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 Appropriations Subcommittee on Agriculture, Environment, and General Government

BILL:	CS/SB 1940
INTRODUCER:	Environment and Natural Resources Committee and Senator Brodeur
SUBJECT:	Statewide Flooding and Sea Level Rise Resilience
DATE:	February 21, 2022 REVISED:

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Collazo	Rogers	EN	**Fav/CS**
2.	Reagan	Betta	AEG	**Recommend: Favorable**
3.			AP	

Please see Section IX. for Additional Information:

COMMITTEE SUBSTITUTE - Substantial Changes

I. Summary:

CS/SB 1940 establishes the Statewide Office of Resilience (office) within the Executive Office of the Governor. The bill provides that the office must be headed by a Chief Resilience Officer, who is appointed by and serves at the pleasure of the Governor.

The bill requires the Department of Transportation (DOT) to develop a resilience action plan for the State Highway System. The bill identifies goals of the action plan and requires it to include certain components. It also requires the DOT to submit the action plan to the Governor and the Legislature by June 20, 2023, and a status report every third year on June 30 thereafter.

The bill makes various revisions to section 380.093, Florida Statutes, relating to statewide resiliency funding and planning, including:

- Authorizing the use of Resilient Florida Grant Program funds to fund preconstruction activities for Statewide Flooding and Sea Level Rise Resilience Plan (plan) projects in municipalities and counties meeting certain population thresholds, but not for projects that adapt critical assets to flooding and sea level rise;
- Pushing back by one year (to 2023 and 2024, respectively) the dates by which the Comprehensive Statewide Flood Vulnerability and Sea Level Rise Data Set and Assessment must be completed; and
- Revising the $100 million cap on funding proposed for each year of the plan to a minimum threshold of $100 million.

The bill requires the Florida Flood Hub for Applied Research and Innovation to provide certain data to counties and municipalities for vulnerability assessments.

Beginning January 1, 2023, the bill also directs surveyors and mappers to submit digital copies of the elevation certificates they complete to the Division of Emergency Management (DEM) as outlined on the DEM's website.

The bill will likely cause the DOT to incur costs associated with developing the required resilience action plan for the State Highway System.

II. Present Situation:

Chief Resilience Officer

In January of 2019, Governor DeSantis issued Executive Order 19-12, creating the Office of Resilience and Coastal Protection to help prepare Florida's coastal communities and habitats for impacts from sea-level rise by providing funding, technical assistance, and coordination among state, regional, and local entities.[1] This office oversees a broad range of state programs.[2]

In August of 2019, the Governor appointed Florida's first Chief Resilience Officer (CRO), Dr. Julia Nesheiwat. The CRO reports directly to the Executive Office of the Governor and is tasked with preparing Florida for the environmental, physical, and economic impacts of sea level rise.[3]

In February of 2020, Dr. Nesheiwat stepped down as the CRO. Former Secretary of the Department of Environmental Protection (DEP), Noah Valenstein, served as the interim CRO until he resigned in May 2021. The current Secretary of the DEP, Shawn Hamilton, served as the CRO until Governor DeSantis appointed Wesley Brooks, the current CRO, in November 2021.[4]

Statewide Resilience Programs

Department of Environmental Protection Programs

In 2021, the Legislature, recognizing that Florida is vulnerable to flooding from increasing rainfall, storm surge, and sea level rise, established several statewide resilience programs administered by the DEP.[5] Those programs include the following:

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[1] State of Florida, Office of the Governor, *Executive Order Number 19-12*, 5 (2019), *available at* https://www.flgov.com/wp-content/uploads/2019/01/EO-19-12-.pdf (last visited Jan. 26, 2022).
[2] Dep't of Environmental Protection (DEP), *Office of Resilience and Coastal Protection*, https://floridadep.gov/rcp (last visited Jan. 26, 2022).
[3] *See* Governor Ron DeSantis, News Releases, *Governor Ron DeSantis Announces Dr. Julia Nesheiwat as Florida's First Chief Resilience Officer* (Aug. 1, 2019), https://flgov.com/2019/08/01/governor-ron-desantis-announces-dr-julia-nesheiwat-as-floridas-first-chief-resilience-officer/ (last visited Jan. 26, 2022).
[4] Governor Ron DeSantis, New Releases, *Governor DeSantis Announces Four Key Appointments to His Administration* (Nov. 19, 2021), https://www.flgov.com/2021/11/19/governor-desantis-announces-four-key-appointments-to-his-administration/ (last visited Jan. 26, 2022); Renzo Downey, "After 20 months of uncertainty, Gov. DeSantis names Wesley Brooks as Chief Resilience Officer," FLORIDA POLITICS, *available at* https://floridapolitics.com/archives/474849-after-20-months-of-uncertainty-gov-desantis-names-wesley-brooks-as-chief-resilience-officer/ (last visited Jan. 26, 2022).
[5] Sections 380.093, 380.0933, 403.928(4), F.S.; *see* ch. 2021-28, Laws of Fla.

