) National Flood Insurance Program designates the decision-making on freeboard to the local levels. Mr. Joiner stated that the council's decisions had undergone scrutiny to ensure they were aligned with the best interests of the citizens of Louisiana. This was confirmed during conversations with FEMA representatives. Although the council is not required to attend the public hearings, it does have to consider "all" the comments that are presented before voting on whether or not to change the decision to remove Freeboard from the 2015 IRC.

Manning-Broome, C., Jenkins, P., & Dubinin J. (2015). View from the Coast: Local Perspectives and Policy Recommendations on Flood Risk Reduction in South Louisiana. The Center for Planning for Excellence. https://static1.squarespace.com/static/536d55f1e4b07afeea8cef61/t/589b56542e69cf66eee7102d/1486575239051/Coastal_06102015.pdf.

The study examines local perspectives and projects from across coastal Louisiana related to nonstructural flood risk reduction. The report discusses federal, state, and local level decision-making and policy implementation while documenting community-level risk-reduction perspectives towards nonstructural efforts to build resilience against coastal impacts such as recurrent flooding, sea level rise, and storm surge. The research found that local communities in coastal Louisiana perceive a growing disconnect between themselves and the State regarding their various efforts to reduce risk. It also revealed locals' frustration at trying to make state and federal programs work well for them, and their perceived inability to coordinate nonstructural efforts, both locally and regionally. Interview participants noted that because the FIRMs are periodically updated to reflect new risks, it is important to add freeboard to stay ahead of elevation requirements. Doing so reduces uncertainty about meeting elevation requirements and thus risking insurance premium increases if the BFE changes on revised FIRMs.

Miller, J. (2018). Credit Downgrade Threat as a Non-regulatory Driver for Flood Risk Mitigation and Sea Level Rise Adaptation. Master of Environmental Studies Capstone Projects. 73. https://repository.upenn.edu/mes_capstones/73.

The author explores the federal policies and regulations with higher standards that respond to flood risk and sea level rise that are being rolled back by the current administration. In that void, the threat of credit rating downgrades is expected to be a developing non-regulatory driver to future risk planning and adaptation. Credit rating agencies in the last few years have issued publications giving some notice on how climate change is to be considered in municipal credit ratings. Municipalities that do not engage now in addressing the threats associated with climate change may have to increase taxes to offset the increased bond return demanded by investors.

Mobley, W., Atoba, K., and Highfield, W. (2020). Uncertainty in Flood Mitigation Practices: Assessing the Economic Benefits of Property Acquisition and Elevation in Flood-Prone Communities. Sustainability 12-2098. https://www.mdpi.com/2071-1050/12/5/2098.

This study looks into how decision-makers decide on the financially optimal approaches for hazard mitigation when faced with data accuracy limitations. Their results indicate that the amount budgeted for mitigation and how those funds are allocated directly influence the selection of the most economically viable mitigation

practices. The research also contributes to the growing need for evaluating specific flood mitigation strategies.

Mostafiz, R. B., Bushra, N., Rohli, R. V., Friedland, C. J., & Rahim, M. A. (2022). Present vs. future property losses from a 100-year coastal flood: A case study of Grand Isle, Louisiana. *Natural Hazards*, 113(2), 797-818. https://www.frontiersin.org/journals/water/articles/10.3389/frwa.2021.763358/full.

This study shows present pluvial flood depth and the contributions of additional coastal subsidence and ESLR toward future (2050) pluvial flooding. Then, current tropical storm-induced storm surge and future storm surge depth modeled by Louisiana's Coastal Protection and Restoration Authority (CPRA) under climate change scenarios are presented. Present and future 100-year pluvial flood and storm surge losses to structures and their contents are estimated at the individual building level for Grand Isle, Louisiana, a barrier island town of ecological, economic, historical, recreational, cultural, and aesthetic treasure. Results suggest that the average 100-year pluvial flood depth in buildings will increase by 1.35 feet by 2050, with subsidence contributing over 82% of this total. Outcomes from this study will offer a more realistic risk assessment model and will direct flood risk managers, property owners, and other stakeholders to build a comprehensive framework to minimize future flood risk in one of the most vulnerable sites in the U.S.A. to coastal flooding.

Moudrak, N., & Feltmate, B. (2017). Preventing Disaster Before It Strikes: Developing a Canadian Standard for New Flood-Resilient Residential Communities. Prepared for Standards Council of Canada. Intact Centre on Climate Adaptation, University of Waterloo. https://www.intactcentreclimateadaptation.ca/recent-reports/preventing-disaster-before-it-strikes-developing-a-canadian-standard-for-flood-resilient-residential-communities/.

This report profiles 20 best practices to be incorporated into the design and construction of new flood-resilient residential communities in Canada. Ensuring that new communities are built under the direction of these practices is necessary to combat ever-worsening extreme weather that, if not addressed, will result in costly flood damage. Incorporating freeboard in floodplain mapping may be helpful to account for uncertainty when a quantitative approach to assessing the flood impacts is not feasible. Some stakeholders noted that factors of safety could take the form of buffers from the floodplain.

Municode. (2020). Code of Ordinances Parish of Jefferson, Terrebonne, St. Tammany, Ascension, and Baton Rouge. https://library.municode.com/la.

This resource highlights freeboard codes in the parishes (e.g. design flood elevation, and advisory base flood elevation). Most of the Southern Louisiana parishes define a freeboard as an additional amount of height above the base flood elevation.

National Association of Realtors. (2020). Flood Factor Frequently Asked Questions. https://narfocus.com/billdatabase/clientfiles/172/21/4130.pdf.

NAR has developed a frequently asked questions sheet to help members handle questions from customers about Flood Factor data. Flood Factor is a flood risk visualization tool from the First Street Foundation that is now accessible via an interactive experience on realtor.com. Flood Factor provides comprehensive flood risk information for each property, including a score ranging from 1 (minimal risk) to 10 (extreme risk) as determined by the cumulative likelihood and potential depth of flooding over the next 15-30 years.

O'Connell, J., & Justus Stacey (2009). Effectively Managing Coastal Floodplain, Development. Sea Grant. https://repository.library.noaa.gov/view/noaa/39945/noaa_39945_DS1.pdf.

This study provides scientific and technical information, incorporated into specific bylaw language, to consider when implementing many progressive coastal floodplain management practices. They put forward adding freeboard as a cost-effective approach that can lead to substantial reductions in flood insurance premiums, significantly decreasing the chances a structure will be damaged by storms and flooding and help protect against relative sea level rise. Additionally, increasing elevation by providing freeboard provides an added margin of safety to address the flood modeling and mapping uncertainties associated with FIRMs. FEMA's Community Rating System also gives credit and thus reduces flood insurance premiums for communities that incorporate freeboard into floodplain building standards.

Paille, M., Reams, M., Argote, J., Lam, N. S. N., & Kirby, R. (2016). Influences on adaptive planning to reduce flood risks among parishes in South Louisiana. Water, 8(2), 57. https://www.mdpi.com/2073-4441/8/2/57.

The NFIP encourages local collective action by offering reduced flood insurance premiums for individual policyholders of communities where suggested risk-reducing measures have been implemented. This preliminary analysis examines the

extent to which parishes (counties) in southern Louisiana have implemented the suggested policy actions and identifies key factors that account for variation in the implementation of the measures. More measures implemented result in higher CRS scores. Potential influences on scores include socioeconomic attributes of residents, government capacity, average elevation, and past flood events. The results of multiple regression analysis indicate that higher CRS scores are associated most closely with higher median housing values. Furthermore, higher scores are found in parishes with more local municipalities that participate in the CRS program. The number of floods in the last five years and the revenue base of the parish do not appear to influence CRS scores. The results shed light on the conditions under which local adaptive planning to mitigate increasing flood risks is more likely to be implemented and offer insights for program administrators, researchers, and community stakeholders.

Penix, M. (2006, July 20). Jefferson Parish adopts FEMA Elevation Guidelines. New Orleans City Business. https://www.fema.gov/case-study/jefferson-parish-elevation.

Jefferson Parish became the first parish in the state to adopt federal guidelines on how to elevate homes, a move that will force at least 900 homeowners to raise their houses at least 3 feet above the base flood elevation. The Parish Council adopted the Federal Emergency Management Agency guidelines under the threat that residents would not receive assistance if they did not rebuild using the standards. Home builders oppose the adoption of the FEMA building standards, claiming there is no reference point for the new base elevation and that the added cost could be prohibitive to some homeowners.

Perez, A. (2020, August 26). Realtor.com Announces New Flood Risk Tool. National Association of Realtors, Washington Report. https://www.nar.realtor/washington-report/realtor-com-announces-new-flood-risk-tool.

Realtor.com rolled out a new property listing feature called Flood Factor; an online flood risk visualization tool developed by the First Street Foundation. Realtor.com is the first to integrate a feature like this, allowing consumers to access comprehensive flood risk information specific to each property, including the FEMA flood zone and a risk score. Flood Factor supports NAR policy to provide accurate flood mapping with full transparency and disclosure. Because FEMA flood maps cover only the high NFIP population areas along major rivers and some of the coast, many consumers could be buying or selling a home in harm's way and not know.

