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:	CS/SB 1434
INTRODUCER:	Environment and Natural Resources Committee and Senator Rodriguez
SUBJECT:	Public Financing of Potentially At-risk Structures and Infrastructure
DATE:	January 25, 2022 REVISED:

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Collazo	Rogers	EN	**Fav/CS**
2.			AEG	
3.			AP	

Please see Section IX. for Additional Information:

COMMITTEE SUBSTITUTE - Substantial Changes

I. Summary:

CS/SB 1434 broadens the geographic applicability of the requirements, for public entities commissioning or managing coastal construction projects using funds appropriated from the state, to create sea level impact projection (SLIP) studies.

The bill provides definitions for the terms "area at risk due to sea level rise," "potentially at-risk structure or infrastructure," and "significant flood damage."

In each place in s. 161.551, F.S., where the term "coastal structure" currently appears, the bill replaces it with the term "potentially at-risk structure or infrastructure." This expands the geographic scope of the statutory requirements relating to SLIP studies from the coastal building zone, as defined in statute, to areas at risk due to sea level rise.

The bill adds a new requirement to the standards for SLIP studies, which the Department of Environmental Protection establishes by rule, requiring a list of flood mitigation strategies evaluated as part of the design of the potentially at-risk structures or infrastructure, and identification of the flood mitigation strategies that have been implemented or are being considered as part of the potentially at-risk structure or infrastructure design.

II. Present Situation:

Flooding and Sea Level Rise

The effects of climate change[1] include sea level rise, increasing storm intensity, and increasing frequency and severity of extreme rainfall events.[2] These trends result in increased flooding in inland and coastal areas.[3] With 1,350 miles of coastline, relatively low elevations, and a porous geology, Florida is particularly vulnerable to coastal flooding.[4] Coastal areas are facing the combined effects of sea level rise, storm surge, and extreme precipitation.[5]

Sea level rise is an observed increase in the average local sea level or global sea level trend.[6] Climate change is causing global sea level rise through two primary factors: the loss of land-based ice (ice sheets and glaciers) due to melting, and thermal expansion caused by the warming of the oceans (water expands as it warms).[7] Global mean sea level has risen about 8–9 inches since 1880, and the rate of rise is accelerating: 0.06 inches per year throughout most of the twentieth century, 0.14 inches per year from 2006–2015, and 0.24 inches per year from 2018–2019.[8]

Sea level rise data is obtained through various scientific equipment: tide gauge stations record the local height of the surrounding water level relative to a reference point on land, and satellite

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[1] *See* NASA, Global Climate Change, Facts, *Effects*, https://climate.nasa.gov/effects/ (last visited Jan. 20, 2022).
[2] U.S. Global Change Research Program (USGCRP), *Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States*, 31, 40-43, 97, 116-118, 745, 762, 1482 (2018), *available at* https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf (last visited Jan. 20, 2022); IPCC, *Climate Change 2021: The Physical Science Basis, Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, SPM-10 SPM-11, SPM-28, SPM-33 (2021), *available at* https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf (last visited Jan. 20, 2022).
[3] USGCRP, *Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States*, 757-68 (2018), *available at* https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf (last visited Jan. 20, 2022).
[4] Florida Division of Emergency Management (DEM), *Enhanced State Hazard Mitigation Plan*, 107-108, 162 (2018), *available at* https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl--shmp/shmp-2018-full_final_approved.6.11.2018.pdf (last visited Jan. 20, 2022). Florida has over 8,000 miles of coastline when considering intricacies such as bays, inlets, and waterways; McKinsey Global Institute, *Will Mortgages and Markets Stay Afloat in Florida?*, 10, 12, 27 (2020), *available at* https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/Sustainability/Our%20Insights/Will%20mortgages%20and%20markets%20stay%20afloat%20in%20Florida/MGI_Climate%20Risk_Case%20Studies_Florida_May2020.pdf (last visited Jan. 20, 2022). Florida's porous limestone foundation causes saltwater intrusion and seepage from underground.
[5] *See* DEM, *Enhanced State Hazard Mitigation Plan*, 107 (2018), *available at* https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl--shmp/shmp-2018-full_final_approved.6.11.2018.pdf (last visited Jan. 20, 2022); IPCC, *Climate Change 2021: The Physical Science Basis, Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, SPM-33 (2021), *available at* https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf (last visited Jan. 20, 2022).
[6] Dep't of Environmental Protection (DEP), *Florida Adaptation Planning Guidebook*, Glossary (2018), *available at* https://floridadep.gov/sites/default/files/AdaptationPlanningGuidebook.pdf (last visited Jan. 20, 2022).
[7] *Id.*; NOAA, *Climate Change: Ocean Heat Content*, https://www.climate.gov/news-features/understanding-climate/climate-change-ocean-heat-content (last visited Jan. 20, 2022). More than 90 percent of the warming that has happened on Earth over the past 50 years has occurred in the ocean.
[8] NOAA, *Climate Change: Global Sea Level*, https://www.climate.gov/news-features/understanding-climate/climate-change-global-sea-level (last visited Jan. 20, 2022). The melting of glaciers and ice sheets (such as the Greenland and Antarctic Ice Sheets) is accelerating, and from 2005–2013 melting caused nearly twice as much sea level rise as thermal expansion.

laser altimeters measure the average height of the entire ocean.[9] Data is incorporated into numerous online tools for visualization.[10] Scientific projections for future sea level rise and precipitation vary based on modeling using different scenarios of future greenhouse gas emissions and atmospheric concentrations.[11] After 2050, the various projections for sea level rise and precipitation diverge significantly based on different scenarios of emissions trajectories.[12] Rising sea levels result in gradual coastal inundation as sea level rise raises the height of high tide.[13] High tide flooding (HTF) generally begins when coastal water levels exceed about 1.75 feet above high tide as measured by a tide gauge.[14] Since 2000, the frequency of HTF in the U.S. has more than doubled, with data showing large increases at tide gauge locations in Florida.[15] For example, research shows that in Miami Beach, between 1998 and 2013, the frequency of recurrent tidal flooding events quadrupled.[16] The frequency of such flooding is projected to continue to increase.[17] Research suggests that the increasing frequency of HTF may not be incremental and may include tipping points punctuated by extreme months and seasons during which many days of HTF cluster together.[18]