- The DEP's Resilient Florida Grant Program provides grants to counties or municipalities for community resilience planning, such as vulnerability assessments, plan development, and projects to adapt critical assets.[6] The findings of the assessments must be reported to the DEP.
- The Comprehensive Statewide Flood Vulnerability and Sea Level Rise Data Set and Assessment, which must be updated at least every five years. The DEP must:
  - By July 1, 2022, develop a statewide data set, including statewide sea level rise projections, containing information necessary to determine the risks of flooding and sea level rise to inland and coastal communities; and
  - By July 1, 2023, develop a statewide assessment, using the statewide data set, identifying vulnerable infrastructure, geographic areas, and communities. The statewide assessment must include an inventory of critical assets.
- The Statewide Flooding and Sea Level Rise Resilience Plan. By each December 1, the DEP must develop the plan on a three-year planning horizon and submit it to the Governor and Legislature. The plan must consist of ranked projects addressing the risks of flooding and sea level rise to communities in the state. The funding proposed in the plan may not exceed $100 million in one year and is subject to review and appropriation by the Legislature. Each project must have a minimum 50 percent cost-share, unless it assists or is within a financially disadvantaged small community.[7] Counties, municipalities, and regional resilience entities[8] are authorized to submit to the DEP lists of proposed projects for inclusion, and water management districts and flood control districts are authorized to submit to the DEP lists of proposed projects specifically relating to water supplies or water resources for inclusion.[9] The DEP must assess projects for inclusion by implementing a four-tiered scoring system.[10]

Department of Transportation Programs

The Department of Transportation (DOT) regulates access to the facilities forming part of the State Highway System.[11] The Florida Transportation Code[12] defines the State Highway System[13] as meaning:

- The interstate system and all other roads within the state which were under the jurisdiction of the state on June 10, 1995;
- Roads constructed by an agency of the state for the State Highway System; and

[6] Section 380.093(2)(a), F.S. "Critical asset" is defined to include broad lists of assets relating to transportation, critical infrastructure, emergency facilities, natural resources, and historical and cultural resources.
[7] Section 380.093(5)(e), F.S. "Financially Disadvantaged Small Community," for purposes of s. 380.093, F.S., is defined as a municipality with a population of 10,000 or fewer and a per capita annual income that is less than the state's per capita annual income, or a county with a population of 50,000 or fewer and a per capita annual income that is less than the state's per capita annual income.
[8] Section 380.093(6), F.S. The bill authorizes the DEP to provide funding, subject to specific legislative appropriation, to regional resilience entities for providing technical assistance to counties and municipalities, coordinating multijurisdictional vulnerability assessments, and developing project proposals for the statewide resilience plan.
[9] Section 380.093(5)(d), F.S.
[10] Section 380.093(5)(h), F.S.
[11] Section 334.03(24), F.S.
[12] Chapters 334-339, 341, 348, and 349, F.S., and ss. 332.003-332.007, 351.35, 351.36, 351.37, and 861.011, F.S. *See* s. 334.01, F.S., (identifying the chapters and sections of the Florida Statutes that may be cited as the Florida Transportation Code).
[13] Section 334.03(24), F.S.

- Roads transferred into the state's jurisdiction after June 10, 1995 by mutual consent with another governmental entity, but not including roads transferred out of the state's jurisdiction in the same way.[14]

In April 2020, Secretary of the DOT Kevin Thibault signed Policy 000-525-053,[15] entitled Resiliency of State Transportation Infrastructure (Resiliency Policy), to make it the official policy of the DOT to consider the resiliency of the state's transportation system to support the safety, mobility, quality of life, and economic prosperity of Florida and to preserve the quality of its environment and communities.[16]

The Resiliency Policy recognizes that resiliency includes the ability of the transportation system to adapt to changing conditions and prepare for, withstand, and recover from disruption. To that end, the DOT has pledged to:[17]

- Continue to identify risks, particularly related to sea level rise, flooding, and storms; assess potential impacts; and employ strategies to avoid, mitigate, or eliminate impacts;
- Collaborate with appropriate agencies and organizations for information sharing and alignment of resiliency strategies; and
- Implement the Resiliency Policy through the DOT's long-range and modal plans; work program; asset management plans; research efforts; and internal manuals, tools, guidelines, procedures, and related documents, guiding planning, programming, project development, design, construction, operations, and maintenance.[18]

Consistent with its Resiliency Policy, the DOT is doing all of the following to advance resiliency:[19]

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[14] *Id.*

[15] Dep't of Transportation (DOT), *Resiliency of State Transportation Infrastructure, Topic No. 000-525-053* (Apr. 27, 2020), *available at* https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/planning/policy/resilience/resiliency_policy_000-525-053.pdf?sfvrsn=4dae64fd_2 (last visited Jan. 28, 2022). The U.S. Department of Transportation, Federal Highway Administration (FHWA), has also issued an order directing FHWA to integrate consideration of climate change and extreme weather event impacts and adaptation responses into the delivery and stewardship of the Federal aid and Federal Lands Highway programs. This includes encouraging state departments of transportation and other agencies to develop, prioritize, implement, and evaluate risk-based and cost-effective strategies to minimize climate and extreme weather risks and protect critical infrastructure using the best available science, technology, and information. *See* U.S. Dep't of Transportation, Federal Highway Administration, *Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events, Order 5520* (Dec. 15, 2014), *available at* https://www.fhwa.dot.gov/legsregs/directives/orders/5520.pdf (last visited Jan. 31, 2022).

