



STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE DIRECTOR OF EMERGENCY MANAGEMENT
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STATE OF HAWAII
DEPARTMENT OF DEFENSE
HAWAII EMERGENCY MANAGEMENT AGENCY

TESTIMONY ON SENATE BILL 2828,
RELATING TO WATER

Before the Senate Committees on
WAYS AND MEANS
JUDICIARY

By

Thomas L. Travis
Administrator, Hawaii Emergency Management Agency (HI-EMA)

Aloha Chairs Dela Cruz and Rhoads, Vice-Chairs Keith-Agaran and Keohokalole, and Members of the Committee:

Senate Bill 2828 specifies that fire safety use is a beneficial use of water. Requires the Department of Land and Natural Resources to work with the county governments, Hawaii Emergency Management Agency, and owners to use reservoir water for fire safety.

Hawaii Emergency Management Agency (HI-EMA) would like to offer **comments**.

HI-EMA feels that the Department of Land and Natural Resources would be better equipped to coordinate the requirements outlined in this measure. Without research and staffing, HI-EMA cannot address the requirements for additional water resources for fire fighting or the technical requirements for using such water for fire fighting.

Thank you for the opportunity to testify on Senate Bill 2828.

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DAVID Y. IGE
GOVERNOR OF
HAWAII



**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES**

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**Testimony of
SUZANNE D. CASE
Chairperson**

**Before the Senate Committee on
JUDICIARY**

**Thursday, February 27, 2020
10:30 A.M.
State Capitol, Conference Room 016**

**In consideration of
SENATE BILL 2828
RELATING TO WATER**

Senate Bill 2828 proposes to specify that fire safety use is a beneficial use of water and require the Department of Land and Natural Resources (Department) to work with the county governments, Hawaii emergency management agency and owners to use reservoir water for fire safety. **The Department acknowledges the intent of this measure and provides the following comments.**

This measure proposes to amend the declaration of policy in the State Water Code, Section 174C-2, Hawaii Revised Statutes (HRS), to include the benefit to public health, safety, and welfare by maintaining available fresh water for fire safety purposes. The Department concurs that fire safety is a legitimate beneficial use of water.

This measure also proposes to amend the Dam and Reservoir Safety Act, Section 179D-6, HRS, to include a requirement to work with county governments, Hawaii emergency management agencies, and dam and reservoir owners to use reservoir water for fire safety. The purpose of Chapter 179D, HRS, is to provide for the inspection and regulation of construction of all dams or reservoirs to protect the health, safety, and welfare of the citizens of the State by reducing the risk of failure of the dams or reservoirs.

The Department advises that Chapter 179D, HRS, is not the appropriate statute to amend to meet the intent of this bill. The reason being is that the Dam Safety law only applies to dams that meet a certain height and volume criteria. Therefore, many of the over 180 known unregulated dams and reservoirs throughout the state that potentially could provide fresh water for fire safety purposes would be excluded from this requirement. Furthermore, the Department believes a

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
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DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

requirement to have dam owners maintain their reservoir water for fire safety may be contrary to the purpose of the Dam Safety law, which is to reduce the risk of a dam failure to protect life and property.

In lieu of amending the Dam Safety law, the Department recommends amending Chapter 185, HRS, Land Fire Protection Law. This statute already establishes coordination between the counties, state and federal government for the prevention, control, and extinguishment of fires. Moreover, this statute already authorizes the Department to summon additional firefighting assistance, equipment, supplies or materials to assist in fighting a fire. The Department suggest amending Chapter 185, HRS, to include a provision that the Department shall work with the County Governments, Hawaii emergency management agency, and owners to use reservoir water for fire safety.

The Department suggest the following amendment to Chapter 185, HRS:

§185-1.5 Responsible agency. The department shall take measures for the prevention, control, and extinguishment of wildland fires within forest reserves, public hunting areas, wildlife and plant sanctuaries, and natural area reserves and shall cooperate with established fire control agencies of the counties and the federal government in developing plans and programs and mutual aid agreements for assistance for the prevention, control, and extinguishment of fires on forest, grass, brush, and watershed lands not within the department's fire protection responsibilities described above. The department shall work with the county governments, Hawaii emergency management agency, and owners to use reservoir water for fire safety.

