

Planning for Hawai'i's Climate Adaptation

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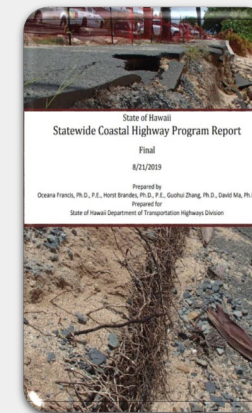
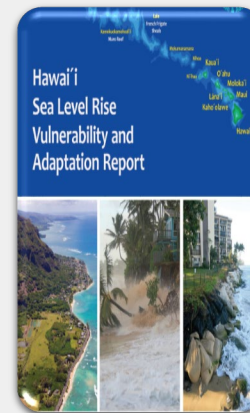
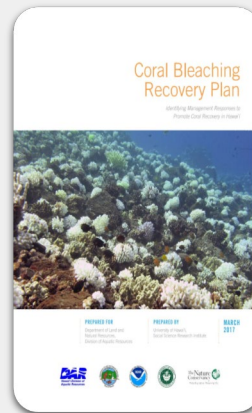


Hawai'i's Climate Change Impacts



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Climate Change Adaptation Planning by the State of Hawai'i



Hawai'i Coral Bleaching Recovery Report

2017

*Published by
Hawai'i
Department of
Land and
Natural
Resources -
Division of
Aquatic
Resources*

Hawai'i Sea Level Rise Vulnerability and Adaptation Report

2017

*Published by
Hawai'i
Climate
Change
Mitigation and
Adaptation
Commission*

State of Hawai'i Multi-Hazard Mitigation Plan

2018

*Published by
Hawai'i
Emergency
Management
Agency*

Feasibility of Managed Retreat Strategies for Vulnerable Coastal Areas in Hawai'i

2019

*Published by
Office of
Planning -
Coastal Zone
Management
Program*

Statewide Coastal Highway Program Report

2019

*Published by
Hawai'i
Department of
Transportation*



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Act 45, Session Laws of Hawai'i 2020

Requires the State of Hawai'i's Office of Planning to:

1. Provide Sea Level Rise Adaptation Coordination
via the Coastal Zone Management Program
2. Provide Statewide Climate Adaptation and Sustainability Planning and Coordination
3. Provide planning, policy guidance, and assistance to state and county agencies regarding climate change and sustainability
4. Officially establishes the Statewide Sustainability Program

Roles and Responsibilities to the State Office of Planning

Updated!



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Introducing...

Act 45, Session Laws of Hawai'i 2020

Establishes the Statewide Sustainability Program to:

1. **Develop, organize, and promote policies and programs** that assist in the meeting of Hawai'i's numerous sustainability and climate policies and goals, and the State's Sustainability priority guidelines and principles
2. **Identify, evaluate, and make recommendations regarding proposed legislation, regulatory changes, or policy modifications to the governor, the legislature, government agencies, private entities,** and other bodies for the purpose of encouraging activities that best sustain, protect, and enhance the quality of the environment, economy, and community for the present and future benefit of the people of Hawai'i; and
3. **Develop and promote proposals that jointly and mutually enhance** local economies, the environment, and community well-being for the present and future benefit of the people of Hawai'i.



STATEWIDE
SUSTAINABILITY PROGRAM



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Decennial Update and Revision to the Hawai'i 2050 Sustainability Plan

Act 146, Session Laws of Hawai'i 2019

1. Revised scope of the Hawai'i 2050 Sustainability Plan to: *“serve as the state’s sustainability and climate strategic action plan”* (Hawai'i Revised Statutes §226-65)
2. Requires the Office of Planning to update the Hawai'i 2050 Sustainability Plan every 10 years

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- ✓ Launched update for the 2020-2030 planning period and U.N. Decade of Action
 - ✓ Hosting Statewide Information Sharing Sessions & online survey throughout month of October
 - Visit planning.hawaii.gov/sustainability/hawaii2050 to participate!



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Sustainability Defined

Hawai‘i Revised Statutes § 226-2, Definition:

“Sustainability” means achieving the following:

- 1) Respect of culture, character, beauty, and history of the State’s island communities;
- 2) Striking balance between economic, social, community, and environmental priorities; and
- 3) Meeting the needs of the present without compromising the ability of future generations to meet their own needs.



