IN THE CIRCUIT COURT OF THE SECOND JUDICIAL CIRCUIT
IN AND FOR LEON COUNTY, FLORIDA

DELANEY REYNOLDS; LEVI D., by and through his natural guardian and mother Leigh-Ann Draheim; ISAAC A., by and through his natural guardian and mother, Janet Ray Augspurg; JOSE ("Andres") P., by and through his natural guardian and mother, Valerie Jean Phillips; LUSHIA ("Luxha") P., by and through her guardian and mother, Valerie Jean Phillips; OLIVER C., by and through his natural guardian and mother, Emily Chamblin; VALHOLLY F., by and through her natural guardian and mother, Rhonda Roff; and OSCAR PSYCHAS,

Plaintiffs,

v.

THE STATE OF FLORIDA; RICK SCOTT, in his official capacity as Governor of the State of Florida; the FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION; by and through NOAH VALENSTEIN, in his capacity as Secretary of the Florida Department of Environmental Protection; the FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES; by and through ADAM PUTNAM, in his capacity as Commissioner of the Florida Department of Agriculture and Consumer Services; the FLORIDA BOARD OF TRUSTEES OF INTERNAL IMPROVEMENT TRUST FUND; and the PUBLIC SERVICE COMMISSION,

Defendants,

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CASE NO.: 18-CA-000819

FIRST AMENDED COMPLAINT

JURY TRIAL REQUESTED

COMPLAINT SEEKING DECLARATORY AND INJUNCTIVE RELIEF

Plaintiffs are eight young Floridians, aged 19 and younger, who have been seriously injured because of Defendants' deliberate indifference to their fundamental rights to life, liberty, property, and the pursuit of happiness, which includes a stable climate system, in violation of

Florida common law and the Florida Constitution. They bring this action on behalf of themselves because the Fossil Fuel Energy System[1] created and operated by the Defendants does not and cannot ensure that Plaintiffs will grow to adulthood safely and enjoy the same rights, benefits, and privileges of earlier-born generations of Floridians. Defendants' historic and current unconstitutional contributions to climate change, by and through its creation and operation of a Fossil Fuel Energy System have harmed Plaintiffs by causing widespread harm to the climate and vital natural resources in Florida, upon which Plaintiffs now and in the future will depend. Because the Defendants know that Plaintiffs are living under dangerous climatic conditions that create an unreasonable risk of harm but have not responded reasonably to this urgent crisis, and instead have affirmatively acted to exacerbate the climate crisis, Plaintiffs seek declaratory relief and an injunction compelling Defendants to develop and implement a comprehensive plan to bring its Energy System into constitutional compliance.

INTRODUCTION

1. Plaintiffs bring this case to enforce the Defendants' constitutional and common law public trust obligations to protect Plaintiffs' inalienable and fundamental rights secured by Florida common law and Article I, Sections 1, 2 and 9; Article II, Sections 5, 7(a), and 8; and Article X, Sections 11 and 16 of the Florida Constitution.

2. Plaintiffs are and will continue to be adversely impacted by excessive and dangerous human-caused atmospheric carbon dioxide ("CO_2") concentrations that now exceed 407

[1] By and through Defendants affirmative aggregate and systemic actions with respect to "all components related to the production, conversion, delivery and use of energy," Defendants have demonstrated their policy, practice and custom with respect to fossil fuels and GHG emissions in Florida (hereinafter Defendants' "Fossil Fuel Energy System"). IPCC, 2014: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Cambridge, United Kingdom and New York, NY, USA, Annex I: Glossary, Page 1261 (defining energy system). It is Defendants' Fossil Fuel Energy System that Plaintiffs challenge as unconstitutional and violative of the Public Trust Doctrine in this case.

parts per million ("ppm"), as compared to the stable pre-industrial levels of 280 ppm. These unconstitutional conditions, which Defendants have produced and exacerbated in part through their creation and operation of a Fossil Fuel Energy System and affirmative actions that cause dangerous levels of CO_2 greenhouse gas pollution, have substantially impaired the climate and other vital natural resources on which Plaintiffs – as well as both current and future generations of Floridians - depend, in the exercise of their inherent rights.

3. Carbon dioxide and other greenhouse gas (collectively, "GHG") pollution is causing dangerous increasing temperatures, rising seas and storm-surge flooding, increasing droughts and violent storms, ocean acidification, beach and farmland soil erosion, freshwater degradation, resource and species extinctions, increased pestilence with resultant diseases and other adverse health risks, and other adverse impacts (collectively, the "Climate Change Impacts"), all of which threaten the habitability of Florida and the safety and wellbeing of these Plaintiffs, other Floridians, and future generations.

4. All of Florida's public trust resources, including without limitation, the atmosphere (air), submerged state sovereignty lands, lakes, rivers, beaches, water (both surface and subsurface), forests, and wild flora and fauna (individually, a "Public Trust Resource," and collectively, "Public Trust Resources"), are essential for life, liberty, pursuit of happiness, and the right to acquire, possess and protect property, including human habitation and personal and economic health, safety, and wellbeing. The Trump Administration's recently-released Fourth National Climate Assessment confirms that

"[t]hese ecological resources that people depend on for livelihoods, protection, and well-being are increasingly at risk from the impacts of climate change."[2]

5. The Defendants - through their actions as public officials who create, manage and implement Florida's Fossil Fuel Energy System and are responsible for responding to the threat of climate change - are materially causing and contributing to the increasing negative effect of Climate Change Impacts.

6. The Defendants have a common-law fiduciary and constitutional duty to take action on behalf of the Plaintiffs to reduce and mitigate the adverse effects of Climate Change Impacts and to bring the state's Fossil Fuel Energy System into constitutional compliance.

JURISDICTION AND VENUE

7. This is an action brought by youth residents of Escambia County, Broward County, Brevard County, Alachua County, Hendry County, Monroe County, and Miami-Dade County, Florida, claiming violations of the Florida Constitution, Article II, Section 7(a); Article X, Section 11; and Article X, Section 16, and of the common law including the principles of the Public Trust Doctrine.

8. This Court has subject matter jurisdiction pursuant to Article I, Section 21, and Article V, Sections 1, 5, and 20(c)(3) of the Florida Constitution.

9. This Court also has subject matter jurisdiction over this action pursuant to § 26.012, Fla. Stat., because Plaintiffs seek injunctive relief and equitable protection.

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[2] *Fourth National Climate Assessment*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/ (last visited Dec. 17, 2018).

10. This Court has subject matter jurisdiction pursuant to §§ 26.012(2)(a), 86.011 and 86.101, Fla. Stat., because Plaintiffs seek declaratory relief and the rights and interest at issue are not quantifiable in monetary terms.

11. This Court has personal jurisdiction over all Defendants pursuant to § 48.193, Fla. Stat.

12. Venue is proper pursuant to § 47.011, Fla. Stat., because Defendants are state agents or state entities that maintain their principal headquarters within Leon County, Florida.

STATEMENT OF THE FACTS

PLAINTIFFS

13. Plaintiff **Delaney Reynolds** is a 19-year-old U.S. citizen and a resident of Miami, Florida. Delaney is being harmed by climate change and ocean acidification and those impacts are only getting worse. Delaney lives in Miami, a mere 9-10 feet above sea level, and also has grown up in her family's home on No Name Key in the Florida Keys. She calls both Miami and No Name Key home. Her home in the Florida Keys is approximately 3 feet above sea level and is located on a canal that connects to the ocean. While hiking on No Name Key, Delaney has recently noticed rising seas and saltwater in places where it did not used to be. Without drastic steps to reduce GHG pollution, Delaney's home on No Name Key, and the places where she recreates there, will be devastated by flooding, erosion and further inundated by rising seas. In Miami, climate change and sea level rise are impacting the aquifers and will cause irreparable damage to the groundwater well systems that Delaney relies on for drinking water without immediate action to reduce GHG pollution.

14. In Delaney's lifetime, sea levels have noticeably risen at places where she visits and recreates. For example, Matheson Hammock Beach, just one mile from her Miami home,

is an area where Delaney likes to ride her bike but the trail she uses is increasingly flooded with salt water due to sea level rise. She is not able to use, access and enjoy the trail when it is flooded. Miami Beach, the Everglades, and other areas in South Florida that Delaney visits and plans to continue to visit, also have experienced increasingly common and disruptive floods and other impacts as a result of climate change, thus minimizing her ability to recreate there and enjoy such places.

15. Delaney loves fishing for snapper, grouper, lobsters, and other fish, which afford both recreation and food for Delaney and her family. However, Delaney's ability to fish is being negatively affected as marine species are impacted by ocean acidification and warming. Delaney also loves to swim and snorkel and see dolphins, sea turtles, sharks, barracudas, and other marine life in places like Biscayne Bay National Park. Florida's coral reefs already experience bleaching – almost every time Delaney goes swimming or snorkeling she sees coral bleaching in new areas – and without GHG emission reductions, she will not be able to see and enjoy all the marine life that she does now in the future.

16. When Hurricane Irma struck in the summer of 2017, Delaney lost power for 11 days and her college studies were significantly disrupted. Her home on No Name Key and the surrounding lower Keys region suffered tremendous damage as it is located where the northern eyewall of Hurricane Irma hit Florida. Delaney was out of school for two weeks and is concerned about scientists' predictions that climate change is leading to more frequent, more powerful hurricanes in the future that will impact her ability to live in places that she loves such as Miami and No Name Key. Delaney consistently experiences anxiety, depressed thoughts, terror and high stress because she fully understands the gravity and urgency of climate change and ocean acidification and its impacts on her life.

17. Plaintiff **Levi D.**, by and through his natural guardian and mother Leigh-Ann Draheim, is an 11-year old Florida youth residing in Satellite Beach, Brevard County, Florida, whose personal and economic wellbeing is, and will continue to be, threatened with injury from the Climate Change Impacts. Levi lives on a southeastern Florida barrier island, much of which is less than 6 feet above sea level. Levi's home is 3 feet above sea level. His island already is facing impacts from sea level rise and increased inundation during storms. With just 3 feet of sea level rise, Levi's home will be in the sea, which is likely to happen between 2065-2083. Long before 3 feet of sea level rise, Levi and his family will be forced out of their home because of the increasing frequency and depth of flooding and infrastructure failure in their home and community from sunny day flood events (King Tides and heavy rainfalls) and storm surges from tropical storms and hurricanes.

18. During the summer of 2017, Levi was forced to evacuate his home due to Hurricane Irma. Due to flood and other damage from Hurricane Irma, Levi's school was shut down. Levi is now required to enroll in a new school. Levi has been told his school may reopen in a new location in the Spring, but it is unknown whether and when this will occur. The loss of his school community is devastating to Levi. During fall 2017 storms, Levi's home had at least 18 inches of flood water in the front yard. Levi was literally up to his knees in the flood water and had to put sandbags around the house to protect it from water damage.

19. The beaches on the island are Levi's backyard. During the summer months, he spends time at the beach regularly and, during the remainder of the year, beach visits and recreation are common. However, Sargassum seaweed invasion, with seaweed covering the beaches along the island, is now common due to climate change and higher water

temperatures, as are many fish kills in the waters where Levi recreates. Levi's ability to access the beach and participate in beach activities have thus been reduced because the rotting seaweed smells like sulfur and the rotting fish create unsafe and unpleasant conditions. Levi's ability to swim in the Indian River Lagoon is often limited because of increasing flesh-eating bacteria and dead fish, also due to climate change and higher water temperatures. Levi and his family are able to routinely smell the dead fish in their community. Levi is now limited in where he can access and swim in the Atlantic Ocean, due to an increase in flesh-eating bacteria, Sargassum seaweed invasion and other Climate Change Impacts.

20. During the Red Tide outbreak along the Florida coastline in 2018, Levi was sickened and denied access to many of the beaches he routinely visits for recreation and environmental purposes. On several occasions, Levi was unable to visit Paradise Beach, Pelican Beach, and Cocoa Beach because of the Red Tide. He saw a number of dead fish and other animals on the beaches and when he approached the beach to take pictures, he started coughing, his eyes were burning and it was difficult to breath. He resorted to wearing a gas mask for protection. Levi participates in an organization called Keep Brevard Beautiful that organizes beach cleanups on Paradise Beach and he was unable to access the beach to do this activity. The Red Tide even negatively affected Levi's school schedule because he was unable to do two field trips to the beach with Explorer's Club, his core group of peers. At his home in Satellite Beach Levi was unable to go to the beach and participate in his normal outdoor activities during the Red Tide Outbreak because he would start coughing after being outside for five minutes. The Red Tide took

a significant emotional toll on Levi because it was hard for him to see so many dead animals and he was unable to access the beaches that he loves

21. In the last two years, Levi's severe allergies have made it harder for him to spend time outdoors. Among the adverse effects of Climate Change Impacts are an increase in allergies and adverse psychological impacts.

22. Plaintiff **Isaac A.**, by and through his natural guardian and mother Janet Ray Auspurg, is a 13-year-old U.S. citizen and resident of Alachua, Florida, one of the Florida counties most severely impacted by inland flooding due to significantly high volumes of rain and river flooding. Isaac is psychologically harmed by the overwhelming fears caused by the Climate Change Impacts and at times he feels hopeless and extremely sad.

23. Isaac lives on 20 acres of forest and farmland, which his family has owned for over 18 years. The warmer, more humid weather associated with Climate Change Impacts is harming the animals that Isaac and his family raise and depend on. Hotter weather makes it harder to work on the farm and allow more parasites and diseases to spread, such as those that killed off all but one of Isaac's new baby goats born in 2015.

24. Isaac and his family enjoy and recreate on many of Florida's northeastern beaches and coastal ecosystems but their ability to enjoy and recreate in these areas is being negatively impacted by climate change and sea level rise. The Florida Keys and the ocean life around them are also very important to Isaac and his father. On a recent snorkeling trip to the Keys, Isaac and his father noticed that ocean acidification has drastically changed the coral reefs in the Keys over the years since his childhood. Seeing this takes a toll on Isaac and he worries that he may not be able to continue to see and experience coral reefs and certain fish species as he grows up due to ocean warming and

acidification cause by CO_2 emissions. The increasing prevalence of toxic algal blooms off the coast of Florida due to climate change also limits Isaac's access and ability to swim and recreate in the ocean as they pose serious health threats to Isaac and others.

25. Isaac frequently visits the Blue Springs and Ginnie Springs a few miles from his home. Isaac has noticed significant decreases in the flow of the springs, which upon information and belief are due to climate change, which causes him stress and reduces his ability to access, use and enjoy the springs.

26. When Hurricane Irma struck Florida, there was a tremendous amount of flooding around Isaac's home. They lost power for about a day and did not have Internet service for over a week. Because of this, Isaac's school schedule was interrupted. Isaac's grandpa's property which he visits frequently, received so much water that it flooded about 8-9 acres of his grandpa's property. The water came up to the first step of his grandpa's house and just below his backdoor.

27. Plaintiff **Jose ("Andres") P.**, by and through his natural guardian and mother, Valerie Jean Phillips, is a 13-year-old U.S. citizen and a resident of Miami, Florida. Andres and his mother and older sister live in an apartment on the coast of Miami, about 4-5 feet above sea level. He and his family already are being impacted by flooding at their apartment building, with water flooding the sidewalks due to King Tide flooding caused by sea level rise. As a result of rising temperatures due to climate change, Andres' ability to spend time outside and participate in the activities he enjoys, like biking, playing soccer, basketball and football, has been diminished. Andres and his family enjoy swimming in the Oleta River, which flows from the Everglades into Biscayne Bay, but

they have been going less often due to recent algae alerts and massive fish die-offs, which have been attributed to climate change.

28. Andres is likely to lose his access to clean and safe drinking water. As sea levels rise, salt water is contaminating freshwater aquifers used for his drinking water supply. After getting sick and developing red eyes from a mosquito bite, Andres is threatened by potential mosquito-transmitted diseases. He has never had reactions to mosquitos until recently and is anxious about the Zika outbreaks.

29. Andres was forced to evacuate his home when Hurricane Irma struck Florida. After numerous failed attempts to find local hotels, they drove for three days to stay with their nearest relatives in Chicago. Ultimately, Andres missed about a week and a half of school because it was closed for the hurricane. Since the hurricane, Andres has been unable to swim in the waters around his home because there have been many reports that raw sewage has been discharged into the waters as a result of the hurricane. Andres is fearful about what the future holds and what his life and the planet will look like as he grows up.

30. Plaintiff **Lushia ("Luxha") P.**, by and through her guardian and mother, Valerie Jean Phillips, is a 15-year-old U.S. citizen and a resident of Miami, Florida. Luxha and her family have already been negatively impacted by climate change and will continue to be affected by increasingly severe storms and sea level rise. Luxha and her mother and younger brother live in an apartment on the coast of Miami, about 4-5 ft. above sea level.

31. Luxha is scared and fearful of time running out before disaster strikes her and her community. Over the last few years, Luxha has lived through erratic weather patterns in Florida. She's experienced sea levels rising, and long periods of both drought and

excessive rain. Luxha is also starting to see trees in her city's parks and on her school grounds become sickly.

32. Luxha and her family have experienced flooding at their apartment building, with water spilling onto the sidewalks from the street due to Climate Change Impacts such as sea level rise and increased severity of storms. Because of the erratic weather and more extreme storms, Luxha is concerned that she might soon lose access to her home, her school, and clean and safe drinking water. Because of sea level rise, salt water is beginning to invade freshwater aquifers used for the city's drinking water, which threatens Luxha's drinking supply. Luxha and her family swim in the Oleta River, which flows from the Everglades into Biscayne Bay, but their ability to access and swim in this River has been limited after the water started causing Luxha to experience skin irritations and itching. The Oleta River area has had recent algae alerts and massive fish die-offs due in part to climate change and warmer water temperatures.

33. An increase in heat waves in recent times has caused Luxha to have a hard time spending time outside and participating in the activities she enjoys like biking, playing soccer, and swimming.

34. Luxha was forced to evacuate her home when Hurricane Irma struck Florida. Ultimately, Luxha missed about a week and a half of school because it was closed for the hurricane. After the hurricane, Luxha was unable to swim in the waters around her home because there were reports that raw sewage and other pollutants from land-based sources was discharged into the waters as a result of the hurricane and flooding.

35. Plaintiff **Oliver C.**, by and through his guardian and mother, Emily Chamblin, is a 15-year-old U.S. citizen and a resident of Pensacola, Florida. He and his family live on

Bayou Grande, where he grew up swimming, kayaking, snorkeling and recreating. When he was younger, he used to be able to swim and recreate in the bayou year round, but now he is unable to do that because of Climate Change Impacts, such as increased runoff and stormwater runoff from unprecedented rain events. He frequently goes to Pensacola Beach and Johnson Beach to recreate with his family. He is not able to swim in the ocean as much as he used to because of the increase in jellyfish in the water that sting him. Populations of jellyfish are increasing along the Florida coast due to warmer water temperatures and other factors associated with climate change. Some of the jellyfish make their way into the bayou by his house and impede his ability to swim there as well. He also has seen a decline in the marine life, such as fish and dolphins, that he enjoys to observe in the bayou. In 2014, he experienced significant flooding, that caused his school to close down for 2-3 days. In recent years, flooding has become more common due to climate change and the increasing severity of storms.

