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LEGISLATIVE ACTION

Senate	.	House
Comm: RCS	.	
03/31/2021	.	
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	.	

The Committee on Appropriations (Rodrigues) recommended the following:

Senate Amendment (with title amendment)

Delete everything after the enacting clause
and insert:

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

380.093 Statewide Flooding and Sea Level Rise Resilience
Plan.—

(1) LEGISLATIVE INTENT.—

(a) The Legislature recognizes that the state is



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11 particularly vulnerable to adverse impacts from flooding
12 resulting from increases in frequency and duration of rainfall
13 events, storm surge from more frequent and severe weather
14 systems, and sea level rise. Such adverse impacts pose economic,
15 social, environmental, and public health and safety challenges
16 to the state. To most effectively address these challenges,
17 funding should be allocated in a manner that prioritizes
18 addressing the most significant risks.

19 (b) The Legislature further recognizes that the adverse
20 impacts of flooding and sea level rise affect coastal and inland
21 communities all across the state. Consequently, a coordinated
22 approach is necessary to maximize the benefit of efforts to
23 address such impacts and to improve the state's resilience to
24 flooding and sea level rise.

25 (c) The Legislature further recognizes that to effectively
26 and efficiently address and prepare for the adverse impacts of
27 flooding and sea level rise in the state, it is necessary to
28 conduct a comprehensive statewide assessment of the specific
29 risks posed to the state by flooding and sea level rise and
30 develop a statewide coordinated approach to addressing such
31 risks.

32 (2) DEFINITIONS.—As used in this section, the term:

33 (a) "Critical asset" includes:

34 1. Transportation assets and evacuation routes, including
35 airports, bridges, bus terminals, ports, major roadways,
36 marinas, rail facilities, and railroad bridges.

37 2. Critical infrastructure, including wastewater treatment
38 facilities and lift stations, stormwater treatment facilities
39 and pump stations, drinking water facilities, water utility



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40 conveyance systems, electric production and supply facilities,
41 solid and hazardous waste facilities, military installations,
42 communications facilities, and disaster debris management sites.

43 3. Critical community and emergency facilities, including
44 schools, colleges, universities, community centers, correctional
45 facilities, disaster recovery centers, emergency medical service
46 facilities, emergency operation centers, fire stations, health
47 care facilities, hospitals, law enforcement facilities, local
48 government facilities, logistical staging areas, affordable
49 public housing, risk shelter inventory, and state government
50 facilities.

51 4. Natural, cultural, and historical resources, including
52 conservation lands, parks, shorelines, surface waters, wetlands,
53 and historical and cultural assets.

54 (b) "Department" means the Department of Environmental
55 Protection.

56 (3) RESILIENT FLORIDA GRANT PROGRAM.—

57 (a) The Resilient Florida Grant Program is established
58 within the department.

59 (b) Subject to appropriation, the department may provide
60 grants to a county or municipality to fund the costs of
61 community resilience planning and necessary data collection for
62 such planning, including comprehensive plan amendments and
63 necessary corresponding analyses that address the requirements
64 of s. 163.3178(2)(f); vulnerability assessments that identify or
65 address risks of flooding and sea level rise; the development of
66 projects, plans, and policies that allow communities to prepare
67 for threats from flooding and sea level rise; and projects to
68 adapt critical assets to the effects of flooding and sea level



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69 rise.

70 (c) A vulnerability assessment conducted pursuant to
71 paragraph (b) must encompass the entire county or municipality,
72 or a smaller area if approved by the department; include all
73 assets owned or maintained by the grant applicant; and use the
74 most recent publicly available Digital Elevation Model and
75 dynamic modeling techniques, if available. Locally collected
76 elevation data may also be included as part of the assessment as
77 long as it is submitted to the department pursuant to this
78 paragraph.

79 1. The assessment must include an analysis of the
80 vulnerability of and risks to critical assets, including
81 regionally significant assets, owned or managed by the county or
82 municipality.

83 2. Upon completion of a vulnerability assessment, the
84 county or municipality shall submit to the department the
85 following:

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

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

90 (I) Geospatial data in an electronic file format suitable
91 for input to the department's mapping tool.

92 (II) Geographic Information System data that has been
93 projected into the appropriate Florida State Plane Coordinate
94 System and that is suitable for the department's mapping tool.
95 The county or municipality must also submit metadata using
96 standards prescribed by the department.