Powell, A. (2006, August 26). Parish Weighing Base Flood Elevations - Many Home Builders Vehemently Opposed. Time Picayune. https://www.crt.state.la.us/Assets/OCD/hp/uniquely-louisiana-education/Disaster-Recovery/The%20History%20of%20Building%20Elevation%20in%20New%20Orleans%2012-21-12.pdf.

To qualify for about $2.2 million in hazard mitigation funds, St. John the Baptist parish needs to adopt the Federal Emergency Management Agency's advisory base flood elevation guidelines. Local home builders are against the guidelines, describing them as illogical, arbitrary, and incorrect. Although not mandated by law, it is strongly advised that local governments adopt the guidelines. Homebuilders fear that the guidelines will stall the booming residential development. St John Councilman sided with the homeowners and builders.

Rivera, J. D., & Knox, C. C. (2021). *Focus group administration in disaster research: Methodological transparency when dealing with challenges. Journal of Emergency Management*, 19(4), 255-264. https://journals.sagepub.com/doi/10.1177/028072701903700301?icid=int.sj-abstract.citing-articles.40.

This paper seeks to provide an overview of how disaster scholars are discussing their focus group methods and processes. Focus groups are a cost-effective and efficient methodological approach to generating data on disaster victims' experiences. However, their administration is fraught with a number of challenges. Although the challenges faced by researchers are known to those that practice this data acquisition technique, the obstacles and the strategies for overcoming them are not well documented in the literature. This lack of transparency leaves focus group studies, as rigorous as they may be, open to questions of validity and replication. Examples from the disaster literature are provided from a sample of articles published in Disasters and Natural Hazards between 2005 and 2018. By being more transparent about the challenges of conducting focus groups, disaster researchers using this technique can produce higher-quality studies that are more rigorous and replicable.

Robadue, D. (2019). Understanding resistance to resilience in coastal hazards and climate adaptation: three approaches to visualizing structural and process obstacles, opportunities and adaptation responses. 10.24251/HICSS.2019.368. https://www.researchgate.net/publication/332085250_Understanding_resistance_to_resilience_in_coastal_hazards_and_climate_adaptation_three_approaches_to_vi

sualizing_structural_and_process_obstacles_opportunities_and_adaptation_responses.

This research examines the conditions that hinder or facilitate coastal resilience efforts and the dynamic engagement of stakeholders in Rhode Island. It employs fifty years' worth of information on hazard events, studies, plans, and policies to reveal patterns of decision-making related to coastal resilience and trace stakeholder engagement. The study found significant barriers to the adoption of appropriate mitigating behaviors which included, decision-makers lacking a full understanding of the threats faced, conflicting incentive structures that create counterproductive behaviors or otherwise impede coordination among groups, and the fact that established patterns of behavior are difficult to overcome. The article asserted that structural, financial, and institutional sources of resistance to resilience remain and continue to be difficult to address.

Roberts, D. (2006, April 24). Elevation guidelines Present Costly Homeowner Quandary. New Orleans City Business. https://www.proquest.com/docview/209569286?sourcetype=Trade%20Journals

According to the federal government, housing elevation guidelines will save property owners money on flood insurance, which FEMA agrees with and recommends to homeowners. The real estate community, however, feels like the guidelines will price people out of the market and destroy the appearance of New Orleans neighborhoods. Randy Noel, state representative for the National Association of Home Builders, pointed out that the cost of building a home has gone up by as much as 24 percent since Katrina and will rise even further if new homes must be 3 feet off the ground. These costs will ultimately be passed on to the buyer. Pricing home buyers out of the market is the biggest concern. Additionally, tall flights of stairs will inconvenience elderly members of the community.

Rogers, S., Tanski, J., and Carey, W. (2012). Win-Win Climate Change Adaptation Strategies: Lessons Learned From Sea Grant Coastal Processes and Hazards Programming. Sea Grant UNC-SG-12-06. https://ncseagrant.ncsu.edu/ncseagrant_docs/products/2010s/win_win_climate.pdf.

This study explores the science and timeline limitations of climate change and sea-level rise as justifications for implementing adaptation actions. Several adaptation actions already in common application are described, including financial incentives to encourage implementation. As an example, freeboard is one of the more

important adaptation actions that yields immediate results and has been proven to make buildings safer and communities more resilient. The best way to make a convincing case to reduce risks is to describe all of the available justifications that apply to the decision-maker, starting with the most immediate and local focus. The authors encourage a strategy for individual and community adaptation actions using coastal climate change and sea-level rise as the sole or even primary justification.

Rollason, E., Bracken, L. J., Hardy, R. J., & Large, A. R. G. (2018). Rethinking flood risk communication. *Natural Hazards, 92*, 1665-1686. https://doi.org/10.1007/s11069-018-3273-4.

The authors argue that current strategies for flood risk communication in Europe have not succeeded in raising awareness or changing behavior. To improve flood risk communication, the authors conducted a study with members of a local flood action group in Northern England, discussing how flood risk communication is received and acted upon by end users, what information end users want and need, and how that information can be best presented to promote resilience. The authors found that members of the flood action group felt that flood maps and advance warnings were of limited use because they didn't help residents evaluate the severity of a specific flood event, communicate an understanding of the flood risk in real-time, or contribute to resident's understanding of flood dynamics. The authors conclude that flood risk communication should involve a participatory process with both flood risk communicators and community members, to ensure that flood risk communications provide information that is useful and desired by residents, in a way that is easy for them to understand.

Ruppert, T., & Deady, E. (2017). Climate Change Impacts on Law and Policy in Florida. Florida's Climate: Changes, Variations, & Impacts. FSU. Libraries. https://fsu.digital.flvc.org/islandora/object/fsu%3A539158/.

The authors research how climate change and sea level rise have made obsolete the notion that law and policy develop in the context of a relatively stable natural environment. The need for communities to adapt to climate change and sea level rise reflects the need for laws and policies governing those communities to facilitate rather than undermine such adaptation. The authors provide an overview of law and policy issues at three levels of government (i.e., state, local, and federal), highlighting changes in state law and policy in Florida that relate to climate change and sea level rise. They find that the will for mitigation regulation may be politically challenging at the local level. Without strong mandatory regulation from the state or federal level, local governments will choose not to address the mitigation

challenges. Additionally, incrementally providing local governments with tools to address these issues within the state's code or law provides a basis for doing so for those who want to and allows greater local control and self-determination.

Sandink, D. (2009). Urban Flooding Homeowner Hazard Perceptions and Climate Change. Public Sector Digest. p. 35-39. https://www.iclr.org/wp-content/uploads/PDFS/urban-flooding-homeowner-hazard-perceptions-and-climate-change-public-sector-digest.pdf.

This study examines how stormwater management infrastructure in Canada has traditionally been designed with the assumption that weather and climate conditions are static, and historical climate conditions can be used to accurately predict the future climate. The author explores how studies have also revealed a high reliance on the government for flood protection, and that often the blame for damages caused by natural hazards is placed on governments, rather than extreme natural events or on those who choose to occupy hazard-prone areas. These barriers of low public awareness will have to be overcome to effectively engage homeowners in urban flood risk reduction. Homeowner-level flood mitigation programs are discussed, which include education components as well as financial assistance through partial subsidies for homeowner-level urban flood reduction.

Schwartz. J (2018, March 23). National flood Insurance is Underwater Because of Outdated Science. Scientific American, Env. https://www.scientificamerican.com/article/national-flood-insurance-is-underwater-because-of-outdated-science/.

The FEMA program will continue to be financially unviable until it incorporates the latest research to help remedy the broken system. FEMA is trapped in a downward spiral with claims ballooning and not enough resources to cover them. The program has been unable to sustain the amount of claims since Hurricane Katrina in 2005. Among the major reasons why the NFIP cannot keep up with the growing number of claims is that it assesses risk based on outdated research. Thomas Wahl, a coastal engineer and oceanographer at the University of Central Florida, points out the fact that FEMA's maps do not connect inland flooding and coastal flooding. Incorporating recent research into the NFIP could help establish a framework for identifying which properties and communities are most vulnerable to repetitive flooding and create more efficient standards.

Skilton, L., Osland, A. C., Willis, E., Habib, E. H., Barnes, S. R., ElSaadani, M., Miles, B., & Do, T. Q. (2022). We don't want your water: Broadening community understandings of and engagement in flood risk and mitigation. *Frontiers in Water*, 4, 1016362.

https://www.frontiersin.org/journals/water/articles/10.3389/frwa.2022.1016362/full.