[16] *Id.*

[17] DOT, *Resiliency of State Transportation Infrastructure, Topic No. 000-525-053* (Apr. 27, 2020), *available at* https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/planning/policy/resilience/resiliency_policy_000-525-053.pdf?sfvrsn=4dae64fd_2 (last visited Jan. 28, 2022).

[18] *Id.*

[19] DOT, *Resiliency Subject Brief*, 2, *available at* https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/planning/policy/briefing-sheets/briefing_sheets_resilience_0630.pdf?sfvrsn=1173ebf_2 (last visited Jan. 28, 2022).

- Incorporating resiliency in statewide planning efforts including the Florida Transportation Plan,[20] Strategic Intermodal System (SIS) Policy Plan,[21] Freight Mobility and Trade Plan,[22] and Transportation Asset Management Plan;[23]
- Providing resources such as the Resilience Quick Guide[24] for incorporating resiliency into Metropolitan Planning Organizations' (MPOs') long range plans and the Resilience Primer that establishes a process framework, documents industry best practices, and provides a resiliency toolbox;[25]
- Laying the groundwork for a SIS Resilience Action Plan as part of phase II of a vulnerability assessment for Florida's high priority transportation facilities;
- Developing and coordinating training for the Sea Level Scenario Sketch Planning Tool[26] to aid the assessment of potential long-range sea level rise impacts on transportation infrastructure;
- Designing for rising sea levels and tidal issues by analyzing projected sea levels and tides in the design of bridge replacement projects and incorporating closed drainage system upgrades and backflow devices into coastal projects;
- Supporting research activities that provide a better understanding of the impacts and potential responses to sea level rise, tidal flooding, and other stresses and shocks;
- Managing infrastructure assets like roadway pavements through analysis and implementation of methods that address environmental conditions such as extreme heat; and
- Safeguarding information technology through an agency-wide team established to ensure the protection of critical data and network resources from cyberattacks and other threats.[27]

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[20] DOT, *Florida Transportation Plan (FTP), available at* http://floridatransportationplan.com/index.htm (last visited Jan. 29, 2022). The Florida Transportation Plan is the single overarching plan guiding Florida's transportation future. Updated every five years, it is a collaborative effort of state, regional, and local transportation partners in the public and private sectors.

[21] DOT, *Strategic Intermodal System Policy Plan* (Mar. 2016), *available at* https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/content/planning/systems/programs/mspi/plans/sis-policyplan.pdf?sfvrsn=4d7341ad_0 (last visited Jan. 29, 2022). The Strategic Intermodal System Policy Plan establishes the policy framework for planning and managing Florida's Strategic Intermodal System, the high priority network of transportation facilities important to the state's economic competitiveness. *Id.* at ii.

[22] DOT, *Freight Mobility and Trade Plan* (2020), *available at* https://www.fdot.gov/fmtp (last visited Jan. 29, 2022).

[23] DOT, *Transportation Asset Management Plan* (2015), *available at* https://www.fdot.gov/docs/default-source/planning/tamp/TAMP-2015.pdf (last visited Jan. 29, 2022).

[24] DOT, *Resilience Quick Guide: Incorporating Resilience in the MPO Long Range Transportation Plan*, 2 (2020), *available at* http://www.floridatransportationplan.com/pdf/2020-01-29_FDOT%20Resilience%20Quick%20Start%20Guide_FINAL.pdf (last visited Jan. 26, 2022). The purpose of the Quick Guide is to help MPOs improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation in the long-range transportation planning process. Florida MPOs must consider resilience as a planning factor when assessing projects, strategies, and services during development of their Long Range Transportation Plans (LRTPs). The Quick Guide outlines the steps for MPOs to consider throughout the development of the LRTP.

[25] DOT, *Resiliency Subject Brief*, 2, *available at* https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/planning/policy/briefing-sheets/briefing_sheets_resilience_0630.pdf?sfvrsn=1173ebf_2 (last visited Jan. 28, 2022). MPOs must, in cooperation with the state and public transportation operators, "[i]mprove the resilience and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation" in the long range transportation planning process. *See id; see also* 23 C.F.R. s. 450.306(b)(9).

