

Florida Conservation Coalition

A Water Policy for Florida

I. Introduction: Florida Needs New Water Protections

Florida's waters are our most valuable public resource and all Floridians need clean water to sustain life. Recent state policy has regarded this valuable resource as a disposable commodity, bringing Florida to the verge of environmental and economic crises. Our rivers, springs, lakes, estuaries and coastal waters are polluted. Our aquifers are threatened by excessive water withdrawals and saltwater intrusion. Some Florida communities are even suffering from water shortages and contamination.

From the diverse ecosystems of the Apalachicola River in the northwest, to the intricate limestone aquifer feeding freshwater springs in north-central Florida, the St. Johns River and Indian River Lagoon in the east, the southwest Gulf Coast, to the Everglades and Florida Bay in the south, water is Florida's lifeblood and connects us across our state. Although the Florida Conservation Coalition appreciates the emphasis on water issues by Governor Ron DeSantis and many Florida lawmakers, both at the state and local level, who have advocated for positive water policies over the years, we need to recognize that all of Florida's world-class water resources must have sufficient funding to guarantee sustainable protection and cannot afford neglect during our justifiably strong efforts to restore the Everglades. Only with a holistic approach to all Florida's waters can we achieve the long-term results we desire.

The Florida Conservation Coalition's position statement below outlines a pathway for the successful conservation, replenishment and protection of Florida's waters statewide. We, the members of the Florida Conservation Coalition, stand ready to be a sounding board and advocate for more protective water policy for all of Florida.

II. Effects of Current Water Policy

A. Polluted Waters

Excessive nitrogen and phosphorus pollution have impaired our coastal waters, rivers, springs, lakes and estuaries. Current environmental and development laws across all levels of government are insufficient to produce the reduction in nitrogen and phosphorus needed to stem our ongoing environmental and economic crises.

1. Blue-Green Algae and Red Tide

During the past year, Florida has experienced the worst outbreaks of red tide (*Karenia brevis*) in over a decade, contaminating its coastlines with dead fish and noxious fumes and bringing economic disaster. Blue-green algae (cyanobacteria) blooms containing microcystin toxins fouled Lake Okeechobee, the St. Lucie, Caloosahatchee and St. Johns rivers and estuaries. Numerous natural and anthropogenic nutrient sources fuel harmful algae blooms in both freshwater and marine environments, including dead vegetative matter, fertilizers, sewage etc. Both types of harmful algal blooms contributed to a health crisis for humans and wildlife.

- a. *As of August 2018, the Florida Poison Control Center received 75 calls about suspected or confirmed blue-green algae exposure, compared with last year's 8, and 367 calls related to red tide exposure, compared to 88 last year.*¹

Studies have linked harmful algal blooms containing microcystin toxins with serious human health conditions such as Lou Gehrig's disease, Alzheimer's, Parkinson's disease and liver

¹ Florida Poison Control, ToxSentry database, January 2019.

cirrhosis.² Red tide toxins can cause a range of symptoms including acute respiratory distress, and ingesting contaminated shellfish can cause gastrointestinal illness.

- b. *At least 207 manatees,³ 577 sea turtles,⁴ 126 bottlenose dolphins,⁵ many birds and hundreds of tons of fish are reported dead and suspected to have fallen prey to red tide toxins in Florida waters. (Red tide mortalities as of December 12, 2018)*

The total economic impact of our “lost summer of 2018” is still in calculation, but from August to November 2018, 241 businesses from 11 counties reported more than \$130 million in estimated lost revenue.⁶

- c. *“We have seen a significant dip in rentals, approaching a 30% reduction on last year,” Andy Moore, CEO of Gulf Coast Vacation Rentals & Gulf Coast Property Management in Bradenton.⁷*
- d. *“We’re definitely seeing a decrease in tourism, a lot of cancellations for resorts with our beaches being closed,” Allison McNeal, Indian River County tourism director.⁸*

2. Deterioration of Springs, Rivers, Lakes

Florida is home to over 1,000 springs, the largest concentration on the planet, and the most first and second magnitude springs in the U.S. Approximately 80% of Florida’s artesian springs fail to meet water quality standards and are considered by the State to be impaired by nitrogen and other pollution.⁹ Algal blooms and invasive and/or aggressive flora fed by increased nitrate levels are now frequent occurrences in our springs, rivers, lakes and canals, and diminish their beauty and economic value.

