

By Senator Rodrigues

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1                   A bill to be entitled  
2           An act relating to statewide flooding and sea-level  
3           rise resilience; creating s. 380.093, F.S.; providing  
4           legislative intent; defining the term "critical  
5           asset"; establishing the Resilient Florida Grant  
6           Program within the Department of Environmental  
7           Protection; authorizing the department to provide  
8           grants to local governments to fund the costs of  
9           community resilience planning, subject to  
10          appropriation; providing requirements for certain  
11          local government vulnerability assessments; requiring  
12          the department to complete a comprehensive statewide  
13          flood vulnerability and sea-level rise data set and  
14          assessment by specified dates; specifying requirements  
15          for such data set and assessment; requiring the  
16          department to develop a Statewide Flooding and Sea-  
17          Level Rise Resilience Plan and annually submit the  
18          plan to the Governor and Legislature by a specified  
19          date; specifying requirements for the plan; requiring  
20          water management districts to annually submit proposed  
21          projects to the department for inclusion in the plan;  
22          specifying requirements for such projects; specifying  
23          projects that are ineligible for inclusion in the  
24          plan; requiring the department to implement a scoring  
25          system for assessing projects submitted by water  
26          management districts; limiting the total amount of  
27          funding that may be proposed in the plan; requiring  
28          the Legislature, upon review and subject to  
29          appropriation, to approve funding for projects as

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30 specified in the plan; authorizing local governments  
31 to create regional resilience coalitions for a  
32 specified purpose; authorizing the department to  
33 provide funding to the coalitions, subject to  
34 appropriation; creating s. 380.0933, F.S.;  
35 establishing the Florida Flood Hub for Applied  
36 Research and Innovation within the University of South  
37 Florida College of Marine Science for a specified  
38 purpose; providing duties of the hub; providing for an  
39 executive director; requiring the hub to submit an  
40 annual report to the Governor and Legislature by a  
41 specified date; amending s. 403.928, F.S.; requiring  
42 the Office of Economic and Demographic Research to  
43 include specified information relating to inland and  
44 coastal flood control in certain assessments;  
45 providing an effective date.

46  
47 Be It Enacted by the Legislature of the State of Florida:

48  
49 Section 1. Section 380.093, Florida Statutes, is created to  
50 read:

51 380.093 Statewide Flooding and Sea-Level Rise Resilience  
52 Plan.—

53 (1) LEGISLATIVE INTENT.—

54 (a) The Legislature recognizes that this state is  
55 particularly vulnerable to adverse impacts of flooding resulting  
56 from the increasing frequency and duration of rainfall events,  
57 storm surge from more frequent and severe weather systems, and  
58 sea-level rise. Such adverse impacts pose economic, social,

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59 environmental, and public health and safety challenges to this  
60 state. To most effectively address these challenges, funding  
61 should be allocated in a manner that prioritizes and addresses  
62 the most significant risks.

63 (b) The Legislature further recognizes that the adverse  
64 impacts of flooding and sea-level rise affect coastal and inland  
65 communities all across this state. Consequently, a coordinated  
66 approach is necessary to maximize the benefit of efforts to  
67 address such impacts and to improve this state's resilience to  
68 flooding and sea-level rise.

69 (c) The Legislature further recognizes that to effectively  
70 and efficiently address and prepare for the adverse impacts of  
71 flooding and sea-level rise in this state, it is necessary to  
72 conduct a comprehensive statewide assessment of the specific  
73 risks posed to this state by flooding and sea-level rise and  
74 develop a statewide coordinated approach to addressing such  
75 risks.

76 (2) DEFINITION.—As used in this section, the term "critical  
77 asset" includes:

78 (a) Transportation assets and evacuation routes, including  
79 airports, bridges, bus terminals, ports, major roadways,  
80 marinas, rail facilities, and railroad bridges.

81 (b) Critical infrastructure, including wastewater treatment  
82 facilities, stormwater treatment facilities, drinking water  
83 facilities, electric production and supply facilities, solid and  
84 hazardous waste facilities, military installations,  
85 communications facilities, and disaster debris management sites.

86 (c) Critical community and emergency facilities, including  
87 schools, colleges, universities, community centers, correctional

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88 facilities, disaster recovery centers, emergency medical service  
89 facilities, emergency operation centers, fire stations, health  
90 care facilities, hospitals, law enforcement facilities, local  
91 government facilities, logistical staging areas, affordable  
92 public housing, risk shelter inventory, and state government  
93 facilities.

94 (d) Natural, cultural, and historical resources, including  
95 conservation lands, parks, shorelines, surface waters, wetlands,  
96 and historical and cultural assets.

