ENVIRONMENTAL POLICY FOR FLORIDA'S FUTURE 2021-2022 BRIEFING BOOK

DEAR FLORIDA POLICYMAKER,

You have an opportunity and responsibility to make Florida a more sustainable and healthy place to live. There is no doubt that the challenges we face today are enormous—a staggering number of deaths caused by COVID-19, the related economic downturn and budget shortfalls, and an increasingly damaging climate crisis here at home and globally. Yet, with your leadership, we have a chance to build a more just and equitable Florida. We believe that lawmakers like you can help shape a future where protecting our natural areas and promoting clean, renewable energy brings economic prosperity and a high quality of life to all Floridians.

Florida needs bold leadership to safeguard our environment and the long-term health and well-being of all communities. To achieve this, elected officials from both sides of the political spectrum must work together to protect our water, build resilient communities, reduce fossil fuel pollution, and support Floridians in their endeavors to make a better life for their families. These are values shared by all Floridians, regardless of political affiliation. We want leaders like you to put those values above party loyalties and preserve what's best about Florida.

Florida Conservation Voters Education Fund has collaborated with **two dozen conservation and social justice experts** to bring you this briefing book. We hope that it will serve as your guide to understanding the critical environmental issues facing our state along with the social justice issues to which they are inextricably bound.

Beyond providing an overview of Florida's complex environmental issues, we hope you will also use these briefs as an opportunity to connect and converse with experts across the state. Know that as you rise to meet the environmental challenges facing our state and fulfill your responsibility to represent the interests of the people of Florida, we are here to support your efforts.

Our state's incredible beauty and the life-sustaining natural world within our borders will last only as long as we work to conserve and protect them. This year, you have the power to make Florida a more sustainable and healthy place to live, and we look forward to opportunities for working together to create a legacy that our children and grandchildren will be proud of.

If you have any questions, please feel free to contact me at aliki@fcvoters.org. Thank you.

Kuly M. an chast

Aliki Moncrief Executive Director Florida Conservation Voters Education Fund



Florida Conservation Voters Education Fund (850) 629-4656 www.FCVEF.org



TABLE OF CONTENTS



CLIMATE & CLEAN ENERGY

FLORIDA IS FACING A CLIMATE CRISIS. FROM RISING SEAS TO WARMING TEMPERATURES AND MORE EXTREME WEATHER, WE NEED ACTION NOW.

Florida Conservation Voters Education - unc

Constant S

SOLAR POWER IN THE SUNSHINE STATE

Florida is the "Sunshine State," so it should come as no surprise that solar energy is our most commonly used renewable energy resource, providing roughly half of the state's renewable energy. Yet, Florida's solar infrastructure lags far behind where it should be. We currently receive only 5% of our power from renewable resources, 3% of which is solar energy.¹ Meanwhile, California generates upwards of 20% of its power from solar resources, proving that a swift transition to a renewable energy economy truly is possible.

Fortunately, the sun appears to be rising on Florida's solar potential due to both personal investments by customers and major plans for new utility-scale projects. Costs for solar panels have declined by 80% in the last decade, making solar competitive with any other form of power.² The explosive growth of solar technology offers an opportunity for the Sunshine State to become a national leader in clean energy.

To harness the full potential of solar power and ensure that the benefits of solar energy are shared equitably, Florida will need to invest in a combination of utility-scale solar projects, community-scale solar, and rooftop solar.

PUBLIC SUPPORT FOR RENEWABLE ENERGY IS STRONG

Public support for solar has never been stronger, as evidenced by high-profile election wins for solar in two-state ballot amendment campaigns in 2016. In a recent poll, 73% of Floridians said they would be more likely to vote for a political candidate who supported increasing the development and use of renewable energy sources like solar energy, including 49% who said they were much more likely to support such a candidate.³ Independent voters were the group most likely to support the adoption of solar energy as the state's primary energy source, with 57% in support.⁴

Other southeastern states like North Carolina and Georgia have been early leaders in solar deployment, but Florida now has a chance to emerge as a top solar state. Florida is poised to

reap the benefits of policies that move us toward a cheaper and more resilient energy grid that relies on clean energy sources like solar, avoiding risky and expensive investments in outdated fossil fuel resources. These benefits can be accomplished by:

- Expanding access to solar for all Floridians through practical leasing and financing options;
- Setting aggressive goals for clean energy deployment;
- Protecting Floridians' right to go solar;
- Opening up the state to community solar;
- Supporting the adoption of utility-scale solar pursued responsibly and equitably;
- Supporting resilience through solar and solarplus-storage.

Achieving these policy goals will help provide Florida families and businesses with an affordable way to control rising energy bills, create thousands of new solar jobs, and reduce Florida's reliance on imported and polluting fossil fuels.

EXPAND SOLAR ACCESS THROUGH FINANCING OPPORTUNITIES

The most effective ways to promote equitable access to solar include establishing low-income programs and expanding leasing and other financing opportunities. Florida is one of only four states that legally prohibits customers from choosing to finance their rooftop solar panels via power purchase agreement (PPA) arrangements with solar companies. These arrangements avoid large upfront costs for customers and lower performance risks by letting the customer pay only for the value of energy produced by the solar panels. Other southern states have removed similar prohibitions, as Georgia did in 2015 with Republican-sponsored legislation.

Florida would benefit from a common-sense approach that expands options for electricity customers to include the most popular forms of financing used throughout the country. Allowing homeowners and businesses to choose clean energy—without the need for new subsidies or incentives—is a practical way to remove obstacles to a cleaner energy future for Florida's economy and environment.

SET AGGRESSIVE GOALS FOR CLEAN ENERGY DEPLOYMENT

Today, 25% of Americans live in a state committed to being powered by 100% clean energy in the near future. Florida, the fourth largest energyconsuming state, is not one of them. Florida is one of the most vulnerable states to the impacts of the climate crisis, and we now have the opportunity to lead on this issue by putting the state on a clear path to clean energy now.

The state needs comprehensive goals and energy planning processes to ensure that clean energy resources can fairly compete with traditional fossil fuel plants. Solar energy now competes on cost with gas and other alternatives, and leadership is necessary to ensure that Floridians receive the full benefits of the growing clean energy economy.

PROTECT FLORIDIANS' RIGHT TO GO SOLAR

The rapid growth of solar has been great news for customers who want to take advantage of reliable, sustainable, and lower-cost energy. Unfortunately, electric utilities have not welcomed the competition from inexpensive rooftop solar. Across the country, utilities are redesigning their customer rates to single out solar customers for additional fees, thus reducing the economic payback of investing in solar panels. Another tactic used by utilities is to shift customers towards new types of rates that ascribe a bigger portion of monthly power bills to fixed charges, reducing customers' ability to invest in solar panels or energy efficiency improvements.

Utilities are also launching attacks on a popular rate policy known as "net metering," which requires utilities to fairly compensate customers for the energy produced from their solar panels. That excess generation is sent to neighbors and replaces the fossil fuel generation that the utility would otherwise produce. It's a win-win for solar customers, their neighbors, and the environment. This simple crediting arrangement is one of the most important state policies for enabling Floridians to generate their power from the sun. It is also extremely popular—with 77% of Florida voters supporting the concept of net metering to give solar energy users a billing credit based on the net volume of power their solar panels feed back into the power grid.⁵

Utility companies have pushed the narrative that strong net metering policies shift the costs of maintaining the grid onto customers who do not own solar panels. In reality, research shows that the influence of net metering has a completely negligible effect on customer rates, especially at or below 10% solar penetration (Florida rooftop solar adoption is only at 0.5% penetration today).⁶

Florida's strong net metering policies were developed to promote distributed rooftop solar adoption, which reduces electricity rates while increasing the reliability of the grid. In contrast, utilities' new capital investments in expensive gas transmission, generation, and unnecessary grid upgrades will substantially increase rates for all customers by up to as much as 20% in Florida between now and 2030.⁷

Because utilities have monopoly control over the prices they pay for solar generation under net metering, Florida's utility customers need policymakers to stand up for them and defend their right to be fairly compensated for the energy they provide to the grid with their private investment in rooftop solar systems.

The local solar industry is reporting strong job growth, despite the many barriers it continues to face. But as solar grows and becomes more cost-competitive with traditional energy options in Florida, we expect more utility rate changes and attacks on net metering across the state. Policymakers should discourage this constant stream of bad-faith attacks which put a heavy burden on customers to be ever-vigilant in protecting their rights to get a fair return on their investment to preserve the economic value and affordability of new clean energy technologies. Solar companies employ more than 10,000 Floridians, 10% of whom are veterans. Solar employs more people in the U.S. than oil, coal, and gas combined.

LEGALIZE AND PROMOTE COMMUNITY SOLAR

Under a community solar program, households can purchase or lease a "share" in a community solar project or start a project with their neighbors. Every month, subscribers receive a credit on their electricity bill for the energy produced by their share.

Currently, access to community solar is limited in Florida due to the absence of state legislation, either allowing non-utility entities to offer community solar arrangements or mandating that utilities make virtual net metering arrangements available to customers. To access community solar, your utility must agree to voluntarily offer a community solar program. Twenty states and the District of Columbia have some form of statewide community shared solar policy in place, although these vary from state to state. Community solar policies should be flexible enough to allow for a variety of ownership and contract models to meet different consumers' preferences and financial standing, such as an upfront payment model, a leasing agreement, and cooperative or community ownership. Community solar policies should add to existing renewable energy programs, not undermine them. Importantly, community solar offerings should ensure access for lowincome customers who are most in need of solar savings. For example, the State of Illinois offers significant financial resources for community solar programs under the Illinois Solar for All Program, while simultaneously mandating community solar developers to engage in partnership with community-based organizations. The Illinois program also invests significant resources into education and job training.⁸

In many states, community solar programs rely on net metering to set the credit value of solar, meaning policies that defend the retail-rate compensation structure of net metering are important to the continued viability of these offerings.

SUPPORT RESILIENCE THROUGH SOLAR AND STORAGE

Communities in Florida must become more resilient to the risks of extreme weather. During and after Hurricane Michael, 6,700 Floridians used emergency shelters, and more than 200 state shelters were opened after Hurricane Irma.9 These critical facilities need resilient energy sources that can provide reliable power for extended periods and don't depend on a fuel supply to function effectively. Also, low-income communities and homeowners (especially seniors and those who are medically vulnerable) need access to solar plus storage technologies that keep the lights on even when the grid goes down.

Policymakers should look for ways to support emerging solar plus storage technologies that make Florida's communities safer and stronger in the face of extreme weather.

SUPPORT ADOPTION OF UTILITY-SCALE SOLAR, PURSUED RESPONSIBLY AND EQUITABLY

Florida's largest monopoly electric utility companies all have plans to expand their solar footprints in the near future. Florida Power and Light (FPL) plans to develop eight gigawatts of solar capacity through 2030, while Duke Energy and Tampa Electric Company (TECO) have set 2022 goals of 700 megawatts and 600 megawatts, respectively.¹⁰ Utilities are experimenting with a variety offinancing and development strategies in order to achieve these goals. Lawmakers should prioritize the needs and preferences of local residents in these utility-scale solar projects, with special sensitivity to low-income communities that already face disproportionate impacts from the siting of traditional energy resources. Utility-scale solar facilities produce jobs and energy without the pollution generally associated with energy generation, but they also have a land use footprint which may conflict with local uses or harm residents. Regulators and lawmakers can play a role in ensuring solar projects produce quality local jobs, generate cost savings and clean energy benefits for low-income residents, and are ultimately sited and built with community involvement in a robust public input process.

See *The State of Rooftop Solar in Florida* for more information about important policies protecting Floridians' solar rights.¹¹

² International Renewable Energy Agency, Renewable Power Generation Costs in 2019, 2020.

³ Bolger, Herbert, Florida Clean Energy Survey, Clean Energy COnservatives, April 16, 2019.

 ⁴ Pew, Majorities See Government Efforts to Protect the Environment as Insufficient, PewResearch, May 14, 2018.
⁵ Schorsch, Sunburn – The morning read of what's hot in Florida politics.

⁶ Satchwell, Andrew. Mills, Andrew. Barbose, Galen. Financial Impacts of Net-Metered PV on Utilities and Ratepayers: A Scoping Study of Two Prototypical U.S. Utilities. Ernest Orlando Lawrence Berkeley National Laboratory, September 2014.

⁷ Barbose, Putting the Potential Rate Impacts of Distributed Solar into Context. Lawrence Berkeley National Laboratory. Retrieved at: https://emp.Ibl.gov/sites/default/files/Ibnl-1007060.pdf

⁸ Vote Solar, GridAlternatives, Increasing Low-Income Access to Community Solar, 2017.

 ⁹ Clean Energy Group, Resilient Southeast: Exploring Opportunities for Solar+Storage in Miami, FL. 2018.
¹⁰ Trabish, Florida's solar turnaround sparks concerns over limits on community projects, May 9, 2019.

¹¹ Solar United Neighbors, Votesolar, The State of Rooftop Solar in Florida, August 2020.



¹ Florida Department of Agriculture and Consumer Services Office of Energy, Annual Report, 2019.

SOLAR POWER POLICY RECOMMENDATIONS

- Expand access to solar for all customers in Florida by supporting the legalization of Power Purchase agreements (PPAs) and other practical financing mechanisms to help open solar energy access to all.
- Establish robust, statewide clean-energy goals.
- Protect the rights of solar customers to recoup their investments by preserving retail-rate net metering and rejecting discriminatory rates for solar customers.
- Support true community solar through legalization of virtual net metering.
- Support the adoption of responsible and equitable Utility-Scale Solar.
- Support resilience through solar and solar-plusstorage.

TRANSPORTATION

Florida faces both challenges and opportunities in meeting the transportation needs of our growing population. The traditional pattern of low-density development and the transportation system that fuels it have had devastating impacts on Florida's environment and communities. Year after year, the annual "Dangerous by Design" study published by Smart Growth America lists Florida and its cities as having among the highest pedestrian fatality rates in the nation due to transportation networks that are solely oriented towards motorized vehicles.¹

For decades, transportation planners at all levels of government have sought to solve traffic congestion by building more roads rather than investing in public transportation. When those roads become highly congested, the vicious cycle begins again, leading to the construction of even more roads. This pattern of development is not only ineffective but relies heavily on nonrenewable fossil fuels, is costly for Florida taxpayers, and destroys Florida's rich natural lands, water bodies, and wildlife. The time has come for a new transportation paradigm in Florida, emphasizing intermodal and public transportation options, smart planning, and promising new technologies.

PUBLIC AND INTERMODAL TRANSPORTATION

Providing transportation alternatives for all including pedestrians, cyclists, drivers, and transit users—could protect vulnerable natural resources from sprawl, create more walkable and livable communities, enhance public health, and improve our quality of life. Electrifying our transportation sector by promoting electric vehicle use and deploying charging infrastructure, particularly in urban areas and communities with poor air quality, would improve public health, benefit our environment, and support a just transition to clean, renewable energy sources.

Transportation solutions for the 21st century must provide a greater range of options for all. Practical public transportation solutions can be deployed to ease congestion and increase the usability of our transit networks. Florida's lawmakers should expand funding for state agencies to operate more buses and trains at higher frequencies and expand overall funding for transit projects, such as rapid bus transit systems. Focusing on multiple transportation options has many positive benefits and protects vulnerable natural resources from sprawl and greenhouse gas emissions. Urban areas in particular stand to benefit from better transit options and active transportation alternatives.

EXPANDING TRANSPORTATION OPTIONS

Unfortunately, our current transportation system focuses almost exclusively on motorized vehicles, leading to high rates of pedestrian fatalities and constraints on community members without the financial means to own and operate a personal vehicle. New roads generate urban sprawl, which consumes Florida's rich natural lands, drinking water, and wildlife. Transportation options and development patterns focused on producing walkable spaces make for more livable communities, enhance public health, and improve our quality of life.

Lawmakers can begin the process of rethinking how we plan our transportation infrastructure by requiring the Florida Department of Transportation's district offices to reduce their emphasis on road expansion projects as a solution to congestion issues. Regulators should scrutinize all new road projects, particularly in greenfield corridors in rural areas. New roads are not a long-term solution to congested traffic. Numerous studies have shown that while new road infrastructure may provide some short-term relief, ultimately, these projects only increase traffic overall as they encourage further development and automobile travel.^{2 3 4} This dynamic of new roads spurring more traffic is called "induced demand."

Instead of repeatedly falling into the same induced demand trap, FDOT should focus on more transformational changes such as protected bike lanes and dedicated bus lanes. Many districts have yet to accommodate more effective and responsive solutions to mobility in their planning that are more effective at developing successful mode shifts. There is an urgent need for projects that will increase our transit system's efficiency and create a more welcoming roadscape for cyclists and nonmotorists. Not only would these changes make our streets safer for transit riders, pedestrians, and cyclists as a whole, but they would also help us achieve our climate goals by reducing greenhouse gas emissions. Re-evaluating planning metrics and standards for success in transportation planning must be done to change the culture and working practices at FDOT.