- a. *Since the 1950s, the concentration of nitrate nitrogen in Silver Springs has increased by more than 160%.¹⁰ Nitrogen levels are 79% higher than the 0.35 mg/L threshold set by the Florida Department of Environmental Protection (FDEP).¹¹*
- b. *Within the Florida Department of Economic Opportunity’s (FDEO) North Central Rural Area of Opportunity, the recreational use of fifteen major springs brings an estimated \$83.3 million in visitor spending annually, contributing more than 1,160 full-time and part-time jobs, and local and state government tax revenues of \$6.56 million.¹²*

Lake Okeechobee, Florida’s largest freshwater lake, is often referred to as the liquid heart of Florida. Over the past century, it has been polluted by discharges from agricultural operations, including sugar cane production, dairy and cattle operations; urban stormwater; and human waste from septic tanks and inadequately treated wastewater. As a result, millions of cubic yards of legacy pollution sediment lie on the lake bottom laden with high levels of phosphorus and toxic metals, which are re-suspended during high wave action. Phosphorus now enters the lake at 4-5 times the annual goal, as well as large volumes of nitrogen. Over 90% of the water and pollution that enters the lake comes from Fisheating Creek and basins to the north. During extended high-water periods, such as in 2017 and 2018, water is discharged from the lake to the St. Lucie and Caloosahatchee estuaries primarily to avoid endangering Hoover Dike. Nutrient pollution from local basins remains a problem area for the estuaries, and local governments and landowners are working on water

² Brand, L., et.al. 2010., Zhang et. al, Environmental Health, May 2015

³ Florida Fish & Wildlife Conservation Commission, 12/12/2018

⁴ Florida Fish & Wildlife Conservation Commission, 12/10/2018

⁵ NOAA Fisheries, Office of Protected Resources 12/13/2018

⁶ Florida Department of Economic Opportunity. 2018. Business Damage Assessment Survey for the Florida Red Tide Incident.

⁷ Nota, VRMIntel, August 23, 2018

⁸ Hughes, WPTV, October 25, 2018

⁹ Florida Springs Institute, October 23, 2018

¹⁰ Knight, Silenced Springs, p. 45

¹¹ Florida Department of Environmental Protection. 2015.

¹² Borisova, Hodges & Stevens, UF IFAS, 2015

quality improvement projects to address these sources. However, lake discharges that are outside local control are the major source of toxic blue green algae, elevated nutrients and suspended sediment, which combine to wreak havoc on the public health, economies and environment of the estuarine regions.

In order to improve the water quality of the lake and reduce discharges to the estuaries: 1) Water needs to be retained and treated north of the lake; and 2) The River of Grass needs to be restored to the greatest extent possible to restore the flow of clean water south to Everglades National Park and Florida Bay. This includes the raising of Tamiami Trail (which serves as a partial dam) and other projects implemented to ensure flow south from the lake and water conservation areas.

- c. *Lake Okeechobee is a major economic driver of both urban and rural counties in South Florida. In Hendry County, Clewiston brings in thousands of competitors and spectators for fishing tournaments, creating nearly \$1.5 million in annual revenue for the local economy.*¹³
- d. *Public Employees for Environmental Responsibility (PEER) reports that there are approximately 90,000 cows in the 7 counties north of the lake, which includes 31 concentrated animal feeding operations (CAFOs) that create over 10,000 gallons of wastewater daily and approximately 2 billion pounds of manure annually.*
- e. *A study of Lake Okeechobee's water quality found that algae-laden discharges into the Caloosahatchee and St. Lucie Rivers correlated with a combined drop in property value of \$1 billion for properties in Lee and Martin County between 2010 and 2014.*¹⁴

The St. Johns River has exceeded its assimilative capacity for nitrogen and phosphorus. Excessive nutrients feed uncontrolled algal blooms that deplete oxygen in the water needed by fish, reduce light that is essential to submerged vegetation and threaten the health of both humans and aquatic life. The river suffers from an excess of nutrients from wastewater treatment plants, industrial discharges, failing septic tanks, stormwater runoff and fertilizers that regularly wash into the river.

