

The Florida Senate
BILL ANALYSIS AND FISCAL IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: The Professional Staff of the Committee on Environment and Natural Resources

BILL: SPB 7024

INTRODUCER: For Consideration by the Environment and Natural Resources Committee

SUBJECT: Florida Forever

DATE: January 10, 2020

REVISED: _____

ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1. Schreiber	Rogers		Pre-meeting

I. Summary:

SPB 7024 allocates \$10 million of Florida Forever funding each year for acquiring lands and conservation easements in Florida in areas impacted by a hurricane within the five years prior to the fiscal year for which the acquisition funding is appropriated. In order to receive such funding, properties must be either conservation lands or coastal areas subject to flooding as a result of sea-level rise.

The bill requires the Department of Environmental Protection (DEP) to consult with other specified agencies for Florida Forever projects related to conservation lands and coastal areas subject to sea-level rise, in order to maximize the benefits of such projects by coordinating on acquisitions that complement the agencies' respective plans. The bill requires DEP's Acquisition and Restoration Council to give increased priority to such projects when DEP and certain agencies coordinate to maximize the benefits of a project.

The bill requires that the connection of wildlife habitat with a wildlife crossing be included in the benefits that land acquisition under the Florida Forever program is planned to provide. The bill requires that the number of acres of wildlife crossings acquired be included as a measurement for evaluating achievement of the program's goal of increasing protection of Florida's biodiversity.

II. Present Situation:

Florida Forever

As a successor to Preservation 2000, the Legislature created the Florida Forever program in 1999 as the Blueprint for conserving Florida's natural resources.¹ The Florida Forever Act reinforced the state's commitment to conserve its natural and cultural heritage, provide urban open space, and better manage the land acquired by the state.² Florida Forever encompasses a wide range of

¹ Chapter 99-247, Laws of Fla.

² DEP, *Florida Forever Five Year Plan*, 49 (2019), available at

<http://publicfiles.dep.state.fl.us/DSL/FFWeb/Current%20Florida%20Forever%20Five-Year%20Plan.pdf>.

goals, including: land acquisition; environmental restoration; water resource development and supply; increased public access; public lands management and maintenance; and increased protection of land through the purchase of conservation easements.³ The state has acquired more than 2.4 million acres since 1991 under the Preservation 2000 and Florida Forever programs.⁴ Under Florida Forever, the issuance of up to \$5.3 billion in Florida Forever bonds is authorized to finance or refinance the cost of acquisition and improvement of land, water areas, and related property interests and resources, in urban and rural settings, for the purposes of restoration, conservation, recreation, water resource development, or historical preservation, and for capital improvements⁵ to lands and water areas which accomplish environmental restoration, enhance public access and recreational enjoyment, promote long-term management goals, and facilitate water resource development.⁶

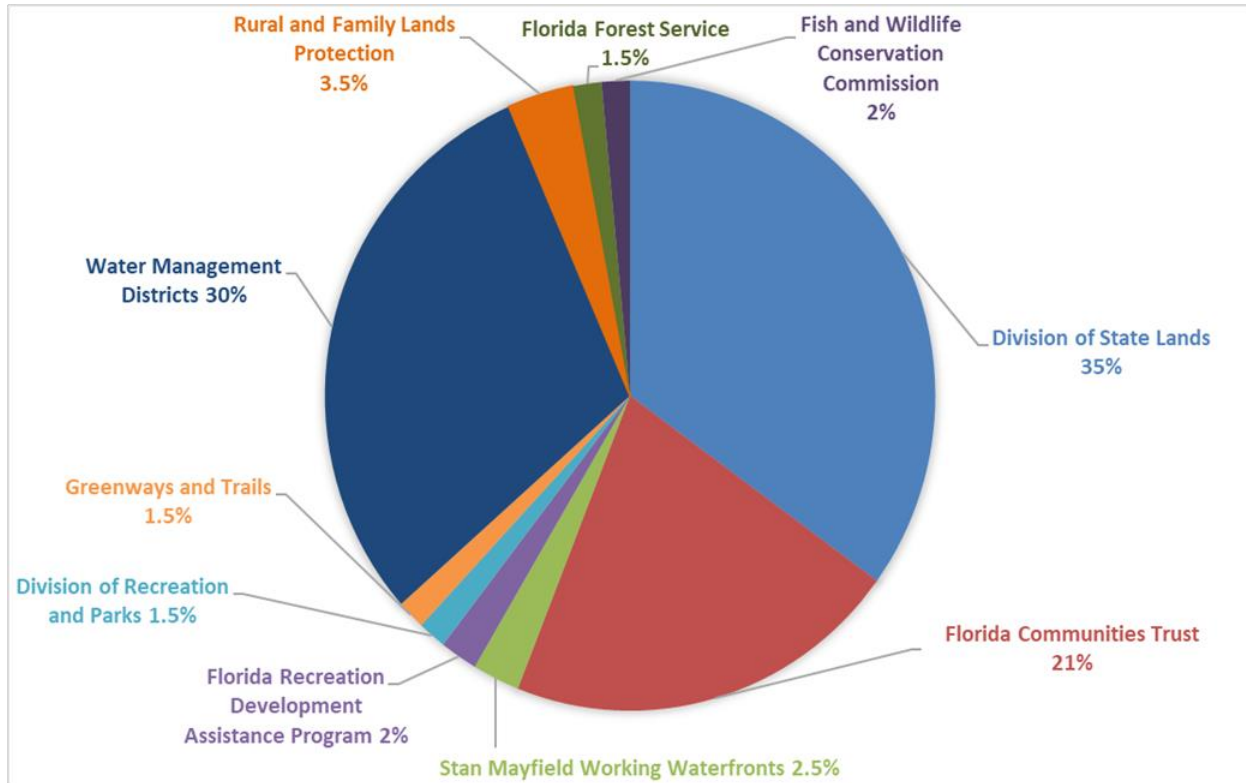
The Florida Forever Trust Fund was created to serve as the repository for Florida Forever bond proceeds to fund the Florida Forever Program. The Florida Forever Trust Fund is administered by the Department of Environmental Protection (DEP). DEP is required to distribute revenues from the Florida Forever Trust Fund in accordance with s. 259.105(3), F.S., which sets forth the allocation of the proceeds of cash payments or bonds deposited into the Florida Forever Trust Fund and is depicted in the graph below.

³ Section 259.105, F.S.

⁴ DEP, *Frequently Asked Questions about Florida Forever*, <https://floridadep.gov/lands/environmental-services/content/faq-florida-forever> (last visited Jan. 5, 2020); see Florida Natural Areas Inventory, *Summary of Florida Conservation Lands* (Feb. 2019), available at https://www.fnai.org/PDF/Maacres_201902_FCL_plus_LTF.pdf. This inventory provides a complete summary of the total amount of conservation lands in Florida.

