



Audubon | FLORIDA

State of the Everglades

Spring 2020



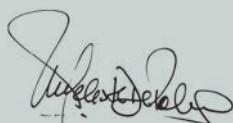
Dear Friends,

These unprecedented times are testing the fabric of our humanity, but as uncertain as the future is, I am humbled by the unwavering passion and dedication of the Audubon community to protect America's Everglades and Florida's special places. Whereas this pandemic has forced us to rethink our day-to-day operations, it has also offered us a pause to recalibrate and find creative ways to continue protecting the places we love. Through it all one thing remains constant: you continue to be there for us and for the River of Grass.

We talk about the Everglades being the backbone of South Florida's economy. Today, it has become an undeniable fact. The Everglades is the drinking water of more than eight million Floridians, and it is the water that you and I rely on to wash our hands and remain safe.

Rest assured that Audubon Florida's science and policy staff continue protecting America's Everglades and Florida's waterways safely from home and we appreciate you sticking with us through the many virtual meet-ups and electronic action alerts. We are Audubon strong and together we can move mountains.

Stay safe, healthy, and connected. We can't do this without you!



Celeste De Palma,
Director of
Everglades Policy



Fantastic News for Florida Grasshopper Sparrows

Over the past two decades, the Florida Grasshopper Sparrow population has plummeted from more than 1,000 birds in the wild to less than 100, making it the most endangered bird in the continental US. They now are restricted to a few conservation areas and private ranches near the Kissimmee River. State, federal agencies, and NGO partners like Audubon have responded by improving management activities, increasing research devoted to the sparrows, and starting a captive breeding program.



Florida Grasshopper Sparrow.
Photo: © Christina L. Evans

And we have great news! The captive program has been successful, and for the first time ever since its inception in 2013, 100 captive Sparrows were released to Florida Fish and Wildlife Conservation Commission's (FWC) Three Lakes Wildlife Management Area last summer. In addition, more than 50 sparrows have been released this spring.

Because they were reared in captivity, researchers harbored concerns that the sparrows could survive in the wild. Survival of released birds is unknowable until the males start singing during the spring breeding season. To our unspeakable joy, at least 15 males released last summer have since been spotted singing, in addition to six released this spring. Some appear paired and preparing to nest.

This unprecedented success in the captive breeding program is a major step forward in the fight to bring the Florida Grasshopper Sparrow back from the brink of extinction.

Much remains to be done. The released birds must breed successfully and start rebuilding populations. The White Oak Conservation Center is doing most of the captive breeding and more sites are being reviewed to increase capacity. Releases have been focused at Three Lakes because the area has the largest remaining population, but other sites can support releases to spread the populations out.

Audubon staff have been critical team members throughout the reintroduction process, providing technical support to the agencies, funding field technicians, and securing funds to maintain captive breeding activities. The recently released singing males give us hope that we can recover this wonderful endemic Florida bird and pave the way for further support of this critical program.

Audubon has been conducting cutting-edge research on the birds and health of Florida Bay since the 1930's, based out of our Everglade Science Center at Tavernier in the Florida Keys.

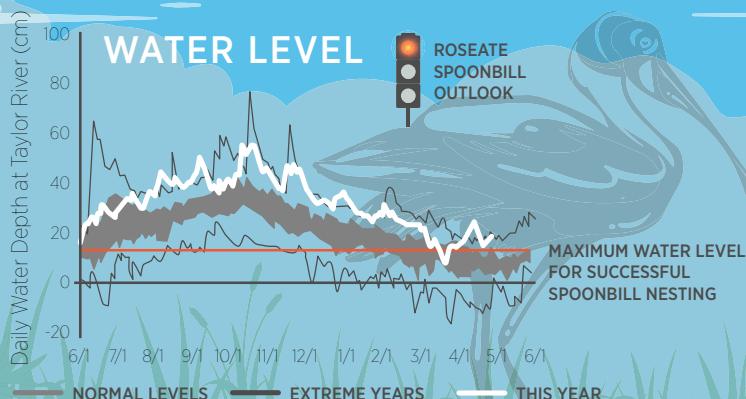




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STATE OF THE SLOUGH

IN THIS STATE OF THE SLOUGH, WE ANALYZE A NUMBER OF INDICATORS TO SPOTLIGHT TRENDS IN THE FLORIDA BAY SYSTEM.

