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**HAWAII CLIMATE CHANGE MITIGATION & ADAPTATION**  
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**FINAL STATEMENT ON DECISION MAKING & INVESTMENT GUIDANCE TO ADDRESS THE  
CLIMATE EMERGENCY IN HAWAII**

**Date: July 19, 2021**

This statement of the Hawai'i Climate Change Mitigation and Adaptation Commission (Commission) aims to provide: guidance to all Hawai'i state and county governments and their agencies; and recommendations on how to translate Hawai'i's robust climate policy framework to decision making and investments to address the current climate emergency.

Hawai'i is the first state to declare a climate emergency through [SCR 44](#).<sup>1</sup> The Hawai'i Climate Change Mitigation and Adaptation Commission's Climate Ready Hawai'i Initiative highlights ongoing efforts in mitigation, adaptation, sequestration, and resilience that are ambitious, climate-positive, and culturally responsive; and that situate Hawai'i to be ready to use imminently available federal pandemic recovery funds, as well as funds available in the longer term, to support the pivot to a clean, equitable, and resilient future. The [American Jobs Plan](#) (AJP) proposes investing in all forms of infrastructure to build back better following the economic impact of the COVID-19 pandemic, and to address the climate crisis.<sup>2</sup> This includes a \$50 billion investment in resilient infrastructure, including restoring and protecting nature-based infrastructure — lands, forests, wetlands and more. Along with strategies embodied in the AJP, the federal Surface Transportation Reauthorization Act (STRA) and the Energy Act of 2020<sup>3</sup> integrate well with the Commission's priorities as embodied in its Climate Ready Hawai'i Initiative. As these federal funds are being readied for disbursement, Hawai'i needs to be poised to receive and deploy them to the maximum advantage of our communities and people; reflecting the intent of the AJP to create good-paying union jobs, tackle the climate crisis, and grow the economy, sustainably and equitably for decades to come.

**Hawai'i needs to utilize incoming federal funding to build back better for a resilient and climate ready state.**

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<sup>1</sup> SCR 44 declared a "climate emergency" in the state and "requested statewide collaboration toward an immediate and just transition and emergency mobilization effort to restore a safe climate". It recognizes the need to address climate change in order to protect citizen's right to a clean and healthful environment, highlights the need for a just transition to a decarbonized economy and the facilitation of projects and infrastructure that will aid this transition.

<sup>2</sup> On March 31, 2021, President Biden [announced](#) *The American Jobs Plan*, a \$2.3 trillion plan to create good jobs and rebuild America's infrastructure. In addition, Environment and Public Works Committee [introduced](#) their Surface Transportation Reauthorization Act (STRA) of 2021 ([S.1931](#)) with unanimous, bipartisan support. The STRA includes a climate title with more than \$18 billion in funding and tackles Climate Change and Resilience. Along with the [American Rescue Plan Act](#), and other legislation pending in Congress

<sup>3</sup> The Energy Act of 2020 authorizes appropriations for numerous energy efficiency, renewable energy, and decarbonization investments.

**A Climate Ready Hawai'i is a clean, equitable, and resilient Hawai'i.** The Commission emphasizes that nature-based solutions, green infrastructure, and carbon-smart practices must be implemented now and prioritized in all planning and future actions as part of a climate ready Hawai'i. By doing so, it supports state sustainability and climate resiliency which provide a multitude of economic, environmental, and social co-benefits.

The Commission's member departments and offices are crucial in moving this work forward. Actions that embody climate readiness are discussed below. This list is not comprehensive, as the Commission recognizes the breadth and depth of work ongoing in the State, including the recently released *Hawai'i 2050 Sustainability Plan Decade for Action 2020-2030*. An updated list of actions is available online at the Commission's website: [climate.hawaii.gov](http://climate.hawaii.gov).

