Sunset, St. Joseph Bay State Buffer Preserve, Port St. Joe, Florida
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SUNS
SCALING UP NATURE-BASED SOLUTIONS

The Nature Conservancy

Scaling Up Nature-based Solutions

in the Hurricane Michael Impacted Region of Florida

SUNS Portfolio February 2023

SUNS Portfolio Project location "Salinas Park," Gulf County © Darryl Boudreau

SCALING UP NATURE-BASED SOLUTIONS IN THE HURRICANE MICHAEL IMPACTED REGION OF FLORIDA

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The Nature Conservancy

Northwest Florida Water Management District

St. Andrew & St. Joseph Bays Estuary Program

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EXECUTIVE SUMMARY

In 2018, Hurricane Michael made landfall in the Florida panhandle as a powerful Category 5 storm, causing loss of life and major damage to many communities and widespread catastrophic impacts to the areas around Mexico Beach and Tyndall Air Force Base. The storm also significantly impacted the landscape by eroding beaches, knocking down forests and urban trees, and causing acute local flooding. In the aftermath of the storm, a study led by The Nature Conservancy (TNC), Northeastern University, and the US Naval Academy demonstrated the importance of considering green spaces and natural and nature-based features as part of a holistic portfolio of investments for increasing the resilience of coastal communities to future storms and sea level rise. The study also provided a foundation for the Scaling Up Nature-based Solutions project (SUNS) by confirming that the area affected by Hurricane Michael would be a good place to work with local communities to ensure that "Nature-Based Solutions" are fully considered and planned for as part of the region's overall recovery planning.

Nature-based solutions, or NBS, are projects that are motivated and supported by nature that may also offer environmental, economic, and social benefits, while increasing resilience. This is an umbrella concept that covers a range of approaches, including restoration, management, conservation, and nature-based infrastructure. Many communities do not have the staffing or capacity to fully consider the best places to use NBS approaches, particularly in the aftermath of storms, and so the opportunity for securing the long-term benefits of NBS at the most strategic places for their use may be lost.

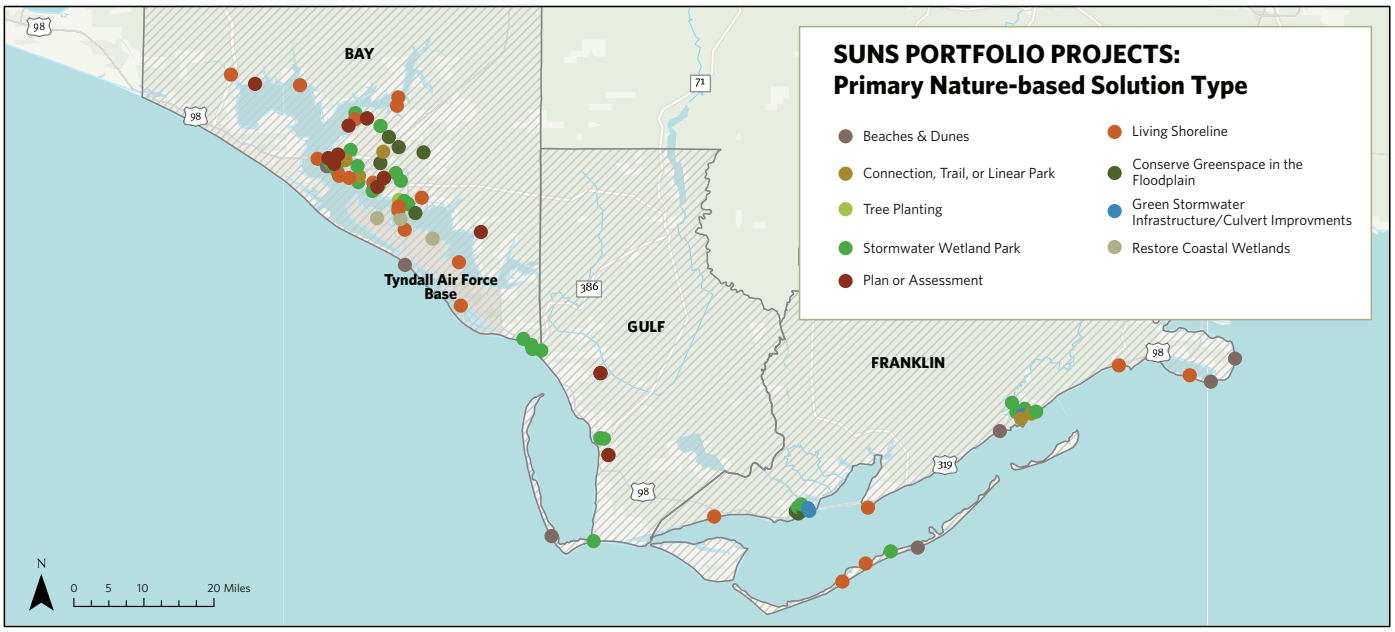
To address these challenges, TNC, Northeastern University and the US Naval Academy joined with the Northwest Florida Water Management District and the St. Andrews and St. Joseph Bay Estuary Program to develop and implement the SUNS project with the support of a grant from the National Fish and Wildlife Foundation's National Coastal Resilience Fund. The goals of SUNS are to:

- Provide local government staff, planners, and communities with **decision-making knowledge and tools** to inform the use of nature-based solutions as part of their overall efforts to recover from storms by building more durable infrastructure
- Develop and facilitate a **regional, stakeholder-based planning process** to create a **prioritized portfolio of nature-based solution investments** across the project area
- Encourage adoption and implementation of the portfolio by providing **technical assistance and capacity building support to local government**

To achieve these goals, the SUNS Project team convened a Working Group composed of 27 representatives from local governments, regional planning councils, state and federal agencies, and local stakeholders to inform the SUNS planning process and develop a portfolio of potential NBS projects in Franklin, Gulf, and Bay counties. To craft the SUNS Portfolio, The SUNS project team facilitated a process that relied on using maps showing NBS Opportunity areas, existing projects, priority locations, and supporting data (such as sea level rise scenarios) to develop potential NBS project ideas across the region. This planning process resulted in 143 potential NBS project ideas.

To select project ideas for the SUNS Portfolio, project concepts were scored using selection criteria that aligned with guiding principles defined by the SUNS Working Group. SUNS Working Group members were given the opportunity to adjust scores based on local knowledge and provide feedback to the SUNS teams on their project preferences. The SUNS project team worked closely with working group members to merge project ideas where feasible and confirm final projects selected for inclusion in the SUNS Portfolio. The final SUNS portfolio consists of **72 NBS projects, 11 plans or assessments, and 5 connector projects** such as linear parks and trails.

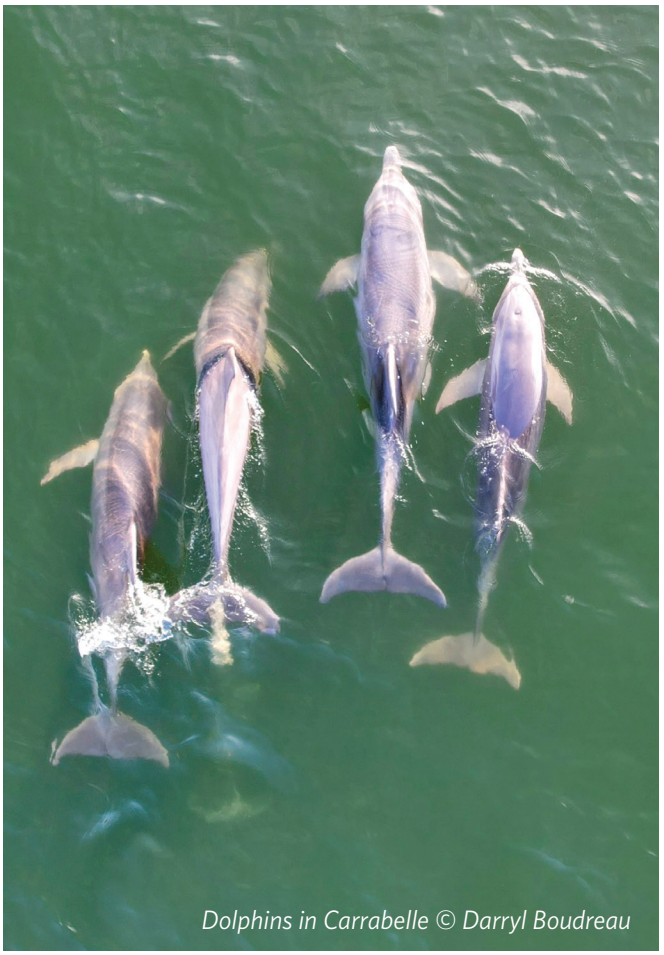
Now that the SUNS Portfolio of projects is finalized, the SUNS project team is shifting into more of a capacity building and support role through the additional support provided by a grant from the Walmart Foundation to help translate the SUNS region-wide planning into tangible results. For the remainder of 2023, the SUNS project team will work closely with local governments to further refine the SUNS portfolio of projects and provide technical and financial support to those that are most impactful and viable.



The SUNS Portfolios consists of 72 nature-based solution projects, 11 plans or assessments, and 5 connector projects such as linear parks and trails. This map shows the location of the projects in the SUNS Portfolio displayed by project type. The project concepts are all at different phases of development and implementation. The SUNS team will be providing capacity and support to advance as many projects as possible towards completion through at least 2023.

The successful collaboration that took place to develop the SUNS Portfolio of projects has demonstrated that interest in regional planning for Nature-Based Solutions is high if the process is easy to follow, flexible and aligns with the local priorities of the communities. We found that the leaders of coastal communities are supportive of NBS because nature-based projects can be effective while providing multiple community benefits. However, scaling up NBS requires substantial planning, technical expertise, knowledge of funding programs, and substantial time and effort. Many small municipalities generally do not have the capacity to do all this. Regional government agencies and non-profit organizations can help fill this gap by combining regional coordination and technical support with a sensitivity to local concerns.