- f. *Most recently, FDEP permitted annually more than 89,000 tons of sewage sludge ("biosolids") from South Florida to be disposed on land adjacent to the headwaters of the St. Johns River. This dangerous practice-already banned in South Florida- is degrading water quality, threatening human and ecosystem health and undermining public investments downstream.*
- g. *According to the FDEP Middle St. Johns River Basin Management Action Plan, 96% of the Middle Basins' phosphorous load comes from upstream.*
- h. *A 2015 Lower St. Johns River Economic Study concluded that the Lower St. Johns alone provides more than \$3 billion in flood protection value, \$400 million in nutrient removal and \$100 million in recreational value.*¹⁵

B. Water Shortages

Florida's water management districts, responsible for managing and allocating Florida's water resources, have neglected their scientific duties to assess available water resources and how much must be set aside for the environment and needs of the future. This has led to the over-allocation of groundwater. Current efforts to address Florida's water supply issues, such as the

¹³ Florida TaxWatch, 2018

¹⁴ Florida TaxWatch, 2018

¹⁵ Borisova, Hodges & Stevens, UF IFAS, 2015

North Florida Water Supply Plan and Central Florida Water Initiative, focus more on alternative water supply development and less on more productive and economically efficient sustainable conservation measures. The primary goal of these planning efforts should be sustainability and should utilize a diversity of strategies including alternative water supply initiatives and aggressive conservation measures.

1. Shrinking Springs, Rivers, and Lakes

Most of North and Central Florida's freshwater resources are fed by the Floridan Aquifer, which is recharged through rainfall. Approximately 1 billion gallons of freshwater is pumped each day from our aquifer by residents, municipalities, farmers and industries throughout north-central Florida.¹⁶ Nearly all of Florida's first and second magnitude spring systems such as Silver, Rainbow, Ichetucknee and Wekiwa have experienced significant reductions in their historic flows due to groundwater pumping.¹⁷

- a. *The Suwannee River Groundwater Basin consists of over 200 artesian springs, which have declined in flow by more than 45%. Forty of these springs host more than 1 million visitors per year, supporting over 1,100 jobs and spending upwards of \$90 million annually.*¹⁸
- b. *Water levels in Lake Brooklyn and Lake Geneva, near Keystone Heights, have declined approximately 12 and 18 feet, respectively since 1960s, as groundwater use in the region has increased.*¹⁹
- c. *The combination of periods of drought and the artificial diversion of water to make way for new development can lead to the destabilization of our limestone bedrock and sinkholes.*²⁰ In 2011, RiskMeter, an insurance data platform, listed four Florida counties among the top ten most sinkhole prone in the nation.
- d. *Estimated natural lands loss is 5.4 million acres by 2070, an 85 percent increase in developed land. Protecting our water supply depends on protecting open lands that recharge our aquifer.*²¹

2. Insufficient Water Supply

Approximately 50% of Florida's potable water is used for irrigation. This unsustainable practice needs to be buffered by sensible, responsible water conservation rules. Commercial and residential landscapes can be designed to drastically reduce and even eliminate irrigation while providing increased aesthetic and ecological value. Continued use of high-quality treated drinking water to irrigate lawns makes little sense given the increasing demands for water throughout the state and the importance of water to a sustainable environment and economy.

Central Florida is already reaching the sustainable limits of its predominant source of water, the Floridan Aquifer. As a result, the three water management districts in this five county area - the St. Johns River Water Management District, South Florida Water Management District and Southwest Florida Water Management District (SWFWMD) - created the Central Florida Water Initiative (CFWI) to identify alternative sources of water to meet demand. The CFWI's focus on alternative water supply development, particularly surface water withdrawals from the St. Johns River, will worsen existing pollution problems, increase salinity levels and adversely impact the fisheries, wildlife and submerged vegetation in and along the river.