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Hawai'i's Sustainability Priority Guidelines

Codified within the Hawai'i State Planning Act (Hawai'i Revised Statutes § 226-108, enacted in 2011)

[§226-108] **Sustainability.** Priority guidelines and principles to promote sustainability shall include:

- (1) Encouraging balanced economic, social, community, and environmental priorities;
 - (2) Encouraging planning that respects and promotes living within the natural resources and limits of the State;
 - (3) Promoting a diversified and dynamic economy;
 - (4) Encouraging respect for the host culture;
 - (5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations;
 - (6) Considering the principles of the ahupuaa system; and
 - (7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawaii.
- [L 2011, c 181, §2]



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Hawai'i's Climate Change Adaptation Priority Guidelines

Codified within the Hawai'i State Planning Act (Hawai'i Revised Statutes § 226-109; enacted in 2012)

[§226-109] Climate change adaptation priority guidelines. Priority guidelines to prepare the State to address the impacts of climate change, including impacts to the areas of agriculture; conservation lands; coastal and nearshore marine areas; natural and cultural resources; education; energy; higher education; health; historic preservation; water resources; the built environment, such as housing, recreation, transportation; and the economy shall:

- (1) Ensure that Hawai'i's people are educated, informed, and aware of the impacts climate change may have on their communities;
- (2) Encourage community stewardship groups and local stakeholders to participate in planning and implementation of climate change policies;
- (3) Invest in continued monitoring and research of Hawai'i's climate and the impacts of climate change on the State;
- (4) Consider native Hawaiian traditional knowledge and practices in planning for the impacts of climate change;
- (5) Encourage the preservation and restoration of natural landscape features, such as coral reefs, beaches and dunes, forests, streams, floodplains, and wetlands, that have the inherent capacity to avoid, minimize, or mitigate the impacts of climate change;
- (6) Explore adaptation strategies that moderate harm or exploit beneficial opportunities in response to actual or expected climate change impacts to the natural and built environments;
- (7) Promote sector resilience in areas such as water, roads, airports, and public health, by encouraging the identification of climate change threats, assessment of potential consequences, and evaluation of adaptation options;
- (8) Foster cross-jurisdictional collaboration between county, state, and federal agencies and partnerships between government and private entities and other nongovernmental entities, including nonprofit entities;
- (9) Use management and implementation approaches that encourage the continual collection, evaluation, and integration of new information and strategies into new and existing practices, policies, and plans; and
- (10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy. [L 2012, c 286, §2]



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Hawai'i Climate Change Mitigation and Adaptation Initiative

- Aligns the State of Hawai'i's commitment to combat climate change by with the principles and goals set forth by the United Nations' Paris Agreement and Hawai'i's share of the obligations within the expectations apportioned to the U.S. in the Paris Agreement.
- Established an advisory Climate Commission administratively attached to the Dept. of Land and Natural Resources, headed jointly by the Chair of the DLNR and the Director of the Office of Planning, or their designees.

(Hawai'i Revised Statutes § 225P-3; enacted in 2017)



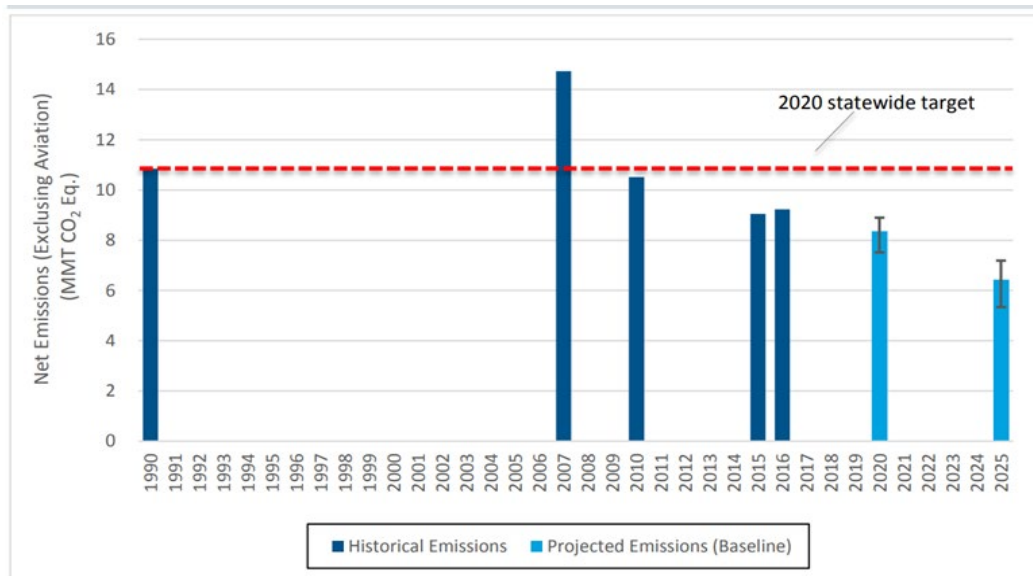
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2020 Statutory Target: Greenhouse Gas Emissions Limit