The Nature Conservancy and SUNS partner organizations have learned a lot through the SUNS project, and we believe the lessons learned here over time can inform other projects in the Gulf states and result in planning, permitting and budget efficiencies. **It is our hope that the stakeholder-based SUNS planning process can be adapted and replicated in other regions of the Gulf coast to contribute to the creation of a future Gulf that is resilient to change, sustains its fish and wildlife, and enables people to remain connected to their coastal heritage.**



Dolphins in Carrabelle © Darryl Boudreau

INTRODUCTION

In the Gulf of Mexico region there has been a long history of tropical storms that have affected and shaped the region's settlement patterns, character and culture. Now, however, a changing climate and rising sea levels are intensifying threats to both the people and nature of the Gulf coast. Rainfall events are more intense and frequent. Tropical storms gain strength rapidly over the warm Gulf waters. Rising sea levels impact coastal property and increase storm surge. These ever-increasing impacts threaten coastal communities and the marshes, mangroves, oyster reefs and beaches that have historically provided a level of natural storm protection along the coasts of the Gulf of Mexico.

Hurricane Michael Illustrated the Vulnerability of the Gulf Coast

The Florida panhandle has many of the characteristics of the overall Gulf coast—biologically important nearshore waters, barrier islands, marshes, freshwater wetlands, and coastal forests interspersed with cities and rural communities. In 2018, Hurricane Michael illustrated the vulnerability of this area and others like it around the Gulf to the impacts of intense storms. Hurricane Michael made landfall in the Florida panhandle as a powerful Category 5 storm, severely damaging communities, including Tyndall Air Force Base, eroding beaches, knocking down trees, and causing acute local flooding.

An Opportunity to Study How Nature Benefitted Coastal Households During and After the Storm

The mission of The Nature Conservancy, a non-profit organization, is to conserve the lands and waters on which all life depends. We have worked in the Gulf states for more than 40 years, and we have long been interested in whether and to what extent natural features like barrier beaches, wetlands, oyster and coral reefs, freshwater wetlands, and floodplains are able to protect human communities from the impacts of storms while also providing habitat for fish and wildlife. In 2019, TNC received a grant from the Walton Family Foundation to conduct such an evaluation. We worked with Northeastern University and the U.S. Naval Academy and found that, marshes are a viable form of coastal protection in many circumstances and were resilient to the impacts of Hurricane Michael. We also found that higher levels of green space in the community surrounding a home was associated with a higher probability of recovery, even after controlling for social and hurricane-impact factors.

Nature-Based Solutions are projects that are motivated and supported by nature and that may also offer environmental, economic, and social benefits, while increasing resilience. This is an umbrella concept that covers a range of approaches, including restoration, management, conservation, and nature-based infrastructure (e.g., green infrastructure and low impact development).

Examples of NBS are rebuilding barrier islands to shield the mainland from waves and storm surge such as projects underway in the Mississippi River Delta, creating living shorelines to enable marshes to regenerate as is being done in Mobile Bay, constructing intertidal oyster reefs to break storm waves, and building wetland parks to absorb stormwater. NBS have been recognized by federal agencies and in legislation as a desirable approach to making communities safer and more resilient to the impacts of a changing climate.

Scaling Up Nature-based Solutions (SUNS)

The findings of the study (and similar studies in other locations) demonstrated the importance of considering green spaces and natural and nature-based features as part of a holistic portfolio of investments for increasing the resilience of coastal communities to storms and sea level rise. The study also provided a foundation for the Scaling Up Nature-based Solutions (SUNS) project by confirming that the area affected by Hurricane Michael would be a good place to work with local communities to ensure that Nature-Based Solutions (NBS) were fully considered and planned for as part of the region's overall recovery planning post-Hurricane Michael.

Living shorelines installed at Rivercamps in St. Andrew Bay © Darryl Boudreau

Mayor Hammond and NOAA Digital Coast Fellow Anna Jane Jones in City of Springfield © Christine Shepard

NBS Projects Can Be Cost-Effective to Build and Maintain, but their Siting, Design and Construction Must Be Done Right

While potentially very cost-effective, creating NBS on the ground is not a simple task. Nature-Based Solutions cannot mitigate all coastal risks and must be sited in appropriate locations. While using natural components, they still must be designed and engineered. They are not inexpensive and, although federal and state funding is now available to build them, applying for those funds can be complex and time consuming.

Particularly in the aftermath of storms, many local communities do not have the staffing or other capacity to fully consider the best places to use NBS projects, and so the opportunity for securing the long-term benefits of NBS at the most strategic places for their use may be lost. In addition, NBS is most effective if it is applied not in bits and pieces, but more broadly across a coastal landscape so that individual projects can reinforce adjacent natural or nature-based projects. Working across municipal boundaries is another challenge for many local communities that are already stretched thin addressing recovery efforts in their own jurisdictions.