Policies supporting transit-oriented development should come hand in hand with more investment in our transit infrastructure. Planning for higher densities along public transportation corridors helps to maximize the effectiveness of public transit investments.

GETTING OFF THE ROADS TO RUIN: M-CORES TOLL ROADS

Transportation planning should reflect local needs, not top-down mandates. Since transportation planning often begins at the local and regional levels, state lawmakers should work cooperatively with regional transportation planning efforts and provide funding, as appropriate, to implement locally vetted and supported plans.

Tragically, the three Multi-use Corridors of Regional Economic Significance (M-CORES) authorized by state leaders in 2019 represent a dangerous shift from thoughtful and cooperative planning efforts to a top-down approach that ignores the true needs of communities and is not economically viable.

The proposed toll roads would pave over some of Florida's last remaining undeveloped natural and agricultural lands, fragment wildlife corridors, stimulate sprawling development, and divert significant funding from existing transportation problems in urban areas. They would force a massive transfer of tax and toll dollars from heavily populated congested areas—where funds are needed most for transportation improvements to rural, sparsely populated areas. The enormous economic, environmental, and social costs of this project would burden Floridians for generations.

In giving the green light to M-CORES, state leaders overrode long-standing transportation planning principles intended to establish the need and financial feasibility for projects. Neither has been demonstrated for M-CORES. Task Force reports for each of the three corridor areas provide no data demonstrating any need for new roads (greenfield corridor development) or expansion of existing roadways. The significant environmental and economic impacts led task force members to emphasize the importance of a "no build" option and further request that the overly aggressive and politically motivated deadlines for construction initiation and completion be extended or removed. Facing extremely lean budget years to come due to the COVID-19 pandemic, lawmakers should redirect hundreds of millions of dollars dedicated to M-CORES to current priorities and infrastructure upgrades that address the needs of our current population. State lawmakers should re-evaluate the program, including potential for a full repeal.

ELECTRIC VEHICLES

Electric vehicles (EVs) represent an essential component of Florida's transportation future that should be deployed in conjunction with public transit and other transportation options. EVs are poised to assume a significant role in transportation over the next five to ten years as they achieve price parity with non-electric vehicles.⁵ Models consistently show that electrifying the motor vehicle fleet will be necessary to decarbonize the transportation sector and achieve targets like zero emissions by 2050.6 The growth of EVs will have an overall positive impact on the market. Future transportation plans should consider financing tools and opportunities that account for a diversity of transportation modes, including an increase in EVs, when examining future road construction projects and their financing needs.

Florida lags other states in government support for transportation electrification and utility investment, ranking 30th in per capita deployment of EV charging infrastructure. Florida also lacks EV manufacturing employment and investment, which provide economic opportunities neighboring states are well-positioned to seize.

State lawmakers are beginning to set plans to

accommodate EVs and charging infrastructure with the passage of SB 7018 in 2020. The law tasks the Florida Department of Transportation (FDOT), Public Service Commission (PSC), and Florida Department of Agriculture and Consumer Services Office of Energy with identifying barriers and opportunities to advance EV adoption, including state policy and utility engagement recommendations. The master plan's outcome has the potential to put Florida on the road to become a national EV leader.

Future planning must examine the deployment of necessary charging infrastructure, the absence of which can present a risk during emergency evacuation situations. State and local governments can help advance charging infrastructure deployment by providing incentives, opportunities, and mandates to deploy charging stations for residential use, particularly in multi-family residences constructed using public funds.

State and local governments can also advance our transportation system's electrification by electrifying their vehicle fleets, particularly their heavy-duty diesel fleets. Heavy-duty vehicles such as buses and trucks comprise only about 5% of all vehicles on the road. Yet, they generate more than 25% of greenhouse gas emissions from the transportation sector, and significant amounts of air pollution can cause adverse health impacts. Electric vehicle alternatives to these heavy-duty diesel vehicles exist. Replacing vehicles with electric alternatives should be a major component of transition plans. State and federal grant programs can help to fund this transition to clean fleets. For example, right now, Florida school districts have the opportunity to leverage \$166 million in settlement funds from the lawsuit settling Clean Air Act violations by Volkswagen to expand electric vehicle usage. The Florida Department of Environmental Protection is allocating the majority of these "VW Settlement" funds to support electric school bus projects within the 23 select air quality criteria counties that suffer from documented air quality problems.

³ Milam et al., 'Closing the Induced Vehicle Travel Gap Between Research and Practice', Transportation Research Record: Journal of the Transportation Research Board, 2017, DOI 10.3141/2653-02.



¹ Smart Growth America, National Complete Streets Coalition, 'Dangerous By Design 2020 Report', 2020.

² Litman. Generated Traffic and Induced Travel Implications for Transport Planning. Victoria Transport Policy Institute, 2017.

⁴ Kulash, Selected Traffic and Transit Issues SR 836 Extension Dade County, Florida. December 24, 2018.

⁵ Steve Hanley, UBS Predicts EV Price Parity In 2024, CleanTechnica, 10/22/2020.

^e Rogelj J, et al. 2015 Energy system transformations for limiting end-of-century warming to below 1.5 °C Nat. Clim. Change 5 519–27. 2015.

TRANSPORTATION POLICY RECOMMENDATIONS

Florida can improve transportation for current and future residents and visitors by making thoughtful investments in options that respect the protection of natural resources, community character, and livability, and reduce our carbon emissions. State lawmakers can achieve these goals through the following policies and directions:

- Fund and support the electrification of Florida's school bus fleets on a continuing basis, even after the Volkswagen Settlement funds are spent through both funding and planning assistance for school districts.
- Fund transportation alternatives for all, including pedestrians, cyclists, and transit and vehicle users.
- Examine needs for future maintenance and infrastructure development that considers a change in vehicle type and usage at the state (FDOT), regional, and local planning levels.
- Expand EV charging stations, including for medium and heavyduty vehicles, concentrating on high population density areas where there is a demonstrated need, while ensuring equitable access for all. Plan for the deployment of DC rapid charging infrastructure along evacuation routes and major highway corridors.
- Redirect M-CORES funding to alternative modes of transportation, and address the backlog of infrastructure upgrades. Re-evaluate the program with an eye towards full repeal.
- Incentivize technology development and provide opportunities for the needed infrastructure to support more EVs. Consider promoting EV-friendly building, parking, and zoning codes mandating the provision of charging opportunities.
- Fully fund the Florida Forever conservation programs to protect critical water and land areas that may be impacted by future transportation and developments. Promote more compact urban development that requires less consumption of land and resources and supports multiple modes of transportation.

CLIMATE RESILIENCE

Florida's high summer temperatures and 1,200 miles of coastline make our state especially vulnerable to the harmful impacts of the global climate crisis. Floridians are already experiencing a litany of worsening environmental conditions: drought, extreme rain, inland flooding, increasing temperatures, sea level rise, saltwater intrusion, storm surge, coastal inundation, and harmful algal blooms. The impacts of a warming planet will affect every facet of our society, economy, and lives. To adequately prepare our communities, it is essential to understand the changes already underway.

CLIMATE DISRUPTION AND PUBLIC HEALTH THREATS

Globally, **sea levels are rising** due to thermalexpansion of ocean water (the same amount of water takes up more volume as it warms up), polar ice-melt, and changes to the flow of ocean currents. Compared to global sea level rise rates, Florida's sea levels are rising faster than average, due primarily to temperature-driven changes to the flow of Gulf Stream currents.¹ In South Florida, sea levels are rising six times faster than previous records indicated. At the present rate, Florida could face seven feet of sea level rise or more by 2100 according to widely accepted scientific models by the United Nations International Panel on Climate Change.²

This rise in sea level would submerge large areas of the most densely populated parts of the state, exposing homes and businesses to major flood risks, displacing millions of people, endangering our freshwater aquifers and drinking water supplies, overloading our aging wastewater systems, and threatening to undo billions of dollars in infrastructure and investments.

Florida is home to 20 of the top 25 cities most vulnerable to coastal flooding, and 22 of the top 25 cities identified by the Federal Emergency Management Agency (FEMA) as having socially vulnerable communities.

More intense hurricanes and the destructive forces they exert have fundamentally shaped Florida's history, from the infamous hurricanes of

1926 and 1929 to Hurricanes Andrew and Irma. In 2017, Irma took 87 lives in Florida, and the storm's damage cost state agencies and county governments roughly \$1.7 billion.

With greenhouse gas emissions driving temperatures ever upward, ocean waters are warming as well and providing optimal conditions for more intense and slower-moving hurricanes.³ Tropical storms and hurricanes have intensified during the past 20 years and are projected to be even more damaging in the future. The combination of higher sea levels and slower, more powerful storms massively increase the destructive potential of storm surge.

Evaporation increases as the atmosphere warms, which drives up humidity, average rainfall, and the frequency of heavy rainstorms in many places—but contributes to drought in others.⁴ These **extremes in rainfall**, and the resulting **drought** or **heavyflooding** conditions, can depress agricultural yields, impact water supplies, and induce more frequent inland flooding events.

"Social vulnerability" is broadly defined as the susceptibility of social groups to the adverse impacts of natural hazards, including disproportionate death, injury, loss, or disruption of livelihood. Social vulnerability considers the social, economic, demographic, and housing characteristics of a community that influence its ability to prepare for, respond to, cope with, recover from, and adapt to environmental hazards.

Florida is already experiencing **rising temperatures.** By 2070, temperatures in most areas of the state will likely rise above 95°F between 45 and 90 days per year, compared with less than 15 days per year today.⁵ Higher humidity will also further increase the heat index and associated negative health impacts. Extreme heat is among the deadliest climate-related disasters in the United States, killing more people on average than hurricanes, lightning, tornadoes, earthquakes, and floods combined. More than 600,000 Florida residents are vulnerable to extreme heat.⁶

By 2070, Miami-Dade County alone could see half of its year falling into what is considered "danger days" when heat and humidity create temperatures above 105°F.7 These extreme conditions pose a serious, sometimes deadly, challenge for people living in homes that are not weatherized or who work outdoors, including farmworkers, construction workers, and firefighters. Extreme heat events can result in increased emergency room visits due to heatstroke, asthma attacks, and other negative health impacts. When this happens to Floridians who are already struggling financially, the increased medical bills and financial burden can be overwhelming and cause long-term harm. United Way's 2020 ALICE (Asset Limited Income Constrained Employed) report found that, "In 2018, 47% of our population is at high risk of falling into financial ruin." No question things are worse now and they went on to say, "one can only imagine what these families are dealing with in the wake of the COVID-19 pandemic."

Rising temperatures also increase household energy costs, while making the energy grid less

reliable at the same time. A household's "energy burden" is the percentage of their income dedicated to paying for energy. Electricity bills that exceed 6% of a household's income are considered "unaffordable."⁸ As temperatures rise, more energy is needed to maintain healthy temperatures through air conditioning, leading to higher energy bills and energy burden. Unaffordable energy burden can lead to difficult trade-offs among essential household needs such as food, rent, clothing, and medicine for thousands of Florida households. When many households need to run their air conditioners at the same time in order to endure the heat, the combined energy demand can also render transmission lines more prone to failure and present the risk of **brownouts** (a drop in voltage in an electrical power supply system).

DISPROPORTIONATE IMPACTS

Climate change promises to impact every person on Earth, but these impacts will not be distributed equally. Specific identifiable communities will feel the impacts of climate change first and hardest. **"Frontline communities"** are Black, Latinx, Indigenous, low-income, and rural communities that have been and continue to be disproportionately harmed by environmental pollution, climate



change impacts, the siting of harmful land uses and transportation facilities that fragment and harm neighborhoods, and the disruption of natural systems.

"Frontline communities" are Black, Latinx, Indigenous, low-income, and rural communities that have been and continue to be disproportionately harmed by environmental pollution, climate change impacts, the siting of harmful land uses and transportation facilities that fragment and harm neighborhoods, and the disruption of natural systems.

PUBLIC HEALTH THREATS

The World Health Organization estimates that there will be an additional 250,000 yearly deaths from vector-borne diseases and heat stress between 2030 and 2050.⁹ As temperatures rise in Florida, warm waters are creating the ideal environment for thermophilic flesh-eating bacteria (amoeba and parasites) to thrive. In 2017 and 2018, the Florida Department of Health reported 92 cases and 20 fatalities related to flesh-eating amoeba. In the late summer of 2020, a brain-eating amoeba triggered a water advisory in eight Texas cities.¹⁰

The climate crisis is a global crisis with compounding effects. The ongoing COVID-19 pandemic has illuminated the importance of investing in sustainable public health programs, which are essential to improving communities' quality of life and resilience to disaster events like disease outbreaks and extreme weather. The Florida Department of Health (FDOH) currently participates in the BRACE (Building Resilience Against Climate Effects) program led by the Centers for Disease Control and Prevention. BRACE provides a framework that health officials can leverage to create solutions for health-related impacts due to climate change. While the program is an excellent resource for FDOH, it is underfunded compared to other participating entities.

CLIMATE RESILIENCE

Climate resiliency is a lens through which all infrastructure investments and public policy must be examined. **"Resiliency"** encapsulates a broad spectrum of social and physical infrastructure improvements needed to help communities and industries overcome the shocks and stressors that come with an increasingly warmer planet. Policies and investments to support disaster preparedness and community adaptation to sea level rise, increasing temperatures, and displacement are essential.

While resilience is often associated with the ability to withstand and "bounce back " from a crisis, for many communities recovering to a status quo that was already failing to meet the community's needs is insufficient. True resilience helps prepare communities for a future that is safer, more just, and more sustainable than what exists today.

As described above, Floridians are already experiencing the harmful impacts of the climate crisis. From increased flooding and saltwater intrusion contaminating our drinking water supplies to more frequent high-temperature days, the climate crisis is already affecting every aspect of our lives.

There is no doubt that Florida must adapt to the impacts of climate change already underway, but we cannot simply adapt our way out of this problem. The state's future demands we not cause further harm by addressing only the immediate impacts of the challenge at hand. Lawmakers must address the root cause of climate change: greenhouse gas emissions.

SOLUTIONS

Florida must immediately begin **comprehensive assessment and planning efforts**. The first step to being resilient involves identifying and assessing the risks to vulnerable and frontline communities throughout Florida. State agencies must expand the planning agenda to develop a comprehensive statewide response. Fifteen states already have climate adaptation or resilience plans (with five more states currently developing them). The state's lack of action has prompted many local governments to develop their own local or regional adaptation and action plans, such as the Southeast Florida Regional Climate Compact, the Tampa Bay Regional Resiliency Coalition, the East Central Florida Regional Resilience Collaborative and others that are in the works.

Lawmakers must direct state agencies to **adopt inclusive and equitable resilience practices**, such as policies mandating or incentivizing climate resilience in insurance, transportation, and building codes.

When making critical infrastructure investments, lawmakers, agencies, and local governments must **prioritize community needs**. A growing number of communities and organizations are calling for a statewide fund for climate adaptation and mitigation of greenhouse gases. A state fund could use a blend of public and private investment and financing options to support innovative transportation, energy, and flood control infrastructure projects in areas that need them the most.

A statewide fund could provide low-interest or interest-free loans, loan guarantees, and other financing products to allow the state to prioritize and advance on critical adaptation and mitigation priorities. The result would be an expanded investment in future-ready infrastructure, including community solar projects, energy efficiency improvements, septic to sewer conversions, acquisition of open-space, implementation of nature-based solutions, and many other critical projects. The question of who reaps the benefits of this funding cannot be ignored. Historically, infrastructure investments have left lower income communities and communities of color behind, and many commonly used methods for determining how to allocate infrastructure funding can serve to entrench discrimination, particularly models which prioritize property values. Funding must be distributed in a transparent and equitable manner.

Finally, Florida must promote and invest in **energy efficiency and relief programs to combat high energy burden.** As temperatures rise, households will continue to need more and more energy to provide life-saving air conditioning unless energy efficiency retrofits are deployed. Energy efficiency and weatherization programs can significantly reduce utility bills in the long-term and reduce the energy burden much more effectively than bill assistance. High energy bills can come as a result of inadequate insulation, inefficient cooling equipment, old appliances, and other factors. Improving home efficiency can reduce bills for highly burdened households; however, many of these improvements are beyond the reach of families who do not own their homes. Although renters pay high utility bills, they are rarely eligible for the efficiency improvement programs that make the biggest difference. In Florida, energy efficiency programs are required by law, specifically the Florida Energy Efficiency and Conservation Act; however, the Public Service Commission has historically set low goals due to their reliance on outdated cost benefit analysis. The American Council for an Energy Efficient Economy's 2020 Utility Energy Efficiency Scorecard ranked the state's three largest investor-owned electric utilities (Tampa Electric Company, Duke Energy Florida, and Florida Power & Light) at 46th, 48th, and 51st out of the 52 largest utilities nationwide in terms of program performance and savings.

