

I. PROJECT INFORMATION

Project Title*	Co-Development of Nature-Based Solutions for Resilience Planning on a Gulf Coast Barrier Island
Project Director*	Ryan Bare
Project Location*	City of Galveston, Texas
Project Summary*	<p>The City of Galveston, Texas is a barrier island community, located on the Gulf of Mexico, that is susceptible to impacts resulting from extreme heat and precipitation-driven flooding. The North Broadway area community is disproportionately impacted because it contains the most socially vulnerable residents on Galveston Island, has increasing risk to the climate-related hazards, and has potential for elevated exposure from nearby industrial activity. The goal of this project is to engage community stakeholders in development of a planning prospectus to design a NBS project capable of increasing the North Broadway area's social and ecological resilience. This project will use inclusive engagement approaches to align planning outcomes with a community driven vision for an equitable NBS project. A holistic systems approach is intended to advance contributions of the NBS plan to resilience and social equity aims within the community and align co-benefits with the most at-risk residents.</p>

II. PROGRESS REPORT QUESTIONS

1. Please revisit your proposal and review your goals and the outcomes you were seeking to achieve through this grant. How successful were you in meeting your goals? Please assess your success against the criteria you set in your proposal and use any combination of anecdotes, stories, graphs, charts, visuals as well as data to explain your success. Upload supporting files if you choose.*

This project was able to successfully achieve the goal and outcomes laid out in the proposal. The goal to engage community stakeholders to co-develop a full Phase II design grant proposal was achieved as indicated by the successful completion and submission of the proposal. The core objectives for the engagement activities conducted during the planning phase of this project were to prioritize potential NBS based on alignment with community goals, gather input on desirable placement of NBS, identify the most appropriate NBS strategies dependent on unique characteristics of the community, and to empower community members by providing information about how NBS can provide resilience, equity, and health benefits.

All these objectives were completed as evidenced by the amount of influence the community had on shaping the Phase II proposal that includes potential project locations, specific NBS practices, and an overall vision for a climate resilient Old Central Carver Park neighborhood. See the uploaded Visual Summary file to experience the project by taking a digital tour through the two community meetings; including bi-lingual invitations, images from the events, stakeholders interacting with several of the project's engagement activities, and some examples of feedback, results, and information that the project team learned.

One indicator of this project's success is the number of participants that attended the community engagement events. An initial stakeholder workshop was held in February and a second public engagement event was held in April. The two events had a combined attendance of more than 70 stakeholders and community members. Input from residents, community leaders, academic institutions, elected officials, faith-based organizations, and nonprofits was collected via conversations and a variety of engagement activities. In addition, conversational style interactions with community members were successful to hear antinodes from residents which were influential in shaping the NBS plan and Phase II proposal. For example, one community member shared a story about the mature magnolia trees that once lined two sides of the streets adjacent to a local baseball field. He had said that at the time the canopy provided ample shade and cooling effect for the spectators, but these trees have been lost overtime. He desired to increase the diversity of trees in Old Central Carver Park and doesn't want to see more palm trees planted because they provide no shade.

The partnership formation objective was successful in bringing on additional organizations including the University of Texas Medical Branch, Shmaefsky Consulting, Lockwood, Andrews, and Newman, Inc which allowed for the

inclusion of unique and diverse expertise in the Phase II proposal. Also, the time allotted was effectively utilized to expand the number of participating residents and other organizations including the City of Galveston.

Optional File Upload

[Visual Summary.pdf](#)

Filename: Visual Summary.pdf **Size:** 3.6 MB

2. How has your work benefited your organization, professional field, community, or other stakeholders?*

This project was beneficial in establishing a well-connected and informed stakeholder network which is a community asset. Connections and relationships between stakeholders from multiple disciplines that incorporated subject matter experts and members of the local community were formulated. A beneficial outcome is increased community capacity because of the opportunities for residents to connect with supportive resources, learn about the benefits of NBS, and strengthened community and partner relationships.