Greenhouse Gas (GHG) Emissions Limit

(Hawai'i Revised Statutes C. 342B-Part VI; enacted in 2007)

- Established a GHG emissions limit to be equal to/below statewide GHG emissions in 1990 by 2020.
- Hawai'i Greenhouse Gas Emissions Report for 2016 (GHG Inventory), released December 2019
 - Excludes Aviation Fuel Emissions
 - Excludes International Bunker Fuel Emissions
 - Includes Carbon Sinks



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2030 Statutory Target:

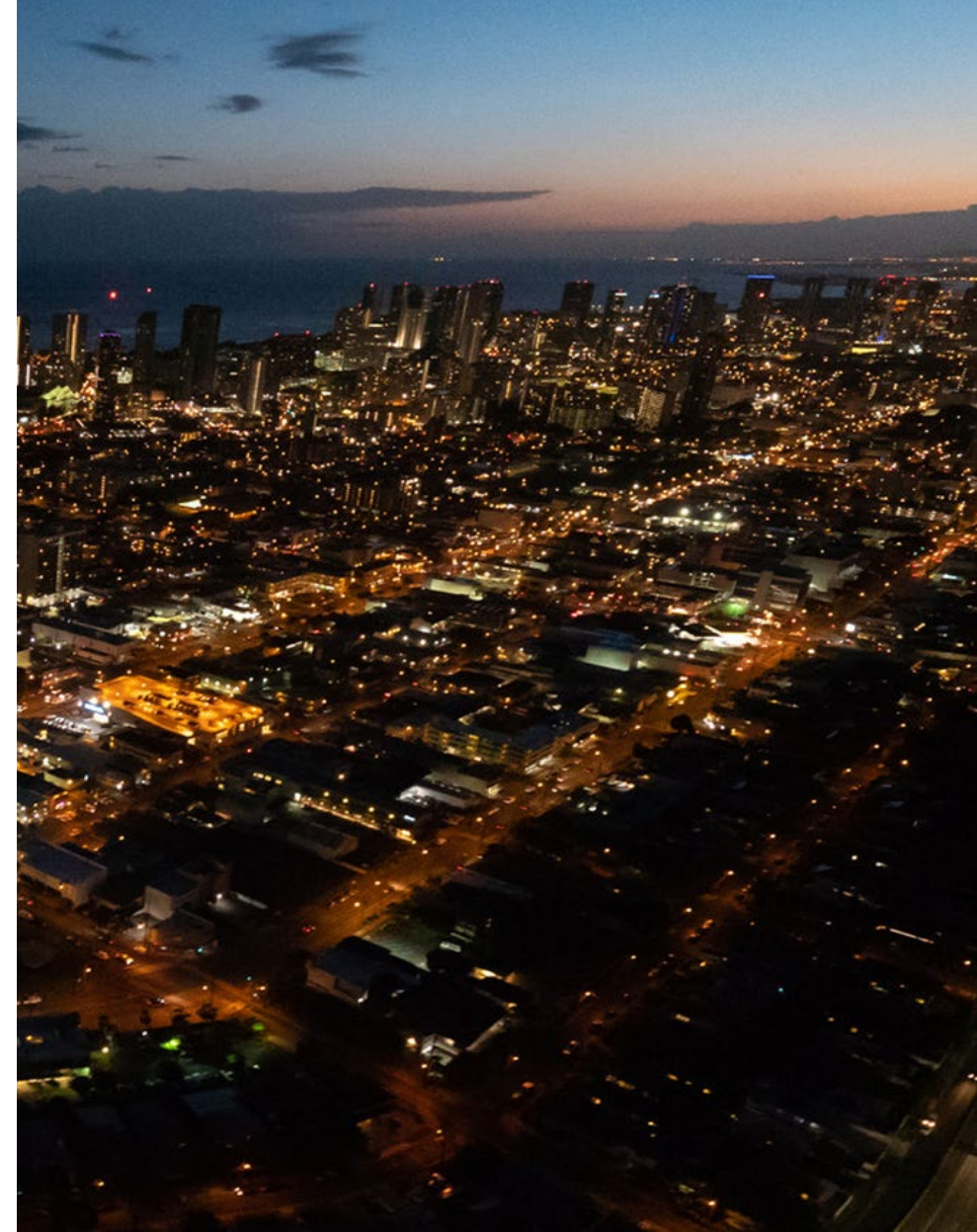
Energy Efficiency

Hawai'i's Energy Efficient Portfolio Standard

(Hawai'i Revised Statutes §269-96; enacted in 2009)

- Requires the Public Utilities Commission to establish energy-efficient portfolio standards, and mandates 30% (4,300 GW) energy reduction goal by **2030**.

- Mandates energy reduction goals of:
 - 1,375 GW of energy efficiency savings by 2015
 - 2,350 GW of energy efficiency savings by 2020
 - 3,325 GW of energy efficiency savings by 2025, and
 - 4,300 GW of energy efficiency savings by 2030



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2030 Sustainability Goals: Aloha+ Challenge

He Nohona 'Ae'ōia, A Culture of Sustainability



2014: Senate Concurrent Resolution 69:

Hawai'i State Legislature endorses and supports an integrated approach and six ambitious targets of the Aloha+ Challenge to be achieved by **2030**:

- 1) **Clean Energy:** 70% clean energy, including 40% from renewables and 30% from efficiency;
- 2) **Local Food:** At least double the local food production with a goal of 20-30% of food consumed being grown locally;
- 3) **Natural Resource Management:** Reverse the trend of natural resource loss mauka to makai by increasing watershed protection, community-based marine management, invasive species prevention and control, and restoration of native species;