36. Plaintiff **Valholly F. ("Peanut")**, by and through her guardian and mother, Rhonda Roff, is a 15-year-old U.S. citizen, resident of Weston, Florida. Her father is a member of the Panther Clan of the Seminole Tribe of Florida. She grew up and continues to spend a significant amount of time on the Big Cypress Indian Reservation. Her tribal heritage is closely linked to nature and many in her tribal community believe that if the land dies, so will the tribe. With the increasing temperatures in Florida, Peanut finds it harder to go outside and engage in her normal activities, such as going to the beach and exploring nature on the reservation. On the reservation, she has witnessed many native plants struggling to survive and there are a lot less animals, such as frogs, toads and butterflies. She has noticed an increase in mosquitoes.

37. The Everglades ecosystem is an important part of Peanut's cultural heritage. She grew up in the Everglades and has been surrounded by its ecosystem her entire life. She has witnessed the Climate Change Impacts that have happened in the Everglades which is negatively affecting many of her traditional cultural areas and practices.

38. Because her house in Weston is at sea level, Peanut and her family evacuated to their home on the Big Cypress Reservation during Hurricane Irma. Her neighborhood in Weston flooded and the lake adjacent to their home rose several inches into their backyard. She lost power for several days and missed an entire week of school because the school was closed due to significant flooding. She and her family also evacuated their home during Hurricane Irma and missed a lot of school during this time as well. Experiencing these hurricanes has been terrifying because she knows that Climate Change Impacts are getting more severe and will become life threatening if her state does not act to address climate change.

39. Plaintiff **Oscar Psychas** is a 20-year-old U.S. citizen whose family home is along the shore of Newnan's Lake, a wild lake that is surrounded by cypress swamps a few miles outside of Gainesville, Florida in Alachua County. Oscar spends much of his free time hiking, canoeing and camping throughout the state of Florida, particularly around his home on Newnan Lake. While in high school, Oscar founded and led his school's environmental club and took students on hiking and canoeing trips. Oscar's neighborhood, particularly his access road, is low-lying and vulnerable to flooding and storm damage. When Hurricane Irma struck Florida, his access road was flooded by two feet of water for one week, which completely cut off access to and from their home. During this time, his parents commuted to work by canoe. His home was without power

for nine days and the surrounding environment was significantly damaged due to down trees. His dock was destroyed, eliminating Oscar's access to Lake Newnan, and it must be completely rebuilt. His ability to recreate in places he has traditionally visited has become limited because of Climate Change Impacts. Oscar has witnessed Climate Change Impacts in the wild places of Florida and he fears that he will not be able to share these experiences with his children.

40. The above-described health, recreational, scientific, cultural, inspirational, educational, aesthetic, property, and other interests of Delaney, Levi, Isaac, Andres, Luxha, Oliver, Peanut, Oscar, and other Floridians, are being, and will continue to be, adversely and irreparably injured by Defendants' failure to protect Public Trust Resources by establishing and enforcing adequate limitations on the levels of CO_2 and other GHG pollution consistent with Florida's responsibility to reduce the level of CO_2 concentrations in the atmosphere to safe levels in order to provide a livable future for Plaintiffs and all Floridians.

41. Defendants' ongoing causation of dangerous amounts of fossil fuel consumption and GHG pollution through its Fossil Fuel Energy System, and its failure to sufficiently cap and annually reduce CO_2 emissions in the State, is contributing to the harm to Levi's, Isaac's, Andres', Luxha's, Delaney's, Oliver's, Peanut's, and Oscar's lives, liberties, and properties violating their inalienable rights as citizen beneficiaries of the Public Trust Doctrine under Article II, Section 7(a), Article X, Section 11, and Article X, Section 16, as well as under common law, and can only be redressed by a favorable order from the Court.

DEFENDANTS

42. Defendant the **State of Florida** is the sovereign trustee over public natural resources within its domain, including air, water, the sea, shores of the sea, and fish and wildlife, and it must protect those Public Trust Resources from substantial impairment and alienation, for the benefit of present and future generations of Floridians. These resources must be managed and protected for the benefit of the public good and all future generations, not for the benefit of private individuals. The State of Florida must refrain from performing its trustee duties in a manner that results in the substantial impairment of Public Trust Resources, and it also has an obligation to affirmatively act to protect Public Trust Resources. In substantial part due to the State of Florida's affirmative actions that allow and promote fossil fuel development and use, as well as the State of Florida's failure to limit and phase out fossil fuels, the concentration of CO_2 and other GHGs in the atmosphere has risen to dangerous levels that constitute a breach of the State of Florida's fiduciary duties to protect the constitutional and common law rights of the Plaintiffs and the citizens of Florida.

43. Defendant **Rick Scott**[3] is the Governor of the State of Florida and is sued in his official capacity. The Governor "shall take care that the laws be faithfully executed, commission all officers of the state and counties, and transact all necessary business with the officers of government." Art. IV, § 1, Fla. Const. The Governor must approve every bill before it becomes law and has the authority to veto legislation. Art. III, § 8, Fla. Const. The Governor may convene the legislature for a special session to address specific legislative business. Art. III, § 3(c), Fla. Const. The Governor is required to make recommendations

[3] In light of the November 2018 election, Governor-Elect Ron DeSantis will be substituted in as a Defendant when he assumes office. Fla. R. Civ. P. 1.260(d).

to the legislature every two years revising the State's long-range state planning document. Art. III, § 19(h), Fla. Const. The Governor is the chief administrative officer and supervises Florida's state agencies and appoints members to various agencies and other positions within the Executive branch. Art. IV, § 1, Fla. Const. The Governor is responsible for planning and budgeting for the State. Art. IV, § 1, Fla. Const. The Governor is responsible for preparing and updating the State's Comprehensive Plan and directing agencies to prepare and implement plans necessary to meet the goals of the State Comprehensive Plan. § 186.006, Fla. Stat. Among other things, this Plan is meant to protect the health, safety, and welfare of Florida's children; "assure a safe and healthful environment" by regulating activities that impact the State's air, water, and food; protect and improve surface and groundwater quality for drinking water and natural resource protection; protect marine fisheries, beaches, and coastal ecosystems; improve air quality to "safeguard human health and prevent damage to the natural environment;" reduce energy requirements and "reduce atmospheric carbon dioxide;" protect Florida's air, water, and land from resource extraction; and integrate "systemic planning capabilities . . . into all levels of government." The Governor sits on the Natural Gas Transmission Pipeline Siting Board, which approves permits for natural gas pipelines, as well as the Siting Board that authorizes power plants, transmission lines, and associated facilities and projects. Together with the Cabinet, the Governor issues siting certifications for power plants, transmission lines, and natural gas pipelines. Additionally, the Governor sits on the Defendant Board of Trustees of the Internal Improvement Trust Fund, which is vested and charged with the conservation and protection of all lands owned by the State. § 253.03, Fla. Stat.

44. Defendant the **Florida Department of Environmental Protection** ("FDEP") is the state agency responsible for conserving and maintaining Florida's natural resources and for enforcing many of the State's environmental laws. As a trustee of Public Trust Resources, the FDEP has the "power and duty to control and prohibit pollution of air and water" and to "[a]dopt a comprehensive program for the prevention, control, and abatement of pollution of the air and waters of the state." § 403.061, Fla. Stat. The FDEP permits and charges operation license fees to each major source of air pollution in Florida. The FDEP also permits minor sources of air pollutants. The permits for major and minor sources of air pollution specify emission limits and requirements for construction and operation. The FDEP also provides permits for the various stages of oil and gas development, including oil and gas exploration, drilling and operating of wells, and the plugging of wells, as well as natural gas storage facilities. The FDEP also coordinates interagency review and certification of the construction and operation of power plants, transmission lines, and pipelines. The FDEP's affirmative acts permit the development, transportation, and combustion of fossil fuels that are resulting in dangerous levels of CO_2 and GHG pollution. The FDEP "is the agency of state government responsible for collecting and analyzing information concerning energy resources in this state; for coordinating the energy conservation programs of state agencies; and for coordinating the development, review, and implementation of the state's energy policy." § 20.255(7), Fla. Stat. The FDEP also has numerous natural resource and water management responsibilities defined by statute.

45. Defendant **Noah Valenstein** is the Secretary of the Florida Department of Environmental Protection and responsible for ensuring FDEP meets its constitutional and statutory

obligations. He is sued in his official capacity as Secretary of the Florida Department of Environmental Protection.

46. Defendant the **Florida Department of Agriculture and Consumer Services** ("FDACS"), which includes the Office of Energy, is charged with coordinating Florida's energy policy and the State's energy-related programs, including planning for the development of energy efficiency and renewable energy resources and programs and reducing dependence on energy resources like oil and gas. § 570.67 and Chapter 377 Parts II and III, Fla. Stat. FDACS responsibilities include reporting to the Governor and Legislature with "recommendations for policies for improvement of the state's response to energy supply and demand and its effect on the health, safety, and welfare of the residents of the state." § 377.703(2), Fla. Stat. The FDACS is a statutory party to the proceedings whereby the Florida Public Service Commission sets the numeric goals governing the extent to which the state's largest utilities acquire "demand side" energy resources[4] – and must file comments in those proceedings based on its technical analyses. § 366.82(5), Fla. Stat. The FDACS is also responsible for collecting data on the extraction, production, importation, exportation, transportation, transmission, and sale of reserves of energy sources in the State and issuing reports based on that data. § 377.603, Fla. Stat. In addition, the FDACS is responsible for protecting and promoting the appropriate and efficient use of soil and water resources as well as protecting the state's farm, forests, and grazing lands, which are "among the most basic assets of the state and

[4] "Demand side" energy resources meet utility-customer needs with a wide range of technologies that increase the energy efficiency of the existing and emerging fleet of buildings in each utility's service area and thus lower "demand" for electricity (in contrast to 'supply side' energy resources whereby utility-customer needs are met by via electrical power generation or transmission/distribution wires, such as by a fossil-fueled power plant generating electricity that is delivered to customers through such wires). *See* footnote 6 and accompanying text, *supra*.

the conservation of these lands is necessary to protect and promote the health, safety, and general welfare of its people and is in the public interest." § 582.02, Fla. Stat.

47. The FDACS includes the Florida Forest Service, which is responsible for managing over one million acres of state forest resources for present and future generations and promoting forest land stewardship, good forest management, and tree planting and care. § 589.04, Fla. Stat. The FDACS is responsible for overseeing and managing Florida's agricultural sector, including the state's agricultural practices, which has a significant impact on whether agriculture practices contribute to carbon sequestration or release carbon. Florida's forests and soils are critical for sequestering CO_2 and must be managed in order to maximize their carbon sequestration potential. Instead of using its authority to promote renewable energy policies, energy efficiency, and land management practices designed to maximize carbon sequestration, the FDACS continues to promote a Fossil Fuel Energy System and land management practices that are not adequately sequestering CO_2.

48. Defendant **Adam Putnam**[5] is the Commissioner of the Florida Department of Agriculture and Consumer Services and is responsible for ensuring FDACS meets its constitutional and statutory obligations. He is sued in his official capacity as Commissioner of the Florida Department of Agriculture and Consumer Services and as a member of the Florida Cabinet.

49. Defendant **Florida Board of Trustees of Internal Improvement Trust Fund** is comprised of Defendant Governor Scott and other members of the Florida Cabinet. The Board of Trustees is "vested and charged with the acquisition, administration,

[5] In light of the November 2018 election, Commissioner-Elect Nikki Fried will be substituted in as a Defendant when she assumes office. Fla. R. Civ. P. 1.260(d).

management, control, supervision, conservation, protection, and disposition of" state lands, and can take actions "necessary to the full protection and conservation of [state] lands." § 253.04(1), Fla. Stat. "All lands held in the name of the board of trustees shall continue to be held in trust for the use and benefit of the people of the state pursuant to s. 7, Art. II, and s. 11, Art. X of the State Constitution." § 253.001, Fla. Stat.

50. Defendant **Florida Public Service Commission** ("Commission") is the state agency charged with regulating and supervising public utility rates and services in a manner that "promote[s] the convenience and welfare of the public." § 366.05(1), Fla. Stat. The Commission is responsible for reviewing standard offer contracts and to ensure they fulfill the energy policies of the state. § 366.91, Fla. Stat. The Commission has the authority and obligation to examine future electricity costs related to climate change and is specifically authorized to adopt rules to administer and implement Florida's renewable energy policy. §§ 366.06, 366.92(5), Fla. Stat. The Commission reviews all Electric Utility 10-year Site Plans, the most recent versions of which project Florida energy generation and consumption through 2026. § 186.801, Fla. Stat. Under the Florida Energy Efficiency and Conservation Act, the Commission has the obligation to develop and adopt overall goals to promote demand-side and renewable energy resource systems and the conservation of energy and natural gas usage. § 366.81; § 366.82(2)-(3), Fla. Stat. In addition, the Commission has the exclusive jurisdiction to determine the need[6] for new electric power plants under the Electrical Power Plant Siting Act (§§ 403.501-.519, Fla

[6] For example, a new power plant or a new high-voltage transmission line would not be needed if demand-side energy efficiency or renewable energy resources could reliable and affordably satisfy the same utility-customer needs. *See* footnote 4, *infra.*

Stat) or for new high-voltage transmission lines under the Transmission Line Siting Act (§ 403.537, Fla. Stat.).

51. Florida is the home to approximately 20 million residents, third most of any state; Florida's GDP is nearly $1 trillion annually; Florida has 1,350 miles of coastline, second only to Alaska. The Defendants' collective actions, policies, practices and customs that make up the state's Fossil Fuel Energy System are causing dangerous amounts of GHG pollution and resulting in material adverse impacts to the Public Trust Resources of the state and the present and future generations that depend upon such resources in the exercise of their rights to life, liberty, property, and the pursuit of happiness.

52. GHG pollution is a function of a systemic problem caused by the Fossil Fuel Energy System, which the named Defendants control and perpetuate through their authorities, actions, and inactions. The infringement of the constitutional and common law rights of the Plaintiffs and the violations of the constitutional and common law Public Trust Doctrine cannot be remedied without systemic change. Continuation of the status quo system currently in place in Florida will irreversibly harm Plaintiffs and present and future generations of Floridians unless the Court acts as a constitutional check on the Defendants and affords a remedy to Plaintiffs and the residents of Florida.

53. Through its Fossil Fuel Energy System, Defendants are collectively responsible for authorizing, promoting, and permitting fossil fuel production, consumption, transportation, and combustion in the State of Florida, as well as deforestation and soil degradation, and thus allowing CO_2 and GHG pollution to rise to dangerous levels and cause substantial harm to Plaintiffs. Defendants also have failed to use their authority take the requisite available steps to protect Florida's essential natural resources, including

the air and its waters, from dangerous levels of CO_2 and GHG pollution. The affirmative aggregate acts and omissions of Defendants, jointly and severally, have violated, and continue to violate Plaintiffs' inalienable rights protected by the Florida Constitution and by the common law.

ANTHROPOGENIC CLIMATE CHANGE

54. There is an overwhelming scientific consensus that human-caused climate change is occurring and negatively affecting the state of Florida. On November 23, 2018, the Trump Administration released the Fourth National Climate Assessment, a comprehensive and authoritative report on climate change impacts in the United States. This assessment confirms that the harms Plaintiffs face are worsening and becoming irreversible as a direct result of excessive GHG pollution to which Defendants are contributing:

> This report draws a direct connection between the warming atmosphere and the resulting changes that affect Americans' lives, communities, and livelihoods, now and in the future. It documents vulnerabilities, risks, and impacts associated with natural climate variability and human-caused climate change across the United States and provides examples of response actions underway in many communities. It concludes that *the evidence of human-caused climate change is overwhelming and continues to strengthen, that the impacts of climate change are intensifying across the country, and that climate-related threats to Americans' physical, social, and economic well-being are rising.* These impacts are projected to intensify-but how much they intensify will depend on actions taken to reduce global greenhouse gas emissions and to adapt to the risks from climate change now and in the coming decades.[7]

55. The release of the Fourth National Climate Assessment follows the September 10, 2018 remarks of United Nations Secretary-General Antonio Guterres on climate change:

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[7] *Fourth National Climate Assessment Chapter 1: Overview*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/1/ (last visited Dec. 17, 2018) ("NCA4 Chapter 1") (emphasis in original).

> Climate change is the defining issue of our time – and we are at a defining moment. We face a direct existential threat. Climate change is moving faster than we are – and its speed has provoked a sonic boom "SOS" across our world. If we do not change course by 2020, we risk missing the point where we can avoid runaway climate change, with disastrous consequences for people and all the natural systems that sustain us.[8]

56. The present rate of global heating is a result of anthropogenic GHG pollution, primarily CO_2 emissions, from the combustion of fossil fuels. This release of GHGs into the atmosphere, combined with deforestation and soil degradation, has disrupted Earth's energy balance, thereby changing Earth's climate.

57. In 2013, the atmospheric CO_2 concentration exceeded 400 ppm for the first time in recorded history, well above the pre-industrial concentration of 280 ppm. The average CO_2 concentration for 2017 was 407 ppm. The current CO_2 concentration is the highest it has been in the last three million years. The last time in the geologic record that atmospheric CO_2 was at present levels, the seas were 70-90 feet higher than they are today.

58. The concentration of other GHGs in the atmosphere also has increased. For example, methane concentrations have increased approximately 250 percent since the pre-industrial period.

59. GHGs in the atmosphere act like a blanket over Earth to trap some of the energy the Earth receives from the sun. Without this greenhouse effect, the average surface temperature of our planet would be 0°F (-18°C) instead of 59°F (15°C). Scientists have understood this basic mechanism of global warming since the late-nineteenth century.

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[8] *Addressing Climate Change, Secretary-General Say's World's Fate is in our Hands, Requires Rising to Challenge Before its Too Late* (September 10, 2018), https://www.un.org/press/en/2018/sgsm19205.doc.htm.

More GHGs in the atmosphere means that more heat is being retained on Earth, with less heat radiating back out into space, causing a disruption in Earth's energy balance.

