Florida TaxWatch

We Can't Wait on Water

The Restoration and Protection of Florida's Water Resources is an Essential Taxpayer Investment

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Introduction

Water is perhaps Florida's most valuable resource. In addition to sustaining life, it provides many environmental, economic, and recreational benefits to the public.

With more than 7,700 lakes, 10,550 miles of rivers, more than 1,000 springs, and 2,276 miles of tidal shoreline, it is also central to Florida's identity and a key reason why so many people visit the Sunshine State.

The Governor and the Legislature recognize this, and state investment in protecting and restoring our water resources is increasing as a result.

On his second day in office, Governor Ron DeSantis issued an Executive Order[1] making the environment, especially water, a top priority. It called for funding of $2.5 billion over four years--$625 million a year—to significantly expedite Everglades restoration and the protection of our water resources. He called for creating a Blue-Green Algae Task Force and re-establishing a Red Tide Task Force, expediting projects to restore the Everglades and to clean and reduce discharges from Lake Okeechobee, and creating grant programs to assist communities with water supply and septic -to-sewer conversion projects.

The Governor also directed changes at the Florida Department of Environmental Protection (DEP) to enhance effectiveness, collaboration and transparency and appointed a Chief Science Officer to prioritize scientific research and analyzing needs. He also created an Office of Resilience and Coastal Protection to ensure Florida's coastal communities are prepared for the impacts of sea-level rise and opposed all off-shore oil and gas activities off every coast in Florida, as well as hydraulic fracturing.

Benefits of Water Resource Restoration and Protection

Ecosystem Services

Water quality
Water supply
Groundwater recharge
Stormwater management
Wastewater management
Flood and erosion control
Mitigating climate change and sea level rise

Recreation

Boating, swimming, water sports
Park visitation

Fish and Wildlife

Enhanced fisheries
Enhanced wildlife habitats

Public Health

Cleaner drinking water
Reduced exposure to toxins
Reduced contaminants in seafood

Economic

Increased tourism
Increased property values
Increase government revenues
Job creation/economic growth

The Legislature followed with $634 million in appropriations,[2] that while not mirroring the Governor's recommendations, addressed the key points.

Governor DeSantis recently released his budget recommendations for FY2020-21 and they reaffirm his commitment to the Everglades and the state's water resources. His budget includes $635 million for

1 Executive Order 19-12, Achieving More Now for Florida's Environment, January 10, 2019. https://www.flgov.com/wp-content/uploads/2019/01/EO-19-12-.pdf

2 There is much more water-related funding in both the Governor's recommendations and the current state budget, much of it in the recurring base. This number is for the appropriations that most closely align with the Governor's recommendations.

water, including $322 million for the Everglades, $200 million for targeted water quality improvements, $40 million for alternative water supply grants, and $50 million for springs restoration.[3]

The focus has been on restoring the Everglades, Lake Okeechobee and the St. Lucie and Caloosahatchee estuaries and will continue to be due to the Everglades sheer size and importance—it is the largest ecosystem restoration project in the world. In 2000, Congress approved the Comprehensive Everglades Restoration Plan (CERP), a $10.5 billion, 35-plus year project, designed to restore natural sheetflow, rehydrate marshes, and provide freshwater flows to protect our estuaries. Currently more than eight million South Florida residents, more than one-third of the state's population, directly rely on the Everglades system for freshwater supply. Florida's billion agriculture sector also relies heavily on this system to supply water for crop irrigation. The Everglades is also home to a diverse wildlife population, including 73 threatened or endangered species.

In recent years, increasing attention has been paid to nutrient reductions in Lake Okeechobee and the harmful discharges into downstream estuaries, as well as remediating and preventing the algal blooms these nutrient-laden waters cause.

This report examines the investment in water resource restoration, protection, and the potential benefits it provides.

3 Required by s. 375.041 (3) Florida Statutes.

Where Does the $634 Million Go?

These are the appropriations in the 2019-20 General Appropriations Act that most closely align with the Governor's recommendations.