97 c. A list of critical assets, including regionally



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98 significant assets, that are impacted by flooding and sea level
99 rise.

100 (d) A vulnerability assessment conducted pursuant to
101 paragraph (b) must include all of the following, if applicable:

102 1. Peril of flood comprehensive plan amendments that
103 address the requirements of s. 163.3178(2)(f), if the county or
104 municipality is subject to such requirements and has not
105 complied with such requirements as determined by the Department
106 of Economic Opportunity.

107 2. The depth of:

108 a. Tidal flooding, including future high tide flooding,
109 which must use thresholds published and provided by the
110 department. To the extent practicable, the analysis should also
111 geographically display the number of tidal flood days expected
112 for each scenario and planning horizon.

113 b. Current and future storm surge flooding using publicly
114 available National Oceanic and Atmospheric Administration or
115 Federal Emergency Management Agency storm surge data. The
116 initial storm surge event used must equal or exceed the current
117 100-year flood event. Higher frequency storm events may be
118 analyzed to understand the exposure of a critical asset.

119 c. To the extent practicable, rainfall-induced flooding
120 using spatiotemporal analysis or existing hydrologic and
121 hydraulic modeling results. Future boundary conditions should be
122 modified to consider sea level rise and high tide conditions.

123 d. To the extent practicable, compound flooding or the
124 combination of tidal, storm surge, and rainfall-induced
125 flooding.

126 3. The following scenarios and standards:



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127 a. All analyses in the North American Vertical Datum of
128 1988.

129 b. At least two local sea level rise scenarios, which must
130 include the 2017 National Oceanic and Atmospheric Administration
131 intermediate-low and intermediate-high sea level rise
132 projections.

133 c. At least two planning horizons that include planning
134 horizons for the years 2040 and 2070.

135 d. Local sea level data that has been interpolated between
136 the two closest National Oceanic and Atmospheric Administration
137 tide gauges. Local sea level data may be taken from one such
138 gauge if the gauge has a higher mean sea level. Data taken from
139 an alternate tide gauge may be used with appropriate rationale
140 and department approval, as long as it is publicly available or
141 submitted to the department pursuant to paragraph (b).

142 (4) COMPREHENSIVE STATEWIDE FLOOD VULNERABILITY AND SEA
143 LEVEL RISE DATA SET AND ASSESSMENT.—

144 (a) By July 1, 2022, the department shall complete the
145 development of a comprehensive statewide flood vulnerability and
146 sea level rise data set sufficient to conduct a comprehensive
147 statewide flood vulnerability and sea level rise assessment. In
148 developing the data set, the department shall compile, analyze,
149 and incorporate, as appropriate, information related to
150 vulnerability assessments submitted to the department pursuant
151 to subsection (3) or any previously completed assessments that
152 meet the requirements of subsection (3).

153 1. The Chief Science Officer shall, in coordination with
154 necessary experts and resources, develop statewide sea level
155 rise projections that incorporate temporal and spatial



156 variability, to the extent practicable, for inclusion in the
157 data set. This subparagraph does not supersede regionally
158 adopted projections.

159 2. The data set must include information necessary to
160 determine the risks to inland and coastal communities,
161 including, but not limited to, elevation, tidal levels, and
162 precipitation.

163 (b) By July 1, 2023, the department shall complete a
164 comprehensive statewide flood vulnerability and sea level rise
165 assessment that identifies inland and coastal infrastructure,
166 geographic areas, and communities in the state that are
167 vulnerable to flooding and sea level rise and the associated
168 risks.

169 1. The department shall use the comprehensive statewide
170 flood vulnerability and sea level rise data set to conduct the
171 assessment.

172 2. The assessment must incorporate local and regional
173 analyses of vulnerabilities and risks, including, as
174 appropriate, local mitigation strategies and postdisaster
175 redevelopment plans.

176 3. The assessment must include an inventory of critical
177 assets, including regionally significant assets, that are
178 essential for critical government and business functions,
179 national security, public health and safety, the economy, flood
180 and storm protection, water quality management, and wildlife
181 habitat management, and must identify and analyze the
182 vulnerability of and risks to such critical assets. When
183 identifying critical assets for inclusion in the assessment, the
184 department shall also take into consideration the critical



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185 assets identified by local governments and submitted to the
186 department pursuant to subsection (3).

