

Project Portfolio





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Project Criteria

After the vulnerability and risk assessment was conducted, the CAT team developed a set of projects to mitigate specified hazards. The projects offer non-structural, structural, and nature-based solutions that address multiple hazards and having co-benefits extending beyond resiliency. The potential projects are listed with a description, location, type of solution, project map, any scoping questions, the hazards the project addresses, existing and potential funding opportunities, an estimated timeline, the community lifeline the project supports, and anticipated benefits.

The following section describes the prioritization measures that were used when considering the order of which projects should be conducted.

Prioritization Measures

The STAPLEE evaluation method is a cost/benefit rating system to take into consideration: social, technical, administrative, political, legal, economic, and environmental impacts of proposed non-design intervention and design-intervention projects. The cost-benefit rating system utilizes a high/medium/low scoring system to predict benefits and cost of each potential solution. The social equity rating also utilizes a low/medium/high rating system to determine if the proposed project benefits a limited population, vulnerable populations, or benefits the entirety of the town. The internal capacity considers the capacity of town resources. Co-benefits for each individual project were also considered.

Prioritization Measures	
<i>Cost-Benefit</i>	Low (1) – Benefits exceed cost in the short term (1 to 5 years); however, future sea level rise over the 30-year planning horizon may significantly decrease the project benefits Medium (2) – Benefits entirety of the Town High (3) – Benefits exceed cost in the short term (1 to 5 years) and continue to provide additional benefits over the 30-year planning horizon.
<i>Social Equity</i>	Low (1) – Benefits are limited to location of project Medium (2) – Benefits neighborhoods beyond project area (>25 homes or some cut off) High (3) – Benefits large part of town or provides vital access to significant area or number of homes)
<i>Internal Capacity</i>	Considers the capacity of town resources (staff effort, scheduling, funding) Low (1) – Requires more interdepartmental and external coordination and scheduling, town funding and external resources. Medium (2) – Requires some interdepartmental coordination and funding. High (3) - Minimal staff efforts and town funding required or similar project completed by town.

Project Map

Potential Projects
Context
 Town Limits
 Salt/Brackish Marsh
 Stormwater Pipes
 Sump Standpipes
 Critical Infrastructure (Buildings) Parcels

- | | | |
|--|--|---|
| 1 - Living Shoreline Expansion | 7 - Creek Snagging / Debris Removal | 12 - Salt Marsh Wetland Restoration and Migration Study |
| 2 - Ridge Road to Colleton Road Access | 8 - Estuarine Shoreline Management Plan | 13 - Beach Nourishment |
| 3 - Dune Access Retrofits | 9 - Educational Programming (Not mapped) | 14 - Power Grid Improvements |
| 4 - Town Hall Resiliency Improvements | 10 - Moor Shore Road Feasibility Study | 15 - Passive Recreation Acquisitions |
| 5 - Public Works Building Improvements or Relocation | 11 - Kitty Hawk Road / Twiford Street Drainage and Elevation | 16 - Lillian to Sanderlin Swales |
| 6 - Clear Drainageway Policy/Process | | 17 - Additional swales and pump location |



Town of Kitty Hawk Project Prioritization

As part of the community engagement process, community members were introduced to resilience strategies aimed at reducing exposure and sensitivity to hazards while strengthening the adaptive capacity of community assets and vulnerable populations. These strategies included structural, nonstructural, and nature-based solutions. At this meeting, the community was asked to rank strategies as presented. Project categories included Design or Implementation Ready, Other Implementation, and Additional Study or Analysis Needed.