Everglades Restoration -- $413 million

- $145.5 million went to the South Florida Water Management District (SFWMD) for the planning, design, engineering, and construction of the Comprehensive Everglades Restoration Plan (CERP).[4]
- $64 million in recurring funds was dedicated to the Everglades Agricultural Area (EAA) project. Remaining money in any fiscal year must go to Phase II of the C-51 reservoir project. An additional non-recurring $43.8 million was appropriated this year for EEA and related projects that move water south.
- $32 million in recurring funds (through FY2025-26) went to SFWMD's Restoration Strategies Regional Water Quality Plan.
- $32.9 million was directed towards implementing the Northern Everglades and Estuaries Protection Program to restore and protect the Lake Okeechobee, Caloosahatchee River, and St. Lucie River watersheds.
- $50 million was for specific projects designed to achieve the greatest reduction in harmful discharges into the Caloosahatchee and St. Lucie Estuaries.
- $40 million was funded in the Department of Transportation Work Program to elevate 5.45 miles of the Tamiami Trail which has been blocking the natural flow of water through the Everglades.
- $4 million was appropriated in the Department of Agriculture and Consumer Service's budget

4 In 2000, Congress approved the Comprehensive Everglades Restoration Plan (CERP), a $10.5 billion, 35-plus year project, designed to restore natural sheetflow, rehydrate marshes, and provide freshwater flows to protect our estuaries.

for agricultural nutrient reduction and water retention projects in the Lake Okeechobee Watershed.

Targeted Water Quality Improvements - $50 million

- $25 million to address Total Maximum Daily Loads (TMDLs)[5] with innovative water treatment projects and cost-share with local governments for innovative nutrient removal projects.
- $25 million for water quality improvement grants, including septic-to-sewer conversions, wastewater improvements, and stormwater system upgrades.

Springs Restoration - $100 million

- $100 million for springs restoration, protection, and management projects. This can include land acquisition. In 2016,[6] the Legislature dedicated $50 million annually from the Land Acquisition Trust Fund (LATF) for springs restoration. This year's appropriation includes $50 million in unspent funds from last year that was reappropriated.

Alternative Water Supply - $40 million

- $40 million is provided to establish a water supply and water resource development grant program to help communities plan for and implement conservation, reuse and other water supply and water resource development projects. Regional projects in the areas of greatest need will receive priority. DEP is directed to provide an assessment of funding needs critical to supporting Florida's growing economy.

Water Quality Enhancement and Accountability - $10.8 million

- $6.8 million is for the creation of a water quality public information portal[7] and the establishment of the Blue-Green Algae Task Force (see Appendix on page 13).
- $4.0 million is for DEP to expand statewide water quality analytics for a nutrient over-enrichment assessment and for the information portal.

Innovative Technologies – $10 million

- $10 million is provided to DEP to support the evaluation and implementation of innovative technologies to combat or clean up algal blooms and nutrient enrichment of Florida's fresh waterbodies. Funds may be used for the DEP's red tide emergency grant program to support local governments in cleaning beaches and coastal areas to minimize the impacts of red tide to residents and visitors. Funds may also be used to implement water quality treatment technologies near water control structures in Lake Okeechobee.

5 A TMDL is a scientific determination of the maximum amount of a given pollutant that a surface water can absorb and still meet the water quality standards that protect human health and aquatic life.

6 Chapter 2016-201, Laws of Florida

7 Florida Department of Environmental Protection. *Protecting Florida Together* website. https://protectingfloridatogether.gov/water-quality-status

What Benefits will the Investment Provide?

Restoring and protecting Florida's waterbodies will ensure Florida will continue to reap the myriad of benefits they provide, as well as help recover what has been lost to degradation. These benefits will be discussed in this report, but first, here is a summary of the projected direct benefits (nutrient reduction, water supply increases, etc.)[8] from the $634 million investment appropriated by the 2019 Legislature.

Everglades Restoration

Project Types: water conveyance, water storage, water quality, ecosystem restoration, hydrologic restoration

Projected Benefits: reduction of 221,200 pounds of phosphorous, 490 billion gallons of water storage capacity

Targeted Water Quality Improvements

Project Types: septic-to-sewer conversion, hydrologic restoration, stormwater collection enhancements, water storage

Projected Benefits: nitrogen reductions of over 27,000 pounds per year; phosphorous reductions of over 3,000 pounds per year

TMDLs Improvements

Project Types: water quality monitoring, hydrologic monitoring, aquifer storage and recovery wells

Projected Benefits: stormwater treatment enhancement, nutrient reduction in impaired waterbodies, science-based Basin Management Action Plans (BMAP) development and project selection

Springs Restoration

Project Types: Agricultural Best Management Practices, land acquisition, wastewater collection and treatment, hydrologic restoration, water conservation and reuse

Projected Benefits: nitrogen reductions of 2.47 million pounds; 19.3 million gallons of water made available, 1,636 acres of land acquired