Creating the SUNS Project

To address these challenges, TNC, Northeastern University and the US Naval Academy joined with the Northwest Florida Water Management District and the St. Andrews and St. Joseph Bay Estuary Program to develop and implement the SUNS project with the support of a grant from the National Fish and Wildlife Foundation's National Coastal Resilience Fund. The goals of SUNS are to:

- Provide local government staff, planners, and communities with **decision-making knowledge and tools** to inform the use of nature-based solutions as part of their overall efforts to recover from storms by building more durable infrastructure
- Develop and facilitate a **regional, stakeholder-based planning process** to create a **prioritized portfolio of nature-based solution investments** across the project area
- Encourage adoption and implementation of the portfolio by providing **technical assistance and capacity building support to local government**

SUNS PANHANDLE PLANNING REGION

The eye of Hurricane Michael made landfall in Mexico Beach, Florida in Gulf County. The coastal impacts of the storm extended eastward through Franklin County and westward through Bay County—about 100 linear miles of coastline that includes the Apalachicola River estuary and barrier islands, the St. Joseph Peninsula and Cape San Blas which enclose St. Joseph Bay, and St. Andrews Bay and its barrier islands. These three counties (Bay, Gulf, and Franklin) were selected for the SUNS planning region.

This is an area of exceptional natural and outdoor recreational values and extensive state and federal landholdings including state parks, Apalachicola Bay National Estuarine Research Reserve, St. Vincent National Wildlife Refuge, Apalachicola National Forest, and St. Joseph Bay Aquatic Preserve. The eastern portion of the area is part of one of six biological hotspots in the U.S.

Franklin and Gulf Counties are rural with each having a population of less than 15,000 people and include small cities like Carrabelle, Apalachicola, and Port St. Joe. Bay County is more intensively developed and includes Panama City and several smaller urban communities. Tyndall Air Force Base is a large Department of Defense installation in Bay County which was heavily damaged by Hurricane Michael.

The entire project area is low-lying and vulnerable to sea level rise and storms. Development lies close to the coast and varies from beach front to back bay. The economy in this region has relied on fishing, oystering, forest management, military employment and manufacturing as well as tourism and recreation. Both cities and the surrounding countryside have substantial low income and socially vulnerable populations. Many of the project area communities have limited capacity to develop and implement new infrastructure projects. We have discovered, however, that they do have a dual interest in protecting their natural environments and increasing their resilience to storms and floods.

The communities are supported in these goals by:

- The Northwest Florida Water Management District—one of five such districts in Florida which have the responsibility of protecting the quality and quantity of water resources
- The St. Andrews and St. Joseph Bay Estuary Program—a new entity, modeled after EPA's National Estuary Program, that is bringing together science and public input to improve water quality, natural habitat and public enjoyment of the St. Andrews Bay system.

SUNS PORTFOLIO PLANNING PROCESS

SUNS Needs Assessment

The first phase of the SUNS Portfolio Planning process focused on better understanding the capacity and limitations for planning and implementing nature-based solutions in the region through a *Needs Assessment*. The purpose of the *Needs Assessment* was to: establish connections with local governments, state, and federal agencies; identify potential members of the SUNS Working Group; gauge interest in nature-based solutions; understand the planning that had been accomplished to date and assess project development needs.

Four members of the project team conducted interviews and meetings with 43 stakeholders who work within the project area. Our project team included TNC staff along with Darryl Boudreau of the Northwest Florida Water Management District, all of whom have working relationships with our potential participant pool in the Panhandle region. We identified stakeholders through existing relationships, a snowball method in which interviewees can suggest additional contacts, and web-based research.

The results from the *Needs Assessment* were organized in two primary ways. First, we compiled notes from the Assessment and organized them to reflect themes, issues, concerns, and strategies represented throughout the interviews. We did not attribute the ideas or comments to particular stakeholders. Secondly, we used the interviews alongside information in published plans to create an Existing Plans and Projects Footprint Map, which documents the existing projects and plans within the three-county area that leverage nature-based solutions but predate the SUNS Project.

The *Needs Assessment* resulted in several lessons learned:

- The level of technical assistance needed to help communities in identifying viable projects and securing funding was greater than we anticipated.
- There were few, if any, models or guides to assist local government in securing coastal resilience funds at the scale needed to improve resilience.
- Some communities already had completed conceptual designs for projects, and were ready to enter the next phase of project development (engineering studies, design, etc.) Several of them lack critical capacity to carry these projects to the next phase.
- There is a great deal of funding available for such projects at the federal and state level but securing that funding is a complex process

SUNS Working Group

Using information gathered through the Needs Assessment, TNC joined with the Northwest Florida Water Management District to convene a Working Group composed of representatives of local governments, regional planning councils, state agencies, and local stakeholders to inform the SUNS planning process and develop a portfolio of potential nature-based solutions projects in Franklin, Gulf, and Bay counties. The SUNS Working Group, with representative from 27 entities, organizations, and agencies, was convened virtually monthly for a year. The original plan for the SUNS Working Group was to meet in person for 3-4 workshops over a six-month period, however, the SUNS project kicked off at the height of the Covid-19 pandemic. As a result, the SUNS team had to adjust the SUNS Working Group meeting schedule to allow for monthly, shorter virtual meetings which extended the planning timeline significantly.

The early SUNS Working Group sessions informed the SUNS Portfolio planning process by defining:

- The hazards to be addressed and priority locations within each community,
- Guiding principles and regional strategies for prioritizing NBS projects, and
- The NBS project types that should be planned for.