- a. *CFWI prioritizes unsustainable surface water withdrawals over sustainable water conservation. In 2015, the CFWI released water supply plans that include projects that could remove up to 160 million gallons per day of surface water from the St. Johns River at a cost of up to \$1.79 billion.*

¹⁶ Knight, The Gainesville Sun, March 23, 2018

¹⁷ Knight, Silenced Springs, p. 53

¹⁸ Borisova, Hodges & Stevens, UF IFAS, 2016

¹⁹ SJRWMD, 2018

²⁰ St. Johns River Water Management District. 2018.

²¹ 1000 Friends of Florida, Water 2070, 2017

3. Weakening Our Government Institutions

Florida's five water management districts are the front lines to protect our water. The Districts were created and given the power to levy ad valorem taxes by Florida voters more than four decades ago. Districts historically played a key role in planning and funding Florida's most costly and important water projects including Everglades restoration, Tampa Bay Water, springs protection and land acquisition in sensitive watersheds. Over the past decade, however, the districts have been stripped of their fiscal and policy autonomy by the Executive and Legislative branches.

- a. *The South Florida Water Management District has seen its budget and staff cut in half since 2012 due to cuts in its ad valorem tax rate.*
- b. *Changes in laws and procedures now centralize water management in Tallahassee, making budgeting and setting of priorities subject to political changes, rather than the steady, regional management contemplated by the original Water Resources Act. This has also dismissed the role of scientists, experts and local stakeholders.*

III. A New Water Policy

A. Prevent Pollution at its Source

Florida must develop and implement a comprehensive strategy to prevent nutrients and other pollutants from entering our groundwater and surface waters at their sources. Prevention is the most cost effective way to meet water quality goals because it can not only reduce the need for expensive control and mitigation but also avoid impairment in the first place. Common sense solutions to prevent pollution at the source in at-risk watersheds include:

1. Prohibiting new septic tanks on properties less than five acres or requiring the installation of septic tanks with enhanced nitrogen advanced wastewater treatment for new developments
2. Upgrading or replacing wastewater infrastructure
3. Eliminating the spreading of septage, sludge and biosolids
4. Prohibiting existing and future concentrated animal feeding operations in vulnerable areas absent stronger nutrient controls
5. Requiring implementation and verification of agricultural Best Management Practices (BMPs), as well as advanced BMPs which are eligible for cost-share programs, that achieve the water quality goals
6. Prohibiting well stimulation operations, including hydraulic fracturing, matrix acidizing and acid fracturing throughout Florida
7. Updating the statewide stormwater standards for development to incorporate new technologies for more effective pollutant removal
8. Replacing the use of herbicides in water bodies with mechanical harvest methods and prohibiting the deposition of vegetative material into Florida's waters

B. Aggressively Reduce Existing Sources of Pollution

Since the vast majority of Florida's waters are already impaired by nutrients, it is not enough to just slow the growth of pollution; we must take significant steps to reverse the trend.

In rural areas, agriculture plays an important role in Florida's environment, quality of life and economy, but is also a primary pollutant of many of Florida's springs, rivers and lakes. We must find a way to balance the economic viability of agriculture with the health of our water resources.

1. The Legislature must provide significant funding for grants and cost-share programs to help agricultural operations convert to more sustainable operations and strengthen and enforce regulations on agricultural best management practices and run off.

In more urban areas, Florida's waters are contaminated by excessive nutrients from wastewater effluent, septic tanks and lawn fertilizer. Adopting a stronger state model fertilizer ordinance, upgrading wastewater utilities and replacing or upgrading septic tanks in areas already

impaired by excessive nutrient pollution will be an expensive but necessary undertaking for current and future generations of Floridians.

2. Along with local and federal sources, the Legislature needs to provide recurring funding for wastewater infrastructure projects.
3. The Legislature should allow local governments to protect their water bodies by eliminating fertilizer regulation preemptions, including fertilizer sales, and allow them to adopt more stringent local fertilizer ordinances.

C. Protect Land to Protect Water

What happens on Florida's land determines the state of its waters. There is no way to protect the water underneath, without protecting the land above.