### **Climate Ready Priority A: The ambitious mitigation of greenhouse gases through elimination and reduction of emissions.**

Recognizing that this must be done through decarbonization of the energy sector by eliminating and reducing emissions from power and transportation — which includes energy efficiency, renewable energy, electrification of ground transportation, and renewable fuel switching for aviation and shipping — and land use reform, the Commission urges agencies such as HSEO, DOT, county planning departments and MPOs, OPSD, HTA, DAGS, DHRD, PUC, DCCA, DOH, DOE,<sup>4</sup> and other relevant government, business and community partners to work towards the goals and actions outlined in the [Climate Emergency Resolution and Act 131](#) (SLH 2021), beginning with pilots such as those outlined in [SCR 173](#).<sup>5 6 7</sup>

The Energy Act of 2020, in alignment with what the AJP proposes, authorizes funding for the following programs that align with the Commission's priorities:

1. New and renewed energy efficiency programs, including for schools, federal buildings, and industry.
2. Provisions to guide and accelerate modernization of the electric grid.
3. Investment in all types of renewable energy resources and improved federal permitting for renewable projects.
4. An expanded focus on energy storage, which is key to advancing generation from renewable resources, can increase grid resiliency and reduce the need for additional transmission.
5. Research and development on natural and technological carbon dioxide removal, including direct air capture to transportation fuel in support of and in alignment with the State's zero emissions clean economy target.
6. Domestic supply chains with an emphasis on locating, responsibly producing, increasing the efficient use of recycling, and developing alternatives for critical minerals.

Among other strategies, the STRA calls out the following, which align well with the Commission's priorities:

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<sup>4</sup> The Hawai'i State Energy Office (HSEO), Dept. of Transportation (DOT), Dept. of Business, Economic Development and Tourism's Office of Planning and Sustainable Development (OPSD), Hawai'i Tourism Authority (HTA), Dept. of Accounting and General Services (DAGS), Dept. of Human Resource Development (DHRD), Public Utilities Commission (PUC), Dept. of Commerce and Consumer Affairs (DCCA), Dept. of Health (DOH), Dept. of Education (DOE), Dept. of Hawaiian Homelands (DHHL), Office of Hawaiian Affairs (OHA), Metropolitan Planning Organizations (MPOs).

<sup>5</sup> Act 131 (SLH 2021) states that as the Department of Transportation begins modernizing transportation to meet state and national clean energy goals, the primary goals of DOT will be "equity for all communities" and "addressing climate change".

<sup>6</sup> SCR 173 requests the DOT to initiate three innovative pilot projects of meaningful scale to modernize transportation infrastructure in underserved communities.

<sup>7</sup> See note 2.

1. Reduces carbon emissions from transportation. The bill establishes a new Carbon Reduction Program that will distribute approximately \$6.4 billion over five years to states by formula to invest in projects that support a reduction in transportation emissions. In Hawai'i, this is embodied in several electrification of transportation programs, the conversion of state fleets by 2035 ([Act 74](#), SLH 2021), EV incentives, and other actions.
2. Provides formula funding to states and competitive grants to eligible entities to make our surface transportation infrastructure more resilient- including through the use of natural infrastructure- to the effects of extreme weather and natural disasters.
3. New program for electric vehicle charging. The bill authorizes \$2.5 billion over five years for a new competitive grant program to build out alternative fuel corridors along the National Highway System. In Hawai'i, this is addressed through [Act 75](#) (SLH 2021), new procurement methods being used by the State, and other actions.
4. Port truck emissions reduction program. The bill would provide \$250 million to reduce air emissions from trucks idling at port facilities.
5. A new Healthy Streets program. The bill creates a new Healthy Streets program, authorized at \$500 million to be appropriated over five years, for eligible projects, including projects that mitigate urban heat islands, improve air quality, and reduce stormwater runoff. Grants would be prioritized for low-income communities and communities of color.
6. Establishes Resilience and Adaptation Centers of Excellence. The bill authorizes \$500 million to be appropriated over five years for new Resilience and Adaptation Centers of Excellence, which will advance research to help make surface transportation infrastructure more resilient to natural disasters and extreme weather.
7. Increases Transportation Alternatives funding. The bill increases funding for the Transportation Alternatives Program (TAP), which funds bicycle and pedestrian projects among other projects.
8. Codifies the Safe Routes to School program. The bill codifies the existing Safe Routes to School Program, which encourages children to safely walk or bike to school.