3. Are there any other successes related more broadly to this project that you would like to share with us?*

Several other successes can be attributed to the project. For example, the involvement and increased support of the City of Galveston is important for the larger Galveston Island community. The city is increasingly willing to consider NBS as viable options to mitigate climate related hazards. Their openness to include city owned parks properties in the design and planning for the Phase II proposal was a success. Another broad success is the establishment of community capacity building that resulted from the information shared, development of relationships, and momentum that came from kicking off the Planting Seeds for Change initiative.

4. What did you learn (positive or negative) as a result of this grant? What lessons would you share with other organizations or the field at large?*

The project team learned a tremendous amount of information by engaging the Old Central Carver Park community. The importance of collaborating with the community early on was highlighted. A lesson learned is that the community has a lot to offer and that it is best to take an approach of listening to what they have to say. The information learned from the community is not available in reports or in other written forms, so it is crucial to capture their thoughts, comments, or concerns through engagement activities.

Another lesson is that the format of engagement such as in-person, virtual, or hybrid can make a big difference in the success of the project. Due to restricted access to the internet and limited bandwidth the community made it clear that hybrid or virtual formats were not desirable. As a result, all of the community engagement for this project was conducted in person which was beneficial for building trust and increased opportunities for side channel conversations that would not have been possible on a virtual platform. The in-person events had an energized atmosphere where community members felt comfortable with sharing their experiences.

5. How do you characterize your relationship with GRP and what suggestions do you have for improvement?*

The relationship with GRP over the project period was collegial and open. The GRP provided ample support and responded quickly to questions that were asked. The information provided during the grant kickoff was helpful in establishing expectations for the project, administrative obligations, scheduling, and project management. I felt comfortable reaching out to provide updates, ask questions, and to request support as needed. The GRP has been successful in establishing open communications channels. However, one suggestion is that it would have been helpful to have been informed about or provided with the changes that were made to the Phase II RFP earlier on in the project period.

6. Please provide any other feedback or comments you have for the GRP.*

The unique structure of this funding program, which was divided into two distinct phases, allowed for the development of a higher quality Phase I project and Phase II proposal. The time that was allocated to specifically focus on the community engagement effectively allowed for stronger relationships, customization of the NBS based on the community's vision and needs, and the collection of information at sufficient detail to design and plan for NBS at the neighborhood level. The resources and time provided by the Phase I award allowed for a stronger full Phase II proposal than would have otherwise been possible. I think that this two-phase approach is a necessity when it comes to getting the most out of co-developing NBS with at-risk communities. I hope to see increased use of the phased project/proposal approach by the GRP as well as across the wider grant making community.

7. If applicable, please identify and describe the ways you or your organization leveraged GRP's grant (e.g., other funders, volunteers who worked on the program, in-kind donations etc.) Please specify the value and/or number/hours of volunteers if possible.

(No response)

Planting Seeds for Change: Community Development of Nature-Based Solutions on a Gulf Coast Barrier Island – Phase 1

Funding Program: National Academies of Science Engineering and Math – Gulf Research Program

NATIONAL ACADEMIES *Sciences
Engineering
Medicine*
GULF RESEARCH PROGRAM



HARC



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Let's Plant Seeds for Change!

Planting Seeds for Change is a community-driven effort to address climate-related hazards through nature-based improvements in the Old Central/Carver Park Neighborhood.

Please join us in this first meeting to talk about the neighborhood's strengths, opportunities, and ideas for supporting current and future generations of this community.

February 06 at 6:00p

In-Person - Wright Cuney Recreation Center, 718 41st Street

Virtual - Via Zoom

[Please RSVP here](#)



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Plantemos Semillas Del Cambio!

Plantando Semillas Del Cambio es una iniciativa impulsada por la comunidad para lidiar con peligros del cambio climatico, usando soluciones basadas en la naturaleza dentro del vecindario de Old Central/Carver Park.