In Florida, flooding from sea level rise impacts roads, stormwater systems, wastewater systems, public and private property, and natural areas.[19] Sea level rise causes saltwater intrusion of both

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[9] NOAA, Tides and Currents, *Sea Level Trends*, https://tidesandcurrents.noaa.gov/sltrends/ (last visited Jan. 20, 2022). Showing trends in data from tide gauge stations around Florida; NOAA, *Is Sea Level Rising?*, https://oceanservice.noaa.gov/facts/sealevel.html (last visited Jan. 20, 2022); *see* DEM, *Enhanced State Hazard Mitigation Plan*, 107 (2018), *available at* https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl--shmp/shmp-2018-full_final_approved.6.11.2018.pdf (last visited Jan. 20, 2022). "Relative sea level" is measured locally using tide gauges. "Eustatic sea level" is measured globally based on the volume of water in earth's oceans.

[10] DEP, *SLIP Map*, https://floridadep-slip.org/Map.aspx (last visited Jan. 20, 2022).

[11] USGCRP, *Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States*, 1, 6, 40-43, 84-91, 338, 751, 758, 762 (2018), *available at* https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf (last visited Jan. 20, 2022).

[12] *Id*. at 41-42, 109; IPCC, *The Ocean and Cryosphere in a Changing Climate*, 4-9–4-10 (Sept. 2019), *available at* https://www.ipcc.ch/site/assets/uploads/sites/3/2019/12/SROCC_FullReport_FINAL.pdf (last visited Jan. 20, 2022); SFRCCC, *Unified Sea Level Rise Projection Southeast Florida - 2019 Update*, 7, 25, 29 (2019), *available at* https://southeastfloridaclimatecompact.org/wp-content/uploads/2020/04/Sea-Level-Rise-Projection-Guidance-Report_FINAL_02212020.pdf (last visited Jan. 20, 2022).

[13] DEM, *Enhanced State Hazard Mitigation Plan*, 101, 108 (2018), *available at* https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl--shmp/shmp-2018-full_final_approved.6.11.2018.pdf (last visited Jan. 20, 2022); SFRCCC, *Unified Sea Level Rise Projection Southeast Florida - 2019 Update*, 17 (2019), *available at* https://southeastfloridaclimatecompact.org/wp-content/uploads/2020/04/Sea-Level-Rise-Projection-Guidance-Report_FINAL_02212020.pdf (last visited Jan. 20, 2022). Rapid pulses are possible.

[14] NOAA, *2021 State of High Tide Flooding and Annual Outlook*, v, 1 (2021), *available at* https://tidesandcurrents.noaa.gov/publications/2021_State_of_High_Tide_Flooding_and_Annual_Outlook_Final.pdf (last visited Jan. 20, 2022).

[15] *Id*. at 9, 16-17.

[16] SFRCCC, *Unified Sea Level Rise Projection Southeast Florida - 2019 Update*, 31 (2019), *available at* https://southeastfloridaclimatecompact.org/wp-content/uploads/2020/04/Sea-Level-Rise-Projection-Guidance-Report_FINAL_02212020.pdf (last visited Jan. 20, 2022).

[17] NOAA, *2021 State of High Tide Flooding and Annual Outlook*, v-vi, 10 (2021). By 2030, without additional adaptation measures, national HTF frequency is likely to be about 2–3 times greater than today. By 2050, its likely to be 5–15 times greater.

[18] Thompson et al., *Rapid Increases and Extreme Months in Projections of United States High-Tide Flooding*, NATURE CLIMATE CHANGE 11, 584-585, 589 (2021), *available at* https://www.nature.com/articles/s41558-021-01077-8 (last visited Jan. 20, 2022).

[19] SFRCCC, *Unified Sea Level Rise Projection Southeast Florida - 2019 Update*, 5 (2019), *available at* https://southeastfloridaclimatecompact.org/wp-content/uploads/2020/04/Sea-Level-Rise-Projection-Guidance-Report_FINAL_02212020.pdf (last visited Jan. 20, 2022).

surface water and groundwater, threatening fresh water resources including coastal aquifers.[20] It causes coastal erosion and threatens coastal ecosystems which, when healthy and allowed space for landward migration, are critical for resilience.[21] Sea level rise also raises coastal groundwater tables and pushes salt water further inland.[22] Many of these processes are exacerbated by Florida's porous limestone geology.[23]

Future storms are generally expected to have increased average intensity and precipitation rates.[24] Storm intensity is a principal determinant of storm surge height.[25] Storm surge is water driven ashore by the wind during severe weather, and it is an especially dangerous aspect of coastal flooding.[26] Sea level rise is expected to increase the impacts from storm surge, as it will build on top of a higher base of water, travel farther inland, and impact more areas and properties

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[20] DEM, *Enhanced State Hazard Mitigation Plan*, 106 (2018), *available at* https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl--shmp/shmp-2018-full_final_approved.6.11.2018.pdf (last visited Jan. 20, 2022); SFRCCC, *Unified Sea Level Rise Projection Southeast Florida - 2019 Update*, 33-35 (2019), *available at* https://southeastfloridaclimatecompact.org/wp-content/uploads/2020/04/Sea-Level-Rise-Projection-Guidance-Report_FINAL_02212020.pdf (last visited Jan. 20, 2022).