¹ Valle-Levinson, Spatial and temporal variability of sea level rise hot spots over the eastern United States, Dutton, Martin, Geophysical Research Letters, Volume 44-Issue 15, 2017.

² Southeast Florida Regional Climate Change Compact's Sea Level Rise Ad Hoc Work Group, Unified Sea Level Rise Projection Southeast Florida, 2019.

³ Princeton University, Human-caused warming will cause more slow-moving hurricanes, warn climatologists, Science Daily, April 22, 2020.

⁴ Obeysekera, J., et al. "Implications Of Climate Change On Florida's Water Resources." Florida's Climate: Changes, Variations, & Impacts, 2017 Nov. 5 What Climate Change Means for Florida, US Environmental Protection Age.

⁵ What Climate Change Means for Florida, US Environmental Protection Agency, EPA 430-F-16-011, August 2016.

⁶ Florida Department of Health Division of Community Health Promotion, Health Effects of Summer Heat in Florida, National Center for Environmental Health, August 2015.

⁷ Union of Concerned Scientists, Killer Heat Interactive Tool July 8, 2019.

American Council for an Energy-Efficient Economy, Understanding Energy Affordability, https://www.aceee.org/sites/default/files/energy-affordability.pdf
World Health Organization, Climate change and health, February 1, 2018. https:// www.who.int/news-room/fact-sheets/detail/climate-change-and-health

¹⁰ Johnson, Lauren. Moshtaghian, Artemis. "8 Texas cities were alerted to a braineating amoeba found in water supply," CNN, September 26, 2020.

CLIMATE RESILIENCE POLICY RECOMMENDATIONS

- Conduct a statewide greenhouse gas inventory and climate impacts assessment to establish a baseline against which progress on emissions reductions can be measured.
- Develop a comprehensive Climate Action Plan for the State of Florida.
- Adopt a "Health in All Policies" approach, requiring integration of public health equity considerations into policymaking across sectors to improve the health of all communities and people, identify gaps in public health, and achieve health equity.
- Require state agencies to:
 - develop and implement an ongoing collaborative process to identify solutions and provide a comprehensive climate change planning report to inform the statewide Climate Action Plan on a recurring basis;
 - develop equity plans using the Equitable and Just National Climate Agenda Principles or the Southeast Florida Climate Compact framework (Social Equity Archives) to ensure that frontline communities have necessary resources to recover from, and prepare for, climate impacts; and
 - Incorporate sea level rise, potential greenhouse gas emissions, climate gentrification, social vulnerability analyses, displacement, and other climate impacts into their planning processes.
- Require the Department of Economic Opportunity (DEO) or other relevant state agency to perform an ongoing review on how growth management and



sprawl may disproportionately impact communities of color, rural, and lowincome communities in light of potential changes resulting from anticipated impacts of climate change.

- Promote and fund coastal risk assessments and feasibility studies to implement infrastructure projects that address these issues.
- Develop Multiple Lines of Defense (MLODS) strategies that incorporate grey and green infrastructure.
- Provide funds for local governments to update municipal planning and development codes for flood management.
- Adopt an ambitious Renewable Portfolio Standard or other statewide cleanenergy goals: 75% by 2030 and 100% by 2035.
- Provide clean energy infrastructure for local government buildings, schools, public housing, and other facilities.
- Fund the Florida Forever program and environmental restoration efforts to spur the creation of parks and the preservation of healthy open spaces for flood control and carbon sequestration purposes.
- Establish a clean energy and green infrastructure fund with a fair and transparent project review process, metrics to meet social, environmental, and economic measures, and a substantial investment plan informed by input from local government and community leaders.
- Provide grants and low-interest loans for low- and middle-income households to convert from septic to sewer, and deploy energy efficiency retrofits as well as weatherization in a socially and racially equitable manner.
- Provide additional grant opportunities for regional compacts to implement NNBF projects and solutions.



NO FRACKING, NO DRILLING

Florida's best source of energy and wealth is not in the ground. There are no fossil fuel resources in the state that can be extracted without significant risk to public health and the environment. Our state has more to lose from the impacts of the climate crisis than virtually any other.

The risks to human health, the environment, and the natural resources which our economy relies upon heavily outweigh the value of gas and oil resources that remain buried. Florida contributes a scant amount to oil and gas production in the United States and does not contribute coal. Florida's reserves for potential future oil production are estimated to be less than one-tenth of 1% of our national reserves, and the quality of our oil is considered poor.¹ Moreover, the majority of existing reserves are located in areas with a porous limestone bedrock and high water table, meaning any spills that do occur cannot be easily contained. As the Sunshine State, Florida can best contribute to its own and the national portfolio of energy resources by focusing on renewable energy like solar and leaving our fossil fuel resources in the ground, both on and offshore.

Today, nearly 70% of Florida's electricity needs are met by burning gas, making us already dangerously over-dependent on this single source of energy. As of 2018, about 12% of Florida's net generation was coal-fired. As one of the states most vulnerable to climate change and sea level rise, Florida should make policy decisions to support renewable energy rather than encourage our dependence on fossil fuels.

Oil prospectors have identified the Sunniland Trend, which underlies Big Cypress National Preserve and Everglades National Park, along with the Jay Field in the Panhandle as areas of interest for risky well stimulation and fracking activities.² In turn, more than 91 local governments in Florida have passed resolutions or ordinances opposing fracking. The majority of Floridians now live in a municipality that has either banned fracking or called for a ban on fracking at the state level.³ Simply put, there is no place for fracking, unconventional well stimulation, or drilling of any kind in the state of Florida.

OFFSHORE OIL & GAS DRILLING

Floridians are united in their opposition to nearshore and offshore oil and gas exploration. That commitment is evidenced by the 2018 amendment to Florida's constitution to prohibit oil and gas drilling in nearshore waters. Similarly, the Eastern Gulf of Mexico has been off limits to drilling since the bipartisan Gulf of Mexico Security Act (GOMESA) passed in 2006. That moratorium is set to expire on June 30, 2022, potentially leaving Florida's Gulf coast vulnerable to the dangers of drilling. The 2010 Deepwater Horizon disaster and its lingering economic and environmental effects remind us just how devastating an oil spill can be.

CONVENTIONAL DRILLING

Florida is not and has never been an oil rich state. Yet, for decades, prospectors have used conventional oil and gas drilling techniques hoping to get rich quick by finding the nation's next big oil deposit beneath the Florida peninsula. They had little success, finding only a limited supply in the Panhandle and Southwest Florida. What little reserves they found have been on the decline since the early 1980s. And although the scale of conventional oil and gas drilling in Florida has been comparatively small, those operations result in leaks, spills, and contaminations at various points along the drilling process.

Unfortunately, conventional operations are not adequately equipped to extract oil safely. Data collected by the Florida Department of Environmental Protection reveals 14 spills associated with oil drilling in Florida from June 15 to December 2019, contaminating the surrounding environment with almost 15,000 gallons of wastewater, more than 300 gallons of oil, and nearly 3,500 gallons of wastewater mixed with oil. These spills were concentrated in Santa Rosa and Collier counties.

FRACKING

As oil and gas deposits declined elsewhere in the country, drilling companies began to implement unconventional extraction techniques to boost

production, at the high cost of polluting water supplies. The real treasure beneath the Florida peninsula is not oil. The risks that unconventional drilling techniques pose to our state's water supplies far outweigh the benefits.

Fracking originated as a term to describe hydraulic or acid fracturing. It involves injecting millions of gallons of highly pressurized water, usually mixed with sand and chemicals, deep into the earth to crack the rock and release oil or gas deposits. Another method—known as "matrix acidizing"—involves injecting acidic chemicals into underground rock formations, but at lower pressure, with the chemicals dissolving rather than fracturing the rock to release oil and gas. All fracking techniques use a combination of toxic chemical and produce large volumes of wastewater.

THE DEFINITION MATTERS

Legislation that seeks to ban all forms of fracking in Florida must not only refer to "hydraulic fracturing" but also "well-stimulation" for oil and gas production or recovery. Legislation must cover any process that seeks to change the permeability of the underground geologic formation by fracturing or dissolving the rock, at either a high or low pressure, to improve the flow of oil and gas (hydrocarbons) from the formation into the well.

RISK ASSOCIATED WITH FRACKING

Nearly 75% of chemicals used in fracking have been proven harmful to the skin, eyes, respiratory system, and digestive system. Nearly half of these chemicals also affect immune, cardiovascular, and brain/nervous system functions, and a quarter cause cancer and congenital disabilities.⁴ Aside from direct contact with fracking chemicals, fracking operations also form ground-level ozone, which creates smog when combined with particulate matter. Higher levels of ozone and smog can irritate the lungs, aggravate asthma, and reduce lung function, affecting sensitive populations such as children and disproportionately impacting low-income and Black, Latinx, and Indigenous communities.⁵ In Florida, as in many states, the chemicals used in drilling operations can be withheld from public knowledge under trade secret provisions. The driller decides what is a"trade secret" without an independent evaluation, leaving communities in the dark about chemicals that may affect their health.

WATER QUALITY IMPACTS

Spills and leaks resulting from the transport, storage, and injection of hazardous chemicals pose a serious threat of contaminating our drinking water supplies and water resources. Thousands of water contamination cases reported across the country show that fracking has caused illness in humans and livestock deaths.⁶ Leakage from waste pits has caused contamination of nearby underground water sources with toxic chemicals known to cause cancer, like benzene. Besides posing a grave threat to water quality, fracking also uses vast amounts of fresh water.

ECONOMIC IMPACTS

Environmental disasters have an enormous impact on Florida's tourism-based economy. From the BP Deepwater Horizon disaster of 2010 to the devastating algal blooms in the Indian River Lagoon and Caloosahatchee Estuary in 2013, 2016, and 2018, regional ecological disasters can cause statewide economic impacts. Additionally, studies have shown that homes with private drinking wells within one kilometer of a fracking well lose up to 22% of their property value.⁷

¹ Glab, Edward. Energy Pro: Florida Is Not A Big Oil State. So Why Drill?. 2015. WLRN.

² FracTracker Alliance, Oil and Gas Activity in Florida, January 2017.

³ Floridians Against Fracking, Local Resolutions and Ordinances, 2018.

⁴ Colborn, T. et al, Natural Gas Operations from a Public Health Perspective, Human and Ecological Risk Assessment: An International Journal, 17:5, 1039-1056, DOI: 10.1080/10807039.2011.605662, 2011.

⁵ Bienkowski, B. "Poor Communities Bear Greatest Burden from Fracking," Scientific America, May 6, 2015.

⁶ Bamberger M, Oswald RE, Impacts of gas drilling on human and animal health. New Solut. 2012;22(1):51-77. doi: 10.2190/NS.22.1.e., 2012.

⁷ McMahon, J. Pollution Fears Crush Home Prices Near Fracking Wells,2014. Duke University Study cited in http://www.forbes.com/sites/jeffmcmahon/2014/04/10/ pollution-fears-crush-home-prices-near-fracking-wells/

NO FRACKING, NO DRILLING POLICY RECOMMENDATIONS

- Prohibit all forms of fracking within Florida.
- In the absence of a statewide ban on fracking, protect local government home rule by preserving their authority to define more stringent regulations through zoning and land-use plans.
- End new permitting of oil and gas drilling and shift Florida's energy focus to renewable energy.
- Prohibit utilities in Florida from engaging in speculative purchasing of oil and gas resources outside of the state.
- Work with Florida's congressional delegation to permanently ban offshore oil and gas drilling off Florida's coast.



WATER

WATER IS THE LIFEBLOOD OF OUR STATE. OUR ECONOMY, PUBLIC HEALTH, AND QUALITY OF LIFE ALL DEPEND ON CLEAN AND PLENTIFUL WATER.

Ten Thousand Islands National Wildlife Refuge

Unfortunately, years of neglecting our waterways through lax policy and enforcement, poor growth management decisions, and disregard for our natural environment have resulted in a dangerous decline in water quality statewide. The availability of fresh water for a growing population and our vibrant natural systems also relies on appropriate policies to conserve water and ensure its use is consistent with the public good. While localized issues can affect certain areas of the state more acutely, there are underlying water quality and quantity concerns that impact us statewide.

FLORIDA'S WATER QUALITY WOES

Florida's water woes are many and varied. Whether in our freshwater systems, estuaries, or marine waters, water degradation is the result of excess pollution, made worse by inadequate monitoring and lack of enforcement of environmental standards. Water quality crises affect human health, natural systems, and Florida's economic stability. Many communities in Florida are blanketed with no-swim advisories due to elevated bacterial levels from discharges of inadequately treated sewage. This is worsened by warmer water and increased rainfall that washes pollution into our waters. Nearly every summer in recent years, waterbodies across the state have been plaqued by record-breaking harmful blue-green algae and red tide. Often, there are insufficient postings and advisories of these events, which harm wildlife, people, and local economies. Warming seas only exacerbate these water quality issues, leading to larger, longer algal blooms.

A core objective of Florida water policy is to balance environmental and economic needs. The Florida Department of Environmental Protection (FDEP), and the state's five regional water management districts are tasked with implementing our water policies. FEDP enforces pollution control efforts, such as Total Maximum Daily Loads (TMDLs), and works with Florida's five water management districts to oversee pollution reduction programs. However, it is becoming increasingly clear that our pollution standards and enforcement are inadequate.

Unfortunately, recent water policy legislation

passed by the Legislature to address our water issues fails to strike the balance needed to protect our waters from pollution, over-consumption, and environmental destruction.

SOURCES OF POLLUTION

Pollution harms our waterways and includes chemicals, oils and greases, heavy metals, bacteria in fecal matter, sediments, and nutrients like nitrogen and phosphorus. Our water laws identify two main categories of pollution: point and nonpoint sources. Point source pollution is easy to identify because it comes from a single place such as sewage treatment plants or industrial discharge. Non-point pollution comes from many places such as stormwater runoff from urban and industrialized areas, aging or leaking septic systems, and fertilizer runoff from agriculture and residential lawns.

Sewage is one of Florida's biggest contributors to water pollution. The majority of effluent from treated sewage ("domestic wastewater") is discharged to surface waterbodies like rivers, estuaries, and the ocean. Land application of solids from wastewater treatment plants ("sewage sludge" or "biosolids") pollute adjacent surface waters, as well as our groundwater, and is used as a cheaper alternative to other disposal methods. Deep well injection of partially treated wastewater into our porous underground limestone formations can lead to contamination of drinking water.

Accidental discharges of inadequately treated sewage have been a growing concern, especially given the combination of aging infrastructure of wastewater lines, increased rain, and rising water levels in many Florida communities. In 2019, there were 2,690 wastewater spills releasing 84,882,375 gallons of untreated or poorly treated sewage into our waterways.¹ Much of this pollution is caused by stormwater and groundwater that finds its way into deteriorating sewage pipes during storms and overwhelms collection and treatment systems. While massive sewage spills make headlines and draw public outcry, exfiltration, or leaking, from old pipes and infrastructure is a chronic problem, causing year-round contamination of local soil, groundwater, and surface waters. Because they are usually hidden from view, necessary repairs or upgrades have too often been delayed or underfunded.

Septic systems treat waste for an individual home or business. Roughly 30% of Florida's population utilizes a septic tank (2.6 million systems) with higher percentages in more rural communities where connection to centralized sewer is costprohibitive or not available. When properly designed, constructed, and maintained, septic systems minimize organic wastes but are not designed to treat nutrients, chemicals, or emerging contaminants, which are a growing concern. Aging systems or failure to monitor or conduct routine pump-outs can cause the systems to fail, leaking untreated waste into groundwater.

Agricultural runoff, which often contains high levels of nitrogen, phosphorus, and fecal matter, can contaminate nearby water bodies and is often the most significant source of nutrient pollution in areas around our freshwater springs.

Residential runoff includes fertilizer, pesticides, and other contaminants that wash off lawns from developed lands. The application of readily available commercial fertilizers is especially problematic on lawns that are near waterways, like canals. Fertilizer applied during rainy periods has limited opportunity to be utilized by the turf or landscaped plants and instead washes directly into storm drains and our waters. Several counties have enacted residential fertilizer ordinances to control the type or timing of application; however, lawmakers have prohibited any new local protective measures.

