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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 include all critical assets owned or maintained by the grant
118 applicant; and use the most recent publicly available Digital
119 Elevation Model and generally accepted analysis and modeling
120 techniques. An assessment may encompass a smaller geographic
121 area or include only a portion of the critical assets owned or
122 maintained by the grant applicant with appropriate rationale and
123 upon approval by the department. Locally collected elevation
124 data may also be included as part of the assessment as long as
125 it is submitted to the department pursuant to this paragraph.

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

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

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

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

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

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

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

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146 rise.

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

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

154 2. The depth of:

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

160 b. Current and future storm surge flooding using publicly
161 available National Oceanic and Atmospheric Administration or
162 Federal Emergency Management Agency storm surge data. The
163 initial storm surge event used must equal or exceed the current
164 100-year flood event. Higher frequency storm events may be
165 analyzed to understand the exposure of a critical asset.

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

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

173 3. The following scenarios and standards:

174 a. All analyses in the North American Vertical Datum of

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175 1988.

176 b. At least two local sea level rise scenarios, which must
177 include the 2017 National Oceanic and Atmospheric Administration
178 intermediate-low and intermediate-high sea level rise
179 projections.

180 c. At least two planning horizons that include planning
181 horizons for the years 2040 and 2070.

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

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

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

200 1. The Chief Science Officer shall, in coordination with
201 necessary experts and resources, develop statewide sea level
202 rise projections that incorporate temporal and spatial
203 variability, to the extent practicable, for inclusion in the

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204 data set. This subparagraph does not supersede regionally
205 adopted projections.

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

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

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

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

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

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233 department pursuant to subsection (3).

234 (c) The department shall update the comprehensive statewide
235 flood vulnerability and sea level rise data set and assessment
236 every 5 years. The department may update the data set and
237 assessment more frequently if it determines that updates are
238 necessary to maintain the validity of the data set and
239 assessment.

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

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

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

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

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262 1. A description of the project.

263 2. The location of the project.

264 3. An estimate of how long the project will take to
265 complete.

266 4. An estimate of the cost of the project.

267 5. The cost-share percentage available for the project.

268 6. A summary of the priority score assigned to the project.

269 7. The project sponsor.

270 (d)1. By September 1, 2021, and each September 1
271 thereafter, counties and municipalities may submit to the
272 department a list of proposed projects that address risks of
273 flooding or sea level rise identified in vulnerability
274 assessments that meet the requirements of subsection (3). A
275 regional resilience entity may also submit such proposed
276 projects to the department on behalf of one or more member
277 counties or municipalities.

278 2. By September 1, 2021, and each September 1 thereafter,
279 each water management district and flood control district may
280 submit to the department a list of any proposed projects that
281 mitigate the risks of flooding or sea level rise on water
282 supplies or water resources of the state and a corresponding
283 evaluation of each project.

284 3. Each project submitted to the department by a county,
285 municipality, regional resilience entity, water management
286 district, or flood control district for consideration by the
287 department for inclusion in the plan must include:

288 a. A description of the project.

289 b. The location of the project.

290 c. An estimate of how long the project will take to

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291 complete.

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

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

294 f. The project sponsor.

295 (e) Each project included in the plan must have a minimum
296 50 percent cost-share unless the project assists or is within a
297 financially disadvantaged small community. For purposes of this
298 section, the term "financially disadvantaged small community"
299 means:

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

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

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

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

322 1. Aesthetic vegetation.

323 2. Recreational structures such as piers, docks, and
324 boardwalks.

325 3. Water quality components of stormwater and wastewater
326 management systems, except for expenses to mitigate water
327 quality impacts caused by the project or expenses related to
328 water quality which are necessary to obtain a permit for the
329 project.

330 4. Maintenance and repair of over-walks.

331 5. Park activities and facilities, except expenses to
332 control flooding or erosion.

333 6. Navigation construction, operation, and maintenance
334 activities.

335 7. Projects that provide only recreational benefits.

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

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

342 a. The degree to which the project addresses the risks
343 posed by flooding and sea level rise identified in the local
344 government vulnerability assessments or the comprehensive
345 statewide flood vulnerability and sea level rise assessment, as
346 applicable.

347 b. The degree to which the project addresses risks to
348 regionally significant assets.

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

351 d. The degree to which the project contributes to existing
352 flooding mitigation projects that reduce upland damage costs by
353 incorporating new or enhanced structures or restoration and
354 revegetation projects.

