

## **Why Should You Care about Everglades Restoration?**

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As has been [well documented](#), more than a century's worth of extensive urban and agricultural development has reduced the Everglades' size in half, while at the same time providing constantly increasing nutrient loads that pollute the water and degrade the entire ecosystem.

Restoring the Everglades to health will be an important topic in this year's Florida legislative session. This article will discuss why that topic is critical to all South Florida and why the process of Everglades restoration is of particular importance to both the J.N. "Ding" Darling National Wildlife Refuge and to all of us who live in Southwest Florida. The article concludes with some suggestions for what you can do to help restore the Everglades.

### **Everglades Restoration: Many Types of Benefits**

One of the likely benefits of a healthy Everglades that all South Florida will experience is that it will enable the plant and wildlife ecosystems in the Everglades to thrive. However, many benefits that "Ding" Darling and Southwest Florida residents will experience are due primarily to the projects and activities that are part of the process of restoring the Everglades.

The high level of nutrients in the water bodies that flow into Lake Okeechobee, combined with an antiquated water infrastructure that has a tendency to require the flushing of huge volumes of water down the Caloosahatchee River, means that Southwest Florida is highly vulnerable to massive outbreaks of blue-green algae such as what happened in 2018. That outbreak created an ecological disaster for the Refuge that resulted in the Refuge being full of dead fish and devoid of birds. That outbreak also presented serious health risks, virtually stopped tourism, caused numerous people to lose their jobs, and made it extremely difficult -- and in some cases temporarily impossible -- for people to sell their homes.

Given that the nutrient load entering our water bodies is steadily increasing, it is reasonable to conclude that, unless something happens, we will continue to experience blue-green algae outbreaks. It is also reasonable to conclude that if the outbreaks continue at least some of the impact of the outbreaks will be cumulative. For example, if Southwest Florida gets a reputation for having frequent harmful algal blooms, property values will likely be reduced significantly for the foreseeable future and populations of affected wildlife may not be able to recover.

The process of restoring the Everglades includes many activities and projects that directly impact Southwest Florida. This includes activities and projects that will:

- Reduce the flow of nutrients into Florida's waterbodies to levels that are deemed to be acceptable;
- Implement techniques to clean our waterbodies;
- Build reservoirs that can reduce the need to release huge volumes of water out of Lake Okeechobee and can also provide water to the Caloosahatchee River when needed.

### **Summary of Benefits**

No matter which of the numerous studies you look at, Everglades restoration will provide significant benefits to the Refuge as well as to our environment in general, our health, and our economy.

Below is a summary of some of the benefits.

#### **Improved Human Health**

Blue-green algae are [laden with toxins](#) that frequently cause respiratory problems. They also are a cause of non-alcoholic liver cancer and are linked to diseases including Alzheimer's, ALS, and Parkinson's. Samples taken

from Lake Okeechobee contained toxin levels that are 300 times the level that the United Nations recommends as being safe.

Restoring the Everglades will result in a significant reduction in nutrients in our waterbodies and will dramatically reduce how often there is a need to release huge volumes of water down the Caloosahatchee. This will result in a significant reduction in the frequency and intensity of blue-green algae outbreaks, a corresponding reduction in the toxins in our waterbodies, and an equivalent improvement in the health of all of us in Southwest Florida.

### **Environmental Benefits**

The Everglades is a unique ecosystem that is comprised of sawgrass marshes, freshwater ponds, prairies, and forested uplands, all of which support rich plant and wildlife communities. In Everglades National Park alone, [more than 360 types of birds](#) have been spotted. The Everglades is also home to dozens of threatened or endangered species, such as the Florida Panther, American Crocodile, Snail Kite, and Wood Stork.

As a minimum, Everglades restoration will stop the continued degradation of this ecosystem. A more likely outcome is that Everglades restoration will enable the ecosystem to thrive.

In similar fashion, the “Ding” Darling Refuge is an environmental jewel that suffered a massive blue-green algae attack in 2018. The process of restoring the Everglades will benefit the Refuge because it will result in a significant reduction in the frequency and intensity of blue-green algae outbreaks.

### **Economic Benefits**

The U.S. Congress enacted the [Comprehensive Everglades Restoration Plan](#) (CERP) for the restoration of the Everglades. According to [an economic study](#) published by the Everglades Foundation (Everglades Foundation Study), the restoration of the Everglades, as described in CERP, will provide dramatic economic benefits to the 16 counties that comprise South Florida.

Using a conservative estimate, that study determined that the restoration of the Everglades will provide a benefit of at least \$46.5 billion. The study stated that if less conservative assumptions are used, that the benefit could be as high as \$123.9 billion.

Based on using conservative assumptions, three of the benefits identified in that study are:

#### Groundwater Purification and Aquifer Recharge Valuation

Florida’s large and rapidly growing population is creating an ever-increasing demand for fresh water for drinking and other purposes. At the same time, due to factors such as sea level rise, the groundwater in many parts of South Florida is becoming increasingly brackish and will have to be desalinated for most purposes. A healthy Everglades significantly reduces the need for desalination.

Returning the Everglades to health will reduce the cost of desalination by \$13.1 billion, according to the Everglades Foundation Study..

#### Impact on Fishing

[Many studies](#) have quantified the economic activity associated with fishing in the Everglades. The Everglades Foundation Study quantified the expected impact that Everglades restoration will have on both the commercial and the recreational fishing industries. One assumption used in that study predicts that restoration will return the fish population in the Everglades to 75% of what it was 30 years ago.

