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## HOUSE RESOLUTION

REQUESTING THE DEPARTMENT OF LAND AND NATURAL RESOURCES AND THE OFFICE OF PLANNING, IN CONSULTATION WITH THE HAWAII CLIMATE CHANGE MITIGATION AND ADAPTATION COMMISSION, ACTING THROUGH ITS COORDINATOR, TO COLLABORATE TO CONVENE A TASK FORCE ON WAIKIKI'S ADAPTATION TO SEA LEVEL RISE.

1           WHEREAS, substantial flooding impacts from sea level rise  
2 are projected as a result of climate change for the island of  
3 Oahu, with lesser impacts for other parts of the State, as  
4 discussed in more detail below; and

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6           WHEREAS, the iconic tourist destination of Waikiki, in  
7 particular, is projected to incur among the worst impacts in the  
8 State, including a much higher economic impact in lost property  
9 value than any other area due to the dense concentration of high  
10 level investment in hotels, condominiums, and retail  
11 establishments there; and

12  
13           WHEREAS, rising sea levels are among the significant  
14 adverse impacts of climate change, which result from the  
15 expanded volume of ocean waters due to increased water  
16 temperatures as the oceans absorb most of the increased heat  
17 from global warming and the addition of melt waters from melting  
18 glaciers and ice sheets in the polar regions; and

19  
20           WHEREAS, another effect of the increasing temperature of  
21 ocean waters is to add energy to tropical storms such as  
22 hurricanes, such that such storms become more powerful and last  
23 longer with damaging force; and

24  
25           WHEREAS, these impacts have been recognized by the  
26 Legislature since at least 2007, when in enacting Act 234,  
27 Session Laws of Hawaii 2007, it observed that "climate change  
28 poses a serious threat to the economic well-being, public  
29 health, natural resources, and the environment of Hawaii" and  
30 that "the potential adverse effects of global warming include a  
31 rise in sea levels resulting in the displacement of businesses  
32 and residences...and an increase in the severity of storms and  
33 extreme weather events"; and



1  
2 WHEREAS, Hawaii, as the only state in the country  
3 consisting solely of islands, is particularly vulnerable to  
4 rising sea levels and more powerful tropical storms; and  
5

6 WHEREAS, Hawaii's Sea Level Rise Vulnerability and  
7 Adaptation Report dated December 2017 (the "Sea Level Rise  
8 Report") is the first state-wide vulnerability assessment for  
9 coastal hazards associated with sea level rise in Hawaii; and  
10

11 WHEREAS, preparation of the Sea Level Rise Report was  
12 initially mandated by Act 83, Session Laws of Hawaii 2014, and  
13 expanded in scope pursuant to Act 32, Session Laws of Hawaii  
14 2017; and  
15

16 WHEREAS, the Sea Level Rise Report, including its  
17 projections of sea level exposure areas described below, has  
18 been officially approved by the Hawaii Climate Change Mitigation  
19 and Adaptation Commission; and  
20

21 WHEREAS, among the scientific information included in the  
22 Sea Level Rise Report are projections of future increases in  
23 global sea level of up to 3.2 feet by 2100 under the "business  
24 as usual" scenario developed by the United Nations  
25 Intergovernmental Panel on Climate Change in its Assessment  
26 Report 5 (IPCC 2014) in which greenhouse gas emissions continue  
27 to increase at current rates; and  
28

29 WHEREAS, however, the Sea Level Rise Report further notes  
30 that "[more] recent observations and projections suggest that  
31 this magnitude of seal level rise could occur as early as year  
32 2060", leading to the Sea Level Rise Report's conclusion that,  
33 "...it is vital that the magnitude and rate of sea level rise is  
34 tracked as new projections emerge, [to] plan for 3.2 feet of sea  
35 level rise now, and be ready to adjust that projection upward";  
36 and  
37

38 WHEREAS, the Sea Level Rise Report also cites emerging  
39 science, including a Climate Science Special Report (CSSR)  
40 issued in 2017 by the U.S. Global Change Research Program and a  
41 report by the National Oceanic and Atmospheric Administration,  
42 indicating that the global mean sea level is very likely to rise



1 by up to 4.3 feet by 2100 if greenhouse gas emissions continue  
2 to increase and suggesting that, for high emission scenarios, a  
3 global mean sea level rise in the range of 6.4 feet to 8.8 feet  
4 is "physically plausible" by 2100, based on observations and  
5 models of potential rapid ice melt in Greenland and Antarctica;  
6 and