[26] University of Florida GeoPlan Center, *Sea Level Scenario Sketch Planning Tool*, https://sls.geoplan.ufl.edu/ (last visited Jan. 29, 2022). The purpose of the Sea Level Scenario Sketch Planning Tool is to help identify transportation infrastructure exposed to current and future flood risks. It was created by the University of Florida GeoPlan Center with funding from the DOT. *Id.*

[27] *Id.*

Division of Emergency Management Programs

The Division of Emergency Management (DEM) in the Executive Office of the Governor maintains a statewide emergency management program, and its roles include administering federal mitigation grant programs and serving as Florida's state coordinating agency for the National Flood Insurance Program (NFIP).[28]

The NFIP was created by passage of the National Flood Insurance Act of 1968.[29] The NFIP is managed by the Federal Emergency Management Agency (FEMA) and enables homeowners, business owners, and renters in flood-prone areas to purchase flood insurance protection from the federal government.[30] Flood insurance through the NFIP is only available in communities that adopt and enforce federal floodplain management criteria.[31]

The NFIP elevation certificate is used to provide elevation information necessary to ensure compliance to community floodplain management ordinances, to determine the proper insurance premium rate, or to support a request for a Letter of Map Amendment.[32] As part of the agreement for making flood insurance available in a community, the NFIP requires each community to adopt floodplain management regulations that specify minimum requirements for reducing flood losses.[33] One such requirement is for the community to obtain the elevation of the lowest floor (including the basement) of all new and substantially improved buildings, and maintain a record of such information. The elevation certificate provides a way for a community to document compliance with the community's floodplain management ordinance.[34]

In Florida, elevation certificates must be completed by a surveyor and mapper.[35] Since January 1, 2017, surveyors and mappers are required to submit, within 30 days after completion, a copy of each elevation certificate that he or she completes to the DEM. The surveyor and mapper must retain a signed and sealed original in his or her records.[36] Elevation certificates may be submitted to the DEM using its online web application[37] developed for this purpose.[38]

Other State, Regional, and Local Programs

The following list includes examples of resilience efforts by other government entities in Florida:

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[28] Division of Emergency Management (DEM), *Mitigation*, https://www.floridadisaster.org/dem/mitigation/ (last visited Jan. 26, 2022); DEM, *State Floodplain Management Program*, https://www.floridadisaster.org/dem/mitigation/floodplain/ (last visited Jan. 26, 2022).
[29] FEMA, *50 Years of the NFIP, available at* https://www.fema.gov/sites/default/files/2020-05/NFIP_50th_Final_8.5x11_Regional_Printable.pdf (last visited Jan. 29, 2022).
[30] Benefits.gov, *National Flood Insurance Program (NFIP)*, https://www.benefits.gov/benefit/435 (last visited Jan. 29, 2022).
[31] *Id.*
[32] FEMA, *Elevation Certificate and Instructions (2019 Edition), available at* https://www.fema.gov/sites/default/files/2020-07/fema_nfip_elevation-certificate-form_feb-2020.pdf (last visited Jan. 29, 2022).
[33] *Id.*
[34] *Id.*
[35] Section 472.0366(1)(b), F.S.
[36] Section 472.0366(2), F.S.
[37] DEM, *Elevation Certificates Submittal Form*, https://maps.floridadisaster.org/portal/apps/GeoForm/index.html?appid=d5642b277af24b7191107524b390bada (last visited Jan. 31, 2022).
[38] DEM, *Elevation Certificates*, https://www.floridadisaster.org/elevation-certificates/ (last visited Jan. 31, 2022).

- Florida's coastal local governments must have a coastal management element in their comprehensive plans,[39] and this element may include an "adaptation action area" designation[40] and must contain a redevelopment component in compliance with the 2015 "Peril of Flood" law.[41]
- The Department of Economic Opportunity assists communities with adaptation planning, and its Office of Long-Term Resiliency supports communities following disasters, which includes administering federal funds that support resiliency efforts.[42]
- The Fish and Wildlife Conservation Commission (FWC) is Florida's lead agency on addressing the impacts of climate change on fish and wildlife.[43] In 2016, the FWC published a guide of adaptation strategies for the predicted impacts of climate changes.[44]
- The Department of Agriculture and Consumer Services' Office of Energy develops Florida's energy policy and works on climate change issues.[45]
- The Department of Business and Professional Regulation's Florida Building Commission adopts floodplain management and resilience standards into the Florida Building Code.[46]
- The water management districts implement a range of resilience and flood control programs.[47]
- Florida is divided into ten Regional Planning Councils, and some do resilience planning.[48]
    - The Northeast Florida Regional Council's efforts include grant funding, technical support, and resources including an online mapping tool for determining risk.[49]

