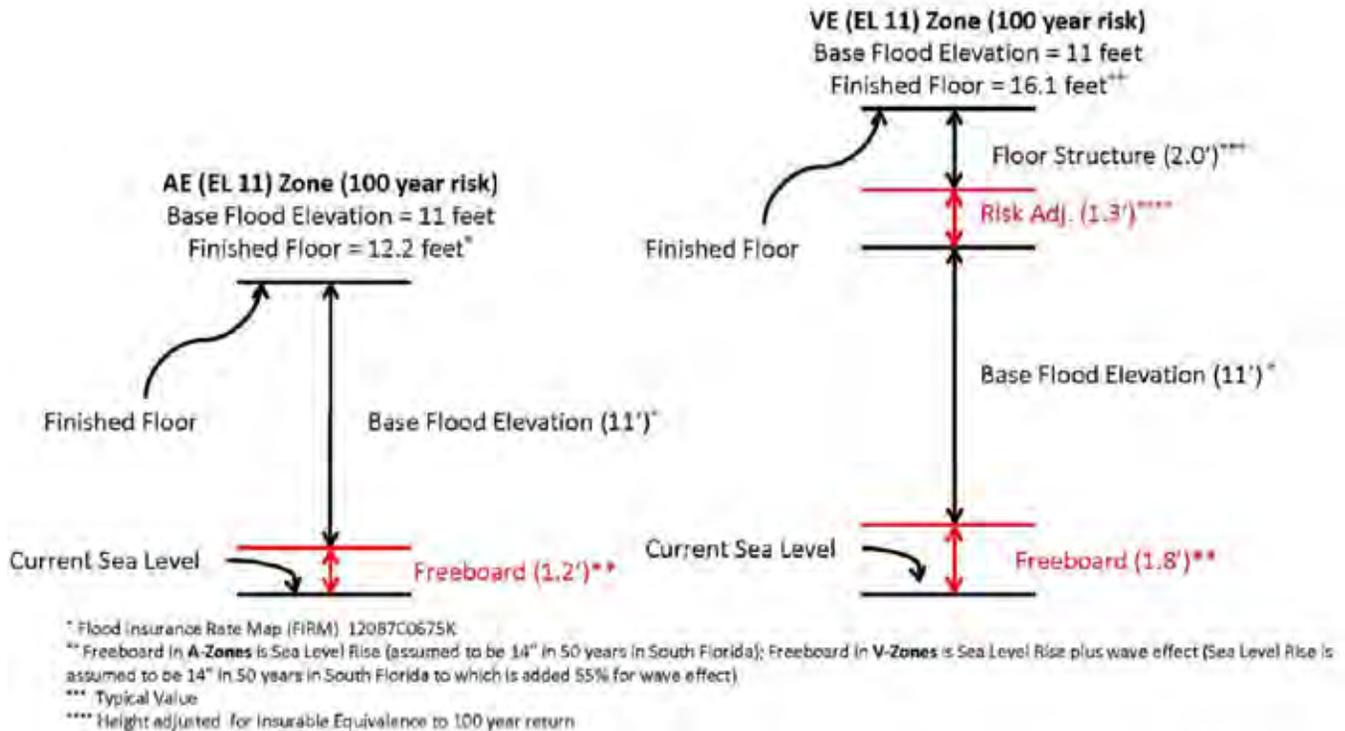


Case Study 18: Developing Sustainable Visitor Facilities, Everglades National Park, Florida

Contributing Author: Fred Herling (Everglades National Park)



Everglades National Park is redeveloping the Flamingo area, including proposals to mitigate risk by elevating structures. Heights include the incorporation of sea level and storm surge scenarios. Image credit: Everglades National Park.

Goals

Visitor facilities in the Flamingo area of Everglades National Park in Florida were destroyed by two hurricanes in 2005. Incorporating climate change sustainability into the redevelopment plan has required extensive data gathering efforts and public engagement.

Challenges and Needs

Until 2005 the Flamingo area of Everglades National Park was the park's primary destination and the only location offering overnight accommodations and providing direct access to the park's vast wilderness. Hurricanes Katrina and Wilma in 2005 caused severe impacts to Flamingo facilities including National Park Service (NPS) visitor facilities and concessions, including all lodging units. Due to the resulting damage, Flamingo has been relegated to a day-use/camping area. The NPS has been working with the public and key stakeholders to determine and implement a sustainable rebuilding effort. With overwhelming public support, plans were completed to define the new, sustainable Flamingo vision for the 21st century, including consideration of sea level and coastal storm threats. Then, in 2011, Director Jarvis expressed concerns about the project due to its cost and threats from climate change. Due to its coastal location on Florida Bay, a few feet above sea level, Flamingo is susceptible to storm surge, sea level rise, and hurricane-force winds. The Flamingo project needed to be revised with consideration of the location's vulnerability.