⁵ Section 259.03(3), F.S. The terms “capital improvement” or “capital project expenditure,” when used in ch. 259, F.S., mean “those activities relating to the acquisition, restoration, public access, and recreational uses of such lands, water areas, and related resources deemed necessary to accomplish the purposes of this chapter. Eligible activities include, but are not limited to: the initial removal of invasive plants; the construction, improvement, enlargement or extension of facilities’ signs, firelanes, access roads, and trails; or any other activities that serve to restore, conserve, protect, or provide public access, recreational opportunities, or necessary services for land or water areas. Such activities shall be identified prior to the acquisition of a parcel or the approval of a project. The continued expenditures necessary for a capital improvement approved under this subsection shall not be eligible for funding provided in this chapter.”

⁶ Section 215.618, F.S.



Division of State Lands – 35 Percent

The Division of State Lands (DSL) within DEP oversees the Florida Forever program, under which the state has protected over 770,279 acres of land purchased with about \$3 billion in Florida Forever funds.⁷ Florida Forever projects and acquisitions are required to contribute to the achievement of one or more of the following program goals:

- Enhance the coordination and completion of land acquisition projects;
- Increase the protection of Florida’s biodiversity at the species, natural community, and landscape levels;
- Protect, restore, and maintain the quality and natural functions of land, water, and wetlands systems of the state;
- Ensure that sufficient quantities of water are available to meet the current and future needs of natural systems and the citizens of the state;
- Increase natural resource-based public recreational and educational opportunities;
- Preserve significant archaeological or historic sites;
- Increase the amount of forestland available for sustainable management of natural resources;
- Increase the amount of open space available in urban areas; and
- Mitigate the effects of natural disasters and floods in developed areas.⁸

⁷ DEP, *Florida Forever Five Year Plan*, 51 (2019), available at <http://publicfiles.dep.state.fl.us/DSL/FFWeb/Current%20Florida%20Forever%20Five-Year%20Plan.pdf>.

⁸ Section 259.105(4), F.S.

The Acquisition and Restoration Council (ARC) is a 10-member body⁹ that makes recommendations on the acquisition, management, and disposal of state-owned lands.¹⁰ ARC accepts applications from state agencies, local governments, nonprofit and for-profit organizations, private land trusts, and individuals for project proposals eligible for Florida Forever funding. In evaluating each application, ARC is required to consider whether the project:

- Meets multiple program goals;
- Is part of an ongoing governmental effort to restore, protect, or develop land areas or water resources;
- Enhances or facilitates management of properties already under public ownership;
- Has significant archaeological or historic value;
- Has funding sources that are identified and assured through at least the first 2 years of the project;
- Contributes to the solution of water resource problems on a regional basis;
- Has a significant portion of its land area in imminent danger of development, losing its significant natural attributes or recreational open space, or subdivision that would result in multiple ownership and make acquisition of the project more costly or less likely to be accomplished;
- Implements an element from a plan developed by an ecosystem management team;
- Is one of the components of Everglades restoration efforts;
- May be purchased at 80 percent of appraised value;
- May be acquired, in whole or in part, using alternatives to fee simple; and
- Is a joint acquisition.¹¹

ARC is required to give increased priority to:

- Projects for which matching funds are available;
- Project elements previously identified on an acquisition list which can be acquired at 80 percent or less of appraised value;
- Projects that can be acquired in less than fee ownership (acquiring land at less than fee ownership means acquisition of an interest in the property which allows the conservation and protection of resources on the property at less cost while keeping the land in private ownership);
- Projects that contribute to improving the quality or quantity of surface water or groundwater; and
- Projects that contribute to improving the water quality and flow of springs; and

⁹ Section 259.035(1), F.S. Four of ARC's 10 members are appointed by the Governor, three from scientific disciplines related to land, water, or environmental sciences and one with least five years of experience in managing lands for both active and passive types of recreation. Four of the members are the Secretary of Environmental Protection, the director of the Florida Forest Service of the Department of Agriculture and Consumer Services, the executive director of the Fish and Wildlife Conservation Commission, and the director of the Division of Historical Resources of the Department of State, or their respective designees. One member is appointed by the Commissioner of Agriculture from a discipline related to agriculture, including silviculture, and one member is appointed by the Fish and Wildlife Conservation Commission from a discipline related to wildlife management or wildlife ecology.

¹⁰ DEP, *Florida Forever Five Year Plan*, 49 (2019), available at <http://publicfiles.dep.state.fl.us/DSL/FFWeb/Current%20Florida%20Forever%20Five-Year%20Plan.pdf>.

¹¹ Section 259.105(9), F.S.

- Projects for which the state's land conservation plans overlap with the military's need to protect lands, water, and habitat to ensure the sustainability of military missions.¹²

Using its established criteria, ARC develops a priority list of applications. An affirmative vote of at least five members of ARC is required to place a proposed project on the priority list. ARC evaluates and selects projects twice per year, in June and December, and ranks the projects annually.¹³ Each project on the priority list is placed in one of the following categories of expenditure for land conservation projects: climate change; critical natural lands; less-than-fee; partnerships or regional incentives; or substantially complete (greater than 85 percent complete).¹⁴ Projects are ranked within each category from highest to lowest priority.

The climate change category includes lands where acquisition or other conservation measures will address the challenges of global climate change, such as through protection, restoration, mitigation, and strengthening of Florida's land, water, and coastal resources.¹⁵ This category includes lands that provide opportunities to sequester carbon, provide habitat, protect coastal lands or barrier islands, and otherwise mitigate and help adapt to the effects of sea-level rise and meet other objectives of the program.¹⁶ Generally, when developing its priority list, ARC gives greater consideration to lands that help address the challenges of global climate change.¹⁷

The proposed project list is presented to the Governor and the Cabinet sitting as the Board of Trustees of the Internal Improvement Trust Fund (BOT).¹⁸ The BOT is responsible for acting on ARC's recommendations by approving the acquisition of each parcel.¹⁹ While the BOT is authorized to remove projects from the proposed list, the BOT may not add or rearrange projects on the list.²⁰ DSL prepares an annual work plan based on the priority list developed by ARC, which outlines the specific projects and acquisitions within projects that will be negotiated for purchase with Florida Forever funds available for that fiscal year for land acquisition.²¹

At least \$5 million of the funds allocated to DSL under Florida Forever, beginning in the 2017-2018 fiscal year and continuing through the 2026-2027 fiscal year, are required to be spent on land acquisition within the Florida Keys Area of Critical State Concern.²²

¹² Section 259.105(10), F.S.

¹³ DEP, *Frequently Asked Questions about Florida Forever*, <https://floridadep.gov/lands/environmental-services/content/faq-florida-forever> (last visited Oct. 29, 2019).

¹⁴ Section 259.105(17), F.S.

¹⁵ Section 259.105(17)(d), F.S.

¹⁶ *Id.*

¹⁷ Fla. Admin. Code R. 18-24.006(3)(d)5.; *see also* Fla. Admin. Code R. 18-24.0022(2)(c)6.