## **Climate Ready Priority B: The preservation of our cultural, biological and public resources through adaptation.**

Recognizing that human life and health<sup>8</sup>, natural and built infrastructure, biological and cultural resources, and communities in Hawai'i are under existential threat from the impacts of climate change, the Commission urges all departments and planning organizations to help integrate adaptation and resilience into their programs and operations, and to plan for and implement climate change adaptation projects for critical infrastructure and natural environments per requirements of the State's Planning Act - Climate Change Adaptation Priority Guidelines ([HRS 226-109](#)) and [Act 178](#).<sup>9</sup> This includes actions such as:

- Relocation of sections of state coastal highway that are critically vulnerable to coastal flooding and erosion (e.g., [HR 149](#) urging Hawai'i DOT to move the coastal highway inland at Makaha Beach, O'ahu)

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<sup>8</sup> A recently released memorandum from DOH "discusses potential environmental concerns posed by anticipated increased flooding, groundwater inundation and disruption of contaminated lands in coastal areas due to climate change and rising sea levels. It is anticipated that additional guidance, policies and regulations will be necessary to adequately prepare for and address impending impacts to human health and the environment from climate change." DOH Memorandum, June 21, 2021.

<sup>9</sup> Act 178 (SLH 2021) relates to sea level rise adaptation. It identifies sea level rise (SLR) as a significant threat to the State and requires executive departments of the State to identify infrastructure that is vulnerable to SLR, flooding, and natural hazards; assess mitigation options; coordinate adaptation and resilience strategies; and submit annual reports regarding vulnerability and adaptation assessments.

- Developing nature-based alternatives for protecting state coastal highways while conserving and restoring shoreline environments (e.g., O’ahu MPO and DLNR grant for *Planning for Improved Resilience to Coastal Hazards through Green Infrastructure at Punalu’u, O’ahu, Hawai’i*).
- Ongoing efforts to address coastal erosion and beach loss in vital tourism areas of Waikiki and Ka’anapali, and through community-based restoration projects statewide (e.g., Small Scale Beach Restoration permitting program)

The Commission urges providing funding and capacity to support State agencies in planning and implementing actions that assess risk and vulnerabilities to natural and built infrastructure. Examples of such planning are detailed in DOT’s reports for airports, harbors and highways.<sup>10</sup>

### **Climate Ready Priority C: The accelerated sequestration of carbon, production of local foods and protection of public health and ecosystems.**

Recognizing that mauka and makai croplands (including lo’i kalo and loko i’ā), forests, and ranchlands paired with climate-smart practices can reduce greenhouse gas (GHG) emissions, increase carbon sequestration, and provide additional economic, social, cultural, and environmental benefits, the Commission urges partners in the Greenhouse Gas Sequestration Taskforce<sup>11</sup> and the Hawai’i Natural and Working Lands (NWL) hui<sup>12</sup> to develop and refine strategies, programs, and projects that focus on: (1) the sustainable increase of agricultural productivity and incomes, and (2) the reduction and removal of GHGs.

The NWL hui has assembled examples of climate smart “Ready-to-Go” actions requiring resources, funding, and expertise to enable local government, community organizations, and land managers to design and implement climate-smart agriculture and forestry projects. These actions are:

1. Produce a land use map based on land stewardship
  - Identify land status and availability.
  - Update Hawai’i’s soil carbon assessment map of abandoned and vulnerable lands.
2. Develop a climate resilience gap assessment. Anticipate the impact of climate variability in the role of natural working lands, and assess vulnerabilities and opportunities.
  - Determine the GHG emissions and soil carbon sequestration potential of NWL.
  - Improve NWL GHG inventories for use in goal setting and policy network.
3. Identify adaptation practices. Identify the most suitable interventions to preserve and increase natural and working land services. Create a new-generation watershed-scale design plan for effective conservation programs.

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<sup>10</sup> DOT reports “Hawai’i Airports System, Climate Change & Sea Level Rise: Preliminary Assessment for Mitigation and Adaptation” (2021, Unpublished) and “Hawai’i Highways, Climate Adaptation Action Plan” (2021, Unpublished) assess the vulnerabilities and hazards of the State’s transportation system that will be exacerbated by climate change.

<sup>11</sup> The State’s Greenhouse Gas Sequestration Taskforce was signed into law in 2018 under Act 15. The Taskforce aims to accomplish multiple objectives that will aid the state in reaching the Hawai’i Sustainability Initiatives and achieving Hawai’i’s commitment to sustainability goals by 2030 for clean energy, local food, natural resource management, solid waste, smart sustainable communities, and green education and work force.