97 (3) RESILIENT FLORIDA GRANT PROGRAM.—

98 (a) The Resilient Florida Grant Program is established  
99 within the Department of Environmental Protection.

100 (b) Subject to appropriation, the department may provide  
101 grants to a county or municipality to fund the costs of  
102 community resilience planning, including projects that address  
103 the requirements of s. 163.3178(2)(f), vulnerability assessments  
104 that identify or address risks of flooding and sea-level rise,  
105 and the development of plans and policies that allow communities  
106 to prepare for threats from flooding and sea-level rise.

107 (c) A vulnerability assessment conducted pursuant to  
108 paragraph (b) must encompass an entire county or municipality  
109 and must use the most recent publicly available Digital  
110 Elevation Model and dynamic modeling techniques, if available.

111 1. The assessment must include an analysis of the  
112 vulnerability of and risks to critical assets, including  
113 regionally significant assets, owned or managed by the county or  
114 municipality.

115 2. Upon completion of a vulnerability assessment, the  
116 county or municipality shall submit to the department the

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117 following:

118 a. A report detailing the findings of the assessment.

119 b. All electronic mapping data used to illustrate flooding  
120 and sea-level rise impacts identified in the assessment. When  
121 submitting such data, the county or municipality shall include:

122 (I) Geotechnical data in an electronic file format suitable  
123 for input to the department's mapping tool.

124 (II) Geographic Information System data that has been  
125 projected into the appropriate Florida State Plane Coordinate  
126 System and that is suitable for the department's mapping tool.

127 The county or municipality must also submit metadata using  
128 standards prescribed by the department.

129 c. A list of critical assets, including regionally  
130 significant assets, that are impacted by flooding and sea-level  
131 rise.

132 (d) A vulnerability assessment conducted for a county or  
133 municipality subject to the requirements of s. 163.3178(2) (f)  
134 must include:

135 1. A peril of flood analysis that addresses the  
136 requirements of s. 163.3178(2) (f).

137 2. The depth of sea-level rise, calculated using the North  
138 American Vertical Datum of 1988, expected for the county or  
139 municipality using, at a minimum, all of the following:

140 a. Two local sea-level rise scenarios, which must equal or  
141 exceed the 2017 National Oceanic and Atmospheric Administration  
142 intermediate-low and intermediate-high sea-level rise  
143 projections.

144 b. At least two planning horizons that must be, at a  
145 minimum, 20 years and 50 years from the date of the assessment.

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146 c. Local sea-level rise data that has been interpolated  
147 between the two closest coastal tide gauges with National  
148 Oceanic and Atmospheric Administration sea-level rise data.

149 3. The depth of expected storm surge flooding using Federal  
150 Emergency Management Agency storm surge data. The storm surge  
151 flood depth used must equal or exceed the 100-year flood event  
152 and must be calculated using the North American Vertical Datum  
153 of 1988.

154 4. The depth of potential future flooding from combinations  
155 of sea-level rise, storm surge, and high tides using, at a  
156 minimum, all of the following:

157 a. Two local sea-level rise scenarios, which must equal or  
158 exceed the 2017 National Oceanic and Atmospheric Administration  
159 intermediate-low and intermediate-high sea-level rise  
160 projections.

161 b. At least two planning horizons that must be, at a  
162 minimum, 20 years and 50 years from the date of the assessment.

163 c. Local sea-level rise data that has been interpolated  
164 between the two closest coastal tide gauges with National  
165 Oceanic and Atmospheric Administration sea-level rise data.

166 d. The depth of expected storm surge flooding using Federal  
167 Emergency Management Agency storm surge data. The storm surge  
168 flood depth used must equal or exceed the 100-year flood event  
169 and must be calculated using the North American Vertical Datum  
170 of 1988.

171 e. Future high tide flooding, which must be derived using  
172 National Oceanic and Atmospheric Administration Technical Report  
173 NOS CO-OPS 086.

174 (4) COMPREHENSIVE STATEWIDE FLOOD VULNERABILITY AND SEA-

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175 LEVEL RISE DATA SET AND ASSESSMENT.—

176 (a) By July 1, 2022, the department shall complete the  
177 development of a comprehensive statewide flood vulnerability and  
178 sea-level rise data set sufficient to conduct a comprehensive  
179 statewide flood vulnerability and sea-level rise assessment.

180 1. The Chief Science Officer shall, in coordination with  
181 necessary experts and resources, develop statewide sea-level  
182 rise projections that incorporate temporal and spatial  
183 variability, to the extent practicable, for inclusion in the  
184 data set.