Design or Implementation Ready Projects

Structural

1. Living Shoreline -Moor Shore Rd. to Windgrass Circle
2. Ridge Road to Colleton Rd. Emergency Road Extension
3. Dune Access Retrofits
4. Town Hall Resiliency Improvements
5. Public Works Retrofit

Other Implementation

6. Establish Drainageway Policy
7. Creek Snagging/Debris Removal
8. Estaurine Shoreline Management Plan
9. Educational Programming

Additional Study or Analysis Needed

10. Moor Shore Rd. Feasibility Study
11. Kitty Hawk Rd./Twiford Rd. Drainage and Elevation Study
12. Salt Marsh Wetland Restoration and Migration Study

Additional Projects or Programs

13. Beach Nourishment
14. Power Projects
15. Passive Recreation
16. Additional Pump Location and Drainage Improvements (i.e., Lillian to Sanderlin Swales)
17. Tree Planting Program
18. Community Action Team Continued Coordination Meetings




The project categories are color coded. Please use key below.

Project Key:

Project Next Steps (by type)	
<i>Design or Implementation Ready</i>	Structural or nature-based solutions with project locations and type of design solution identified This category includes projects that are “implementation ready” and/or necessary steps to take that would make the project “implementation ready”.
<i>Other Implementation</i>	This category includes policy, programming, maintenance, and planning projects.
<i>Additional Study or Analysis Needed</i>	Projects that need additional analysis, detailed planning, specific location(s) outlined, and/or suitability and/or feasibility analysis.
<i>Additional Projects or Programs</i>	Projects, programming, and additional ongoing steps necessary to increase the Town of Kitty Hawk’s resiliency.



Project #1: Living Shoreline Expansion Design or Implementation Ready

<i>Project Description</i>	Expand living shoreline to cover area near Windgrass Circle.
<i>Location</i>	Kitty Hawk Bay Shore from Moor Shore Road to Windgrass Circle.
<i>Source</i>	CAT members, Town staff, Vulnerability and Risk Assessment
<i>Scoping Questions</i>	Extent of need may be less than full 2,000 linear feet. Areas of concern include the area near the intersection of Beacon Drive and Moor Shore Road, an area of greenway just south of there and area of erosion near Windgrass Circle Trailhead.
<i>Hazard(s) Addressed</i>	Flooding, storm surge, shoreline erosion, wave attenuation
<i>Supporting Function</i>	
<i>Type of Solution</i>	Infrastructure
<i>Estimated Timeline</i>	1-2 years
<i>Responsible Entity</i>	Planning and Inspections or Public Works
<i>Potential Partners</i>	NCDCM, US Army Corps of Engineers, NCDEQ, Dare County Soil and Water, NC DOT, Volunteers
<i>Existing Funding</i>	TBD
<i>Potential Funding Sources</i>	NC RCCP Phase III and Phase IV, NC Coastal Federation, NCDEQ grants, National Fish and Wildlife Federation (NFWF), NOAA Coastal Resilience grants, Wildlife Conservation Society Climate Adaptation Fund
<i>Estimated Cost</i>	\$300-600 (per lf cost) = \$180-360k
<i>Anticipated Benefit</i>	The expansion of the living shoreline along the Bay in this area will provide protection to existing trees, the greenway, Moor Shore Road and private properties from the expected deterioration and erosion from the expected higher-strength wave action associated with sea-level rise (SLR).
<i>CAT Team Priority Rating</i>	High
<i>Overall Rating</i>	2nd


Project Map(s)




Prioritization Measures



Cost-Benefit	Medium (2) – Protects shoreline and transportation infrastructure
Social Equity	Medium (2)
Internal Capacity	High (3) – Completed similar project in 2019
Co-Benefits	Vehicular connections, greenway connectivity, evacuation route, protection of natural resources including existing trees.
Public Ranking	2nd

Project #2: Ridge Road to Colleton Road Access Expansion Design or Implementation Ready