Hazards and Nature-based Solutions to Plan for as defined by the SUNS Working Group

Hazard	Types	Nature-based Solutions to address each Hazard
Storm Surge	Coastal Storms	Beaches and Dunes, Protect Coastal Wetlands and Wetland Migration Corridors, Restore Coastal Wetlands, Living Shorelines, Conserve Greenspace in the Floodplain
Flooding	Coastal	Beaches and Dunes, Waterfront Parks, Protect Coastal Wetlands and Wetland Migration Corridors, Restore Coastal Wetlands, Living Shorelines, Conserve Greenspace in the Floodplain
	Urban/ Riverine	Stormwater Parks, Green Stormwater Infrastructure/Culvert Improvements, Greenways, Conserve Greenspace in the Floodplain
Erosion (Shoreline recession)	Coastal	Beaches and Dunes, Protect Coastal Wetlands and WetlandMigration Corridors, Restore Coastal Wetlands, Living Shorelines
	Urban/ Riverine	Living shorelines
Sea Level Rise		Beaches and Dunes, Protect Coastal Wetlands and Wetland Migration Corridors, Restore Coastal Wetlands, Living Shorelines, Conserve Greenspace in the Floodplain, Stormwater Parks, Green Stormwater Infrastructure/Culvert Improvements

Building the SUNS Portfolio

The SUNS Project team incorporated the Working Group's decisions and feedback into the SUNS Portfolio planning process. To inform project idea generation, the SUNS team developed "Opportunity Maps" for each nature-based solution type. "Opportunity Maps" show where on the landscape a given NBS type is likely suitable to implement *and* in an area of coastal risk *and* in an area of medium or high value for fish and wildlife habitat.

Opportunity Areas
Each NBS type has an Opportunity Map

Identifies where a given NBS type is:

- Likely suitable to implement
- In an area of coastal risk
- In an area of medium or high value for fish and wildlife habitat

Opportunity areas help focus the conversation for developing project ideas.

Opportunity Areas for Protecting Wetlands Migration Pathways

Opportunity Areas for Protecting Coastal Wetlands

Opportunity Areas for Conserving Land in the Floodplain

Sunset, St. Joseph Bay State Buffer Preserve © Andrew Kornylak

SUNS Working Group members were not limited to generating ideas within the "Opportunity Map" areas. However, the "Opportunity Maps" provided a general idea of which types of NBS were likely feasible within their community and where multiple NBS project types could be implemented in one location using a layered approach. The SUNS project team remained flexible throughout the planning process to help ensure that the final portfolio of SUNS projects aligned with the communities' preferences.

In addition to creating the "Opportunity Maps", the project team compiled relevant supporting layers, such as Florida Forever areas, critical infrastructure, sea level rise projections that align to Resilient Florida requirements, NOAA's Coastal Flood Hazard Composite layer, the Southeast Conservation Blueprint (SECAS) data showing priority fish and wildlife habitat areas, and CDC's social vulnerability data. The data were compiled and uploaded into an interactive SUNS Map App, accessible to the project team and Working Group. The Existing Plans and Projects Footprint Map, which show project ideas and planning efforts that pre-dated SUNS, was also included in the SUNS Map App.

To craft the SUNS Portfolio, the SUNS project team hosted a four-part virtual workshop series that ran from January through April of 2022. The project team facilitated a planning process that relied on using the SUNS Map App to view "Opportunity Maps", existing projects, priority locations, and supporting data to develop potential NBS projects across the region.

At each workshop, SUNS Working Group members reviewed the "Opportunity Maps" for their communities to see where there are opportunities to implement NBS to address known flooding or erosion issues and also to explore where NBS could be used to mitigate against future impacts such as sea level rise or increased development. Additional consideration was given towards aligning NBS projects with recreation opportunities and economic development.

SUNS Working Group members digitally added their project ideas into the SUNS Map App throughout the workshop series. In some circumstances, further planning or assessment was needed before a project could be identified and these needed "plans or assessments" were also noted in the SUNS Map App.

SUNS Portfolio Planning Process Workshop Series 2022

Regional Strategy	Description	NBS	Hazard
Greenspace in the Floodplain *January 13*	Mitigates flooding by maintaining open space for floodwater storage and fish and wildlife habitat in the floodplain	Land Conservation, Coastal Wetlands	Flooding SLR Storm Surge
Community Stormwater Managament *February 10*	Leverages NBS to manage stormwater, mitigate urban flooding, protet coastal and riparian habitat, enhance recreation opportunites and protect property values	Stormwater Parks, Culvert Upgrades, Coastal Wetlands	Fooding SLR
Shoreline Protection *March 10*	Stabilizes the shoreline, mitigates erosion, provides coastal habitat, and incrreases recreational and property value with techniques that mimic the natural shoreline	Living Shoreline, Beaches & Dunes, Coastal Wetlands, Oyster Reef Restoration	SLR Storm Surge Erosion
Regional Recreation Economy *April 14*	Aligns NBS with recreation opportunities and supports local/regional economic development	Land Conservation, Stormwater Parks, Living Shorelines	Flooding SLR Erosion

The facilitated workshop series resulted in 143 potential NBS projects being added to the Map App. To prioritize the projects ideas for potential inclusion in the SUNS Portfolio, project concepts were scored using selection criteria that aligned with guiding principles defined by the SUNS Working Group.