[39] Sections 380.24, 163.3177(6)(g), and 163.3178(2), F.S.
[40] Chapter 2011-139, Laws of Fla.; ss. 163.3164(1) and 163.3177(6)(g)10., F.S.
[41] Chapter 2015-69, Laws of Fla.; s. 163.3178(2)(f), F.S.
[42] Dep't of Economic Opportunity (DEO), *Adaptation Planning*, http://www.floridajobs.org/community-planning-and-development/programs/community-planning-table-of-contents/adaptation-planning (last visited Jan. 26, 2022); DEO, *Office of Long-Term Resiliency*, http://www.floridajobs.org/community-planning-and-development/assistance-for-governments-and-organizations/disaster-recovery-initiative (last visited Jan. 26, 2022).
[43] Florida Fish and Wildlife Conservation Commission (FWC), *What FWC is Doing*, https://myfwc.com/conservation/special-initiatives/climate-change/fwc/ (last visited Jan. 26, 2022).
[44] FWC, *A Guide to Climate Change Adaptation for Conservation*, 1-1 (2016), *available at* https://myfwc.com/media/5864/adaptation-guide.pdf (last visited Feb. 3, 2021).
[45] Dep't of Agriculture and Consumer Services (DACS), *Office of Energy*, https://www.fdacs.gov/Divisions-Offices/Energy (last visited Jan. 26, 2022).
[46] Chapter 553, pt. IV, F.S.; Fla. Admin. Code R. 61g20-1.001; *see* Building a Safer Florida, Inc., *Flood Resistant Construction and the 6th Edition Florida Building Code*, 1 (2017), *available at* https://floridabuilding.org/fbc/thecode/2017-6edition/BASF_2017_flood_061217.pdf (last visited Jan. 26, 2022).
[47] St. John's River Water Management District, *Sea-Level Rise and Resiliency*, https://www.sjrwmd.com/localgovernments/sea-level-rise/ (last visited Jan. 26, 2022); Akintunde Owosina, Chief, Hydrology and Hydraulics Bureau, South Florida Water Management District (SFWMD), Governing Board Meeting, June 13, 2019, *Impact of Sea Level Rise on the SFWMD Mission, Focus on Flood Protection*, 2, 6-10 (June 13, 2019), *available at* https://apps.sfwmd.gov/webapps/publicMeetings/viewFile/21964 (last visited Jan. 26, 2022); Dr. Carolina Maran, District Resiliency Officer, SFWMD, Governing Board Meeting, March 12, 2020, *Central and Southern Florida Flood Resiliency Study*, 1 (Mar. 12, 2020), *available at* https://apps.sfwmd.gov/ci/publicmeetings/viewFile/25445 (last visited Jan. 26, 2022). In 2020, SFWMD appointed a District Resiliency Officer. It also implements a Flood Control Level of Service Program and, in collaboration with the U.S. Army Corps of Engineers, has initiated the Central and South Florida Flood Resiliency Study. *See id.; see also* SFWMD, *Resiliency and Flood Protection*, https://www.sfwmd.gov/our-work/resiliency-and-flood-protection (last visited Jan. 29, 2022).
[48] Sections 186.501-186.513, F.S.
[49] Northeast Florida Regional Council, *Resiliency Services*, https://www.nefrc.org/resiliency (last visited Jan. 26, 2022).

  - The East Central Florida Regional Planning Council has formed the East Central Florida Regional Resilience Collaborative, which includes 25 member counties and cities and six member organizations and agencies.[50]
  - The Tampa Bay Regional Planning Council is active on resiliency planning.[51]
- The United States Army Corps of Engineers (USACE) is planning and implementing many projects in Florida related to resilience.
  - The Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study is a three-year study, ending in September of 2021, that has tentatively recommended a plan that may include storm surge barriers, floodproofing of critical infrastructure countywide, and nonstructural measures (including home elevations or floodproofing) in seven refined focus areas determined to be the most socially vulnerable economic damage centers in Miami-Dade County.[52]
  - The Central and Southern Florida Flood Resiliency Study was proposed by the USACE, with the support of the South Florida Water Management District, to reevaluate the Central and Southern Florida Project to address climate change, sea level rise, and more.[53]
- The FEMA administers hazard mitigation programs that increase resilience and facilitate hazard mitigation planning and grant funding.[54] The FEMA also administers the NFIP, which includes insurance, floodplain mapping, and federal, state, and local regulations.[55]

The Office of Economic and Demographic Research

The Legislature's Office of Economic and Demographic Research (EDR) is a research arm principally concerned with forecasting economic and social trends that affect policy making, revenues, and appropriations.[56] The EDR conducts an annual assessment of Florida's water resources and conservation lands.[57] For water resources, the assessment must include historical, current, and estimated future expenditures associated with water supply and demand, water quality protection and restoration, and government revenues dedicated for such purposes.[58] Also,