<i>Project Description</i>	Establish an alternate route for residents to travel to reduce vulnerability from hazardous events or when main routes are inundated. Feasibility analysis can be part of design phase. Easements need to be in place for this project to come to fruition.
<i>Location</i>	Ridge Road to Colleton Avenue (approximately 2,350ft)
<i>Source</i>	CAT members, Town staff
<i>Scoping Questions</i>	Coordination is needed between state and private property owners to have proper easements and/or agreements in place and to finalize location and design of the route.
<i>Hazard(s) Addressed</i>	Flooding, storm surge, sea level rise, storms
<i>Supporting Functions</i>	
<i>Type of Solution</i>	Infrastructure
<i>Estimated Timeline</i>	1-2 years
<i>Responsible Entity</i>	Town staff (Public Works/Planning and Inspections)
<i>Potential Partners</i>	State of North Carolina
<i>Existing Funding</i>	Town CIP
<i>Potential Funding Sources</i>	RCCP Phase III and Phase IV
<i>Estimated Cost</i>	\$150,000-\$200,000
<i>Anticipated Benefits</i>	Improve alternate routes for neighborhoods and/or residents to reduce vulnerability when main routes become inundated.
<i>CAT Team Priority Rating</i>	High
<i>Overall Rating</i>	1st, but after conversations with DCM more coordination between state agencies is needed.

Project Map(s)	
Prioritization Measures	
Cost-Benefit	High (3) – Relatively inexpensive alternative to elevating a longer segment of Kitty Hawk Road.
Social Equity	High (3) - 300+ homes potentially served by secondary evacuation route or alternative means of public safety access.
Internal Capacity	High (3) – Similar project executed in 2023
Co-Benefits	N/A
Public Ranking	1st

Project #3: Dune Access Retrofits Design or Implementation Ready

Project Description	Retrofitting key access points with boardwalks will improve preparedness for storms. Currently staff moves sand prior to major storms to fill in gaps. <i>Note: For pedestrian access points only. Vehicular access points would remain at grade.</i>
Location	Priority locations include Luke Street and Bleriot Street due to improved parking in the vicinity.
Source	Planning staff, CAT members, Town staff
Scoping Questions	Survey needed to determine location of utilities, property lines and other assets. Coordination with NCDOT, utility companies and DCM needed to determine final design.
Hazard(s) Addressed	Flooding, storm surge, sea level rise, storms
Supporting Function	 
Type of Solution	Infrastructure
Estimated Timeline	1-3 years
Responsible Entity	Town Staff
Potential Partners	NCDOT, NCDCM
Existing Funding	TBD
Potential Funding Sources	Division of Coastal Management Beach & Waterfronts Access Grants, NC Coastal Federation, NCDEQ grants, National Fish and Wildlife Federation (NFWF), NOAA Coastal Resilience grants, Wildlife Conservation Society Climate Adaptation Fund
Estimated Cost	\$100,000-120,000 each location
Anticipated Benefits	The current “at grade “ crossing are gaps or areas of vulnerability in the Town’s permanent protection as provided by the dune system, from the storm surges, tidal action, wave actions and some wind actions.
Retrofitting key access points with boardwalks will improve preparedness for storms. Currently staff moves sand prior to major storms to fill in gaps.	
CAT Team Priority Rating	Medium (2)
Overall Rating	Tied for 3rd


Project Map(s)



Prioritization Measures

Cost-Benefit	High (3)
Social Equity	Medium (2)
Internal Capacity	Medium (2)
Co-Benefits	Will save on maintenance costs and time spent by Public Works preparing for storms.
Public Ranking	Tied for 3rd