Thank you for the opportunity to comment on this measure.



SB2828
RELATING TO WATER
Ke Kōmike ‘Aha Kenekoa o ka Ho‘okolokolo

Pepeluali 27, 2020

10:30 a.m.

Lumi 016

The Office of Hawaiian Affairs (OHA) **OPPOSES** SB2828, which would amend the state water code to prioritize “fire safety” as a beneficial use of state public trust water resources, for the stated purpose of refilling and maintaining currently unfilled reservoirs. **OHA is concerned that this measure would encourage and promote corporate and private water banking, in contravention to the public trust doctrine, in a manner that may compromise the integrity and function of our watersheds, with questionable benefits to the overall safety of the public.**

As an initial matter, OHA recognizes and appreciates concerns regarding the need for fire fighting resources, and has itself committed funds to assist affected beneficiaries in their recovery from the recent and tragic fires in West Maui. However, a statutory amendment as proposed is not necessary for the state to recognize and allocate water for fire safety uses as a reasonable beneficial use in appropriate circumstances. Additionally, there is no indication that a codified state policy that prioritizes the refilling and maintenance of currently defunct reservoirs will provide any significant benefit to the fire suppression and response needs of the state or its counties. **On the other hand, the proposed statutory amendment may promote the continued or renewed diversion of streams to fill continuously leaking and potentially dangerous reservoirs,ⁱ while impairing the aquifer recharge and climate resiliency functions of our native watersheds, including through the proliferation of invasive species that increase the risk of fires and other climate change-associated threats.**

OHA notes that private “water banking,” or the reservation and sequestration of water for private purposes, is inapposite to the public trust doctrine, the state constitution, and the state water code, which require the state to ensure the actual use and development of our limited water resources for the public benefit.ⁱⁱ **Allowing private entities to “bank” or reserve water for hypothetical future uses precludes such water from serving public trust purposes and reasonable beneficial uses prioritized under the water code and public trust doctrine, and may lead to the significant and substantial waste of our islands’ most precious and important resource.** By characterizing the refilling and maintenance of large and notoriously leaky reservoirs,ⁱⁱⁱ including privately held reservoirs, as a “beneficial” use of water, this measure may unintentionally promote and justify private water banking, helping private landowners and developers gain the significant financial benefit of a private water source, to the detriment of the native

watersheds, ecosystems, cultural practices, domestic and agricultural uses, and other public purposes and uses that would otherwise rely on water banked in such a manner.

Notably, the diversion of surface waters to maintain large reservoirs of questionable integrity may compromise the climate resiliency, water security, and overall public safety of our islands. Native forested watersheds serve critical functions including aquifer recharge, and may play a key role in our islands' climate resiliency, including in climate change-related disaster mitigation.^{iv} Diversions can significantly impair native watersheds and ecosystems,^v and may lead to the proliferation of invasive species that severely reduce aquifer recharge and water availability rates,^{vi} and that can significantly increase the risk of wildfires.^{vii} The dams and reservoirs that would be considered "beneficial" for fire safety purposes under this measure may in themselves also pose a significant risk to public safety, with **"virtually every one of Hawai'i's 130 state-regulated dams [] considered high hazard . . . Of those, 59 are considered to be in poor or unsatisfactory condition."**^{viii} Accordingly, any purported fire safety benefits of this measure, which may facilitate the continued or increased diversion of streams and surface waters to maintain reservoirs, may be significantly outweighed by associated water security, climate resiliency, and public safety concerns.

Finally, OHA notes that in many instances, there may be alternative sources of water that are already available and/or much better suited for fire suppression and fighting activities, including, for example, the 3 to 5 million gallons of water per day produced by the Lahaina Wastewater Reclamation Facility, currently disposed of via groundwater injection wells.^{ix} A public trust analysis under the existing state water code would enable the state to consider an analysis of such alternatives, prior to determining whether and to what extent the refilling and maintenance of potentially dangerous reservoirs for "fire safety" may be considered a "beneficial" use. The proposed statutory amendment would limit such an analysis, while unintentionally encouraging and legitimizing water banking to the detriment of the public trust.