The Everglades Foundation Study concluded that Everglades restoration will provide a \$2.6 billion dollar increase in the value of the fishing industry in the Everglades.

#### Impact on Real Estate Values – A Macro View

Economists have developed sophisticated [techniques](#) to quantify the incremental price people are willing to pay for individual product characteristics, such as air and water quality. Studies consistently show that property

located on or around high-quality water is more valuable than property located on or around lower quality water. The magnitude of this effect is generally in the 0.5 percent to 7.0 percent range.

Using the very conservative assumption that restoring the Everglades would increase property values by 1.65%, the Everglades Foundation Study concluded that the restoration would increase property values in South Florida by \$16.1 billion.

#### Impact on Real Estate Values – A Micro View

A [report published by Florida TaxWatch](#) (TaxWatch Report) discussed a study that provides a micro view of the potential impact that Everglades restoration will have on real estate values.

The study referenced in the TaxWatch Report examined property values in Lee and Martin counties between 2010 and 2014. It found that, when water quality dropped following discharges from Lake Okeechobee, property values dropped by a total of \$1 billion between the two counties. This represents an average of a \$135.3 million reduction per year in Lee County, and a \$107 million reduction per year in Martin County.

The TaxWatch Report also referenced a study that determined that if water quality were improved in the rivers surrounding Lake Okeechobee, homeowners in proximity of those waterbodies would see their properties increase in value by 18%.

#### Impact on Tourism – A Macro View

The TaxWatch Report stated that in 2018 more than 124 million tourists visited Florida and that out-of-state visitors spent an estimated \$88.6 billion in 2017. This spending supports 1.5 million jobs and generates billions in state and local tax revenue. For example, out-of-state tourists alone generate a total of \$5.1 billion in state sales taxes (\$3.9 billion) and in other taxes (\$1.2 billion) on gasoline, alcohol, etc.

If Florida continues to experience well-documented, harmful algal blooms, tourism will be dramatically reduced. If, for example, continued harmful algal blooms resulted in a 10% reduction in tourism, that would translate to tens of thousands of people losing their jobs. It would also translate to a reduction of approximately \$500 million in tax revenues, which would result in a combination of reduced services and increased taxes.

#### Impact on Tourism – A Micro View

The Sanibel & Captiva Islands Chamber of Commerce conducted [a study](#) to identify the impact that the 2018 blue-green algae outbreak had on the local economy. As part of the study, hotels, resorts, and vacation rental companies were asked if the current water quality had negatively impacted their business. All 42 businesses surveyed answered “yes.” The study concluded that over roughly a two-month period, the outbreak reduced the revenue of local businesses by approximately \$46 million and impacted 4,278 jobs. The lodging industry, for example, reported that 78% of reservations were cancelled.

Since Everglades restoration will dramatically reduce the frequency and intensity of blue-green algae outbreaks, it also will dramatically reduce how often and how badly local businesses are impacted by these outbreaks.

#### Impact on People – A Micro View

[F.I.S.H.](#) is an island human services organization, focused on “neighbors helping neighbors.” Its mission is to lend a helping hand to those who live, work or visit on Sanibel and Captiva islands through an array of food programs, island-based workshops, social services, and helping hands.

Because of the harmful algal blooms of 2018, F.I.S.H. saw a dramatic increase in the demand for its services when compared to 2016, which is considered a normal year, and when compared to 2017, which also had high demand due to hurricane Irma. For example, when comparing August through November of 2018 to the same time period in 2017 and 2016:

- The total number of pantry visits in 2018 was 25% more than in 2017 and 51% more than in 2016;

- The number of clients who received rent assistance in 2018 was 66% higher than in 2017 and 96% higher than in 2016.

Since Everglades restoration will dramatically reduce the frequency and intensity of blue-green algae outbreaks, it will significantly reduce the number of times that working people on Sanibel and Captiva can't afford to buy food or to pay their rent.

### Conclusions and Next Steps

To determine the value of Everglades restoration, it is important to take a 360-degree view. That view must look both at the value that a restored Everglades will provide and the value that will result from the activities and projects that are associated with the restoration. It must provide insight at both the macro and micro levels. The macro view provides valuable insight because it takes well-established techniques and applies them to all of Southwest Florida. The micro view provides complementary insight because it is based on customized studies that focus on tracts of land in our area.

The result of taking a 360-degree view is clear: Everglades restoration will have a dramatic impact on the Refuge and local environment in general, our health, and our economy.

So, what can you do to help? One thing you can do immediately is to share this document with your friends. The more people who are aware of the benefits of Everglades restoration, the more likely we can effect change.

One place where we need to effect change is in the Florida legislature. The legislature is in the process of reviewing several bills that have the potential to reduce the nutrient load going into our waterbodies. One conservation-related bill is Senate Bill 712. It looks promising, but like all bills, is subject to modification. To better understand this bill, and to be able to track its progress, see [here](#). Receive regular insight into the conservation related bills being discussed by the Florida legislature by signing up for the [2020 SCCF Legislative Session Tracker](#).

You can also help immediately by writing to your Florida legislators and telling them you want them to pass bills that make meaningful reductions in the nutrients entering our waterbodies. You can also respond to SCCF's action alerts and provide more focused input to your legislators.

**In Case You Missed It:** [This article](#) provides more detail on the impact that harmful algal blooms have on human health and the potential value of Senate Bill 712.



Blue-green algae