60. A substantial portion (around 20%) of every ton of CO_2 emitted by humans persists in the atmosphere for as long as a millennium or more, therefore the impacts associated with CO_2 emissions of today will be mostly borne by our children and future generations. As the Trump Administration recently acknowledged: "Valued aspects of regional heritage and quality of life tied to the natural environment, wildlife, and outdoor recreation will change with the climate, and as a result, future generations can expect to experience and interact with natural systems in ways that are much different than today."[9] The Earth will continue to warm in reaction to concentrations of CO_2 from past emissions, as well as future emissions. This has been well understood and accepted by government and the fossil fuel industry since at least the 1950s.

61. In 1955, an article sponsored by the United States Office of Naval Research, *The Carbon Dioxide Theory of Climate Change*, linked the release of CO_2 from human activities to temperature increases. A 1965 White House Report, Restoring the Quality of Our Environment, stated that CO_2 from the burning of fossil fuels "will modify the heat balance of the atmosphere to such an extent that marked changes in climate, not controllable through local or even national efforts, could occur." The 1965 report linked rising CO_2 emissions to temperature increases, melting of the Antarctic ice cap, sea level rise and warming, and other impacts. The report stated that humans are "unwittingly conducting a vast geophysical experiment."

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[9] *Fourth National Climate Assessment Chapter 1: Overview*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/1/ (last visited Dec. 17, 2018); *Fourth National Climate Assessment Chapter 19: Southeast*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/19/ (last visited Dec. 17, 2018).

62. For decades, the U.S. Government and the State of Florida have acknowledged that climate change is occurring from burning fossil fuels, that its adverse effects are underway and that a continuation of a Fossil Fuel Energy System and failure to reduce GHG pollution would consign future generations to irreversible and catastrophic consequences. In 2014, the Third National Climate Assessment acknowledged that "the cumulative weight of the scientific evidence . . . confirms that climate change is affecting the American people now, and that choices we make will affect our future and that of future generations." Four years later, this message was repeated by the Trump Administration in the Fourth National Climate Assessment:

> Observations collected around the world provide significant, clear, and compelling evidence that global average temperature is much higher, and is rising more rapidly, than anything modern civilization has experienced with widespread and growing impacts. The warming trend observed over the past century can only be explained by the effects that human activities, especially emissions of greenhouse gases, have had on the climate.[10]

63. A 1997 U.S. Environmental Protection Report, *Climate Change and Florida*, found that sea level rise due to climate change would cause large losses of mangroves in Florida, damage freshwater ecosystems, accelerate coastal erosion, exacerbate flooding, increase vulnerability to storm damage, threaten freshwater drinking supplies, and lead to the loss of land, structures, and wildlife habitat. The National Oceanic and Atmospheric Administration ("NOAA") has recently reported that nuisance flooding is 300-900% more frequent than it was 50 years ago. A study released in 2018 has found that Florida is the "hot spot" for flooding and has assets valued at $714 billion at risk of destruction.

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[10] *Fourth National Climate Assessment Chapter 1: Overview*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/1/ (last visited Dec. 17, 2018).

64. The 2008 Energy and Climate Change Action Plan for the State of Florida acknowledged that Florida will see an increase in temperatures and sea levels as a result of climate change and that "[t]ropical storms and hurricanes are likely to become more intense, produce stronger peak winds, and produce increased rainfall over some areas due to warming sea surface temperatures." The Plan also noted that if Florida acted to reduce GHG pollution, the effects of climate change could be "avoided, minimized, or mitigated" and that actions to reduce GHG pollution already are available.

65. Climate Change Impacts result from human-caused GHG pollution and deforestation and degradation of soils. Climate Change Impacts are already injuring and irreversibly destroying human and other natural systems, causing loss of life/health, and pressing species to extinction. Unless arrested by immediate science-based action, climate change will produce catastrophic and irreversible consequences for humanity and nature alike, as tipping points are reached and points of no return are crossed. The Fourth National Climate Assessment confirms that "[w]ithout significant reductions in greenhouse gas emissions, extinctions and transformative impacts on some ecosystems cannot be avoided, with varying impacts on the economic, recreational, and subsistence activities they support."[11]

66. Well-documented and observable impacts from the changes in the climate system highlight that the current level of atmospheric CO_2 concentration, over 400 ppm, already has taken Florida and the rest of Earth into a danger zone. Current CO_2 and GHG concentrations are resulting in the warming of land surfaces, the warming and acidifying of oceans, increased atmospheric moisture levels, rises in the global sea level, and

[11] *Fourth National Climate Assessment Chapter 1: Overview*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/1/ (last visited Dec. 17, 2018).

changes in rainfall and atmospheric air circulation patterns that affect water and heat distribution, among other impacts.

67. One key observable change is the rapid increase in recorded global surface temperatures. As a result of increased atmospheric CO_2 and GHG pollution from human activities, based on fundamental scientific principles, the Earth has been warming as scientists have predicted. The increased concentrations of GHGs in our atmosphere have raised global surface temperature by about 1.8°F (1.06°C) from 1880 to 2015, which is above, probably well above, the maximum warming of the Holocene era, the period of relatively stable climate over the last 10,000 years over which human civilization developed. In the last 30 years, the acceleration of change has intensified as the Earth has been warming at a rate three times faster than that over the previous one hundred years. According to National Aeronautics and Space Administration ("NASA"), 2014 was the hottest year on record, until 2015 broke that record. 2016 exceeded both 2014 and 2015, marking the first time since modern recordkeeping began that three consecutive years were the hottest years on record. 2017 was the third warmest year in NOAA's 138-year climate record, behind 2016 (warmest) and 2015 (second warmest).[12]

68. The Trump Administration's Fourth National Climate Assessment warns that "without major reductions in [GHG] emissions, the increase in annual average global temperatures relative to preindustrial times could reach 9°F (5°C) or more by the end of this century. Because of the slow timescale over which the ocean absorbs heat, warming that results

[12] NOAA, *2017 Was 3rd Warmest Year on Record for the Globe*, https://www.noaa.gov/news/noaa-2017-was-3rd-warmest-year-on-record-for-globe (January 18, 2018).

from emissions that occur during this century will leave a multi-millennial legacy, with a substantial fraction of the warming persisting for more than 10,000 years."[13]

69. As expected (and consistent with the temperature increases in land surfaces), ocean temperatures also have increased. Approximately 93.45% of the excess energy (heat) human pollution has forced on the planet has been absorbed by the oceans to 1000 meters or more in depth. Over half of this excess heat from human-induced climate change has transferred to the ocean since 1997. This has led to changes in the ability of the oceans to circulate heat around the globe; which can have catastrophic implications for the global climate system. The average temperature of the global ocean has increased significantly despite its remarkable ability to absorb enormous amounts of heat before exhibiting any indication thereof.

70. The United States Environmental Protection Agency ("EPA"), as well as the thirteen federal agencies that contributed to the Fourth National Climate Assessment, have found that climate change already harms our health and welfare and will only worsen without immediate action: "The health and well-being of Americans are already affected by climate change, with the adverse health consequences projected to worsen with additional climate change. Climate change affects human health by altering exposures to heat waves, floods, droughts, and other extreme events; vector- and food- and waterborne infectious diseases; changes in the quality and safety of air, food and water; and stresses to mental health and well-being."[14]

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[13] *Fourth National Climate Assessment Chapter 2: Our Changing Climate*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/2/ (last visited Dec. 17, 2018).
[14] *Fourth National Climate Assessment Chapter 14: Human Health*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/14/ (last visited Dec. 17, 2018).

71. Children, such as the Plaintiffs, are especially vulnerable to adverse health impacts due to climate change. For example, "[d]isasters present a heavy burden on the mental health of children when there is forced displacement from their home or a loss of family and community stability."[15]

72. Mental health disorders are likely to be one of the most dangerous indirect health effects of climate change. The mental health effects can include elevated levels of anxiety, depression, PTSD, and a distressing sense of loss. The impacts of these mental health effects include chronic depression, increased incidences of suicide, substance abuse, and greater social disruptions like increased violence. Again, children are disproportionately affected by these climate-related health risks.[16]

73. Climate change already is causing, and will continue to result in, more frequent, extreme, and costly weather events, such as floods and hurricanes. The annual number of major tropical storms and hurricanes has increased over the past 100 years in North America, coinciding with increasing temperatures in the Atlantic sea surface. "While 2017 tied the previous record year of 2011 for the total number of billion-dollar weather and climate disasters – 16 – the year broke the all-time previous record high costs by reaching $306.2 billion in damages (in 2017 dollars; $297 billion in 2015 dollars)."[17]

74. Scientific evidence demonstrates that non-linear sea level rise would submerge much of Florida and the eastern seaboard of the U.S., impacting millions of Americans and trillions of dollars of property, unless there are immediate reductions in CO_2 and GHG

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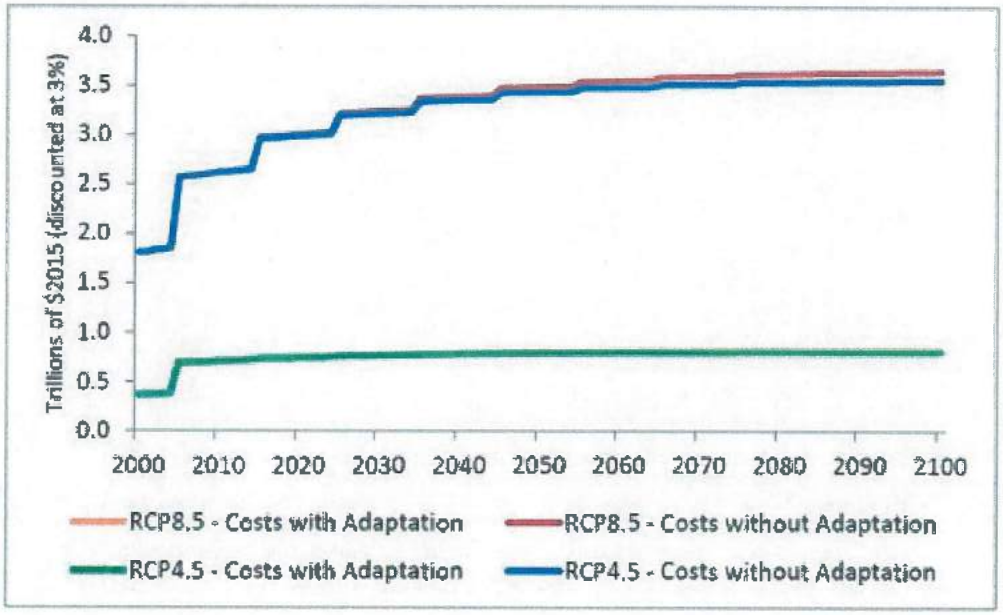
[15] *Fourth National Climate Assessment Chapter 14: Human Health*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/14/ (last visited Dec. 17, 2018).
[16] *Fourth National Climate Assessment Chapter 14: Human Health*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/14/ (last visited Dec. 17, 2018).
[17] *Fourth National Climate Assessment Chapter 19: Southeast*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/19/ (last visited Dec. 5, 2018).

pollution. Specifically, the U.S. EPA reports that sea level rise and storm surge could result in cumulative damages of $3.6 trillion through 2100 and notes that "adaptation costs are comparatively higher in sites such as Tampa and Miami, where there are many high-value properties in low-lying areas and high levels of storm surge are protected in the future."[18]

Figure 15.1. Cumulative Costs of Sea Level Rise and Storm Surge to Coastal Property

Costs are presented with and without adaptation under RCP8.5 and RCP4.5[279] in trillions of $2015, discounted at 3%.



75. Global mean sea level has risen about 8-9 inches since the industrial revolution and 3 inches of that rise has occurred since 1993. Even these relatively small increases have had substantial effect on low-lying areas.

[18] U.S. EPA, *Multi-Modal Framework for Quantitative Sectoral Impacts Analysis: A Technical Report for the Fourth National Climate Assessment* (May 2017) at 114-15, https://cfpub.epa.gov/si/si_public_record_Report.cfm?Lab=OAP&dirEntryId=335095.

76. Scientists have established that during certain periods of the geologic record rises in sea level have occurred very rapidly. This geologic evidence for rapid ice sheet disintegration, once destabilized, verifies that the numerous reinforcing, accelerating feedbacks scientists are observing for recent ice sheet melt on Greenland and Antarctica is occurring.

77. In 2017, the National Oceanic and Atmospheric Administration ("NOAA") published the most recent United States Government sea level rise projections, once again confirming that sea level rise is a certain impact of climate change. NOAA's projections, which included acceleration of ice melt from Greenland and Antarctica, included a range between 4.1-8 feet global mean sea level rise by 2100. However, for certain coastlines across the U.S., the high ranges could be 1-3.3 feet higher. NOAA's 2017 projections are higher than the projections it made just five years ago in its 2012 assessment.

78. Under NOAA's 2017 projected scenarios, there could be 2 feet of sea level rise by 2048, 4 feet by 2074, 6 feet by 2093, 8 feet by 2110, and 10 feet by 2125. A 2-3 foot rise of sea level will make nearly all of the barrier islands of the world uninhabitable, result in inundation of a major portion of the world's deltas, and make low-lying coastal zones in Florida increasingly challenging communities in which to maintain infrastructure and welfare and to ensure protection of life and property during extreme rainfall events and hurricanes.

79. NOAA reports that even 3 feet of sea level rise would permanently inundate 2 million American's homes and communities and 6.6 feet of sea level rise would put 6 million U.S. homes underwater.

80. In the Fourth National Climate Assessment, the Trump Administration confirmed that "[w]ith rapid ice loss from Greenland and Antarctica under the higher [NOAA] scenario (RCP8.5), an Extreme scenario of global sea level rising upwards of 8 feet by 2100 is a possibility. Under this rise, the average daily high tide would exceed the current 100-year (1% annual chance) coastal water level event location in most U.S. coastal locations."[19]

81. NOAA's projection of up to 8 feet of sea level rise by 2100 is representative of sea level projections typically made in the scientific literature based on current modeling, including the current rate of accelerated melting in the poles, but it does not address other plausible high-risk scenarios. The scientific consensus regarding the historic rapid pulses in sea level rise as ice sheets disintegrate is not incorporated in NOAA's 2017 model, or any of the modeling summarized by the Intergovernmental Panel on Climate Change.

82. The best scientific information available project a 15-30-foot rise in sea level by 2100 if current trends continue, with ever greater rises and acceleration in subsequent centuries until such time as levels of CO_2 in the atmosphere are dramatically reduced and steps are taken to cool the upper portion of the ocean.[20]

83. Climate change and ocean acidification are threatening the survival and wellbeing of plants, fish and wildlife, and Earth's biodiversity. As many as one in six species are threatened with extinction due to climate change. Many more species that do not face extinction will face changes in abundance, distributions, and species interactions that cause adverse impacts for ecosystems and humans. The Trump Administration

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[19] *Fourth National Climate Assessment Chapter 8: Coastal Effects*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/8/ (last visited Dec. 17, 2018).

[20] *See, e.g., Juliana, et al. v. United States*, No. 17-71692 (9th Circuit Court of Appeals) (Decl. of Dr. Harold R. Wanless in Support of Answer of Real Parties in Interest to Petition for Writ of Mandamus) (filed Aug. 28, 2017).

acknowledged that "[w]ithout significant reductions in greenhouse gas emissions, extinctions and transformative impacts on some ecosystems cannot be avoided, with varying impacts on the economic, recreational, and subsistence activities they support."[21]

84. Increased CO_2 emissions are having a severe negative impact on our oceans, in addition to our climate system. The oceans absorb around 25-30% of global CO_2 emissions, resulting in their acidification. Ocean acidity has been rising at a geologically unprecedented rate. Currently, acidity is rising at least 100 times faster than at any other period during the last 100,000 years, threatening marine life, including human food sources, and killing coral reefs.

85. The Trump Administration states that "the impacts to coral reef ecosystems in the [Southeast] region have been and are expected to be particularly dire."[22]

86. The best available science shows long-term average global surface heating must not exceed 1°C for a long period of time this century if the Earth's natural systems are to remain intact.

87. According to the current climate science, to prevent long-term global heating greater than 1°C and a short-term peak of no more than 1.5°C, concentrations of atmospheric CO_2 must decline to 350 ppm or less by the end of this century.

88. Oceans have the same scientific standard of protection. Critically important ocean ecosystems, such as coral reefs, are substantially impaired and threatened with increasingly devastating impacts by present day CO_2 concentrations of approximately 407 ppm. According current science atmospheric CO_2 levels should be reduced to no

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[21] *Fourth National Climate Assessment Chapter 1: Overview*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/1/ (last visited Dec. 17, 2018).
[22] *Fourth National Climate Assessment Chapter 19: Southeast*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/19/ (last visited Dec. 5, 2018).

more than 350 ppm in order to protect ocean ecosystems and coral reefs from dangerous acidification and warming.

89. If emissions peaked and reductions began in 2005, only a three and one-half percent (3.5%) per year reduction would have been necessary to reach 350 ppm by 2100, along with carbon sequestration of 100 gigatons of carbon ("GtC") through reforestation and soil sequestration. If emission reductions begin in 2018, the annual rate of reduction would need to be nine and two-tenth percent (9.2%), along with carbon sequestration of 100 GtC through reforestation and soil sequestration. For every additional year of delay, the annual rate of CO_2 and GHG emission reductions required to reach 350 ppm by 2100 increases, making it extremely important that GHG emission reductions begin immediately before the rate of annual GHG emission reductions becomes so large it is impracticable. These targets reflect the global average emission reductions required to remedy the current climate emergency without accounting for the differentiated and equitable responsibilities of individual states and their historic contribution to carbon pollution.

90. The Fourth National Climate Assessment agrees that GHG reductions in the near term are critical to avoiding the most severe climate change impacts: "Early greenhouse gas emissions reductions reduce climate impacts in the near term and in the longer term by avoiding critical thresholds (such as marine ice sheet instability and the resulting consequences for sea level rise)."[23] The Fourth National Climate Assessment references

[23] *Fourth National Climate Assessment Chapter 1: Overview*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/1/ (last visited Dec. 17, 2018).

"research [that] supports that early and substantial mitigation offers a greater chance of avoiding increasingly adverse impacts."[24]

91. Improved forestry and agricultural practices can provide the necessary net drawdown of atmospheric CO_2 naturally, without relying on unproven technologies to capture and sequester carbon. This carbon drawdown is achievable primarily via reforestation of degraded lands that are of little or no value for agricultural purposes, and by changing agricultural and land management practices to increase the amount of carbon that is stored underground in healthy soils. These practices can help in returning the atmosphere to safe levels of atmospheric CO_2 while reducing erosion and improving soil fertility and forest health.

92. Florida can achieve a zero-CO_2 economy within the next 30 to 50 years without acquiring carbon credits from other jurisdictions. In other words, the direct emissions of CO_2 from burning fossil fuels can be cost-effectively eliminated in Florida by substituting building, energy, and transportation technologies that are now available or reasonably foreseeable.

