Project Need

Climate change impacts cultural resources by exacerbating the typical deterioration of physical resources, such as historic buildings, and altering cultural landscapes. Climate change impacts to coastal cultural resources include inundation, erosion, destruction, or submersion from sea level rise and storm-related flooding.

As indicated by a report of National Park Service (NPS) coastal assets*, most historic buildings at Cape Lookout National Seashore are listed as being highly vulnerable to sea level rise (and subsequent impacts). This high vulnerability rating is due to the low elevation of the seashore and the previous flooding impacts from storms.

The NPS is proactively thinking about strategies to adapt vulnerable cultural resources & landscapes to ensure their preservation for the enjoyment of present and future generations. Besides considering the opportunities and limitations of materials and technology, the NPS recognizes the need to consider the values and preferences of stakeholders.

In 2017, Core Sound Waterfowl Museum & Heritage Center members were invited to respond to an online survey that measured their connections to the seashore and its historic buildings, as well as their perceptions of resources, climate-related threats, and adaptation strategies.

Respondent Profile

170 individuals voluntarily responded to the survey which was sent as a link in an email to members of the Core Sound Waterfowl Museum & Heritage Center email list. 137 respondents were current members, 23 were prior members, and 10 were never members (could have had the link forwarded to them by a member). Results presented here are responses of the 137 current Core Sound Waterfowl Museum & Heritage Center members.

On average, members made their first visit to the island in 1979.

Typically, members visited Cape Look Village four times in the prior 12 months and Portsmouth Village once in the prior 12 months.

13% of Core Sound Waterfowl Museum & Heritage Center members are former, or descendants of former, residents of Cape Lookout Village or Portsmouth Village.

Members’ Connections to Cape Lookout National Seashore

We asked members of Cape Lookout National Seashore which areas they felt most connected to.

Members perceive that the greatest values Cape Lookout provides are:

- Attracting tourism dollars.
- Contributing to the character of local communities.
- Instilling feelings of community pride & togetherness.
- Providing a special place for my family.

Core Sound Waterfowl Museum & Heritage Center members agree most strongly with statements that:

"What happens at Cape Lookout matters to me."

"The local communities’ history is strongly tied to Cape Lookout."

"Cape Lookout is an important part of our history as a nation."

"Preserving the history and culture associated with cultural resources at Cape Lookout is important for future generations."

41% felt most connected to Cape Lookout Lighthouse, 22% to all of Cape Lookout Village, 18% to both villages equally, 9% to Portsmouth Village, and 8% reported they did not feel connected to either village.
Perceptions of Site Conditions & Vulnerability at Cape Lookout National Seashore

Overall, members perceive Cape Lookout cultural resources to be in **fair to good condition**.

Members perceive that the five greatest threats to historic buildings on Cape Lookout National Seashore are:

1. Storm-related flooding and erosion
2. Sea level rise
3. Deterioration
4. Erosion
5. Inundation

Core Sound Waterfowl Museum & Heritage Center members perceive these threats as "extremely threatening."

Members perceive moderate change to the cultural resources at Cape Lookout National Seashore since their first visit and report that these changes have positively affected their connection to the site.

Perceptions of Adaptation & Prioritization

Members were asked about the desirability and impact of seven different adaptation strategies:

- **Manage change** as the most desirable adaptation strategy.
- Interpreting the change, improving resilience, and relocating buildings are perceived as somewhat desirable.
- Additionally, members feel relocating a building from its original location would slightly detract from their connections to the site.
- Taking off-site action, leaving things as they are, and documenting & releasing buildings are perceived to be the least desirable options.
- Members rate these least desirable adaptation strategies as those most likely to negatively affect their future connection to the site.

Members believe that adaptation prioritization should be based on:

- National importance.
- Historical value and uniqueness.
- Meaningfulness to a community.
- Scientific value.

**Adaptation strategies***

- **Leave as they are:** if vulnerability is low or if preservation treatments are too technically challenging or expensive, take no action & allow building to deteriorate as change occurs.
- **Take offsite action:** construct barriers like seawalls to deflect storm surge.
- **Improve resilience:** alter or modify buildings to withstand storm surge or flooding, includes elevating buildings.
- **Manage change:** plant vegetation to reduce erosion or build boardwalks to access buildings.
- **Relocate:** to a less vulnerable location.
- **Document and release:** study & record the details of the building, then allow them to deteriorate with storms & flooding.
- **Interpret the change:** prepare visitor talk or signs with information about how storms, flooding, erosion and sea level rise impact buildings.

Key Insights

Based on the findings of the survey, we highlight several key insights for cultural resource management:

- Perceived changes to site conditions increased partners’ connections to the site. Management, including restoration and interpretation, appears to be capable of enhancing individuals’ place connections regardless of climate-related threats. However, some adaptation strategies will negatively influence place connections.

- Partners value interpretation as a cultural resource management tool and climate adaptation strategy. Further, partners may be best situated (have the time, skill, knowledge, and fiscal resources) to help managers prepare interpretive materials for the site.

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For full report of survey results, please see:

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