187 (c) The department shall update the comprehensive statewide
188 flood vulnerability and sea level rise data set and assessment
189 every 5 years. The department may update the data set and
190 assessment more frequently if it determines that updates are
191 necessary to maintain the validity of the data set and
192 assessment.

193 (5) STATEWIDE FLOODING AND SEA LEVEL RISE RESILIENCE PLAN.—

194 (a) By December 1, 2021, and each December 1 thereafter,
195 the department shall develop a Statewide Flooding and Sea Level
196 Rise Resilience Plan on a 3-year planning horizon and submit it
197 to the Governor, the President of the Senate, and the Speaker of
198 the House of Representatives. The plan must consist of ranked
199 projects that address risks of flooding and sea level rise to
200 coastal and inland communities in the state.

201 (b) The plan submitted by December 1, 2021, before the
202 comprehensive statewide flood vulnerability and sea level rise
203 assessment is completed, will be a preliminary plan that
204 addresses risks of flooding and sea level rise identified in
205 available local government vulnerability assessments. The plan
206 submitted by December 1, 2022, will be an update to the
207 preliminary plan. The plan submitted by December 1, 2023, and
208 each plan submitted by December 1 thereafter, shall address
209 risks of flooding and sea level rise identified in the
210 comprehensive statewide flood vulnerability and sea level rise
211 assessment.

212 (c) Each plan submitted by the department pursuant to this
213 subsection must include the following information for each



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214 recommended project:
215 1. A description of the project.
216 2. The location of the project.
217 3. An estimate of how long the project will take to
218 complete.
219 4. An estimate of the cost of the project.
220 5. The cost-share percentage available for the project.
221 6. A summary of the priority score assigned to the project.
222 7. The project sponsor.
223 (d)1. By September 1, 2021, and each September 1
224 thereafter, counties, municipalities, and regional resilience
225 entities may submit to the department a list of proposed
226 projects that address risks of flooding or sea level rise
227 identified in vulnerability assessments that meet the
228 requirements of subsection (3).
229 2. By September 1, 2021, and each September 1 thereafter,
230 each water management district and flood control district may
231 submit to the department a list of any proposed projects that
232 mitigate the risks of flooding or sea level rise on water
233 supplies or water resources of the state and a corresponding
234 evaluation of each project.
235 3. Each project submitted to the department by a county,
236 municipality, regional resilience entity, water management
237 district, or flood control district for consideration by the
238 department for inclusion in the plan must include:
239 a. A description of the project.
240 b. The location of the project.
241 c. An estimate of how long the project will take to
242 complete.



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

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

245 (e) Each project included in the plan must have a minimum
246 50 percent cost-share unless the project assists or is within a
247 financially disadvantaged small community. For purposes of this
248 section, the term "financially disadvantaged small community"
249 means:

250 1. A municipality that has a population of 10,000 or fewer,
251 according to the most recent April 1 population estimates posted
252 on the Office of Economic and Demographic Research's website and
253 a per capita annual income that is less than the state's per
254 capita annual income as shown in the most recent release from
255 the Bureau of the Census of the United States Department of
256 Commerce that includes both measurements; or

257 2. A county that has a population of 50,000 or fewer,
258 according to the most recent April 1 population estimates posted
259 on the Office of Economic and Demographic Research's website and
260 a per capita annual income that is less than the state's per
261 capita annual income as shown in the most recent release from
262 the Bureau of the Census of the United States Department of
263 Commerce that includes both measurements.

264 (f) To be eligible for inclusion in the plan, a project
265 must have been submitted by a county, municipality, regional
266 resilience entity, water management district, or flood control
267 district pursuant to paragraph (d) or must have been identified
268 in the comprehensive statewide flood vulnerability and sea level
269 rise assessment, as applicable.

270 (g) Expenses ineligible for inclusion in the plan include,
271 but are not limited to, expenses associated with:



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272 1. Aesthetic vegetation.

273 2. Recreational structures such as piers, docks, and
274 boardwalks.

275 3. Water quality components of stormwater and wastewater
276 management systems, except expenses to prevent saltwater
277 intrusion unless such expenses are used to mitigate water
278 quality impacts caused by the project.