[21] SFRCCC, *Unified Sea Level Rise Projection Southeast Florida - 2019 Update*, 35 (2019), *available at* https://southeastfloridaclimatecompact.org/wp-content/uploads/2020/04/Sea-Level-Rise-Projection-Guidance-Report_FINAL_02212020.pdf (last visited Jan. 20, 2022); DEM, *Enhanced State Hazard Mitigation Plan*, 106, 221 (2018), *available at* https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl--shmp/shmp-2018-full_final_approved.6.11.2018.pdf (last visited Jan. 20, 2022); USGCRP, *Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States*, 340-341, 690, 775, 833 (2018), *available at* https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf (last visited Jan. 20, 2022). Coastal ecosystems reduce erosion, buffer against waves and storm surge, attenuate wave energy, maintain water quality, and provide habitat for wildlife.

[22] DEM, *Enhanced State Hazard Mitigation Plan*, 108 (2018), *available at* https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl--shmp/shmp-2018-full_final_approved.6.11.2018.pdf (last visited Jan. 20, 2022).

[23] *See* Urban Land Institute (ULI), *The Business Case for Resilience - Regional Economic Benefits of Climate Adaptation*, 20 (2020), *available at* https://knowledge.uli.org/-/media/files/research-reports/2020/the-business-case-for-resilience-in-southeast-florida_final.pdf?rev=81609c7f6b72479d89c49aff72fea446&hash=FB2E953B8A456CFE781169A0CAA82333 (last visited Jan. 20, 2022).

[24] SFRCCC, *Unified Sea Level Rise Projection Southeast Florida - 2019 Update*, 35 (2019), *available at* https://southeastfloridaclimatecompact.org/wp-content/uploads/2020/04/Sea-Level-Rise-Projection-Guidance-Report_FINAL_02212020.pdf (last visited Jan. 20, 2022); DEM, *Enhanced State Hazard Mitigation Plan*, 106, 221 (2018), *available at* https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl--shmp/shmp-2018-full_final_approved.6.11.2018.pdf (last visited Jan. 20, 2022); USGCRP, *Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States*, 97, 116-118, 1482 (2018), *available at* https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf (last visited Jan. 20, 2022); *see* Knutson et al., *Tropical Cyclones and Climate Change Assessment, Part II: Projected Response to Anthropogenic Warming*, American Meteorological Society, E317-E318 (2020), *available at* https://journals.ametsoc.org/bams/article/101/3/E303/345043/Tropical-Cyclones-and-Climate-Change-Assessment (last visited Jan. 20, 2022); IPCC, *Climate Change 2021: The Physical Science Basis, Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, SPM-20 (2021), *available at* https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf (last visited Jan. 20, 2022). The proportion of intense tropical cyclones (categories 4-5) and peak wind speeds of the most intense tropical cyclones are projected to increase globally.

[25] DEM, *Enhanced State Hazard Mitigation Plan*, 441 (2018), *available at* https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl--shmp/shmp-2018-full_final_approved.6.11.2018.pdf (last visited Jan. 20, 2022).

[26] DEM, *Enhanced State Hazard Mitigation Plan*, 100 (2018), *available at* https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl--shmp/shmp-2018-full_final_approved.6.11.2018.pdf (last visited Jan. 20, 2022); Emrich et al., *Climate-Sensitive Hazards in Florida, Identifying and Prioritizing Threats to Build Resilience against Climate Effects*, Storm Surge 1 of 37 (2014), *available at* https://flbrace.org/images/docs/climate-sensitive-hazards-in-florida-final-report.pdf (last visited Jan. 20, 2022).

than in the past.[27] Storm surges are an especially dangerous aspect of coastal flooding and their impacts also include coastal erosion, property loss and damage, and debris carried by the water.[28] A warmer atmosphere holds more water vapor, leading to more frequent and intense extreme rainfall events that are contributing to increased inland and coastal flooding.[29] Extreme rainfall events can stress or overwhelm stormwater infrastructure, while sea level rise impairs gravity-driven systems and reduces the discharge capacity of coastal water control structures.[30] By raising groundwater levels, sea level rise reduces the ability of rainfall to infiltrate the soil, and the reduced soil storage capacity causes flooding.[31]

Florida's 35 coastal counties contain 76% of its population and 79% of its total economy as of 2012.[32] One study found that 20.5% of properties in Florida were at substantial risk of flooding in 2020 and 24.3% will be at such risk by 2050.[33] Another study found tidal flooding could result in a total property devaluation of $10–$30 billion by 2030 and $30–$80 billion by 2050, and that

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[27] DEM, *Enhanced State Hazard Mitigation Plan*, 100, 106-08 (2018), *available at* https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl--shmp/shmp-2018-full_final_approved.6.11.2018.pdf (last visited Jan. 20, 2022); USGCRP, *Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States*, 758 (2018), *available at* https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf (last visited Jan. 20, 2022).

[28] DEM, *Enhanced State Hazard Mitigation Plan*, 138-40, 217-19 (2018), *available at* https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl--shmp/shmp-2018-full_final_approved.6.11.2018.pdf (last visited Jan. 20, 2022); Emrich et al., *Climate-Sensitive Hazards in Florida, Identifying and Prioritizing Threats to Build Resilience against Climate Effects*, Storm Surge 1 of 37 (2014), *available at* https://flbrace.org/images/docs/climate-sensitive-hazards-in-florida-final-report.pdf (last visited Jan. 20, 2022); NOAA, *Florida Marine Debris Emergency Response Guide: Comprehensive Guidance Document*, 16-18 (May 2021), *available at* https://marinedebris.noaa.gov/file/5582/download?token=3Ju2uDHQ (last visited Jan. 20, 2022). Forty percent of all hurricanes that strike the U.S. make landfall in Florida. *Id.* at 15.

[29] USGCRP, *Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States*, 88, 97, 113, 745, 762, 1447 (2018), *available at* https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf (last visited Jan. 20, 2022); DEM, *Enhanced State Hazard Mitigation Plan*, 106 (2018), *available at* https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl--shmp/shmp-2018-full_final_approved.6.11.2018.pdf (last visited Jan. 20, 2022); IPCC, *Climate Change 2021: The Physical Science Basis, Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, SPM-20 (2021), *available at* https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf (last visited Jan. 20, 2022). Globally, extreme daily precipitation events are projects to intensify by about 7% for each 1°C of warming.