CLIMATE CHANGE IMPACTS IN FLORIDA THAT ARE HARMING THE PLAINTIFFS

93. The Plaintiffs already are experiencing the devastating impacts of climate change, and will continue to do so with increasing severity unless there are immediate, science-based, and systemic reductions in CO_2 emissions. As the Trump Administration acknowledged in the Fourth National Climate Assessment, drought, extreme weather events, sea level

[24] *Fourth National Climate Assessment Chapter 29: Reducing Risks Through Emissions Mitigation,* U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/29/ (last visited Dec. 17, 2018).

rise, coastal flooding, and ocean acidification "are being acutely felt now"[25] in Florida and will worsen with time absent substantial GHG emission reductions.

94. The science of attributing extreme weather events to climate change is developing rapidly and now is reliable to make significant, scientifically accurate probabilistic predictions about future weather events and the expected severity of weather-related natural disasters. Scientifically reliable research has been done and continues to advance establishing a causal relationship between anthropogenic GHG pollution and certain extreme weather events, including those that have affected Florida.

95. Sea level rise, storm surges, and salt-water intrusion are among the biggest impacts being experienced in Florida.

96. Florida has more than 1,200 miles of coastline, 6,700 square miles of coastal waters, and 4,500 square miles of estuaries. Scientists predict that non-linear sea level rise could lead to several meters of sea level rise in the coming decades without immediate science-based reductions in GHG pollution.

97. A maximum land elevation in Florida of 400 feet (400') above sea level makes rising sea levels an extraordinary threat to Florida's land and residents. A mere one-meter (about 3 feet (3')) rise in sea levels, which is at the low end of projections under business-as-usual emissions scenarios, would result in a nine percent (9%) loss of Florida's landmass, impacting ten percent (10%) of the State's population, and a projected loss of 37,000 acres of cropland.

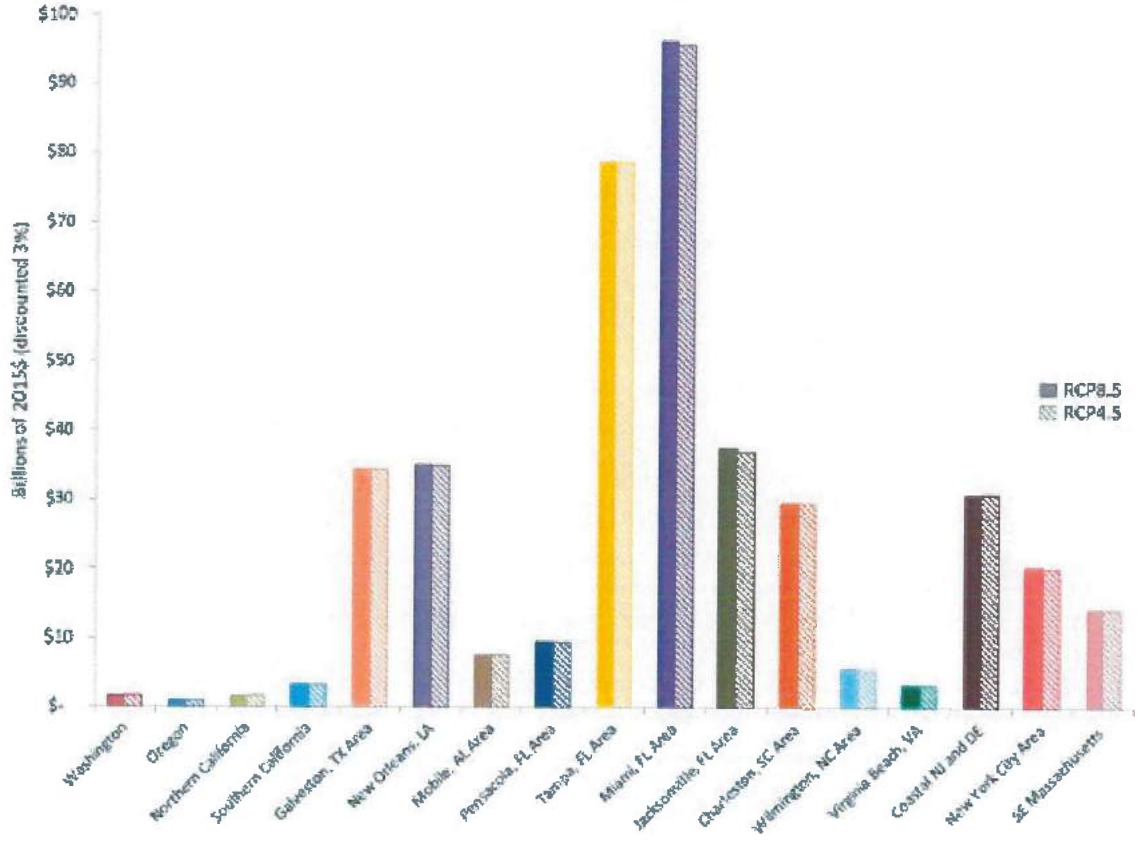
98. With two meters (about six feet (6')) of sea level rise, well within the range of conservative projections, experts project that six million Floridians would be displaced

[25] *Fourth National Climate Assessment Chapter 19: Southeast*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/19/ (last visited Dec. 17, 2018).

and 934,411 homes lost due to the impacts of sea level rise. Forty percent (40%) of the United States' population and housing units at risk from sea level rise are located in Florida. Florida will lose more homes and land than any other state in the United States if CO_2 and GHG emission levels continue as projected.

Figure 15.2. Projected Costs to Coastal Property of Sea Level Rise and Storm Surge

Costs are shown for 17 multi-county coastal areas (see map below) that were modeled for sea level rise and storm surge impacts and potential adaptation responses through 2100 (billions $2015, discounted at 3%).



99. Florida's coastal lands are the most affected. Freshwater ecosystems are being compromised by saltwater intrusion and this loss will have a negative impact on fish spawning habitats and other animal populations. Florida's wetlands and estuaries are suffering irreversible catastrophic impacts.

100. Oyster reefs will continue to die-off due to upstream movement of optimal saline conditions.

101. With sea level rise, Florida's coastal ecosystems are changing due to the increase in dry-land loss due to submergence, erosion, wetland loss/change, flood damage, saltwater intrusion from surface to ground water, and higher water tables that impede drainage. With the loss of coastal wetlands and other coastal ecosystems that are not able to migrate inland due to coastal squeeze (when development or other impediments, such as roads or sea walls, are in the way), Florida is becoming even more susceptible to storm surges and inland flooding.

102. In preparing for Hurricane Irma that struck Florida in September 2017, Florida government officials ordered the evacuation of 7 million Floridians, 700,000 of which were mandatory. The damage from Hurricane Irma was extensive, producing approximately $11,082,199,367 in insured losses claims, with that amount continuing to grow.[26]

103. "Coral reefs are biologically diverse ecosystems that provide many societal benefits, including coastal protection from waves, habitat for fish, and recreational and tourism opportunities. However, coral reef mortality in the Florida Keys and across the globe has been very high in recent decades, due in part to warming ocean temperatures, nutrient enrichment, overfishing, and coastal development."[27]

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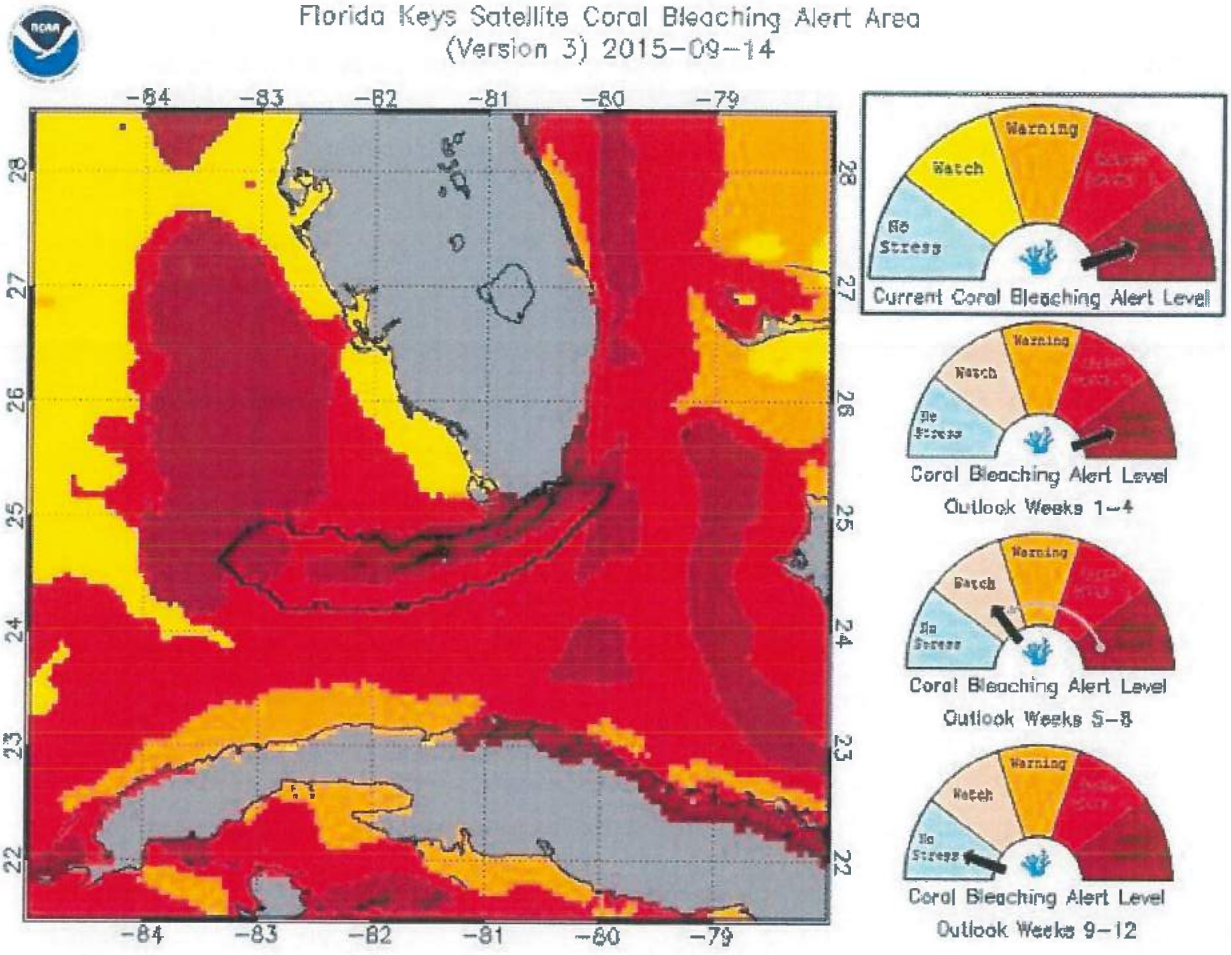
[26] Florida Office of Insurance Regulation, Hurricane Irma Claims Data, *at* https://www.floir.com/Office/HurricaneSeason/HurricaneIrmaClaimsData.aspx (updated as of November 14, 2018).

[27] *Fourth National Climate Assessment Chapter 19: Southeast*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/19/ (last visited Dec. 17, 2018).

104. Florida Reef System is the only barrier reef located in the continental United States and it already is showing signs of climate change vulnerability in the form of mass bleaching events caused by stress due to increased ocean temperatures.

105. In September 2015, ocean temperatures off the coast of Florida were deadly for coral reefs. The figure[28] below from the National Oceanic and Atmospheric Administration illustrates the extent of the harm. Yellow signifies "Bleaching Watch;" orange signifies "Bleaching Warning;" red signifies "Bleaching Alert Level 1," which means coral bleaching is likely; and dark red signifies "Bleaching Alert Level 2," which means that coral mortality is likely.

[28] NOAA Coral Reef Watch. 2015, updated daily. NOAA Coral Reef Watch Version 3.0 Daily Global 5-km Satellite Coral Bleaching Alert Area for Florida Keys, Sept. 14, 2015. College Park, Maryland, USA: NOAA Coral Reef Watch. Data set accessed 2018-12-05 at https://coralreefwatch.noaa.gov/vs/gauges/florida_keys.php



106. Severe coral bleaching conditions have occurred in the Florida Keys during five of the last six years for one month or more each year.[29]

107. According to the Fourth National Climate Assessment, "[c]oral elevation and volume in the Florida Keys have been declining in recent decades, and present-day temperatures in the region are already close to bleaching thresholds; hence it is likely that many of the remaining coral reefs in the Southeast region will be lost in the coming decades."[30]

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[29] NOAA Coral Reef Watch. 2013 - 2018. NOAA Coral Reef Watch Version 3.0. Bleaching Alert Time Series for Florida Keys, 2013 - 2018. College Park, Maryland, USA: NOAA Coral Reef Watch. Data set accessed 2018-12-05 at https://coralreefwatch.noaa.gov/vs/gauges/florida_keys.php.

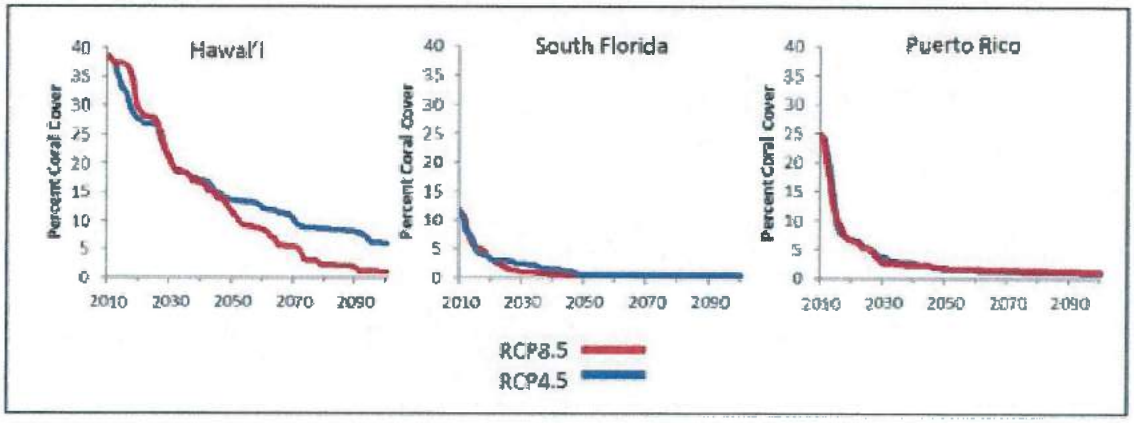
[30] *Fourth National Climate Assessment Chapter 19: Southeast*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/19/ (last visited Dec. 17, 2018).

108. Experts project that even under the most optimistic scenarios, coral bleaching events will become more frequent and severe. Sea level rise and severe weather events can also endanger local reef survival through chronic stress.

109. According to the EPA, "[i]n South Florida and Puerto Rico, where present day sea surface temperatures are already close to bleaching thresholds and where these reefs have historically been affected by non-climate stressors, coral is projected to disappear even faster."[31]

Figure 23.1. Average Change in Percent Coral Reef Cover

Results show change in percent coral cover under RCP8.5 and RCP4.5 for the five-model average



110. The EPA has clearly stated: "Unlike other sectors of this Technical Report where the climate change signal emerges from natural variability over the course of the next 25 years, *the most severe impacts to coral reefs are occurring now.*"[32]

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[31] U.S. EPA, *Multi-Modal Framework for Quantitative Sectoral Impacts Analysis: A Technical Report for the Fourth National Climate Assessment* (May 2017) at 172, https://cfpub.epa.gov/si/si_public_record_Report.cfm?Lab=OAP&dirEntryId=335095.

[32] U.S. EPA, *Multi-Modal Framework for Quantitative Sectoral Impacts Analysis: A Technical Report for the Fourth National Climate Assessment* (May 2017) at 175 (emphasis added), https://cfpub.epa.gov/si/si_public_record_Report.cfm?Lab=OAP&dirEntryId=335095.

111. Excess CO_2-induced ocean acidification already is decreasing the concentration of calcium carbonate in seawater, limiting the rate at which corals and other marine animals build their skeletons, and further reducing coral cover in the Florida Reef System.

112. Three-fourths of Florida's residents live in shoreline and coastal areas. Losing these areas to sea-level rise will wreak havoc on Florida's economy and its ability to provide Floridians with essential human services. Coastal local governments depend on coastal land values for most of their property tax revenue.

113. A recent assessment found that within the next 12 years, property values in Florida will decline by $15 billion. By 2050, Florida property value decline is forecasted to reach $23 billion.

114. The Trump Administration reports that "Florida alone is estimated to have a 1-in-20 chance of having more than $346 billion (in 2011 dollars) in property value (8.7%) below average sea level by 2100 under a higher scenario (RCP8.5). An assessment by the Florida Department of Health determined that 590,000 people in South Florida face 'extreme' or 'high' risk from sea level rise, with 125,000 people living in areas identified as socially vulnerable and 55,000 classified as medically vulnerable."[33]

115. A record-breaking 105 million tourists visited Florida in 2015, generating $89.10 billion in taxable sales. Six million tourists visited Florida's barrier islands, generating nearly $10 billion in 2016 alone. Any changes in coastal areas or the disappearance of Florida's most popular beaches, coral reefs, and coastal destinations will greatly diminish tourism revenues.

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[33] *Fourth National Climate Assessment Chapter 19: Southeast*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/19/ (last visited Dec. 17, 2018).

116. Plaintiffs' ability to access and recreate on Florida's reef systems is already impaired and is expected to be destroyed in the near future. "Under most RCP/GCM combinations [GHG emission scenarios], more than 90% of the value of the recreation in the reference period is lost by the end of the century. Across [Hawaii, South Florida and Puerto Rico], an estimated $140 billion (discounted 3%) in reef-based recreation is projected to be lost through 2100 under RCP8.5, and $130 billion under RCP 4.5. More than half of these losses are projected for South Florida, which has larger levels of tourism for reef-based recreation."[34]

117. According to the Trump Administration, "[i]ncreases in extreme rainfall events and high tide coastal floods due to future climate change could impact the quality of life of permanent residents as well as tourists visiting the low-lying and coastal regions of the Southeast. Recent social science studies have indicated that people may migrate from many coastal communities that are vulnerable to the impacts of sea level rise, high tide flooding, saltwater intrusion, and storm surge."[35]

118. Annual economic costs of climate change inaction in Florida from loss of tourism revenue, increased hurricane damages, value of at-risk residential real estate, and increased cost of electricity generation are projected to total at least $92 billion by 2050 and at least $345 billion by 2100, constituting 2.8 percent and 5.0 percent of Florida's projected Gross State Product respectively.

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[34] U.S. EPA, *Multi-Modal Framework for Quantitative Sectoral Impacts Analysis: A Technical Report for the Fourth National Climate Assessment* (May 2017) at 173-74, https://cfpub.epa.gov/si/si_public_record_Report.cfm?Lab=OAP&dirEntryId=335095.