Screening Criteria:

Nature-based

Benefits commercial and residential structures

Benefits critical infrastructure

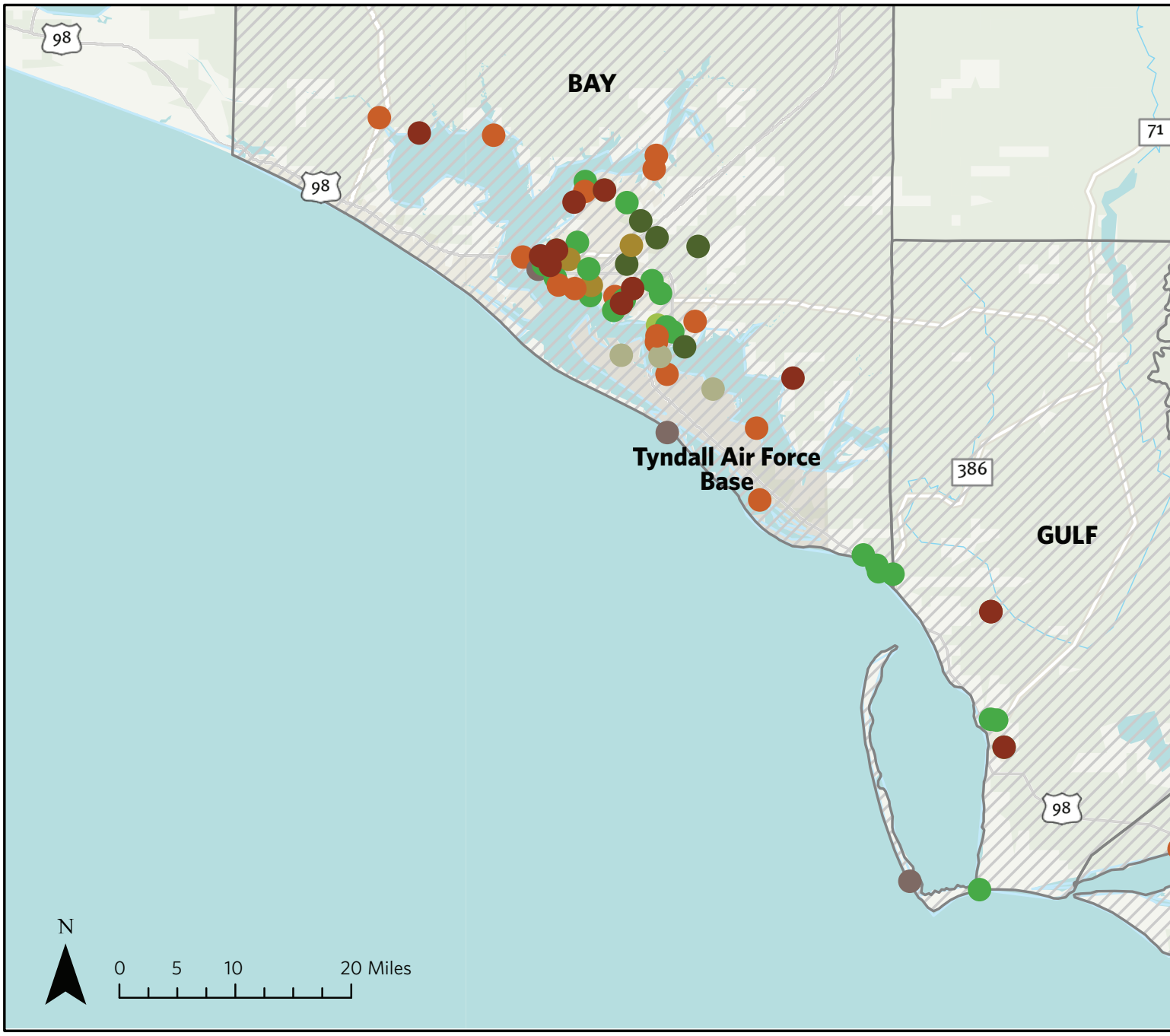
Benefits potentially vulnerable communities