185 2. The data set must include information necessary to  
186 determine the risks to inland and coastal communities, such as  
187 elevation, tidal levels, and precipitation.

188 (b) By July 1, 2023, the department shall complete a  
189 comprehensive statewide flood vulnerability and sea-level rise  
190 assessment that identifies inland and coastal infrastructure,  
191 geographic areas, and communities in this state which are  
192 vulnerable to flooding and sea-level rise and the associated  
193 risks.

194 1. The department shall use the comprehensive statewide  
195 flood vulnerability and sea-level rise data set to conduct the  
196 assessment.

197 2. The assessment must incorporate local and regional  
198 analyses of vulnerabilities and risks.

199 3. The assessment must include an inventory of critical  
200 assets, including regionally significant assets, which are  
201 essential for critical government and business functions,  
202 national security, public health and safety, the economy, flood  
203 and storm protection, water quality management, and wildlife

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204 habitat management, and must identify and analyze the  
205 vulnerability of and risks to such critical assets.

206 (c) The department shall update the comprehensive statewide  
207 flood vulnerability and sea-level rise data set and assessment  
208 every 3 years. The department may update the data set and  
209 assessment more frequently if it determines that updates are  
210 necessary to maintain the validity of the data set and  
211 assessment.

212 (5) STATEWIDE FLOODING AND SEA-LEVEL RISE RESILIENCE PLAN.-

213 (a) By December 1, 2021, and each December 1 thereafter,  
214 the department shall develop a Statewide Flooding and Sea-Level  
215 Rise Resilience Plan on a 3-year planning horizon and submit it  
216 to the Governor, the President of the Senate, and the Speaker of  
217 the House of Representatives. The plan must consist of ranked  
218 projects that address risks of flooding and sea-level rise to  
219 coastal and inland communities in this state.

220 (b) The plan submitted by December 1, 2021, before the  
221 comprehensive statewide flood vulnerability and sea-level rise  
222 assessment is completed, will be a preliminary plan that  
223 addresses risks of flooding and sea-level rise identified in  
224 local government vulnerability assessments. The plan submitted  
225 by December 1, 2022, will be an update to the preliminary plan.  
226 The plan submitted by December 1, 2023, and each plan submitted  
227 by each December 1 thereafter, shall address risks of flooding  
228 and sea-level rise identified in the comprehensive statewide  
229 flood vulnerability and sea-level rise assessment.

230 (c) Each plan submitted by the department pursuant to this  
231 subsection must include the following information for each  
232 recommended project:

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- 233       1. A description of the project.
- 234       2. The location of the project.
- 235       3. An estimate of how long the project will take to  
236 complete.
- 237       4. An estimate of the cost of the project.
- 238       5. The cost-share percentage available for the project.
- 239       6. A summary of the priority score assigned to the project.
- 240       (d) By September 1, 2021, and each September 1 thereafter,  
241 each water management district shall submit to the department a  
242 list of proposed projects that mitigate or eliminate risks of  
243 flooding or sea-level rise and a corresponding evaluation of  
244 each project.
- 245       1. Local governments and regional entities whose  
246 responsibilities include addressing flooding or sea-level rise  
247 may submit to the water management district proposed projects  
248 that mitigate or eliminate risks of flooding or sea-level rise.
- 249       2. Water management districts shall evaluate the proposed  
250 projects to assess the degree to which the project addresses:
- 251           a. Threats to critical assets, including regionally  
252 significant assets, and reductions of future damage costs.
- 253           b. Risks identified in local government vulnerability  
254 assessments or the comprehensive statewide flood vulnerability  
255 and sea-level rise assessment, as applicable.
- 256       3. Each project submitted by a water management district  
257 for consideration by the department for inclusion in the plan  
258 must include:
- 259           a. A description of the project.
- 260           b. The location of the project.
- 261           c. An estimate of how long the project will take to

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262 complete.

263 d. An estimate of the cost of the project.

264 e. The cost-share percentage available for the project.

265 (e) Each project included in the plan must have a minimum  
266 50 percent cost share.

267 (f) To be eligible for inclusion in the plan, a project  
268 must address risks to a critical asset identified in a local  
269 government vulnerability assessment or the comprehensive  
270 statewide flood vulnerability and sea-level rise assessment, as  
271 applicable.

272 (g) Projects ineligible for inclusion in the plan include,  
273 but are not limited to:

274 1. Aesthetic vegetation.

275 2. Recreational structures such as piers, docks, and  
276 boardwalks.