Por favor acompaños en esta reunion para discutir ideas, fortalezas, y oportunidades para la comunidad y sus futuras generaciones

February 06 at 6:00p

En Persona - Wright Cuney Recreation Center , 718 41st Street

Virtual - Via Zoom

[RSVP aqui](#)



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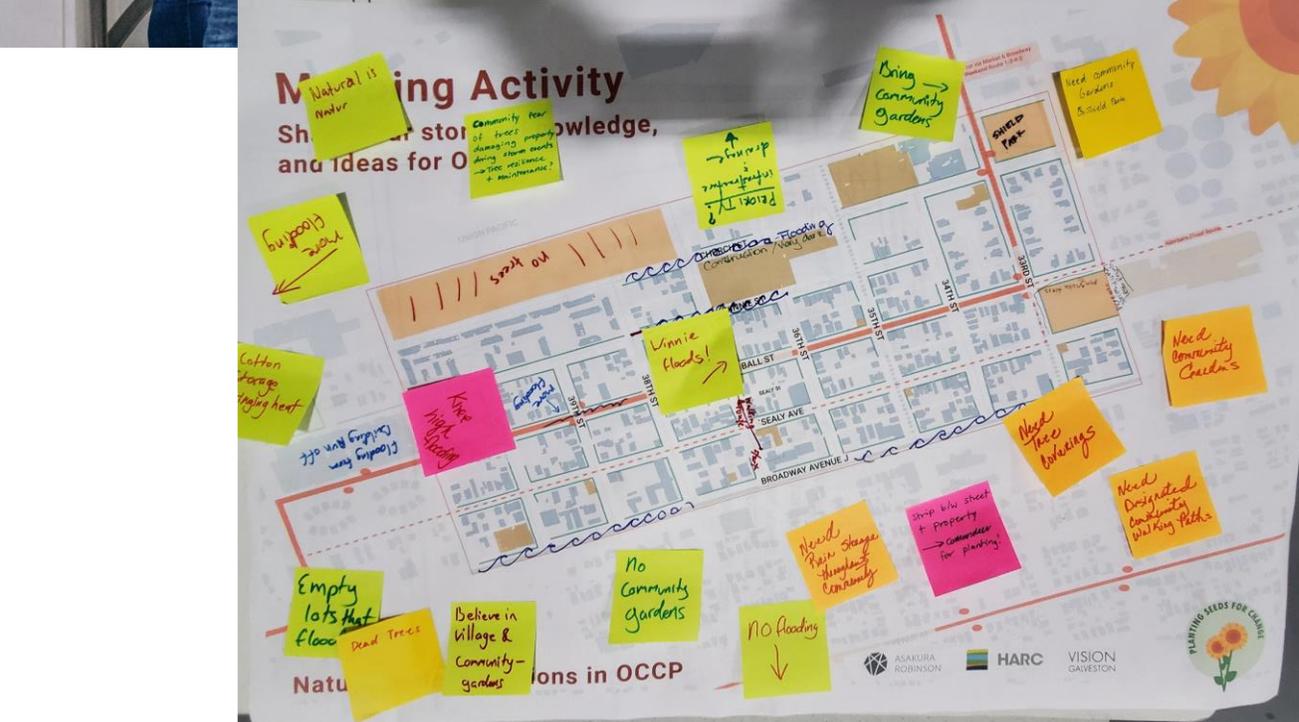


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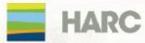
Join us for BBQ, Music, Fun, and Engagement at a Public Workshop for

Nature-Based Solutions in Old Central Carver Park Neighborhood

Come join your neighbors to hear about Planting Seeds for Change, a community driven effort to address climate-related hazards through nature-based improvements in the Old Central Carver Park Neighborhood.

April 15 from 11:00am - 1:00pm

Central Middle School Field
3014 Sealy St, Galveston, TX 77550



April showers bring May flowers. If it rains, please join us in the gymnasium!



Disfruta de BBQ, música, diversión, y actividades en el taller comunitario para

Soluciones basadas en la naturaleza en el vecindario de Old Central Carver Park

Acompaña tus vecinos a escuchar como estamos Plantando Semillas Para el Cambio, una iniciativa impulsada por la comunidad para lidiar con peligros climáticos en el vecindario de Old Central Carver Park usando soluciones basadas en la naturaleza.