Other pollution comes from **industrial sources and the energy sector.** Coal ash, which is a byproduct of burning coal in power plants, is one of the largest industrial wastes in our nation. While coal is being replaced by other forms of energy, there are still more than 6 million tons of coal ash generated in Florida annually.² Adding to the problem, Florida also imports coal ash from places where its disposal has been banned, such as Puerto Rico. Communities across the state, particularly in central Florida, bear the brunt of the pollution leaching from coal ash pits into our groundwater and drinking water sources.

As seas rise and move landward, salt water inundates freshwater rivers and streams, altering the delicate salinity balance. This **saltwater** **intrusion** can harm drinking water supplies and require additional costly treatment to remove salts, minerals, and other pollutants. Saltier waters can also damage agricultural crops, landscape plants, and native vegetation.

The world-renowned clarity in many Florida springs has decreased in recent decades as invasive plants and harmful algae outcompete native underwater grasses and reduce food sources for wildlife like manatees and turtles. Protection of our springs is primarily under the purview of the five regional water management districts and the FDEP. Stormwater regulations, under the direction of FDEP, are meant to reduce the flow of polluted water into springs and other water bodies and include regulations for agriculture, businesses, industry, and local governments that manage stormwater systems. Years of data show that agricultural operations are the biggest contributors to nitrogen pollution in the majority of impaired spring systems. Currently, agricultural operations are held to voluntary measures and best management practices, which have failed to prevent the decline of most springs.

CONTAMINANTS OF EMERGING CONCERN

Our state's water resources are also at risk from new chemicals and pollutants, called contaminants of emerging concern. The modern proliferation of pharmaceutical and personal care products raises the question of whether our current water quality standards protect public health and ecosystems sufficiently. One example is a category of chemicals called **PFAS** (per- and polyfluoroalkyl substances). While PFAS are known to cause cancer and affect the immune system, a water quality standard has not yet been established.³ These chemicals are used in coating materials for cookware and food packing, stain- and waterproofing for clothing, and firefighting foam. They break down in the environment or are washed into wastewater. With PFAS and many other emerging contaminants of concern, wastewater treatment plants and septic systems fail to remove these products, leading to higher concentrations in our natural systems. These emerging contaminants are not adequately removed in conventional wastewater or septic systems, and may also be present in biosolids.

WATER QUANTITY TOO MUCH WATER OR NOT ENOUGH?

While Florida is blessed with abundant freshwater resources including numerous springs, large rivers and lakes, and the extensive Floridan and Biscayne aquifers, these resources are not limitless. Erratic and changing weather patterns, made worse by climate change, can result in prolonged droughts, as well as heavy rainfall that brings flooding.

Florida's fresh water supply and demand is out of balance as human demands exceed the available supply. An influx of nearly 900 new residents moving to Florida each day, coupled with more intensive irrigation of agricultural lands, have over-burdened our already-depleted freshwater sources.

Reductions of funding and staffing at water management districts have led to a lack of regulatory and management capacity to perform their essential role in regulating and balancing water consumption. As a result, a growing array of water-reliant ecosystems are suffering from overpumping and the wasteful use of water.

Excessive freshwater withdrawals from our groundwater aquifers reduce flows to springs and inland areas and increase saltwater intrusion, harming ecosystems, recreation, drinking water supplies, and other water uses. Overpumping of our aquifers and springs for agricultural irrigation,



residential uses, and extraction by the bottled water industry has led to decreased spring and river flows. Agricultural and bottled water interests acquire permits to extract water at little to no cost because the current scheme only requires small, one-time permitting fees rather than a per-gallon cost. More than half of all potable water extracted in Florida is used to irrigate lawns. Across sectors, Florida lacks water conservation incentives and requirements needed to curb waste and preserve our most precious resource: water.

While local freshwater needs and challenges vary within the state, one thing remains consistent: much of the fresh water we gain from rainfall or that we extract from our rivers, lakes, and aquifers is wasted. South Florida wrestles excess fresh water from Lake Okeechobee, which upon discharge causes disruption to estuarine and coastal areas. Many of North Florida's natural systems are starved of fresh water due to excessive upstream withdrawals or dams, such as the case with the Apalachicola and Ocklawaha Rivers.

THE CLIMATE CRISIS AMPLIFIES OUR WATER WOES

Florida's growing population continues to put additional demands on our water resources each year. Compounding this, the climate crisis is

CONSERVATION FUNDING

Saving Florida's water also requires saving land. Natural areas, surface water bodies, wetlands, and even working landscapes like ranches all play a role. By holding and filtering water, they reduce pollutants and recharge aquifers without the need for costly, engineered water treatment technologies. Conservation lands must be protected to support these vital functions. Full and consistent funding for Florida Forever is a win for land and for water. already harming water bodies and natural systems throughout our state and will only get worse as global temperatures increase. As a result, we must also confront the reality that water supply and wastewater disposal decisions can no longer be based on historical weather and precipitation patterns. Water managers and lawmakers must incorporate longer planning horizons. In addition to addressing adaptation needs, they must also take into consideration the underlying cause of climate change—heat-trapping gas emissions. Otherwise, many of the efforts we implement today will be overwhelmed or undone by the climate crisis.

Changes in precipitation patterns and more extreme weather events, such as droughts and flooding, can alter the water balance in natural ecosystems and negatively impact our economy. Periods of prolonged drought increase pressure to extract more water for agricultural crops and residential lawns. Increased withdrawals can reduce potable drinking water supplies, and in extreme cases can create sinkholes that destroy homes and buildings. Excessive rainfall and runoff can flood farms, homes, and businesses, especially as impermeable surfaces like parking lots, roads, and rooftops funnel water quickly and prevent natural percolation into the soil. Wetlands store and treat water and can prevent or minimize

RESTORE THE OCKLAWAHA

Restoring the Great Florida Riverway is long overdue. By breaching the Rodman/Kirkpatrick Dam, lawmakers can reconnect the Ocklawaha. Silver. and St. Johns Rivers and historic Silver Springs. The Great Florida Riverway is a vast 217-mile river system that reaches from the Green Swamp and Lake Apopka in Central Florida all the way to the Atlantic Ocean via the Ocklawaha and St. Johns Rivers. The Ocklawaha has been dammed since 1968 as part of the failed Cross Florida Barge Canal, flooding 7,500 acres of forested wetlands, submerging 20 freshwater springs, and causing continuing damage to the riverway. The dam is past its life expectancy and would require millions to repair. Legislation is needed to create a natural, free-flowing Ocklawaha River for the benefit of wildlife, water quality, fisheries, forests and the economy.

flooding. Unfortunately, we have lost more than half of our wetlands due to weak protections and reckless development.

Nearly 2 Billion gallons of fresh water are discharged each day into our oceans, enough fresh water to supply the entirety of South Florida's population.



Blue-winged teals, photo by Ray Hennessey

FRESH WATER RIVERS, STREAMS, LAKES, SPRINGS, AND DRINKING WATER

Florida is known for its spectacular freshwater systems as much as for its miles of sandy beaches. More than 90% of Floridians rely on underground aquifers for drinking water. Many of Florida's rivers, streams, and springs are also fed from these underground sources, through rainfall, or a combination of both. Drinking water standards ensure water is safe for potable uses like drinking and cooking.

Our state has more than 1,000 freshwater springs, primarily within North and Central Florida, fed by the Floridan aquifer. Of those, 33 are first-magnitude springs, meaning that they discharge more than 100 cubic feet of water per second or more than 64.6 million gallons of water per day. The springs and rivers they feed offer a glimpse into the watery, underwater world beneath our feet, delighting residents and tourists with opportunities to paddle, snorkel, and swim. Florida also has more than 7,700 lakes greater than 10 acres, 11 million acres of wetlands, and 27,561 linear miles of rivers and streams.

Our freshwater gems are not just beautiful and vibrant natural ecosystems—they support our economy and water needs for Florida's growing population, along with agriculture and industrial uses. Iconicriverslike Apalachicola, Caloosahatchee, and St. Johns are economic drivers and have been used for centuries for transportation and food. Discharges from Lake Okeechobee south into the River of Grass are critical to maintaining freshwater flows into the Florida Everglades and Florida Bay. Billions of dollars of investments have been made to restore the flows to this system.

THREATS

Pollution and over pumping of our aquifers are two of the biggest threats to our lakes, rivers, and springs. All together, residential, agricultural, and industrial users extract 5 billion gallons of fresh water from the Floridan aquifer every day. As a result, the historic flows of nearly all of Florida's first and second magnitude spring systems such as Silver, Rainbow, Ichetucknee, and Wekiwa have been reduced dramatically. Reduced spring flows result in decreased river flows, reduced freshwater inputs to estuaries, and movement of salt water further upstream into the Suwannee, St. Johns, Apalachicola, and many other smaller Florida rivers and creeks.

Every river, lake, spring, and other water body needs a certain minimum amount of water to function. If unchecked, extracting water to meet human demands ("consumptive uses") can lower water flow and levels to the point of significantly harming our water resources and surrounding ecology. To prevent such harm, decades ago Florida adopted a strategy for establishing Minimum Flows and Levels (MFLs) for most water bodies, but that program has been under-utilized.

Reduced flows combined with pollution create a deadly mix for our beloved waters. Polluted runoff from agriculture, stormwater, leaking septic systems, fertilizer from residential lawns, land application of sewage sludge (biosolids), wastewater discharges, and pollution from the air all contribute to the destruction and decline of Florida's most precious natural asset.

Drinking water quality concerns can be especially acute during extreme weather events when rainfall and flooding overwhelm wastewater treatment capacity. Boil water notices, common in many communities across the state, highlight the urgent need to upgrade aging infrastruture.

WHO REGULATES OUR WATER?

Water quantity. Florida's five water management districts are responsibile for water allocations and reservations for nature, including consumptive use permit requests. Each district is led by a board appointed by the governor. Too often,

overrepresentation by developers, investors, and corporate interests has tipped the scales in favor of developers and other interests that lack any incentive to reduce their water use. Currently, there are vacancies on many of these boards, leaving important water use decisions to a small handful of people. Florida's lawmakers, particularly, the Governor, should ensure that all appointed offices in environmental positions are filled with people who will best advocate for our water.

Water quality. The Florida Department of

Environmental Protection (FDEP) is tasked with enforcing a broad array of water quality standards meant to protect human and environmental health. Corrective actions to reduce non-point pollution from agriculture, stormwater, leaking septic tanks, and other sources are developed under processes required by the U.S. Clean Water Act and enforced primarily by FDEP. A Total Maximum Daily Load (TMDL) is the maximum amount of a given pollutant that a waterbody can absorb and still achieve water quality standards. Enforcement of TMDLs relies upon Basin Management Action Plans (BMAP) which is a framework for water quality restoration establishing local and state commitments to reduce pollutant loading through current and future projects and strategies.

While Florida has developed more than 220 TMDLs, many are overdue.⁴ Additionally, the state has failed to establish TMDLs for many waterbodies that have been designated as impaired for years. Some BMAPs, particularly in our springs systems, have been legally found to be ineffective, especially when there is a reliance on voluntary regulations. Furthermore, most existing BMAPs fail to account for future growth, legacy pollution, or climate change.

Drinking water. The U.S. Environmental

Protection Agency sets baseline drinking water quality standards, largely based on human health concerns. FDEP enforces these standards through a variety of mechanisms. While some states have already started to regulate emergent contaminants of concern such as PFAS (per- and polyfluoroalkyl substances), known to cause cancer and used in firefighting foam, cookware, clothing, and other materials. Florida has not yet addressed PFAS. **Wetlands.** Florida has already lost more acres of wetlands than any other state in the nation. The human benefits they provide, including flood protection and climate regulation, cannot be understated. Florida's lawmakers must hold FDEP accountable to the needs of our ecosystems and public, and re-establish that our wetlands protections and permitting programs must not be used as a vehicle to fast track development. Lawmakers must ensure that FDEP stringently enforces existing wetlands protections and consider adopting more expansive protections.

POLICY RECOMMENDATIONS

There is no single silver bullet solution to save our waterways. The threats to our water resources are numerous and varied; so must be the solutions. We need buy-in from state and local governments, water managers, utilities, industry, agricultural interests, and the public to address the degradation of our waterways.

Sustaining Florida's quality of life and economy requires concerted efforts to improve the management and conservation of water resources. A balanced approach to water supply planning must prioritize reducing consumption to ensure sufficient availability of clean water for natural systems and uses that serve the public interest.



WATER QUALITY POLICY RECOMMENDATIONS

- Adopt and implement statewide stormwater regulations to reduce environmental harm by incorporating new science-based technologies; eliminating the statutory presumption of compliance; and utilizing periodic, quantifiable water quality testing to determine compliance.
- Create a regulatory system for septic tanks that prohibits installation of new septic systems in environmentally sensitive areas, including coastal high hazard areas, and low-lying areas with elevated groundwater tables. Regulations of existing septic tanks should require that owners replace traditional septic tanks with nitrogen removing systems or connect to central sewer.
- Require advanced agricultural Best Management Practices (BMPs) to achieve water quality goals in the basins of impaired and outstanding water bodies. Verify the effectiveness and implementation of BMPs with regular, quantifiable water quality testing, and eliminate the presumption of compliance with water quality standards.
- Protect all Florida waters from unsustainable land disposal of sewage sludge by expanding permit safeguards that are currently in place in South Florida.
- Monitor and strictly limit nutrient inputs from land application of reclaimed water.
- Repeal and prevent statewide preemptions that prohibit local governments from regulating harmful contaminants including fertilizers, pesticides, biosolids, and single-use plastics.
- Expand access to financial support and technical assistance for municipal upgrades to Advanced Wastewater Treatment systems.
- Require municipalities to regularly assess the condition of their wastewater systems and make improvements where deficiencies are discovered.
- Establish a timeline for upgrading all wastewater treatment plants to Advanced Wastewater Treatment standards, regardless of the discharge method.
- Provide increased funding and geographically equitable allocation for land conservation, environmental restoration, and water quality improvement projects in watersheds throughout Florida.
- Increase state funding and staffing to the Florida Department of Environmental Protection and require the Water Management Districts to use their authority to increase valorem rates sufficient to address our water quality and quantity issues.
- Develop BMAPs that exceed the reductions needed to meet TMDLs. Strategies should account for growth, include nutrient reductions necessary to be protective of downstream water bodies, address legacy pollution sources, and accelerate the timeline for reaching water quality goals.
- Implement stronger drinking water standards that take into account children, the elderly, and other vulnerable populations.
- Develop water quality standards for emerging contaminants of concerns, such as cyanotoxins, pharmaceutical and personal care products, and "PFAS."
- Fill seats on environmental decision-making boards, such as water management districts and the Environmental Regulation Commission, with diverse and qualified appointees that will advocate for regulations that protect and improve our state's water quality.

WATER CONSERVATION POLICY RECOMMENDATIONS

- Implement a water withdrawal fee on all consumptive use permits to provide an economic incentive for water conservation and to provide funding for future water conservation projects.
- Define the "public interest" in water use permitting decisions to include both no harm to ecosystems and the protection of natural resources.
- Require consumptive use permit applicants to have measurable, enforceable, goal-based water conservation plans that are based on sound science. Where necessary, enact a moratorium on new consumptive use permits when an Outstanding Florida Spring or Outstanding Florida Water requires a "recovery strategy" because significant harm to the waterbody is already occurring as a result of over-pumping.
- Expedite the establishment and adoption of protective Minimum Flows and Levels, and incorporate them into statewide water supply planning.
- Adopt a protective definition for "harmful to the water resources" (as required by section 373.219(3), Florida Statutes) to protect Outstanding Florida Springs from excessive water withdrawals.
- Dedicate significant funding for land conservation to preserve critical aquifer recharge areas.
- Regulate new development to prohibit urban sprawl, require smart growth planning and green infrastructure, and require the use of water conservation technologies and measures, including strict requirements to retain native vegetation and landscape new development with native groundcover, shrubs and trees.

Juniper Springs

SALT WATER BEACHES, COASTS, AND ESTUARIES

Healthy estuaries, coasts, and beaches are essential to our way of life. Our coastal systems are the economic engine that drives Florida's tourism industry and more people visit Florida's beaches than the beaches of any other country. Our state is home to more than 820 miles of sandy beach, 1,200 miles of coastline, and 4,500 square miles of estuaries and bays. Nearly three out of every four Floridians reside in coastal counties, with the majority of Florida's residents living less than 60 miles from the Gulf of Mexico or the Atlantic Ocean.