¹⁸ Section 259.105(14), F.S.

¹⁹ DEP, *Florida Forever Five Year Plan*, 50 (2019), available at <http://publicfiles.dep.state.fl.us/DSL/FFWeb/Current%20Florida%20Forever%20Five-Year%20Plan.pdf>.

²⁰ Section 259.105(14), F.S.

²¹ Section 259.105(17), F.S.

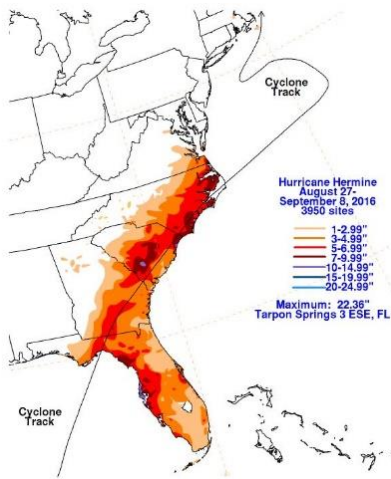
²² Section 259.105(3)(b), F.S.

Hurricanes

Hurricanes are tropical cyclones with maximum sustained surface winds of at least 74 miles per hour.²³ Major hurricanes to directly hit Florida within the last five years are reflected in the chart below.²⁴

Hurricane	Date	Category
Michael ²⁵	October 10, 2018	5
Irma ²⁶	September 10-11, 2017	1-4
Matthew ²⁷	October 7, 2016	3-4
Hermine ²⁸	August 30, 2016	1

Hurricane Hermine



In late August of 2016, Hurricane Hermine made landfall at its peak intensity, just east of St. Marks, Florida.²⁹ Hermine brought moderate storm surge to coastal areas. The combined effects of surge and tide produced maximum inundation levels of four to seven feet above ground level to the east of Hermine’s location along the coastlines of Dixie, Jefferson, Levy and Taylor Counties. Hermine produced heavy rainfall across large areas of western and northern Florida. The heavy rainfall caused flooding in streets and low-lying areas around the west coast of Florida, and on several rivers in northern Florida. Governor Scott declared a state of emergency for 51 counties. On September 28, 2016, a major disaster was declared. According to a report from the Florida Office of Insurance Regulation, insured losses to property in Florida

reached \$139 million with 19,699 claims.³⁰

²³ Florida Division of Emergency Management, *Enhanced State Hazard Mitigation Plan, State of Florida*, 134-135 (2018), available at https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl--shmp/shmp-2018-full_final_approved.6.11.2018.pdf.

²⁴ In addition to those listed in the table, other hurricanes have impacted Florida within the past five years, such as Dorian.

²⁵ See NOAA, National Weather Service, *Hurricane Michael (AL142018)*, (2019), available at https://www.nhc.noaa.gov/data/tcr/AL142018_Michael.pdf.

²⁶ See NOAA, National Weather Service, *Hurricane Irma (AL112017)*, (2017), available at https://www.nhc.noaa.gov/data/tcr/AL112017_Irma.pdf.

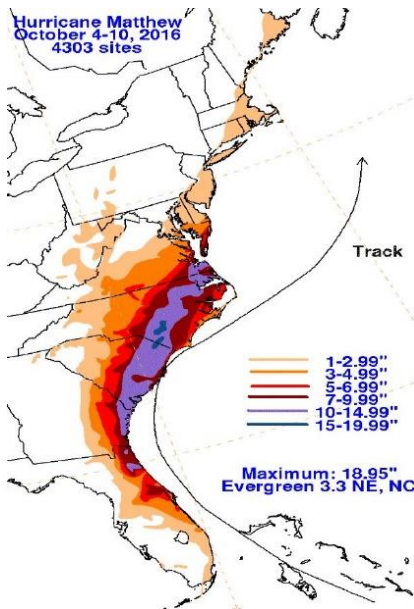
²⁷ See NOAA, National Weather Service, *Hurricane Matthew (AL142016)*, (2016), available at https://www.nhc.noaa.gov/data/tcr/AL142016_Matthew.pdf.

²⁸ See NOAA, National Weather Service, *Hurricane Hermine (AL092016)*, (2016), available at https://www.nhc.noaa.gov/data/tcr/AL092016_Hermine.pdf.

²⁹ DEO, *State of Florida 2019 - Mitigation Action Plan Draft*, 12-13 (2019), available at http://www.floridajobs.org/docs/default-source/office-of-disaster-recovery/cdbg-mitigation/state-action-plan/cdbg-mit-state-action-plan-draft-for-public-comment.pdf?sfvrsn=966041b0_2; see DEM, *Hermine Recovery*, <https://www.floridadisaster.org/info/hermine-recovery/> (last visited Jan. 5, 2020).

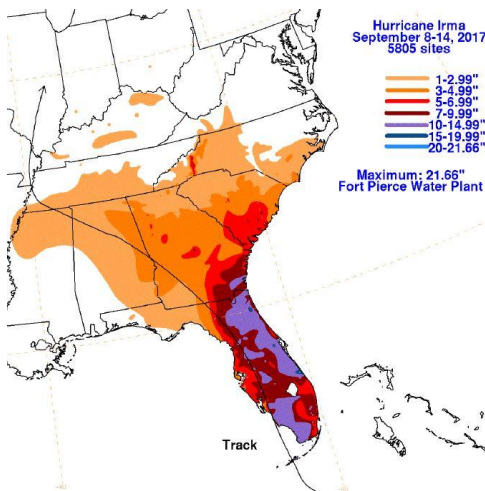
³⁰ DEO, *State of Florida 2019 - Mitigation Action Plan Draft*, 12-13 (2019).

Hurricane Matthew



In October of 2016, Hurricane Matthew paralleled the coast of the southeastern United States for 36 hours.³¹ Florida saw significant storm surge and high winds, which caused damage to infrastructure, homes, and businesses. As Matthew approached, states of emergency were declared along Florida’s eastern coast and widespread evacuations were ordered for extensive areas. As the storm passed to the east, over one million people in Florida lost power. In Fernandina Beach, on October 7, there was a peak surge of 9.88 feet above normal. Major erosion and damage to infrastructure occurred in areas around Jacksonville, Flagler Beach, and other parts of Florida’s east coast. Many homes were damaged by the combination of wind and rainfall. Portions of the state experienced heavy rainfall with several regions receiving more than 10 inches of rain in a 24-hour period. In northeast Florida, the St. John’s River was flooded by storm surge of up to 4.3 feet. On October 11, 2016, a major disaster was declared.³²

Hurricane Irma



Hurricane Irma, a Category 4 storm, made landfall on September 10, 2017 in the Florida Keys.³³ Irma devastated coastlines, infrastructure, and homes. It then turned northward, making a second landfall near Marco Island in southwest Florida, and then progressed northeast through the center of the state. Hurricane force winds pummeled southeast Florida and portions of central Florida. Northern portions of Florida were affected by tropical storm force winds. Storm surges impacted the state’s coastal areas from the Florida Keys up to the northern border. South Florida counties experienced surges of more than eight feet, with Monroe and Miami-Dade recording observed surges of more than

15 feet. Surges along the St. Johns River and its tributaries were extreme. Irma produced moderate rainfall across much of western and central Florida. The most significant concentration of Irma-related damage occurred in the Florida Keys. There, the storm destroyed 1,200 homes

³¹ DEO, *State of Florida 2019 - Mitigation Action Plan Draft*, 13-14 (2019), available at http://www.floridajobs.org/docs/default-source/office-of-disaster-recovery/cdbg-mitigation/state-action-plan/cdbg-mit-state-action-plan-draft-for-public-comment.pdf?sfvrsn=966041b0_2; see DEM, *Matthew Recovery*, <https://www.floridadisaster.org/info/matthew-recovery/> (last visited Jan. 4, 2020).