[30] USGCRP, *Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States*, 763 (2018), *available at* https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf (last visited Jan. 20, 2022); SFRCCC, *Unified Sea Level Rise Projection Southeast Florida - 2019 Update*, 5, 34 (2019), *available at* https://southeastfloridaclimatecompact.org/wp-content/uploads/2020/04/Sea-Level-Rise-Projection-Guidance-Report_FINAL_02212020.pdf (last visited Jan. 20, 2022).

[31] SFRCCC, *Unified Sea Level Rise Projection Southeast Florida - 2019 Update*, 33 (2019), *available at* https://southeastfloridaclimatecompact.org/wp-content/uploads/2020/04/Sea-Level-Rise-Projection-Guidance-Report_FINAL_02212020.pdf (last visited Jan. 20, 2022); DEM, *Enhanced State Hazard Mitigation Plan*, 106, 181 (2018), *available at* https://www.floridadisaster.org/globalassets/dem/mitigation/mitigate-fl--shmp/shmp-2018-full_final_approved.6.11.2018.pdf (last visited Jan. 20, 2022).

[32] DEP, *Florida Adaptation Planning Guidebook*, at III (2018), *available at* https://floridadep.gov/sites/default/files/AdaptationPlanningGuidebook.pdf (last visited Jan. 20, 2022); *see* McKinsey Global Institute, *Will Mortgages and Markets Stay Afloat in Florida?*, 13 (2020), *available at* https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/Sustainability/Our%20Insights/Will%20mortgages%20and%20markets%20stay%20afloat%20in%20Florida/MGI_Climate%20Risk_Case%20Studies_Florida_May2020.pdf (last visited Jan. 20, 2022). Almost 10% of the state's population is less than 4.9 feet (1.5 meters) above sea level.

[33] First Street Foundation (FSF), *The First National Flood Risk Assessment: Defining America's Growing Risk*, 39 (2020), *available at* https://assets.firststreet.org/uploads/2020/06/first_street_foundation__first_national_flood_risk_assessment.pdf (last visited Jan. 20, 2022). The study calculates substantial risk as a 1% annual risk of 1 cm of inundation or more.

real estate losses during 100-year storm surge events could reach $50–$75 billion by 2050.[34] A regional analysis found that in Southeast Florida alone, by 2040, $4.2 billion in property value could be lost to daily tidal inundation and one 10-year storm tide event could cause $3.2 billion in property damage.[35] It is estimated that Florida has nine of the top ten counties in the nation for total annual risk of economic loss from flooding.[36] Despite the risks, people and capital continue to flow into exposed coastal areas in Florida.[37]

Adaptation strategies such as elevating properties or constructing coastal structures may be cost-prohibitive in certain instances, and the burdens of adaptation disproportionately affect vulnerable individuals or communities.[38] A recent report from a medical journal states a range of health impacts related to rising sea levels are likely to occur.[39]

As sea level rise continues, financial impacts may include increases in flood insurance costs,[40] decreases in property sales or property values, and increased risk for lenders.[41] Coastal flooding

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[34]McKinsey Global Institute, *Will Mortgages and Markets Stay Afloat in Florida?*, 15-19 (2020), *available at* https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/Sustainability/Our%20Insights/Will%20mortgages%20and%20markets%20stay%20afloat%20in%20Florida/MGI_Climate%20Risk_Case%20Studies_Florida_May2020.pdf (last visited Jan. 20, 2022).

[35] ULI, *The Business Case for Resilience - Regional Economic Benefits of Climate Adaptation*, 6 (2020), *available at* https://knowledge.uli.org/-/media/files/research-reports/2020/the-business-case-for-resilience-in-southeast-florida_final.pdf?rev=81609c7f6b72479d89c49aff72fea446&hash=FB2E953B8A456CFE781169A0CAA82333 (last visited Jan. 20, 2022). In 2070, the estimated potential harm in Southeast Florida increases to $53.6 billion of lost property value from daily tidal inundation and $16.5 billion of property damage from one 10-year storm.

[36] FSF, *The Cost of Climate, America's Growing Flood Risk*, 11 (Feb. 2021), *available at* https://assets.firststreet.org/uploads/2021/02/The_Cost_of_Climate_FSF20210219-1.pdf (last visited Jan. 20, 2022).

[37] McKinsey Global Institute, *Will Mortgages and Markets Stay Afloat in Florida?*, 13 (2020), *available at* https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/Sustainability/Our%20Insights/Will%20mortgages%20and%20markets%20stay%20afloat%20in%20Florida/MGI_Climate%20Risk_Case%20Studies_Florida_May2020.pdf (last visited Jan. 20, 2022).

[38] USGCRP, *Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States*, 333-35 (2018), *available at* https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf (last visited Jan. 20, 2022); U.S. Government Accountability Office, *A Climate Migration Pilot Program Could Enhance the Nation's Resilience and Reduce Federal Fiscal Exposure*, 29 (2020), https://www.gao.gov/assets/710/707961.pdf (last visited Jan. 20, 2022); *see* A.R. Siders and Jesse M. Keenan, *Variables Shaping Coastal Adaptation Decisions to Armor, Nourish, and Retreat in North Carolina*, OCEAN AND COASTAL MANAGEMENT, vol. 183, pg. 1–2, 9 (Jan. 2020), *available at* https://www.sciencedirect.com/science/article/abs/pii/S0964569119305836 (last visited Jan. 20, 2022); *see generally* Buchanan et al., *Sea Level Rise and Coastal Flooding Threaten Affordable Housing*, ENVIRONMENTAL RESEARCH LETTERS (Dec. 1, 2020), *available at* https://iopscience.iop.org/article/10.1088/1748-9326/abb266 (last visited Jan. 20, 2022).