279 4. Maintenance and repair of over-walks.

280 5. Park activities and facilities, except expenses to
281 control flooding or erosion.

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

284 7. Projects that provide only recreational benefits.

285 (h) The department shall implement a scoring system for
286 assessing each project eligible for inclusion in the plan
287 pursuant to this subsection. The scoring system must include the
288 following tiers and associated criteria:

289 1. Tier 1 must account for 40 percent of the total score
290 and consist of all of the following criteria:

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

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

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

300 d. The degree to which the project contributes to existing



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301 flooding mitigation projects that reduce upland damage costs by
302 incorporating new or enhanced structures or restoration and
303 revegetation projects.

304 2. Tier 2 must account for 30 percent of the total score
305 and consist of all of the following criteria:

306 a. The degree to which flooding and erosion currently
307 affect the condition of the project area.

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

313 c. The environmental habitat enhancement or inclusion of
314 nature-based options for resilience, with priority given to
315 state or federal critical habitat areas for threatened or
316 endangered species.

317 d. The cost-effectiveness of the project.

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

320 a. The availability of local, state, and federal matching
321 funds, considering the status of the funding award, and federal
322 authorization, if applicable.

323 b. Previous state commitment and involvement in the
324 project, considering previously funded phases, the total amount
325 of previous state funding, and previous partial appropriations
326 for the proposed project.

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



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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 extent to which the project assists financially
335 disadvantaged communities.
336 (i) The total amount of funding proposed for each year of
337 the plan may not exceed \$100 million. Upon review and subject to
338 appropriation, the Legislature shall approve funding for the
339 projects as specified in the plan. Multi-year projects that
340 receive funding for the first year of the project must be
341 included in subsequent plans and funded until the project is
342 complete, provided that the project sponsor has complied with
343 all contractual obligations and funds are available.
344 (j) The department shall initiate rulemaking by August 1,
345 2021, to implement this section.
346 (6) REGIONAL RESILIENCE ENTITIES.—Subject to specific
347 legislative appropriation, the department may provide funding
348 for the following purposes to regional entities that are
349 established by general purpose local governments and whose
350 responsibilities include planning for the resilience needs of
351 communities and coordinating intergovernmental solutions to
352 mitigate adverse impacts of flooding and sea level rise:
353 (a) Providing technical assistance to counties and
354 municipalities.
355 (b) Coordinating multijurisdictional vulnerability
356 assessments.
357 (c) Developing project proposals to be submitted for
358 inclusion in the Statewide Flooding and Sea Level Rise



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359 Resilience Plan.

360 Section 2. Section 380.0933, Florida Statutes, is created
361 to read:

362 380.0933 Florida Flood Hub for Applied Research and
363 Innovation.-

364 (1) The Florida Flood Hub for Applied Research and
365 Innovation is established within the University of South Florida
366 College of Marine Science to coordinate efforts between the
367 academic and research institutions of the state. The University
368 of South Florida College of Marine Science or its successor
369 entity will serve as the lead institution and engage other
370 academic and research institutions, private partners, and
371 financial sponsors to coordinate efforts to support applied
372 research and innovation to address the flooding and sea level
373 rise challenges of the state.

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

375 (a) Organize existing data needs for a comprehensive
376 statewide flood vulnerability and sea level rise analysis and
377 perform a gap analysis to determine data needs.

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

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

387 (d) Establish community-based programs to improve flood



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388 monitoring and prediction along major waterways, including
389 intracoastal waterways and coastlines, of the state and to
390 support ongoing flood research.

391 (e) Coordinate with agencies, including, but not limited
392 to, the Department of Environmental Protection and water
393 management districts.

394 (f) Share its resources and expertise.

395 (g) Assist in the development of training and a workforce
396 in the state that is knowledgeable about flood and sea level
397 rise research, prediction, and adaptation and mitigation
398 strategies.

399 (h) Develop opportunities to partner with other flood and
400 sea level rise research and innovation leaders for sharing
401 technology or research.

402 (i) Conduct the activities under this subsection in
403 cooperation with various local, state, and federal government
404 entities as well as other flood and sea level rise research
405 centers.

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

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

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

414 403.928 Assessment of water resources and conservation
415 lands.—The Office of Economic and Demographic Research shall
416 conduct an annual assessment of Florida's water resources and



417 conservation lands.