- 4) **Waste Reduction:** Reduce the solid waste stream prior to disposal by 50%, through source reduction, recycling, and bioconversion;
- 5) **Smart Sustainable Communities:** Increase livability and resilience in the built environment through planning and implementation at the state and county levels; and
- 6) **Green Workforce:** Increase local green jobs and education to implement these targets.



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2020-2045 Sustainability Goals:

Sustainable Hawai'i Initiative

- 1) **Local Food:** Double local agricultural production by 2020
- 2) **Biosecurity:** Implement interagency biosecurity plan by 2027
- 3) **Watershed Protection:** Protect 30% of priority watersheds by 2030
- 4) **Marine Management:** Effectively manage 30% of nearshore ocean waters by 2030
- 5) **Renewable Energy:** Achieve 100% renewable electricity by 2045



2030 Legal Target: Double Local Food Production

Department of Agriculture Doubling Food Production and Increase Food Exports by 2030

(Act 151; enacted in 2019)

Requires the Department of Agriculture, in cooperation with the Office of the Governor, to establish a strategic plan to achieve the goal to double food production and increasing food exports **by 2030.**



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2035 Statutory Targets: Net Zero Campuses

University of Hawai'i Net Zero Energy Goal

(Hawai'i Revised Statutes §304A-119; enacted in 2015)

- Requires all campuses of the University of Hawai'i including Hawai'i's community college system to be net zero in energy use by 2035.

Department of Education Net Zero Energy Campuses

(Hawai'i Revised Statutes §302A-1510; enacted in 2016)

- Requires all public schools in the State of Hawai'i to be net zero in energy use by 2035.