³² DEO, *State of Florida 2019 - Mitigation Action Plan Draft*, 13-14 (2019).

³³ DEO, *State of Florida 2019 - Mitigation Action Plan Draft*, 14 (2019), available at http://www.floridajobs.org/docs/default-source/office-of-disaster-recovery/cdbg-mitigation/state-action-plan/cdbg-mit-state-action-plan-draft-for-public-comment.pdf?sfvrsn=966041b0_2; see DEM, *Irma Recovery*, <https://www.floridadisaster.org/info/irma-recovery/> (last visited Jan. 5, 2020).

and significantly damaged an additional 3,000 homes. Irma severely damaged many bridges, roadways and state beaches. On September 10, 2017, a major disaster was declared for Hurricane Irma. The declaration encompassed all 67 Florida counties.³⁴

Hurricane Michael

On October 10, 2018, Hurricane Michael made landfall near Mexico Beach as a Category 5 Hurricane, ranking by pressure as the third-most intense Atlantic hurricane ever to make landfall in the United States.³⁵ Michael struck northwest Florida with wind speeds in excess of 155 miles per hour.³⁶ The storm devastated that area of the state, causing billions of dollars of damage and the loss of many businesses, homes, and lives. Governor Rick Scott declared a state of emergency on October 7, 2018 in 26 Florida counties, which was later extended to additional counties.³⁷ DEP issued an emergency order to address needs and expedite restoration efforts for structures, water and wastewater management systems, public works, and other systems damaged by the hurricane.³⁸ A major disaster was declared on October 11, 2018.³⁹

The Office of Economic and Demographic Research's (EDR) 2019 Annual Assessment of Florida's Water Resources and Conservation Lands discusses Hurricane Michael, and states the following:

While the storm caused widespread destruction, land that was proposed for future conservation prior to the storm is expected to still be suitable for conservation. EDR has identified 287,268.32 acres of land that withstood sustained hurricane force winds which are on lists of future potential conservation land from state agencies. In addition, the [Northwest Florida Water Management District] has broadly identified a class of 3,053,976 acres within its boundaries that it has some interest in acquiring. At this time, it is unknown how this general class interplays with the state agency plans... Given the large number of acres that have been identified for potential land acquisition, policy makers may see conservation as an option as they develop a vision and plan for recovery in this area. Purchasing lands for conservation would have the benefit of protecting identified lands while providing immediate financial relief to willing local land owners.⁴⁰

³⁴ DEO, *State of Florida 2019 - Mitigation Action Plan Draft*, 14 (2019).

³⁵ State of Florida, Office of the Governor, Executive Order Number 19-261 (Nov. 25, 2019), available at <https://www.floridadisaster.org/globalassets/executive-orders/michael/eo-19-261-hurricane-michael-extension-7-11-25-19.pdf>.

³⁶ Office of Economic and Demographic Research, *Annual Assessment of Florida's Water Resources and Conservation Lands, 2019 Edition*, 157 (2019), available at http://edr.state.fl.us/Content/natural-resources/LandandWaterAnnualAssessment_2019Edition.pdf.

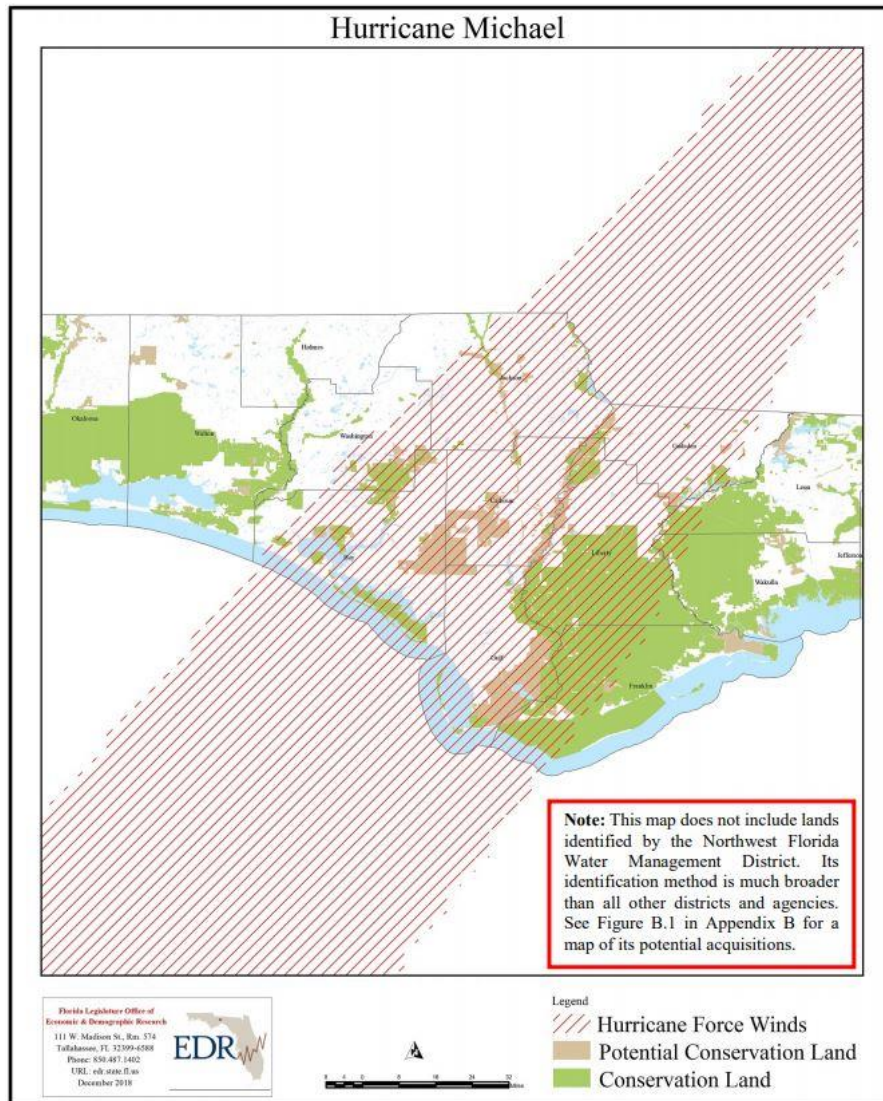
³⁷ See DEM, *Michael Recovery*, <https://www.floridadisaster.org/info/michael/> (last visited Jan. 4, 2020).