15 de abril, 11:00am - 1:00pm

Campo de Central Middle School
3014 Sealy St, Galveston, TX 77550



Abril lluvioso saca mayo florido y hermoso. Si llueve, ¡por favor encontrenos en el gimnasio!





WHAT WE'VE HEARD

We invited local stakeholders to provide initial feedback about climate hazards and potential areas where nature-based solutions are needed most. This birds-eye view highlights some of current challenges and opportunities in the neighborhood.



- FLOODING
- ▬ RUNOFF
- ▬ MOSQUITO
- ▬ CONSTRUCTION
- ▬ DARK AREA
- ▬ POOR TREE CANOPY



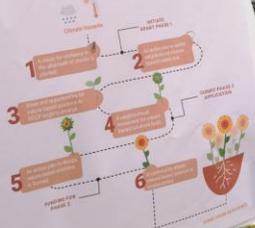
WHAT IS PLANTING SEEDS FOR CHANGE?

Identifying Nature-Based Solutions in Old Central Carver Park Neighborhood

WHY OLD CENTRAL CARVER PARK NEIGHBORHOOD?
 The climate-related hazards of extreme heat and weather driven flooding are among the top challenges for Galveston's communities, and Old Central Carver Park Neighborhood is no exception. In fact, the community has been disproportionately impacted and residents are among the island's most vulnerable.

WHAT DO WE PLAN TO DO?
 This project plans to address climate-related hazards in Old Central Carver Park Neighborhood by identifying opportunities for nature-based solutions (NBS) where they are needed the most.

The goal is to engage community stakeholders in identifying assets and opportunities to design Nature-Based Solutions (NBS) for Old Central Carver Park Neighborhood that address flooding and extreme heat.



WHAT IS PLANTING SEEDS FOR CHANGE?

Identifying Nature-Based Solutions in Old Central Carver Park Neighborhood

WHAT ARE NATURE-BASED SOLUTIONS?
 Nature-based solutions (NBS) are practices that conserve the environmental benefits of natural resources while providing the benefits to address climate change and other societal challenges. NBS are used to improve water and environmental health. By using natural systems, NBS can reduce flood risk and increase water infiltration to help communities address the effects of extreme weather events.

WHAT DO WE PLAN TO DO?
 Addressing climate-related hazards in Old Central Carver Park Neighborhood has been a challenge. For example, a 100-year flood depth of 10 feet could result in 100% of land cover, old central carver park neighborhood, and surrounding areas will be flooded. Identifying opportunities for nature-based solutions, such as planting trees, installing permeable pavement, and installing green roofs, can help reduce the risk of flooding and improve water infiltration. The goal is to engage community stakeholders in identifying assets and opportunities to design Nature-Based Solutions (NBS) for Old Central Carver Park Neighborhood that address flooding and extreme heat.





HOW HAS CLIMATE AFFECTED YOU?

Climate hazards, including flooding and heat, can play a big role in our quality of life. From standing water to excessive heat, climate can keep us from getting to work and determines how much time we play outside. We want to hear how climate change affects you?

Please use a sticker to place your answer.

- 1 Have you noticed the effects of climate change or changes in weather patterns in your community in the last 5 years?

0 Strongly Disagree 1 2 3 4 5 Strongly Agree

Add stickers here!
- 2 Have these changes negatively impacted your daily routines such as driving to work or school?

0 Strongly Disagree 1 2 3 4 5 Strongly Agree
- 3 Have these changes interfered with your ability to enjoy the outdoors with community members, family, and friends?

0 Strongly Disagree 1 2 3 4 5 Strongly Agree
- 4 Have you experienced any financial setbacks due to climate or weather events (i.e. inability to get to work, house repairs, furniture/personal item loss)?

0 Strongly Disagree 1 2 3 4 5 Strongly Agree
- 5 Have you experienced any health-related issues related to climate or weather events (i.e. asthma attacks, heat stroke, allergies, mosquito bites)?

0 Strongly Disagree 1 2 3 4 5 Strongly Agree

Do you have more you want to share? Tell us your story!

Using a sticky note, paste your story below:

Additional good stuff every day because the weather is so great!

My favorite part is to walk with my dog every day because it's so relaxing and fun!