[50] East Central Florida Regional Planning Council, *East Central Florida Regional Resilience Collaborative*, https://www.ecfrpc.org/resiliencecollaborative (last visited Jan. 26, 2022).
[51] Tampa Bay Regional Planning Council, *Resiliency Planning*, https://www.tbrpc.org/resiliency/ (last visited Jan. 26, 2022).
[52] USACE, *Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study*, https://www.saj.usace.army.mil/MiamiDadeBackBayCSRMFeasibilityStudy/ (last visited Jan. 26, 2022); U.S. Army Corps of Engineers, *Miami-Dade Back Bay Coastal Storm Risk management Draft Integrated Feasibility Report and Programmatic Environmental Impact Statement*, 177-178, 181, 222-238 (May 2020), *available at* https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll7/id/14453 (last visited Jan. 26, 2022).
[53] Dr. Carolina Maran, District Resiliency Officer, South Florida Water Management District, Governing Board Meeting March 12, 2020, *Central and Southern Florida Flood Resiliency Study*, video begins at 4:50:30 (Mar. 12, 2020), *available at* http://sfwmd.iqm2.com/Citizens/SplitView.aspx?Mode=Video&MeetingID=2008&Format=Agenda (last visited Jan. 26, 2022); *see also* SFWMD, *Central and Southern Florida Flood Resiliency Study*, https://www.sfwmd.gov/our-work/central-and-southern-florida-flood-resiliency-study (last visited Jan. 29, 2022).
[54] Federal Emergency Management Agency (FEMA), *Hazard Mitigation Assistance Guidance - Hazard Mitigation Grant Program, Pre-Disaster Mitigation Program, and Flood Mitigation Assistance Program*, 1–5 (2015), *available at* https://www.fema.gov/sites/default/files/2020-07/fy15_HMA_Guidance.pdf (last visited Jan. 26, 2022).
[55] FEMA, *National Flood Insurance Program (NFIP), Floodplain Management Requirements, FEMA 480*, 2-6–2-8 (2005), *available at* https://www.fema.gov/sites/default/files/documents/fema-480_floodplain-management-study-guide_local-officials.pdf (last visited Jan. 26, 2022); *see* 44 C.F.R. parts 59 and 60.
[56] EDR, *Welcome*, http://edr.state.fl.us/Content/ (last visited Mar. 3, 2021); *see* s. 1.01(19), F.S.
[57] Section 403.928, F.S.
[58] Section 403.928(1), F.S.

beginning with the assessment due January 1, 2022, the assessment must include an analysis of the expenditures necessary to repair, replace, and expand water-related infrastructure.[59] For conservation lands, the assessment must include expenditures, revenues, and tax implications related to government acquisition and maintenance of conservation lands in the state.[60]

The EDR must submit the assessment to the Legislature by January 1 of each year.[61] In 2021, the EDR published the most recent edition of the Annual Assessment of Florida's Water Resources and Conservation Lands.[62]

Florida Flood Hub for Applied Research and Innovation

The Florida Flood Hub for Applied Research and Innovation (Flood Hub) is established within the University of South Florida (USF) College of Marine Science.[63] Its purpose is to coordinate efforts between the academic and research institutions of the state. The USF's College of Marine Science serves as the lead institution and engages other academic and research institutions, private partners, and financial sponsors to coordinate efforts to support applied research and innovation to address the flooding and sea level rise challenges of the state.[64]

In 2021, the Legislature created the Flood Hub and tasked it with all of the following minimum duties:[65]

- Organize existing data needs for a comprehensive statewide flood vulnerability and sea level rise analysis and perform a gap analysis to determine data needs;
- Develop statewide open source hydrologic models for physically-based flood frequency estimation and real-time forecasting of floods, including hydraulic models of floodplain inundation mapping, real-time compound and tidal flooding forecasts, future groundwater elevation conditions, and economic damage and loss estimates;
- Coordinate research funds from the state, the federal government, or other funding sources for related Flood Hub activities across all participating entities;
- Establish community-based programs to improve flood monitoring and prediction along major waterways, including intracoastal waterways and coastlines, of the state and to support ongoing flood research;
- Coordinate with agencies, including, but not limited to, the DEP and the water management districts;
- Share its resources and expertise;
- Assist in the development of training and in the development of a workforce in the state that is knowledgeable about flood and sea level rise research, prediction, and adaptation and mitigation strategies;
- Develop opportunities to partner with other flood and sea level rise research and innovation leaders for sharing technology or research; and

[59] *Id.*
[60] Section 403.928(2), F.S.
[61] Section 403.928(7), F.S.
[62] EDR, *Annual Assessment of Florida's Water Resources and Conservation Lands* (2021), *available at* http://edr.state.fl.us/Content/natural-resources/LandandWaterAnnualAssessment_2021Edition.pdf (last visited Jan. 28, 2022).
[63] Section 380.0933(1), F.S.
[64] *Id.*
[65] Ch. 2021-28, s. 2, Laws of Fla., as codified in s. 380.0933(2), F.S.

- Conduct these activities in cooperation with various local, state, and federal government entities as well as other flood and sea level rise research centers.[66]

III. Effect of Proposed Changes:

Section 1 of the bill establishes a Statewide Office of Resilience within the Executive Office of the Governor. The bill provides that the office must be headed by a Chief Resilience Officer, who is appointed by and serves at the pleasure of the Governor.

Section 2 of the bill requires the Department of Transportation (DOT) to develop a resilience action plan for the State Highway System based on current conditions and forecasted future events. The goals of the resilience action plan are to do all of the following:

- Recommend strategies to enhance infrastructure and the operational resilience of the State Highway System, which may be incorporated into the transportation asset management plan;
- Recommend design changes for retrofitting existing and constructing new state highway facilities; and
- Enhance partnerships for collaboration to address multijurisdictional resilience needs.