[35] *Fourth National Climate Assessment Chapter 19: Southeast*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/19/ (last visited Dec. 17, 2018).

119. Florida's agriculture, including citrus crops, likely will experience decreased yields and smaller fruit due to warmer temperatures from climate change. The Trump Administration reports that "[b]y the late 21st century under the higher [GHG emissions] scenario (RCP8.5), the freeze-free season is expected to lengthen by more than a month." "Where climatic thresholds are crossed, certain ecosystem and landscapes will be transformed by changing winter air temperatures."[36]

120. Tropical storms and hurricanes will become increasingly common and destructive with climate change. Florida is especially vulnerable to hurricanes. Rising sea levels will result in hurricane storm surges and wave heights that are higher and increasingly destructive. These storms will result in flooding, coastal erosion, damage to property and infrastructure, contamination of freshwater supplies with salt water, and the loss of lives.

121. The World Bank has identified Tampa Bay as one of the 10 most at-risk areas on the globe due its vulnerability to flooding and damage when a major hurricane occurs. A recent study analyzing potential catastrophic storm damage has reported that the Tampa Bay region could lose up to $175 billion if a storm the size of Hurricane Katrina were to reach land, which almost occurred with Hurricane Irma.

122. Warmer temperatures and droughts will adversely affect Florida's forests and may result in forests being reduced and replaced with grasslands. The warmer temperatures and droughts will also lead to lower rivers flows, lower lake levels, and reduced groundwater supplies.

123. Florida's citizens will be increasingly exposed to various human health threats associated with climate change. Marine-borne illnesses, shellfish poisoning, and harmful algae

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[36] *Fourth National Climate Assessment Chapter 19: Southeast*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/19/ (last visited Dec. 5, 2018).

blooms are also expected to worsen in the coming years due to climate change. Climate change is also leading to the increased prevalence of mosquito-transmitted diseases in Florida, such as the Zika virus.

124. In September 2017, Hurricane Irma struck Florida as a Category 3 hurricane, making landfall on Cudjoe Key with maximum sustained winds of 130 mph. The storm caused catastrophic damage throughout Florida and the Caribbean, causing at least 124 deaths, including 80 in the United States. The Trump Administration reports that "[h]igh-intensity hurricanes such as Irma are expected to become more common in the future due to climate change."[37]

125. "According to NOAA's National Centers for Environmental Information (NCEI), Irma significantly damaged 65% of the buildings in the Keys and destroyed 25% of them."[38]

126. "According to NCEI, the U.S. direct cost from Hurricane Irma is approximately $50 billion (in 2017 dollars) . . . . Of the $50 billion, approximately $30-$35 billion accounts for wind and flood damage to a combination of residential and commercial properties, automobiles and boats – with 80%-90% of this cost felt in Florida. The remainder of the costs include $5 billion for infrastructure repairs and $1.5-$2.0 billion for damage to the agricultural sector, also mainly in Florida."[39]

127. As of the date of this filing, 126,000 residents of Miami are considered to be most "at risk" to coastal flooding within FEMA's 100-year coastal floodplain.

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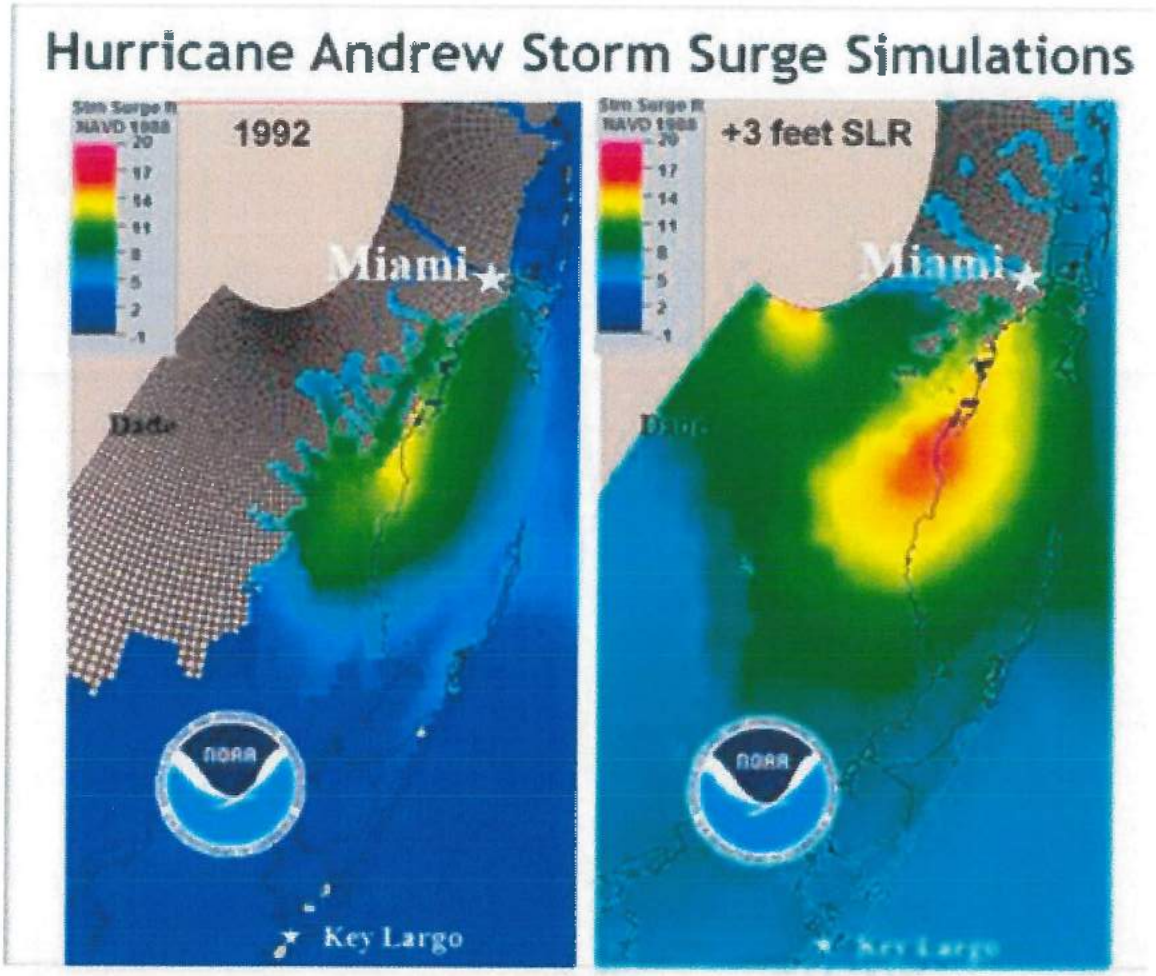
[37] *Fourth National Climate Assessment Chapter 19: Southeast*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/19/ (last visited Dec. 5, 2018).
[38] *Fourth National Climate Assessment Chapter 19: Southeast*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/19/ (last visited Dec. 5, 2018).
[39] *Fourth National Climate Assessment Chapter 19: Southeast*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/19/ (last visited Dec. 17, 2018).

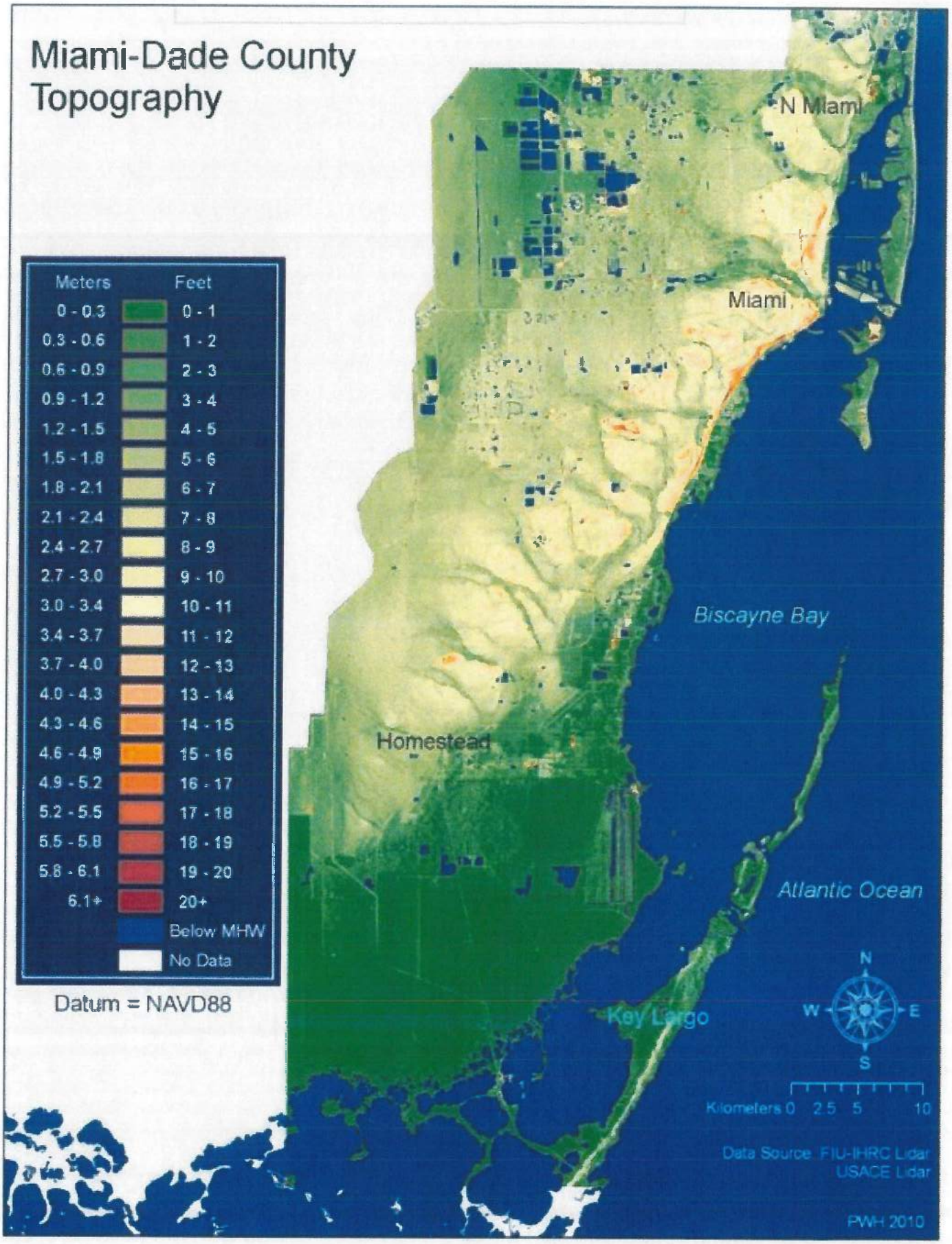
128. With sea level rise, Miami would lose almost one third of its houses and $16 billion in housing would be underwater. Using conservative estimates of sea level rise, 32,874 homes in Miami (30% of the Miami housing stock) worth $16 billion, are likely to be underwater if sea levels rise six feet. In the city of Miami Beach alone, 37,144 homes (78% of the housing stock) worth $33 billion would be underwater if sea levels rose six feet.

129. South Florida's sea level has risen about 30 cm (1 foot) since 1930. Between 1930 and 1990, the rate of sea level rise for Miami was just over 2.6 mm per year (above the global rate of 2.4 mm per year), and that rate has increased to about 3.4 mm per year because of ice melt. After 2006 the rate of sea level rise in Miami and the Southeast Atlantic increased dramatically to about 9 mm per year in the Miami area through 2015. The low-lying and heavily-populated coastline of south and southeastern Florida, including its barrier islands, makes it extremely vulnerable to the effects of climate change, particularly sea level rise, amplified by storm surges.

130. Hurricane storm surges will make low-lying south Florida an increasingly risky place to live. The maps below show the increased extent and depth of a category 5 Hurricane Andrew (1992) storm with a further three feet of sea level rise. Nearly the entire southern two-thirds of Miami-Dade county will be affected by a deep, powerful, violent lateral storm surge and the seaward barrier islands will be dangerously swept by a deep surge.



131. Miami is particularly at risk from the environmental impacts of sea level rise. Long-term adaptation to sea level rise in some areas of Florida under current rates of warming are not realistic. LiDAR high-resolution elevation mapping from a plane with ground-truthing illustrates the complete and irreversible loss of land and property that is projected if GHG emissions continue at present rates.