[39] Watts et al., *The 2020 Report of The Lancet Countdown on Health and Climate Change: Responding to Converging Crises*, THE LANCET, Vol. 396, 14 (2020), https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)32290-X/fulltext (last visited Jan. 20, 2022). The report mentions "changes in water and soil quality and supply, livelihood security, disease vector ecology, flooding, and saltwater intrusion."

[40] FSF, *The Cost of Climate, America's Growing Flood Risk*, 39 (Feb. 2021). The report finds that if insurance prices were adjusted to account for actual current flood risk premiums for many properties in Florida would increase significantly, by as much as 4.8 to 7.7 times the current rates (depending on location), impacting property values.

[41] McKinsey Global Institute, *Will Mortgages and Markets Stay Afloat in Florida?*, 22-27 (2020), *available at* https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/Sustainability/Our%20Insights/Will%20mortgages%20and%20markets%20stay%20afloat%20in%20Florida/MGI_Climate%20Risk_Case%20Studies_Florida_May2020.pdf (last visited Jan. 20, 2022) (lending risks involve not only banks investing in private homes and businesses, but also potential downgrades to bond ratings for local governments that do not implement adaptation strategies); SFRCCC, *Unified Sea Level*

can disrupt local economies and tourism, leading to lost revenues for the public and private sectors, and over time risks include loss or impairment of employment opportunities and public services and infrastructure.[42] While accounting for the chronic stresses of recurrent flooding, local governments will increasingly need to finance adaptation strategies, such as investing in infrastructure or pumping systems, which may be made more difficult over time by any downgrades to municipal bond ratings or long-term tax losses.[43]

Studies show significant positive returns on investment calculated for resilience measures, including the following benefit-cost ratios: $6 for every $1 spent through federal grants on natural hazard mitigation, and, for future resilience investments in Southeast Florida, $4 for every $1 on building-level adaptations and $2 for every $1 on community-wide adaptations.[44]

Sea Level Rise Projections

Entities from the international to the local level use scientific data and modeling to create projections of future sea level rise for planning and decision-making. The Intergovernmental Panel on Climate Change (IPCC) includes 195 member countries assessing climate change science reviewed by thousands of experts around the globe and intended to reflect the full range of scientific views.[45] The National Oceanic and Atmospheric Administration (NOAA) operates tide gauges along the nation's coasts and satellites that measure changes in sea level. In 2012 and 2017, NOAA published sea level rise projections for the U.S.[46] NOAA's projections include six scenarios ranging from "low" to "extreme," with several intermediate scenarios.[47] NOAA's projections were used in the fourth national climate assessment by the U.S. Global Change Research Program, a program of thirteen federal agencies analyzing the changing global environment.[48] The U.S. Army Corps of Engineers (USACE) has developed policies requiring consideration of specific scenarios of sea level change at every step in a project's life cycle.[49]

Rise Projection Southeast Florida - 2019 Update, 5 (2019), *available at* https://southeastfloridaclimatecompact.org/wp-content/uploads/2020/04/Sea-Level-Rise-Projection-Guidance-Report_FINAL_02212020.pdf (last visited Jan. 20, 2022).

[42] ULI, *The Business Case for Resilience - Regional Economic Benefits of Climate Adaptation*, 13, 14, 19, 20 (2020), *available at* https://knowledge.uli.org/-/media/files/research-reports/2020/the-business-case-for-resilience-in-southeast-florida_final.pdf?rev=81609c7f6b72479d89c49aff72fea446&hash=FB2E953B8A456CFE781169A0CAA82333 (last visited Jan. 20, 2022).

[43] *Id.* at 10, 23, 33; McKinsey Global Institute, *Will Mortgages and Markets Stay Afloat in Florida?*, 27 (2020), *available at* https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/Sustainability/Our%20Insights/Will%20mortgages%20and%20markets%20stay%20afloat%20in%20Florida/MGI_Climate%20Risk_Case%20Studies_Florida_May2020.pdf (last visited Jan. 20, 2022).

[44] ULI, *The Business Case for Resilience - Regional Economic Benefits of Climate Adaptation*, 26 (2020), *available at* https://knowledge.uli.org/-/media/files/research-reports/2020/the-business-case-for-resilience-in-southeast-florida_final.pdf?rev=81609c7f6b72479d89c49aff72fea446&hash=FB2E953B8A456CFE781169A0CAA82333 (last visited Jan. 20, 2022); National Institute of Building Sciences, *Natural Hazard Mitigation Saves*, 1-2 (Dec. 2019), *available at* https://www.nibs.org/files/pdfs/NIBS_MMC_MitigationSaves_2019.pdf (last visited Jan. 20, 2022).

[45] IPCC, *About the IPCC*, https://www.ipcc.ch/about/ (last visited Jan. 20, 2022).

[46] NOAA, *Climate Change: Global Sea Level*, *available at* https://www.climate.gov/news-features/understanding-climate/climate-change-global-sea-level (last visited Jan. 20, 2022).

[47] Sweet et al., NOAA, *Global and Regional Sea Level Rise Scenarios for the United States*, 21–23 (2017), *available at* https://tidesandcurrents.noaa.gov/publications/techrpt83_Global_and_Regional_SLR_Scenarios_for_the_US_final.pdf (last visited Jan. 20, 2022).

[48] USGCRP, *About USGCRP*, https://www.globalchange.gov/about (last visited Jan. 20, 2022).

[49] *See* USACE, *Policies*, https://www.usace.army.mil/corpsclimate/climate_policies/ (last visited Jan. 20, 2022).

