Friends,

Sometimes, new challenges can provide the best opportunity for insight. As Hurricane Irma—the most powerful storm to hit the state in more than a decade—approached South Florida, our concerns were far-reaching:

- How would wildlife and natural resources fare?
- Where would the damages be most severe?
- How would we recover?

As the storm’s path continued over America’s Everglades, it became clear that this vast network of wetlands doesn’t just serve as important wildlife habitat. As Audubon’s Celeste De Palma noted in a recent Miami Herald op-ed, these wetlands are, in fact, our first line of defense against incoming storms. Hurricane Irma, in contrast with record-breaking high water levels and a severe drought immediately preceding it, put the importance of ongoing Everglades restoration efforts in a new light.

One incredible demonstration of the value of restoration investments was provided by the Kissimmee River Restoration project located south of Orlando. This project is a world-renowned model for ecosystem restoration. When the first part of the restoration was complete, the positive impact on surrounding areas was immediate. Birds returned more quickly than ever anticipated, and the area quickly mirrored its historic characteristics.

The restored river and floodplain held back water during Hurricane Irma that would otherwise have flooded into Lake Okeechobee. Restoration prevented a challenging situation on the lake from getting even worse. This part of the Everglades responded to an extreme weather event the way it would have historically. This resilience is just what is needed as extreme weather becomes more commonplace.

With your help, Audubon is advancing restoration progress like this across America’s Everglades. And every completed restoration project helps increase resiliency and the ability to respond to challenges like Hurricane Irma.

Julie Hill-Gabriel, Esq.
Deputy Director, Audubon Florida

This year’s record-breaking wet season coupled with significant rainfall from Hurricane Irma created extremely high water levels in the Central Everglades. These conditions highlighted the need to accelerate projects that increase storage throughout the Greater Everglades Ecosystem, and galvanized the South Florida Water Management District to embrace the Florida Legislature’s mandate to plan for a reservoir in the Everglades Agricultural Area (EAA).

Planning for an EAA Reservoir started in October and the process is moving quickly. The next step is for a series of project alternatives to be developed. Analysis of these alternatives will unfold before the end of 2017, providing opportunities to ensure that the objectives of this project are met: to alleviate northern estuarine discharges and to increase freshwater flows to the Southern Everglades. Audubon remains focused on getting the water right for the birds and Floridians that call this paradise home.
Cape Sable – Restoration on the Front Lines of Intense Storm Impacts

The sandy beaches, mud flats, and interior marshes of Cape Sable provide some of the most valuable water bird habitat in Everglades National Park. Protruding into the Gulf of Mexico off the southwest tip of the Florida mainland, the Cape is also one of the most vulnerable locations to tropical storm impacts and sea level rise.

Hurricane Irma set up a critical test case for the importance of wetlands as the intense storm passed just west of the Cape. In 2011, a first phase of the Cape Sable Dams Restoration was completed. This phase reestablished the natural coastal ridge across canals, preventing saltwater intrusion and reducing erosion. After Irma, Audubon scientists monitoring ecological conditions on Cape Sable documented storm impacts in the restored versus non-restored wetland areas. The differences were remarkable. In restored wetlands, where earthen dams recreated the natural conditions, the habitat withstood storm forces exceptionally well with virtually no further erosion or loss of vegetation. In contrast, loss of shoreline and mangroves from storm surge was evident in areas not yet restored. This is direct evidence that an intact coastal ridge and healthy mangrove habitat offer a strong defense against extreme storm conditions and rising seas.

A second phase of Cape Sable restoration has been planned and authorized through the National Park Service. But with a lack of sufficient funding, completion of this project has stalled. Completing this project is a top priority for Audubon because it sets a precedent about whether habitat on the front lines of sea level rise and storm surge will be restored, allowing fish, wildlife, and birds time to adjust to changing conditions. If not restored, the area will fall victim to erosion on an accelerated scale. Hurricane Irma made it even clearer that it’s important to invest in wetland restoration in places like Cape Sable.

The Heart of America’s Everglades Wounded

Lake Okeechobee Suffers from High Water Levels Brought on by Hurricane Irma

One of the earliest reports of ecological damage from Hurricane Irma was from the University of Florida. Forty-four Everglade Snail Kite nests on Lake Okeechobee were destroyed. But that’s not all. Storm surge caused water levels on one side of the lake to rise to 20 feet and drop to 9.5 feet on the other while harmful sediments on the lake bottom were stirred up.

Heavy rainfall from Hurricane Irma caused Lake Okeechobee to rise more than 3.5 feet in a single month. And despite the fact that lake levels in advance of Hurricane Irma were unusually low for this time of year, this one storm brought the lake’s water levels above 17 feet- its highest level since Hurricane Wilma in 2005.

The last time Lake Okeechobee water levels reached 17 feet, the lake lost about 70 square miles of plant communities after they drowned in the deep, dirty water while fisheries collapsed and did not recover for almost a decade. Underwater plant communities serve important nutrient filtration functions and are the nursery for the famed large-mouthed bass and black crappie fisheries. With the loss of water treatment capacity provided by this vegetation, water quality in the lake declined. Audubon scientists warn that a similar scenario is now unfolding.

