

By the Committees on Appropriations; and Environment and Natural Resources; and Senators Rodrigues and Garcia

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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; providing definitions;
5 establishing the Resilient Florida Grant Program
6 within the Department of Environmental Protection;
7 authorizing the department to provide grants to local
8 governments to fund the costs of community resilience
9 planning, subject to appropriation; providing
10 requirements for certain local government
11 vulnerability assessments; requiring the department to
12 complete a comprehensive statewide flood vulnerability
13 and sea level rise data set and assessment by
14 specified dates; specifying requirements for such data
15 set and assessment; requiring the department to
16 develop an annual Statewide Flooding and Sea Level
17 Rise Resilience Plan and submit the plan to the
18 Governor and Legislature by a specified date;
19 specifying requirements for the plan; authorizing
20 local governments, regional resilience entities, water
21 management districts, and flood control districts to
22 annually submit proposed projects to the department
23 for inclusion in the plan; specifying requirements for
24 such projects; specifying expenses that are ineligible
25 for inclusion in the plan; requiring the department to
26 implement a scoring system for assessing projects
27 eligible for inclusion in the plan; limiting the total
28 amount of funding that may be proposed for each year
29 of the plan; requiring the Legislature, upon review

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

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

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

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

54 (1) LEGISLATIVE INTENT.—

55 (a) The Legislature recognizes that the state is
56 particularly vulnerable to adverse impacts from flooding
57 resulting from increases in frequency and duration of rainfall
58 events, storm surge from more frequent and severe weather

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59 systems, and sea level rise. Such adverse impacts pose economic,
60 social, environmental, and public health and safety challenges
61 to the state. To most effectively address these challenges,
62 funding should be allocated in a manner that prioritizes
63 addressing the most significant risks.

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

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

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

78 (a) "Critical asset" includes:

79 1. Transportation assets and evacuation routes, including
80 airports, bridges, bus terminals, ports, major roadways,
81 marinas, rail facilities, and railroad bridges.

82 2. Critical infrastructure, including wastewater treatment
83 facilities and lift stations, stormwater treatment facilities
84 and pump stations, drinking water facilities, water utility
85 conveyance systems, electric production and supply facilities,
86 solid and hazardous waste facilities, military installations,
87 communications facilities, and disaster debris management sites.

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88 3. Critical community and emergency facilities, including
89 schools, colleges, universities, community centers, correctional
90 facilities, disaster recovery centers, emergency medical service
91 facilities, emergency operation centers, fire stations, health
92 care facilities, hospitals, law enforcement facilities, local
93 government facilities, logistical staging areas, affordable
94 public housing, risk shelter inventory, and state government
95 facilities.

96 4. Natural, cultural, and historical resources, including
97 conservation lands, parks, shorelines, surface waters, wetlands,
98 and historical and cultural assets.

99 (b) "Department" means the Department of Environmental
100 Protection.

101 (3) RESILIENT FLORIDA GRANT PROGRAM.—

102 (a) The Resilient Florida Grant Program is established
103 within the department.

104 (b) Subject to appropriation, the department may provide
105 grants to a county or municipality to fund the costs of
106 community resilience planning and necessary data collection for
107 such planning, including comprehensive plan amendments and
108 necessary corresponding analyses that address the requirements
109 of s. 163.3178(2)(f); vulnerability assessments that identify or
110 address risks of flooding and sea level rise; the development of
111 projects, plans, and policies that allow communities to prepare
112 for threats from flooding and sea level rise; and projects to
113 adapt critical assets to the effects of flooding and sea level
114 rise.

115 (c) A vulnerability assessment conducted pursuant to
116 paragraph (b) must encompass the entire county or municipality,

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117 or a smaller area if approved by the department; include all
118 assets owned or maintained by the grant applicant; and use the
119 most recent publicly available Digital Elevation Model and
120 dynamic modeling techniques, if available. Locally collected
121 elevation data may also be included as part of the assessment as
122 long as it is submitted to the department pursuant to this
123 paragraph.

124 1. The assessment must include an analysis of the
125 vulnerability of and risks to critical assets, including
126 regionally significant assets, owned or managed by the county or
127 municipality.

128 2. Upon completion of a vulnerability assessment, the
129 county or municipality shall submit to the department the
130 following:

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

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

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

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

142 c. A list of critical assets, including regionally
143 significant assets, that are impacted by flooding and sea level
144 rise.

145 (d) A vulnerability assessment conducted pursuant to

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146 paragraph (b) must include all of the following, if applicable:

147 1. Peril of flood comprehensive plan amendments that
148 address the requirements of s. 163.3178(2)(f), if the county or
149 municipality is subject to such requirements and has not
150 complied with such requirements as determined by the Department
151 of Economic Opportunity.