Alternative Water Supply

Project Types: brackish groundwater, surface water, reclaimed water, conservation

Projected Benefits: nitrogen reductions of over 24,000 pounds; phosphorous reductions of over 46,000 pounds per year, 85 million gallons of water made available, 1.4 billion gallons of storage created, 80 million gallons of distribution capacity created

Water Quality Enhancement and Accountability

Project Types: increased monitoring and inspections, Blue-Green Algae Task Force, water quality portal and analytics tool

Projected Benefits: improved data, increased oversight, increased analytics and improved public communication, science-based decisions

Innovative Technologies

Project Types: a diverse portfolio focused on science-based criteria, innovative multi-prong approach, Red Tide research

Projected Benefits: prevention, mitigation and remediation of algal blooms, science-based understanding of Red Tide

8 Project types and projected benefits are taken from Florida Department of Environmental Protection Secretary Noah Valenstein's presentation to the Senate Committee on Appropriations, November 7, 2019. http://flsenate.gov/Committees/Show/AP/MeetingPacket/4716/8341_MeetingPacket_4716.pdf

Economic Benefits of Water Resource Restoration and Protection

The results detailed above will lead to many public environmental benefits such as water quality and supply, flood and erosion control, mitigating climate change and sea level rise, public health, recreation, and enhanced fish and wildlife habitats.

Jobs and Economic Growth - Not only does environmental restoration protect valuable natural resources, the projects also increase economic activity and create jobs. Not only by protecting and increasing the jobs created by industries that currently benefit from cleaner, more abundant water (tourism, fishing, etc.), but the restoration projects themselves boost the economy and create jobs. Moreover, restoration work often occurs in rural, low-income areas, where the need for jobs and economic growth tends to be more pronounced.

One study found evidence that the "restoration industry" has benefits far beyond protecting public environmental assets. Environmental restoration activities also contribute to economic growth and employment, creating as many as 33 jobs for every $1 million invested.[9] The study found that existing literature shows the restoration industry has an employment multiplier of between 1.48 and 3.8 (the number of other jobs supported by every restoration job) and an output multiplier of between 1.6 and 2.59 (total economic output from investments). Further, these benefits tend to be local in nature, benefitting the communities in proximity to the restoration work.

Another study found that the national restoration economy produced $24.9 billion in economic output and 221,000 jobs in 2014. This includes direct impact of $9.47 billion in economic output and 126,111 jobs. This activity produces an estimated $1 billion in additional state and local tax revenue and more than $2 billion in federal revenue.[10]

In response to the Great Recession, Congress passed the American Recovery and Reinvestment Act of 2009 (ARRA), designed to save and create jobs. The ARRA included 50 coastal habitat restoration projects around the country. Those projects produced 17 jobs per $1 million spent, not including longer-term benefits such as jobs created in rebuilt fisheries and tourism, and other economic benefits such as higher property values and better water quality.[11]

A study measuring the economic benefits of Everglades restoration found that it will have large and important economic benefits and that the rewards of restoration far outweigh the economic costs. It assumed that spending $11.5 billion of restoration would produce $46.5 billion in total benefits—a return-on-investment of more than 4-to-1. The study further estimates restoration will create 442,000 over 50 years. The study's authors claim a very conservative approach and say their estimate "almost surely understate the return on investment of Everglades restoration."[12] In addition, the Army Corps of Engineers has estimated the work of completing the restoration projects will directly create 22,000 jobs.

Climate Change and Sea Level Rise - Recognition of the potentially devastating effects of climate change and sea level rise is growing in Florida, as evidenced by the Governor's appointment of a Chief Science Office, a Chief Resiliency Officer and an Office of Resilience and Coastal Protection. These investments in water resource, especially Everglades restoration, can be a key part of this effort.

9 Defining and evaluating the ecological restoration economy, Todd K. BenDor, Avery Livengood, T. William Lester, Adam Davis. Logan Yonavjak, Restoration Ecology Vol. 23, No. 3, pp. 209–219, May 2015.

10 The Economic Impacts of the US Ecological Restoration Sector, Sophie Kelmenson, Todd BenDor, and T. William Lester, University of North Carolina at Chapel Hill, Communities and Banking, Summer 2016.