Miami-Dade County
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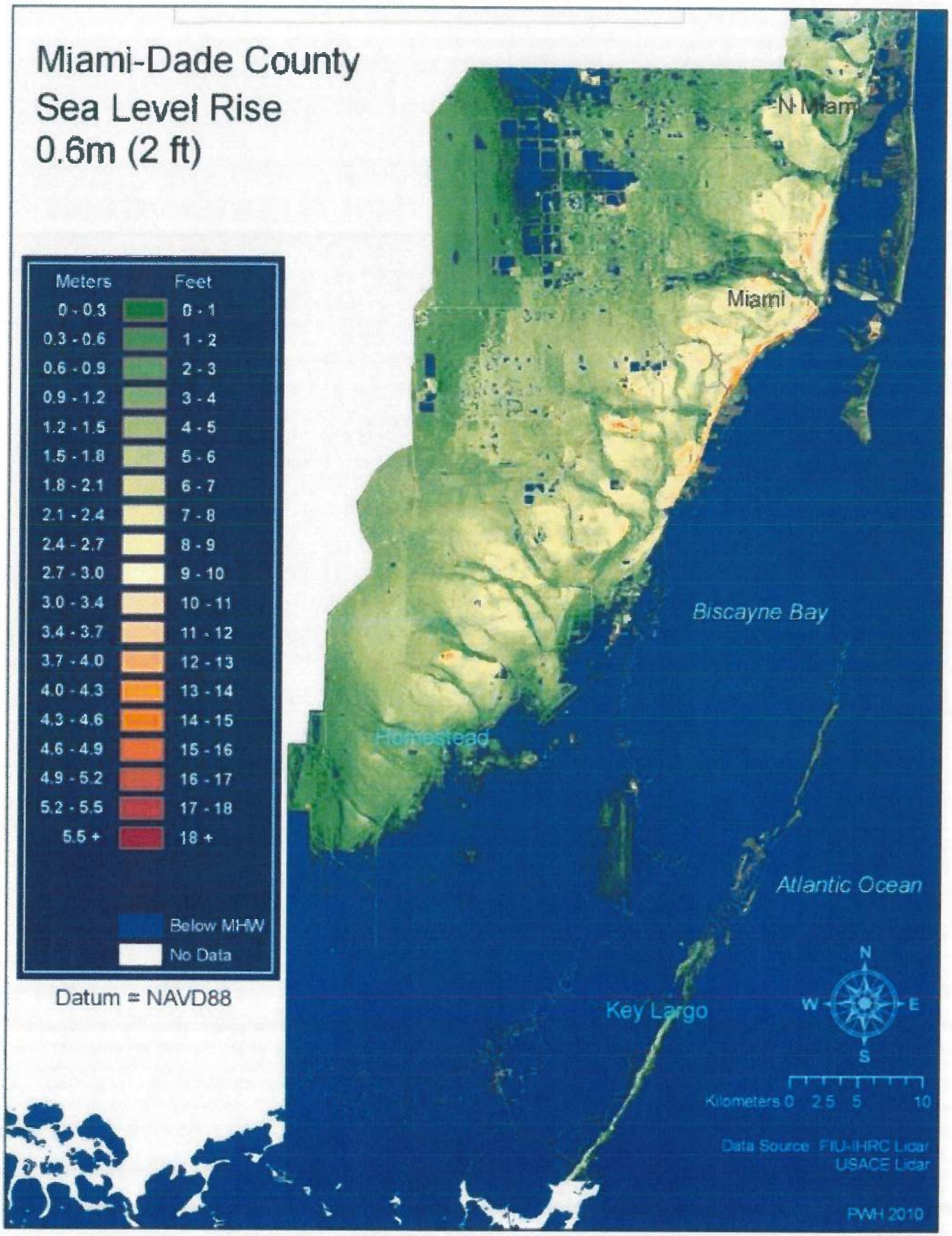
Miami-Dade County
Sea Level Rise
0.6m (2 ft)
Meters
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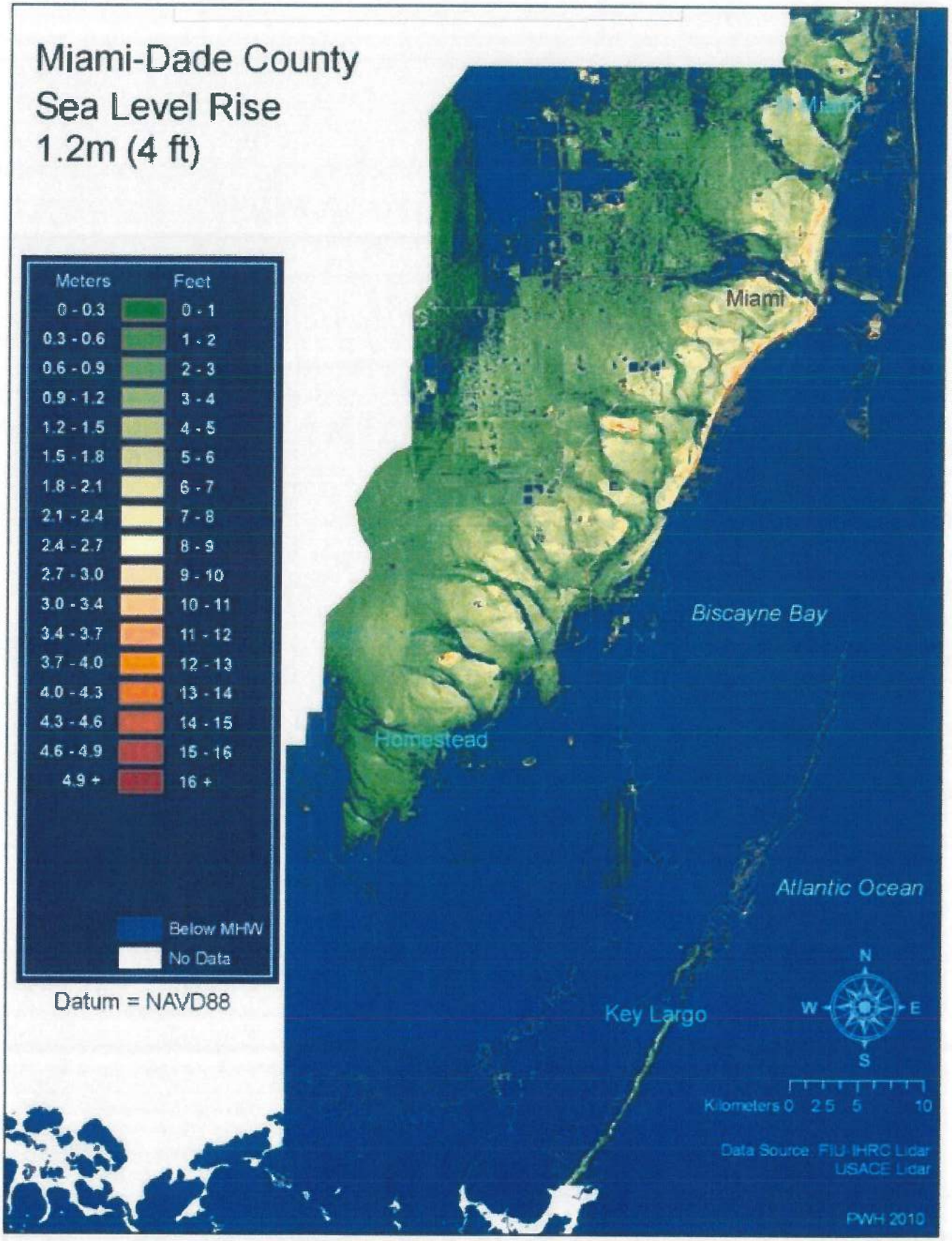
Miami-Dade County
Sea Level Rise
1.2m (4 ft)
Meters
Feet
0 - 0.3
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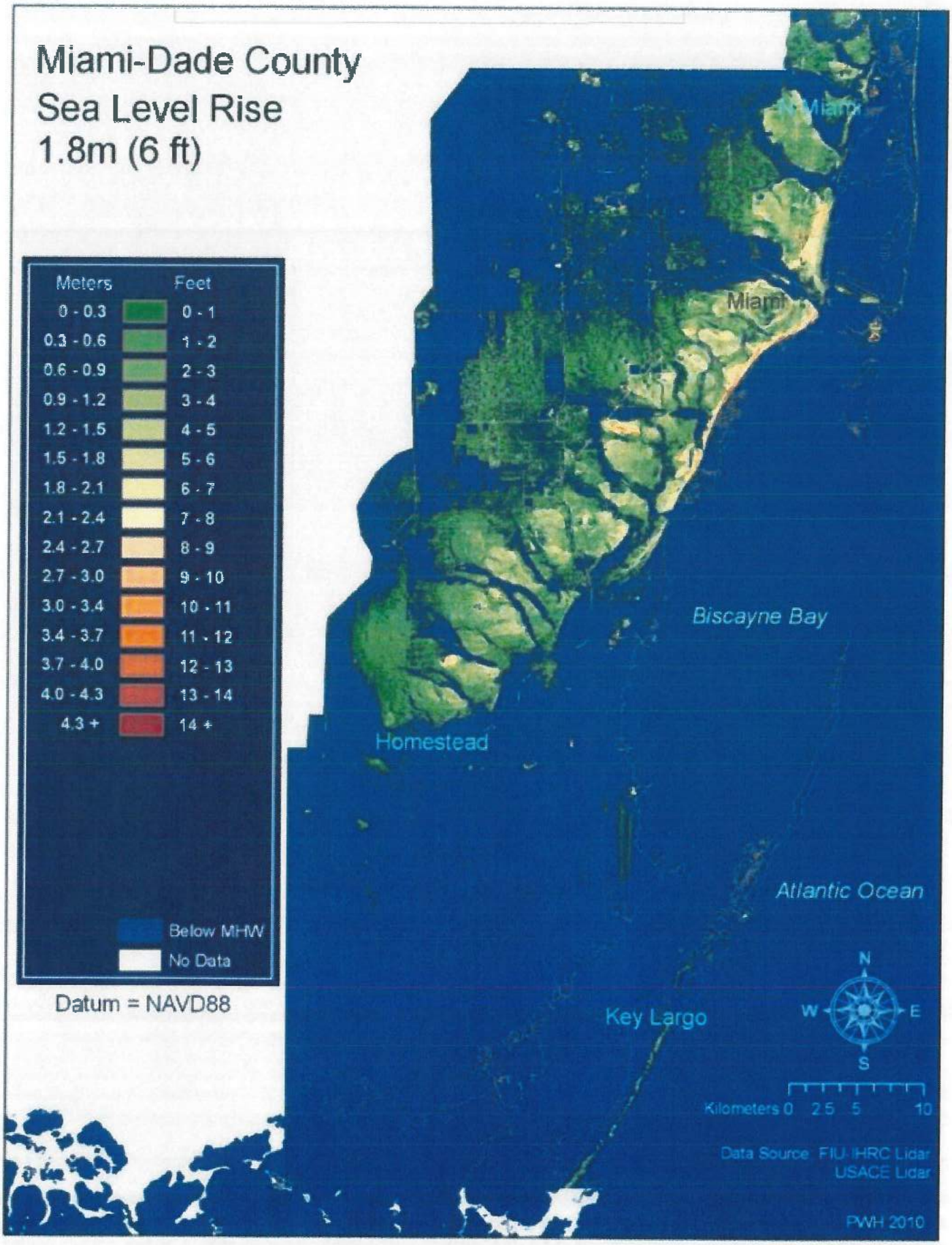
Miami-Dade County
Sea Level Rise
1.8m (6 ft)
Meters
Feet
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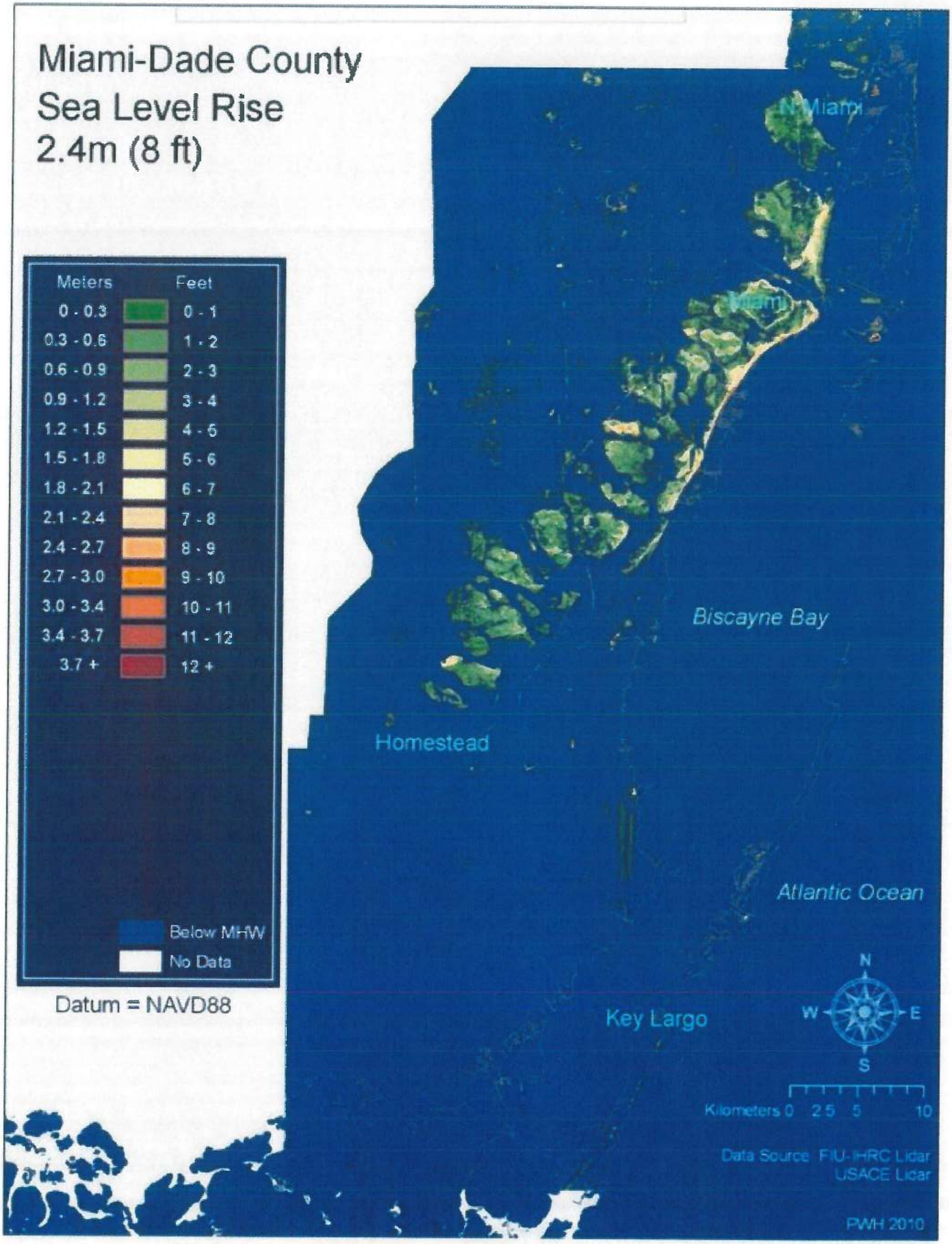
Miami-Dade County
Sea Level Rise
2.4m (8 ft)
Meters
Feet
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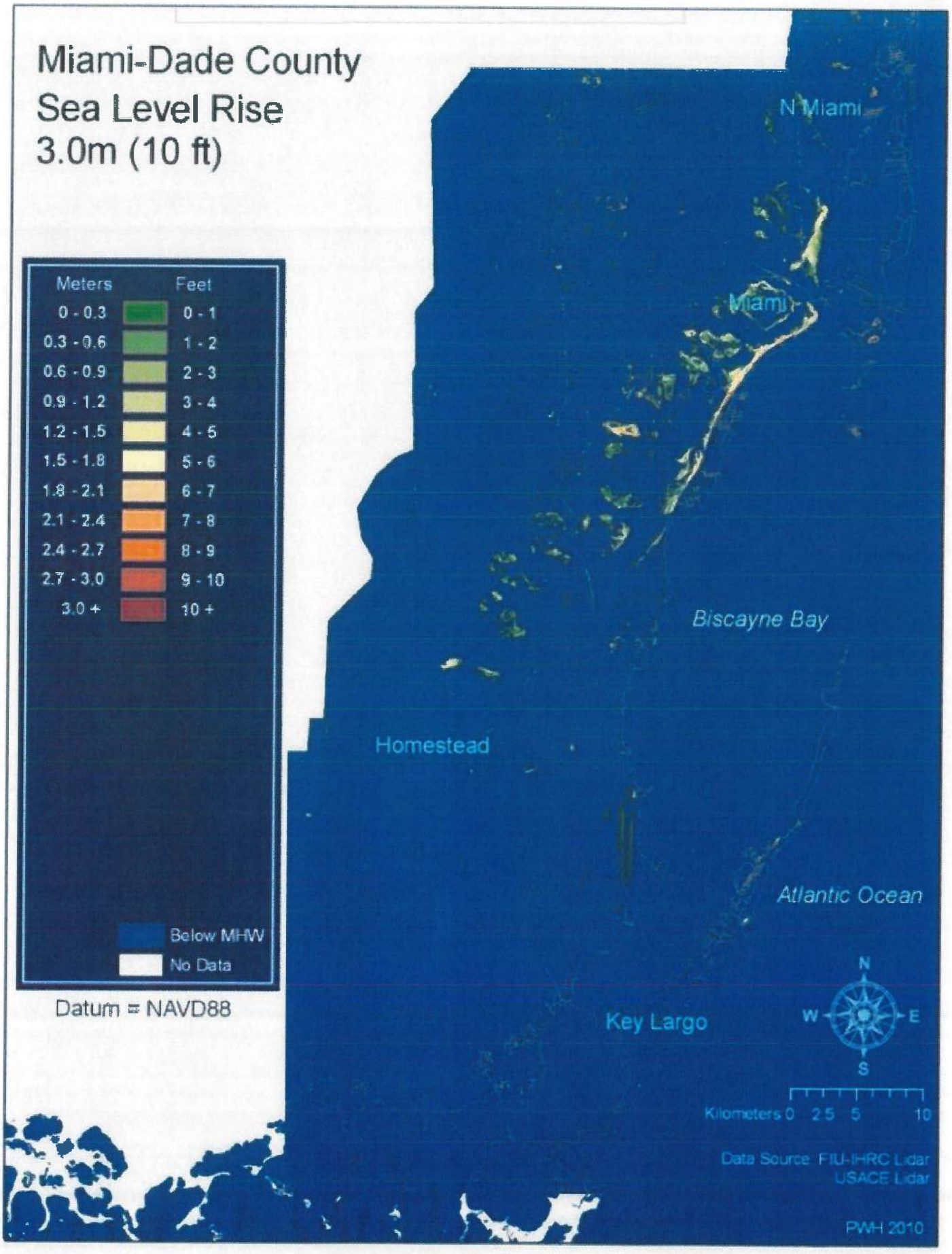
Miami-Dade County
Sea Level Rise
3.0m (10 ft)
Meters
Feet
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132. The maps above are at only mean high tide and do not include storm surge inundation, which will be substantial, as illustrated with Hurricanes Andrew and Irma.

133. The Trump Administration reports that "[s]ea level rise is already causing an increase in high tide flood events in the Southeast region and is adding to the impact of more extreme coastal flooding events. In the future, this flooding is projected to become more serious, disruptive, and costly as its frequency, depth, and inland extent grow with time."[40]

134. Sea level rise and the resulting salt water inundation already is contaminating fresh water supplies and compromising human infrastructure, including the material of buildings, roads, ports, storm water systems and treatment facilities, power plants and related energy infrastructure, airports, rail systems, and bridges. With even a two-foot rise in sea level, saltwater will intrude into Florida's southern and southeastern aquifers. For instance, saltwater intrusion already is affecting the Biscayne Aquifer, a sole source aquifer that provides drinking water to more than 3 million people in the region and to the neighboring Biscayne National Park. This will become a rapidly increasing problem, serving to diminish and then eliminate sources of drinking water. The economic costs from this damage will be billions of dollars per year.

135. Rising sea level will harm the viability of infrastructure like wastewater treatment facilities, nuclear power plants, roads, and landfills, which will become vulnerable to disruption or destruction by storms, leading in some cases to vast contamination of lands and waters as other pollutants are released. For example, with only 1.5-3 feet of further sea level rise, the Central Treatment Plant and the adjacent abandoned unlined dump of

[40] *Fourth National Climate Assessment Chapter 19: Southeast*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/19/ (last visited Dec. 17, 2018).

Virginia Key, Florida, will be all that is left of the ocean-facing sandy barrier island. These pollutant-filled facilities will be exposed to the full force of the ocean tides, waves and storm surges.

136. The Trump Administration reports that "[i]t is estimated that with a meter (about 3.3 feet) of sea level rise, the Southeast would lose over 13,000 recorded historic and prehistoric archaeological sites and more than 1,000 locations currently eligible for inclusion on the National Register of Historic Places. This includes many historic buildings and forts in cities like Charleston, Savannah, and St. Augustine."[41]

137. Rising sea levels, increased flooding, and more significant storm surges are resulting in the bleeding of non-acidifying pollutants and toxins, such as glues, adhesives, corrosive metals, chemicals, oils, lubricants, acids, hazardous materials, and bacteria from the public infrastructure and privately built structures on land. These pollutants and toxins are degrading ocean health, causing the impairment of the marine resources of the State, and preventing the public from using, accessing and enjoying Public Trust Resources.

138. A recent study by the University of Miami showed that in the last decade, flooding in Miami Beach has increased by 400%. The City of Miami Beach has spent hundreds of millions of dollars to try to avert the flooding and resulting damage through the raising of roads, installation of pumps and construction of levees. Most recently, City of Miami voters passed a $400 million Miami Forever bond measure to help protect the city against flooding and other climate impacts.

139. A sea level rise of two feet, combined with storm effects, will eliminate the habitability of most of Florida's barrier islands. Sea level rise and the concomitant coastal flooding

[41] *Fourth National Climate Assessment Chapter 19: Southeast*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/19/ (last visited Dec. 17, 2018).

have the potential to cause major disruption to Florida's water management systems due to saltwater intrusion. In some coastal cities, wastewater treatment facilities are located at such low elevations that flooding due to sea level rise or storm surges will result in the contamination of coastal ecosystems, municipal drinking water, local rivers, and lakes. This already is happening in the city of Hallandale Beach where the city had to cease using six of their eight drinking water wells. Fort Lauderdale, Pompano Beach, Hollywood, City of Miami, Miami Beach, and other Florida cities have experienced saltwater backing up storm water pipes, causing flooding of streets and neighborhoods.

140. The Florida Department of Health estimates that there are 2.3 million onsite sewage treatment and disposal systems that serve 31% of Florida residents and visitors. These systems discharge over 426 million gallons of treated effluent per day into the subsurface soil environment. For those areas on septic tank systems, sea level rise, increasingly frequent flooding and more substantial storm surges are inundating neighborhoods and roads with fecal pollution. This pollution is degrading ocean health and impairing Florida's marine resources. Climate change is causing groundwater levels to increase, which can cause waste contained in septic systems to back up, resulting in sewage waste flooding homes and streets. The increase in groundwater levels also degrades the efficacy of the septic treatment system itself.

141. The Florida Everglades is home to some of the most important ecosystems in North America. This subtropical ecosystem and its National Park is a huge draw for tourists from all over the world and is of traditional cultural significance to the Miccosukee and Seminole Tribes of Florida. Because the Everglades are nearly flat and surrounded on three sides by rising seas, the ecosystem is being harmed due to sea level rise causing the

salinization of the groundwater and the soil. This in turn negatively affects the diverse array of species that depend upon the unique Everglades ecosystem. An acceleration of sea level rise is expected to increase coastal erosion, which has the potential to cause the replacement of coastal wetlands with open water areas. Scientists have predicted that over 48 x 10^6 megatons of C in the form of old grown mangroves and associated soils is at risk of being lost from the Everglades National Park.[42]

142. Due to record amounts of rainfall from Hurricane Irma and subsequent rain events, Florida's Fish and Wildlife Commissioner Ron Bergeron recently announced that the Everglades are experiencing a "catastrophic" condition, with high waters threatening habitat for white-tailed deer, raccoons, and many species of endangered turtles and snakes. The Francis S. Taylor Wildlife Management Area, which covers 1,125 square miles in western Miami-Dade and Broward counties, was shut down in mid-June 2017 due to the abnormally high water levels generated from high volume rain events throughout the remainder of the wet season and into the 2017-2018 dry season. Some tree islands, which serve as important habitat for many species, were under water for so long that they may not survive.