Hurricane Irma serves as a reminder that there must be additional water storage projects outside of Lake Okeechobee that move water to the right places at the right time and provide a relief valve for water in the lake. Unfortunately, even while the current disaster on Lake Okeechobee is developing, some policymakers are advocating that the lake be intentionally held at its current, damaging deep levels more often in the future. Higher lake levels would create even more dangerous conditions for the people living around the lake and dampen the progress of Everglades restoration. As more extreme weather events hit Florida, Audubon will continue reporting on the health of Lake Okeechobee and advocating for true restoration projects that protect our communities and ecosystems from extreme weather events.
The Western Everglades was at the center of extreme weather impacts in 2017. Unnaturally hot wildfires, like those experienced in the region this past spring, were followed by high summer rainfall and Hurricane Irma. These conditions demonstrated one thing: the importance of protecting existing wetlands and restoring areas where wetlands have been drained.

When wetlands are developed, their natural water storage capabilities are lost. Water is quickly drained from the commercial and residential developments that were built in low floodplains in the Western Everglades, leaving these areas more susceptible to the impacts of extreme dry conditions, like wildfires or water restrictions. When heavy rainfall occurs, the land is no longer able to hold water which can also impact upstream wetlands like those in the Corkscrew Swamp region.

One top restoration project in the region is the Picayune Strand Restoration Project in Collier County. The project is a critical wetlands restoration component of the Comprehensive Everglades Restoration Plan that will restore almost 100,000 acres of wetlands. Despite this project being 90 percent complete, no federal or state restoration funding was provided for this project in 2017, and it is uncertain whether any funding will come through in 2018. Without completing the final components of the project, less than 30 percent of the restoration benefits can be realized. Audubon will continue to advocate for its completion.

Did you know: Wood Storks have only nested in two of the last 11 years at Audubon’s Corkscrew Swamp Sanctuary in the Western Everglades? Audubon scientists link this poor nesting activity to the draining of regional wetlands.
Algal Bloom Returns to Florida Bay

Hurricane Irma passed through the Florida Keys with 110+ mph winds and a maximum 7-foot storm surge across Florida Bay. This was an untimely event that occurred as the bay ecosystem was still recovering from a widespread seagrass die-off in 2015.

Surprisingly, Audubon scientists’ initial reports of bay conditions were positive, with the discovery of mangrove and seagrass habitat in relatively good condition. Immediately evident though, were enormous rafts of seagrass that had been blown in from the Gulf of Mexico, covering hundreds of acres across the bay. Another concern was that the nutrient-rich bay bottom was churned up by high winds, allowing for growth of phytoplankton or microalgae that thrive on the available nutrients.

Within four weeks of the storm passing, signs of an algal bloom appeared with the telltale opaque, green water. Elevated levels of chlorophyll—up to 15 times above standard levels—were detected across large swaths of the bay, verifying reports from researchers and fisherman of a substantial bloom.

This latest bloom again calls our attention to the vulnerability of this ecosystem and the urgency of completing Everglades restoration projects. Lack of adequate freshwater flow to Florida Bay leaves seagrass and the ecosystem in a compromised state and less resilient to handling natural events like hurricanes. Best available science provides us with evidence that increased flow from the Central Everglades through restoration and reconnecting this water flow to the bay will be pivotal toward reducing hypersalinity, resulting in resilience to seagrass die-offs and potential future blooms.

Kissimmee River Restoration Proves that Everglades Restoration Improves Resiliency

The Kissimmee River Restoration project is nearly complete, and water managers report that it performed well during Hurricane Irma. Before restoration, the channelized Kissimmee River would flush water quickly into Lake Okeechobee, draining the surrounding floodplain. During and after the storm, the restoration completed to date allowed the Kissimmee Chain of Lakes to hold significant amounts of water rather than sending it into the lake, mirroring the ecosystem’s historic ability to respond to high water levels in the Northern Everglades.

“During and after the storm, the restoration completed to date allowed the Kissimmee Chain of Lakes to hold significant amounts of water...”
This year at the Audubon Assembly in St Augustine, Audubon Florida recognized Senator Rob Bradley as the 2017 Champion of the Everglades. Senator Bradley’s Senate Bill 10 was the biggest environmental legislative victory in 2017 and the most important piece of Everglades legislation in a decade. This bill accelerated the development of a southern reservoir that will help reduce damaging discharges of water from Lake Okeechobee to the St. Lucie and Caloosahatchee estuaries while providing a key source of freshwater flow to the Southern Everglades.

“The southern reservoir is a reality,” Bradley said to the sold-out gathering of Audubon’s conservation leaders. Building on this conservation legacy, Senator Bradley has recently introduced Senate Bill 370 (2018), which would dedicate much-needed funding to land conservation. Passing this bill is a top legislative priority for Audubon Florida in 2018.

Record Level of State Funding Requested for the Everglades

In October, Gov. Rick Scott announced his environmental budget recommendations for the 2018-2019 fiscal year at Audubon’s Corkscrew Swamp Sanctuary in Naples and the Audubon Center for Birds of Prey in Maitland. A key component of his request was a record high $305.8 million recommendation for the Everglades. Audubon supports this record-setting Everglades request.

Building upon the successful passage of the Legacy Florida Act in 2016 that dedicated approximately $200 million per year to the Everglades and Senate Bill 10 in 2017 that included funding for the Everglades Agricultural Area reservoir, Audubon will continue to need your voice to weigh in on important Everglades issues as the Florida Legislature convenes in January 2018. Be sure to sign up for our action network at FL.Audubon.org/SignUp.