Estuaries are semi-enclosed coastal areas that contain a mixture of fresh water from rivers and streams and salt water from the sea. With a range of salinities, estuaries contain both submerged and emergent wetland plants like seagrass, salt marsh, and mangroves. Many prized sportfish like tarpon, snook, and redfish rely on estuaries for part of their lifecycle, making these ecosystems critical to our vibrant commercial and recreational fishing industries. Besides providing habitat and food for countless fish, shellfish, manatees, crabs, and turtles, these brackish water wetlands are our first line of defense from damaging storms and hurricanes. Like terrestrial plants, water-loving plants also store carbon in their root systems, helping to reduce the amount of heat-trapping carbon dioxide in the atmosphere. In some estuaries, plants like seagrasses can buffer the effects of ocean acidification which can weaken the shells of oysters and other shellfish. As natural shorelines are replaced with sea walls and development, we lose those protective measures and the diversity of wildlife they support.

THREATS

Despite their immense value, our estuaries, coasts, and beaches are threatened by overdevelopment, shoreline armoring, degraded water quality, plastic pollution, and sea level rise. From fecal bacteria to harmful algal blooms, Florida's coastal areas are increasingly impacted by water quality issues and pollution. Pollution in these areas is dangerous to human health and can be devastating for local economies. Like our freshwater systems, pollution sources to our marine systems include stormwater runoff, human waste from aging sewage and septic systems, agricultural discharges, and marine debris and plastic pollution. Unique to the marine environment, harmful algal blooms in the form of red tide and blue-green algae have significant economic and human health consequences. Red tide can cause respiratory impairments and persons with asthma or other illnesses may be particularly vulnerable to poor air quality conditions during red tide blooms. The prolonged red tide bloom in 2017-2018 led to massive die-offs of fish and marine life. Coastal towns all but shut down as their beaches were blanketed with thousands of dead fish, birds, and dolphins. Cyanobacteria, a component of blue-green algae, can be toxic to people and pets, yet the state still lacks water quality standards for this known threat.

Plastic pollution is increasingly prevalent on Florida's beaches and in coastal waters. It includes not only obvious plastic litter like discarded plastic bags or bottles, but also minuscule microplastics that are found in our drinking water, seafood, rain, and even the air. They are caused by the breakdown of plastic items, as well as the degradation of synthetic clothing. While other states are actively regulating plastic bags and foam containers, the Florida Legislature has preempted local communities from passing foam or plastic bag bans without offering any statewide policy solutions for plastic pollution.

OUR BEACHES ARE ERODING

Florida's beaches are some of the most beautiful in the world. Because they are so desirable, the majority of our coastline has been heavily developed. Half of the state's beaches have been designated as "critically eroded," meaning that the adjacent upland development and infrastructure requires perpetual protection from the encroaching surf. Stronger and more frequent storms and hurricanes can batter coastlines and beaches, cutting new channels through barrier islands and flooding coastal communities. As properties become threatened by erosion, homeowners look for ways to combat beach erosion through expensive and damaging beach renourishment or sea walls. Hard armoring of the beach with steel and concrete sea walls or other coastal structures such as groins and jetties can cause many harmful impacts. Sea walls actually increase coastal erosion and, without renourishment in perpetuity, sacrifice public beaches in order to temporarily save the structure. In addition to negatively impacting public beach access, coastal armoring interferes with nesting sea turtles and shorebirds.

Beach renourishment includes placing sand that is dredged from the ocean or other areas onto eroding beaches. It is a costly and temporary solution. Most coastal erosion is caused by the state's many engineered navigational inlets which can change the way water flows. Sand naturally shifts and barrier islands can migrate over time, making the placement of homes and businesses in these coastal high hazard areas not only risky but costly. While many coastal communities provide some funding, tens of millions of dollars have been allocated annually from the Land Acquisition Trust Fund to renourish beaches. Yet all too frequently, the benefits of expensive and environmentally degrading beach renourishment projects prove fruitless, as the newly placed sand is washed away by the next major storm or through tidal exchange. Florida must recognize that beaches are living, dynamic, ever-changing systems, not fixed structures.

CLIMATE CHANGE IMPACTS

Our coastlines, estuaries, and coastal communities are especially exposed to impacts from climate change and sea level rise. Florida's low elevation and extensive coastal areas make it vulnerable to current and future rising seas. Salt water can intrude into fresh water, leading to losses of freshwaterdependent vegetation and harming drinking water sources. Estuaries can also become saltier as sea water may extend many miles upstream into historically freshwater rivers. This can result in the loss of vegetation and native species. Climate change makes blue-green algae and red tide outbreaks worse as nutrient-rich conditions are

32 Florida Conservation Voters Education Fund

proliferated by warmer, wetter weather.

Inundation of coastal areas due to sea level rise can also lead to habitat squeeze in areas with adjacent upland development or structuring. Landward habitats migrate to respond to warming climates and rising waters. As habitats migrate upslope or inland to avoid rising seas, they may be met with impenetrable roads or other infrastructure. This leads to a net loss of wetlands, dune grasses, and other important habitats.

Fortunately, preservation and restoration of our coastal habitats can ameliorate negative impacts from flooding and sea level rise, improving our resiliency to a changing climate. Living shorelines, composed of native vegetation like mangroves and wave-reducing substrates like oyster reefs, can protect nearby coastal development and provide habitat and food sources for fish and birds.

Coastal marshes like seagrasses, marshes, and mangroves store carbon in their roots. By protecting and restoring coastal habitats, or "blue carbon" areas, we can reduce heat-trapping gas emissions to the atmosphere and reduce ocean acidification. In addition to protecting our human population, more stable marine and estuary ecosystems protects our valuable fishing and shellfish industries.

To be clear, the climate crisis amplifies our water challenges and extends beyond just sea level rise. Many of the issues caused by the climate crisis and how they relate to human population can be found in the sections of this book focused on climate change.

The Florida Legislature should adopt policies that reduce or reverse threats that put our coastal waters at risk. Many coastal states, including California, New Jersey, and North Carolina, are adopting coastal management policies that consider climate change and sea level rise. The Florida Legislature must provide similar meaningful leadership, starting by requiring the Florida Department of Environmental Protection to conduct a study on anticipated sea level rise impacts, present recommendations to local governments, and guide state agencies in their planning and land use decisions.

SALT WATER POLICY RECOMMENDATIONS

- Incorporate a review of the disproportionate impacts of sea level rise and global climate change to communities of color and under-resourced communities in policy decisions, including collateral damage from climate gentrification.
- Update the state's 25-year-old coastal development laws that allow development on sandy beaches to establish coastal construction and 30-year erosion lines that are based on the best available sea level rise and erosion projections, and prohibit the practice except in exceptional circumstances.
- Update and implement inlet management plans so there is no net loss of sand.
- Implement post-disaster redevelopment policies that prohibit building in the same vulnerable locations after storms.
- Disincentivize development and redevelopment in vulnerable coastal areas and prioritize land acquisition for hazard mitigation.
- Enact a moratorium on new septic systems in areas that are vulnerable to sea level rise and coastal flooding.
- Require the landward siting of new coastal development.
- Establish and fund coastal land acquisition (direct fee-simple or less-than-fee purchase or through conservation easements) programs.
- Increase green infrastructure and natural defenses such as coral reefs, mangroves, wetlands, and dunes.
- Invest in blue carbon solutions, including restoration of coastal ecosystems that store carbon and reduce ocean acidification.
- Create sea level rise readiness policies that prioritize prevention and mitigation in addition to adaptation strategies.
- Adopt statewide water quality standards for cyanobacteria and associated toxins.
- Implement a comprehensive, conspicuous, and timely notification process for dangerous conditions in recreational water bodies to protect human health, including electronic notification and physical signage.
- Fund the Florida Healthy Beaches Program with recurring, sustainable state revenue.
- Enact legislation to curb plastic pollution or, at a minimum, allow local governments to regulate single-use plastic bags and foam foodware.

THE EVERGLADES

The Everglades is likely Florida's most recognized natural feature and it provides drinking water for 9 million residents. Comprising most of the southern peninsula, the Greater Everglades Ecosystem begins near Orlando with the Kissimmee River and ends in Florida Bay. It contains a mixture of cypress swamps, flatwoods, marshes, and prairies, interspersed with creeks, rivers, and Lake Okeechobee. It supports 78 threatened and endangered species. The Everglades once covered 18,000 square miles but is now less than one-third of its original size. The historic flow of the Everglades has been drastically altered by massive drainage infrastructure projects built in the 20th century, including the channelization of the Kissimmee River and water diversions from Lake Okeechobee to the St. Lucie and Caloosahatchee estuaries. Natural areas south of the lake have been starved for fresh water, while discharges of pollution-laden fresh water from the lake have led to salinity imbalances and fueled harmful algae blooms along the Atlantic and Gulf coasts.

The state is an active partner in the restoration of the Everglades. The Comprehensive Everglades Restoration Plan (CERP) is the single largest component of the restoration effort and was authorized by Congress in 2000. The goal of CERP is to "restore, preserve, and protect the south Florida ecosystem while providing for other waterrelated needs of the region, including water supply and flood protection." CERP laid out a 35-year timeline for more than 60 component projects. Now, 20 years later, we are beginning to see the results of this program, with some CERP projects completed and others nearing completion. Yet this work will be in vain if additional pollution and encroaching development are not prohibited in the Greater Everglades Ecosystem. Near-term adjustments to water policy are necessary while we wait for CERP to be completed.

In 2020, Everglades restoration had record high funding at \$200 million from the federal government along with \$322 million from the state. By maintaining the state level and investing more at the federal level, we can save \$2.7 billion

dollars and finish CERP on time. In combination, these projects will help alleviate blue-green algae blooms that plague the Caloosahatchee and St. Lucie estuaries and seagrass die-offs in Florida Bay.

THREATS

As the lead federal agency in restoration efforts, the U.S. Army Corps of Engineers can improve its management practices, particularly related to the operation of Lake Okeechobee, to better address ecosystem and human health. The South Florida Water Management District must be a proactive partner in this. During the dry season, water is retained in Lake Okeechobee instead of being sent south to the Water Conservation Areas (WCAs) and Everglades. The lack of water sent south dries out Everglades National Park and the Big Cypress National Preserve. In the wet season, the WCAs are flooded with water from the Everglades Agricultural Area (located just south of the Lake), and no water can move south from Lake Okeechobee. Changing the flow of water in these two seasons by integrating salinity and flow performance measures in the Lake Okeechobee Regulation Schedule (LORS) can drastically help preserve the Everglades. Doing so will minimize damaging high-volume discharges to the St. Lucie and Caloosahatchee estuaries during the wet season and provide beneficial dry-season flows to the Caloosahatchee estuary.

Lake Okeechobee operations should incorporate new protective measures in the new Lake Okeechobee System Operating Manual (LOSOM). By adding a water demand from the Everglades to LOSOM, sending water south would help meet the dry-season needs of the Caloosahatchee and be used as a water management strategy to lower the lake in advance of the wet season. This change will provide more capacity in the Lake for the wet season, thus reducing the likelihood of harmful discharges to the northern estuaries. Additional acquisition of lands in the Greater Everglades Ecosystem should be accelerated to give water managers enough land on which to store and cleanse water, to then be discharged south to

Everglades restoration yields a 4:1 return on investment and creates more than 440,000 jobs.Florida's \$11.5 Billion fishing industry, \$23.3 Billion boating industry, and \$94 Billion tourism industry depend on the health of the Everglades ecosystem and coastal waters.^{5 6 7} replenish the Southern Everglades and Florida Bay.

Greater enforcement of water pollution standards is needed to address legacy and new pollution sources to the system. State lawmakers should pick up where the Clean Waterways Act of 2020 (SB712) left off by fixing Basin Management Action Plans (BMAPs), which are failing to help the impaired waters the legislature intended to serve. BMAPs over-rely on projected pollution data rather than actual measured nutrient data, which is often significantly higher. Also, they rely heavily on Best Management Practices (BMPs), which are voluntary, unenforceable, and designed not to cost the landowner money and, therefore, fall short of protecting water quality.

Policies should also expedite establishment of adequate minimum flows and levels (MFLs) and address human health impacts of polluted discharges. Water for the natural environment in Florida does not have the same guarantees that water for businesses has. Despite a Florida law requiring water bodies to have minimum flows and levels to prevent environmental harm,⁹ there is a clause that negates their enforcement. As a result, the environment takes a back seat to agriculture irrigation. The failed MFL is felt acutely in the Caloosahatchee estuary and Florida Bay. Given the economic impact of fishing, tourism, and boating in Florida, the state must give the environment the same protections as businesses in water supply decisions. The legislature should enact the Blue-Green Algae Task Force recommendations to protect human health, including and especially water quality standards for cyanotoxins.

Finally, the ill-conceived M-CORES toll roads program should be permanently repealed and defunded. The impervious surfaces of these controversial toll roads will carry pollutants to protected and ailing waterways at a time when state and federal agencies are spending hundreds of millions of dollars fighting that very type of pollution. Much of Florida has already been ditched and drained. A massive road network cutting through some of Florida's least developed lands will only cut through vital habitat for the endangered Florida panther and other native Florida wildlife, but also add to our pollution problems by expanding the drainage system and encouraging urban sprawl.

⁶ Southwick Associates. "Economic Impacts of Recreational Fishing in Florida." Fact sheet. American Sportfishing Association. October 2018. Web. https://asafishing.org/wp-content/uploads/2019/07/ASA-Congressional-Fishing-Contributions-2019-Senate-version-Florida-Update-06262019.pdf



¹ Rosen, Everitt. "Major Spills from Florida's Sewage Treatment Plants Are on the Rise-and so Are the Storms That Can Cause Aging Pipes to Burst." The Human Hazard, WUFT, 22 May 2020.

² Evans, Lisa. "Florida and Coal Ash: Disposal, Contamination, and Inadequate Regulation." Fact sheet. Earthjustice. December 2014. Web.

³ Temkin, Alexis M., et al. "Application of the Key Characteristics of Carcinogens to Per and Polyfluoroalkyl Substances." International Journal of Environmental Research and Public Health, vol. 17, no. 5, 4 Mar. 2020. doi:10.3390/ijerph17051668.

⁴ "Final TMDL Reports." Florida Department of Environmental Protection, Florida DEP, floridadep.gov/dear/water-quality-evaluationtmdl/content/final-tmdl-reports.

⁵ The Everglades Foundation. "Everglades Economy". Web. https://www.evergladeseconomy.org/

⁷ National Marine Manufacturers Association. "Recreational Boating, an American Pastime & Economic Engine: Florida." Fact sheet. National Marine Manufacturers Association. October 2018. Web. https://www.nmma.org/statistics/publications/economic-impactinfographics

⁸ Rockport Analytics. "Picking Up the Pace: Florida's Tourism Performance Jumps Into a Higher Gear, the 2018 Contribution of Travel & Tourism to the Florida Economy." Report. Visit Florida. 2020. Web. https://www.visitflorida.org/media/30679/florida-visitor-economiclarge-impact-study.pdf

⁹ Section 373.042, Florida Statutes.

THE EVERGLADES POLICY RECOMMENDATIONS

- Maintain state-level funding and increase federal funding to expedite completion of the Comprehensive Everglades Restoration Plan (CERP).
- Include increased water demands for the Everglades during the dry season in the Lake Okeechobee Systems Operating Manual (LOSOM).
- Push the U.S. Army Corps of Engineers and South Florida Water Management District to ensure the LOSOM considers the dry-season water needs of the Everglades, addresses human health risks posed by toxic algae, and adheres to updated salinity and flow performance measures developed by the RECOVER Program.
- Fix the broken system of voluntary BMAPs by making pollution prevention programs like BMPs mandatory and enacting stronger water quality standards.
- Develop and enforce MFLs for the Everglades that incorporate ecosystem protections as well as the needs for fishing, tourism, and boating industries.
- Acquire additional lands in and around the Greater Everglades Ecosystem to maximize water management flexibility by providing opportunities for additional water storage and treatment.
- Enact recommendations of the Blue-Green Algae Task Force, including and especially water-quality standards for cyanotoxins and adequate public warning of toxic algae blooms.
- Repeal the M-CORES toll roads program and redirect funding to water quality and conservation priorities of the state, including the Everglades.

Path of Light, photo by Paul Marcellini

PUBLIC LANDS

CONSERVED AREAS PROTECT WATER, WILDLIFE, AND HUMAN HEALTH. FROM FUNDING LOCAL PARKS TO ACQUIRING LARGE HABITATS, WE ADVOCATE FOR THE CONSERVATION OF NATURAL FLORIDA.

Myakka River

38 Florida Conservation Voters Education Fund

CONSERVATION LANDS INVESTING IN FLORIDA'S FUTURE

Florida has a proud history of conserving land for nature, wildlife, and people. Both native and new Floridians understand the need to protect our natural environment because it is the reason we choose to live, retire, and raise our families in this beautiful state. For visitors, our natural environment is the "Real Florida," and the health of our economy depends directly upon the health of our ecosystems.