Using focus groups, this study delves into better understanding the disconnect between individual and community perceptions of flood risks, and how emerging hydro informatics tools can bridge these gaps. Using qualitative analysis, this study evaluated the resources individuals use to learn about flooding, how individuals define flooding and its causes, how definitions of community impact flood mitigation efforts, and where gaps in knowledge exist about flood mitigation efforts. This research demonstrates that individuals conceive of flooding in relationship to themselves and their immediate circle first. The study revealed a division within the community in how individuals think about the causes of flooding and the potential solutions for reducing flood risk. Based on the results, the authors argue that helping individuals reconceive how they think about flooding may help them better appreciate the flood mitigation efforts needed at individual, community, and regional levels. Additionally, they suggest that reducing gaps in knowledge about mitigation strategies and broadening how individuals conceive of their community may deepen their understanding of flood impacts and what their community can do to address potential challenges.

Sommer, L. (2020, October 21). Millions of Homes are at Risk of Wildfires, but It's Rarely Disclosed. NPR, Special Series: Climate Risk Hits Home. https://www.npr.org/2020/10/21/924507691/millions-of-homes-are-at-risk-of-wildfires-but-its-rarely-disclosed?ft=nprml&f=1007.

Homebuyers being informed about hazard risk can spell the difference between saving or losing a home. 29 states require flood disclosure, flood plain, and insurance costs information in the residential real estate industry. Federal FIRM has been available since the 1970s to help homebuyers and homeowners understand their flood risk. For communities to be prepared for future potential hazards, policymakers need to provide individuals with risk assessment information to facilitate better-informed decisions.

Stole, B. (2018, November 30). Congress Extends NFIP Through November 30. Louisiana Realtors, Advocacy. https://www.larealtors.org/publications/2018/8/6/congress-extends-nfip-through-november-30.

The article updates the NFIP federal program short-term extension in Congress, which underwrites most flood insurance coverage in the country and covers a half-

million Louisiana homes. Politicians from flood-prone areas like Louisiana have insisted on measures that keep premiums affordable for homeowners while critics of the program have targeted what they see as overly generous subsidies that encourage development and repeated payouts in high-risk areas. The NFIP is an important factor in the real estate market in flood-prone areas.

Susskind, L. (2010). Responding to the risks posed by climate change: Cities have no choice but to adapt. Liverpool University Press. https://www.jstor.org/stable/40660723.

The author explores how coastal areas around the world need to pay close attention to the risks posed by global warming and climate change, suggesting that planners should take the lead in preparing climate mitigation and adaptation plans. They argue that adaptation planning, in particular, should be viewed as a collective risk management task and as such, new tools for collaboration such as scenario planning, joint fact-finding and the use of role-play simulations to build public support in the face of high levels of uncertainty and complexity might be helpful.

Sussman, E., Major, D. C., Deming, R., Esterman, P. R., Fadil, A., Fisher, A., ... & Smith, J. (2010). Climate change adaptation: fostering progress through law and regulation. *NYU Envtl. LJ*, *18*, 55. https://heinonline.org/HOL/Page?handle=hein.journals/nyuev18&div=7&g_sent=1&casa_token=nu0f3zfy1w8AAAAA:xkw0ERcSFJ_pQt0XDYl86c1e4oUUCxb0TaGOno5X-4FLtrvnsLqd3eQq-EjHdkE7ujK25BU7h4s&collection=journals.

Precipitation, flooding, and stormwater management are problems that demand correct and periodically updated information, including flood hazard and topographical maps. These maps should be based on future predictions, not just historical data regarding areas vulnerable to flood hazard and sea level rise so they may guide planners' decisions regarding the appropriate zoning districts and regulations needed to reduce flooding and mitigate the impacts of climate change. The Zoning Resolution could provide additional flexibility for buildings in flood-prone areas to provide freeboard and additional elevation of the finished floor level above the FEMA Base Flood Elevation (BFE) levels. Currently, for buildings in flood zones within most districts, the base plane from which building heights are measured is established at the FEMA BFE. Buildings providing freeboard can earn discounts on their flood insurance; however, they are subject to the same zoning height limits as buildings that do not. Allowing additional height commensurate with the freeboard provided would eliminate this disincentive for improved flood resistance.

Taeby, M., & Zhang, L. (2019). Exploring Stakeholder Views on Disaster Resilience Practices of Residential Communities in South Florida. *Natural Hazards Review*, *20*(1). https://doi.org/10.1061/(ASCE)NH.1527-6996.0000319.

This study provides both theoretical and empirical insights on the importance and implementation of community disaster resilience practices from the stakeholder's perspectives. The authors focus on identifying the disaster resilience practices in residential communities and analyzing stakeholder views on the importance and implementation of these practices in South Florida. The study aimed to address the need to engage multiple stakeholders in collaboratively creating and facilitating the disaster resilience of residential communities to prevent ineffective, time-consuming, costly, and conflict-prone disaster resilience decisions. The results showed that, the identified resilience practices were highly important, but only moderately implemented. The results also showed that, for a considerable number of resilience practices, there was a significant difference in the ranks of importance and implementation of the practices between different stakeholders. In addition, stakeholder views on the importance and implementation of the resilience practices were affected by factors such as stakeholders' ages, regions, types of dwellings in which they live, and the occurrence of the disaster.

Taghinezhad, A. (2019). Costs and Benefits of Flood Mitigation in Louisiana. PhD Thesis, Louisiana State University. https://digitalcommons.lsu.edu/cgi/viewcontent.cgi?article=5818&context=gradschool_dissertations.

This Ph.D. thesis explores how assessing the costs and benefits of hazard mitigation efforts is an essential component of disaster management, planning, and resilience assessment. This study aims to provide an improved understanding of the costs and benefits of flood mitigation efforts in Louisiana funded by federal government grants between 2005 and 2015. Elevation project cost was investigated for prediction by statistical modeling. Benefit analysis was then conducted by quantifying the avoided loss achieved through mitigation for discrete events. The data imputation study revealed that statistical methods can impute missing pre- and post-mitigation first-floor elevation values. The mitigation project cost study revealed that, due to the accommodation of a wide range of building types, the statistical modeling of the mitigation project cost is superior to the current mitigation cost guidelines.

The Appraisers Association of America. https://www.appraisersassociation.org.

With a membership of over 900 independent appraisers and affiliated professionals in 100 different areas of specialization, the Appraisers Association's roster of well-established professionals holds the widest range of experience and expertise in their respective fields. Many members are either former curators at major museums or heads of departments at auction houses. The members work with private and corporate art collections as well as partner with attorneys, accountants, museums, educational institutions, trusts, brokers, and insurance carriers to reflect the highest industry standards. The members are required to produce appraisals that are compliant with USPAP, (Uniform Standards of Professional Appraisal Practice). Members serve public and private collectors alike to deliver independent, ethical, and objective valuations for insurance, estate tax, charitable donation, equitable distribution, and liquidation purposes.

The Association of State Floodplain Managers.

https://floods.org .

Founded in 1977, the Association of State Floodplain Managers is a 501(c)(3) scientific and educational nonprofit organization dedicated to reducing flood loss in the nation. It accomplishes this mission by educating policymakers on sound floodplain management policies and practices; improving the knowledge of floodplain managers through the Certified Floodplain Manager (CFM) certification program; delivering ongoing professional development and training events; conducting applied research, promoting emerging technologies, and developing tools that address all aspects of flooding and floodplain management; and increasing international awareness on flooding and flood loss reduction.

The Louisiana Home Builders Association.

https://lhba.org/ .

The goal of LHBA is to provide Louisiana with quality housing that is safe and affordable. The board represents the homebuilding industry before state & regulatory bodies, serves as the chief advocate of private property rights, educates the general public as to the advantages of utilizing licensed builders, and promotes professionalism in the homebuilding industry.

The Louisiana Realtors.

https://www.larealtors.org/ .

Louisiana Realtors (LR) is a member-based trade association established to assist its members in the business of real estate in Louisiana. LR represents its membership on important real estate-related issues to the state and federal

government while providing legal assistance, professional development opportunities, discounts, and other unique services for its membership. Real estate licensees who join a local Member Board of Realtors become members of the state association and the National Association of Realtors.

The National Association of Home Builders.
https://www.nahb.org/.

NAHB represents the largest network of craftsmen, innovators, and problem solvers dedicated to building and enriching communities. Operating at the local, state, and national levels, the NAHB Federation helps its members gain a competitive advantage by; offering education and other resources members need to expand their businesses and achieve personal success, creating networking opportunities within a community of home-building professionals for members to build key relationships and increase their profitability, developing solutions for members' businesses through access to experts who provide insight and information, as well as improving the business environment on Capitol Hill, in state capitols and local communities by eliminating excessive regulations.

The National Association of Realtors.
https://www.nar.realtor/.

NAR, America's largest trade association, is involved in all aspects of residential and commercial real estate. Its membership is composed of residential and commercial brokers, salespeople, property managers, appraisers, counselors, and others engaged in the real estate industry. Members belong to one or more of approximately 1,200 local associations/boards and 54 state and territory associations of REALTOR.

The National Risk Index.
https://hazards.geoplatform.gov/portal/apps/MapSeries/index.html?appid=ddf915a24fb24dc8863eed96bc3345f8.

