

Progress Toward Restoring the Everglades:

An independent review that stresses the need to invest in Everglades Restoration



Introduction

The Everglades is a vast, sub-tropical ecosystem that once supported hundreds of thousands of wading birds. Everglades restoration is among the largest environmental restoration projects in the world. It is focused in part on recovering the populations of wading birds in the Greater Everglades Ecosystem like Wood Storks and Roseate Spoonbills that have declined sharply in the last century. These birds serve as valuable indicators of the overall health of the ecosystem and the reduction in their numbers provides evidence that the Everglades has experienced serious decline.

Every two years an independent panel of experts analyzes the status of Everglades restoration. In the 2014 *“Progress Toward Restoring the Everglades: The Fifth Biennial Review,”* (NRC Review) the National Research Council of the National Academies calls for speeding up implementation and increasing funding for Everglades restoration projects. This report sets up a call to action to find a dedicated funding source for science and monitoring, to quickly move forward with the Central Everglades Planning Project (CEPP), and to address new challenges posed by climate change and invasive exotic species.

“During the past 2 years, Everglades restoration has been defined by exceptional project planning accomplishments with substantial restoration potential on the one hand; and increasingly frustrating financial, procedural, and policy constraints impeding project implementation on the other.” P 1

Reinvest in Science and Monitoring

A project with the scale, cost, and complexity of Everglades restoration needs to be rooted in scientifically informed decision-making. Stable funding is necessary to maintain a sufficient amount of scientific research and monitoring in the Greater Everglades. Scientific data collected consistently over time is vital for understanding how the Everglades is changing and how the ecosystem responds as restoration projects are completed.

The NRC Review states:

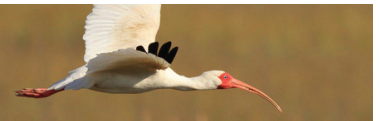
- “Substantial federal and state resources have been and continue to be invested in Everglades restoration. To ensure that these resources are being used wisely to achieve restoration objectives, a robust science and monitoring program is essential.” P. 174
- “If funding cuts result in significant gaps in critical long-term monitoring data, important changes and patterns could be missed, and data collected before or after the funding gaps could lose their value.” P. 186
- “Scientific research provides knowledge and tools that assist decision makers. Monitoring involves the collection of data necessary to evaluate the success of various restoration projects. Long-term data that describe the conditions, variability, trends, and patterns related to resources and processes in the Everglades are fundamental to understanding whether and how projects, once implemented, change conditions.” P. 175
- “A dedicated, stable, and reliable funding source is essential to obtain the long-term systemwide monitoring data necessary to evaluate the success of restoration efforts. Such funding is necessary to conduct monitoring for long enough to provide a scientifically sound understanding of the conditions, trends, and patterns for each parameter of concern.” P. 176

New Threats to a Vulnerable Ecosystem: Climate Change and Invasive Species

The Review notes that climate change and invasive nonnative species represent growing threats that are already taking a toll on the ecosystem and that more information is needed to address these challenges. Rather than reasons to abandon restoration efforts, these threats increase the urgency for making progress on restoration.

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The NRC Review states:

- “In the face of climate change, Everglades restoration will increase the resilience of the ecosystem and the water management system and decrease their vulnerability. From the perspective of water resources management, the CERP may offer substantial benefits.” *P. 135*
- “Climate change provides additional incentives to expedite restoration. The CERP provides important means to help mitigate the impacts of sea-level rise and precipitation and temperature changes by enhancing ecosystem resilience, promoting peat accretion, and reducing salt water intrusion.” *P. 3*
- “Given that the Comprehensive Everglades Restoration Plan is a multidecadal restoration effort, it is important to understand how anticipated changes in climate and sea level could impact restoration outcomes.” *P. 109*
- “Invasions by nonnative species can threaten Everglades restoration, displacing native species and transforming large expanses into ecosystems that differ radically from their historical structure, functioning, and provision of ecosystem services.” *P. 138*
- “At every step of the CERP planning process, full consideration is needed of the implications of restoration activities for introduced species and their impacts.” *P. 173*

Central Everglades Planning Project and Signs of Hope for the Everglades

Research and monitoring have indicated that the ecological functions in areas south of Lake Okeechobee, cut off from freshwater flows, have continued to decline. The Central Everglades Planning Project represents an unprecedented expedited planning effort to more quickly address and repair the ecological damage in the core of the Greater Everglades Ecosystem. Now that a plan for the Central Everglades is in place, constructing the project as soon as possible is key.

The NRC Review states:

- “If implemented in a timely manner... the Central Everglades Planning Project would make substantial improvements toward the goal of restoring the Everglades.” *P. 41*
- “Implementation of the plan would provide significant benefits to the remnant Everglades ecosystem, including more than 200,000 AF/yr of new water—a sizeable first increment of restoration for the central Everglades that represents approximately two-thirds of the new water to northern WCA-3 envisioned in the CERP.” *P. 57*
- “If the Central Everglades Planning Project is to avert further ecosystem degradation, CERP planners and policy makers need to expedite project implementation in the face of several hurdles.” *P. 57*
- “Creative solutions may be available to significantly expedite restoration, such as finding permit mechanisms to move water that meets water quality criteria into the Everglades prior to completion of the entire Restoration Strategies project... Without such solutions, redistribution of existing water may not be feasible until 2035 or beyond, and at the envisioned funding level of \$100 million per year, construction would not be completed for approximately four decades—exceedingly long for a system already in significant decline.” *P. 4*

Conclusion:

In “*Progress Toward Restoring the Everglades: The Fifth Biennial Review*,” the National Research Council of the National Academy of Sciences report progress in efforts to restore America’s Everglades while identifying areas where refocus is needed.

Audubon urges state and federal decision-makers to heed the Review’s call to reinvest in science and monitoring, better coordinate invasive species management, complete the Central Everglades Planning Project, and accelerate restoration efforts in the face of rising seas and other impacts of climate change.