Since 1963, Floridians have consistently supported raising public funds for land conservation, even when it means imposing additional taxes. Widespread approval of local ballot measures and statewide constitutional amendments have provided funding to preserve land and protect healthy rivers, springs, beaches, and other natural areas.

With 21.5 million residents and growing, Florida's population places significant demands on our natural resources, and most importantly, our drinking water. Natural, undeveloped land adjacent to water bodies filter pesticides, fertilizers, and other pollutants, allowing clean water to replenish the Floridan aquifer, which supplies 90% of our state's drinking water. Protecting land is the most cost-effective way to protect our water supply, as it is far less expensive to buy land or conservation easements to protect water resources than to restore a degraded system, like the Everglades.

Land conservation also aids in coastal resiliency and makes our \$11.5 billion fishing industry¹ and \$94 billion tourism industry² possible. Smart land policy includes investing in Florida's future in the form of strategic and science-based land acquisition that will protect areas with the highest environmental value and help guide new growth and development away from critical natural resources. Protecting these areas will ensure important conservation goals are met, such as protecting Florida's rich biodiversity, recharging our aquifer and drinking water supply, and minimizing floods.

Florida already has a nationally recognized conservation and recreation lands acquisition program: **Florida Forever.** Thanks to the Water and

Land Conservation Amendment, which passed in 2014 with 75% voter approval, we now also have a dedicated funding stream to purchase and protect critical conservation lands. This funding comes from documentary stamp taxes, which is a revenue source generated through real estate transactions.

The Florida Forever program provides a clear roadmap for investing in our conservation future. It uses science-based criteria and a strategic plan to protect our most valuable lands and waters. Investments in Florida Forever, the Florida Communities Trust, and the Rural and Family Lands Protection Program protect our priority conservation lands and preserves, support community parks, and maintain working landscapes for the benefit of all Floridians. A core purpose of the Water and Land Conservation Amendment is to restore Florida Forever funding to its pre-recession level, which was a steady \$300 million annually. Funding was slashed in 2009 in response to the recession. However, as the economy improved, conservation funding did not recover. From 2016 through 2020, the Legislature only appropriated \$ 248.2 million to the Florida Forever program. Before the 2008 recession, lawmakers used bonding to protect areas that faced an imminent threat of development. The legislature's Florida Forever bonding authority expired per statute in 2020; lawmakers should restore this authority as soon as possible, especially as borrowing rates are at historic lows.

STATE PARKS

State parks are living natural museums where we can experience Florida as it once was and protect those cultural experiences for generations to come. The Florida Park Service is the premier state park system in the United States, having won the national state parks Gold Medal Award four times in the last two decades. In 2019, Florida State Parks & Trails served more than 29 million visitors, generating \$2.27 billion in direct economic impact on local economies throughout the state. Our parks contributed more than \$150 million to the state's general revenues via sales taxes and created more



than 31,000 jobs in local economies.³ In many of Florida's more rural counties, state parks are one of the most essential attractions drawing visitors to the area and supporting small businesses that depend on tourism for survival.

COMMUNITY PARKS

For many families in Florida's metropolitan areas, much of their time spent in the natural world occurs at community parks. In addition to recreational benefits, parks are economic engines for communities seeking to attract and retain residents and businesses. Proximity to parks raises the property values of homes and businesses and provides cost-free exercise and recreation.

Florida Communities Trust (FCT) is the state's only program aimed at urban open space conservation needs. Created in 1991, it provides state matching funds for local governments and land trusts, resulting in nearly 600 local and regional parks. With 70% of low-income communities across the country living in nature-deprived areas, we must prioritize new parks and green spaces in lowincome Black and Latinx neighborhoods to meet current and future generations' needs.

30 X 30

The 30x30 campaign is a global effort to protect 30% of our land and oceans by 2030. Florida is well on its way due to its strong history of conservation programs, like Florida Forever. Florida can be a global leader in this program by improving management on its existing lands to optimize biodiversity and climate resiliency and by increasing the protection status of its current public lands and water bodies. Removing dangerous extractive practices like oil and gas drilling from public lands, like Big Cypress National Preserve, is one way to enhance protections and advance the goals of 30x30.

One of FCT's economic benefits is that the cost of maintaining the land is paid by local governments, placing no additional burden on state land management funds.

PUBLIC HEALTH

Time spent in nature is not only good for our physical health but also improves our mental wellbeing. The COVID-19 pandemic has underscored the importance of accessible, safe places for people to gather, exercise, and recreate. Our parks, whether they are expansive or pocket-sized, keep communities healthy and connected.

WORKING LANDS

Wide open spaces provide refuge for wildlife and water. Working landscapes, like ranches or forests, can benefit conservation and agricultural production. The Rural and Family Lands Protection Program (RFLPP) funds easements to protect agricultural lands and the conservation benefits they provide. Conservation easements pay landowners a portion of the land value in exchange for limiting future development. This means that agricultural practices can continue, but the land cannot be converted to urban uses, like commercial developments. Maintaining working landscapes provides water quality benefits as wetlands and undeveloped areas filter pollutants and recharge the aquifer. Wildlife can also use the areas for hunting, breeding, or as movement corridors connecting to other conserved lands.

CONSERVATION LANDS AND THE CLIMATE CRISIS

Climate change is the greatest threat facing our natural areas, wildlife, and human population. Parks and natural lands, especially in Florida's urban areas, are green infrastructure that can provide multiple solutions to mitigate the climate crisis. Strategically placed shoreline parks and natural lands buffer cities from rising seas, coastal storms, and flooding.

Trails provide carbon-free transportation and link residents to popular destinations. Shady green spaces reduce the urban heat island effect, protect people from heat waves, and reduce summer energy use. Water-smart parks, playgrounds, and green alleys absorb rainfall, reduce flooding, and recharge drinking water supplies while saving energy for water management.



LAND MANAGEMENT

Managing our protected lands is a critical, on-going component of conservation. Lands protected using conservation easements are managed by the private landowner, reducing the state's management cost and burden. Examples of management methods include the restoration of water flow, removal of invasive, non-native species, and prescribed fire. Below are several management strategies that may be jointly implemented.

MANAGING FOR WATER SUPPLY

In Florida, 90% of our drinking water comes from our underground aquifers. Keeping our water safe from pollution and depletion starts with protecting the lands and wetlands that recharge them.

MANAGING FOR RECREATION

To provide the best recreational opportunities for Floridians and visitors alike, it's crucial to provide steady funding to maintain our state parks, wildlife managementareas, state forests, aquatic preserves, and other conservation lands. Infrastructure such as signage, public restrooms, boat ramps, and ADA-accessible recreational equipment enhances visitor safety and experiences.

MANAGING FOR HABITAT AND WILDLIFE CORRIDORS

Some conservation lands are managed primarily for their value as wildlife habitat or for their biodiversity. Florida is a global biological hotspot and is a haven for more than 120 endangered plant and animal species. Habitat loss is among the most severe threats these species face, making the preservation of ecologically endangered lands and wildlife corridors key to their continued survival. Prescribed fire and other techniques can combat the invasion of non-native species that compete for resources with native plants and animals.

MANAGING FOR FOOD SUPPLY

Agricultural lands protected through conservation easements may be managed to ensure the healthy and safe harvest of food, livestock, and timber products. As Florida's second-highest-grossing industry, agriculture employs 2 million people and contributes more than \$104 billion to the state's economy each year.

MANAGING FOR CLIMATE AND RESILIENCY

Natural areas can aid in our fight against climate change and sea level rise. Aquatic and terrestrial plants store carbon in their root systems or the soil, reducing the atmosphere's carbon dioxide levels. Restoration of wetlands like seagrasses and mangroves can reduce climate impacts and provide a buffer for damaging storms and hurricanes.

³ Florida Department of Environmental Protection. "State of Florida Land Management Uniform Accounting Council 2020 Annual Report (FY2019-20) "http:// publicfiles.dep.state.fl.us/DSL/OESWeb/FLDEP_DSL_OES_LMUAC_AnnualReport. pdf. 2020.



¹ Southwick Associates. "Economic Impacts of Recreational Fishing in: Florida." Fact sheet. American Sportfishing Association. October 2018. Web. https://asafishing.org/wp-content/uploads/2019/07/ASA-Congressional-Fishing-Contributions-2019-Senate-version-Florida-Update-06262019.pdf

² Rockport Analytics. "Picking Up the Pace: Florida's Tourism Performance Jumps Into a Higher Gear, the 2018 Contribution of Travel & Tourism to the Florida Economy." Report. Visit Florida. 2020. Web. https://www.visitflorida.org/media/30679/floridavisitor-economic-large-impact-study.pdf

CONSERVATION LANDS POLICY RECOMMENDATIONS

- Implement the intent of the Water and Land Conservation Amendment (Florida Constitution Art. 10, Sec. 28) by statutorily dedicating at least \$300 million per year of the Land Acquisition Trust Funds to fund the suite of Florida Forever conservation programs.
- Reauthorize the use of bonding for conservation funding.
- Maintain adequate fund balances to ensure flexibility and competitiveness in acquiring or protecting new lands.
- Ensure adequate funding for land management, with preference given to practices that retain and, where possible, restore natural processes and native populations of plants and animals.
- Adequately fund the management of our state's awarding-winning state parks system.
- Appropriately staff conservation departments to maintain efficiency and effectiveness in the Florida Forever programs.
- Prioritize new parks and green spaces in low-income Black and Latinx neighborhoods to meet the needs of current and future generations.
- Participate in the global 30x30 campaign to protect 30% of our land and oceans by 2030 as a leader and example of how the 30x30 goal can drive economic success and stability.

Highlands Hammock State Park

WILDLIFE

Florida boasts some of the nation's highest concentrations of rare plants and animals. From the endangered Florida panther and threatened Florida manatee to the more common great blue heron and wild turkey, when we protect habitat for wildlife, we are protecting the natural systems upon which our economy and quality of life depend.

Florida is one of the most species-rich states in the nation. With more than 80 different ecosystems, the state supports more than 100 species listed as endangered, threatened, or of special concern. Many rare species are found only in our state—like the Florida bonneted bat and the Florida scrubjay. While it is difficult to quantify all the ways that Florida's wildlife and their habitats enrich our quality of life, there are many tangible benefits to preserving strong and healthy ecosystems. Animal, plant, and marine biodiversity keeps ecosystems functional, which in turn allows us to thrive.

Direct economic benefits associated with conserving Florida's wildlife and habitat include increased tourism, recreation, and fishing. International and domestic tourism now accounts for more than 106 million visitors to Florida each year. Tourists delight in catching a glimpse of our charismatic creatures, and through activities like birdwatching and ecotourism, they pump billions of dollars into local economies each year. The Florida Fish and Wildlife Conservation Commission (FWC) reports about \$6 billion in annual spending on wildlife viewing activities alone.¹

DEVELOPMENT & HABITAT FRAGMENTATION

With 21.5 million residents, Florida is the third most populous state in the nation and growing. Experts at the University of Florida Bureau of Business and Economic Research predict that by 2070, our population will increase by another 14 million residents. Development consumes and divides natural and agricultural areas essential to wildlife, putting more pressure on existing conservation lands. Coastal development exerts additional threats to marine and beach-dwelling plants and animals. If development occurs as it has in the past, Floridians will lose roughly 5 million acres of agricultural and natural undeveloped lands by 2070.² The proposed creation of 330 miles of new and expanded toll roads and utility corridors by the legislatively-mandated Multiple-Use Corridors of Regional Economic Significance (M-CORES) program will have profound implications. If built, the toll roads and resulting development threaten to destroy and fragment habitat for and increase deaths of Florida panther, black bear, gopher tortoise, and many other species.

THE CLIMATE CRISIS AND INVASIVE SPECIES

Our changing climate is already affecting wildlife and the habitats they call home. Rising sea levels force animals and vegetation to move to higher ground or more northern latitudes. Freshwater resources are becoming more saline as water sources and freshwater habitats become more scarce. Coral reefs, coastal beaches, sand dunes, and wetlands—our first line of defense against damaging storms or hurricanes—are in severe decline, along with their ability to protect against stronger waves and storm events.

On top of development pressures and a changing climate, invasive non-native species such as Old World climbing fern, Brazilian pepper, Burmese pythons, cane toad, and lionfish also threaten native plants and animals. According to the National Park Service and FWC, removing exotic invasive species costs Florida taxpayers more than \$500 million each year. Those costs pale in comparison to the harm they cause to natural systems.³

THE IMPORTANCE OF WILDLIFE CORRIDORS

Permanently protecting rare species' habitat and completing and securing the Florida Wildlife Corridor, a statewide network of vital conservation lands and important waterways, will enhance wildlife habitat connectivity and protect natural systems that are crucial to protecting our water supplies. The good news is that more than half of the



Corridor is already protected. Connecting existing public lands with private lands through acquisition, easements, and incentives will preserve wildlife habitat, enhance food and freshwater supply, and foster rural economies.

MARINE AND COASTAL WILDLIFE

Some of Florida's most charismatic wildlife species are found in our freshwater, marine, and coastal environments. Like the Florida panther, animals like sea turtles and Florida manatees are considered umbrella species because when we protect their habitat, we also ensure the survival of myriad other fish and wildlife species.

Florida is globally important for sea turtles. Florida's beaches provide nesting habitat for five of the world's seven species of sea turtles: green, leatherback, loggerhead, Kemp's Ridley, and hawksbill), all federally listed as either threatened or endangered. More than 90% of all sea turtle nesting in the United States occurs on Florida's beaches. Our beaches host the world's largest nesting aggregation of loggerheads and almost all the nesting in North America for green turtles and leatherback turtles.

The Florida manatee, a subspecies of the West Indian manatee, feeds on seagrasses and other vegetation and thrives in warm waters. They can be found along the Atlantic and Gulf coasts, as well as our springs systems, shallow rivers, bays, estuaries, and canals.

These and other marine wildlife face many serious threats in Florida. Sea turtles require dynamic and healthy beaches, pollution-free coastal waters, natural dunes, and the ecosystem services these coastal systems provide. Storms, inappropriate coastal development, and sea level rise associated with climate change erode essential nesting areas. Over half of Florida's sea turtle nesting beaches are designated as critically eroded. Sea walls and other forms of coastal armoring on the beach deter or prevent sea turtles from nesting, increasing shoreline erosion, and locking up sand vital for the natural post-storm recovery of beaches. Bright lights along the coast from homes, businesses, and streetlights can discourage adult turtles from emerging from the surf to nest or cause them

to abandon a nesting attempt and can disorient hatchlings, leading them away from the ocean to die on land. A warming climate is heating beaches and the ocean with numerous adverse impacts to sea turtles, including a skew towards female turtles as sex determination of hatchlings in a nest is temperature dependent.

Harmful Algal Blooms (HAB) are an increasing threat for all aquatic species that depend upon seagrasses and other Submerged Aquatic Vegetation (SAV) for their survival. Excessive water withdrawals and pollution of the Floridan aquifer decreases needed freshwater supplies. Boat strikes, pollution, marine debris, and oil spills endanger numerous aquatic wildlife species. More information on HABs can be found in the section on water quality.

Protections at the state and federal level have helped sea turtle and manatee populations rebound. Currently, sea turtles are doing well in Florida, and nesting numbers are stable or rising slightly. Estimates of manatee populations have increased from fewer than 1,000 individuals to approximately 8,800 today thanks to the Federal Endangered Species Act and the Florida Manatee Sanctuary Act of 1978 that helped establish manatee protection speed zones and habitat preservation areas. However, the combination of watercraft collisions, persistent harmful algal and red tide blooms, and continued loss of seagrass communities resulted in record-breaking manatee mortalities in 2017-2019. Fortunately, the Legislature has also recognized the importance of maintaining a vital private-public partnership to rescue, rehabilitate, and return to the wild those manatees suffering from watercraft injuries and other illnesses.

Florida's treasured wildlife species will only survive with continued dedication by the Florida legislature, residents, businesses, and tourists alike to protect them and their habitat.

¹ The 2011 Economic Benefits of Wildlife Viewing in Florida. Florida Fish and Wildlife Conservation Commission, 2011, myfwc.com/media/5067/2011-economics-benefits. pdf

² 1000 Friends of Florida, University of Florida Geo Plan Center, Florida Dept. of Agriculture & Consumer Services. 'Florida 2070 Report,' 2016.

³ Beck, Sandy et al. Florida Invaders. National Park Service and Fish and Wildlife Conservation Commission, 2nd Ed. 2013.