Sea level rise is experienced differently in different areas, depending on many factors including ocean currents, subsidence (sinking of land), accretion (accumulation of sediment), land use, and erosion.[50] The Southeast Florida Regional Climate Change Compact (Compact), a collaboration including Broward, Miami-Dade, Monroe, and Palm Beach counties, periodically assembles a technical work group of experts to produce sea level rise projections to assist planning and decision-making in Southeast Florida.[51] Many local governments in the region have incorporated the Compact's projections into their planning documents and policies.[52] In 2019, the Tampa Bay Climate Science Advisory Panel recommended a common set of sea level rise projections for use throughout the Tampa Bay region.[53]

Sea Level Rise Projections				
Source	**Scale**	**Year**	**Low (feet)**	**High (feet)**
IPCC Assessment Report 6[54]	Global	2100	0.92–1.8	2.07–3.31
		2150	1.21–2.82	3.22–6.17
NOAA (Sweet et al., 2017), Low–Extreme[55]	Global	2040	0.43	1.35
		2070	0.72	3.94
		2100	.98	8.20
SFRCCC Unified Sea Level Rise Projection, 2019 Update[56]	Southeast Florida	2040	.83	1.42
		2070	1.75	3.33
		2120	3.33	7.67
Tampa Bay Climate Science Advisory Panel[57]	Tampa Bay Region	2050	1	2.5
		2100	2	8.5

[50] USGCRP, *Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States*, 757, 855, 1495 (2018), *available at* https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf (last visited Jan. 20, 2022).
[51] SFRCCC, *Unified Sea Level Rise Projection Southeast Florida - 2019 Update*, 8 (2019), *available at* https://southeastfloridaclimatecompact.org/wp-content/uploads/2020/04/Sea-Level-Rise-Projection-Guidance-Report_FINAL_02212020.pdf (last visited Jan. 20, 2022).
[52] SFRCCC, *Climate Action Plan, ST-1: Incorporate Projections Into Plans*, http://southeastfloridaclimatecompact.org/recommendations/incorporate-projections-into-plans/ (last visited Jan. 20, 2022).
[53] Tampa Bay Climate Science Advisory Panel, *Recommended Projections of Sea Level Rise in the Tampa Bay Region*, 7 (Apr. 2019), *available at* http://www.tbrpc.org/wp-content/uploads/2019/05/CSAP_SLR_Recommendation_2019.pdf (last visited Jan. 20, 2022).
[54] IPCC, *Climate Change 2021: The Physical Science Basis, Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, SPM-28 (2021), *available at* https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf (last visited Jan. 20, 2022). The low and high ranges shown in the table represent the very low and very high greenhouse gas emissions scenarios, respectively.
[55] Sweet et al., NOAA, *Global and Regional Sea Level Rise Scenarios for the United States*, 21, 23 (2017), *available at* https://tidesandcurrents.noaa.gov/publications/techrpt83_Global_and_Regional_SLR_Scenarios_for_the_US_final.pdf (last visited Jan. 20, 2022).
[56] SFRCCC, *Unified Sea Level Rise Projection Southeast Florida - 2019 Update*, 9-10 (2019), *available at* https://southeastfloridaclimatecompact.org/wp-content/uploads/2020/04/Sea-Level-Rise-Projection-Guidance-Report_FINAL_02212020.pdf (last visited Jan. 20, 2022). The range in the table shows regional applications of the IPCC Representative Concentration Pathway 8.5 Median curve and the NOAA Intermediate High curve.
[57] Tampa Bay Climate Science Advisory Panel, *Recommended Projections of Sea Level Rise in the Tampa Bay Region*, 7 (Apr. 2019), *available at* http://www.tbrpc.org/wp-content/uploads/2019/05/CSAP_SLR_Recommendation_2019.pdf (last visited Jan. 20, 2022).

Statewide Resilience 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.[58] Those programs include the following:

- The Department of Environmental Protection's (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.[59] The findings of the assessments must be reported to DEP.
- The Comprehensive Statewide Flood Vulnerability and Sea Level Rise Data Set and Assessment, which must be updated at least every five years.[60] 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.
  - 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.[61]
- The Statewide Flooding and Sea Level Rise Resilience Plan.[62] By each December 1, DEP must develop the plan on a three-year planning horizon and submit it to the Governor and Legislature for funding of ranked projects.[63]

The Coastal Zone Protection Act

The Coastal Zone Protection Act of 1985 (Act)[64] is intended to manage the most sensitive portion of Florida's coastal areas through the imposition of strict construction standards in order to minimize damage to the natural environment, private property, and life.[65]

The Act covers activities and construction within the "coastal building zone." The coastal building zone is the land from the seasonal high-water line[66] landward to a line 1,500 feet landward from the coastal construction control line (CCCL),[67] and for those areas where no CCCL has been established, the coastal building zone is the land seaward of the most landward

[58] *See* ch. 2021-28, Laws of Fla., codified in ss. 380.093, 380.0933, 403.928(4), F.S.
[59] 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.
[60] Section 380.093(4), F.S.
[61] *Id.*
[62] Section 380.093(5), F.S.
[63] Section 380.093, F.S.
[64] Sections 161.52-161.58, F.S.
[65] Sections 161.53(5), F.S.
[66] *See* s. 161.053(5)(a)2., F.S. (defining "seasonal high-water line" as "the line formed by the intersection of the rising shore and the elevation of 150 percent of the local mean tidal range above local mean high water"); *see* s. 177.27(14), F.S. (defining "mean high water," in part, as the average height of the high waters over a 19-year period).
[67] See s. 161.053, F.S. A CCCL defines the portion of the beach-dune system that is subject to severe fluctuations caused by a 100-year storm surge, storm waves, or other predictable weather conditions. Generally, a permit is required for construction and excavation activities seaward of the CCCL. *See generally* Fla. Admin. Code Chapters 62B-33, 62B-34, 62B-49, and 62B-56.

velocity zone (V-zone) line[68] as established by the Federal Emergency Management Agency and shown on flood insurance rate maps.[69] On coastal barrier islands, the coastal building zone is the land from the seasonal high-water line to a line 5,000 feet landward from the CCCL, or the entire island, whichever is less.[70] For coastal barrier islands on which a CCCL has not been established, the coastal building zone is the land seaward of the most landward V-zone boundary line fronting upon the Gulf of Mexico, Atlantic Ocean, Florida Bay, or Straits of Florida.[71] All land in the Florida Keys located within Monroe County is in the coastal building zone.[72]