7  
8 WHEREAS, the National Oceanic and Atmospheric  
9 Administration report further indicates that sea level rise in  
10 the area around Hawaii and other tropical areas will exceed  
11 projections of global mean sea level rise; and

12  
13 WHEREAS, the Sea Level Rise Report states that the  
14 potential future exposure of each of the Hawaiian islands to  
15 coastal hazards as a result of sea level rise were determined by  
16 computer modeling, "using the best available data and methods",  
17 to assess three separate chronic flooding hazards, including  
18 passive flooding, annual high wave flooding, and coastal  
19 erosion; and

20  
21 WHEREAS, the separate impacts of these three hazards were  
22 mathematically combined by the model to define the total  
23 projected extent of chronic flooding due to sea level rise under  
24 four scenarios, including a maximum rise of 3.2 feet; and

25  
26 WHEREAS, the total projected area of flooding impact is  
27 referred to as the "sea level rise exposure area"; and

28  
29 WHEREAS, the results of the modeling are available for  
30 online review through an interactive tool referred to as the  
31 Hawaii Sea Level Rise Viewer; and

32  
33 WHEREAS, in addition to sea level rise projections, the Sea  
34 Level Rise Report also provides vulnerability assessments of the  
35 estimated social, cultural, economic, and environmental impacts  
36 of the projected sea level rise; and

37  
38 WHEREAS, vulnerability, as used in the Sea Level Rise  
39 Report, refers to the "degree to which a system is susceptible  
40 to, and unable to cope with, adverse effects of climate change,  
41 including climate variability and extremes"; and

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1 WHEREAS, for lands within the sea level rise exposure area,  
2 vulnerability was assessed as "the estimated potential permanent  
3 loss of land and structures and displaced people from the  
4 exposure to sea level rise"; and

5  
6 WHEREAS, potential economic loss, as determined in the Sea  
7 Level Rise Report, is "based on the value of the land and  
8 structures from the county tax parcel database permanently lost  
9 in the sea level rise exposure area for each projected height of  
10 sea level rise"; and

11  
12 WHEREAS, the Sea Level Rise Report's modeling projects much  
13 greater impact from chronic flooding to the island of Oahu (nine  
14 thousand four hundred acres) than the other islands of Hawaii  
15 (Kauai having the next largest flooding acreage of 5,760 acres);  
16 and

17  
18 WHEREAS, when these impacts are translated to vulnerability  
19 assessments, the Sea Level Rise Report shows the island of Oahu  
20 to have a markedly higher vulnerability to sea level rise  
21 impacts than other islands of the State; and

22  
23 WHEREAS, Oahu's projected thirteen thousand three hundred  
24 displaced persons is more than twice the total for all other  
25 islands of the State and its projected \$12,900,000,000 in  
26 economic loss from the chronic flooding of structures and land  
27 is nearly twice the total for all other islands of the State;  
28 and

29  
30 WHEREAS, the Waikiki area of Oahu is described by the Sea  
31 Level Rise Report as particularly vulnerable to sea level rise  
32 due to very low elevation of this area; and

33  
34 WHEREAS, also problematic is the presence of the Ala Wai  
35 Canal, which will act as a conduit for ocean waters into the  
36 interior of Waikiki as sea level rise worsens; and

37  
38 WHEREAS, this iconic tourist attraction has the highest  
39 concentration and largest total value of projected economic loss  
40 (estimated at over \$5,000,000,000) of any area on Oahu or  
41 elsewhere in the State, including twelve major hotels as well as



1 many condominiums and expensive retail shopping establishments;  
2 and  
3

4 WHEREAS, Waikiki is also projected to have the single  
5 largest concentration of displaced residents; and  
6

7 WHEREAS, the Sea Level Rise Report includes recommendations  
8 for the development of policies and programs to support,  
9 sustainable and resilient land use and community development,  
10 prioritization of smart urban redevelopment outside the  
11 projected sea level rise exposure area, development of  
12 innovative and sustainable financing approaches to support  
13 adaptation, and promotion of intergovernmental collaboration and  
14 accountability for adaptation measures; and  
15

16 WHEREAS, the Sea Level Rise Report warns that decisions  
17 about where to use coastal armoring and when to retreat will  
18 need to be made carefully; and  
19

20 WHEREAS, the Sea Level Rise Report carefully points out  
21 that it does not include a plan for implementation of its  
22 recommendations; now, therefore,  
23