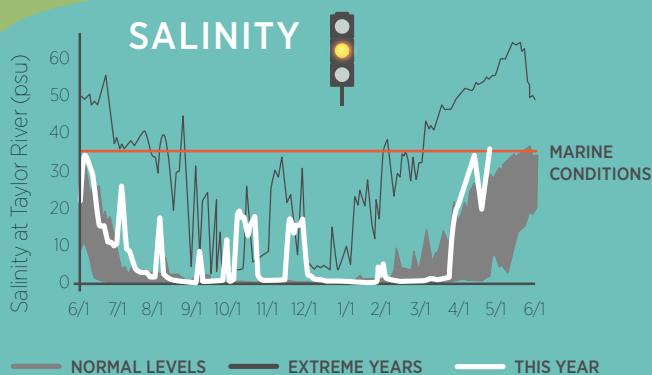
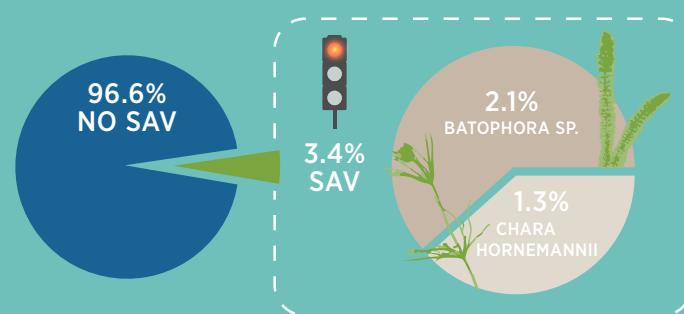


Overall water conditions this year were poor. Sea levels contributed to above normal water depths and the dry conditions needed to concentrate prey only occurred during a nine-day period — not nearly long enough for most Roseate Spoonbills to successfully raise young.

Florida Bay does not receive enough freshwater. In the absence of rainfall, it becomes hypersaline and crashes. The natural system used to receive four times more freshwater from the Everglades ecosystem. Audubon's team works tirelessly to accelerate Everglades restoration projects that will bring freshwater south to rehydrate Florida Bay.



SUBMERGED AQUATIC VEGETATION (SAV) COVERAGE



Spikes in salinity indicate freshwater flows are still insufficient to keep Florida Bay within normal conditions year-round. For the last half of 2019, spikes in salinity made it hard to sustain SAV. Healthy SAV is key to favorable foraging conditions. In early 2020, we had near freshwater conditions through the end of March, a good indication that restoration infrastructure (C-11SC) can help keep salinity below normal when there is water in the ecosystem.

However an unprecedented sharp rise in salinity late March into early April suggests Florida Bay is on its way to surpass marine conditions unless water management can provide relief freshwater flows.

FISH SPECIES CAPTURED THIS YEAR AT TAYLOR SLOUGH



During regular sampling 6% of fish caught were freshwater species. There were very few species that depended on moderate salinity, and virtually no high salinity species. This is a good sign, as it indicates the fish community is moving towards one dominated by freshwater species. April's shock will negatively affect freshwater fish.



The Northern Everglades Nutrient Expressway

Picture a metaphorical multi-lane expressway stretching from just south of Orlando through the 2.6 million-acre Northern Everglades watershed and exiting along the north shore of Lake Okeechobee. But instead of cars and trucks, this expressway conveys runoff laden with nutrients, mainly phosphorus and nitrogen, into the lake.

The bulk of the traffic comes from fertilizers and animal waste from agricultural sources such as dairies, citrus, sugarcane and row crop farms, and cow-calf operations. Pollutants from urban stormwater, septic tanks, and biosolids dumping from urban areas add to the traffic.