<sup>12</sup> The US Climate Alliance’s Hawai’i Natural and Working Lands hui works to utilize healthy landscapes to sequester carbon and provide cost-effective opportunities to reduce greenhouse gas emissions. The members work on various research projects that aim to improve the State’s understanding of current uses of Natural and Working Lands and the potential of these lands to help the State reach its sustainability goals, consistent with the goals of the Paris Agreement.

4. Build relationships with land managers. Build relationships with land managers and communities to ensure widespread involvement, climate-smart practices implementation, and secure their role in the local economy.
5. Build a policy and incentives program. Craft equitable policy and incentives programs that enable diverse groups to enact natural and working land changes considering climate change projections, as embodied in [SB493](#) (2021 session), that reduce GHG emissions, increase carbon sequestration, and contribute towards the protection of natural resources while meeting local food production, biodiversity, and watershed protection goals and supporting social and cultural values.

The Commission urges agencies such as DLNR, DOA, DOE, DOH, planning offices, DOT, DHHL, OHA, and other relevant government, business and community partners to assist in developing, consolidating, and implementing practices summarized by the GHG Sequestration Taskforce and the NWL hui.

### **Climate Ready Priority D: The adoption of nature-based solutions and building of resilience to climate change.**

Recognizing that managing lands for soil health can protect waterways and nearshore reef ecosystems and increase resilience in the face of other stressors such as increased ocean temperatures and acidification, and recognizing that Hawai'i's oceans and reefs are local and international treasures that drive Hawai'i's economy and provide coastal protection, the Commission recommends climate-smart land management practices that focus on building soil health to provide ecological and economic resilience for agricultural communities throughout the islands and increase food system resilience, a key social determinant of public health.<sup>13</sup> The Commission urges actions by agencies such as DLNR, DOA, DOE, DOH, DHHL, OHA, planning offices and MPOs, and DOT to assist in building resilience on natural and working lands, and food system resilience.

The following ongoing efforts undertaken by DLNR's Division of Aquatic Resources (DAR) exemplify such resilience efforts:

1. Holomua: Marine 30x30: is a statewide effort to effectively manage the nearshore resources, with 30% established as marine management areas by 2030.
2. Watershed partnerships: such as the South Kohala Coastal Watershed Partnership, the West Maui Ridge to Reef Initiative, and with groups at Honouliuli and the He'eia National Estuarine Research Reserve help reduce impacts of soil erosion and other land-based impacts.
3. Coral resilience through herbivore management: In response to more frequent bleaching events, one management strategy used to reduce the stresses on recovering corals for better resilience has been to reduce competition from algae on corals through improved herbivore management.
4. Coral restoration plan: In collaboration with partners such as The Nature Conservancy and the National Oceanic and Atmospheric Administration, a plan to set priorities for coral restoration, out planting standards, and suitability analysis for planned locations is being developed.
5. State of Hawai'i Ocean Acidification Action Plan: Hawai'i has one of the leading datasets worldwide for measurements of carbon dioxide absorbed by the ocean and is developing models to look at measures, such as saturation state, for ocean acidification. This plan, previously approved by the Commission, will indicate how partners will collaborate on mutual goals.

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<sup>13</sup> Healthy reef systems provide coastal flood protection valued at \$835 million annually. *Nature-Based Resilience And Adaptation To Climate Change In Hawai'i: A Climate Ready Hawai'i Working Paper*. Hawai'i Climate Commission, 2021, <https://climate.hawaii.gov/wp-content/uploads/2021/04/CRHI-Working-Paper-V5.pdf>.

**In conclusion**, the Commission encourages further coordination and collaboration on addressing climate change through green, nature-based, resilient infrastructure projects for a climate ready Hawai'i. Federal dollars should be spent on climate-smart projects based on resilient outcomes that provide multiple co-benefits to our economy, ecosystems and communities. In support of these actions, the Commission aims to keep an updated non-exhaustive list of past and planned green, nature-based, resilient and climate-smart infrastructure projects on its website and continue its work to bring departments and agencies together to coordinate swift and resilient action to address the climate crisis.

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Statement Pau