24 BE IT RESOLVED by the House of Representatives of the  
25 Thirtieth Legislature of the State of Hawaii, Regular Session of  
26 2020, that the Department of Land and Natural Resources and the  
27 Office of Planning, in consultation with the Hawaii Climate  
28 Change Mitigation and Adaptation Commission, acting through its  
29 Coordinator, are requested to collaborate to convene a task  
30 force on Waikiki's adaptation to sea level rise to do the  
31 following:  
32

33 (1) After reviewing the recommendations from the Sea Level  
34 Rise Report, develop, consider, and offer  
35 recommendations on a broad range of alternative  
36 options for adaptive measures by which Waikiki might  
37 respond to projected increasing sea levels, including  
38 but not limited to the extent to whether Waikiki  
39 should retreat from the incursions of ocean waters or,  
40 conversely, protective measures should be considered,  
41 if deemed technically feasible, to preserve Waikiki in  
42 its current state;



- 1
- 2 (2) Consider and offer recommendations on potential
- 3 methods of funding of such adaptive measures for
- 4 Waikiki from public and private stakeholders; and
- 5
- 6 (3) To the extent that the Task Force concludes that a
- 7 more detailed and in-depth engineering study
- 8 concerning possible adaptation measures for Waikiki
- 9 and a more in-depth financial analysis of funding
- 10 options is needed for sound decision making on this
- 11 monumental subject, the task force is requested to
- 12 outline with as much specificity as reasonable the
- 13 topics or issues to be addressed in such follow-up
- 14 study or studies and an estimate of the costs thereof;
- 15 and
- 16

17 BE IT FURTHER RESOLVED that the Chairperson of the Board of  
18 Land and Natural Resources, or the Chairperson's designee, and  
19 the Director of the Office of Planning, or the Director's  
20 designee, are requested to serve as co-chairs of the task force  
21 and to invite one representative of each of the following  
22 entities to service as members of the task force:

- 23
- 24 (1) The Office of Conservation and Coastal Lands of the
- 25 Department of Land and Natural Resources;
- 26
- 27 (2) The Department of Business, Economic Development and
- 28 Tourism;
- 29
- 30 (3) The Office of the Mayor of the City and County of
- 31 Honolulu;
- 32
- 33 (4) The Office of Climate Change, Sustainability, and
- 34 Resilience of the City and County of Honolulu;
- 35
- 36 (5) The Department of Planning of the City and County of
- 37 Honolulu;
- 38
- 39 (6) The Hawaii Tourism Authority;
- 40
- 41 (7) The Chamber of Commerce Hawaii;
- 42



1 (8) The Waikiki Beach Special Improvement District  
2 Association;

3  
4 (9) The Waikiki Improvement Association; and

5  
6 (10) The Waikiki Neighborhood Board; and  
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8 BE IT FURTHER RESOLVED that the Chairperson of the Board of  
9 Land and Natural Resources, or the Chairperson's designee, and  
10 the Director of the Office of Planning, or the Director's  
11 designee, are requested to consider inviting representatives  
12 from the following entities to serve as additional non-voting  
13 participants in the task force:

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15 (1) A civil engineering firm;

16  
17 (2) A bank or financing firm; and

18  
19 (3) Two representatives at large from the Waikiki  
20 community; and  
21

22 BE IT FURTHER RESOLVED that the task force is requested to  
23 submit a report with its findings and recommendations, including  
24 any proposed legislation, to the Legislature no later than  
25 twenty days prior to the convening of the Regular Session of  
26 2021; and  
27

28 BE IT FURTHER RESOLVED that the members of the task force  
29 shall serve without compensation; and  
30

31 BE IT FURTHER RESOLVED that certified copies of this  
32 Resolution be transmitted to Chairperson of the Board of Land  
33 and Natural Resources; Director of Business, Economic  
34 Development, and Tourism; Director of the Office of Planning;  
35 Chairperson of the Hawaii Climate Change Mitigation and  
36 Adaptation Commission; Director of the Office of Climate Change,  
37 Sustainability, and Resilience; Director of the Department of  
38 Planning of the City and County of Honolulu; Mayor of the City  
39 and County of Honolulu; Chairperson of the Board of Directors of  
40 the Hawaii Tourism Authority; Chairperson of the Chamber of  
41 Commerce Hawaii; Chairperson of the Waikiki Beach Special  
42 Improvement District Association; Chairperson of the Waikiki



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1 Improvement Association; and Chairperson of the Waikiki  
2 Neighborhood Board.

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OFFERED BY:

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MAR 06 2020