WILDLIFE POLICY RECOMMENDATIONS

- Implement the intent of the Water and Land Conservation Amendment (Florida Constitution Art. 10, Sec. 28) by statutorily dedicating at least \$300 million from the Land Acquisition Trust Funds to the Florida Forever programs, including Florida Communities Trust programs.
- Support programs that maintain Florida's rural and working agricultural lands, such as Rural and Family Lands Protection Program and Florida Forest Legacy.
- Repeal the M-CORES program and redirect funding to other pressing needs of the state, including protection of wildlife habitat.
- Prevent habitat fragmentation and reduce conflict with wildlife through sound transportation and land use programs, installation of wildlife crossings, and programs that encourage responsible homeowner practices.
- Strengthen coastal development laws that allow and even incentivize inappropriate development along the beach and too close to the surf.
- Enhance the protection of less-developed coastal lands by supporting targeted land acquisitions and increasing incentives for coastal conservation through public and private programs.
- Incentivize urban redevelopment, rather than green fill and urban sprawl, through expedited permitting for redevelopment and reuse projects.
- Install appropriate wildlife crossings and fencing in crucial panther and bear mortality hot spots.
- Strengthen incentives to protect, manage, and restore wildlife habitat.
- Require widespread use of sea turtle-friendly lighting along the beach to keep nesting beaches dark.
- Educate the public on measures they can take, such as removing food waste, discouraging nest predators, and reducing predation of sea turtle nests and other beach-dwelling animals.
- Commit to meaningful strategies to combat climate change and sea level rise. Enact strong federal policies to significantly reduce the state's and nation's global warming pollution; promote cleaner, safer energy resources; and provide dedicated funding for safeguarding our natural systems.
- Support additional Springs Protection including Support for Ocklawaha River Restoration to protect essential natural warm water winter habitat refuges for manatees.
- Continue funding for the Florida Fish and Wildlife Conservation Commission (FWC) Manatee Rescue/Oceanaria Reimbursement Program.
- Continue funding for FWC Manatee Research and Management Programs.
- Support FWC Boater Safety Education Programs and Legislation.



DEMOCRACY

THE RIGHT TO VOTE IS A CORE PRINCIPLE OF OUR REPUBLIC. WHEN FLORIDIANS ACT ON THEIR RIGHT TO VOTE, THEY HOLD THEIR LAWMAKERS ACCOUNTABLE FOR PROTECTING OUR ENVIRONMENT.

48 Florida Conservation Voters Education F

GROWTH MANAGEMENT AS GOOD GOVERNMENT

In a mere decade, Florida's population is projected to expand by five million residents, and more than half of that growth will occur in just ten counties.¹ If current development trends stay on track, Florida will permanently lose more than five million acres of land within one generation. The loss of this land, much of it working and natural lands, will only be worsened by the effects of sea level rise as many Floridians who live in coastal counties may need to relocate further inland. This migration may disproportionately impact Black, Latinx, workingclass, and low-income communities that currently live in more affordable inland communities, leading to climate gentrification. But that fate is not inevitable.

Florida can achieve a more sustainable future by taking a long view in planning, specifically by establishing policies requiring local governments to consider the cumulative impact of developments big and small—on the natural environment and communities. Incremental changes will shape the future of Florida and the health of our natural resources and social structures.

Local county and city planners have a robust working knowledge of the comprehensive plans, growth constraints, and hurdles facing their communities. Sometimes, however, meaningful state oversight in the planning process is critical to avoid irreversible negative regional impacts. That need was recognized as far back as 1985 when Florida's hallmark Growth Management Act became law. Since then, the Florida Legislature has systematically dismantled this once-robust comprehensive planning process. Currently, Florida lacks the tools to protect our environment, economy, and quality of life from the negative impacts of unchecked development.

Beginning in 2011, the Legislature has promoted development over the protection of natural resources, rural areas, and existing communities. The Growth Management Act, the Department of Community Affairs (DCA), and the Developments of Regional Impact program are gone,² replaced with the Community Planning Act, the Department of Economic Opportunity (DEO), and a greatly reduced state oversight of local planning decisions. The state's policy now emphasizes "innovative community planning, development, and support for communities and economic incentives for businesses that create new jobs." Any land use proposal that can claim to to meet this objective may now be approved despite its negative impact on the environment or existing residents.

The new growth policy also unwisely excludes the economic value of maintaining natural resources, such as water storage and water quality protection, shoreline erosion control, flood minimization, habitat for spawning fish, and mitigation of climate change impacts. These well-established economic benefits, currently provided for free by maintaining our existing ecosystems, are not protected or recognized by Florida's planning law.

Oversight of unsustainable growth has been left to resident engagement in the local planning process. Residents and advocates may challenge inconsistent comprehensive plans and rezonings at the local level. However, during the 2019 legislative session, this remaining mechanism to keep a check on unsustainable growth came under attack. Per HB 7103, the losing side in a legal challenge to a development order must pay the attorney fees and costs for the winning side. This chilling provision has already caused citizens to dismiss challenges against unsustainable development proposals and has created potentially unlimited financial liability for local governments if their denials of development projects are challenged by development applicants.

Planning for growth also happens on a regional level. Florida has ten Regional Planning Councils that serve the unique needs of Florida's diverse regions, issues and populations such as COVID-19 relief, resiliency, transportation, affordable housing, hurricane evacuation and disaster relief, and eliminating racial equity gaps. They are funded primarily by federal and state grants; they do not receive any allocation of the state budget.



POPULATION GROWTH

In 50 years, Florida's population is projected to grow to approximately 33.7 million residents.³

The pressures of dynamic population growth combined with rising seas come at a time when Florida's state process to manage growth has been eviscerated. How Florida's future governor, legislators, and other state and local leaders respond to these increasing challenges will determine the quality of our communities and the ecological health of our natural lands for future generations.4

Florida planning law must be strengthened immediately. Some areas of our state simply are not suitable for development and must be preserved as natural lands or low-impact agriculture. Such lands should be permanently protected through the Florida Forever, Rural and Family Lands Protection Program, or Florida Communities Trust. For more information, please see the section on land conservation. The state's policies on development in and near rural and environmentally sensitive areas are not nearly strong enough to protect these fast-vanishing and irreplaceable natural resources.

The 2019 legislative session introduced another severe threat to Florida's ecosystems with the passage of the Multi-use Corridors of Regional Economic Significance Program, or MCORES. These toll roads and the development they will spawn will have irreversible impacts on vast tracts of some of Florida's last remaining natural areas, stimulating sprawling development and diverting funding away from much-needed existing transportation projects. At the same time, the Legislature has continued to limit the ability of local governments who want to preserve their communities and ecosystems. Unfortunately, home-rule authority has been under attack for years by politicians in Tallahassee, who have limited the ability of local governments to regulate tree trimming, fertilizer usage, sunscreen, plastic bags, short term vacation rentals, and many other issues. While state law can serve as a floor (minimum requirements), the Legislature should avoid preempting local governments and let locals lead when the state has less stringent standards.

¹ "The Florida Scorecard.", The Florida Chamber of Commerce. 2019. Web. TheFloridaScorecard.com

² "An Obituary for Florida Growth Management ." Tampa Bay Times, 7 June 2011, www.tampabay.com/archive/2011/06/05/an-obituary-growthmanagement-1985-2011/

³ "Mapping Florida's Future – Alternative Patterns of Development in 2070." The 2070 Project, 1000 Friends of Florida/University of Florida GeoPlan Center, Florida Department of Agriculture & Consumer Services. 2017. Web. 1000friendsofflorida. org/florida2070/

⁴ 1000 Friends of Florida et al. "Trouble in Paradise: Six Key Issues to Tackling Florida's Environmental Challenges. 1000 Friends of Florida. 2018. Web. http://troubleinparadiseflorida.org/wp-content/uploads/2018/08/FOF-1115-Troublein-Paradise-Paper-vFINAL.pdf

GROWTH MANAGEMENT POLICY RECOMMENDATIONS

Lawmakers have the opportunity to improve how Florida manages growth and work more cooperatively with local governments by enacting legislation that will:

- Enact legislation to require consideration of the impacts to Black, Latinx, Indigenous, and low-income communities that may be displaced as residents migrate away from coastal areas.
- Allow local ordinances that address fertilizer usage, tree-trimming, residential vegetable gardens, and road construction specifications.
- Repeal language in SB 712 that prohibits local governments from recognizing the rights of nature.
- Restore citizen rights by undoing the damage wrought by HB 7103: repeal the law that provides for automatic prevailing party attorney fees against citizens who unsuccessfully challenge development decisions that violate their comprehensive plans, and broaden standing to challenge development decisions by citizens and advocacy organizations.
- Provide funding support for the Regional Planning Council's technical staff for implementation and oversight of sea level rise adaptation and resiliency measures.
- Increase funding to Regional Planning Councils to continue their coordination with local governments and the private sector to provide for rural mobility, disaster recovery, and broadband implementation.
- Require that Department of Economic Opportunity review all comprehensive plan amendments to determine if they comply with state law and ensure that they prevent negative regional or state impacts from development.
- Ensure that transportation plans are consistent with local and regional planning efforts that address design, road materials, and appropriate locations for roads and associated infrastructure.
- Give local governments affected by the development decisions of an adjacent government a seat at the table by:
 - improving the dispute resolution process under Chapter 164 and section 186.509, Florida Statutes; and
 - providing the more equitable preponderance of the evidence standard of review to affected local governments if dispute resolution is unsuccessful and legal action becomes necessary to protect their rights.

VOTING RIGHTS

The right to vote is fundamental to our democracy. Our ability to elect leaders who serve the public interest—whether it be to protect Florida's beautiful coastlines and pristine waterways or to advance sustainable energy and transportation policies—hinges on our ability to maintain a fair and open election system where every eligible voter can cast a ballot and have it accurately counted. Unfortunately, Florida's election system is outdated in many ways, and voters are often unable to fully participate due to bureaucratic obstacles, antiquated systems, or poor planning.

Millions of Floridians who are eligible to vote remain unregistered. Automatic Voter Registration (AVR) streamlines registration. With AVR, voter registration is prompted or updated when eligible citizens interact with government agencies, and eligible citizens may affirmatively decline automatic registration or updates. Nineteen states and the District of Columbia currently offer AVR with varying approaches to how voters may optout. AVR has increased registration rates in states where it is implemented and has saved states money with the electronic transferral of voter registration information. AVR also keeps voter rolls more accurate by creating a constant stream of updates between registration agencies and election officials and eliminating mistakes caused by processing paper registrations by hand.

ELECTION DAY VOTER REGISTRATION

Often referred to as same-day voter registration (SDR), election day voter registration allows eligible voters to register or fix a problem with their registration when they arrive at the polls to vote. This boosts voter turnout and ensures that voters are not blocked from voting simply because they missed the registration deadline. The District of Columbia and 21 states offer SDR. In Florida, the book closing deadline is 29 days, nearly a month, before Election Day. Even when voters do everything correctly, they may still have registration problems due to no fault of their own. In these cases, SDR provides a critical fail-safe against overzealous list maintenance by officials, errors by third-party registration Fund

and simple clerical mistakes by those processing registration forms.

VOTE-BY-MAIL

Vote-by-mail is increasingly popular, and could be improved by ensuring that fewer ballots are unfairly rejected. For a mail ballot to be counted, Florida law currently requires that it be received by the Supervisor of Elections by 7 p.m. on Election day. This strict deadline disenfranchises many eligible voters whose ballots are not delivered until after the deadline. After the 2020 August primary election, an analysis by Politico found that 66% of the rejected mail ballots were due to being received after the deadline.

Florida already allows ballots cast by military and overseas voters to be counted if they are postmarked by Election Day and received within ten days after the election. This practice should be expanded to apply to all voters. Lawmakers should update statutes so that vote-by-mail ballots will be accepted if postmarked by Election Day and received within five days after the election. The deadline to cure vote-by-mail ballots would also need to shift to allow voters at least two days after the new deadline to correct signature errors.

VOTE CENTERS

As vote-by-mail has become increasingly popular nationwide, some states have moved towards countywide voting systems rather than precinctbased voting. In a countywide system, voters may vote at any polling place on Election Day. Two counties in Florida (Bay and Gulf) are currently allowed to use super voting sites due to executive orders. Other election officials have expressed an interest in this as well. Vote centers must be implemented with clear standards for choosing equitable and accessible locations, structured opportunities for meaningful input from leaders of potentially affected communities, and robust voter education and outreach plans. When considering this new approach, the state must require local election officials to gather input from affected communities and incorporate that input into their planning to implement vote centers in a nondiscriminatory way.

VOTING RIGHTS POLICY RECOMMENDATIONS

- Support automatic voter registration systems requiring government agencies to register eligible voters automatically by default unless the individual opts out.
- Implement same-day registration, requiring local election officials to allow voters to register or fix their registrations at the polls on election day.
- Extend the deadline for vote-by-mail ballots to count ballots postmarked by election day.
- Ensure that any legislation allowing Supervisors of Elections to establish vote centers include clear standards for choosing equitable and accessible locations, structured opportunity for meaningful input from leaders of potentially affected communities, and robust voter education and outreach plans.

ENVIRONMENTAL JUSTICE

Dr. Robert Bullard, the advocate, author, and professor often cited as "the father of environmental justice" famously noted that "America is segregated and so is pollution." Zip codes remain the most potent predictor of an individual's health and well-being. Black, Latinx, and Indigenous people and communities are subjected to elevated environmental health threats and more than their share of preventable diseases. Working class people, people of color, and Indigenous people across the country still grapple with the impacts of artificial systems that have fueled the development of vast chasms of inequality which are borne out at the level of the physical environment they inhabit. of the global climate crisis. Collectively, each of these contributes and fosters the inequities we see taking place today across the state. Many of these communities face injustice without the same degree of protection, an equal voice in planning processes, or the access to resources afforded to other communities.

Today, environmental justice issues take many forms and differ across the state, from dirty diesel school buses to landfills, gentrification, and displacement. These injustices result from the irregular dissemination of the benefits and burdens of our systems.

Environmental Justice is "the fair treatment and meaningful involvement of all people regardless of ethnicity, color, national origin, social status or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."¹

It is no coincidence that these populations live in close proximity to our worst forms of pollution.

The environmental justice movement addresses an undeniable fact: people who live, work, and recreate in America's most polluted environments are commonly people of color and the poor and working class. Environmental justice advocates have shown that this is no accident. Communities of color, which are often poorer than their counterparts, are routinely targeted to host facilities with negative environmental impacts, such as landfills, dirty industrial plants, or truck depots.^{2, 3} The statistics provide clear evidence of what the movement calls "environmental racism." Communities of color have been battling this injustice for decades.

The injustices and inequities that arise from past and present social and racial discrimination take many different forms: gentrification, discriminatory zoning practices, segregation, restricted access to the democratic process, pollution, lack of investment in preparedness, and even displacement by the very climate adaptation and mitigation strategies meant to help prevent the worst impacts

ENVIRONMENTAL RACISM

Race is the number one indicator for the placement of toxic facilities in this country. Race is also the most significant predictor of an individual living near contaminated air, soil, or water. According to a recent publication by The Nation, 56% of residents near toxic waste sites are people of color; 38% of people of color have higher nitrogen dioxide exposure and are two times more likely to live without potable water and modern sanitation.

INDUSTRIAL POLLUTION

Florida's industrial sector poses a serious health and environmental challenge particularly for lowincome, Black, and Brown communities. Many of these "fenceline communities" are right next to these facilities. Neighborhoods surrounding industrial plants or processing centers are the recipients of toxins released into the air and water. For example, the predominantly Black communities of Belle Glade, South Bay, and Pahokee (located near Lake Okeechobee) are subject to black smoke plumes from burning sugarcane fields during industry harvesting season. The Fairway Oaks community in Jacksonville is another example of a community built on an old landfill and where toxins in the soil and water are at levels deemed hazardous by the U.S. Environmental Protection Agency. This form of pollution has led to many health problems for residents such as asthma and other respiratory illnesses.

ENVIRONMENTAL GENTRIFICATION

When localities clean up urban pollution or make urban spaces more sustainable, wealthier people are attracted to live there, thus driving up rental rates and property value and changing the culture and dynamics of the neighborhood. There are benefits to bringing energy efficient buildings, parks, and community gardens to urban communities, but these well-meaning practices can result in communities of color being rapidly displaced. Programs that focus on greening spaces in low income zip codes should consider and plan for the social impacts such development will have, such as increased rent and added community policing.