11 Investing in nature: Restoring coastal habitat blue infrastructure and green job creation. P.E.T. Edwards, A.E.Sutton-Grier, G.E.Coyle. Marine Policy, May 2012. Journal homepage: www.elsevier.com/locate/marpol

12 Mather Economics, Measuring the Economic Benefits of America's Everglades Restoration

The DEP Secretary, speaking to a legislative committee, highlighted how important Everglades restoration is to protecting South Florida from sea level rise. He said getting water through the system, restoring aquifers in south Florida, restoring Florida Bay, and creating hydrologic pressure to prevent salt water intrusion are some of the most important things we can do for long-term resilience. He said sea level rise is all the more reason to speed up our investment in Everglades restoration.[13]

The Everglades Mangrove Ecotone Region (EMER)—in addition to shoreline protection, water quality improvement, and support of fisheries—provides another increasingly valuable asset. Mangrove forests are very good at carbon storage (in plants and soil) and carbon sequestration (removal of carbon from the atmosphere). These ecosystems play an important role in mitigating climate change. One study estimated the value of the carbon stored in the EMER at $2.7 billion.[14,15] One-third of mangrove forests have been lost globally over the last 50 years. Since it is in a protected area, EMER is one of the mangrove forests least affected by deforestation; however, other stressors such as hurricanes and freshwater diversion also have an impact. The changes in drainage and reduced water flows over many years affect nutrient and salinity levels that are vital for healthy mangroves.

The Comprehensive Everglades Restoration Plan (CERP)—along with other state efforts—will greatly enhance the future of the Everglades mangrove forests.

13 Florida Department of Environmental Protection Secretary Noah Valenstein's testimony to the Senate Committee on Appropriations, November 7, 2019.

14 The role of economic, policy, and ecological factors in estimating the value of carbon stocks in Everglades mangrove forests, South Florida, USA, Meenakshi Jerath, et al., Environmental Science & Policy, 2016. Journal homepage: www.elsevier.com/locate/envsci

15 Based on the average auction clearing price of CO2 allowances in the Regional Greenhouse Gas Initiative (RGGI), the first mandatory market-based regulatory program in the nation to reduce carbon pollution. Nine New England and Mid-Atlantic states participate.

Protecting Florida's Springs

Florida's springs are world-renowned and a vital component of Florida's water system. It is estimated that there are more than 1,000 springs in Florida, the largest concentration in the world, with more still being discovered. Last year, 27 new springs were discovered in the panhandle. In addition, we have 27 first-magnitude springs and 70 second-magnitude springs, the most in the nation.

Groundwater provides 90 percent of Florida's drinking water, and springs are a vital resource for supplying that water. Springs also provide scientists a window into the health of our groundwater. Thirty percent of the nation's water quality data comes from Florida.

Springs are also an important habitat for endangered manatees. Manatees need warm water to survive. Since springs maintain an average temperature of 70-75 degrees, manatees move into Florida's springs when surrounding waterways get colder.

Springs provide recreational activities for Floridians and people from all over the world. Florida State Parks attract millions of visitors annually, and 19 of them are named for springs.

Tourism - Tourism plays a major role in Florida's economic strength. In 2018, more than 124 million tourists visited Florida. Out-of-state visitors spent an estimated $88.6 billion in 2017. This spending supports as many as 1.5 million Florida jobs, and generate billions in state and local tax revenue.

It is estimated that across the nation, the tourism industry loses nearly $1 billion a year in revenues due to polluted waterways.[16] These losses are primarily

16 United States Environmental Protection Agency. https://www.epa.gov/nutrientpollution/effects-economy

due to the effects algal blooms and other nutrient pollutions have on fishing and recreational boating activities. These are among the activities for which Florida is best known, and for which the Everglades is a top destination. While some come to ride on airboats or go hiking, many more come to see alligators, manatees, and birds, or to hunt and fish.[17] Without continued restoration of the Everglades and protection of other water resources, state and local economies could suffer.

A recent peer-reviewed report by U.S. Geological Survey economists and the National Park Service show that 1.9 million people visited the four south Florida National Parks—Everglades, Biscayne and Dry Tortugas National Parks and Big Cypress National Preserve in 2018. They spent more than $156 million in local communities. That spending supported 2,089 jobs in the local area and had a cumulative benefit to the South Florida economy of $225 million.[18]

Water features also attract visitors to Florida's state parks. In fact, nine parks are named for springs. More than 31 million residents and visitors enjoyed Florida's award-winning system of state parks and trails, creating an estimated total direct economic impact of $2.8 billion. This generated approximately $191 million in increased sales tax revenue. State parks further support 45,525 jobs. For every 1,000 persons visiting a state park in Florida, the total direct impact on the local community is almost $89,361.[19]

Commercial and Recreational Fishing - Fishing in Florida is big business, both commercial and recreational. In 2012, Florida led the nation in total recreational angler expenditures, with almost $5 billion dollars spent, supporting more than 80,200 jobs. Of these jobs, more than 14,000 are attributed to freshwater fishing.[20]

The Indian River Lagoon in South Florida is one of the nation's most plentiful commercial fishing sources. Each year the lagoon accounts for nearly 15 percent of all fish and shellfish harvested in the U.S., and the sector generates roughly $140 million in economic impact for the region.