Traffic capacity for phosphorus on the nutrient expressway is 105 metric tons per year on average.¹ Set by the Florida Department of Environmental Protection (DEP), this is the maximum amount of phosphorus the lake can absorb and maintain a healthy ecosystem while avoiding harmful algal blooms.

Additionally, drainage from the Northern Everglades watershed provides the fuel for nutrients traveling to the lake. During a “normal” or “non-peak” water year² like 2019, 442 metric tons (mt) of phosphorus whisked along the nutrient expressway into Lake O, far exceeding the maximum capacity allowed by DEP. Extreme weather events — such as Hurricane Irma — create “rush hour” water years like 2018, when 1,081 mt of phosphorus jammed the nutrient expressway on its way to the lake.

Today, the main exits off this road are the Northern Estuaries, where nutrient-enriched waters are discharged east and west from the lake through the Caloosahatchee and St. Lucie estuaries.

Staff Spotlight: Halle Goldstein

Born and raised in Fort Myers, Halle Goldstein joins the Everglades policy team as the west coast Conservation Organizer to expand our base of Everglades, water, and climate advocates. Halle has fostered partnerships with communities and local businesses through her past role at the Florida Trail Association, and garnered a real understanding of the importance of wetlands through her experience at the Florida Department of Environmental Protection’s permitting program. We are thrilled to have Halle join the team!

How do we begin solving this traffic nightmare?

- Urge DEP to adopt effective comprehensive rules of the road to stop the continuing influx of pollutants entering Lake Okeechobee. The current rule book, called a Basin Management Action Plan, lacks sufficient projects and initiatives to be effective.
- Provide “rest stops” along the nutrient expressway that can retain and clean large volumes of water before it enters the lake with a combination of regional projects, conservation easements, water storage arrangements with private landowners, and wetland restoration projects.
- Implement effective, verifiable and enforceable agricultural best management practices (BMPs) using the best available science and ensure full enrollment in the BMP program.

Audubon’s Everglades science and policy teams are working with state and federal regulators and decision makers to get pollutants off the nutrient expressway. We will reach out to you for support of these initiatives and solutions.

¹Lake Okeechobee only has a maximum load for phosphorus, but does not have one for nitrogen. Audubon advocates that we need a limit for nitrogen into the Lake as well. ²Water years in Florida run from May 1 to April 30.

Corkscrew Swamp Sanctuary Research Reveals Threat to Super Ghost Orchid and Wetlands

Corkscrew Swamp Sanctuary has made headlines recently with the publication of two research papers on 60 years of Sanctuary water level data, plus a National Geographic feature of this research describing how it impacts Corkscrew's "Super" Ghost Orchid.

Corkscrew's Western Everglades Research Center Director, Shawn Clem, Ph.D., and longtime Florida ecological consultant, Mike Duever, Ph.D., reveal dry season water levels at the Sanctuary have been precipitously declining since about 2000, impacting all wetlands of the Swamp.

While the causes are unknown, researchers suspect that the destruction of wetlands and their capacity to store and clean water, as well as overdrainage for downstream flood protection and overpumping for farms and urban water supply, are the primary culprits. Dry season water losses pose a serious threat to Corkscrew's native plants and animals, not only for the Ghost Orchid but for imperiled Wood Storks as well. Orchids depend on the humid microclimates of swamps like Corkscrew to survive fire and freezes, and storks depend on dry down conditions to concentrate prey during nesting season.

These water declines also appear to be regional, affecting most of Southwest Florida's conservation lands, including the Florida Panther National Wildlife Refuge, Big Cypress National Preserve, and Fakahatchee



Photo: RJ Wiley

Strand Preserve. Drying and wetland loss increase large scale risks of catastrophic wildfire, flooding in big storms, and polluted water fueling Red Tide and Blue-Green Algal blooms.

Audubon is countering these threats by executing a hydrologic model with the Big Cypress Basin of the South Florida Water Management District to identify causes and solutions. For years, Audubon has been advocating that Everglades Restoration and better protection of wetlands and water resources are fundamental protection and restoration strategies. These recent discoveries drive the urgency home, and are more important now than ever.