Project #4: Town Hall Resiliency Improvements Design or Implementation Ready

Project Description	Three-phased approach to address site and building improvements necessary to address flooding, wind exposure and wildfire risk. The first phase includes defensible space improvements. The second phase includes elevating the building 2 feet to improve the structures resiliency against storm surge and flooding events. The third phase would include siding and replacement of glass to improve the structural integrity of the building against high winds and fire.
Location	101 Veterans Memorial Dr.
Source	CAT members, Town staff, Vulnerability and Risk assessment
Scoping Questions	Town staff needs to have office space while these retrofits are being completed. Could plan on Town staff working in the old Sentara building during phases II and III. Currently, there is no office space available, would need to plan these phases once leases have expired.
Hazard(s) Addressed	Flooding, storm surge, sea level rise, wildfire
Supporting Function	
Type of Solution	Infrastructure
Estimated Timeline	1-3 years
Responsible Entity	Town staff (interdepartmental coordination)
Potential Partners	
Existing Funding	Town CIP
Potential Funding Sources	FEMA, RCCP Phase III, RCCP Phase IV
Estimated Cost	\$-\$-\$
Anticipated Benefit	Finished floor elevation is 8.7 ft. Base flood elevation is 4 ft. This could increase with sea level rise. The building is located in the wildland/urban interface zone and has a high exposure to potential wildfire. Increasing the elevation of the structure by 1-2 feet and/or retrofitting the building for wind resistance, fire resistance siding or improving defensible space would make the Town Hall more resilient.
Priority Rating	4th


Project Map(s)



Prioritization Measures

Cost-Benefit	High (3)
Social Equity	Medium (2)
Internal Capacity	Medium (2)
Co-Benefits	Savings on maintenance and recovery costs and add operational resiliency.
Public Ranking	4th

Project #5: Public Works Building Improvements Design or Implementation Ready

Project Description	Building improvements that elevate necessary equipment needed prior to and after storm events.
Location	965 W. Kitty Hawk Road
Source	Vulnerability and Risk assessment, CAT members, Town staff
Scoping Questions	Evaluation of costs, conceptual design and alternatives needed.
Hazard(s) Addressed	Flooding, storm surge, sea level rise
Supporting Function	
Type of Solution	Infrastructure
Estimated Timeline	1 year
Responsible Entity	Public Works Department
Potential Partners	
Existing Funding	Town CIP
Potential Funding Sources	FEMA, RCCP Phase III and IV
Estimated Cost	\$-\$\$
Anticipated Benefit	Reduce equipment exposure to flooding.
Priority Rating	5th


Project Map (s)




Prioritization Measures

Cost-Benefit	High(3)
Social Equity	Medium (2)
Internal Capacity	Medium (2)
Co-Benefits	Savings on equipment replacement and maintenance costs
Public Ranking	5th


**Project #6: Establish Drainageway Policy
Other Implementation**

Project Description	Development of a policy and process to keep drainageways clear that drain to suction basins along Lindbergh Ave.
Location	E of Highway 158, properties near suction basins
Source	Town staff, CAT members
Scoping Questions	Evaluation of precedent policies and enforcement procedures necessary.
Hazard(s) Addressed	Coastal hazards, emergency preparedness, flooding,
Supporting Function	
Type of Solution	Policy/programming, mapping and analysis
Estimated Timeline	1 year
Responsible Entity	Public Works
Potential Partners	Planning and Inspections
Existing Funding	Town General Fund
Potential Funding Sources	RCCP Phase III
Estimated Cost	\$
Anticipated Benefit	Improve hazard awareness and education on emergency preparedness, flooding, etc
Priority Rating	1st
Project Map (s)	N/A
Prioritization Measures	
Cost-Benefit	High (3)
Social Equity	Low (1)
Internal Capacity	High (3)
Co-Benefits	Ensures drainageways remain free from obstruction.
Public Ranking	2nd (Other Implementation category)