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2045 Statutory Targets:

Beginning in 2015, Hawaii's State Legislature began codifying "100%" goals to direct the following sustainability & climate resilience targets:

1. 100% Renewable Portfolio Standard by 2045

(Hawai'i Revised Statutes §269-92; enacted in 2015)

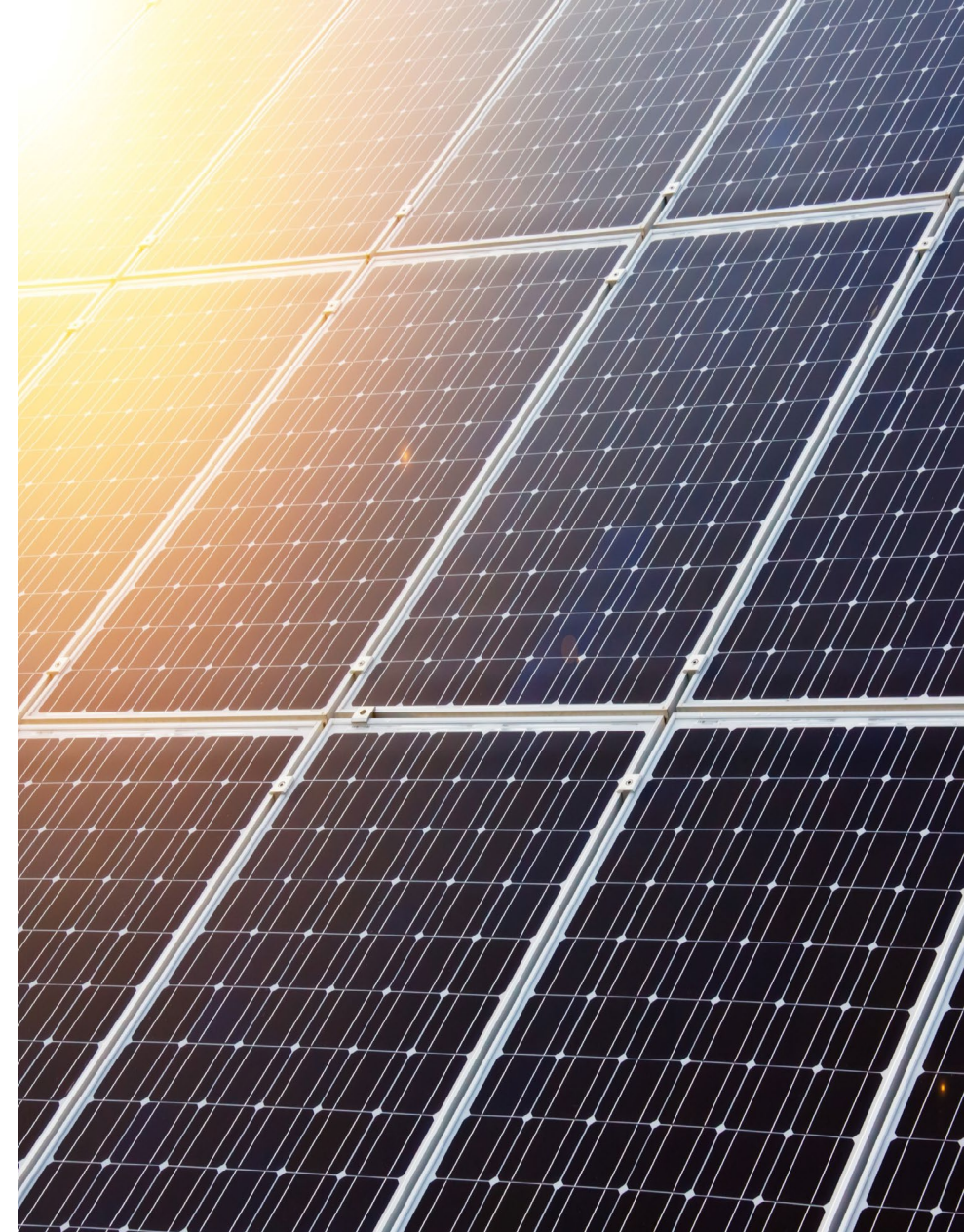
Requires all electric utilities in Hawai'i to establish an RPS of:

- 10% by 12/31/2010,
- 15% by 12/31/2015,
- 30% by 12/31/2020,
- 40% by 12/31/2030,
- 70% by 12/31/2040, and
- 100% by 12/31/2045.