The bill requires the resilience action plan to include an assessment of the State Highway System to identify roadway facilities and drainage outfalls that may be subject to vulnerabilities associated with tidal, rainfall, the combination of tidal and rainfall, and storm surge flooding, including future projections of sea-level rise, using existing data for current and forecasted future events. As part of the assessment, the DOT must do all of the following using the most up-to-date National Oceanic and Atmospheric Administration precipitation frequency and sea-level rise data:

- Synthesize historical and current infrastructure resilience issues statewide;
- Evaluate alternatives for retrofitting existing systems and infrastructure;
- Develop prioritization criteria for resilience project identification;
- Develop a prioritized resilience needs project list, in addition to existing projects within the work program, with the associated costs and timeline; and
- Develop a statewide database identifying and documenting those assets vulnerable to current and future flooding. The department shall develop a cost estimate and schedule to enhance existing data to include site-specific details and existing criteria to improve the needs prioritization.

The bill requires the DOT to perform a systemic review of its policies, procedures, manuals, tools, and guidance documents to identify revisions that will facilitate cost-effective improvements to address existing and future State Highway System infrastructure vulnerabilities associated with flooding and sea-level rise.

The DOT must also provide technical assistance to local agencies and modal partners on resilience issues related to the State Highway System and the deployment of local and regional solutions.

[66] *Id.*

The bill requires the DOT to submit the resilience action plan to the Governor, the President of the Senate, and the Speaker of the House of Representatives by June 20, 2023. Every third year on June 30 thereafter, the DOT must submit a status report reviewing updates to the action plan and the associated implementation activities.

Section 3 of the bill amends s. 380.093, F.S., relating to the Resilient Florida Grant Program; the Comprehensive Statewide Flood Vulnerability and Sea Level Rise Data Set and Assessment; the Statewide Flooding and Sea Level Rise Resilience Plan; and regional resilience entities.

The bill creates two new definitions:

- "Preconstruction activities" means activities associated with a project which occur before construction begins, including, but not limited to, design of the project, permitting for the project, surveys, site development, solicitation, public hearings, local code amendments, establishing local funding sources, and easement acquisition; and
- "Regionally significant assets" means critical assets that support the needs of communities spanning multiple geopolitical jurisdictions, including, but not limited to, regional medical centers, emergency operations centers, regional utilities, major transportation hubs and corridors, airports, and seaports.

The bill clarifies that, subject to appropriation, the Department of Environmental Protection (DEP) may provide grants to a county or municipality to fund vulnerability assessments that identify or address risks of "inland or coastal" flooding and sea-level rise.

The bill provides that subject to appropriation, the DEP may also provide grants to a county or municipality to fund preconstruction activities for projects to be submitted for inclusion in the Statewide Flooding and Sea-Level Rise Resilience Plan, which are located in a municipality that has a population of 10,000 or fewer, or a county that has a population of 50,000 or fewer, according to the most recent April 1 population estimates posted on the Office of Economic and Demographic Research's website.

The bill eliminates the authorization for the DEP to provide grants to a county or municipality to fund projects to adapt critical assets to the effects of flooding and sea-level rise.

With respect to vulnerability assessments funded by the Resilient Florida Grant Program, the bill requires noncoastal communities to include the depth of rainfall-induced flooding for a 100-year storm and a 500-year storm, as defined by the applicable water management district or, if necessary, the appropriate federal agency. Projections of future rainfall conditions should be utilized, if available.

The bill provides that the DEP must complete the required comprehensive statewide flood vulnerability and sea-level rise data set by July 1, 2023, instead of July 1, 2022, and that in developing the data set, the DEP must work in coordination with the Florida Flood Hub for Applied Research and Innovation. It also requires the DEP to complete the required comprehensive statewide flood vulnerability and sea-level rise assessment by July 1, 2024, instead of July 1, 2023.

The bill provides that all eligible projects submitted to the DEP for inclusion in the statewide flooding and sea-level rise resilience plan must be ranked and included in the plan. Each plan must include:

- A detailed narrative overview describing how the plan was developed, including a description of the methodology used by the DEP to determine project eligibility;
- A description of the methodology used to rank projects;
- The specific scoring system used;
- The project proposal application form;
- A copy of each submitted project proposal application form with projects separated by "eligible" and "not eligible";
- The total number of project proposals received and deemed eligible;
- The total funding requested; and
- The total funding requested for eligible projects.

The bill provides that the preliminary plan that must be submitted by December 1, 2021, must include projects submitted by the water management districts which mitigate the risks of flooding or sea-level rise on water supplies or water resources of the state. It also provides that the plan submitted by December 1, 2023, will be an update to the preliminary plan, and pushes back by one year (to December 1, 2024) the date by which the plan must address risks of flooding and sea-level rise identified in the comprehensive flood vulnerability and sea-level rise assessment.

The bill expands the list of entities that may submit a list of proposed projects to the DEP that address risks of flooding or sea-level rise identified in the vulnerability assessments funded by the Resilient Florida Grant Program, to include special districts as defined in state law, if they are responsible for the operation and maintenance of an airport or a seaport facility. The bill also provides that for the plans submitted by December 1, 2021; December 1, 2022; and December 1, 2023, counties, municipalities, and special districts may submit projects identified in existing vulnerability assessments which do not comply with Resilient Florida Grant Program requirements.