The National Risk Index is a dataset and online tool to help illustrate the United States communities most at risk for 18 natural hazards. It was designed and built by FEMA in close collaboration with various stakeholders and partners in academia; local, state, and federal government; and private industry.

The New Orleans Metropolitan Association of Realtors.
https://www.nomar.org/.

The New Orleans Metropolitan Association of Realtors (NOMAR) is a professional trade association dedicated to serving a diverse cross-section of members from all ten parishes of the Metro New Orleans area. NOMAR serves approximately 6,400 real estate professionals through the Association and Multiple Listing Service (MLS) and provides commercial brokers and agents with specialized services through the Commercial Investment Division (CID). Through the Gulf South Real Estate Information Network (GSREIN) MLS, NOMAR is also a founding member of ROAM MLS, the largest multiple listing service in Louisiana with over 12,000 Realtor members in 32 Louisiana parishes.

The Virginia Flood Risk Information System. https://www.dcr.virginia.gov/dam-safety-and-floodplains/fpvfris.

VFRIS helps communities, real estate agents, property buyers, and property owners understand an area's flood risk. By pulling together information from the Federal Emergency Management Agency (FEMA), Fish and Wildlife Service (FWS), Esri (GIS mapping software), and the Virginia Geographic Information Network, VFRIS allows users to quickly locate a property to see if it is within the Special Flood Hazard Area (SFHA).

Torabi, E., Dedekorkut-Howes, A. & Howes, M. (2017). Not Waving, Drowning: Can Local Government Policies on Climate Change Adaptation and Disaster Resilience Make a Difference? Urban Policy and Research, 1-21. https://doi.org/10.1080/08111146.2017.1294538.

This study examines how Climate change will increase the intensity, duration, and frequency of some climate-related hazards. The research takes an integrated approach to compare the climate adaptation and disaster resilience policies and plans of local governments of two low-lying coastal cities in Australia to understand whether (and how) local governments can make a difference. The findings indicate that local governments can significantly contribute to building resilience and adapting to climate-related hazards, however, a number of factors such as the attitudes of local governments on climate change, environmental activism, and the recent experiences of climate-related disasters are instrumental in shaping a better local response. Local action also needs to be supported by a more integrated approach by all levels of government.

U.S. Army Corps of Engineers (USACE). (2020). *Flood Risk Management and the Community Rating System: Elevation as a Tool for Risk Reduction*. Washington, DC. https://www.usace.army.mil/Missions/Civil-Works/Flood-Risk-Management/.

This resource provides detailed insights into how the U.S. Army Corps of Engineers integrates elevation into flood risk management practices, particularly in areas benefiting from the Community Rating System.

U.S. Army Corps of Engineers (USACE). (2020). *Louisiana Coastal Protection and Restoration (LACPR) Study Final Report.* Baton Rouge, LA: USACE. https://www.mvn.usace.army.mil/Missions/Environmental/LaCPR/.

This report presents the findings of the LACPR study, which provides a comprehensive analysis of flood control, habitat restoration, and mitigation strategies in Louisiana, focusing on long-term flood risk reduction. The Louisiana Coastal Protection and Restoration (LACPR) initiative is directly relevant to the challenges faced in Southwest Louisiana, as it focuses on flood risk reduction and coastal restoration efforts for the region. This initiative has a particular emphasis on hurricane protection, aiming to protect coastal Louisiana from storm surge, which is especially significant for areas like Calcasieu, Cameron, and Vermilion parishes. The Corps of Engineers, in partnership with the Louisiana Coastal Protection and Restoration Authority (CPRA), is working on a $6.5 billion project to elevate homes and implement flood risk management strategies, including a mix of structural and non-structural measures. This project will help to reduce risks for thousands of residents who have faced severe storm impacts from events like Hurricanes Laura and Delta.

U.S. Army Corps of Engineers. (2017). *Coastal Louisiana Comprehensive Strategy for Flood Risk Reduction and Habitat Restoration.* USACE, New Orleans, LA. https://www.usace.army.mil/Missions/Civil-Works/Projects/.

This report discusses strategies for flood risk reduction and habitat restoration in Louisiana, outlining the Army Corps' structural and non-structural mitigation measures for coastal areas.

U.S. Army Corps of Engineers. (2023). *Southwest Coastal Louisiana Risk Reduction Feasibility Study*. Baton Rouge, LA. https://www.mvn.usace.army.mil.

This feasibility study by the U.S. Army Corps of Engineers focuses on flood risk reduction strategies for southwest Louisiana, including structural and non-structural mitigation measures.

U.S. Army Corps of Engineers. (2023, June 21). *Federal, State, and Local Partnership Agreement for Southwest Coastal Louisiana Recovery Efforts*.

https://www.mvn.usace.army.mil/Media/News-Releases/Article/3434433/federal-state-and-local-partnership-agreement-for-southwest-coastal-louisiana-r/.

This resource, published by the U.S. Army Corps of Engineers New Orleans District, outlines a significant partnership aimed at improving flood protection and coastal restoration in Southwest Louisiana. This partnership involves multiple levels of government, including federal, state, and local agencies, and focuses on post-disaster recovery efforts following the devastation caused by hurricanes. The initiative prioritizes elevating homes, improving infrastructure, and implementing non-structural mitigation strategies to enhance the region's resilience to future flood risks. This collaboration highlights the critical role of local involvement in the decision-making process and the importance of long-term environmental and structural recovery. The partnership agreement is central to ongoing efforts to address both the immediate and long-term needs of the region, particularly in the aftermath of hurricanes Laura and Delta, which caused significant damage in Southwest Louisiana. By working together, these agencies aim to rebuild a stronger, more resilient coastal community while enhancing the effectiveness of flood protection measures such as levees, floodgates, and wetlands restoration. This work is aligned with broader initiatives such as the Louisiana Coastal Protection and Restoration Authority's projects and the Army Corps of Engineers' flood risk management strategies across the region.

U.S. Department of Housing and Urban Development (HUD). (2016). *HUD Community Resilience Toolkit: A Guide for Addressing the Impacts of Climate Change on Low-Income Communities*. Washington, DC. https://files.hudexchange.info/resources/documents/HUD-Community-Resilient-Toolkit.pdf.

This resource provides strategies for enhancing the resilience of low-income communities to climate change impacts, with a focus on disaster preparedness, flood resilience, and climate change adaptation. It is particularly relevant to Southwest Louisiana, where low-lying areas face significant flood risks, and where vulnerable communities are disproportionately affected by climate change and environmental hazards.

U.S. Government Accountability Office (2021). *Flood Insurance and the Importance of Elevation Compliance.* GAO-21-234. Washington, DC. https://www.gao.gov/blog/can-fema-and-flood-insurance-keep-rising-tide-risks.

This report evaluates the compliance requirements for flood insurance policyholders who elevate their homes. It provides insights into financial impacts, FEMA policy, and how elevation affects insurance affordability.

United States Government Accountability Office. (2009). Climate Change Adaptation: Information on Selected Federal Efforts to Adapt to a Changing Climate. Washington D.C. https://gao.justia.com/executive-office-of-the-president/2009/10/climate-change-adaptation-gao-10-113/.

The Community Rating System (CRS) provides financial incentives for implementing practices beyond the minimum NFIP floodplain management standards. In this program, the CRS provides discounts on flood insurance premiums that range from 5% to 45%. Some CRS credits specifically require having freeboard.

United States Government Accountability Office. (2019). Climate Resilience: A Strategic Investment Approach for High-Priority Projects Could Help Target Federal Resources. Washington D.C. https://www.gao.gov/assets/710/705864.pdf.

This resource highlights code-related mitigation strategies including flood resistance, incorporating at least 1-foot freeboard into the elevation requirements to comply with the 2018 international codes.

Wilson, B., Tate, E., & Emrich, C. T. (2022). Flood recovery outcomes and disaster assistance barriers for vulnerable populations. *International Journal of Disaster Risk Reduction*, 68. https://www.frontiersin.org/journals/water/articles/10.3389/frwa.2021.752307/full.

This article synthesizes empirical knowledge of population disparities in access to flood disaster assistance and outcomes during disaster recovery. The results identify renters, low-income households, and racial and ethnic minorities as populations that most face barriers to accessing federal assistance and experience adverse recovery outcomes. The analysis explores the drivers of these inequities and concludes with a focus on the performance of disaster programs in addressing unmet needs, recognition of intersectional social vulnerabilities in recovery analysis, and gaps in data availability and transparency.