Aligns with state and regional habitat priorities

Aligns with hazard zone footprint from NOAA Flood Exposure Composite Layer

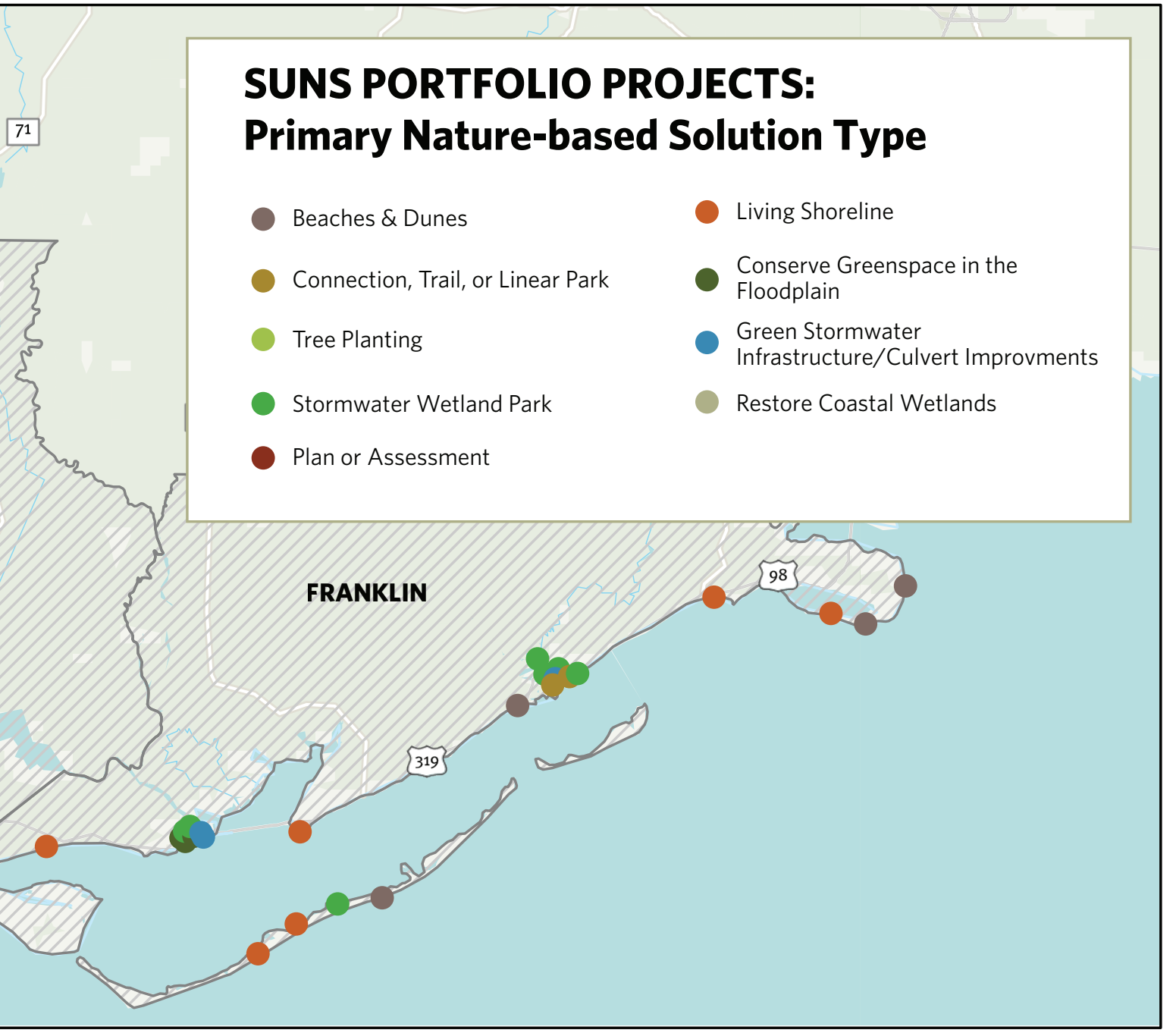
Provides potential recreational amenities

The selection criteria were applied to each project through a combination of reviewer scoring and GIS analyses and after multiple iterations of review with the SUNS project team and the working group members, the final draft portfolio of SUNS projects was defined. SUNS Working Group members were given the opportunity to adjust scores based on local knowledge and provide feedback to the SUNS teams on their project preferences. The SUNS project team worked closely with working group members to merge project ideas where feasible and confirm final projects selected for inclusion in the SUNS Portfolio.

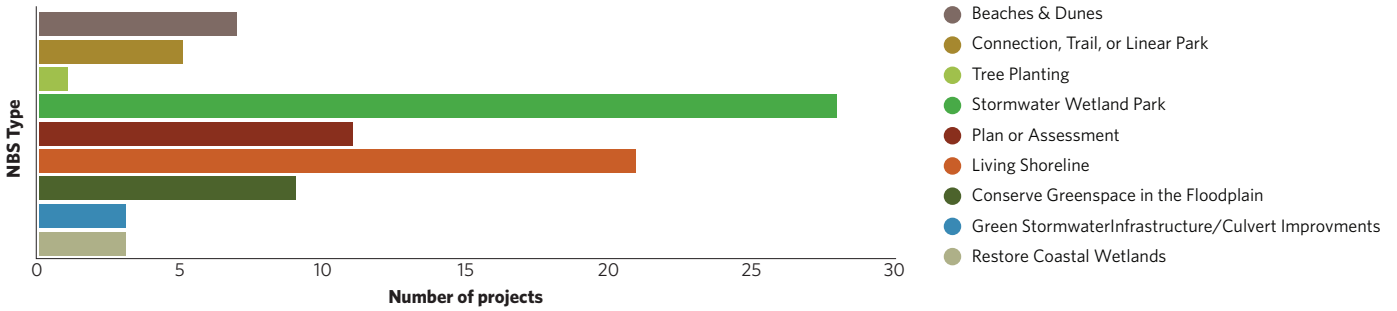


SUNS PORTFOLIO

The SUNS Portfolios consists of 72 nature-based solution projects, 11 plans or assessments, and 5 connector projects such as linear parks and trails. This map shows the location of the projects in the SUNS Portfolio displayed by project type. Many of the project ideas will involve multiple types of nature-based solutions, however the map depicts the primary project type. The project concepts are all at different phases of development and implementation. The SUNS team will be providing capacity and support to advance as many projects as possible towards completion through at least 2023.