143. The salinization of the groundwater and soil, resulting from the rising seas and increasing storms, threatens native plants and ecosystems found in abundance only in Florida, such as freshwater wetlands ecosystems. Additional ecosystems along the coast are also being impaired such as red mangrove forests. Due to sea level rise and saltwater intrusion, these estuarine ecosystems will suffer coastal squeeze and die off as they attempt to migrate

[42] Jerath, M. et al., *The Role of Economic, Policy, and Ecological Factors in Estimating the Value of Carbon Stocks in Everglades Mangrove Forests, South Florida, USA*, Environ. Sci. Pol. 66, 160-169 (2016).

inland and are met with development and coastal armoring measures like sea walls. Protecting Florida's mangrove forests is especially critical because mangrove forests play an important role in absorbing and sequestering CO_2, in addition to their role in flood control, storm protection, and providing good water quality. Scientists have estimated the carbon storing value of mangroves in South Florida's Everglades to be between $2 and $3.4 billion.

144. From October 2017 throughout 2018, Florida experienced a persistent harmful algal bloom (red tide) that dramatically affected portions of the coasts of Florida. It began on the southwest coast and spread to the Panhandle and the east coast of Florida. The red tide has caused fish kills, respiratory irrigation, and mortality of sea turtles, manatees, birds, and dolphins. It has also prevented people, including Plaintiffs, from safely accessing many of Florida's beaches. The Fourth National Climate Assessment reports that "[i]ncreasing water temperatures associated with climate change are projected to alter the seasonality of growth and the geographic range of harmful algae and coastal pathogens, and runoff from more frequent and intense rainfall is projected to increasingly compromise recreational waters and sources of drinking water through increased introductions of pathogens and toxic algal blooms."[43]

145. "By the end of the century, warming under a higher scenario (RCP8.5) is projected to increase the length of time recreational waters have concentrations of harmful algal blooms (cyanobacteria) above the recommended public health threshold by one month

[43] *Fourth National Climate Assessment Chapter 14: Human Health*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/14/ (last visited Dec. 17, 2018.

annually; these bacteria can produce a range of toxins that can cause gastrointestinal illness, neurological disorders, and other illnesses."[44]

146. The Trump Administration's Fourth National Climate Assessment confirms that any and all GHG emission reductions that can be achieved by Defendants are imperative to protect the Plaintiffs from experiencing the most severe climate change impacts because the severity of the impacts are tied to the magnitude of the warming. "Climate-related risks will continue to grow without additional action. Decisions made today determine risk exposure for current and future generations and will either broaden or limit options to reduce the negative consequences of climate change.."[45] In light of their control over Florida's Energy System, Defendants have the authority and obligation to cease conduct that infringes upon the constitutional and public trust rights of the Plaintiffs.

147. Similarly, UN Secretary General Antonio Guterres has eloquently expressed the urgency of the need for every government to transition off of fossil fuels:

> There is no more time to waste. As the ferocity of this summer's wildfires and heatwaves shows, the world is changing before our eyes. We are careening towards the edge of the abyss. It is not too late to shift course, but every day that passes means the world heats up a little more and the cost of our inaction mounts. Every day we fail to act is a day that we step a little closer towards a fate that none of us wants – a fate that will resonate through generations in the damage done to humankind and life on Earth.[46]

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[44] *Fourth National Climate Assessment Chapter 14: Human Health*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/14/ (last visited Dec. 17, 2018.
[45] *Fourth National Climate Assessment Chapter 1: Overview*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/1/ (last visited Dec. 17, 2018).
[46] *Addressing Climate Change, Secretary-General Say's World's Fate is in our Hands, Requires Rising to Challenge Before its Too Late* (September 10, 2018), https://www.un.org/press/en/2018/sgsm19205.doc.htm.

DEFENDANTS' UNCONSTITUTIONAL FOSSIL FUEL ENERGY SYSTEM

148. This case challenges Defendants' systemic, affirmative ongoing conduct, persisting over decades in creating, controlling, and perpetuating a Fossil Fuel Energy System despite long-standing knowledge of the resulting harm to these young Plaintiffs. Our Nation's most celebrated cases include decisions approving declaratory and broad-based injunctive relief to remedy systemic constitutional violations like those at issue here. *See, e.g., Brown v. Bd. of Educ.*, 349 U.S. 294 (1955) (systemic racial injustice in school systems); *Hills v. Gautreaux*, 425 U.S. 284 (1976) (systemically segregated public housing system created by state and federal agencies); *Brown v. Plata*, 563 U.S. 493 (systemically unconstitutional conditions across state prison system).

149. Defendants' aggregate acts and omissions that cause dangerous levels of GHG pollution, and that make up the state's Fossil Fuel Energy System created, controlled and managed by Defendants, taken as a whole, violate the constitutional and common law rights of Plaintiffs in a number of ways. For example:

a. The State of Florida has declared its energy system a state function via state law. § 377.601, Fla. Stat. The State of Florida has established and implements the state's energy system, with each Defendant playing a role in the creation, implementation and perpetuation of the system as described herein. *See, e.g.,* § 377.601, Fla. Stat. (declaring the state's energy policy); § 366.92, Fla. Stat. (establishing the state's renewable energy policy). Florida's energy system is under the control and supervision of the Defendants and has been developed and implemented in a manner that violates the common law and constitutional rights of Plaintiffs. Only the Defendants have the power to implement a

Climate Recovery Plan and bring the state's energy system into compliance with its obligations under the Florida Constitution and Public Trust Doctrine.

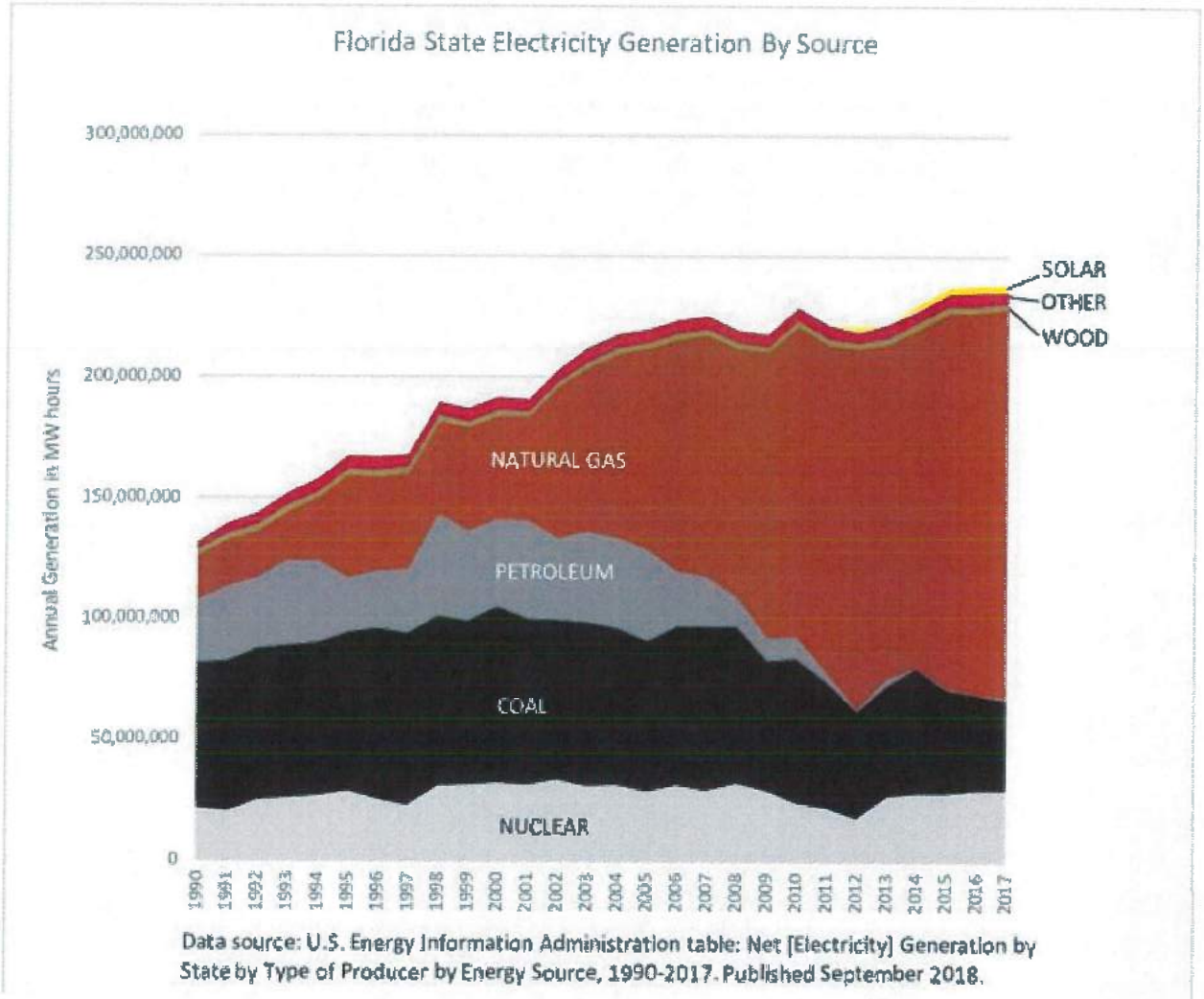
b. Florida is a major contributor to fossil fuel combustion-based CO_2 emissions, emitting 230.1 million metric tons of CO_2 into the atmosphere in 2016, according to EIA data (not including the emissions associated with goods produced outside of Florida but consumed in the State). Florida's electric power generation accounts for the largest portion of these emissions at 105.9 million metric tons (46% of Florida's total emissions), followed closely by the transportation sector at 103.6 million metric tons (45% of Florida's total emissions). If Florida were a country, it would rank as the 27th largest emitter of CO_2 emissions in the world.

c. Florida has not completed a full accounting of its GHG emissions since 2008, when it was mandated by Executive Order 07-126. Therefore, Defendants do not know what amounts of non-CO_2 gases (like methane and refrigerants) are being emitted. Furthermore, the outdated GHG inventory that Defendants rely on does not include consumption-based emissions (also referred to as embedded emissions), those emissions attributed to goods produced outside of Florida but consumed within Florida. If Florida's GHG emission data did include embedded emissions, its total CO_2 and GHG emissions would be significantly higher and would more accurately reflect the extent to which Defendants have caused and contributed to the Climate Change Impacts harming the Plaintiffs.

d. Florida is a major producer and consumer of electricity generated from fossil fuel combustion. According to the U.S. Energy Information Administration, Florida is ranked third in the nation in both total energy consumption and electric energy consumption, and

second in electric energy production. Florida generates more electricity from petroleum than any other state in the nation. Florida generates the second highest amount of CO_2 emissions from electricity in the nation. Florida has declared that "fossil fuel combustion products are currently used in a variety of beneficial applications" and "fossil fuel combustion products promotes economic activity." Ch. 2013-68 (Committee Substitute for Senate Bill No. 682) (2013) (enacting § 403.7047, Fla. Stat.).

e. Florida, "The Sunshine State," obtains only a small portion of its electricity from renewable sources, accounting for only 3.0% of Florida's overall generation capacity, well below the national average of 15%. Most of Florida's electricity generation is natural gas-fired (67.5%) and coal-fired (15.7%), contributing greatly to atmospheric CO_2 and GHG emissions. Florida has no renewable portfolio standard or voluntary targets to increase the use of renewable energy, and provides no subsidies to facilitate renewable energy growth.



f. Florida ranks 3rd in the country in solar power potential, but 18th in the country in number of solar photovoltaic systems installed. Florida law requires energy to be sold only by utility companies, not third-parties, creating a significant barrier to solar power expansion and an obstacle to substantial reductions in GHG pollution. Other laws, policies, customs and practices in Florida restrict the installation of solar on multi-family dwellings.

g. The U.S. Energy Information Administration reports that only four other states have more gas-fired electricity generation under construction or planned compared to Florida. Defendant Florida Public Service Commission, has never rejected an application

for a utility gas plant. Upon information and belief, the three largest planned gas plants in Florida (two under construction and one proposed rebuild that has just received approval) will generate a combined 9 million tons of CO_2 per year over their operating lives.

h. Defendants have also created and implemented a number of financial barriers that limit the cost competitiveness of renewable energy relative to energy produced by fossil fuels. Defendants have also created programs, such as the Natural Gas Rebate Program, that favor the use of fossil fuels over renewable forms of energy.

i. In 2008, the Florida Legislature passed the Florida Energy and Climate Change Protection Act, authorizing the FDEP to develop a market-based, electric utility GHG cap-and-trade program and to establish renewable energy portfolio standards. This was passed in conjunction with the adoption of a number of measures designed to address climate change. Defendants have failed to implement and/or rolled back nearly all of these measures.

j. According to the Florida Department of Transportation, vehicle miles traveled on Florida's public roads system increased by 4.3% from 2013 to 2014. Only 0.091% of registered vehicles in Florida are electric.

k. Since Governor Scott took office in 2011, the DEP has been significantly downsized due to budget cuts, dropping from approximately 3,500 employees to 2,900. Upon information and belief, this affects DEP's ability to carry out its mission to protect Public Trust Resources from Climate Change Impacts.

l. Defendant Governor Scott is required to prepare and update Florida's State Comprehensive Plan, which, among other things, is meant to protect marine fisheries, beaches, and coastal ecosystems; protect Florida's air, water, and land; and ensure a safe

and healthful environment. The State Comprehensive Plan perpetuates the state's existing Fossil Fuel Energy System and contains no goals, policies, or directives to reduce Florida's GHG pollution or to pursue other climate change mitigation and adaptation strategies to protect the constitutional rights of Plaintiffs.

m. Defendants have not engaged in any systemic planning to address the Climate Change Impacts described above, and instead have continued to implement the State's Fossil Fuel Energy System in spite of knowledge that this system is harming the Plaintiffs.

n. Defendants have allowed the substantial impairment of the Public Trust Resources of Florida from the bleeding of pollution and toxins from publicly funded and approved public infrastructure and from the privately built environment during flooding events and high tides that are becoming more frequent and substantial due to sea level rise and climate change.

o. Defendant Department of Agriculture and Consumer Services is required to submit an annual report to the Governor and Legislature "making recommendations for policies for improvement of the state's response to energy supply and demand and its effect on the health, safety, and welfare of the residents of the state" and "for energy efficiency and conservation programs for the state." Fla. Stat. 377.703(2)(f). In spite of this mandate, the reports perpetuate the state's Fossil Fuel Energy System and contain no goals, policies, or recommendations to reduce Florida's GHG pollution or to pursue other

climate change mitigation and adaptation strategies to protect the constitutional rights of Plaintiffs.[47]

p. In 2011, the Florida Legislature passed S.B. 2106, transferring the duties of the Florida Energy & Climate Commission to the Office of Energy within the Department of Agriculture and Consumer Services. In spite of its statutory authority and mandate to do so, Defendant Department of Agriculture and Consumer Services has not established an Energy and Climate Program for the State that is needed to stop the Climate Change Impacts, but has pursued and implemented policies that continue to promote Florida's use and dependence on fossil fuels. For example, upon information and belief, Defendant Department of Agriculture and Consumer Services has provided policy and program recommendations to the Governor and Legislature that facilitate Florida's dependence on fossil fuels. In spite of Defendant Department of Agriculture and Consumer Services statutory mandate to protect agriculture and reduce wildfires, it continues to pursue and implement policies that continue Florida's dependence upon fossil fuels and has developed no plans to promote agricultural carbon sequestration.

q. On June 6, 2011, Defendant FDEP denied a Petition for Rulemaking submitted by several youth petitioners and Kids v. Global Warming requesting that FDEP adopt a rule to reduce GHG pollution and establish an atmospheric CO_2 concentration target of no greater than 350 ppm. In its final order denying the petition, the FDEP stated it was under no statutory mandate to initiate a rulemaking and that under the present circumstances, initiating a rulemaking is inappropriate.

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[47] Florida Dep't of Ag. & Consumer Serv., 2016 Office of Energy Annual Report, *at* https://www.freshfromflorida.com/content/download/75674/2205501/2016_Office_of_Energy_Annual_Report.pdf.

r. To date, the FDEP has failed to promulgate any rules regulating CO_2 emissions, and the FDEP is not pursuing any programs or projects to address climate change, thereby abdicating their control over Florida's Public Trust Resources to the detriment of the Plaintiffs. Instead, FDEP continues to issue permits, authorizations and waivers for the construction and operation of numerous facilities that emit GHGs, including but not limited to natural gas pipelines, fossil fuel-based power plants, construction projects, and fossil-fuel infrastructure throughout the State of Florida. These facilities would not be able to operate and emit GHGs within the state of Florida without authorization from DEP.

s. Upon information and belief, in 2014, the Defendants reduced energy conservation goals by 90% and eliminated the state's solar rebate program.

t. In November 2017, Defendant Commission released its review of the 2017 Ten-Year Site Plans of Florida's Electric Utilities. This review does not mention climate change or the need to transition to renewable energy. In finding that the 10-Year Site Plans are "suitable for planning purposes," Defendant Commission endorsed an energy future for Florida that is neither in the public interest nor promotes the development of renewable energy resources. While Defendant Commission said the renewable outlook is "projected to increase," it found that "a majority of generation is projected to come from traditional sources, such as fossil-fueled steam and turbine generators, that have been added to Florida's electric grid over the last several decades. Due to forecasted increases in peak demand, further traditional resources are anticipated over the planning period." In

fact, Defendant Commission approved an *increase* in the use of natural gas to meet Florida's energy consumption.[48]

u. According to experts, it is technologically feasible and cost effective for Florida to transition away from a predominantly Fossil Fuel Energy System to a 100% renewable energy system by 2050, relying on wind, water, and solar energy. Florida's energy mix would rely heavily on solar, which would make up approximately eighty percent (80%) of Florida's energy mix. Transitioning to a renewable energy-based system in Florida would create over 300,000 40-year jobs (when a person is employed consecutively for 40 years), avoid thousands of pollution-related deaths a year, avoid over $40 billion per year in illness and mortality costs, and reduce energy costs, saving Florida and its residents billions of dollars. Defendants have been deliberately indifferent to the existence of feasible approaches to transition Florida to a 100% renewable energy system.

150. The above-described actions and omissions, although not inclusive, demonstrate that Defendants have tacitly approved a Fossil Fuel Energy System, and it is Defendants' creation and operation of this system that results in the Constitutional deprivations to Plaintiffs described herein.

CLAIMS FOR RELIEF

Count One: For Declaratory Relief
Breach of Mandatory Fiduciary Duty to Protect Florida's Public Trust Resources

151. Plaintiffs incorporate and re-allege all of the preceding allegations set forth in paragraphs 1-150 of this First Amended Complaint.

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[48] Florida Public Service Comm'n, Review of the Ten-Year Site Plans of Florida's Electric Utilities (November 2017), *at* http://www.psc.state.fl.us/Files/PDF/Utilities/Electricgas/TenYearSitePlans/2017/Review.pdf.

152. The State of Florida, in the Florida Constitution, has explicitly codified the common law Public Trust Doctrine, an ancient legal doctrine that was expressed in Roman times in the Institutes of Justinian and enshrined in English common law,[49] predates the existence of Florida's Constitution that is designed to protect common natural resources that are essential to life, liberty, pursuit of happiness and property.