Appendix B: Examples of Responses from Practitioners and Residents

Key Informant Interviews

Challenges of SW Coastal Outreach	73
"Mr. Federal Government" -Distrust of federal programs. People do not always trust government programs. *"The best thing that we have found is people will trust local voices more than they will trust Mr. Federal government that they've never met before."*	17
Houses and People are Gone. Parts of the parishes are no longer occupied. *"I just don't know if those homes exist. I mean, you've had a complete devastation."*	16
"This is my home, and I can live with it." Residents want to stay the way they are. They believe they are resilient no matter what. *"This is my home, and I can live with it. If I want to build on grade, I'm going to build slab on grade."*	8
"Why not my street?" Residents do not understand why some properties or areas are chosen over others. *"It's disheartening whenever your neighbor got it, but you didn't. And I've heard my neighbor got this letter."*	7
Cost of Insurance Both home and flood insurance rates increased significantly. *"You can't get insurance down here. You can't get a mortgage."*	7
"Late in the game" There have been so many disasters and people have left; this project is too little too late. *"We're a little late in the game. It's all about whoever gets the funding. That is about the population. They say it's not, but it is. It's a big factor in projects getting funded and constructed."*	6

Structural Mitigation Needed Residents and practitioners would like levees or other structural mitigation rather than elevations. *"I think they do need to look for more nonstructural elevations on the inland side, more points north, and then I think they need to put in structural protection along the coast."*	6
"I Can't Do it Anymore." Some people have given up and want to move or sell their home. They have disaster fatigue. *"I can't do it anymore. I can't do it…trying to help everybody else in the parish, plus helping myself, my family. I just can't do it."*	4
Ambiguity about "It's a real deal." Participants are not sure if the opportunity is valid. *"Some people have questioned… is it a real thing? Are they really going to go through with this?"*	4
Access Issues (ADA) Fear about accessibility of elevated homes for elderly and handicapped. *"They put a 30-year life on this project of elevation. [In] 30 years, the homeowner may not be able to climb stairs."*	4
Focus on Other Issues There are other issues to focus on – drainage, maintenance, and flood protection. *"Be prepared if you have a Q & A session for people to go come with gripes and complaints about something that's completely unrelated to the topic."*	3
Lack of Community Infrastructure There is not enough infrastructure in the community to support these projects – including drainage issues. *"We can't get gas. I can't get groceries here. There's nothing."*	2
Segregated Population Residents describe a divided community. *"We still have a somewhat racially segregated community, geographically, a lot of that is some residual effects of white flight."*	2
Second Homes Some of the homes in the project region are second homes rather than primary homes. *"There are whole communities of second homes."*	1

Title/Succession Issues Some homeowners do not have access to a copy of the title for their home. *"I don't know if it's an eligible expense, but it's certainly not something we budgeted for. So, it wasn't part of our FEMA Award to pay for those legal services to clear that title."*	1
Unconsolidated Government The lack of consolidation in government can cause process issues. *"So, if you've got a property inside the city of Lake Charles, then you go to the city of Lake Charles's permitting office. If you've got a property in that incorporated area inside the parish, then you go to the parish. We're not a consolidated government, and we're certainly not at a regional level, consolidated."*	1
Successful Outreach Projects Participants were asked what a successful outreach project would look like.	**41**
Involvement of Local Officials The practitioners especially wanted the project to involve local officials at all phases of the project. *"But that's an observation that we've made with other large programs. I would imagine I would rather call someone with a 337 number and say, hey, yeah, I live over here."*	17
Social Media Participants thought social media would be a successful way to reach out. *"We don't see much reward for mailings and stuff like that. Everybody's moved to social media for up-to-date information."*	6
Successful Examples Some people thought seeing examples of other successful projects would be beneficial. *"Our communications and media team created short videos highlighting a project and they do such a good job, but they interview the homeowners...And it has that human element to it, and that's helped."*	6
Find a Local Champion Some people suggested finding a local person to champion the project. *"I think she might be the leader. I'm going to tell her about this property and just and just say, hey, do you know so and so at the corner, you know, if you see him, could you mention that we're looking to sign them up, you know? So that's something we do as well as get to know the neighborhood and the people."*	5

Door Knocking Residents thought knocking on doors would be helpful. *"I think door to door communication would be beneficial. We put ourselves out there on a smaller level, at the local level, where we go, and now we're also local. So sometimes it really does take knocking on someone's door."*	4
We Want You to Stay on Your Land People said that a successful project would emphasize that they want people to stay in their communities. *"A lot of the people that live in those rural areas are family-owned land and has been for ages, generations. So that might be the avenue that you want to use as far as we're not looking to take your land. We want you to be able to stay on your land."*	4
Case Management Participants wanted project leaders to help manage the project from start to finish. *"So, we track everybody's information through the year, and when we have an application period open up, typically in the fall of every year, we call them and just see if they want to participate and get application documents to them."*	3
Strike at the Core of the Community Participants thought outreach projects should speak to community character. *"It was a DEQ public hearing, public meeting, and we had a full house and sometimes when they're talking about the shrimping industry, we have a full house. Things that pertain to lower Cameron Parish."*	3
Regional Approach One resident thought taking a regional approach to outreach would be helpful. *"A good example is you look at Calcasieu Parish, that's 50 or so miles from the coast. Here, recently, they've given us their Hazard Mitigation money to help armor the coastline, because they realize if we lose any more, they no longer have the infrastructure to combat the forces of the Gulf and all the critical habitat around that community."*	1
Signage One practitioner thought placing signs throughout the community would help with outreach. *"I think strategic placement of some sort of advertisement, whether it be on a billboard or a mobile vehicle, to where you where it would be stationed in park with signage on the side."*	1

Important Issues of the Future Participants were asked about their thoughts about the future, and what issues could emerge.	**27**
Structural Mitigation Needed Some participants emphasized the need for levees and other protection projects in the future. *"We have to, we've got to include the lower portion of the parish to be incorporated into a protection system."*	9
Work Together Some residents underlined the need to work together as a community to combat risks in the future. *"There's just a lot of brotherly love, a lot of helping across the aisle in the aftermath of natural disaster. I would hope this is the same in most communities, but political affiliation, socioeconomic strata, religious affiliation, all that just goes out the window. It's people helping people."*	6
Cascading Disasters The cycle of disasters impacts their everyday lives on an ongoing basis. *"You just don't know what tomorrow's going to bring."*	5
Extended Case Management Some practitioners and residents thought case management of the project well into the future was needed. *"Sometimes the contractor and the program manager have a relationship, you know, that doesn't necessarily look out for the homeowner or the client, so that was the main thing. And we brought on a quality control inspector."*	4
Aging Population Practitioners and residents expressed concerns about the increasingly aging populations that remain in vulnerable areas. *"Others choose to stay because of the rich cultural history, and the ones that stay tend to be a little bit older."*	2
Industry One practitioner stated that there was a need to bring more industry into the region in the future. *"Cameron is one of the biggest LNG exporters in the world."*	1
View of the Future Participants were asked how they view the future in their communities.	**22**

"The Only Place They've Known" This quote and code refer to how important this project is for people to stay in their own home. *"It's again, seeing people living on this ridge in the afternoon, playing music underneath the tree and, eating the seafood that was caught that day, or working cattle and the beautiful pastures that once existed...enjoying the recreational opportunities on the weekend...stories that will hold forever, even if I'm not around, the stories my kids will tell, what they've been involved with, will go on forever because they'll reference that."*	8
Pursuing Funding Practitioners especially see the need for future funding. *"We went from where we were three years ago, to feeling destitute and unheard, to today, having the storm response through the disaster money finally hit the streets, and then also, we've been very aggressive in going after additional federal grants, and we've been successful, and we're going to continue to seek them."*	8
Economic Development Practitioners and residents think that there must be economic development for the area to survive. *"I want to see the community come back; I want to see it thrive. I want to see, maybe we can get some businesses in here, and maybe when, as they start seeing that, maybe we can get more residents to come back into the community."*	3
Affordable Insurance Residents would like insurance costs to be reduced. *"It's just if people are willing to come back, if they want to live closer to their job and can and can really afford the insurance."*	2
Strengths of SW Coastal Outreach	**17**
Engaging the Locals People learned about the project through local engagement. *"So, we were very much in the mix from the jump, and very appreciative of that. You know, we've got experience doing residential home elevations on a much smaller scale, but still that valuable experience, and they were very receptive to hearing what we had to say."*	8
100% Funded Residents understand that the cost to elevate their homes is completely funded through SW Coastal. "*It's 100% nothing out of pocket for them. It's just time."*	5

Flood Insurance Not Required Participants understand that flood insurance is not required to participate in the project. *"They don't have to come out of pocket, and you don't have to carry flood insurance. We're seeing a lot of people that are moving out of the parish because they cannot afford their insurance anymore."*	3
Mailings Participants received a mailing about the project. *"For the past week, those letters have started arriving, and they've been reaching back out to us."*	2
Holistic Approach Residents admire the integrated approach of the project. *"To me, they are looking at it full circle. Not just focusing on the construction and exactly how it's going to be done. They are taking that holistic approach."*	1
Knowledge of SW Coastal Residents are aware of the project.	**16**
Extended Timeline Some people commented on the length of time the project has taken to come about. *"But the problem was the plan has taken so long, and you've had these other storms that have come in, and the homes that were qualified are no longer there, so there's no longer qualifications to be met."*	6
"I've Heard Nothing About this Program." A few practitioners and residents had not heard about the program. "*Until you all contacted me, I've heard nothing about this program."*	4
View of SW Coastal Participants have an opinion on the project.	**11**
Did Not Involve Local Government Several practitioners did not think that the project involved locals. *"But they could have reached out to the local government, but they chose not to. But, you know, it's always said, who knows better than the locals?"*	7
Positive View of SW Outreach Residents had a positive view of the outreach that was conducted. *"I think the information that they've sent out, I think was good."*	3