152 2. The depth of:

153 a. Tidal flooding, including future high tide flooding,
154 which must use thresholds published and provided by the
155 department. To the extent practicable, the analysis should also
156 geographically display the number of tidal flood days expected
157 for each scenario and planning horizon.

158 b. Current and future storm surge flooding using publicly
159 available National Oceanic and Atmospheric Administration or
160 Federal Emergency Management Agency storm surge data. The
161 initial storm surge event used must equal or exceed the current
162 100-year flood event. Higher frequency storm events may be
163 analyzed to understand the exposure of a critical asset.

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

168 d. To the extent practicable, compound flooding or the
169 combination of tidal, storm surge, and rainfall-induced
170 flooding.

171 3. The following scenarios and standards:

172 a. All analyses in the North American Vertical Datum of
173 1988.

174 b. At least two local sea level rise scenarios, which must

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175 include the 2017 National Oceanic and Atmospheric Administration
176 intermediate-low and intermediate-high sea level rise
177 projections.

178 c. At least two planning horizons that include planning
179 horizons for the years 2040 and 2070.

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

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

189 (a) By July 1, 2022, the department shall complete the
190 development of a comprehensive statewide flood vulnerability and
191 sea level rise data set sufficient to conduct a comprehensive
192 statewide flood vulnerability and sea level rise assessment. In
193 developing the data set, the department shall compile, analyze,
194 and incorporate, as appropriate, information related to
195 vulnerability assessments submitted to the department pursuant
196 to subsection (3) or any previously completed assessments that
197 meet the requirements of subsection (3).

198 1. The Chief Science Officer shall, in coordination with
199 necessary experts and resources, develop statewide sea level
200 rise projections that incorporate temporal and spatial
201 variability, to the extent practicable, for inclusion in the
202 data set. This subparagraph does not supersede regionally
203 adopted projections.

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204 2. The data set must include information necessary to
205 determine the risks to inland and coastal communities,
206 including, but not limited to, elevation, tidal levels, and
207 precipitation.

208 (b) By July 1, 2023, the department shall complete a
209 comprehensive statewide flood vulnerability and sea level rise
210 assessment that identifies inland and coastal infrastructure,
211 geographic areas, and communities in the state that are
212 vulnerable to flooding and sea level rise and the associated
213 risks.

214 1. The department shall use the comprehensive statewide
215 flood vulnerability and sea level rise data set to conduct the
216 assessment.

217 2. The assessment must incorporate local and regional
218 analyses of vulnerabilities and risks, including, as
219 appropriate, local mitigation strategies and postdisaster
220 redevelopment plans.

221 3. The assessment must include an inventory of critical
222 assets, including regionally significant assets, that are
223 essential for critical government and business functions,
224 national security, public health and safety, the economy, flood
225 and storm protection, water quality management, and wildlife
226 habitat management, and must identify and analyze the
227 vulnerability of and risks to such critical assets. When
228 identifying critical assets for inclusion in the assessment, the
229 department shall also take into consideration the critical
230 assets identified by local governments and submitted to the
231 department pursuant to subsection (3).

232 (c) The department shall update the comprehensive statewide

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233 flood vulnerability and sea level rise data set and assessment
234 every 5 years. The department may update the data set and
235 assessment more frequently if it determines that updates are
236 necessary to maintain the validity of the data set and
237 assessment.

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

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

246 (b) The plan submitted by December 1, 2021, before the
247 comprehensive statewide flood vulnerability and sea level rise
248 assessment is completed, will be a preliminary plan that
249 addresses risks of flooding and sea level rise identified in
250 available local government vulnerability assessments. The plan
251 submitted by December 1, 2022, will be an update to the
252 preliminary plan. The plan submitted by December 1, 2023, and
253 each plan submitted by December 1 thereafter, shall address
254 risks of flooding and sea level rise identified in the
255 comprehensive statewide flood vulnerability and sea level rise
256 assessment.

257 (c) Each plan submitted by the department pursuant to this
258 subsection must include the following information for each
259 recommended project:

- 260 1. A description of the project.
- 261 2. The location of the project.