The bill expands the list of entities that may submit a list of proposed projects to the DEP that mitigate the risks of flooding or sea-level rise on water supplies or water resources to include drainage districts, erosion control districts, and regional water supply authorities.

The bill revises the $100 million cap on funding proposed for each year of the statewide flooding and sea-level rise resilience plan to a minimum threshold of $100 million.

Section 4 of the bill requires the Florida Flood Hub for Applied Research and Innovation (Flood Hub) to provide tidal and storm surge flooding data to counties and municipalities for vulnerability assessments that are conducted pursuant to the Resilient Florida Grant Program. The Flood Hub must provide rainfall-induced and compound flooding data sets; however, more localized data or modeling may be used.

Section 5 of the bill amends existing law to direct surveyors and mappers, beginning January 1, 2023, to submit digital copies of the elevation certificates they complete to the Division of Emergency Management (DEM) as outlined on the DEM's website.

Section 6 of the bill provides an effective date of July 1, 2022.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

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:

Indeterminate.

C. Government Sector Impact:

The bill will likely cause the DOT to incur costs associated with developing the required resilience action plan for the State Highway System.

VI. Technical Deficiencies:

The bill amends s. 472.0366(2), F.S., to direct surveyors and mappers to submit digital copies of the elevation certificates they complete "beginning January 1, 2023." However, this amendment could be interpreted as eliminating the existing requirement to submit copies of elevation

certificates before and through January 1, 2023. Amending the subsection to read as follows would address the issue.

Delete lines 593 – 596 and insert:

> (2) ~~Beginning January 1, 2017,~~ A surveyor and mapper shall, within 30 days after completion, submit to the division a copy of each elevation certificate that he or she completes as outlined on the division's website. Beginning January 1, 2023, such copies shall be submitted digitally. The copy must

VII. Related Issues:

None.

VIII. Statutes Affected:

This bill creates sections 14.2031 and 339.157 of the Florida Statutes, and amends sections 380.093, 380.0933, and 472.0366 of the Florida Statutes.

IX. Additional Information:

A. Committee Substitute – Statement of Substantial Changes:
(Summarizing differences between the Committee Substitute and the prior version of the bill.)

CS by Environment and Natural Resources on January 31, 2022:

- Retains the creation of the Statewide Office of Resilience headed by a Chief Resilience Officer.
- Requires the Department of Transportation (DOT) to develop a resilience action plan for the State Highway System. The bill identifies goals of the action plan and requires it to include certain components. It also requires the DOT to submit the action plan to the Governor and the Legislature by June 20, 2023, and a status report reviewing updates to the action plan and associated implementation activities every third year on June 30 thereafter.
- Makes various revisions to s. 380.093, F.S., relating to statewide resiliency funding and planning. It:
  - Defines "Preconstruction activities" and "Regionally significant assets."
  - Clarifies that the Department of Environmental Protection (DEP) may use the Resilient Florida Grant Program (Grant Program) to fund "inland or coastal" flooding and sea-level rise vulnerability assessments.
  - Provides that the DEP may use the Grant Program to fund preconstruction activities for Statewide Flooding and Sea-Level Rise Resilience Plan (Plan) projects in municipalities and counties meeting certain population thresholds, but may not use such funds for projects to adapt critical assets to flooding and sea-level rise.
  - Specifies when noncoastal communities must and should use certain rainfall data for vulnerability assessments funded by the Grant Program.

- Pushes back by one year (to 2023 and 2024, respectively) the dates by which the Comprehensive Statewide Flood Vulnerability and Sea-Level Rise Data Set and the Assessment must be completed.
- Provides that all eligible projects submitted to the DEP for inclusion in the Plan must be included in the Plan and identifies what each Plan must include.
- Provides that the preliminary Plan must include projects submitted by the water management districts that mitigate the risks of flooding or sea-level rise on water supplies or resources.
- Provides that the Plans submitted in 2022 and 2023 will be updates to the preliminary plan, and that the Plan submitted in 2024 and thereafter must address risks of flooding and sea-level rise identified in the assessment.
- Provides that, in addition to counties and municipalities, certain special districts may also submit a list of proposed projects to the DEP that address risks of flooding or sea-level rise identified in the vulnerability assessments funded by the Grant Program. Also provides that for certain Plans, such entities may submit projects that do not comply with Grant Program requirements.
- Adds drainage districts, erosion control districts, and regional water supply authorities to the entities that may submit a list of proposed projects to the DEP that mitigate the risks of flooding or sea-level rise on water supplies or water resources.
- Revises the $100 million cap on funding proposed for each year of the Plan to a minimum threshold of $100 million.

- Requires the Florida Flood Hub for Applied Research and Innovation to provide certain data to counties and municipalities for vulnerability assessments.
- Directs surveyors and mappers, beginning January 1, 2023, to submit digital copies of the elevation certificates they complete to the Division of Emergency Management (DEM) as outlined on DEM's website.

B. Amendments:

None.