Involvement in SW Project Participants have been involved in the project. *"We have monthly coordination meetings with the Army Corps and CPRA. We are in touch regularly."*	**9**

Focus Group 1: Calcasieu Parish

Challenges of SW Coastal Outreach	**67**
Questions about Process	50
Methodology Residents had questions about implementation methodology. *"My question is this now, being that the storms are going so heavy and so fast now and stronger, then my question is, if we agree to this project and storms come up and the waters are coming up and everything is there. What will happen if they reevaluate and say, no, this is not going to be enough. This is going to have to be raised higher."*	13
Contractors Residents have had trouble with contractors in the past. *"We got burned a lot down here from contractors and roofers and everybody else that just either did shabby work or did no work at all and took the money."*	10
Extra Costs Residents are worried about the extra costs that may come along with elevation projects – such as access, landscaping, and driveways. *"I know the homeowner is responsible for reconnecting all the utilities. I know that much. And from what I understood, if there is any damage when they raise the house that's on the homeowner."*	10
Timeline Participants are worried about the length of time the project will take. *"Are we talking about next year? Are we talking about 10 years? Are we talking about 50 years?"*	6
Height Residents question how high the house will have to go and if it will feel safe. *"So, it is kind of did discourage me, to raise your home that high."*	4

Neighborhood Fabric Some people worry that their elevated homes will not match the rest of the community homes. *"But still, just about everybody's about the same elevation, you know?"*	5
Displacement Participants are concerned about being displaced from their home for an extended period. *"I live check to check. It can be hard for me to take three dogs and find a place to stay, even for two weeks. But I figured it would be longer, because I can't imagine them doing that in two weeks."*	3
Infrastructure Some people worry about how the project will take other infrastructure into account – garages, decks, and driveways. *"It's just raising the homes, right, not the roads."*	3
Vulnerability to Wind Participants are concerned about wind damage to elevated structures. *"So, if we've got winds of 150, 160 miles an hour. Isn't our house going to be more vulnerable when it's stuck up here on pilings, then when it's down here on the ground?"*	2
Aging Structures Residents question whether their aging home can withstand an elevation. *"Our houses are 60, 65 years old that, you know, 65-year-old slab. And, I mean, I can't just see them trying to lift that up."*	1
"Why not my street?" Residents do not understand why some properties or areas are chosen over others. *"And then you find out, oh, the next house to you is not."*	6
Cost of Insurance Both home and flood insurance rates increased significantly. *"So, I guess it would be weighing the flood insurance and raising it, where's the guarantee, that you're doing all this for nothing."*	6

"Mr. Federal Government" -Distrust of federal programs. People do not always trust government programs. *"I went online, and I looked at all that, and I said, this is a bureaucratic piece and I'm not doing it. I've been through FEMA stuff. I've known people who've been through it."*	5
Website Issues Some residents had issues with the project's website. *"But you know, the website you can go on and put your address in, and when you put your address in, they said it's not qualified."*	4
Distrust of Local Government People do not always trust local government officials. *"The city going to tell you what they want."*	3
Focus on Other Issues There are other issues to focus on – drainage, maintenance, and flood protection. *"We had never flooded. It was built in the 70s, but I'm thinking that that waterway was compromised with debris from trees, from hurricanes, and there were also cars in that Bayou."*	3
Access Issues (ADA) Fear about accessibility of elevated homes for elderly and handicapped. *"Put a handicap ramp up. They will do that with a doctor's notice."*	1
Title/Succession Issues Some homeowners do not have access to a copy of the title for their home. *"When I got my first letter. I went through those 5000 pages until I got to the very bottom, and then it said, send us your deed. And then I didn't know where my deed is."*	1
Successful Outreach Projects	**26**
Case Management Participants wanted project leaders to help manage the project from start to finish. *"Maybe at least once a quarter. And then, as I get close to being approved, I would expect more frequent and then when you actually have a contract, and then I want daily updates."*	9

Email Participants thought email would be a successful way to reach out. *"Email. I don't like going to sites because they run you all over the world. You know, straight email."*	4
Successful Examples Some people thought seeing examples of other successful projects would be beneficial. *"It always helped if you could refer back or hear from people that's been there and done it."*	4
Door Knocking Residents thought knocking on doors would be helpful. *"I believe face to face communication is the best way."*	3
Outreach through Mail Participants thought mail would be a successful way to reach out. *"I like paper."*	3
Find a Local Champion Some people suggested finding a local person to champion the project. *"Who would trust a stranger? You know?"*	2
Involvement of Local Officials The practitioners especially wanted the project to involve local officials at all phases of the project. *"We have here the Office of Emergency Preparedness. That's who you listen to."*	2
Important Issues of the Future	**12**
Protect Yourself Some people emphasized the need to protect themselves and their homes from future risks. *"There's so many variables, but we're getting stronger all the time, and so I think this is a great project to learn more about how to harden for future generations."*	6
Cascading Disasters The cycle of disasters impacts their everyday lives on an ongoing basis. *"But I look at a future for my children, grandchildren, and there's been a trend of the severity of the storms, and I'm thinking that we're not ready for it. We're not prepared for it, and the children aren't. We're not changing with the times as we should."*	5

Work Together Some residents underlined the need to work together as a community to combat risks in the future. *"All of us have lived through these disasters. It's our neighbors in our community that stand up with us."*	3
Structural Mitigation Needed Residents and practitioners would like levees or other structural mitigation rather than elevations. *"Well, I grew up loving the beach, but I sit on my deck now and think maybe one day I will live on the beach."*	1
Strengths of SW Coastal Outreach	**9**
Mailings Participants received a mailing about the project. *"Yes, I got a letter from the CORPS, and I read it, then I set it aside, and then some of my neighbors got the same letter, and they were totally skeptical."*	9
Knowledge of SW Coastal	**5**
Extended Timeline Some people commented on the length of time the project has taken to come about. *"Actually, eight or so years ago, I had just moved into that area, and we got something then, and all had a big old thing at the Civic Center and all this information, but it never got funded. And they said, "We want to raise your house, I think. But of course, I never heard anything again, until the letter recently."*	4
"I've Heard Nothing About this Program." A few practitioners and residents had not heard about the program. *"This is my first, the only one I've known about."*	1
View of the Future	**1**
"The Only Place They've Known" This quote and code refer to how important this project is for people to stay in their own home. *"I've built there 25 years ago to stay there and I'm happy where I'm at and whatever comes up, me and my wife will manage it."*	1

Focus Group 2: Calcasieu Parish

Challenges of SW Coastal Outreach	55
Cost of Insurance Both home and flood insurance rates increased significantly. *"They are literally just taking equity out of my pocket, because people are not going to buy my house if they're paying, if they're paying over $6,000, $7,000 a year flood insurance, to have that security, and they don't even get the benefit of being on water."*	15
"Why not my street?" Residents do not understand why some properties or areas are chosen over others. *"I have a friend who like the neighbors across the street are having their houses raised. He's flooded twice, and I think he's applied to that program or whatever didn't qualify. Something happened, but I think he's been in touch with them, and nothing's come about it. He's talked to me about selling this home."*	4
Houses and People are Gone. Parts of the parishes are no longer occupied. *"I actually had one client where they just bought her house out, demo'ed the house nobody could ever build there on that lot again, and she took the money and bought a house in Houston."*	2
Ambiguity about "It's a real deal." Participants are not sure if the opportunity is valid. *"When I called the police jury to find out about this, you know, is this a scam, and how much is it going to cost me? You know, it's just, it's just, like, how much is it going to be out of pocket? What are your plans? And how do you plan to do it?"*	1
"Mr. Federal Government" -Distrust of federal programs. People do not always trust government programs. *"They've got more money, and they don't want to spend it. It's just like everything else; they got money, they need to spend it."*	1
Access Issues (ADA) Fear about accessibility of elevated homes for elderly and handicapped. *"I live with my father in law who has disabilities, and his home is not technically attached to ours, but because of his disabilities and needing access through the property or through the house, they, in turn, told me that they will make his ADA compliant and all that."*	1

