

MAR - 6 2020

SENATE CONCURRENT 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

5
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



1 rise in sea levels resulting in the displacement of businesses
2 and residences...and an increase in the severity of storms and
3 extreme weather events"; and
4

5 WHEREAS, Hawaii, as the only state in the country
6 consisting solely of islands, is particularly vulnerable to
7 rising sea levels and more powerful tropical storms; and
8

9 WHEREAS, Hawaii's Sea Level Rise Vulnerability and
10 Adaptation Report dated December 2017 (the "Sea Level Rise
11 Report") is the first state-wide vulnerability assessment for
12 coastal hazards associated with sea level rise in Hawaii; and
13

14 WHEREAS, preparation of the Sea Level Rise Report was
15 initially mandated by Act 83, Session Laws of Hawaii 2014, and
16 expanded in scope pursuant to Act 32, Session Laws of Hawaii
17 2017; and
18

19 WHEREAS, the Sea Level Rise Report, including its
20 projections of sea level exposure areas described below, has
21 been officially approved by the Hawaii Climate Change Mitigation
22 and Adaptation Commission; and
23

24 WHEREAS, among the scientific information included in the
25 Sea Level Rise Report are projections of future increases in
26 global sea level of up to 3.2 feet by 2100 under the "business
27 as usual" scenario developed by the United Nations
28 Intergovernmental Panel on Climate Change in its Assessment
29 Report 5 (IPCC 2014) in which greenhouse gas emissions continue
30 to increase at current rates; and
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32 WHEREAS, however, the Sea Level Rise Report further notes
33 that "[more] recent observations and projections suggest that
34 this magnitude of seal level rise could occur as early as year
35 2060", leading to the Sea Level Rise Report's conclusion that,
36 "...it is vital that the magnitude and rate of sea level rise is
37 tracked as new projections emerge, [to] plan for 3.2 feet of sea
38 level rise now, and be ready to adjust that projection upward";
39 and
40

41 WHEREAS, the Sea Level Rise Report also cites emerging
42 science, including a Climate Science Special Report (CSSR)



1 issued in 2017 by the U.S. Global Change Research Program and a
2 report by the National Oceanic and Atmospheric Administration,
3 indicating that the global mean sea level is very likely to rise
4 by up to 4.3 feet by 2100 if greenhouse gas emissions continue
5 to increase and suggesting that, for high emission scenarios, a
6 global mean sea level rise in the range of 6.4 feet to 8.8 feet
7 is "physically plausible" by 2100, based on observations and
8 models of potential rapid ice melt in Greenland and Antarctica;
9 and

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

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

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

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

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

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

40
41 WHEREAS, vulnerability, as used in the Sea Level Rise
42 Report, refers to the "degree to which a system is susceptible



1 to, and unable to cope with, adverse effects of climate change,
2 including climate variability and extremes"; and

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

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

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

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

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

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

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

40
41 WHEREAS, this iconic tourist attraction has the highest
42 concentration and largest total value of projected economic loss



1 (estimated at over \$5,000,000,000) of any area on Oahu or
2 elsewhere in the State, including twelve major hotels as well as
3 many condominiums and expensive retail shopping establishments;
4 and

5

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

8

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

17

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

21

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

25

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

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



- 1 if deemed technically feasible, to preserve Waikiki in
- 2 its current state;
- 3
- 4 (2) Consider and offer recommendations on potential
- 5 methods of funding of such adaptive measures for
- 6 Waikiki from public and private stakeholders; and
- 7
- 8 (3) To the extent that the Task Force concludes that a
- 9 more detailed and in-depth engineering study
- 10 concerning possible adaptation measures for Waikiki
- 11 and a more in-depth financial analysis of funding
- 12 options is needed for sound decision making on this
- 13 monumental subject, the task force is requested to
- 14 outline with as much specificity as reasonable the
- 15 topics or issues to be addressed in such follow-up
- 16 study or studies and an estimate of the costs thereof;
- 17 and
- 18

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

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



- 1 (7) The Chamber of Commerce Hawaii;
- 2
- 3 (8) The Waikiki Beach Special Improvement District
- 4 Association;
- 5
- 6 (9) The Waikiki Improvement Association; and
- 7
- 8 (10) The Waikiki Neighborhood Board; and
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10 BE IT FURTHER RESOLVED that the Chairperson of the Board of
11 Land and Natural Resources, or the Chairperson's designee, and
12 the Director of the Office of Planning, or the Director's
13 designee, are requested to consider inviting representatives
14 from the following entities to serve as additional non-voting
15 participants in the task force:

- 16
- 17 (1) A civil engineering firm;
- 18
- 19 (2) A bank or financing firm; and
- 20
- 21 (3) Two representatives at large from the Waikiki
- 22 community; and
- 23

24 BE IT FURTHER RESOLVED that the task force is requested to
25 submit a report with its findings and recommendations, including
26 any proposed legislation, to the Legislature no later than
27 twenty days prior to the convening of the Regular Session of
28 2021; and

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

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



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1 Commerce Hawaii; Chairperson of the Waikiki Beach Special
2 Improvement District Association; Chairperson of the Waikiki
3 Improvement Association; and Chairperson of the Waikiki
4 Neighborhood Board.

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OFFERED BY: _____

Karl Rhoads

John