153. The Legislature has declared English common law to be in force in Florida in Section 2.01, Fla. Stat:

> The common and statute laws of England which are of a general and not a local nature, with the exception hereinafter mentioned, down to the 4th day of July, 1776, are declared to be of force in this state; provided, the said statutes and common law be not inconsistent with the Constitution and laws of the United States and the acts of the Legislature of this state.

154. The Florida Constitution contains several provisions that reserve and recognize Plaintiffs' public trust rights. Article I, Section I of the Florida Constitution states:

> All political power is inherent in the people. The enunciation herein of certain rights shall not be construed to deny or impair others retained by the people.

155. Article II, Section 7(a) of the Florida Constitution states:

> It shall be the policy of the state to conserve and protect its natural resources and scenic beauty. Adequate provision shall be made by law for the abatement of air and water pollution and of excessive and unnecessary noise and for the conservation and protection of natural resources.

156. Article X, Section 11 of the Florida Constitution states:

> The title to lands under navigable waters, within the boundaries of the state, which have not been alienated, including beaches below mean high water lines, is held by the state, by virtue of its sovereignty, in trust for all the people. Sale of such lands may be authorized by law, but only when in

[49] The Institutes of Justinian declared: "By the law of nature these things are common to all mankind – the air, running water, the sea, and consequently the shores of the sea." J. Inst., Proemium, 2.1.1. (T. Sanders trans., 4th ed. 1867).

the public interest. Private use of portions of such lands may be authorized by law, but only when not contrary to the public interest.

157. Article X, Section 16 of the Florida Constitution states:

> The marine resources of the State of Florida belong to all of the people of the state and should be conserved and managed for the benefit of the state, its people, and future generations.

158. The Public Trust Doctrine requires all sovereign governments as trustees to protect and preserve Public Trust Resources for the beneficiaries of the trust—all present and future generations within the government's jurisdiction. The Public Trust is an attribute of sovereignty that cannot be surrendered or abrogated by any branch of government. Public Trust rights predate Florida's Constitution and are secured, not created, by it.

159. Public Trust Resources include the atmosphere (air); waters of the state, including coastal, surface, and groundwater; state-owned lands, including forests, wetlands, estuaries, beaches, coral reefs, submerged lands and lands adjoining the seacoasts; and wild flora and fauna, including freshwater and marine resources.

160. The atmosphere is a Public Trust Resource critical to the welfare of Public Trust Resources specifically enumerated in Article X, Section 11 and Article X, Section 16 of the Florida Constitution: marine resources, submerged sovereignty lands, and beaches. The atmosphere and marine and freshwater resources of the State are inextricably ecologically linked through the hydrological cycle and through CO_2 uptake. The atmosphere is also critical to the welfare of all other Public Trust Resources; without an atmosphere free from substantial impairment, all other Public Trust Resources will inevitably also be substantially impaired.

161. Article II, Section 7(a) of the Florida Constitution specifically identifies the air, or atmosphere, and laws relating to the abatement of pollution therein, as necessary for the

conservation and protection of natural resources. Article II, Section 7(a) thus explicitly incorporates the atmosphere as a Public Trust Resource and imposes a mandatory duty on Defendants to abate GHGs, which are causing and contributing to the substantial impairment of the state's Public Trust Resources, as described herein. Defendants have breached that duty in the past and are continuing to breach that duty.

162. In expanding the public ownership and interest of state lands and other resources, the Florida legislature established that:

> It is the policy of the state that the citizens of the state shall be assured public ownership of natural areas for purposes of maintaining this state's unique natural resources; protecting air, land, and water quality; promoting water resource development to meet the needs of natural systems and citizens of this state; promoting restoration activities on public lands; and providing lands for natural resource based recreation. In recognition of this policy, it is the intent of the Legislature to provide such public lands for the people residing in urban and metropolitan areas of the state, as well as those residing in less populated, rural areas. . . . Finally, it is the Legislature's intent that lands acquired through this program and any successor programs be managed in such a way as to protect or restore their natural resource values, and provide the greatest benefit, including public access, to the citizens of this state.

§ 259.032, Fla. Stat.

163. Defendants, as trustees, have a mandatory obligation to hold Public Trust Resources in trust for the benefit of all Floridians, including Plaintiffs and Florida's future generations, and to refrain from acting in a manner that results in waste or substantial impairment of Public Trust Resources. Defendants have breached that duty in the past and are continuing to breach that duty.

164. Defendants, as trustees, have the mandatory duty of loyalty to administer and manage Public Trust Resources solely in the interest of trust beneficiaries—both present and future generations of citizens. Defendants have the duty of impartiality to not favor one

beneficiary over another. Present and future generations are equally protected classes of beneficiaries of the Public Trust Doctrine, both under Florida's Constitution and its common law. Thus, when carrying out its Public Trustee obligations, Defendant trustees must treat present and future generations equally and cannot be shortsighted. Defendants have breached that duty and are continuing to breach that duty

165. Defendants, as trustees, have the mandatory duty to exercise the appropriate skill, prudence, and caution in managing the Public Trust Resources. Defendants have breached that duty and are continuing to breach that duty.

166. Defendants, as trustees, have the mandatory duty to ensure that the public, including Plaintiffs, have continued use and access to the Florida's Public Trust Resources for the purposes of the trust, including but not limited to commerce, navigation, swimming, fishing, and conservation. Defendants have breached that duty and are continuing to breach that duty.

167. The State of Florida, as a sovereign landowner and proprietor, has the same or greater duty to protect, and prevent material impairment to, its land from harm as an ordinary landowners and proprietor. The state of Florida is also charged with a higher duty of care to protect and preserve Public Trust Resources held in trust for all of its citizens. Defendants have breached that duty and are continuing to breach that duty.

168. Defendants have violated and continue to violate Article II, Section 7(a) and Article X, Sections 11 and 16 of the Florida Constitution and the Public Trust Doctrine by breaching its duties to protect Public Trust Resources from material impairment and waste; by favoring present temporary economic benefits of certain citizens or other entities, especially corporations and self-interest, over all beneficiaries, including future

generations; by failing to ensure Plaintiffs have continued use of and access to Florida's Public Trust Resources for the purposes of the trust; and by failing to exercise the appropriate skill, prudence, and caution in managing Florida's Public Trust Resources.

169. Defendants' systemic historic and ongoing affirmative aggregate actions continuing to authorize, promote, and permit fossil fuel extraction, transportation, and utilization as part of its Fossil Fuel Energy System violates their affirmative obligations to protect Florida's Public Trust Resources from substantial impairment and waste. Defendants have allowed private parties to treat the atmosphere as a dump for their CO_2 and GHG pollution. Defendants have failed to protect, and have abdicated control of, Florida's Public Trust Resources to the detriment of the present and future beneficiaries, including Plaintiffs.

170. Defendants' aggregate affirmative acts and failure to protect and maintain control of Florida's Public Trust Resources has interfered, and will continue to interfere, with Plaintiffs', as well as present and future generations of Floridians, access to and use of Public Trust Resources for their own survival, maintenance and enhancement of water resources, agricultural resources, maintenance and enhancement of fish and wildlife resources, conservation, pollution abatement, ecological values, in-stream flows, commerce, navigation, fishing, and recreation.

171. Defendant's failure to uphold their Public Trust obligations threatens the health, safety, and wellbeing of Plaintiffs, as well as all present and future generations of Floridians.

172. The affirmative aggregate acts in creating and operating a Fossil Fuel Energy System has resulted in the waste and substantial impairment of Florida's air, water, and other Public Trust Resources and continues to be performed by Defendants and their agents or

employees in their official capacities and is a contributing cause of the Plaintiffs' ongoing deprivation of rights secured by the Florida Constitution and the Public Trust Doctrine.

173. The constitutional and common law deprivations described herein are the result of the official policies, customs and continuing practices of the Defendants in implementing the Fossil Fuel Energy System. Defendants past and continuing conduct has caused insecurity with respect to Plaintiffs' rights, status in relation to the common law Public Trust Doctrine and Plaintiffs are entitled to have this Court settle and afford relief from such insecurities and uncertainties pursuant to Section 86.101 of the Florida Statutes.

174. Upon information and belief, Defendants have been, should have been, and are continuing to be aware of all of the deprivations complained of herein, and have condoned or been deliberately indifferent to such conduct.

175. All Defendants named herein have or claim an interest which will be affected by the declaration of rights in this case and are named herein due to their interests and claims pursuant to Section 86.091 of the Florida Statutes.

176. Plaintiffs and Defendants have an actual, present, on-going and adverse interest in the subject matter of this controversy.

177. There is therefore a present and actual dispute between the Plaintiffs and Defendants and the parties to this action disagree over their respective rights, obligations and responsibilities and there is a practical, on-going and actual need for resolution of the issues raised in this litigation. Plaintiffs are therefore entitled to a declaration of their rights in relation to the issues raised in this First Amended Complaint.

178. There is a bona fide adverse interest between the Plaintiffs and Defendants concerning the powers, privileges, immunities, status and rights of each party which requires resolution by this Honorable Court.

179. The Plaintiffs therefore seek a declaration from this Court as a matter of law as to whether Defendants actions and omissions described herein violate the Public Trust Doctrine and the Florida Constitution, a determination concerning Plaintiffs' rights, and an order from this Court that Defendants' illegal conduct cease.

Count Two: For Injunctive Relief
Breach of Mandatory Fiduciary Duty to Protect
Florida's Public Trust Resources

180. Plaintiffs' incorporate and re-allege all of the preceding allegations set forth in paragraphs 1-179 of this First Amended Complaint.

181. The actions of Defendants in creating and operating the Fossil Fuel Energy System are in violation of the Public Trust Doctrine and Florida Constitution, as described above.

182. Plaintiffs are being permanently and irreparably harmed by the Defendants creation and operation of a Fossil Fuel Energy System that results in catastrophic and potentially irreversible Climate Change Impacts, as described herein.

183. The Trump Administration's Fourth National Climate Assessment makes it clear that Plaintiffs' injuries are actual and imminent, not hypothetical:

> Climate changes "are affecting the health and well-being of the American people, causing injuries, illnesses, and death."[50]
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> ***
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> "Earth's climate is now changing faster than at any point in the history of modern civilization . . . . Climate-related risks will continue to grow

[50] *Fourth National Climate Assessment Chapter 14: Human Health*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/14/ (last visited Dec. 17, 2018).

without additional action. Decisions made today determine risk exposure for current and future generations and will either broaden or limit options to reduce the negative consequences of climate change."[51]

184. The harms Plaintiffs are suffering include the loss of use, access and enjoyment of Florida's Public Trust Resources (identified in ¶ 158) for the purposes of the trust, including but not limited to commerce, navigation, swimming, fishing, and conservation.

185. Plaintiffs have no adequate remedy at law that will prevent the irreparable harms identified above.

186. It is in the public interest that this Court grant injunctive relief preventing the Defendants from continuing to implement the Fossil Fuel Energy System in a manner that harms the Plaintiffs.

187. The harm to the Defendants from ceasing its unconstitutional conduct is far outweighed by the existing and anticipated harms to the Plaintiffs and to future generations of the state of Florida.

Count Three: For Declaratory Relief
Violation of Substantive Due Process

188. Plaintiffs incorporate and re-allege all of the preceding allegations in paragraphs 1-150 of this First Amended Complaint.

189. Among the inalienable rights protected by Article I, Sections 1, 2 and 9 of the Florida Constitution are the fundamental and inalienable rights to life, liberty, pursuit of happiness and property, which necessarily includes the fundamental right to a stable climate system capable of sustaining human life. A stable climate system means an

[51] *Fourth National Climate Assessment Chapter 1: Overview*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/1/ (last visited Dec. 17, 2018).

atmosphere and oceans that are free from dangerous levels of anthropogenic CO_2 and GHGs.

190. Protecting Florida's Public Trust Resources, including the climate system, for present and future generations is fundamental to our ordered scheme of liberty and is deeply rooted in our history and tradition. Without Florida's Public Trust Resources, liberty, justice, pursuit of happiness, and property are in peril. Florida's mandatory obligation to protect Public Trust Resources is recognized in the State's Constitution and legislation.

191. Governmental interference with the fundamental rights to life, liberty, property and the pursuit of happiness may be sustained only upon a showing that the governmental action is narrowly tailored to serve a compelling state interest.

192. Defendants' aggregate actions perpetuating a Fossil Fuel Energy System and authorizing dangerous levels of GHG pollution impinge on Plaintiffs' fundamental liberties by denying Plaintiffs' access to life, liberty, property and pursuit of happiness, including a stable climate system. For example, Defendants' unconstitutional actions harm Plaintiffs' dignity, including their capacity to provide for their basic human needs, safely raise families, practice their religious and spiritual beliefs, maintain their bodily integrity, and lead lives with access to clean air, water, shelter, and food.

193. Defendants have knowingly and arbitrarily endangered Plaintiffs' health and welfare by creating and managing a Fossil Fuel Energy System. After knowingly causing and contributing to this dangerous situation for Plaintiffs, Defendants have continued to enhance that danger by perpetuation of the Fossil Fuel Energy System and allowing fossil fuel production, consumption, and combustion at dangerous levels. The Defendants' conduct is so egregious that it shocks the conscience.

194. The Defendants' conduct described herein has been and continues to be performed and authorized by Defendants and their agents or employees in their official capacities and is a cause of the Plaintiffs' ongoing deprivation of rights secured by the Florida Constitution. Art. I, Sec. 1, 2 and 9.

195. The constitutional deprivations described herein are the result of the official policies, customs and pervasive practices of Defendants in its operation of the Fossil Fuel Energy System. Upon information and belief, Defendants have been and are aware of all of the deprivations complained of herein, and have condoned or been deliberately indifferent to such conduct.

196. Collectively and individually, Defendants have pursued and implemented policies, customs and practices that result in dangerous levels of GHG pollution and that fail to protect the Plaintiffs and the Public Trust Resources of this state.

197. Despite the Defendants' constitutional obligations to protect Plaintiffs' rights to life, liberty, pursuit of happiness, and property, Defendants are authorizing, promoting, and permitting fossil fuel extraction, transportation, and utilization through its Fossil Fuel Energy System and are failing to limit and reduce CO_2 and GHG pollution.

198. Plaintiffs have no appropriate and adequate remedy other than to seek declaratory relief in this Court. Plaintiffs lack administrative and non-equitable remedies to restrain Defendants from acting in a manner that violates Plaintiffs' constitutional rights reserved and established pursuant to Article I, Sec. 1, 2 and 9 of the Florida Constitution.

Count Four: For Injunctive Relief
Violation of Substantive Due Process

199. Plaintiffs incorporate and re-allege all of the preceding allegations in paragraphs 1-150, and 186-196 of this First Amended Complaint.

200. The actions of Defendants in perpetuating the Fossil Fuel Energy System are in violation of Article I, Sec. 1, 2, and 9 of the Florida Constitution as described above.

201. Plaintiffs are being permanently and irreparably harmed by the Defendants creation and operation of a Fossil Fuel Energy System that results in catastrophic and potentially irreversible Climate Change Impacts as described herein. The Trump Administration's Fourth National Climate Assessment makes it clear that Plaintiffs' injuries are actual and imminent, not hypothetical:

> Climate changes "are affecting the health and well-being of the American people, causing injuries, illnesses, and death."[52]
>
> ***
>
> "Earth's climate is now changing faster than at any point in the history of modern civilization . . . . Climate-related risks will continue to grow without additional action. Decisions made today determine risk exposure for current and future generations and will either broaden or limit options to reduce the negative consequences of climate change."[53]

202. The Defendants' irrational creation and operation of a Fossil Fuel Energy System deprives Plaintiffs of their fundamental rights to life, liberty, property and the pursuit of happiness, including a stable climate system that sustains human life, without due process of law.

203. The Defendants' irrational creation and operation of a Fossil Fuel Energy System also deprives Plaintiffs of their fundamental rights to personal security and family autonomy.

204. Plaintiffs have no adequate remedy at law that will prevent the irreparable harms identified above.

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[52] *Fourth National Climate Assessment Chapter 14: Human Health*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/14/ (last visited Dec. 17, 2018).
[53] *Fourth National Climate Assessment Chapter 1: Overview*, U.S. Glob. Change Research Program, https://nca2018.globalchange.gov/chapter/1/ (last visited Dec. 17, 2018).

205. It is in the public interest that this Court grant injunctive relief preventing the Defendants from continuing to implement the Fossil Fuel Energy System in a manner that harms the Plaintiffs.

206. The harm to the Defendants from ceasing its unconstitutional conduct is far outweighed by the existing and anticipated harms to the Plaintiffs and to future generations of the state of Florida.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs, by and through undersigned counsel, respectfully requests that this Court assume jurisdiction over the case and enter judgment in its favor against Defendants granting the following relief:

A. Order, declare and adjudge that Defendants have unlawfully violated the Public Trust Doctrine by creating and operating the Fossil Fuel Energy System as described in Paragraphs 148-150;

A. Order, declare and adjudge that Defendants have unlawfully violated the Florida Constitution by creating and operating the Fossil Fuel Energy System as described in Paragraphs 148-150;

B. Order, declare, and adjudge that Defendants have failed to fulfill their mandatory, fiduciary duty to protect the Public Trust Resources of the State of Florida from waste and substantial impairment caused by Florida's Fossil Fuel Energy System;

C. Order Defendants to establish a schedule for the preparation of a consumption-based inventory of Florida's CO_2 and GHG emissions;

D. Order Defendants to establish an inventory of the carbon sequestration capacity of Florida's terrestrial ecosystems;

E. Order Defendants to prepare and implement an enforceable comprehensive statewide remedial plan, (1) including specific dates and benchmark targets, (2) to phase out fossil fuel use in Florida's Fossil Fuel Energy System and draw down excess atmospheric CO_2 through carbon sequestration in Florida's terrestrial ecosystems so as to redress Defendants' contribution to climate change in a way that protects the Public Trust Resources on which Plaintiffs now and in the future will depend and their life, liberties, pursuit of happiness and property;

F. Retain jurisdiction over this action to monitor and enforce Defendants' compliance with all associated orders of this Court;

G. All costs, attorneys' fees, and expenses that Plaintiffs reasonably incur; and

H. Grant such other and further supplemental relief as the Court may deem just and proper pursuant to Section 86.061 of the Florida Statutes.

DEMAND FOR JURY TRIAL

Plaintiffs request and demand trial by jury as to all facts and issues so triable by jury under Florida law.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 26th day of December 2018, a true and correct copy of the foregoing has been electronically filed with the Clerk of the Court utilizing the Florida Courts e-Filing Portal system, and served electronically upon all counsel of record, including the following:

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