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

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

359 b. The overall readiness of the project to proceed in a
360 timely manner, considering the project's readiness for the
361 construction phase of development, the status of required
362 permits, the status of any needed easement acquisition, and the
363 availability of local funding sources.

364 c. The environmental habitat enhancement or inclusion of
365 nature-based options for resilience, with priority given to
366 state or federal critical habitat areas for threatened or
367 endangered species.

368 d. The cost-effectiveness of the project.

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

371 a. The availability of local, state, and federal matching
372 funds, considering the status of the funding award, and federal
373 authorization, if applicable.

374 b. Previous state commitment and involvement in the
375 project, considering previously funded phases, the total amount
376 of previous state funding, and previous partial appropriations
377 for the proposed project.

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378 c. The exceedance of the flood-resistant construction
379 requirements of the Florida Building Code and applicable flood
380 plain management regulations.

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

383 a. The proposed innovative technologies designed to reduce
384 project costs and provide regional collaboration.

385 b. The extent to which the project assists financially
386 disadvantaged communities.

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

395 (j) The department shall initiate rulemaking by August 1,
396 2021, to implement this section.

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

404 (a) Providing technical assistance to counties and
405 municipalities.

406 (b) Coordinating multijurisdictional vulnerability

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407 assessments.

408 (c) Developing project proposals to be submitted for
409 inclusion in the Statewide Flooding and Sea Level Rise
410 Resilience Plan.

411 Section 2. Section 380.0933, Florida Statutes, is created
412 to read:

413 380.0933 Florida Flood Hub for Applied Research and
414 Innovation.-

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

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

426 (a) Organize existing data needs for a comprehensive
427 statewide flood vulnerability and sea level rise analysis and
428 perform a gap analysis to determine data needs.

429 (b) Develop statewide open source hydrologic models for
430 physically based flood frequency estimation and real-time
431 forecasting of floods, including hydraulic models of floodplain
432 inundation mapping, real-time compound and tidal flooding
433 forecasts, future groundwater elevation conditions, and economic
434 damage and loss estimates.

435 (c) Coordinate research funds from the state, the federal

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436 government, or other funding sources for related hub activities
437 across all participating entities.

438 (d) Establish community-based programs to improve flood
439 monitoring and prediction along major waterways, including
440 intracoastal waterways and coastlines, of the state and to
441 support ongoing flood research.

442 (e) Coordinate with agencies, including, but not limited
443 to, the Department of Environmental Protection and water
444 management districts.

445 (f) Share its resources and expertise.

446 (g) Assist in the development of training and a workforce
447 in the state that is knowledgeable about flood and sea level
448 rise research, prediction, and adaptation and mitigation
449 strategies.

450 (h) Develop opportunities to partner with other flood and
451 sea level rise research and innovation leaders for sharing
452 technology or research.

453 (i) Conduct the activities under this subsection in
454 cooperation with various local, state, and federal government
455 entities as well as other flood and sea level rise research
456 centers.

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

458 (4) By July 1, 2022, and each July 1 thereafter, the hub
459 shall provide an annual comprehensive report to the Governor,
460 the President of the Senate, and the Speaker of the House of
461 Representatives that outlines its clearly defined goals and its
462 efforts and progress on reaching such goals.

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

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465 403.928 Assessment of water resources and conservation
466 lands.—The Office of Economic and Demographic Research shall
467 conduct an annual assessment of Florida’s water resources and
468 conservation lands.

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

470 (a) ~~shall~~ Include analyses on a statewide, regional, or
471 geographic basis, as appropriate, and ~~shall~~ identify analytical
472 challenges in assessing information across the different regions
473 of the state.

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

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

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494 (5) ASSESSMENT ASSISTANCE.—

495 (a) The water management districts, the Department of
496 Environmental Protection, the Department of Agriculture and
497 Consumer Services, the Fish and Wildlife Conservation
498 Commission, counties, municipalities, and special districts
499 shall provide assistance to the Office of Economic and
500 Demographic Research related to their respective areas of
501 expertise.

502 (b)~~(6)~~ The Office of Economic and Demographic Research must
503 be given access to any data held by an agency as defined in s.
504 112.312 if the Office of Economic and Demographic Research
505 considers the data necessary to complete the assessment,
506 including any confidential data.

507 (6)~~(7)~~ ASSESSMENT SUBMISSION.—The assessment shall be
508 submitted to the President of the Senate and the Speaker of the
509 House of Representatives by January 1, 2017, and by January 1 of
510 each year thereafter.

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