³⁸ DEP, Third Amended and Restated Emergency Final Order, OGCC No. 18-1335 (Feb. 1, 2019), available at https://floridadep.gov/sites/default/files/18-1335%20-%20Third%20Amended%20Hurricane%20Michael%20EFO%20for%20Repairs_0.pdf.

³⁹ FEMA, *Florida Hurricane Michael (DR-4399)*, <https://www.fema.gov/disaster/4399> (last visited Jan. 7, 2020).

⁴⁰ Office of Economic and Demographic Research, *Annual Assessment of Florida's Water Resources and Conservation Lands, 2019 Edition*, 158 (2019), available at http://edr.state.fl.us/Content/natural-resources/LandandWaterAnnualAssessment_2019Edition.pdf.

Below is a map of conservation lands acquired in the past or identified for future acquisition (as of January of 2019) located within the area that felt sustained hurricane force winds.



Property Acquisition for Resilience

Strategies for recovering from, and increasing resilience to, hurricanes and sea level rise include the voluntary government acquisition of impacted or at-risk properties.⁴¹ Such acquisition is often known as a “buyout,” and generally involves voluntary government acquisition, demolition or relocation of structures, and maintenance of the site as open space to conserve natural floodplain functions.⁴² Programs exist at the national, state, and local levels to fund such purchases. For example, the Federal Emergency Management Agency (FEMA) administers hazard mitigation programs to reduce risk, increase resilience, and provide federal disaster aid,

⁴¹ See Thomas Ruppert et al., *Managing Property Buyouts at the Local Level: Seeking Benefits and Limiting Harms* (2018), available at <https://www.flseagrant.org/wp-content/uploads/ELR-final-pdf.pdf>.

⁴² FEMA, Frequently Asked Questions, *Property Acquisitions for Open Space*, available at https://www.fema.gov/media-library-data/1487973067729-d34bd451527229a45bad0ef5ac6ddf93/508_FIMA_Acq_FAQs_2_24_17_Final.pdf.

such as the Hazard Mitigation Grant Program that makes funding available when authorized under a Presidential major disaster declaration, in areas of the state requested by the Governor.⁴³ FEMA's hazard mitigation programs can fund buyout programs.⁴⁴ Also, the U.S. Department of Housing and Urban Development (HUD) administers programs that can be used to fund buyout programs, such as the Community Development Block Grant Disaster Recovery Program.⁴⁵

In Florida, federal funding is available for property acquisition for disaster recovery and resilience planning. For example, in 2019, it was announced that \$633 million would be available to the state for disaster mitigation projects in areas impacted by presidentially declared disasters in 2016 and 2017, which include Hurricanes Hermine, Matthew, and Irma.⁴⁶ Additional funding was also announced at the end of 2019 for areas impacted by Hurricanes Michael and Irma.⁴⁷ Florida's Department of Economic Opportunity uses money from HUD to fund the Rebuild Florida Voluntary Home Buyout Program.⁴⁸ This program helps reduce the impact of future disasters by providing grant funding for local governments to purchase homes damaged by Hurricane Irma from willing homeowners in high-risk flood areas, or fulfill local match requirements for FEMA hazard mitigation funding.⁴⁹ DEP guidance explains how federal hazard mitigation funding may be available to purchase flood prone properties that can be restored to open space to adaptively enhance the natural function of the floodplain.⁵⁰

Federally-funded buyout programs and acquisition of flood prone properties are important strategies for sea-level rise adaptation and hurricane recovery. However, a 2019 federal government report found that the rising number of natural disasters, especially hurricanes, and increasing reliance on federal disaster aid are a key source of federal fiscal exposure that will likely continue to increase.⁵¹ Disaster costs are projected to increase as certain extreme weather

⁴³ FEMA, *Hazard Mitigation Assistance Guidance*, 4 (2015), available at https://www.fema.gov/media-library-data/1424983165449-38f5dfc69c0bd4ea8a161e8bb7b79553/HMA_Guidance_022715_508.pdf.

⁴⁴ FEMA, Frequently Asked Questions, *Property Acquisitions for Open Space*, available at https://www.fema.gov/media-library-data/1487973067729-d34bd451527229a45bad0ef5ac6ddf93/508_FIMA_Acq_FAQs_2_24_17_Final.pdf; see Katharine J. Mach et al., *Managed Retreat Through Voluntary Buyouts of Flood-Prone Properties*, SCIENCE ADVANCES, 2 (Oct. 9, 2019), available at <https://advances.sciencemag.org/content/advances/5/10/eaax8995.full.pdf>. Analysis of data on FEMA-funded buyouts shows that Florida ranks 23rd in the nation for such property buyouts.

⁴⁵ HUD, *Community Development Block Grant Disaster Recovery Program*, <https://www.hudexchange.info/programs/cdbg-dr/> (last visited Jan. 5, 2020); HUD, *Disaster Recovery Buyout Program Overview, Considerations, and Strategies*, <https://www.hudexchange.info/resource/3186/disaster-recovery-buyout-program-overview/> (last visited Jan. 5, 2020).

⁴⁶ DEO, *Rebuild Florida's Mitigation Program*, <http://www.floridajobs.org/rebuildflorida/mitigation> (last visited Jan. 5, 2020).

⁴⁷ Governor Ron DeSantis, *Governor Ron DeSantis Thanks President Trump and HUD Secretary Carson for Additional \$326 Million in Hurricane Recovery Dollars for Areas Impacted by Hurricanes Michael and Irma*, <https://www.flgov.com/2019/12/03/governor-ron-desantis-thanks-president-trump-and-hud-secretary-carson-for-additional-326-million-in-hurricane-recovery-dollars-for-areas-impacted-by-hurricanes-michael-and-irma/> (last visited Jan. 5, 2020).

⁴⁸ DEO, *Rebuild Florida Voluntary Home Buyout Program*, <http://floridajobs.org/community-planning-and-development/assistance-for-governments-and-organizations/disaster-recovery-initiative/hurricane-irma/irma-voluntary-home-buyout-program> (last visited Jan. 5, 2020).

⁴⁹ Governor Ron DeSantis, *Governor Ron DeSantis Announces \$44 Million in Awards for Voluntary Home Buyouts in Irma-Impacted Communities*, <https://www.flgov.com/2019/12/03/governor-ron-desantis-announces-44-million-in-awards-for-voluntary-home-buyouts-in-irma-impacted-communities/> (last visited Jan. 5, 2020).