1. Land acquisition programs should include strategic acquisitions to buffer growth; protect wetlands, waterways and floodplains; preserve critical recharge areas; and safeguard our supply of affordable fresh water. Protecting Florida's lands protects its waters and has myriad positive economic and social benefits.
2. New development in watersheds should minimize urban sprawl, utilize smart growth planning and green infrastructure and require the use of water conservation technologies to tangibly improve water quality, require the use of water saving technologies and increase Florida's resiliency.
3. Require water-efficient landscaping that provides ecological value, improving upon programs such as Florida-Friendly Landscaping™ that can reduce unnecessary water use and restore lost habitat values.
4. Since the Legislature has already clarified that homeowners associations (HOAs) cannot ban certain drought-tolerant and Florida-Friendly grasses, they should take the next step and affirm that HOAs cannot require certain water intensive plantings.

D. Secure Florida's Future Water Supply

Businesses have long recognized the connection between the health of Florida's water supply and the health of its economy. Public investments in water supply focus on engineering solutions to expand available water resources, missing valuable opportunities to reduce demand through reasonable conservation efforts.

1. Conservation is the most cost-effective and efficient solution; therefore, government grants and cost-share programs should prioritize and incentivize water conservation measures as the first means to address Florida's water supply challenges. In addition, reasonable and responsible regulations, enforcement and education should also be implemented and, if practicable, incentivized.
2. Facilitate growth of potable reuse projects such as PureALTA, an award-winning and internationally-acclaimed water reuse system, invented and co-funded by the St. Johns River Water Management District and the City of Altamonte Springs. The project provides a scalable approach to augmenting our traditional water supply without withdrawing from the aquifer or surface waters and without using the expensive reverse osmosis process.
3. Florida Statute §373.223 should be updated to improve the consumptive use permitting process, to better account for cumulative impacts and require that large water uses are "clearly in the public interest."
4. By Florida Statute, the five Florida water management districts must be the stewards in managing and protecting our water resources. To achieve this, they must identify and reserve water needed for the health of natural systems, including water made available by restoration projects to ensure that Florida is living within its water means.
5. The water management districts, in conjunction with DEP, need to update Florida's minimum flows and levels (MFLs) regulations to ensure they are

adequately protective of our waters, set MFLs for aquifer potentiometric levels as required by statute, provide a roadmap for preventing or reversing the impacts of over withdrawal, and have meaningful and enforceable targets, especially where public money is used. Increasing scientific staff and upgraded models are essential to this task.

6. The Governor and Legislature should consider placing guidelines on future appointments to include diversity and scientific-expertise in governing board selection.

IV. Funding Florida's Comprehensive Water Strategy

For decades, efforts to protect and restore Florida's waters have been significantly underfunded. Compared to other important state priorities, like transportation which receives nearly \$11 billion in funding each year, funding for the management and protection of our water resources is sorely lacking. Although a true cost has not yet been determined, estimates suggest Florida's water quality compliance and infrastructure needs to be a minimum of \$1-2 billion per year. New and dependable funding sources and mechanisms will need to be identified, along with increased general revenue allocations, if we are going to save Florida's waters. New funding sources might include:

A. Establish New Water Funding Sources

1. Water Withdrawal Fee

The only costs for withdrawing water in Florida are a permit fee and the user's costs to pump the water. Because there is no direct correlation between the amount of water used and the costs of water usage, this system leads to an inefficient allocation of water. Florida currently charges fees for the extraction of resources like phosphate and limestone, and the use of submerged lands. There have been previous studies on such a fee and it is time that it be considered once again. The Legislature and Governor should appoint a new commission to revisit and build upon the findings of Governor Bob Martinez' 1989 Water Resource Commission, including:

- a. Evaluating the effectiveness of various water use fee designs to incentivize water conservation and direct water towards higher value uses. A key finding of recent research into water use fees is that industry is responsive to the price of water, and efficiency/conservation gains can be expected with small increases in the price of water.²²
- b. Evaluating the effectiveness, efficiency and equity of various water use fee designs as a funding mechanism, including impacts on agriculture, municipalities and rural areas of economic opportunity.
- c. Evaluating the consistency of various water use fee designs with current state law and the impact of proposed statutory changes.
- d. Basing the water use fee on a sliding scale with credit given for projects/users which reduce water withdrawals on natural systems.
- e. Based on 2015 water usage, a fee of five cents per 1,000 gallons will generate more than \$118 million for water resource protection.²³ Some of the proceeds could be used on projects to protect and restore water resources and to achieve MFLs and Total Maximum Daily Loads goals.
- f. The per capita daily withdrawal of average public water supply was 85 gallons per residential unit. With a \$0.05/1000 gallons additional fee, the impact on a family of four would be approximately \$6.21 per year.