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

419 (a) ~~shall~~ Include analyses on a statewide, regional, or
420 geographic basis, as appropriate, and ~~shall~~ identify analytical
421 challenges in assessing information across the different regions
422 of the state.

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

425 (4) INLAND AND COASTAL FLOOD CONTROL.—Beginning with the
426 assessment due by January 1, 2022, the Office of Economic and
427 Demographic Research shall include in the assessment an analysis
428 of future expenditures by federal, state, regional, and local
429 governments required to achieve the Legislature's intent of
430 minimizing the adverse economic effects of inland and coastal
431 flooding, thereby decreasing the likelihood of severe
432 dislocations or disruptions in the economy and preserving the
433 value of real and natural assets to the extent economically
434 feasible. To the extent possible, the analysis must evaluate the
435 cost of the resilience efforts necessary to address inland and
436 coastal flooding associated with sea level rise, high tide
437 events, storm surge, flash flooding, stormwater runoff, and
438 increased annual precipitation over a 50-year planning horizon.
439 At such time that dedicated revenues are provided in law for
440 these purposes or that recurring expenditures are made, the
441 analysis must also identify the gap, if any, between the
442 estimated revenues and the projected expenditures.

443 (5) ASSESSMENT ASSISTANCE.—

444 (a) The water management districts, the Department of
445 Environmental Protection, the Department of Agriculture and



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446 Consumer Services, the Fish and Wildlife Conservation
447 Commission, counties, municipalities, and special districts
448 shall provide assistance to the Office of Economic and
449 Demographic Research related to their respective areas of
450 expertise.

451 (b)~~(6)~~ The Office of Economic and Demographic Research must
452 be given access to any data held by an agency as defined in s.
453 112.312 if the Office of Economic and Demographic Research
454 considers the data necessary to complete the assessment,
455 including any confidential data.

456 (6)~~(7)~~ ASSESSMENT SUBMISSION.—The assessment shall be
457 submitted to the President of the Senate and the Speaker of the
458 House of Representatives by January 1, 2017, and by January 1 of
459 each year thereafter.

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

461
462 ===== T I T L E A M E N D M E N T =====

463 And the title is amended as follows:

464 Delete everything before the enacting clause
465 and insert:

466 A bill to be entitled
467 An act relating to statewide flooding and sea level
468 rise resilience; creating s. 380.093, F.S.; providing
469 legislative intent; providing definitions;
470 establishing the Resilient Florida Grant Program
471 within the Department of Environmental Protection;
472 authorizing the department to provide grants to local
473 governments to fund the costs of community resilience
474 planning, subject to appropriation; providing



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475 requirements for certain local government
476 vulnerability assessments; requiring the department to
477 complete a comprehensive statewide flood vulnerability
478 and sea level rise data set and assessment by
479 specified dates; specifying requirements for such data
480 set and assessment; requiring the department to
481 develop an annual Statewide Flooding and Sea Level
482 Rise Resilience Plan and submit the plan to the
483 Governor and Legislature by a specified date;
484 specifying requirements for the plan; authorizing
485 local governments, regional resilience entities, water
486 management districts, and flood control districts to
487 annually submit proposed projects to the department
488 for inclusion in the plan; specifying requirements for
489 such projects; specifying expenses that are ineligible
490 for inclusion in the plan; requiring the department to
491 implement a scoring system for assessing projects
492 eligible for inclusion in the plan; limiting the total
493 amount of funding that may be proposed for each year
494 of the plan; requiring the Legislature, upon review
495 and subject to appropriation, to approve funding for
496 projects as specified in the plan; directing the
497 department to initiate rulemaking by a specified date;
498 authorizing the department to provide funding to
499 regional resilience entities for specified purposes,
500 subject to specified appropriation; creating s.
501 380.0933, F.S.; establishing the Florida Flood Hub for
502 Applied Research and Innovation within the University
503 of South Florida College of Marine Science for a



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504 specified purpose; providing duties of the hub;
505 providing for an executive director; requiring the hub
506 to submit an annual report to the Governor and
507 Legislature by a specified date; amending s. 403.928,
508 F.S.; requiring the Office of Economic and Demographic
509 Research to include specified information relating to
510 inland and coastal flood control in certain
511 assessments; providing an effective date.