**Project #7: Creek Snagging/Debris Removal
Other Implementation**

Project Description	Establish a schedule to regular cleaning and maintenance of creeks.
Location	West of Highway 158 (Jean Guite Creek, Duck Pond Creek, Kitty Hawk Landing creeks, other creeks on soundside)
Source	CAT members
Scoping Questions	
Hazard(s) Addressed	Flooding, storm surge
Supporting Function	
Type of Solution	Maintenance
Estimated Timeline	Ongoing
Responsible Entity	Public Works
Potential Partners	NCDEQ
Existing Funding	TBD
Potential Funding Sources	RCCP Phase III, STRAP Program
Estimated Cost	\$
Anticipated Benefit	Removal of debris allows water to flow more quickly out of creeks and away from infrastructure, buildings, etc.
Priority Rating	2nd
Project Map(s)	N/A
Prioritization Measures	
Cost-Benefit	Medium (2)
Social Equity	Medium (2)
Internal Capacity	Medium (2)
Co-Benefits	Ensures creeks are clear prior to and after storm events.
Public Ranking	1st (for Other Implementation category)


Project #8: Estuarine Shoreline Management Plan Other Implementation

Project Description	The project would involve the development of an Estuarine Shoreline Management Plan to comprehensively address the management of the Town's estuarine shoreline. It will assess erosion, coastal and climate hazards, ecosystem health, public health, and recreational opportunities.
Location	Soundside shorelines adjacent to the Town of Kitty Hawk Limits (Kitty Hawk Bay, Albemarle Sound)
Source	Planning staff, Town staff
Scoping Questions	
Hazard(s) Addressed	Flooding, storm surge, shoreline erosion, wave attenuation
Supporting Function	
Type of Solution	Infrastructure
Estimated Timeline	1-2 years
Responsible Entity	Planning and Inspections
Potential Partners	Dare County, NCDCM
Existing Funding	Town General Fund
Potential Funding Sources	Golden Leaf Flood Mitigation Program, Phase III RCCP, Town Planning Fund
Estimated Cost	\$100k-150k
Anticipated Benefit	A prioritized list of estuarine shoreline projects, increased resilience against flooding, increased protection against shoreline erosion, and improved ecosystem health.
Priority Rating	3rd
Project Map(s)	See Project Map on page 69 .
Prioritization Measures	
Cost-Benefit	High (3)
Social Equity	Medium (2)
Internal Capacity	High (3)
Co-Benefits	
Public Ranking	5th (For Other Implementation category)

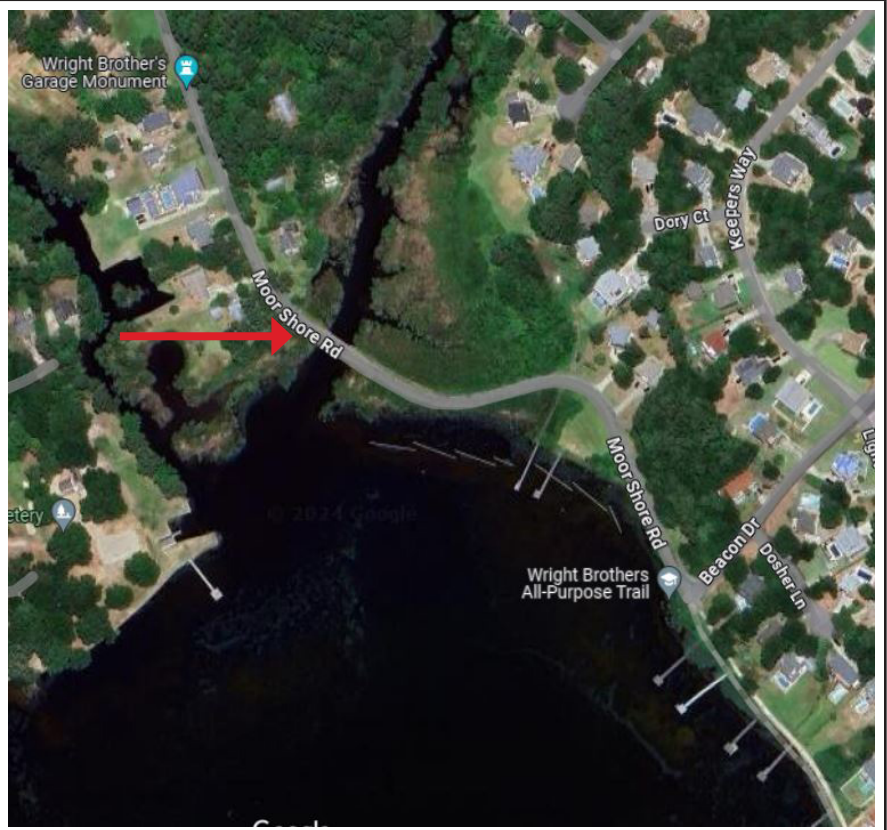
**Project #9: Educational Programming
Other Implementation**