The impact of fishing on the economy in the Florida Bay region is even greater. Commercial and recreational fishing in the Florida Bay region generates an economic impact of $458 million per year. Increased prevalence of algal blooms could result in more frequent fish kills. Further loss to commercial fishing would greatly impact Florida, as it has other states in the past.

A study estimated the change in the Everglades commercial fish catch by comparing current levels to peak levels in the late 1980s. It assumed that a restored Everglades would provide 75 percent of the difference between current catch levels and peak catches. The study estimated that there will be an increase of $23 million per year in catch, after the fishery is fully restored.[21]

Property Values - Proximity to water, a view of water, and the quality of water are among the top attributes sought by homebuyers—but only if that water is clean. The pollution of freshwater sources can have a negative effect on property values for homes near the affected bodies of water. One study examining property values in Lee and Martin counties between 2010 and 2014 found that, when water quality dropped following discharges from Lake Okeechobee, property values dropped by a total of $1 billion between the two counties.

17 The Indian River Lagoon Species Inventory: The Indian River Lagoon Estuary. Smithsonian Marine Station at Fort Pierce.

18 National Park Service, News Release, National Park Tourism in South Florida Creates $225 Million in Economic Benefit, May 2019.

19 Florida Department of Environmental Protection. Memorandum: Economic Impact Assessment - Florida State Park System, September 2016.

20 Florida TaxWatch, Economic Commentary, Florida: The Fishing Capital of the World, August 2013.

21 Mather Economics, Measuring the Economic Benefits of America's Everglades Restoration

This represents an average of a $135.3 million drop per year in Lee County, and a $107 million drop per year in Martin County.[22]

Houses that are in close proximity to clean water sources have seen an increase in home value of up to 25 percent.[23] A more regionally specific study out of Clemson University found that, if water quality were improved in the rivers surrounding Lake Okeechobee, homeowners in the proximity of those bodies of water would see their property values increase by 18 percent ($12 billion in total value added).[24] In the Florida Bay region, access to the bay adds a significant value to residential properties in the region. A recent study found that the bay adds nearly $1.2 billion in value to homes in the area.[25]

If the deterioration of the Everglades and Florida waterbodies continues, property values will continue to decline in the surrounding areas, weakening those communities and resulting in significant losses to real estate owners and local government tax revenues.

State and Local Taxes - Failure to act on Florida's water quality problems could have significant impacts on Florida's state and local government tax revenues.

Taxes from Tourist Spending – Tourists contribute a significant share of Florida's tax revenues. The biggest impact is on the sales tax, by far the largest state government tax source. Local option sales surtaxes also are an important revenue source for Florida's counties, cities, and school districts. Florida's state sales tax of 6 percent brings in $29.4 billion annually.[26]

Local government surtaxes, ranging from 0.5 percent to 2.5 percent, produce another $4.2 billion annually.[27] Sixty-six of Florida's 67 counties levy at least one local option sales surtax.[28]

It is conservatively estimated that tourists pay 13.3 percent of all sales taxes in Florida.[29] This only includes out-of-state visitors because it is assumed that all spending by Floridians when on an in-state vacation simply replaces other spending they would make in Florida, but this may not always be the case. If Florida tourism destinations, such as Everglades National Park, keep Floridians from leaving the state for vacation, their spending in Florida—and the sales tax they pay on that spending—is a plus for Florida. Even assuming the limited 13.3 percent contribution, out-of-state tourists provide $3.9 billion in state sales taxes and close to $0.6 billion in additional local taxes.[30]

A small change in tourist visits can have a significant impact on sales tax revenues, as every one percent change in the number of visitors equates to $45 million in state and local sales tax collections.

Florida relies very heavily on taxing transactions, and tourists help pay other taxes like these as well. Other excise taxes that tourists help pay include: motor fuel (gas) taxes, alcoholic beverage taxes, tobacco taxes, rental car surcharges, local "bed" taxes, and the lottery.