⁵⁰ DEP, *Florida Adaptation Planning Guidebook*, 40, 79, 81 (2018), available at <https://floridadep.gov/sites/default/files/AdaptationPlanningGuidebook.pdf>.

⁵¹ U.S. Government Accountability Office, *Climate Change - Potential Economic Costs and Opportunities to Reduce Federal Fiscal Exposure*, 6-7 (Dec. 2019), available at <https://www.gao.gov/assets/710/703452.pdf>.

events become more frequent and intense due to climate change.⁵² Following the passage of the Disaster Recovery Reform Act of 2018, FEMA will increasingly implement measures for resilience, pre-disaster mitigation, and a culture of preparedness in its mitigation programs.⁵³

Other states also implement programs for buyouts or acquisition in floodplains. For example, following Hurricane Sandy in 2012, New York City reassessed its resiliency strategies.⁵⁴ Governor Andrew Cuomo created a program to buy flood prone areas to maintain as open space or transform into coastal buffer zones, parks or other non-residential uses that will help protect nearby communities from the impacts of extreme weather.⁵⁵ New Jersey's Blue Acres Floodplain Acquisition program makes eligible for acquisition properties damaged by, or prone to damage by, storms or storm-related flooding, or that may buffer or protect other lands from such damage.⁵⁶ Government acquisition of flood-prone properties has generally been funded by federal agencies, but some buyout programs have been entirely state or locally funded.⁵⁷

Sea-Level Rise and Coastal Flooding

With 1,350 miles of coastline and relatively low elevations, Florida is particularly vulnerable to coastal flooding.⁵⁸ There are three primary ways that climate change influences coastal flooding: sea-level rise, storm surge intensity, and rainfall intensity and frequency.⁵⁹

Sea-level rise is an observed increase in the average local sea level or global sea level trend.⁶⁰ The two major causes of global sea-level rise are thermal expansion caused by the warming of the oceans (water expands as it warms) and the loss of land-based ice (ice sheets and glaciers) due to melting.⁶¹ Since 1880, the average global sea level has risen about 8 to 9 inches, and the

⁵² *Id.* at 7.

⁵³ FEMA, *Disaster Recovery Reform Act (DRRA), Annual Report*, iv-vi, 9-14 (Oct. 2019), available at <https://www.fema.gov/media-library-data/1576858019956-8ad76980a61611d59089ba4f88b2f1e1/DRRAAnnualReport.pdf>; see FEMA, *DRRA Acquisition of Property for Open Space* (July 17, 2019), available at https://www.fema.gov/media-library-data/1568995238062-93928194f5ecf656c8647d06b1acd1ff/Acquisition_Fact_Sheet_FINAL_09-19-19.pdf.

⁵⁴ New York City, *A Stronger, More Resilient New York*, <https://www1.nyc.gov/site/sirr/report/report.page> (last visited Jan. 5, 2020).

⁵⁵ New York State, *Governor Cuomo Announces State to Extend Buyout Program for Staten Island Homeowners Affected by Superstorm Sandy*, <https://www.governor.ny.gov/news/governor-cuomo-announces-state-extend-buyout-program-staten-island-homeowners-affected> (last visited Jan. 5, 2020).

⁵⁶ NJ DEP, *Blue Acres Floodplain Acquisition*, https://www.nj.gov/dep/greenacres/blue_flood_ac.html (last visited Jan. 5, 2020).

⁵⁷ Katharine J. Mach et al., *Managed Retreat Through Voluntary Buyouts of Flood-Prone Properties*, SCIENCE ADVANCES, 1 (Oct. 9, 2019), available at <https://advances.sciencemag.org/content/advances/5/10/eaax8995.full.pdf>.

⁵⁸ Florida Division of Emergency Management, *Enhanced State Hazard Mitigation Plan, State of Florida*, 107-108, 162 (2018) [hereinafter *SHMP*], available at https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl-shmp/shmp-2018-full_final_approved.6.11.2018.pdf. This measurement of Florida's coastline increases to over 8,000 miles when considering the intricacies of Florida's coastline, including bays, inlets, and waterways.

⁵⁹ *Id.* at 107.

⁶⁰ DEP, *Florida Adaptation Planning Guidebook*, Glossary (2018) [hereinafter *DEP Guidebook*], available at <https://floridadep.gov/sites/default/files/AdaptationPlanningGuidebook.pdf>; see NASA, Facts, *Vital Signs: Sea Level*, <https://climate.nasa.gov/vital-signs/sea-level/> (last visited Dec. 20, 2019).

⁶¹ *DEP Guidebook*, at Glossary; NOAA, *Climate Change: Ocean Heat Content*, <https://www.climate.gov/news-features/understanding-climate/climate-change-ocean-heat-content> (last visited Dec. 19, 2019). More than 90 percent of the warming that has happened on Earth over the past 50 years has occurred in the ocean; IPCC, *The Ocean and Cryosphere in a Changing Climate*, SPM-8, SPM-10, SPM-19, SPM-21, SPM-23, 1-14–1-15, 4-3, 4-4, 4-14 (Sept. 2019) [hereinafter *IPCC Ocean and Cryosphere*], available at https://report.ipcc.ch/srocc/pdf/SROCC_FinalDraft_FullReport.pdf. Uncertainty

rate of global sea-level rise has been accelerating.⁶² The National Oceanic and Atmospheric Administration (NOAA) utilizes tide gauges to measure changes in sea level, and provides data on local sea-level rise trends.⁶³ Analysis of this data shows some low-lying areas in the southeastern U.S. experience higher local rates of sea-level rise than the global average.⁶⁴

Florida's coastal communities are experiencing high-tide flooding events, sometimes referred to as "sunny day" or "nuisance" flooding, with increasing frequency because sea-level rise increases the height of high tides.⁶⁵ The areas of the state most at risk from sea-level rise include the 35 coastal counties that contain approximately 76% of Florida's population.⁶⁶ In the U.S., sea-level rise and flooding threaten an estimated \$1 trillion in coastal real estate value, and analyses estimate that there is a chance Florida could lose more than \$300 billion in property value by 2100.⁶⁷ Sea-level rise affects the salinity of both surface water and groundwater through saltwater intrusion, posing a risk particularly for shallow coastal aquifers.⁶⁸ Sea-level rise also pushes saltwater further upstream in tidal rivers and streams, raises coastal groundwater tables, and pushes saltwater further inland at the margins of coastal wetlands.⁶⁹

Storm surge intensity and the intensity and precipitation rates of hurricanes are generally projected to increase,⁷⁰ and studies suggest the overall extent of destruction from hurricanes is also rising.⁷¹ Higher sea levels will cause storm surges to travel farther inland and impact more

regarding projected sea-level rise by 2100 is mainly determined by ice sheets, especially in Antarctica and Greenland, which are losing ice at increasing rates. The sum of glacier and ice sheet contributions is now the dominant source of global mean sea-level rise.