<i>Project Description</i>	Educate new/existing homeowners about mitigation strategies that can be taken prior to storm events.
<i>Location</i>	Town of Kitty Hawk
<i>Source</i>	CAT members
<i>Scoping Questions</i>	
<i>Hazard(s) Addressed</i>	Emergency preparedness
<i>Supporting Function</i>	
<i>Type of Solution</i>	Policy/programming
<i>Estimated Timeline</i>	Ongoing
<i>Responsible Entity</i>	Planning and Inspections
<i>Potential Partners</i>	Local Realtors, home inspectors
<i>Existing Funding</i>	Town General Fund
<i>Potential Funding Sources</i>	RCCP Phase III
<i>Estimated Cost</i>	\$
<i>Anticipated Benefit</i>	Improve hazard awareness and education on emergency preparedness, flooding, etc.
<i>Priority Rating</i>	4th
<i>Project Map (s)</i>	N/A
Prioritization Measures	
<i>Cost-Benefit</i>	High (3)
<i>Social Equity</i>	Medium (2)
<i>Internal Capacity</i>	High (3)
<i>Co-Benefits</i>	More prepared residents
<i>Public Ranking</i>	4th

**Project #10: Moor Shore Rd. Feasibility Study
Additional Study or Analysis Needed**

Project Description	Study the potential for elevation improvements along Moor Shore Rd., including necessary stormwater modeling. Potential for boardwalk along Moor Shore Road to continue greenway. Project could be executed in tandem with or separate from expanding living shoreline to cover area near Windgrass Circle.
Location	South Kitty Hawk, from Kitty Hawk Rd. to Beacon Dr.
Source	CAT members, Town staff, Vulnerability and Risk assessment
Scoping Questions	Coordination with NCDOT to determine the state's plans for Moor Shore Rd. Survey and feasibility study to determine alternatives and next steps for elevation of Moor Shore Rd.
Hazard(s) Addressed	Flooding, storm surge, sea level rise
Supporting Function	
Type of Solution	Infrastructure
Estimated Timeline	1-3 years
Responsible Entity	NCDOT
Potential Partners	Town of Kitty Hawk
Existing Funding	TBD
Potential Funding Sources	Local, state, and federal grant funding, RCCP Phase III
Estimated Cost	\$ (Study), \$\$\$ (Design and Construction)
Anticipated Benefit	Long-term Moor Shore Road is threatened by sea-level rise. Elevating the road and bridge should be studied in order to preserve alternative vehicular connections in the event of ocean overwash or heavy rainfall closing Highway 12 and 158.
Priority Rating	1st


Project Map(s)




Prioritization Measures


Cost-Benefit	Low (1)
Social Equity	Medium (2)
Internal Capacity	Low (1)
Co-Benefits	Provide alternate evacuation route when other routes are inundated.
Public Ranking	3rd

Project 11: Kitty Hawk Rd./Twiford St. Drainage and Road Elevation Study Additional Study or Analysis Needed