Assuming tourists contribute the same percentage of these taxes as they do the sales tax, they would contribute another $1.2 billion to Florida governments. Each 1 percent change in the number of tourists equates to $12 million in tax revenue.[31]

22 "The Impact of Water Quality on Florida's Home Values." (March 2015). Florida Realtors

23 United States Environmental Protection Agency. https://www.epa.gov/nutrientpollution/effects-economy

24 Maloney, Michael; De Los Santos, Babur; Thomas, Charles et al, "Benefit and Benefit/Cost Calculations for Two Everglades Restoration Projects," Clemson University (2017)

25 The Economic Significance of Florida Bay. Steinbeck, Andrew. (Jan. 2017) The Everglades Foundation.

26 Florida Legislature, 2019 Florida Tax Handbook.

27 Office of Economic and Demographic Research, Table: Local Discretionary Sales Surtax - Revenue Estimates for the Local Fiscal Year Ending September 30, 2020.

28 Florida Department of Revenue, Form DR-15DSS, Discretionary Sales Surtax Information for Calendar Year 2019.

29 Florida Office of Economic and Demographic Research, Return on Investment for Visit Florida, January 1, 2018.

30 Florida TaxWatch calculation.

31 Florida TaxWatch calculation.

Property Taxes – As discussed earlier in this report, water quality can have a significant impact on property values, which in turn have an impact on property taxes—the major tax source for local governments and school districts.

One study that compared two restoration projects—the construction of a reservoir south of Lake Okeechobee versus a reservoir north of the lake—estimated that construction of the South Reservoir would increase property values in Lee and Martin counties by $19.2 billion.[32] Due to Florida's constitutional caps on property assessments,[33] it would be difficult to estimate how that large of a value increase would translate into increased property tax collections.

Using the previously mentioned example regarding property values in Lee and Martin counties, however, shows how detrimental a decrease in values could be. Assuming average millage rates for the counties and the combined $1 billion dollar drop in property value between 2010 and 2014,[34] total property tax loss is estimated at $16.8 million.

Taxes from Overall Economic Growth – As discussed above. water quality problems can negatively impact the overall economy and fixing the problem can improve the economy.

As the impact of this economic activity ripples through the economy and more dollars are spent, collections of taxes discussed above will increase, and other taxes are likely to rise as well. These include documentary stamp and intangibles taxes from real estate transactions, and corporate income taxes from higher profits.

With any significant change in spending, whether it is due to a decrease in tourism, property values, or a loss in expendable income (due to job loss), the state is likely to experience a loss of economic vitality and reduced tax revenue. As shown above, there are various tax resources that are susceptible to a decrease in revenue if the state does not adequately address water pollution. Any significant loss in tax revenues could affect state programs and infrastructure projects that benefit millions of Floridians each day.

32 Michael T. Maloney, Benefit & Benefit/Cost Calculations for Two Everglades Restoration Projects, February 2017.

33 Article VII, Section 4(d) (Save Our Homes) limits annual increases in homestead assessments to 3 percent and Article VII, Section 4(g) limits non-homestead assessments to 10 percent annually.

34 Florida Realtors, "The Impact of Water Quality on Florida's Home Values." (March 2015).

Helping Chart Future Water Resource Policy: The Blue-Green Algae Task Force

Part of Governor DeSantis's Executive Order 19-12 called for the creation of the Blue-Green Algae Task Force and tasked it with "focusing on expediting progress toward reducing the adverse impacts of blue-green algae blooms now and over the next five years. This task force should support key funding and restoration initiatives to expedite nutrient reductions in Lake Okeechobee and the downstream estuaries. This task force should identify priority projects for funding that are based on scientific data and build upon Basin Management Action Plans to provide the largest and most meaningful nutrient reductions in key waterbodies, as well as make recommendations for regulatory changes." The task force was funded by the Legislature in the 2019 General Appropriations Act.

The task force has held five public meetings thus far, and on October 11, adopted its first set of recommendations. The focus has been on South Florida water systems and nutrient reduction and remediation, innovative technologies, health impacts of algal toxins, and knowledge gaps and research priorities. Future efforts will consider all water in Florida and issues such as wastewater, water reuse, biosolids, fertilizers in urban landscapes, the role of conservation lands and wetlands in maintaining water quality, and application of herbicides. The task force will be making additional recommendations in the future. (See the Appendix for the recommendations of the Blue-Green Algae Task Force.)