⁶² U.S. Global Change Research Program, *Fourth National Climate Assessment*, 757 (2018)[hereinafter *NCA4*], available at https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf; *IPCC Ocean and Cryosphere*, at SPM-10, 4-3.

⁶³ NOAA, *What is a Tide Gauge?*, <https://oceanservice.noaa.gov/facts/tide-gauge.html> (last visited Dec. 19, 2019); NOAA, *Tides and Currents, Sea Level Trends*, <https://tidesandcurrents.noaa.gov/sltrends/> (last visited Dec. 19, 2019); see *DEP Guidebook*, at 8, 16.

⁶⁴ *NCA4*, at 757.

⁶⁵ *SHMP*, at 108, 101, available at https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl--shmp/shmp-2018-full_final_approved.6.11.2018.pdf; NOAA, *High-Tide Flooding*, <https://toolkit.climate.gov/topics/coastal-flood-risk/shallow-coastal-flooding-nuisance-flooding> (last visited Dec. 19, 2019).

⁶⁶ *DEP Guidebook*, at III, available at <https://floridadep.gov/sites/default/files/AdaptationPlanningGuidebook.pdf>.

⁶⁷ *NCA4*, at 324, 758; Zillow, *Climate Change and Housing: Will a Rising Tide Sink All Homes?* (2017), <https://www.zillow.com/research/climate-change-underwater-homes-12890/> (last visited Dec. 20, 2019) (stating that by 2100 \$883 billion in U.S. homes are at risk of being underwater with the total value of potentially underwater properties in Florida at \$413 billion); Union of Concerned Scientists, *New Study Finds 1 Million Florida Homes Worth \$351 Billion Will Be At Risk From Tidal Flooding* (2018), <https://www.ucsusa.org/about/news/1-million-florida-homes-risk-tidal-flooding> (last visited Dec. 20, 2019).

⁶⁸ *SHMP*, at 106, available at https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl--shmp/shmp-2018-full_final_approved.6.11.2018.pdf.

⁶⁹ *Id.* at 108.

⁷⁰ *Id.* at 106, 141; *IPCC Ocean and Cryosphere*, at 6-21, available at https://report.ipcc.ch/srocc/pdf/SROCC_FinalDraft_FullReport.pdf; *NCA4*, at 95, 97, 116-117, 1482, available at https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf.

⁷¹ See Aslak Grinsted et. al., *Normalized US Hurricane Damage Estimates Using Area of Total Destruction, 1900-2018*, *Proceedings of the National Academy of Sciences* Nov. 2019, 116 (48) 23942-23946, available at <https://www.pnas.org/content/116/48/23942>.

properties than in the past.⁷² Stronger storms and sea-level rise are likely to lead to increased coastal erosion.⁷³

Increases in evaporation rates and water vapor in the atmosphere increase rainfall intensity and extreme precipitation events, and the sudden onset of water can overwhelm stormwater infrastructure.⁷⁴ As sea levels and groundwater levels rise, low areas drain more slowly, and the combined effects of rising sea levels and extreme rainfall events are increasing the frequency and magnitude of coastal and lowland flood events.⁷⁵

Sea-Level Rise Projections

Below is a table of projections for future sea-level rise, globally and in regions of Florida:

Sea-Level Rise Projections				
Source	Scale	Years	Low (feet)	High (feet)
Intergovernmental Panel on Climate Change ⁷⁶	Global	2046-2065	0.79	1.05
		2081-2100	1.28	2.32
		2100	1.41	2.76
U.S. Global Change Research Program ⁷⁷	Global	2030	0.3	0.6
		2050	0.5	1.2
		2100	1	4.3
Southeast Florida Regional Climate Change Compact Sea Level Rise Work Group ⁷⁸	Southeast Florida	2030	0.5	0.83
		2060	1.17	2.83
		2100	2.58	6.75
Tampa Bay Climate Science Advisory Panel ⁷⁹	Tampa Bay Region	2050	1	2.5
		2100	2	8.5

⁷² NCA4, at 758; SHMP, at 107; see also NOAA, *Florida Marine Debris Emergency Response Guide: Comprehensive Guidance Document* (Jan. 2019), available at https://marinedebris.noaa.gov/sites/default/files/publications-files/FL_Marine_Debris_Emergency_Response_Guide_2019.pdf.

⁷³ NCA4, 331, 340-341, 833, 1054, 1495; SHMP, at 108, 221; IPCC, *Climate Change and Land*, 4-44-4-45 (Aug. 2019), available at <https://www.ipcc.ch/site/assets/uploads/2019/08/Fullreport-1.pdf>.

⁷⁴ SHMP, at 99, 106, 116, 141, 181; NCA4, at 88, 762-763; see Florida Senate, Committee on Infrastructure and Security, *Meeting Packet for October 14, 2019*, 16-20, 23, available at http://www.flsenate.gov/Committees/Show/IS/MeetingPacket/4649/8266_MeetingPacket_4649_2.pdf.

⁷⁵ SHMP, at 106; NCA4, at 763.

⁷⁶ IPCC *Ocean and Cryosphere*, at SPM-7, 4-4, CCB9-21, AI-23. These projected ranges are based on climate models using “representative concentration pathways (RCPs),” which are scenarios of future emissions and concentrations of the full suite of greenhouse gases and aerosols and chemically active gases, as well as land use/land cover.

⁷⁷ NCA4, at 406, 758, available at https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf.

⁷⁸ Southeast Florida Regional Climate Change Compact Sea Level Rise Work Group, *Unified Sea Level Rise Projection, Southeast Florida*, 4-5 (2015), available at <https://southeastfloridaclimatecompact.org/wp-content/uploads/2015/10/2015-Compact-Unified-Sea-Level-Rise-Projection.pdf>. These projections are compared to the mean sea level in 1992; see SFRCCC, *Unified Sea Level Rise Projections*, <https://southeastfloridaclimatecompact.org/resources/unified-sea-level-rise-projections/> (last visited Dec. 19, 2019). The SFRCCC will soon release updated projections.

⁷⁹ Tampa Bay Climate Science Advisory Panel, *Recommended Projections of Sea Level Rise in the Tampa Bay Region*, 1, 7 (Apr. 2019), available at http://www.tbrpc.org/wp-content/uploads/2019/05/CSAP_SLR_Recommendation_2019.pdf.

Wildlife Crossings

Wildlife-vehicle collisions can have a broad range of consequences for both humans and wildlife, including human injuries and fatalities, threats to the individual survival and population size of wildlife, and other impacts such as vehicle damage.⁸⁰ Wildlife crossings are structures that allow wildlife to safely cross human-made barriers, such as roads. Examples of wildlife crossings include underpasses or overpasses, tunnels or culverts, and other types of crossings allowing wildlife to move safely between separated or fragmented areas of habitat.⁸¹

Currently, there are at least 73 wildlife crossing locations in Florida.⁸² These crossings have the potential to reduce motor vehicle collisions with wildlife, benefitting both humans and wildlife.⁸³ For example, in areas where crossings and fencing are in place panther deaths caused by vehicle collisions in Florida have been sharply reduced.⁸⁴ The Fish and Wildlife Conservation Commission, the Department of Transportation, and the U.S. Fish and Wildlife Service consider the potential need for new crossings and fencing as new roads are built or as existing roads require added capacity.⁸⁵ Including wildlife crossings early in the planning stages for these kind of projects lowers the costs of including them.