277 3. Water quality components of stormwater and wastewater  
278 management systems, except projects to prevent saltwater  
279 intrusion.

280 4. Maintenance and repair of over-walks.

281 5. Park activities and facilities, except projects to  
282 control flooding or erosion.

283 6. Navigation construction, operation, and maintenance  
284 activities.

285 7. Projects that provide only recreational benefits.

286 (h) The department shall implement a scoring system for  
287 assessing each project submitted by water management districts  
288 for inclusion in the plan. The scoring system must include the  
289 following tiers and associated criteria:

290 1. Tier 1 must account for 50 percent of the total score

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291 and consist of all of the following criteria:

292 a. The degree to which the project addresses the risks  
293 posed by flooding and sea-level rise identified in the local  
294 government vulnerability assessments or the comprehensive  
295 statewide flood vulnerability and sea-level rise assessment, as  
296 applicable.

297 b. The degree to which the project addresses risks to  
298 regionally significant assets.

299 c. The degree to which the project reduces risks to areas  
300 with an overall higher percentage of vulnerable critical assets.

301 2. Tier 2 must account for 20 percent of the total score  
302 and consist of all of the following criteria:

303 a. The availability of local, state, and federal matching  
304 funds, considering the cost-share percentage, the status of the  
305 funding award, and federal authorization, if applicable.

306 b. Previous state commitment and involvement in the  
307 project, considering previously funded phases, the total amount  
308 of previous state funding, and previous partial appropriations  
309 for the proposed project.

310 c. The overall readiness of the project to proceed in a  
311 timely manner, considering the project's readiness for the  
312 construction phase of development, the status of required  
313 permits, the status of any needed easement acquisition, and the  
314 availability of local funding sources.

315 d. The cost-effectiveness of the project.

316 3. Tier 3 must account for 20 percent of the total score  
317 and consist of all of the following criteria:

318 a. The current condition of the project area, including any  
319 recent impacts from storm damage.

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320 b. The use of practices that reduce losses due to flooding  
321 and claims made under flood insurance policies issued in this  
322 state.

323 c. The degree to which the project contributes to existing  
324 flood mitigation projects that reduce upland damage costs by  
325 incorporating new or enhanced structures or restoration and  
326 revegetation projects.

327 d. The exceedance of the flood-resistant construction  
328 requirements of the Florida Building Code and applicable flood  
329 plain management regulations.

330 4. Tier 4 must account for 10 percent of the total score  
331 and consist of all of the following criteria:

332 a. The proposed innovative technologies designed to reduce  
333 project costs and provide regional collaboration.

334 b. The environmental habitat enhancement or the inclusion  
335 of nature-based options for resilience, prioritizing state or  
336 federal critical habitat areas for threatened or endangered  
337 species.

338 c. The assistance to financially disadvantaged communities.

339 (i) The total amount of funding proposed in the plan may  
340 not exceed \$100 million. Upon review and subject to  
341 appropriation, the Legislature shall approve funding for the  
342 projects as specified in the plan. Multiyear projects that  
343 receive funding for the first year of the project must be  
344 included in subsequent plans and funded until the project is  
345 complete, provided that the project sponsor has complied with  
346 all contractual obligations and funds are available.

347 (6) REGIONAL RESILIENCE COALITIONS.—

348 (a) Counties and municipalities may enter into agreements

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349 to form regional resilience coalitions for the purpose of  
350 planning for the resilience needs of communities and  
351 coordinating intergovernmental solutions to mitigate adverse  
352 impacts of flooding and sea-level rise.

353 (b) Regional resilience coalitions may provide technical  
354 assistance to counties and municipalities in:

355 1. Preparing and conducting vulnerability assessments and  
356 developing plans and policies funded by the Resilient Florida  
357 Grant Program.

358 2. Developing project proposals to be submitted for  
359 inclusion in the Statewide Flooding and Sea-Level Rise  
360 Resilience Plan and implementing projects that are approved for  
361 funding.

362 (c) Subject to specific legislative appropriation, the  
363 department may provide funding to regional resilience coalitions  
364 for the purpose of carrying out the duties under this section.

365 Section 2. Section 380.0933, Florida Statutes, is created  
366 to read:

367 380.0933 Florida Flood Hub for Applied Research and  
368 Innovation.-

369 (1) The Florida Flood Hub for Applied Research and  
370 Innovation is established within the University of South Florida  
371 College of Marine Science to coordinate efforts between the  
372 academic and research institutions of this state. The University  
373 of South Florida College of Marine Science will serve as the  
374 lead institution and engage other academic and research  
375 institutions, private partners, and financial sponsors to  
376 coordinate efforts to support applied research and innovation to  
377 address the flooding and sea-level rise challenges of this

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378 state.