Banner Year for Everglades Restoration Funding

2020	State Everglades Appropriations	Federal Everglades Appropriations
\$133.9 million for CERP implementation, including \$64 million for the EAA Storage Reservoir	\$235 million for U.S. Army Corps of Engineers Everglades construction (including funding for operation & maintenance of existing projects, unfunded in previous years)	\$46.318 million for Department of Interior, including: <ul style="list-style-type: none">■ \$3.7 million for land acquisition for the Everglades Headwaters National Wildlife Refuge■ \$8.327 million for U.S. Geological Survey Greater Everglades Priority Ecosystems Science Program (reinstated from 2020 proposed budget cuts)
\$47 million for Northern Everglades and Estuaries projects	\$4.845 million for EPA's South Florida Geographic Program to monitor water quality in the Everglades (reinstated from 2020 proposed budget cuts)	
\$32.7 million for the state's Restoration Strategies Plan for water quality improvement in the Everglades		
\$4 million for dispersed water storage		
Total State: \$318.6 million*	Total Federal: \$286.2 million	

*Pending COVID-19 impacts to Florida's tax revenues could result in revisions to the state budget. For the moment, the FY20 Everglades budget passed by the legislature is very strong.

Setting aside the extraordinary coronavirus situation we are all experiencing, 2020 has been an incredible year for Everglades appropriations, with record-highs at both the state and federal levels. From Governor DeSantis' call for recurrent, aggressive funding for water projects with especial emphasis on water appropriations to further Everglades restoration, to historic federal appropriations, this level of funding underscores the significance of Everglades restoration in securing Floridian's wellbeing and prosperity.

Audubon will continue advocating for this top-level of funding to be sustained into the near future to guarantee accelerated completion of key Everglades projects that will yield immediate results in improving our waterways. Another priority will remain preserving full funding of important Everglades monitoring and research programs, which Audubon has rescued from proposed budget cuts for a third year in a row. Finally, we will continue to work towards funding for operation and maintenance of existing restoration infrastructure.



Roseate Spoonbills.
Photo: Chris Heisey

Judge Rules Against Damaging Road Proposal in a Win for the Everglades

In a victory for Everglades protection, an administrative law judge has just rejected a proposed extension of State Road 836 near Miami. In addition to costing \$1 billion, the road would destroy 1,000 acres of wetlands, and its alignment threatens seven out of the 68 projects in the Comprehensive Everglades Restoration Plan (CERP), while directly cutting through the footprint of the Bird Drive Basin Recharge CERP project critical to rehydrating the Biscayne Aquifer and sending more freshwater south into Everglades National Park.

We asked you, our Audubon members, to write to the Army Corps of Engineers to convey your concerns about this project, and you did!



Photo: RJ Wiley

"It is a great day when the value of the Everglades stands on its own and shines through to beat down a bad project," says Celeste De Palma, Director of Everglades Policy for Audubon Florida. "It is about time we learned that putting a road through the Everglades is a bad idea, and embraced that Everglades restoration is the key to South Florida's resiliency and prosperity."

She continues: "This victory would not have been possible without Tropical Audubon's fierce advocacy and leadership. By working together with our members and supporting our Miami chapter, we demonstrated the collaborative power of the Audubon network."

The Florida Keys National Marine Sanctuary Gets an Overhaul

The Florida Keys National Marine Sanctuary protects 2,900 nautical miles of unique marine resources, including thousands of marine species, over 285 species of resident and migratory birds (including the Roseate Spoonbill), seagrass beds, mangrove-fringed islands, and the only barrier coral reef in the continental United States. The Sanctuary is threatened by loss of critical habitat due to overuse by humans as well as impacts from climate change and sea level rise.

Sanctuary managers are engaged in the first comprehensive overhaul of the zoning and regulations that govern the Sanctuary in order to address these and other threats. The new "Restoration Blueprint" is based on nearly 30 years of cutting-edge science, and Audubon is working with Sanctuary staff to develop a plan that reduces stressors and increases the resilience of the ecosystem, including the creation of new and enhanced Wildlife Management Areas that will better protect bird species that reside in or migrate through the Sanctuary.



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