Responsive Actions

In 2011 the Flamingo project was revised to address these climate vulnerability concerns and to focus more on sustainable redevelopment strategies consistent with park goals and ensuring that the park's future concessions partner is provided a strong business opportunity. With the Director's support, the planning and decision making now underway is occurring as part of the concessions prospectus process and is incorporated into the park's long-term vision as described in the new general management plan, completed in 2015. The result will be a refined Flamingo vision that is sustainable for the next 50 years using the best available climate change data together with appropriate laws and policies for protecting Flamingo's unique resources and enhancing its visitor experiences.

This process has faced several setbacks in the concessions prospectus and contracting process that will result in substantial additional work effort and likely cause a one-and-a-half year delay in issuing a new concessions contract. A key contributor to this setback arose from policy guidance on concessions contract length. Though the standard 10-year contract length was shown to be feasible in the prospectus financial analysis, the analysis also demonstrated that having a longer contract period substantially improved the future concessioner's business opportunity. In a project like this, with a large capital investment requirement and/or risks associated with site conditions and vulnerabilities, NPS managers should encourage and facilitate opportunities that have the best chance of success while being consistent with applicable laws and policies. Having less-favorable terms likely led to not attracting any bidders. The prospectus is currently being modified with appropriate contract length and other modifications to be sent out for bids. Policies that allow local or regional flexibility, such as longer contract lengths where allowed by law due to site-specific conditions, would likely have improved the efficiency and timeliness of this project.

Sustainable improvements to park facilities have been funded by various sources: emergency hurricane repair funds, franchise and recreational fee programs, line-item construction, Federal Lands Highway, private sector support, and others. Key references and data sources for enhancing sustainability include Intergovernmental Panel on Climate Change (IPCC) reports, Federal Emergency Management Agency (FEMA) flood insurance data and maps, natural resource and vegetation data and maps, cultural resource assessments, visitor use data, past and projected visitor use and demand data for financial analysis purposes, asset condition assessments, sustainable architecture and designs for coastal areas, cost estimating and lifecycle cost assessments for facilities and assets, and NPS guidance and policy on how to evaluate and make decisions about development in vulnerable coastal areas.

Metrics to evaluate the success of project implementation will be related to natural and cultural resource protection, quality of visitor experiences, success of the NPS-concessioner partnership, and site viability in terms of future climate-change related events and knowledge. Short-term metrics will be associated with the successful approval of the project within the agency (achieved in November 2012) given the scrutiny it has received for a new development in a coastal high-hazard zone, and completion of a successful concessions contract process in 2015.

There are several lessons to be learned from this project. When high-profile projects require public engagement to succeed, the NPS needs to communicate and manage project timelines and expectations effectively. To improve project success, it is important to identify all parties in the project review and decision-making process and to ensure that they are kept aware of key activities, with frequent communication early on and throughout the project so there are no surprises at the end. Additional NPS products that would improve future projects include the following:

- Guidance on how to develop and manage projects with potential climate-change considerations, and how to locate relevant data sources
- Direction from Washington Support Office (WASO) Directorates on expectations for evaluating complex (and sometimes competing) information in a world of diminishing public resources (money and staff)
- Guidance for managing agency and public expectations regarding the level and pace of progress that can be expected
- Ecosystem-, landscape-, or threat-based models for addressing resource management, visitor experience and investment decisions that consider climate-change factors
- Bibliographies, references, and sources of information that can help get project teams thinking about and organizing project scope requirements comprehensively
- Project management tools that facilitate projects occurring efficiently and result in good decisions (e.g., sample work plans, interdisciplinary teams, project/task agreements, and schedules that take into account all key steps)
- Development of national policies and guidance documents that recognize the need for, and incorporate, local or regional flexibility to consider site- or project-specific conditions (e.g., fulfilling Americans with Disabilities Act (ADA) requirements; using optimal, not necessarily minimum contract length)

This project is expected to take 5–10 years to complete. This case study is an example of the following adaptation strategies:

- Incorporating climate change into policies, plans, and regulations
- Monitoring climate change impacts and adaptation efficacy
- Increasing/improving public awareness, education, and outreach efforts
- Making infrastructure resistant or resilient to climate change
- Creating new or enhance existing policy

For more information:

Fred Herling, Park Planner
 Planning and Compliance Branch
 Everglades National Park
 (305) 242-7704
Fred_Herling@nps.gov

<http://www.nps.gov/ever/parkmgmt/planning.htm>

<http://www.nps.gov/ever/naturescience/sfnrcpublications.htm> (Fact Sheets, Technical Reports)