When ARC is developing its priority list of projects for Florida Forever funding, projects that close a critical gap in a recreational or ecological greenway, or landscape linkage, are given greater consideration than those that do not.⁸⁶ The Florida Forever program emphasizes linking together areas of wildlife habitat, and counts the acres of such linkages to measure progress towards achieving the program's goal of increasing protection for Florida's biodiversity.⁸⁷

III. Effect of Proposed Changes:

Section 1 revises s. 259.105, F.S., which establishes the Florida Forever program.

The bill amends paragraph (3)(b) of the statute, which requires thirty-five percent of the proceeds in the Florida Forever Trust Fund to be distributed to the Department of Environmental Protection (DEP) for the acquisition of lands and capital project expenditures, especially those that achieve conservation goals. The bill requires that, beginning in Fiscal Year 2020-2021 and for each fiscal year thereafter, at least \$10 million of the funds allocated pursuant to paragraph (3)(b) must be spent on acquiring lands or conservation easements in Florida in areas impacted by a hurricane within the five years prior to the fiscal year for which the funds for the acquisition

⁸⁰ U.S. Department of Transportation, Federal Highway Administration, *Wildlife-Vehicle Collision Reduction Study*, 7 (2008), available at <https://www.fhwa.dot.gov/publications/research/safety/08034/08034.pdf>; FWC, *Roads*, <https://myfwc.com/wildlifehabitats/wildlife/bear/living/roads/> (last visited Jan. 3, 2020).

⁸¹ See Van der Ree, R. et al., *Wildlife Tunnel Enhances Population Viability*, *Ecology and Society* 14(2): 7 (2009), <http://www.ecologyandsociety.org/vol14/iss2/art7/>.

⁸² FWC, *Wildlife Crossing Locations in Florida*, http://geodata.myfwc.com/datasets/da8f537fae4042799b1d2aff8a77642b_1/data?page=8 (last visited Jan. 3, 2020).

⁸³ DOT, *Wildlife Crossing Guidelines*, 1 (2018), available at https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/environment/pubs/wildlifecrossingguidelines_2018revisions.pdf?sfvrsn=e84b7844_0.

⁸⁴ FWC, *Wildlife Crossings*, <https://myfwc.com/wildlifehabitats/wildlife/panther/wildlife-crossings/> (last visited Jan. 2, 2020).

⁸⁵ *Id.*

⁸⁶ Fla. Admin. Code R. 18-24.006(3)(d)3.

⁸⁷ Section 259.105(4)(b)3., F.S.

are appropriated. In order to receive such funding, property must be either conservation lands as defined in s. 253.034(2)(c), F.S., or coastal areas subject to flooding as a result of sea-level rise.⁸⁸

The bill requires that, for Florida Forever projects related to conservation lands and coastal areas subject to flooding due to sea-level rise, DEP must consult with the following agencies: the Division of Emergency Management, the Department of Agriculture and Consumer Services, the Fish and Wildlife Conservation Commission, the Department of Transportation, the Department of Economic Opportunity, and the relevant water management districts. The goal of this consultation is to maximize the benefits of such projects by coordinating, whenever possible, on acquisitions that complement the planned projects of these agencies. The bill also requires DEP's Acquisition and Restoration Council to give increased priority to projects that maximize the benefits of acquiring conservation lands or coastal areas subject to flooding due to sea-level rise, when such projects use coordinated planning efforts between DEP and any of the aforementioned agencies.

The bill requires that the connection of wildlife habitat with a wildlife crossing be included in the benefits that land acquisition under the Florida Forever program is planned to provide. The bill requires that the number of acres of wildlife crossings acquired be included as a measurement for evaluating achievement of the program's goal of increasing protection for Florida's biodiversity.

Section 2 states that the bill takes effect July 1, 2020.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

⁸⁸ Section 253.034(2)(c), F.S. "Conservation lands" are defined as "lands that are currently managed for conservation, outdoor resource-based recreation, or archaeological or historic preservation, except those lands that were acquired solely to facilitate the acquisition of other conservation lands. Lands acquired for uses other than conservation, outdoor resource-based recreation, or archaeological or historic preservation may not be designated conservation lands except as otherwise authorized under this section. These lands shall include, but not be limited to, the following: correction and detention facilities, military installations and facilities, state office buildings, maintenance yards, state university or Florida College System institution campuses, agricultural field stations or offices, tower sites, law enforcement and license facilities, laboratories, hospitals, clinics, and other sites that do not possess significant natural or historical resources. However, lands acquired solely to facilitate the acquisition of other conservation lands, and for which the land management plan has not yet been completed or updated, may be evaluated by the Board of Trustees of the Internal Improvement Trust Fund on a case-by-case basis to determine if they will be designated conservation lands."

D. State Tax or Fee Increases:

None.

E. Other Constitutional Issues:

None.

V. Fiscal Impact Statement:

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

The bill allocates \$10 million for acquiring certain lands or property rights in areas impacted by hurricanes, which may include purchasing privately-owned property from hurricane victims wishing to sell their impacted property. Therefore, this bill may result in a positive, indeterminate impact on the private sector.

The bill may result in private property that is at risk of future damage or destruction from hurricanes being acquired by the government. This may result in the prevention of significant losses to property owners when a hurricane strikes. Such acquisition may also help protect other private property that is near the acquired property. Therefore, this bill may result in a positive, indeterminate impact on the private sector.

C. Government Sector Impact:

The bill requires that at least \$10 million of Florida Forever funding, from the thirty-five percent for projects intended to achieve conservation goals, be spent on acquiring certain lands or conservation easements impacted by a hurricane within the 5 years before the fiscal year for which funds for the acquisition are appropriated. This allocation will result in at least \$10 million less in funding being available annually for Florida Forever projects that do not meet the criteria specified in the bill.

The bill requires DEP to consult and coordinate with other state agencies for certain types of Florida Forever projects. The bill also requires DEP to change its implementation of the Florida Forever program to incorporate requirements for wildlife crossings. Implementing any of these changes may require rulemaking. These changes may cause DEP to incur additional costs.

The bill's requirements for DEP to consult and coordinate with other agencies may increase efficiency and maximize the achievement of collective state goals through Florida Forever funding. This may result in a positive, indeterminate fiscal impact on the public sector.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Statutes Affected:

This bill substantially amends section 259.105 of the Florida Statutes.

IX. Additional Information:

A. Committee Substitute – Statement of Changes:

(Summarizing differences between the Committee Substitute and the prior version of the bill.)

None.

B. Amendments:

None.