2. Zero Emissions Clean Economy Target by 2045

(Hawai'i Revised Statutes §225P-5; enacted in 2018)

Establishes a statewide target to sequester more atmospheric carbon and greenhouse gases than emitted within the State as quickly as practicable, but no later than 2045.



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2045 Statutory Targets (Continued)

3. 100% Reclaimed Water in State & County Facilities by 2045

(Hawai'i Revised Statutes §174C-31; enacted in 2016)

Requires the Hawai'i Water Plan to direct the utilization of reclaimed water for uses other than drinking and for potable water needs in 100% of state and county facilities by 12/31/2045.



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Sustainable Development in State Facilities

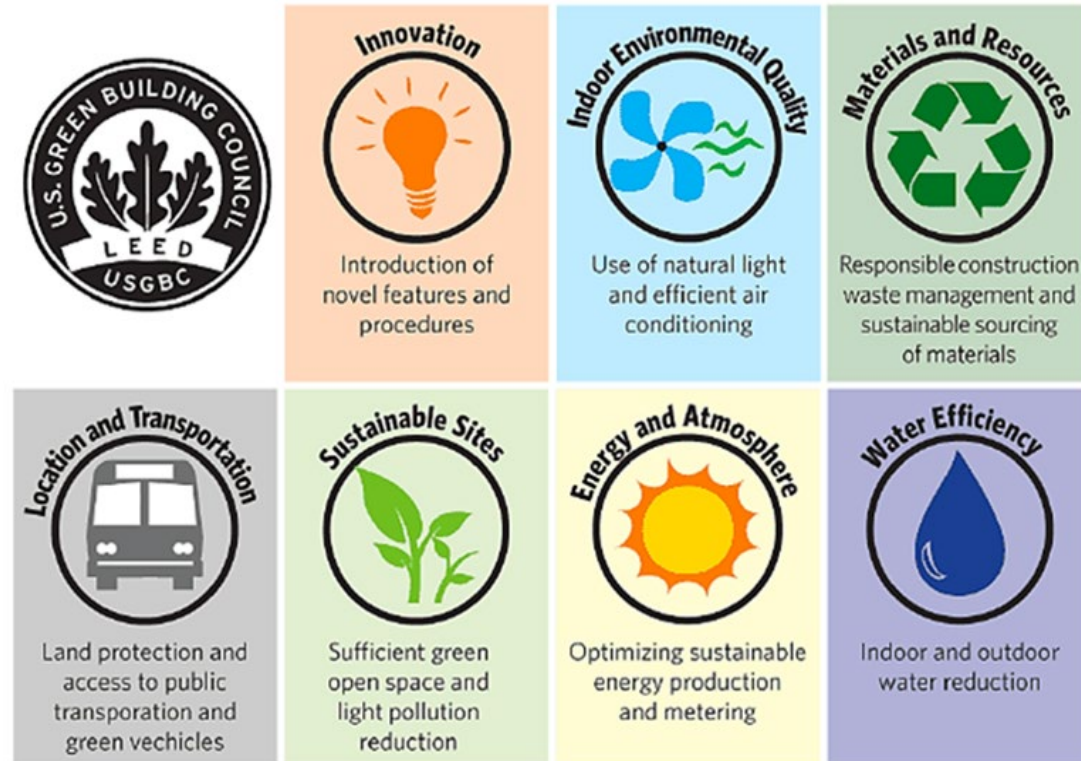
Energy Efficiencies and Environmental Standards for State Facilities and Motor Vehicles

(Hawai'i Revised Statutes §196-9; enacted in 2006)

- Requires New State Buildings to be at least LEED Silver
- Requires New Public Residences to be:
energy efficient,
prevent heat gain,
natural ventilation, and
solar water heating systems
- Requires Public Procurement: to include lifecycle costs benefit analysis to purchase ENERGY STAR Equipment
- Purchase fuel-efficient government vehicles

LEED CERTIFICATION REQUIREMENTS

In order to achieve LEED certification, projects must earn points in these categories:



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2050 Statutory Target: Cesspool Mandatory Upgrade