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- 262 3. An estimate of how long the project will take to
263 complete.
- 264 4. An estimate of the cost of the project.
- 265 5. The cost-share percentage available for the project.
- 266 6. A summary of the priority score assigned to the project.
- 267 7. The project sponsor.
- 268 (d)1. By September 1, 2021, and each September 1
269 thereafter, counties, municipalities, and regional resilience
270 entities may submit to the department a list of proposed
271 projects that address risks of flooding or sea level rise
272 identified in vulnerability assessments that meet the
273 requirements of subsection (3).
- 274 2. By September 1, 2021, and each September 1 thereafter,
275 each water management district and flood control district may
276 submit to the department a list of any proposed projects that
277 mitigate the risks of flooding or sea level rise on water
278 supplies or water resources of the state and a corresponding
279 evaluation of each project.
- 280 3. Each project submitted to the department by a county,
281 municipality, regional resilience entity, water management
282 district, or flood control district for consideration by the
283 department for inclusion in the plan must include:
- 284 a. A description of the project.
- 285 b. The location of the project.
- 286 c. An estimate of how long the project will take to
287 complete.
- 288 d. An estimate of the cost of the project.
- 289 e. The cost-share percentage available for the project.
- 290 (e) Each project included in the plan must have a minimum

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291 50 percent cost-share unless the project assists or is within a
292 financially disadvantaged small community. For purposes of this
293 section, the term "financially disadvantaged small community"
294 means:

295 1. A municipality that has a population of 10,000 or fewer,
296 according to the most recent April 1 population estimates posted
297 on the Office of Economic and Demographic Research's website and
298 a per capita annual income that is less than the state's per
299 capita annual income as shown in the most recent release from
300 the Bureau of the Census of the United States Department of
301 Commerce that includes both measurements; or

302 2. A county that has a population of 50,000 or fewer,
303 according to the most recent April 1 population estimates posted
304 on the Office of Economic and Demographic Research's website and
305 a per capita annual income that is less than the state's per
306 capita annual income as shown in the most recent release from
307 the Bureau of the Census of the United States Department of
308 Commerce that includes both measurements.

309 (f) To be eligible for inclusion in the plan, a project
310 must have been submitted by a county, municipality, regional
311 resilience entity, water management district, or flood control
312 district pursuant to paragraph (d) or must have been identified
313 in the comprehensive statewide flood vulnerability and sea level
314 rise assessment, as applicable.

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

317 1. Aesthetic vegetation.

318 2. Recreational structures such as piers, docks, and
319 boardwalks.

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320 3. Water quality components of stormwater and wastewater
321 management systems, except expenses to prevent saltwater
322 intrusion unless such expenses are used to mitigate water
323 quality impacts caused by the project.

324 4. Maintenance and repair of over-walks.

325 5. Park activities and facilities, except expenses to
326 control flooding or erosion.

327 6. Navigation construction, operation, and maintenance
328 activities.

329 7. Projects that provide only recreational benefits.

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

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

336 a. The degree to which the project addresses the risks
337 posed by flooding and sea level rise identified in the local
338 government vulnerability assessments or the comprehensive
339 statewide flood vulnerability and sea level rise assessment, as
340 applicable.

341 b. The degree to which the project addresses risks to
342 regionally significant assets.

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

345 d. The degree to which the project contributes to existing
346 flooding mitigation projects that reduce upland damage costs by
347 incorporating new or enhanced structures or restoration and
348 revegetation projects.

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

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

353 b. The overall readiness of the project to proceed in a
354 timely manner, considering the project's readiness for the
355 construction phase of development, the status of required
356 permits, the status of any needed easement acquisition, and the
357 availability of local funding sources.

358 c. The environmental habitat enhancement or inclusion of
359 nature-based options for resilience, with priority given to
360 state or federal critical habitat areas for threatened or
361 endangered species.

362 d. The cost-effectiveness of the project.

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

365 a. The availability of local, state, and federal matching
366 funds, considering the status of the funding award, and federal
367 authorization, if applicable.

368 b. Previous state commitment and involvement in the
369 project, considering previously funded phases, the total amount
370 of previous state funding, and previous partial appropriations
371 for the proposed project.

372 c. The exceedance of the flood-resistant construction
373 requirements of the Florida Building Code and applicable flood
374 plain management regulations.

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

377 a. The proposed innovative technologies designed to reduce

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378 project costs and provide regional collaboration.

379 b. The extent to which the project assists financially
380 disadvantaged communities.

381 (i) The total amount of funding proposed for each year of
382 the plan may not exceed \$100 million. Upon review and subject to
383 appropriation, the Legislature shall approve funding for the
384 projects as specified in the plan. Multi-year projects that
385 receive funding for the first year of the project must be
386 included in subsequent plans and funded until the project is
387 complete, provided that the project sponsor has complied with
388 all contractual obligations and funds are available.

389 (j) The department shall initiate rulemaking by August 1,
390 2021, to implement this section.

391 (6) REGIONAL RESILIENCE ENTITIES.—Subject to specific
392 legislative appropriation, the department may provide funding
393 for the following purposes to regional entities that are
394 established by general purpose local governments and whose
395 responsibilities include planning for the resilience needs of
396 communities and coordinating intergovernmental solutions to
397 mitigate adverse impacts of flooding and sea level rise:

398 (a) Providing technical assistance to counties and
399 municipalities.