379 (2) The hub shall, at a minimum:

380 (a) Organize existing data needs for a comprehensive  
381 statewide flood vulnerability and sea-level rise analysis and  
382 perform a gap analysis to determine data needs.

383 (b) Develop statewide open source hydrologic models for  
384 physically based flood frequency estimation and real-time  
385 forecasting of floods, including hydraulic models of floodplain  
386 inundation mapping, real-time compound and tidal flooding  
387 forecasts, future groundwater elevation conditions, and economic  
388 damage and loss estimates.

389 (c) Coordinate research funds from the state, the federal  
390 government, or other funding sources for related hub activities  
391 across all participating entities.

392 (d) Establish community-based programs to improve flood  
393 monitoring and prediction along major waterways, including  
394 intracoastal waterways and coastlines, of this state and to  
395 support ongoing flood research.

396 (e) Coordinate with agencies, including, but not limited  
397 to, the department and water management districts.

398 (f) Share its resources and expertise.

399 (g) Assist in the development of training and a workforce  
400 in this state that is knowledgeable about flood and sea-level  
401 rise research, prediction, and adaptation and mitigation  
402 strategies.

403 (h) Develop opportunities to partner with other flood and  
404 sea-level rise research and innovation leaders for sharing  
405 technology or research.

406 (i) Conduct the activities under this subsection in

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407 cooperation with various local, state, and federal government  
408 entities as well as other flood and sea-level rise research  
409 centers.

410 (3) The hub shall employ an executive director.

411 (4) By July 1, 2022, and each July 1 thereafter, the hub  
412 shall provide an annual comprehensive report to the Governor,  
413 the President of the Senate, and the Speaker of the House of  
414 Representatives that outlines its clearly defined goals and its  
415 efforts and progress on reaching such goals.

416 Section 3. Subsections (3) through (7) of section 403.928,  
417 Florida Statutes, are amended to read:

418 403.928 Assessment of water resources and conservation  
419 lands.—The Office of Economic and Demographic Research shall  
420 conduct an annual assessment of Florida's water resources and  
421 conservation lands.

422 (3) ASSESSMENT REQUIREMENTS.—The assessment must:

423 (a) shall Include analyses on a statewide, regional, or  
424 geographic basis, as appropriate, and shall identify analytical  
425 challenges in assessing information across the different regions  
426 of this ~~the~~ state.

427 (b) (4) ~~The assessment must~~ Identify any overlap in the  
428 expenditures for water resources and conservation lands.

429 (4) INLAND AND COASTAL FLOOD CONTROL.—Beginning with the  
430 assessment due by January 1, 2022, the Office of Economic and  
431 Demographic Research shall include in the assessment an analysis  
432 of future expenditures by federal, state, regional, and local  
433 governments required to achieve the Legislature's intent of  
434 minimizing the adverse economic effects of inland and coastal  
435 flooding, thereby decreasing the likelihood of severe

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436 dislocations or disruptions in the economy and preserving the  
437 value of real and natural assets to the extent economically  
438 feasible. To the extent possible, the analysis must evaluate the  
439 cost of resilience efforts necessary to address inland and  
440 coastal flooding associated with sea-level rise, high tide  
441 events, storm surge, flash flooding, stormwater runoff, and  
442 increased annual precipitation over a 50-year planning horizon.  
443 At such time that dedicated revenues are provided in law for  
444 these purposes or that recurring expenditures are made, the  
445 analysis must also identify the gap, if any, between the  
446 estimated revenues and the projected expenditures.

447 (5) ASSESSMENT ASSISTANCE.—

448 (a) The water management districts, the Department of  
449 Environmental Protection, the Department of Agriculture and  
450 Consumer Services, the Fish and Wildlife Conservation  
451 Commission, counties, municipalities, and special districts  
452 shall provide assistance to the Office of Economic and  
453 Demographic Research related to their respective areas of  
454 expertise.

455 (b) ~~(6)~~ The Office of Economic and Demographic Research must  
456 be given access to any data held by an agency as defined in s.  
457 112.312 if the Office of Economic and Demographic Research  
458 considers the data necessary to complete the assessment,  
459 including any confidential data.

460 ~~(6)~~ ~~(7)~~ ASSESSMENT SUBMISSION.—The assessment shall be  
461 submitted to the President of the Senate and the Speaker of the  
462 House of Representatives by January 1, 2017, and by January 1 of  
463 each year thereafter.

464 Section 4. This act shall take effect upon becoming a law.