CLIMATE GENTRIFICATION

Neighborhoods traditionally overlooked bv wealthy people have become more attractive and more expensive due to their location, which happens to be less prone to flooding and more resilient to climate-related threats. Segregation shunted people of color to less desirable, landlocked neighborhoods. In Miami, lowerincome residents tend to live in high-elevation areas, while waterfront property is prime. As tides rise and waterfront homes are compromised, longforgotten areas have become a hot commodity. A 2018 Harvard University study identified three mechanisms by which climate gentrification occurs. First, the "superior investment" mechanism occurs when climate-resilient properties are more desirable, increasing their prices to a level that only high-income households can afford them. Second, with the "cost-burden" mechanism, less resilient neighborhoods are inaccessible to lowincome people who cannot afford the expenses associated with natural disasters. Finally, the "resilience investment" mechanism occurs when a

ORLANDO'S PARRAMORE COMMUNITY

In the 1980s, Orlando's Parramore neighborhood was a flourishing, middle class community with Blackowned homes, schools, businesses, and churches. Today the Parramore community is enclosed on all sides by the I-4 and 408 highways. The way in which the highways were constructed is considered to be a deliberate tactic used to segregate the Parramore community from the rest of the City of Orlando.

As a result, residents are constantly exposed to soot and noxious fumes from the vehicles on the highway. Unfortunately, Parramore is not alone a federally funded study published in 2017 found that people of color in the U.S. are exposed to far more transportation-related pollution than white people. neighborhood has climate resilience infrastructure that makes living there more expensive. Historically Black and Brown communities in Florida are experiencing gentrification because they are on higher ground. Examples of communities in Miami going through rapid gentrification include Little Haiti, Liberty City, and Allapattah.

URBAN SPRAWL

A long history of racial discrimination and housing segregation has contributed to environmental injustice. "Red-lining" is the systematic denial of services like home mortgages, insurance, and loans based on the location of the home in Black and Brown neighborhoods rather than the applicant's qualifications, and it has led to the concentration of low-income and individuals of color into specific locations or urban areas like Hialeah. These communities become cut off from economic and educational opportunities until some seek to either invest or displace community members.

TRANSPORTATION INEQUALITY

Automobile dependence in Florida is at an all-time high,⁴ and recent development further inland has led to substantial transportation problems and inequities. Low-income communities struggle with access to vehicles, which forces them to rely on public transportation services, exposing them to harmful toxins emitted in the air. As we continue to develop our state, low-wage workers without access to a car are unable to move because the cost and unreliability of transit make it impractical.

CATASTROPHIC EVENTS

Florida has recently seen an intensification of weather events that place low-income and communities of color at greater risk because they are more vulnerable and struggle the most to recover. It is undeniable that hurricanes, tornadoes, extreme heat, and flooding are becoming more commonplace. When storms hit, many residents cannot evacuate or afford the costs incurred to restore their homes. With communities in South Florida barely sitting at sea level, as flooding occurs, they are left to protect their property on their own. In September 2017, after Hurricane Maria, the Census Bureau estimated that more than 44,000 Puerto Ricans relocated to Florida. Two years later, Puerto Ricans are still fighting for post-disaster resources and fair treatment.

DEMOCRATIZATION OF ENERGY

New technology such as solar and modern battery-storage offers the opportunity to distribute generation and ownership of energy resources. Distributed and community ownership opens the door for energy to be viewed not as a commodity, but as a common resource to be democratically controlled for the benefit of our communities, especially low-income communities and communities of color that have been most negatively impacted by the current systems of energy commodification.

Within this vision, communities strive to consume less energy by making homes and businesses more energy-efficient, installing renewable systems, reducing waste, prioritizing efficient, affordable, and/or free public transportation, and adopting similar measures. In addition, electricity generation is decentralized and community-based to provide affordable, reliable, and clean power to meet community needs.

Owned and controlled by the community, renewable energy is invested in equitable, sustainable business, provides family-sustaining clean-energy jobs, powers schools and other public spaces, supplies power for urban food systems and public transportation, and strengthens communities' self-sufficiency and resilience.

¹ United States Environmental Protection Agency, Environmental Justice, 11 Jan. 2021.

² Ihab Mikati, et al., Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status. American Journal of Public Health 108, 480_485, 2018. ³ Perlin, Susan. An examination of race and poverty for populations living near industrial sources of air pollution. Journal of Exposure Analysis and Environmental Epidemiology pg. 9, 29-48. 1999.

⁴ Biomed Center, Environmental justice and policy research, Biomedcentral.com/ collections/environmentaljusticeandpolicy, 2020.

ENVIRONMENTAL JUSTICE POLICY RECOMMENDATIONS

- Measure environmental justice with a cumulative impacts approach. As we work to rectify environmental harms and create new benefits for communities, we must do so through a lens of environmental justice. There are several ways to measure cumulative impact that can help regulators and policymakers prioritize high-need areas in their districts and understand the health burdens. The current state of environmental policy is focused on addressing pollutants and polluters. We must broaden policies to always include a thoughtful environmental justice lens that considers the vulnerabilities and needs of communities of color.
- Create authentic and sustained community participation. Many of the decisions and policies in place are made without community members at the table. Because low-income and communities of color are most impacted by the planning of public infrastructure projects, their participation is critical to ensuring the best outcomes for their future. The knowledge that many community members possess is invaluable to understanding what is happening on the ground. Meaningful community participation should involve communities from the start with the aim of co-creating policies and building trust between government entities and communities.
- Strengthen land use and zoning practices by centering environmental justice. When done right, land use and zoning can have a powerful impact on protecting communities. These practices shape what we know our cities to be, and drive businesses to invest and develop. With proper comprehensive planning, in conjunction with impact and cumulative analyses, we can protect communities subject to gentrification and other issues of displacement.
- **Support resilience planning.** With catastrophic weather events becoming more common and intensifying, communities and elected officials must be proactive through proper planning. Resiliency planning at the local level will force governments to update land use and zoning codes, establish better development standards, provide incentive programs, and create policies to prepare communities for stressors, like catastrophic weather. It is critical that local governments make the necessary investments to protect low-income communities and communities of color.

EXPERT LIST



1000 Friends of Florida

The state's leading not-for-profit smart growth advocacy organization, 1000 Friends of Florida is building better communities and saving special places in one of the fastest growing states in the nation.

Growth Management, Local Governments, and Transportation

Jane West

Policy and Planning Director | (850) 222-6277 ext. 102 | jwest@1000fof.org



Alachua Conservation Trust

The mission of Alachua Conservation Trust (ACT) is to protect the natural, historic, scenic and recreational resources in and around North Central Florida. ACT protects land through purchase, donation, and conservation easements.

Conservation Lands

Tom Kay

Executive Director | (352) 373-1078 | act.tkay@gmail.com

All Voting Is Local

We fight to remove discriminatory barriers to the ballot to achieve a democracy that works for all of us.

Voting Rights

Brad Ashwell

State Director | (850) 294-1008 | brad@allvotingislocal.org

CATALYST Catalyst Miami

To identify and collectively solve issues adversely affecting low-wealth communities throughout Miami-Dade County.

Community Resilience, Environmental and Climate Justice Zelalem Adefris, MPH VP of Policy and Advocacy | (786) 414-1300 | zelalema@catalystmiami.org Maya Cruz, MPH

Climate Justice Director | (786) 527-2573 | mayrac@catalystmiami.org



Conservation Foundation of the Gulf Coast

The mission of CFGC is to protect the land and water in Southwest Florida for the benefit of people and nature.

Conservation Lands **Christine Johnson** President | (941) 918-2100 | christine@conservationfoundation.com



Defenders of Wildlife

Defenders of Wildlife is dedicated to the protection of all native animals and plants in their natural communities.

Wildlife Elizabeth Fleming

Senior Florida Representative | (727) 823-3888 | efleming@defenders.org **Kent Wimmer** Senior Northwest Florida Representative | (850) 528-5261 | kwimmer@defenders.org



FCV Education Fund

We engage people in our democracy to protect our environment and healthy communities for everyone.

Conservation Lands Lindsay Cross Government Relations Director | (727) 642-1563 | lindsay@fcvoters.org

Clean Energy and Climate

Zac Cosner

Climate and Clean Energy Advocate | (305) 608-8303 | zcosner@fcvoters.org



Florida Oceanographic Society

To inspire environmental stewardship of Florida's coastal ecosystems through education, research and advocacy.

Everglades and Water **Mark Perry** Executive Director | (772) 225-0505 | mperry@floridaocean.org



Florida Rising

The mission of Florida Rising is to build independent political power that centers historically marginalized communities so everyday Floridians can shape the future.

Community Resilience, Democracy, and Environmental and Climate Justice Joanne Pérodin Climate Justice Program Manager | (305) 754-0118 | joanne@Floridarising.org Moné Holder Senior Program Director | (904) 999-1123 ext. 1502 | mone@Floridarising.org Ida Eskamani Legislative Director | (407) 376-4801 | ida.eskamani@gmail.com



Florida Springs Council

The Florida Springs Council is a consortium of 50 groups and thousands of individuals dedicated to the restoration of Florida's world-class springs and the protection of the Floridan aquifer.

Water

Ryan Smart

Executive Director | (561) 358-7191 | smart@floridaspringscouncil.org **Bob Knight, Ph.D.** Board Member | (386) 454-9369 | bknight@floridaspringsinstitute.org



Friends of the Everglades

The mission of Friends of the Everglades is to preserve, protect, and restore the only Everglades in the world.

Everglades and Water **Eve Samples** Executive Director | (772) 485-8164 | eve.samples@everglades.org



Matanzas Riverkeeper

The mission of the Matanzas Riverkeeper is to protect the health of the Guana, Tolomato, Matanzas watershed through advocacy, education, and community engagement.

Water

Jen Lomberk, Esq.

Executive Director, Matanzas Riverkeeper | Vice-Chair, Waterkeepers Florida (904) 478-9878 | jen@matanzasriverkeeper.org



Miami Waterkeeper

Miami Waterkeeper's mission is to defend, protect, and preserve South Florida's watershed through citizen engagement and community action rooted in sound science and research. We work to ensure swimmable, drinkable, fishable water for all.

Everglades and Water

Kelly Cox, Esq.

General Counsel | (305) 905-0856 | kelly@miamiwaterkeeper.org



ReThink Energy Florida

ReThink Energy Florida's mission is to educate, engage, and empower Floridians to take action and achieve energy independence for a healthier, more sustainable environment through youth education, adult outreach and community organizing.

Clean Energy and Climate

Kim Ross Executive Director | (850) 888-2565 | kim@rethinkenergyflorida.org



Sanibel-Captiva Conservation Foundation

The mission of SCCF is to protect and care for Southwest Florida's coastal ecosystems.



James Evans Environmental Policy Director | (239) 472-2329 | james.evans@sccf.org



Save the Manatee Club

The mission is to protect manatees and their aquatic habitat for future generations.

Wildlife

Patrick Rose

Executive Director | (407) 539-0990 | prose@savethemanateeclub.com



Sea Turtle Conservancy

It is the mission of Sea Turtle Conservancy to ensure the survival of sea turtles within the Caribbean, Atlantic and Pacific through research, education, training, advocacy and protection of the natural habitats upon which they depend.

Beaches, Coasts, and Wildlife

Gary Appelson Policy Coordinator, Retired | (352) 317-2870 | gaappel@bellsouth.net David Godfrey Executive Director | (352) 373-6441 | david@conserveseaturtles.org

SOLAR UNITED Solar United Neighbors

We're a community of people building a new energy system with rooftop solar at the cornerstone. We help people go solar, join together, and fight for their energy rights.

Clean Energy and Solar

Angela DeMonbreun

Regional Director | (904) 351-8570 | angela@solarunitedneighbors.org



Southern Alliance for Clean Energy

Southern Alliance for Clean Energy promotes responsible energy choices to ensure clean, safe, and healthy communities throughout the Southeast.

Clean Energy, Climate, and Transportation Susan Glickman Florida Director | (727) 742-9003 | susan@cleanenergy.org George Cavros Florida Energy Policy Attorney | (954) 295-5714 | george@cleanenergy.org Dory Larsen EV Manager | (727) 410-4804 | dory@cleanenergy.org



St. Johns Riverkeeper

The mission of St. Johns Riverkeeper is to defend the St. Johns River and advocate for its protection.

Water

Lisa Rinaman

Chair, Waterkeepers Florida | (904) 256-7907 | lisa@stjohnsriverkeeper.org



Surfrider Foundation

The Surfrider Foundation is dedicated to the protection and enjoyment of the world's ocean, waves and beaches, for all people, through a powerful activist network.

Offshore Drilling and Water

Holly Parker Curry Florida Policy Manager | (850) 567-3393 | hparker@surfrider.org

TransitAlliance Transit Alliance Miami

Transit Alliance Miami advocates for walkable streets, bikeable neighborhoods, and better public transit.

Transportation **Azhar Chougle** Executive Director | (786) 254-1884 | Az@transitalliance.miami



The CLEO Institute

We work with communities across Florida to build climate literacy and mobilize climate action for a resilient future.

Clean Energy and Climate Salomé Garcia Policy and Campaigns Manager | (786) 387-5111 | salome@cleoinstitute.org



The Trust for Public Land

The Trust for Public Land creates parks and protects land for people, ensuring healthy, livable communities for generations to come.

Conservation Lands Will Abberger

VP, Director, Conservation Finance | (850) 222-7911 ext. 23 | will.abberger@tpl.org



Vote Solar

Vote Solar is a nonprofit organization working to bring solar energy to the mainstream for all Americans.

Clean Energy and Solar **Katie Chiles Ottenweller** Southeast Director | (706) 224-8017 | katie@votesolar.org

Green sea turtle

INDEX

Algal blooms	12, 19, 23, 24, 31, 32, 34, 36, 46	Oil and gas extraction Conventional drilling	18, 19 18 19, 10
Beach erosion	31, 32	Fracking Offshore oil and gas drilling Risk and impacts of	18, 19 18 19
Climate change impacts			
Drought	12	Solar energy	3
Extreme heat	12, 13	Community solar policy	5,7
Flooding	12	Comparison to non-renewable energy	4
Gentrification	49, 54, 55, 56, 57	Financing	3, 5, 6
Hurricanes & storm surge	6, 12, 13, 51, 57	Job creation	4, 5, 6
Public health	12, 14	Net metering	4
Saltwater intrusion	12, 24	Power Purchase Agreements (PPA)	3
Sea level rise	12	Public support for	3
		Rooftop solar	4
		Solar storage	6
Climate resiliency	12, 14, 57	3	
Blue carbon	16, 32, 33	Tourism	19, 31, 36
Estuaries	32, 41		
Forests and grassland carbon	16, 41	Transportation	
sequestration		Emissions	8, 9, 10
		Multi-use Corridors of Regional	9, 11, 36, 44, 50
Conservation		Economic Significance (M-CORES)	, , , ,
30x30	40	Pedestrian fatalities	8
Agricultural working lands	39.41	Traffic congestion	8.9
Community parks	40		- /
Conservation funding	25, 32, 34, 39, 42, 43,	Transportation planning	
g	47	Funding	8
Florida Forever	11, 17, 26, 39, 58, 59	Induced demand	8
Land management	40, 41, 42	Public transport	8, 9, 51
State parks	39, 42	Transportation alternatives	8,9
Electric vehicles	0	Voting	
Comparison to non electric vehicles	0	Pogistoring to voto	52
Electric school buses	10	Vote-by-mail	52
Heavy-duty diesel vehicle	10	Voting centers	52
electrification	10	voting centers	JZ
Transportation electrification	9	Water pollution	
infrastructure	,	Clean Waterways Act (SB712)	36
imastractare		Per- and polyfluoroalkyl substances	24
Energy consumption	4 8	(PEAS)	21
Efficiency	15 50 52	Plastic	31
Energy burden	A 13 15 A9	Rupoff	2/1 27 31
Energy builden	4, 13, 13, 47	Sentic and sewage	23, 24, 27, 31
Environmental racism		Total Maximum Daily Load (TMDL)	23 28 29
Climate gentrification	49 54 55 56 57	Wastewater	18 19 23 26 28 31
Exposure to pollution	19 54	Wastewater	10, 17, 20, 20, 20, 31
	17, 54	Water quality and quantity	25 26 27 28
Estuaries	31		20, 20, 27, 20
Estadries	01	Water regulation	27 28
Everalades		Basin Management Action Plan	28 36
Comprehensive Everalades	34	(BMAP)	20,00
Restoration Plan (CERP)	51	Best Management Practices (BMPs)	29 36
Lake Okeechobee	25, 27, 34, 49	Best management hactices (Binn s)	27,00
Regulation Schedule (LORS)	34	Wetlands	25 26 28
System Operating Manual	34		,,
(LOSOM)		Wildlife	
(Habitat fragmentation	44.47
Fresh water	27	Invasive species	24, 42, 44
Drinking water	25.28	Wildlife corridors	42, 44, 46
Overpumping	19, 25, 28, 36		,, .0
Springs	26, 27		
Sinkholes	26		

64 Florida Conservation Voters Education Fund





Florida Conservation Voters Education Fund www.FCVEF.org