Proposed Legislation Can Ensure Progress Continues

Along with his FY2020-21 budget recommendation, the Governor is recommending legislation to secure the $2.5 billion in water resource funding. The bill would require a minimum of $625 million to be appropriated annually for Everglades restoration and protection of water resources. It requires at least:

- $300 million for Everglades and the EAA reservoir project;
- $50 million for springs restoration;
- $50 million for Total Maximum Daily Loads;
- $15 million for projects in the St. Johns River, Suwannee River, and Apalachicola River watersheds; and
- $10 million for coral reef protection and restoration.

The remainder must be used for targeted water quality improvements, alternative water supply, water conservation, water quality enhancement and accountability, innovative technologies, and harmful algal bloom prevention and mitigation.

The bill has a sunset date of June 30, 2023 "unless reviewed and saved from repeal through reenactment by the Legislature."

Conclusion

When a state is fortunate enough to have an internationally revered ecosystem at its heart, it is incumbent upon that state to manage that ecosystem at a level befitting such a global treasure. Florida's massive water system is still in trouble, but progress is being made. The Legislature has stepped up funding to protect and restore the state's water resources and Governor DeSantis wants to take this even further, recommending that the state dedicate $2.5 billion to specific key water resources efforts over the four years of his current administration (in addition to millions more in water-related appropriations also in the state budget.) The first year of this commitment has been secured, as the 2019 Legislature appropriated $634 million for these efforts.

This investment will result in significant, wide-ranging benefits—as detailed in this report. Not only critical environmental benefits such as water quality and supply, but also recreation and tourism, fish and wildlife enhancements, mitigating sea level rise, and public health. These benefits, in turn, result in economic benefits. Tourism and recreation, and the jobs, economic growth, and significant government revenue that comes with it, will grow—instead of declining if polluted waterways become even worse. Property values will increase and commercial fishing should be enhanced.

Moreover, the economic benefits from the work in completing the projects cannot be overlooked. Studies are increasingly showing the value of the "restoration economy" and "blue infrastructure" investment, which create up to 33 jobs per each $1 million spent. These economic benefits ripple through the economy with employment multipliers between 1.5 and 3.8 and output multipliers between 1.6 and 2.6. These benefits tend to be local in nature, benefitting the communities in proximity to the restoration work. In addition, restoration work often occurs in rural, low-income areas, where the need for jobs and economic growth tends to be more pronounced.

The focus has been on restoring the Everglades, Lake Okeechobee and the St. Lucie and Caloosahatchee estuaries and will continue to be due to the Everglades sheer size and importance—it is the largest ecosystem restoration project in the world, but other waterbodies in other areas of the state cannot be overlooked.

The state is making progress. The $200 million in annual funding dedicated to the Everglades by the 2016 Legislature has been a big help in sustaining that project. The federal government is fully meeting its obligation for the first time this year, contributing $200 million.

The state must seize this momentum. The Legislature should enact the Governor's proposed legislation to enshrine the $2.5 billion investment in law, including increasing the annual commitment to the Everglades to $300 million annually. The Legislature should also fully consider the recommendations of the Blue-Green Algae Task Force and implement as many as appropriate and practical.

The state's environment, taxpayers, and economy will benefit for years to come.

APPENDIX

Recommendations of the Blue-Green Algae Task Force

BASIN MANAGEMENT ACTION PLANS (BMAPS)

BMAPs are restoration plans with specific projects and actions. BMAPs are developed with local stakeholders and must be adopted by DEP to be enforceable. The task force found that local funding constraints have led to delays in reaching restoration targets. In addition, rigorous assessment of the effectiveness of specific projects is lacking due to lack of available monitoring data, which makes returns on investment questionable. The Task Force recommends:

- Siting, design and funding of regional storage and treatment infrastructure in South Florida watersheds should be a priority
- Consider projected population, demographic and land use changes, legacy nutrients[35] and downstream impacts
- Spatially focused groups of projects in areas likely to yield maximum benefits should be identified and prioritized in all BMAPs.
- Improve evaluation of project effectiveness through better monitoring

AGRICULTURE AND BEST MANAGEMENT PRACTICES

Agriculture is a key component of Florida's economy and helps feed Florida and the world. However agricultural production can negatively impact the environment. Agriculture in the dominant source of phosphorous and nitrogen in agricultural-heavy watersheds. Best management practices (BMPs) were developed to minimize environmental impacts while maintaining production. The adoption and implementation of BMPs is statutorily required within BMAP areas. However, only 75 percent of eligible agricultural parties within the Lake Okeechobee BMAP area, and considerably less in other BMAPs, are enrolled in an appropriate BMP.