The Act defines certain types of structures regulated within the coastal building zone.[73] A "[m]ajor structure" means houses, mobile homes, apartment buildings, condominiums, motels, hotels, restaurants, towers, other types of residential, commercial, or public buildings, and other construction having the potential for substantial impact on coastal zones.[74] A "[n]onhabitable major structure" means swimming pools; parking garages; pipelines; piers; canals, lakes, ditches, drainage structures, and other water retention structures; water and sewage treatment plants; electrical power plants, and all related structures or facilities, transmission lines, distribution lines, transformer pads, vaults, and substations; roads, bridges, streets, and highways; and underground storage tanks.[75]

The Act also defines "substantial flood damage," which means "flood, inundation, or wave action damage resulting from a single event, such as a flood or tropical weather system, where such damage exceeds 25 percent of the market value of the coastal structure at the time of the event."[76]

Sea Level Impact Projection (SLIP) Studies

In 2020, the Legislature created within the Act s. 161.551, F.S., entitled "Public financing of construction projections within the coastal building zone."[77]

Section 161.551, F.S., requires a public entity that commissions or manages a construction project on a coastal structure, using funds appropriated from the state, to conduct a sea level

[68] FEMA, *National Flood Insurance Program (NFIP), Floodplain Management Requirements, FEMA 480*, 3-22–3-23, 3-29, 5-51, 7-59 (2005), *available at* https://www.fema.gov/sites/default/files/documents/fema-480_floodplain-management-study-guide_local-officials.pdf (last visited Jan. 20, 2022). Special Flood Hazard Areas on flood insurance rate maps include "A Zones," which are the regular base floodplain, and "V Zones," which are coastal high hazard areas, subject to more stringent regulatory requirements and different flood insurance rates, where structures must be protected from hazards such as waves, storm surges, hurricane-force winds, and erosion.
[69] Section 161.54(1), F.S.
[70] Section 161.55(4), F.S.
[71] *Id*.
[72] *Id*.
[73] Section 161.54(6), F.S.
[74] Section 161.54(6)(a), F.S.
[75] Section 161.54(6)(c), F.S.
[76] Section 161.551(1)(e), F.S.; *but see* FEMA, *What Does "Substantial Damage" Mean?,* https://www.fema.gov/press-release/20210318/what-does-substantial-damage-mean (last visited Jan. 21, 2022) (noting that FEMA applies the term "substantial damage" to a structure in a Special Flood Hazard Area – or floodplain – for which the total cost of repairs is 50 percent or more of the structure's market value before the disaster occurred, regardless of the cause of damage).
[77] Chapter 2020-119, Laws of Fla.

impact projection (SLIP) study prior to commencing construction.[78] The section defines a coastal structure as a major structure or nonhabitable major structure within the coastal building zone.[79]

Before construction commences, a state-financed constructor[80] must conduct a SLIP study meeting the statutory requirements, submit the study to DEP, and receive notification from DEP that the study has been published on DEP's website for at least 30 days.[81] DEP is required to develop by rule the specific standards for conducting a SLIP study.[82] Under the statute, DEP's SLIP study standards must, at a minimum, require state-financed constructors to do all of the following:

- Use a systematic, interdisciplinary, and scientifically accepted approach in the natural sciences and construction design in conducting the study.
- Assess the flooding, inundation, and wave action damage risks relating to the coastal structure over its expected life or 50 years, whichever is less.
    - The assessment must take into account potential relative local sea level rise and increased storm risk during the expected life of the coastal structure or 50 years, whichever is less, and, to the extent possible, account for the contribution of sea-level rise versus land subsidence to the relative local sea-level rise.
    - The assessment must provide scientific and engineering evidence of the risk to the coastal structure and methods used to mitigate, adapt to, or reduce this risk.
    - The assessment must use and consider available scientific research and generally accepted industry practices.
    - The assessment must provide the mean average annual chance of substantial flood damage over the expected life of the coastal structure or 50 years, whichever is less.
    - The assessment must analyze potential public safety and environmental impacts resulting from damage to the coastal structure, including, but not limited to, leakage of pollutants, electrocution and explosion hazards, and hazards resulting from floating or flying structural debris.
- Provide alternatives for the coastal structure's design and siting, and how such alternatives would impact specified risks, as well as the risk and cost associated with maintaining, repairing, and constructing the coastal structure.[83]

If a state-financed constructor commences construction of a coastal structure without complying with the SLIP study requirements, DEP is authorized to institute a civil action.[84] In such cases, DEP may:

- Seek injunctive relief to cease further construction of the coastal structure or enforce compliance with this section or with rules adopted by DEP pursuant to this section.
- If the coastal structure has been completed or has been substantially completed, seek recovery of all or a portion of state funds expended on the coastal structure.[85]

[78] Section 161.551(2), F.S.
[79] Section 161.551(1)(a), F.S.
[80] Section 161.551(1)(b) and (d), F.S. "State-financed constructor" is defined as "a public entity that commissions or manages a construction project using funds appropriated from the state."
[81] Section 161.551(2), F.S.
[82] Section 161.551(3), F.S.
[83] Section 161.551(3), F.S.
[84] Section 161.551(4), F.S.
[85] *Id.*

DEP is authorized to enforce the requirements of s. 161.551, F.S., and required to adopt rules as necessary to administer the Act.[86] Accordingly, DEP has adopted a rule providing the requirements for state-financed constructors[87] and developed a web-based tool enabling them to create and submit SLIP study reports pursuant to the statute.[88] The web-based tool provides resources for the benefit of the public, including policy information, a database of resilience strategies, and an interactive map for visualizing different scenarios of sea level rise and flooding.[89]

III. Effect of Proposed Changes:

Section 1 amends s. 161.551, F.S., which requires a public entity commissioning or managing certain construction projects within the coastal building zone, using funds appropriated from the state, to conduct a sea level impact projection (SLIP) study prior to commencing construction.