Accordingly, OHA respectfully urges the Committee to **HOLD** this measure. Mahalo nui loa for the opportunity to testify.

ⁱ Even currently working reservoirs have extremely high water loss rates from both seepage and evapotranspiration, as admitted to even by those who own them; water loss may even be higher for defunct and non-working reservoirs. See, e.g., Staff Submittal, Agenda Item C-1, Commission on Water Resource Management, May 25, 2010 ("Of these 36 reservoirs, 31 are unlined. HC&S was unable to provide current studies documenting system loss from the reservoirs. However, they did provide data from seepage runs conducted in the 1960s which estimated loss at **23 to 31 [million gallons per day]**" (emphasis added)); Colleen Uechi, *Hui files complaint over water levels from Waihee River*, Maui News, Sept. 25, 2019, <https://www.mauinews.com/news/local-news/2019/09/hui-files-complaint-over-water-levels-from-waihee-river/> ("...Waiale Reservoir can lose 6 to 8 [million gallons per day], which HC&S was candid about.").

ⁱⁱ See *Kaua'i Springs, Inc. v. Planning Commission of Kaua'i*, 133 Hawai'i 141 (2014) (citing *In re Water Use Permit Applications*, 94 Hawai'i 97 (2000)).

ⁱⁱⁱ OHA is aware of arguments put forth by certain water banking proponents that leaking reservoirs may contribute to aquifer recharge and, by extension, future water availability. However, neither such arguments nor this measure indicates whether aquifers recharged by reservoirs are, in fact, necessarily used or usable

for agriculture or public consumption, or whether the benefits of such future water availability outweigh the immediate loss of benefits to native watersheds and the aquifers they already serve. See e.g.; *Pineapple's Lasting Legacy: The Poisoned Wells of Maui*, ENVIRONMENT HAWAII, June 1996.,

^{iv} See, e.g., State of Hawai'i Dashboard: Watershed Forest Area,

<https://dashboard.hawaii.gov/en/stat/goals/5xhf-begg/4s33-f5iv/wtjm-96jt> (last accessed Feb. 2, 2020)

("Native forests play a critical role to provide our statewide freshwater supply by acting like a 'sponge' and absorbing rainfall and cloud moisture. When a native forest is damaged, so is its ability to capture water."); DEPARTMENT OF LAND AND NATURAL RESOURCES, THE RAIN FOLLOWS THE FOREST: HAHAI NO KA UA I KA ULULĀ'AU 8 (2011) ("Protecting forests alleviates a wide range of threats from climate change predicted to cause hotter and drier conditions, and rising sea levels that infiltrate freshwater systems").

^v See HAWAII COMPREHENSIVE WILDLIFE CONSERVATION STRATEGY 4-2 (2005) ("...Alteration of hydrology, which includes watershed development, stream diversions, channelizations, and excessive water withdrawals that lower the aquifer, degrades or destroys habitat used by native fishes and invertebrates. Such activities indirectly affect terrestrial wildlife where these changes alter plant communities or the availability of drinking water.")

^{vi} See HAWAII STATE DASHBOARD, *supra*. ("For example, widespread strawberry guava demands 27% - 53% times more water than native forests, causing extensive water loss across landscapes. In East Hawaii [sic], invasive plants have reduced estimated groundwater recharge by 85 million gallons per day. . . . Native Hawaiian plants are not adapted to wildfire, and after they are burned they are typically replaced by weeds that are more prone to re-burn. This creates a cycle of wildfres."); Hawai'i Freshwater Initiative, A Blueprint for Action: Water Security for an Uncertain Future 13 ("...[W]ater loss via evapotranspiration may rise with the continued invasion of non-native plants."). DEPARTMENT OF LAND AND NATURAL RESOURCES, THE RAIN FOLLOWS THE FOREST: HAHAI NO KA UA I KA ULULĀ'AU 3 (2011).