- Increased compliance, improved record keeping and data collection.
- Increase funding to increase BMP enrollment in all BMAP areas.
- Accelerate updates to BMP manuals, including advanced technologies that reduce nutrients that end up in groundwater or surface water.

HUMAN WASTE - ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS

There are more than 2.5 million septic systems in Florida that treat approximately one-third of the wastewater generated in the state. Broader regulatory oversight to ensure that onsite sewage treatment and disposal systems are protective of both the environment and human health. The nutrients from these systems contribute to the development of harmful blue-green algae blooms. Currently, there is no requirement that conventional septic systems be inspected post-installation.

- A more comprehensive septic regulatory and inspection program should be developed at transferred from the Department of Health to DEP.
- A post-permitting septic tank inspection system should be implemented
- Expand the current rule that prohibits new septic systems on smaller lots near certain springs to other vulnerable areas in the state.
- Enact legislation and increase funding to accelerate septic to sewer conversions

35 Legacy nutrients, such as nitrogen and phosphorus, are sequestered in soils, groundwater and sediments and contribute to excessive nutrient loading of surface waters throughout the state.

HUMAN WASTE -SANITARY SEWER OVERFLOWS

Sea-level rise and more intense storms are likely to increase the occurrence of SSOs, which can cause direct human health concerns and nutrient pollution. Power failure during storms in the leading cause of SSOs since thousands of lift stations in Florida were constructed before 2003 and are not required to have emergency pack-up power. Infiltration and Inflow (I&I), caused by leaky sewer infrastructure, is another major cause of SSOs. The task force found that the problem is difficult to address under the state's regulatory framework and corrective action is reactionary.

- Minimize SSO events through infrastructure improvements
- Emergency back-up capabilities should be identified for all lift stations constructed prior to 2003.
- Proactive approach to infiltration and inflow issues

STORMWATER TREATMENT SYSTEMS

The task force found that a substantial number of stormwater treatment systems throughout the state, even if meeting BMP design criteria, fail to achieve their presumed performance standards.

- Revise and update stormwater design criteria to incorporate recent advances in stormwater treatment technologies and practices.
- Implement an effective inspection and monitoring program with the goal of identifying improperly functioning or failing systems.

INNOVATIVE TECHNOLOGIES AND APPLICATIONS

The task force found a need to invest in a diverse portfolio of technologies to aid in the prevention, cleanup and mitigation of blue-green algae blooms. Limited funding is consistently focused on cleanup and mitigation technologies.

- Technologies should be cost-efficient, environmentally safe and scalable
- Investment should focus on prevention
- Invest also in technologies that lead to improved detection, monitoring and forecasting of blooms

BLUE-GREEN ALGAE BLOOMS AND PUBLIC HEALTH

- Florida must develop a transparent, consistent and cooperative inter-agency communication program regarding algal blooms and public health.
- Regular and proactive sampling for algal toxins should be incorporated strategically into existing water quality sampling/monitoring programs
- More science is needed to understand the effects of acute and chronic exposure to toxins

SCIENCE-BASED DECISION MAKING, DATA NEEDS AND MONITORING PROGRAMS

- Develop an expanded and more comprehensive statewide water quality monitoring strategy.
- Focus on informing restoration project selection, implementation and evaluation

ABOUT FLORIDA TAXWATCH

As an independent, nonpartisan, nonprofit taxpayer research institute and government watchdog, it is the mission of Florida TaxWatch to provide the citizens of Florida and public officials with high quality, independent research and analysis of issues related to state and local government taxation, expenditures, policies, and programs. Florida TaxWatch works to improve the productivity and accountability of Florida government. Its research recommends productivity enhancements and explains the statewide impact of fiscal and economic policies and practices on citizens and businesses.

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RESEARCH PROJECT TEAM

Robert E. Weissert	*Executive Vice President & General Counsel*	
Kurt Wenner	*VP of Research*	Author
Chris Barry	*Director of Communications & External Affairs*	Design, Layout, Publication

All Florida TaxWatch research done under the direction of Dominic M. Calabro, President, CEO, Publisher & Editor.

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Florida TaxWatch
106 N. Bronough St.
Tallahassee, FL 32301

o: 850.222.5052
f: 850.222.7476