The bill changes the title of s. 161.551, F.S., from "Public financing of construction projects within the coastal building zone" to "Public financing of construction projects within areas at risk due to sea level rise."

The bill creates a definition, defining "[a]rea at risk due to sea level rise" as:

> [A]ny location that is projected to be below the threshold for tidal flooding within the next 50 years by adding sea-level rise using the 2017 National Oceanic and Atmospheric Administration intermediate-high sea-level rise projection. For purposes of this paragraph, the threshold for tidal flooding is 2 feet above mean higher high water.

The bill defines the term "[p]otentially at-risk structure or infrastructure" as meaning any of the following when within an area at risk due to sea-level rise:

- A major structure, regardless of whether it has the potential for substantially impacting coastal zones.
- A nonhabitable major structure.
- Any other construction critical to public health, life, or safety.

This definition of "[p]otentially at-risk structure or infrastructure" replaces the existing definition of "coastal structure" as "a major structure or nonhabitable major structure within the coastal building zone."

The bill replaces the definition of "[s]ubstantial flood damage" with "[s]ignificant flood damage," which means flood, erosion, inundation, or wave action damage resulting from a discrete or compound natural hazard event, such as a flood or tropical weather system, where such damage exceeds:

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[86] Section 161.551(6) and (7), F.S.
[87] Fla. Admin. Code R. 62S-7.011.
[88] DEP, *Sea Level Impact Projection Study Tool*, https://www.floridadep-slip.org/ (last visited Jan. 20, 2022).
[89] *Id*.

- Twenty-five percent of the replacement cost of the potentially at risk structure or infrastructure at the time of the event; or
- A defined threshold established by the Department of Environmental Protection (DEP) in coordination with the Department of Transportation and water management districts. The threshold must be established by July 1, 2023.

The bill revises the requirement that a state-financed constructor assess the flooding, inundation, and wave action damage risks relating to a coastal structure over its expected life or 50 years, whichever is less, by referencing "potentially at-risk structure or infrastructure" instead of "coastal structure." The bill also revises the requirement that the assessment provide the "mean average annual chance of substantial flood damage" over the expected life of the coastal structure or 50 years, whichever is less, to instead require the assessment to provide "an estimated probability of significant flood damage to the potentially at-risk structure or infrastructure" over the expected life of the structure or infrastructure, whichever is less.

The bill replaces the term "coastal structure" with the term "potentially at-risk structure or infrastructure" throughout s. 161.551, F.S. This broadens the geographic applicability of the section's requirements from the coastal building zone[90] to areas at risk due to sea level rise.

The bill also creates a new requirement for SLIP studies. The studies must provide a list of flood mitigation strategies evaluated as part of the design of the potentially at-risk structure or infrastructure, and identify the flood mitigation strategies that have been implemented or are being considered as part of the potentially at-risk structure or infrastructure design.

Section 2 provides an effective date of July 1, 2022.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

[90] Section 161.54(1), F.S. "Coastal Building Zone" is defined as "the land area from the seasonal high-water line landward to a line 1,500 feet landward from the coastal construction control line as established pursuant to s. 161.053, and, for those coastal areas fronting on the Gulf of Mexico, Atlantic Ocean, Florida Bay, or Straits of Florida and not included under s. 161.053, the land area seaward of the most landward velocity zone (V-zone) line as established by the Federal Emergency Management Agency and shown on flood insurance rate maps." *Id.* The coastal building zone on coastal barrier islands is "the land area from the seasonal high-water line to a line 5,000 feet landward from the coastal construction control line established pursuant to s. 161.053, or the entire island, whichever is less. For coastal barrier islands on which a coastal construction control line has not been established pursuant to s. 161.053, the coastal building zone shall be the land area seaward of the most landward velocity zone (V-zone) boundary line fronting upon the Gulf of Mexico, Atlantic Ocean, Florida Bay, or Straits of Florida. All land area in the Florida Keys located within Monroe County shall be included in the coastal building zone." Section 161.55(4), F.S.

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:

The bill expands the geographic applicability of procedures that identify long-term risks to coastal structures, and potentially avoids some of the large costs of mitigating and dealing with future damage to, or even loss of, potentially at-risk structures or infrastructure. To the extent that the bill increases the avoided costs of damage or destruction, residents and businesses may benefit.

C. Government Sector Impact:

The bill would require DEP to promulgate and administer new regulations which may cause DEP to incur additional costs.

Requiring government entities to conduct a larger number of sea-level impact project studies prior to construction may result in an indeterminate, negative fiscal impact on the government sector in the short-term. However, the bill requires procedures that identify risks and potentially avoid damage and loss for an increased range of potentially at-risk structures or infrastructure, at least in part, using funds appropriated from the state. This may result in state funds, or potentially federal grant money that is appropriated from the state, being used for structures or infrastructure that have less risk of damage or loss over time, or structures or infrastructure that may remain undamaged or intact for a longer period of time. Therefore, the bill may result in an indeterminate, positive impact on the government sector in the long-term.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Statutes Affected:

This bill substantially amends section 161.551 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 24, 2022:

- Revises the definition of "Area at risk due to sea-level rise," such that it only means any location that is projected to be below the threshold for tidal flooding within the next 50 years by adding sea-level rise using the 2017 National Oceanic and Atmospheric Administration intermediate-high sea-level rise projection.
- Revises the definition of "Potentially at-risk structure or infrastructure," such that it means any of the following when within an area at risk due to sea-level rise:
  - A major structure, regardless of whether it has the potential for substantially impacting coastal zones.
  - A nonhabitable major structure.
  - Any other construction critical to public health, life, or safety.

B. Amendments:

None.