400 (b) Coordinating multijurisdictional vulnerability
401 assessments.

402 (c) Developing project proposals to be submitted for
403 inclusion in the Statewide Flooding and Sea Level Rise
404 Resilience Plan.

405 Section 2. Section 380.0933, Florida Statutes, is created
406 to read:

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407 380.0933 Florida Flood Hub for Applied Research and
408 Innovation.—

409 (1) The Florida Flood Hub for Applied Research and
410 Innovation is established within the University of South Florida
411 College of Marine Science to coordinate efforts between the
412 academic and research institutions of the state. The University
413 of South Florida College of Marine Science or its successor
414 entity will serve as the lead institution and engage other
415 academic and research institutions, private partners, and
416 financial sponsors to coordinate efforts to support applied
417 research and innovation to address the flooding and sea level
418 rise challenges of the state.

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

420 (a) Organize existing data needs for a comprehensive
421 statewide flood vulnerability and sea level rise analysis and
422 perform a gap analysis to determine data needs.

423 (b) Develop statewide open source hydrologic models for
424 physically based flood frequency estimation and real-time
425 forecasting of floods, including hydraulic models of floodplain
426 inundation mapping, real-time compound and tidal flooding
427 forecasts, future groundwater elevation conditions, and economic
428 damage and loss estimates.

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

432 (d) Establish community-based programs to improve flood
433 monitoring and prediction along major waterways, including
434 intracoastal waterways and coastlines, of the state and to
435 support ongoing flood research.

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436 (e) Coordinate with agencies, including, but not limited
437 to, the Department of Environmental Protection and water
438 management districts.

439 (f) Share its resources and expertise.

440 (g) Assist in the development of training and a workforce
441 in the state that is knowledgeable about flood and sea level
442 rise research, prediction, and adaptation and mitigation
443 strategies.

444 (h) Develop opportunities to partner with other flood and
445 sea level rise research and innovation leaders for sharing
446 technology or research.

447 (i) Conduct the activities under this subsection in
448 cooperation with various local, state, and federal government
449 entities as well as other flood and sea level rise research
450 centers.

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

452 (4) By July 1, 2022, and each July 1 thereafter, the hub
453 shall provide an annual comprehensive report to the Governor,
454 the President of the Senate, and the Speaker of the House of
455 Representatives that outlines its clearly defined goals and its
456 efforts and progress on reaching such goals.

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

459 403.928 Assessment of water resources and conservation
460 lands.—The Office of Economic and Demographic Research shall
461 conduct an annual assessment of Florida's water resources and
462 conservation lands.

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

464 (a) ~~shall~~ Include analyses on a statewide, regional, or

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465 geographic basis, as appropriate, and ~~shall~~ identify analytical
466 challenges in assessing information across the different regions
467 of the state.

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

470 (4) INLAND AND COASTAL FLOOD CONTROL.—Beginning with the
471 assessment due by January 1, 2022, the Office of Economic and
472 Demographic Research shall include in the assessment an analysis
473 of future expenditures by federal, state, regional, and local
474 governments required to achieve the Legislature's intent of
475 minimizing the adverse economic effects of inland and coastal
476 flooding, thereby decreasing the likelihood of severe
477 dislocations or disruptions in the economy and preserving the
478 value of real and natural assets to the extent economically
479 feasible. To the extent possible, the analysis must evaluate the
480 cost of the resilience efforts necessary to address inland and
481 coastal flooding associated with sea level rise, high tide
482 events, storm surge, flash flooding, stormwater runoff, and
483 increased annual precipitation over a 50-year planning horizon.
484 At such time that dedicated revenues are provided in law for
485 these purposes or that recurring expenditures are made, the
486 analysis must also identify the gap, if any, between the
487 estimated revenues and the projected expenditures.

488 (5) ASSESSMENT ASSISTANCE.—

489 (a) The water management districts, the Department of
490 Environmental Protection, the Department of Agriculture and
491 Consumer Services, the Fish and Wildlife Conservation
492 Commission, counties, municipalities, and special districts
493 shall provide assistance to the Office of Economic and

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494 Demographic Research related to their respective areas of
495 expertise.

496 (b)~~(6)~~ The Office of Economic and Demographic Research must
497 be given access to any data held by an agency as defined in s.
498 112.312 if the Office of Economic and Demographic Research
499 considers the data necessary to complete the assessment,
500 including any confidential data.

501 (6)~~(7)~~ ASSESSMENT SUBMISSION.—The assessment shall be
502 submitted to the President of the Senate and the Speaker of the
503 House of Representatives by January 1, 2017, and by January 1 of
504 each year thereafter.

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