Project Description	<ul style="list-style-type: none"> •Asset mapping to locate and size culverts and determine material condition •Stormwater modeling to understand flow during designed storms •Potential to increase elevation of roads, replace or install culverts, create swales to improve infiltration, storage and conveyance. •Study of pedestrian access options <p>Until this project has been studied and phased, the Town should coordinate with NCDOT to place markers in right-of-way to allow drivers crossing inundated roads to know where the edge of the road is located.</p>
Location	West Kitty Hawk Road and Twiford Street intersection and West Kitty Hawk Road to Rogers Street
Source	Public Input, CAT members, Town Staff, and Vulnerability and Risk Assessment
Scoping Questions	Determine project study area, scope and phasing. Also determine potential intermediate improvements that could include flags or other delineation of the location of the roadway while the road is flooded.
Hazard(s) Addressed	Flooding, storm surge, sea level rise
Supporting Function	
Type of Solution	Infrastructure
Estimated Timeline	1-3 years
Responsible Entity	NCDOT
Potential Partners	Town of Kitty Hawk, NCDEQ,
Existing Funding	N/A
Potential Funding Sources	Future RCCP Feasibility Study Program
Estimated Cost	\$-\$\$\$

<p><i>Anticipated Benefit</i></p>	<p>Asset mapping and conditions assessment of culverts will provide baseline conditions and inventory of the Town’s assets. This can facilitate the planning of maintenance, replacement and/or upgrade of each asset. The observed conditions, mapped data and a hydraulic analysis can used as during a study to predict performance of culverts, swales and roads during future rains and/or tidal events. The results of such analyzes will inform Town leadership to plan/ build projects to protect private and critical public infrastructure and facilitate resident and emergency vehicle access to west Kitty Hawk.</p> <p>Note that this area was also identified as a priority for a multi-use path to improve bicycle and pedestrian connectivity. An elevated boardwalk or parallel MUP should be evaluated with roadway and drainage improvement options.</p>
<p>Priority Rating</p>	<p>2nd</p>
<p>Project Map(s)</p>	
<p>Prioritization Measures</p>	
<p>Cost-Benefit</p>	<p>Low (1)</p>
<p>Social Equity</p>	<p>High (3)</p>
<p>Internal Capacity</p>	<p>Low (1)</p>
<p>Co-Benefits</p>	<p>Safe route for emergency services and residents.</p>
<p>Public Ranking</p>	<p>Tied for 1st (In Additional Study or Analysis needed)</p>

Project #12: Salt Marsh Wetland Restoration and Migration Study Additional Study or Analysis Needed

Project Description	Inventory and map threatened, degraded, or eroded marsh complexes based on acreage, ecological, and protective functions Prioritize identified sites for restoration based on federal, state, and/or local criteria. Update and refine existing marsh migration projection maps to account for existing drainage systems, tidal and rainfall patterns, etc. With this effort, develop strategies to manage new development in low-lying areas to avoid blocking potential migration paths and prioritize strategies (i.e.; acquisition, conservation, land development updates, marsh migration on conservation lands (Kitty Hawk Woods)) that facilitate marsh migration.
Location	Southwest Kitty Hawk near Kitty Hawk Bay, West of Highway 158, North of West Kitty Hawk Road, Kitty Hawk Woods Natural Heritage Area, State and Locally owned managed areas
Source	Public input, CAT members, Town staff
Scoping Questions	Will need to have proper easements and/or legal agreements in place, property is privately owned
Hazard(s) Addressed	Flooding, storm surge, sea level rise
Supporting Function	
Type of Solution	Nature-based
Estimated Timeline	Ongoing in phases
Responsible Entity	Town of Kitty Hawk
Potential Partners	Division of Coastal Management, Dare County
Existing Funding	N/A
Potential Funding Sources	RCCP Phase III and Phase IV, NC Coastal Federation, NCDEQ grants, National Fish and Wildlife Federation (NFWF), NOAA Coastal Resilience grants, Wildlife Conservation Society Climate Adaptation Fund
Estimated Cost	\$