^{vii} UNITED STATES DEPARTMENT OF DEFENSE, INVASIVE SPECIES CHALLENGES AND SOLUTIONS 7 (2017) ("Invasive plants . . . can make ecosystems more susceptible to wildfire. . . . For example, fountain grass is a fire-promoting invasive species that has made its way into formerly forested landscapes on the island of Hawai'i. . . This invasive grass species has increased the frequency and size of wildfires on the [Pōhakuloa] training area."); Clay Trauernicht, et. al., *The Contemporary Scale and Context of Wildfire in Hawai'i*, 69 PACIFIC SCIENCE 427, 427-28 (2015) ("These nonnative species regularly encroach into Hawai'i's native ecosystems . . . where they suppress native plant regeneration, increase ecosystem flammability and fire frequency, and accelerate rates of habitat loss.")

^{viii} Caleb Jones, *Hawaii Officials Struggle to Keep Dams Safe*, U.S. NEWS, Nov. 10, 2019.

^{ix} *US Supreme Court Grants Petition in West Maui Injection Well Case*, MAUI NEWS, February 20, 2019.

SB-2828

Submitted on: 2/24/2020 10:29:44 AM

Testimony for JDC on 2/27/2020 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
Mae Nakahata	Individual	Support	No

Comments:

Reservoirs on ag lands have long been used as a source of water for fire protection. Timely turnaround by helicopters to the fire site can make a huge difference to manage the spread of a wildfire. Filling these reservoirs is a good use of stormwaters and any seepage will add to groundwater resources that are critical during droughts.

SB-2828

Submitted on: 2/25/2020 11:51:31 AM

Testimony for JDC on 2/27/2020 10:30:00 AM

Submitted By	Organization	Testifier Position	Present at Hearing
james Kimo Falconer	Individual	Support	No

Comments:

Chair Rhodes and members of the Judiciary Committee,

Since the closure of Sugar on West Maui 20 years ago, valuable reservoir infrastructure has either been lost due to lack of Agriculture use or most recently the Commission on Water Resource Management rulings to send water formerly diverted for Ag use to the ocean reneading the remaining key reservoirs empty. These reservoirs, while unknown to the public due to their remote access on private or public lands, are very important to maintain for fire control. They are at high elevations and easily accessed for helicopter water drops on wildfires where ground crews are unable to reach.

Wild brush fires are common place in Lahaina year round, the dry windy months especially. Mutiple homes were destroyed by 70 mph winds during Hurricane Lane in 2017. We were lucky nobody was hurt physically. During this fire event there was still one working reservoir to help the control effort, today it is empty. Please support this measure as a means to maintain these assets for human safety. Thank you for the opprtunity to testify.

Mahalo

James Kimo Falconer



STATEMENT OF MAHI PONO, LLC
TO THE SENATE COMMITTEE ON JUDICIARY

Thursday, February 27, 2020
10:30 am
State Capitol, Conference Room 016

SB 2828
RELATING TO WATER

Chair Rhoads, Vice Chair Keohokalole and members of the Committee on Judiciary:

Mahi Pono respectfully submits testimony in support of Senate Bill 2828 to specify that fire safety use is a beneficial use of water.

Drought conditions have persisted on Maui and other parts of the State for many years and, together with other unavoidable factors, including human ignitions and fire-prone vegetation, wildfires have and will continue to be a significant threat to our communities. Protecting and preserving our natural resources is a shared responsibility that we must actively work towards, including exploring new or alternative ways to meet this objective.

Water from appropriately maintained and supplied reservoirs can serve multiple purposes for the public good. Mahi Pono supports the use of water in our reservoirs for not only agricultural purposes, but also other reasonable and beneficial uses, including using water to battle wildfires and to help protect our local flora and fauna. Prioritizing water use for fire safety will help to fight against further devastation and keep our communities safe from these destructive occurrences.

Thank you for this opportunity to provide testimony in support of SB2828.