Projects by NBS Type



SUNS Portfolio Project location to be developed into "Sweetbay Stormwater Wetland Park", Panama City
© Darryl Boudreau

MOVING FORWARD: ADVANCING THE SUNS PORTFOLIO

Although the communities in the SUNS region have accepted nature-based solutions as a valid component of increasing their resilience to future storms and sea level rise and identified a portfolio of potential NBS projects, much more must be done to put those projects in place on the ground.

The SUNS project team has been supporting several communities in the region to advance NBS project concepts that were identified during the Needs Assessment phase by helping with proposal development and project coordination. Several projects have received or are pending decisions on grants intended to advance the projects from concept to shovel ready. Examples include a National Academies of Science Gulf Research Program grant to an underserved community in North Port St. Joe to plan for nature-based solutions and a stormwater park in Lynn Haven advancing through multiple phases of implementation with support from the SUNS project team. In addition, the SUNS project team has provided capacity training workshops focused on potential funding sources for NBS projects at the state and federal level and supported multiple SUNS working group members in seeking funding from the Resilient Florida Program for Vulnerability Assessments.

Now that the SUNS Portfolio of projects is finalized, the SUNS project team is shifting into a capacity building and support role through an additional grant provided by the Walmart Foundation to help translate the SUNS region-wide planning into tangible results. For the remainder of 2023, the SUNS project team will:

- Work closely with local governments to further refine the SUNS portfolio of projects and provide technical and financial support to those projects that were highly ranked in the portfolio based on likely impact and viabilitye
- Assist a selection of SUNS Portfolio projects with community outreach in neighborhoods and communities that would potentially benefit from projects that are currently in the Concept phase
- Develop detailed project profiles for a minimum of 10 SUNS portfolio projects that are currently in the concept phase to inform decisions on the feasibility, likely benefits, and path forward for the projects
- Facilitate technical engineering and design support for 3-5 SUNS portfolio projects in preparation for proposals for project construction funding
- Assist local governments in applying for additional design and construction funding for a selection of SUNS portfolio projects
- Evaluate geographic and/or programmatic similarities and synergies among projects to develop additional regional funding and implementation strategies

As this list of objectives suggests, SUNS portfolio projects are in different stages of development, so in accomplishing these objectives the SUNS team of TNC, the Northwest Florida Water Management District and the St. Andrews and St. Joseph Bay Estuary Program will be assisting each community in different ways over the course of the year.

Looking Ahead to Additional Funding to Implement SUNS Portfolio Projects

The reality of NBS projects is that the process of obtaining and administering grant funds is complicated, and, while NBS uses natural features to mitigate storm impacts, design and construction require time and professional expertise. With more than 75 potential NBS projects in the SUNS region, TNC and our partners see the need for additional area-wide grant support to continue technical and engineering assistance to the SUNS area communities. Speed, efficiency, and success of project implementation can be enhanced by communities joining together to share technical information and grant writing and grant management expertise. Regional, multi-site implementation proposals seem more likely to be able to compete successfully for limited state and federal grant funding. TNC, the Northwest Florida Water Management District and the Estuary Program are now exploring the options for additional grant funding to build out a regional implementation strategy and continue to work with the municipalities on SUNS implementation through at least 2023.

CONCLUSION

Our engagement in the SUNS Panhandle region, beginning with the study of the impacts of Hurricane Michael on the Florida panhandle coastline, continuing with the identification of a portfolio of Nature-Based Solutions projects across three counties, and now, moving toward project design and implementation, has demonstrated that:

- NBS projects can be useful in making communities more resilient to the impacts of storms and climate change while providing valuable habitat for fish and wildlife
- Interest in regional planning for NBS is high if the process is easy to follow, flexible and aligns with the local priorities of the communities
- The leaders of coastal communities are supportive of NBS because nature-based solutions projects can be effective while providing multiple community benefits
- While practical and cost-effective, scaling up NBS requires substantial planning, technical expertise, knowledge of funding programs, and a good deal of time and effort; small municipalities generally do not have the capacity to do all this particularly during recovery from storm events
- Regional government agencies and non-profit organizations can help fill this gap by combining regional coordination and technical support with a sensitivity to local concerns

Even with the successful, collaborative development of the SUNS Portfolio of projects, the process of adapting the coast of Franklin, Gulf and Bay Counties in Florida to mitigate the threats of climate change while retaining the valued natural and cultural character of the coast will take time, substantial funding, creativity and persistence.

The Nature Conservancy and SUNS partner organizations have learned a lot through the SUNS project and we believe the lessons learned here over time can inform other projects in the Gulf states and result in planning, permitting and budget efficiencies. It is our hope that the stakeholder-based SUNS planning process can be adapted and replicated in other regions of the Gulf coast to contribute to the creation of a future Gulf that is resilient to change, sustains its fish and wildlife, and enables people to remain connected to their coastal heritage.

Mexico Beach General store © Randall Hughes

SUNS

SCALING UP NATURE-BASED SOLUTIONS

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SUNS Project Director

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