Questions about Process	34
Methodology – how people were chosen Participants do not understand how people were chosen to be a part of the project. *"But anyway, at that point they were telling you there were different levels. And so, a lot of people think that this is not ever going to happen. It was about a fourth of the people that were eligible that it was going to happen, and they told us at that meeting that it would be years before it would happen for some of us. So, I think that at that point, people said, I'm not going to fool with this."*	18
Extra Costs Residents are worried about the extra costs that may come along with elevation projects – such as access, landscaping, and driveways. *"I read that on their website, when they were going through what we're going to pay for, what you're going to pay for, and there was a heck of a lot of what I'm going to pay for is on there. And, you know, I'm not too sure that I want to end up, I don't want to end up paying twice as much for my house as what it's worth, because they raised it for me."*	10
Timeline Participants are worried about the length of time the project will take. *"I would think you start pushing that envelope beyond two weeks, beyond two weeks, and I think some people are going to financially find some hardship in that."*	5
Contractors Residents have had trouble with contractors in the past. *"The way I understood it from the Corps of Engineers was that they had a list of contractors, I want to say most of them being from out of state, and they were all licensed and bonded. But he, and I'm sorry I can't remember his name, he was out of the New Orleans Corps office\ that I specifically asked that question, and he said, "these companies are foundation companies who have years of experience doing this."*	2
Infrastructure Some people worry about how the project will take other infrastructure into account – garages, decks, and driveways. *"Another technical question, about my house, we've added on my house added on 10 by 38 patio, extra covering. What will that mean?"*	1

Neighborhood Fabric Some people worry that their elevated homes will not match the rest of the community homes. *"If you come into my neighborhood, I'm on a hill, when you drive into my neighborhood, all the houses are a few feet above the street level and I think when I read that letter, they're talking about raising your house a minimum of five feet. I may consider doing it because of my equity scenario, but it would also be somewhat of an eyesore in my neighborhood, because everybody's going to look at my house and go, why are you doing this to your home?*	1
Important Issues of the Future	**9**
Protect Yourself Some people emphasized the need to protect themselves and their homes from future risks. *"I know the situation; I know how the flood zones are. I wouldn't even blink at raising your house, 2, 3, 4, feet, whatever they suggest. I would do it in a heartbeat."*	5
Aging Population Practitioners and residents expressed concerns about the increasingly aging populations that remain in vulnerable areas. *"I think because I'm 64 years old. I'm a retired schoolteacher that had to retire early. It's a whole story. So, I'm still working, because my retirement is not enough for me to live on right now. I want to make more money. Okay, when I retire, I'm not going to afford insurance and all this stuff. There's no way I can. I always thought, how do older people, why don't they have insurance on their house? They can't."*	2
Cascading Disasters The cycle of disasters impacts their everyday lives on an ongoing basis. *"I don't want to go through what I did again."*	2
Strengths of SW Coastal Outreach	**14**
Mailings Participants received a mailing about the project. *"When I first got my first letter It was certified. My letter came certified from the Corps of Engineers. And that's what had me starting to read it."*	12

100% Funded Residents understand that the cost to elevate their homes is completely funded through SW Coastal. *"The only cost out of pocket for elevation is if you have something electrical, plumbing, something like that that is not up to code."*	2
Successful Outreach Projects	27
Find a Local Champion Some people suggested finding a local person to champion the project. *"The police jurors. People know them. Maybe the school board, board members, and having some key businessmen."*	5
Involvement of Local Officials The practitioners especially wanted the project to involve local officials at all phases of the project. *"I do live next door to my police juror. He does know everybody on our street. I think some of those people would be excellent. We know our police jurors, or most people do, great people that are just like us, that live in our neighborhood."*	5
Successful Examples Some people thought seeing examples of other successful projects would be beneficial. *"I have a friend that had it done. They were, I think, out of their house for two or three days, and they were there while they were doing all the preliminary work, they were able to stay, they told them to even leave the pictures on the wall. And she said, they told us to leave the pictures on the wall, and they left, I think, for two nights, or max, three, in a hotel, and came back, and she's really enjoying it. It was a positive experience for her."*	5
Community Meetings Residents wanted more public meetings. *"So, I think small groups like this, 10, 20 people at the most, at the most. What happened at the Calcasieu meeting was overwhelming. And that's why there was no more interest. There were so many people in that cafeteria. Every table was full. There was standing room, two or three people deep. It was wild. And there were people talking."*	4

Outreach through Mail Participants thought mail would be a successful way to reach out. *"I was very unsure after leaving the meeting, like I thought, I thought I was in a group that wasn't, so I put it to the back burner. Then the second letter came, and I called her, and she was helpful. So, I think maybe if they just keep reaching out to people."*	4
Phone Call Participants thought phone calls or texts would be a successful way to reach out. *"You can't identify them over the phone. If you were to do that, I would say, look, I can come out to your house or committee at Central Library at five o'clock on Friday. So, if they weren't comfortable meeting at home, they could meet you."*	4
Case Management Participants wanted project leaders to help manage the project from start to finish. *"I would see where the Corps would need to have a project manager or a representative so that when they come into your house, you're not dealing directly with the contractor. The contractor is telling you one thing, you have another place to get an answer."*	2
Social Media Participants thought social media would be a successful way to reach out. *"Facebook live conversation would probably draw a lot."*	2
View of SW Coastal Outreach	**1**
Positive View of SW Outreach *"I do know there was enough money to, I heard that there was enough money to raise. What I want to say like 300 and something houses."*	1
View of the Future	**3**
Affordable Insurance Residents would like insurance costs to be reduced. *"See, and I have a different outlook, because being a Cameron Parish resident, I almost feel like, with the cost of everything, the cost of flood insurance, the cost of just everything in general, especially with since the passing of law, it's almost like they could care less If we come back to Cameron parish or not."*	2

Economic Development Practitioners and residents think that there must be economic development for the area to survive. *"I am concerned about the city. Still, I don't, I don't think we're bouncing back like we should. I think some of the things that have happened incorrectly or not the way, not that I may say so the way I would have had that happen."*	1

Focus Group 3: Vermilion Parish

Challenges of SW Coastal Outreach	**48**
Cost of Insurance Both home and flood insurance rates increased significantly. *"If I can raise my house, yes, it would save me from not having nightmares at night, knowing that I can come home to house if I leave, you know that to me is, the insurance, because I can't afford $20,000 a year in insurance."*	9
Access Issues (ADA) Fear about accessibility of elevated homes for elderly and handicapped. *"Yes, our neighbor has one next door, but her daughter just moved her out to her house. Her elevator will stop in the middle, and she was stuck. She was stuck for about six hours."*	3
Ambiguity about "It's a real deal." Participants are not sure if the opportunity is valid. *"I never, in fact, I thought it was a scam. I really, really did when he handed it to me, I said, are you really legit? And he said, yes."*	1
"Mr. Federal Government" -Distrust of federal programs. People do not always trust government programs. *"I got a neighbor that got a letter filled it and didn't want to fill it up because he said the government's involved."*	1
Questions about Process	36
Methodology Residents had questions about implementation methodology. *"I got a question for you. How much will they waste of this money?"*	12

Extra Costs Residents are worried about the extra costs that may come along with elevation projects – such as access, landscaping, and driveways. *"Is there a hidden cost that you come back after it's done, telling me that it's free, and then now you're going to say, I owe you 1000s of dollars."*	8
Contractors Residents have had trouble with contractors in the past. *"Can I fire them if I don't like the way they're doing?"*	7
Timeline Participants are worried about the length of time the project will take. *"When can you start?"*	6
Infrastructure Some people worry about how the project will take other infrastructure into account – garages, decks, and driveways. *"My concern about my house is I have my house and my upstairs. It's what they call a story and a half. It's above my garage. Okay, so when you're lifting it, you can lift the house, and then that up must go up too, and if I've got to go 14 feet, I'm worried that we get nosebleeds when we go upstairs."*	5
Important Issues of the Future	**18**
Cascading Disasters The cycle of disasters impacts their everyday lives on an ongoing basis. *"So, your hopeful this will work out, but it's going to come to a certain point where insurance, too much water, too often, we're going to say okay, and I don't want to leave."*	8
Protect Yourself Some people emphasized the need to protect themselves and their homes from future risks. *"Why do I stay? Because I absolutely love this place, and it's just my brother and I that are left. Our parents are deceased, and we live right next to each other. He got to lift his through the last thing they had. So, he has no worries, and I just sit there watching him up there. And you know, one day I will be with you, brother."*	8

Aging Population Practitioners and residents expressed concerns about the increasingly aging populations that remain in vulnerable areas. *"Because we're getting older, and if it goes up that high, we have balance problems and stuff, will we have one or two elevators or something to get up, because we have kind of a big house, and it's like, will we be able to go up and have a place to put our groceries to go up?*	2
Work Together Some residents underlined the need to work together as a community to combat risks in the future. *"And when I'm telling you, this community got together after, it was unbelievable, what this community did for each other."*	1
Knowledge of SW Coastal	**1**
"I've Heard Nothing About this Program." A few practitioners and residents had not heard about the program. *"My parents didn't know anything about it. If I didn't know and his mother texted him, I wouldn't even know this meeting existed."*	1
Strengths of SW Coastal Outreach	**10**
Mailings Participants received a mailing about the project. *"I had a letter, but I filled it out and I sent it back. Okay? And then I missed the meeting."*	9
Call One resident received a phone call about the project. *"Yeah, somebody called."*	1
Successful Outreach Projects	**12**
Door Knocking Residents thought knocking on doors would be helpful. *"What would you feel like if a Corps guy came to your house or woman came to your house. Would that be good for you? Yeah? Of course."*	5