²² Canadian National Roundtable on the Environment and the Economy, 2012

²³ Florida Office of Economic and Demographic Research, 2018, p. 74

2. Beverage Container Recycling Fee

Another funding opportunity linked to water use is a beverage container recycling fee. Unclaimed deposits could be used to fund water resource programs as well as significantly increase recycling.

- a. A 2011 study on a Florida Beverage Container Deposit Refund System found that a deposit of 3 cents per container would result in net unredeemed deposit revenue of approximately \$83 million per year.²⁴

B. Use Traditional Sources of State Funding

1. Restore Water Management District's Autonomy

The Legislative and Executive branches should restore the water management districts' traditional level of autonomy in issues of finance and policy.

- a. Article VII, Section 9, of the Florida Constitution authorizes water management district governing boards to levy ad valorem tax rates. Governing boards should set ad valorem tax rates and adopt budgets that reflect the funding needed to properly manage and protect our waters and water users and perform their water supply duties including water conservation, ecosystem restoration, alternative water supply, water storage projects and water quality monitoring programs.

2. Fund Water Quality Programs

The State of Florida has detailed programs to restore our impaired water bodies, but little funding for shared wastewater infrastructure, agricultural operations and programs north of Lake Okeechobee. The immediate costs of addressing failing septic tanks, nutrient-laden stormwater and updating wastewater treatment plants may seem daunting, but cannot compare to the massive long-term economic losses associated with degraded water bodies.

- a. Historically, bonding has been a key element in funding Florida's environmental priorities. The Legislature should take advantage of Florida's excellent credit rating and issue bonds to help meet current and future water infrastructure needs.
- b. Rural Areas of Economic Opportunity, and other economically disadvantaged communities, should be highlighted for state funding assistance.
- c. As referenced above in III.2b, the Legislature should enact cost-sharing programs to work with local governments on funding wastewater infrastructure.
- d. As referenced above in III.2.a, the Legislature should provide significant funding for grants and cost sharing programs to help agricultural operations convert to more sustainable operations.

3. Use the Land Acquisition Trust Fund as Voters Intended/ Restore Florida Forever Funding

In 2014, Florida voters amended the state constitution via the Water and Land Conservation Amendment for the primary purpose of restoring funding for acquiring conservation and recreation lands state-wide. Although many have tried, land conservation acquisition allocations since the passage of the Amendment have consistently failed to live up to the will of Floridians. Acquiring new conservation lands is less expensive and more effective than attempting to artificially replicate the ecosystem services these lands provide after they're converted to other uses. Conserved land naturally filters pollutants and allows rainwater to percolate into our underground aquifers. The ailing condition of our rivers, springs, lakes, estuaries and coastal waters throughout our state underscore the urgency with which we must continue to protect our natural spaces.

²⁴ Florida Bureau of Economic and Business Research, March 15, 2011

With the Governor’s stated commitment to protecting Florida’s waters, the Legislature must adopt legislation that provides for expanded funding in the Land Acquisition Trust Fund to acquire natural areas, working farms and ranches and close-to-home recreational lands through the Acquisition and Restoration Council’s scientifically-developed Florida Forever Priority List, the Rural and Family Lands Protection Program and the Florida Communities Trust. Funding existing programs which make good use of scientifically-driven selection criteria, like Florida Forever, ensure funds are invested where they can make the biggest positive difference throughout Florida.

The Florida Conservation Coalition stands ready, willing and able to help the Governor’s Office, any legislator, governing agency or institution to pursue the recommendations of our proposed water policy. As a coalition of over 80 conservation-minded groups and over 2,000 individuals, our membership consists of Florida’s preeminent environmental organizations made up of experts in our State’s waters, lands and wildlife.

Florida Conservation Coalition Steering Committee Members

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Organizations