<p><i>Anticipated Benefit</i></p>	<p>Biodiversity: Wetlands support a diverse array of plant and animal species, many of which are specially adapted to wetland habitats. They serve as important breeding grounds, nurseries, and stopover sites for migratory birds, fish, amphibians, and other wildlife.</p> <p>Flood Control: Wetlands act as natural sponges, absorbing and storing excess water during periods of heavy rainfall or flooding. By slowing the flow of water and reducing peak flood levels, wetlands help to mitigate flood risks for nearby communities and adjacent critical assets.</p> <p>Water Quality Improvement: Wetlands filter and purify water by trapping sediments, nutrients, and pollutants. They help to improve water quality by removing excess nutrients, such as nitrogen and phosphorus, reducing the concentration of harmful contaminants, and reducing silt and organic material deposits in canal and channels throughout the Bay.</p> <p>Erosion Control: Wetland vegetation helps to stabilize shorelines and prevent erosion by absorbing wave energy and holding soils in place. This helps to protect coastlines, canal and channels banks, riverbanks, and other vulnerable areas from erosion and sedimentation. Threat of erosion due to increased wave action from storms will increase in coming years with sea level rise.</p> <p>Recreation and Tourism: Wetlands provide opportunities for recreational activities such as birdwatching, fishing, hiking, and kayaking. They attract visitors and tourists, contributing to local economies through ecotourism and outdoor recreation.</p> <p>Economic Benefits: Wetlands support commercial fisheries, agriculture, and forestry by providing habitat for fish and wildlife, replenishing groundwater supplies, and enhancing soil fertility. They also provide valuable ecosystem services, such as pollination and nutrient cycling, that support agricultural productivity.</p>
<p><i>Priority Rating</i></p>	<p>3rd</p>
<p><i>Project Map(s)</i></p>	<p>See Salt Marsh Restoration Potential Map on page (TBD)</p>
<p>Prioritization Measures</p>	
<p><i>Cost-Benefit</i></p>	<p>High (3)</p>
<p><i>Social Equity</i></p>	<p>Medium (2)</p>
<p><i>Internal Capacity</i></p>	<p>Medium (2)</p>
<p><i>Co-Benefits</i></p>	<p>Increased resiliency for residents in Kitty Hawk.</p>
<p><i>Public Ranking</i></p>	<p>1st (In Additional Study or Analysis Needed)</p>

<i>Additional Projects or Programs</i>	
<i>Project Name</i>	<i>Project Description</i>
<i>13. Beach Nourishment</i>	The Town has a beach nourishment management plan and should continue to reinforce beach nourishment as a way to protect both its tourism economy and full-time and part-time residents and business owners.
<i>14. Power projects</i>	Electricity is essential to support critical facilities for disaster relief and recovery efforts after storm events. Ongoing coordination is necessary for emergency preparedness, ensure recovery and response is adequate in the aftermath of a storm event, surging power demands, etc. The town should continue to partner with Dominion Energy to ensure service is not disrupted for long periods of time.
<i>15. Passive Recreation</i>	Consider buy-outs along KH Bay to reduce exposure of private property to use for passive recreation while improving water quality, protecting private property values, and the potential to mitigate eroding shorelines.
<i>16. Lillian to Sanderlin Swales</i>	Addition of swales along roads to facilitate water removal and direct to existing pump out locations
<i>17. Additional pump location and drainage improvements</i>	Add pump location North of Luke Street, add swales and driveway culverts between Bennett St. and Luke St.
<i>18. Tree Planting Program</i>	Develop a tree planting program with aims at increasing tree canopy coverage east of Highway 158 to reduce stormwater runoff, improve water quality, calm traffic, provide shade, increase aesthetics and more. Other focus areas should be where older trees are at risk of dying, disease, etc.
<i>19. Community Action Team Continued Coordination meetings</i>	Continuing CAT team meetings; maintaining this network will build community capacity and may help address future resilience concerns
<i>20. Relocation of Bob Perry Convenience Center</i>	Current convenience center is threatened by flooding. Feasibility study needed to determine property needs and potential locations.

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