Phone Call Participants thought phone calls or texts would be a successful way to reach out. *"I had a brain injury, so I get mixed up, and it's just boggles my mind, so I don't look at it much, so phone call or email, I get messages, and I read a message that's a short message."*	3
Community Meetings Residents wanted more public meetings. *"But this was the Army Corps that had a meeting, and they had a bunch of people there. They had a bunch of people from various areas, and they explained everything."*	2
Email Participants thought email would be a successful way to reach out. *"Email, text, I'm good either way."*	2
Find a Local Champion Some people suggested finding a local person to champion the project. *"Next door neighbor."*	1
Involvement of Local Officials The practitioners especially wanted the project to involve local officials at all phases of the project. *"We have a wonderful Council in the town of Erath, trustworthy, and her and my son are on the Council."*	1
Successful Examples Some people thought seeing examples of other successful projects would be beneficial. *"If people see what the Corps is doing, maybe they will decide to contact them and maybe they can get inside the program."*	1
View of the Future	**9**
"The Only Place They've Known" This quote and code refer to how important this project is for people to stay in their own home. *"It was my grandfather's, it was my daddy's, now it's mine. My daughter and son's going to have it, then after that, they going to have it."*	4
Tight Knit Community "*My heart is here."*	4

Affordable Insurance Residents would like insurance costs to be reduced. *"We got a letter from FEMA said, if we raised our house, it would be out of the flood zone. It would be the amount that I'd have to pay for flood either nothing or very minimal."*	1

Focus Group 4: Vermilion Parish

Challenges of SW Coastal Outreach	**42**
"Mr. Federal Government" -Distrust of federal programs. People do not always trust government programs. *"Why, suddenly, the big interest in raising my house and what's the outcome for the people that's helped, helping us? I mean, what's the drive? Just good hearted, we got a new branch of the government that's trying to do something, right? I mean, what's, what's going on? And I'm thinking, what's their motive?"*	4
Cost of Insurance Both home and flood insurance rates increased significantly. *"I'm south of 14. So, anybody south of 14? Hold on because the insurance rates are ridiculous. My house insurance, they wanted $9,000 a year for it. I had to drop it. I couldn't afford it."*	4
Ambiguity about "It's a real deal." Participants are not sure if the opportunity is valid. *"I'm like, they got to have a catch. This is too good to be true- too good to be true."*	2
Access Issues (ADA) Fear about accessibility of elevated homes for elderly and handicapped. *"One concern is, you know, I don't need it right now because my house is, you know, three or four feet off the ground, but I'm concerned that I don't know if I can make it up those stairs once they leave."*	1
Focus on Other Issues There are other issues to focus on – drainage, maintenance, and flood protection. *"I was just going to say it's not even just hurricanes. Like, you know, my street floods in the bad rainstorms."*	1

Houses and People are Gone. Parts of the parishes are no longer occupied. *"I'm really irritated with them buying property out and trying to run people off their property. Yes, they bought his house out, so he could leave. Well, now his property is owned by the government."*	1
Lack of Community Infrastructure There is not enough infrastructure in the community to support these projects – including drainage issues. *"My dad, he flooded through both hurricanes. He had six feet of water and eight feet the second time. He gave up on his on his shop, his seafood shop."*	1
Questions about Process	31
Methodology – how people were chosen Participants do not understand how people were chosen to be a part of the project. *"I'm concerned about the setting up for the lifting of the house, the rails, to be able to set that up right. That's my biggest concern, because I've seen, like I said, my sister in law's house is a horror story."*	17
Extra Costs Residents are worried about the extra costs that may come along with elevation projects – such as access, landscaping, and driveways. *"One of the concerns, for me is going to be the upfront cost, especially if it's asbestos. I'm going to have to electrical, make sure you don't have someone come in and look, am I up to code?"*	9
Infrastructure Some people worry about how the project will take other infrastructure into account – garages, decks, and driveways. *"For Rita, I had 20 inches of salt water in my shop, salt water, everything I had that was in there I lost. And I asked about raising my shop up. Well, we can't raise your shop because your shop is on the same property as your house. That's ridiculous. That makes no sense."*	7
Timeline Participants are worried about the length of time the project will take. *"I just want to know how long does it takes? How much do I have to put in, you know? How does it work?"*	5

Displacement Participants are concerned about being displaced from their home for an extended period. *"I mean, what I'm saying is, two, three days, I can run a hotel if I have to, okay, two weeks that's going to get pricey."*	3
Contractors Residents have had trouble with contractors in the past. *"I know a man, who had a shop built on the side house. The people that built the shop had their specs. But the homeowner would have to push these people to stay by the standards that they say that this is supposed to be built. They had to hire their own inspector. That shop floor is probably all cracked up."*	1
Important Issues of the Future	**8**
Cascading Disasters The cycle of disasters impacts their everyday lives on an ongoing basis. *"I mean, I hope they come soon, but God knows what can happen."*	5
Structural Mitigation Needed Residents and practitioners would like levees or other structural mitigation rather than elevations. *"But come along the coast and stop the water. Stop the water. Vermilion Bay used to be a little reservoir. If it crosses over the wall, they'll go into Vermilion Bay. It's going to take it. It can handle it. But right now, there's nothing. There's no barrier. When it comes, it comes."*	2
Protect Yourself Some people emphasized the need to protect themselves and their homes from future risks. *"And if they get, if they do what they say they're going to do, there's lots of hope. It's just moving forward."*	1
Knowledge of SW Coastal	**4**
"I've Heard Nothing About this Program." A few practitioners and residents had not heard about the program. *"I got people that never got a letter. There are a lot of people south of 14, too. I got a good friend of mine. He's on a slab. He didn't get the letter."*	4
Strengths of SW Coastal Outreach	**9**

Mailings Participants received a mailing about the project. *"I got their letter, and it was from the Corps."*	5
100% Funded Residents understand that the cost to elevate their homes is completely funded through SW Coastal. *"As long as they got money to do it, we need to do it."*	4
Flood Insurance Not Required Participants understand that flood insurance is not required to participate in the project. *"My biggest deal was flood insurance. And the answer was no, flood insurance. So that I made it very appealing. That's right, extremely appealing because they got people that's paying flood insurance right now through the nose. They elevated it. They are still paying for flood insurance."*	1
Successful Outreach Projects	**23**
Community Meetings Residents wanted more public meetings. *"They weren't afraid to answer questions you asked. They gave you an answer, and he said, "If I don't have an answer. I'm going to get an answer for you."*	7
Email Participants thought email would be a successful way to reach out. *"Really, email was better because the email is going to have a title on it and everything, and you can tell whether it's fake."*	7
Case Management Participants wanted project leaders to help manage the project from start to finish. *"I think communication just along the full process would be nice, just little updates. This is the plan we'll be starting in this area, you know, in June of next year. Or, you know, like you said, whether it's Facebook, social media or even just emails to those that are interested or applied or whatever, to say, where are they, what are they doing and which, what direction are they going in?"*	4
Phone Call Participants thought phone calls or texts would be a successful way to reach out. *"If you get a text Corps of Engineers house raising that would, you're going to see that man, you're not going to throw that away."*	3

Social Media Participants thought social media would be a successful way to reach out. *"I got Facebook."*	2
We Want You to Stay on Your Land People said that a successful project would emphasize that they want people to stay in their communities. *"I mean, that's not making the community good. That's getting rid of you. And yeah, everybody you talk to, it's like, man, they just want us out of here."*	2
Door Knocking Residents thought knocking on doors would be helpful. *"When they come to see me, say, look, you've been chosen. We will fix it. We came to see you because we want to start the ball rolling. Okay, that's fine. And we sit down, and we have a come to Jesus."*	1
Find a Local Champion Some people suggested finding a local person to champion the project. *"Somebody local and somebody with your Corps. That way, if there's any questions, you got all two of them to ask, and you can get answers."*	1
Newspaper One resident thought the newspaper should be used to publish information on the project. *"Used to be every day. Now it's three times a week, Wednesday, Saturday. I see it Wednesday and Saturday."*	1
Successful Examples Some people thought seeing examples of other successful projects would be beneficial. *"They showed us some plans of what they've done already. You know what it would look like. They said they would work with you to make sure you're happy with it, or what they're going to do with it."*	1
View of the Future	**2**
"The Only Place They've Known" This quote and code refer to how important this project is for people to stay in their own home. *"The future? We got kids coming up, provide a world for them worth growing up in a neighborhood."*	1

Economic Development Practitioners and residents think that there must be economic development for the area to survive. *“You want to help me? Then help me. If my house needs to be raised, don't you think my business needs to be raised?”*	1