Statewide Mandatory Cesspool Upgrade

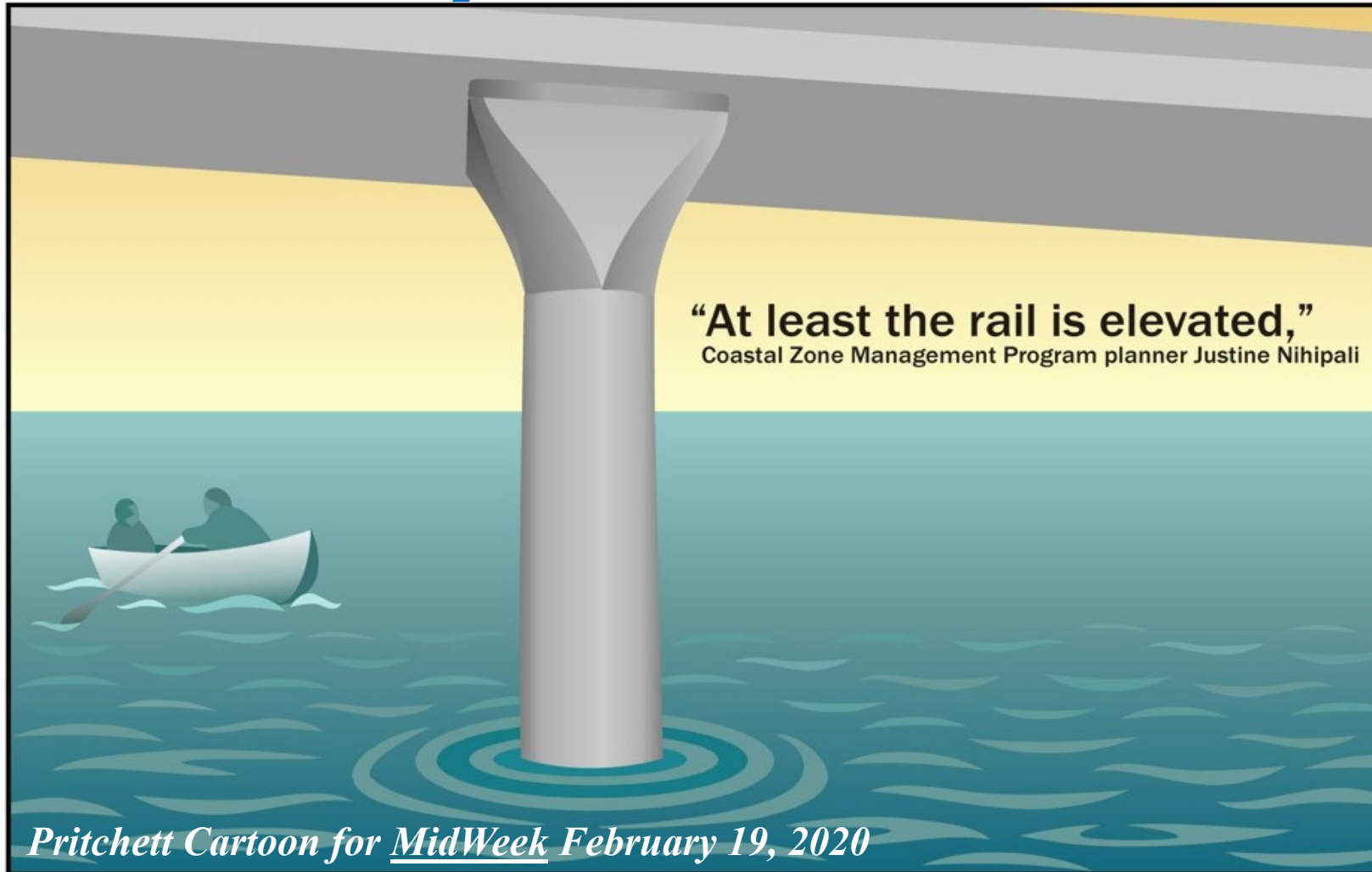
(Hawai'i Revised Statutes §342D-74; enacted in 2019)

- Requires the upgrade, conversion, or sewer connection of all cesspools in the State before 2050 unless exempted.



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Climate Adaptation Planning is Necessary for Hawai'i's Future



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Mahalo!

Questions? Contact us!



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