

DAVID Y. IGE  
GOVERNOR OF  
HAWAII



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

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

**Testimony of  
SUZANNE D. CASE  
Chairperson**

**Before the Senate Committees on  
WATER AND LAND  
and  
PUBLIC SAFETY, INTERGOVERNMENTAL, AND MILITARY AFFAIRS**

**Wednesday, February 5, 2020  
1:30 P.M.  
State Capitol, Conference Room 229**

**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 believes 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. Over 80 per cent of the dams in Hawaii were constructed before 1940 to support the sugarcane plantations. Due to the age of these facilities, deferred maintenance, and demise of the sugar industry, many dams are in need of major improvements and pose risks to life and property should they fail. The Department believes a requirement to have reservoir owners maintain reservoir water for fire safety is contrary to the

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

**ROBERT K. MASUDA**  
FIRST DEPUTY

**M. KALEO MANUEL**  
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

purpose of the dam safety law. While we recognize the importance of having available sources of water for fire safety, we do not believe a requirement for dam owners to provide for this water should be inserted into Chapter 179D, HRS. Moreover, there are 131 dams regulated under Chapter 179D, HRS, which must meet certain statutorily defined size and capacity criteria. Inserting this proposed amendment into Chapter 179D, HRS, would not satisfy the intent of this bill, as it would not apply to the many smaller unregulated reservoirs.

Pursuant to Chapter 185, HRS, Land Fire Protection Law, the Department has the power to "...summon, when necessary, additional firefighting assistance, equipment, supplies, and materials needed to extinguish fires..." and "All agencies of the State or its political subdivisions shall assist in extinguishing any fire when duly summoned..." The Department suggests that a statutory amendment to allow the coordination with county governments, Hawaii emergency management agency, and reservoir owners to use reservoir water for fire safety is better suited in Chapter 185, HRS. As past practice of the Department, there are no formal agreements for obtaining water for firefighting. The Department may call the reservoir owner, if known, prior to the helicopter dipping to ask permission, or in some cases they will proceed if they feel the necessity. If there is no reservoir in the area that is accessible, the pilot will dip their buckets in the ocean.

Thank you for the opportunity to comment on this measure.



**STATE OF HAWAII**  
**DEPARTMENT OF DEFENSE**  
**OFFICE OF THE DIRECTOR OF EMERGENCY MANAGEMENT**  
3949 DIAMOND HEAD ROAD  
HONOLULU, HAWAII 96816-4495

STATE OF HAWAII  
DEPARTMENT OF DEFENSE  
HAWAII EMERGENCY MANAGEMENT AGENCY

**TESTIMONY ON SENATE BILL 2828,**  
**RELATING TO WATER**

Before the Senate Committees on  
**WATER AND LAND**  
**PUBLIC SAFETY, INTERGOVERNMENTAL, AND MILITARY AFFAIRS**

By

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

Aloha Chairs Kahele and Nishihara, Vice-Chairs Keith-Agaran and Wakai 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.

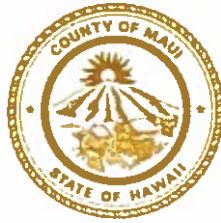
Thank you for the opportunity to testify on Senate Bill 2828.

Thomas L. Travis: Thomas.L.Travis@hawaii.gov; 808-733-4300

**MICHAEL P. VICTORINO**  
Mayor

**DAVID C. THYNE**  
Fire Chief

**BRADFORD K. VENTURA**  
Deputy Fire Chief



**DEPARTMENT OF FIRE & PUBLIC SAFETY**  
COUNTY OF MAUI  
200 DAIRY ROAD  
KAHULUI, HI 96732

January 29, 2020

The Honorable Kaiali'i Kahele, Chair  
Committee of Water and Land  
The State Senate  
State Capitol, Room 213  
Honolulu, HI 96813

Dear Chair Kahele:

Subject: Senate Bill (SB) 2828 Relating to Water

I am David C. Thyne, Fire Chief of the Maui Fire Department (MFD). The MFD supports SB 2828, which finds that water should be retained in reservoirs for the public's health, safety and welfare by having fresh water available for fire safety purposes.

Public safety and property protection are the primary goals for county fire departments. Our department has relied on water sources (i.e. reservoirs) in emergency situations. In 2019, West Maui was hit with a number of large wildfires. It is important that there be water in the former plantation reservoirs so that there is quicker access to fresh water to control fires. Helicopters can retrieve the fresh water in reservoirs quicker than going to the ocean. Also, using ocean water to put out fires results in damage to flora and fauna. Utilizing ocean water also requires the closure of major thoroughfares.

MFD urges your committee's support for the passage of SB 2828.

Sincerely,

A handwritten signature in blue ink, appearing to read "D. Thyne".

DAVID C. THYNE  
Fire Chief

**SB-2828**

Submitted on: 2/4/2020 11:59:38 AM

Testimony for WTL on 2/5/2020 1:30:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
Warren Watanabe	Testifying for Maui County Farm Bureau	Support	No

Comments:



**SB2828**  
RELATING TO WATER  
Senate Committee on Water and Land  
Senate Committee on Public Safety, Intergovernmental and Military Affairs

February 5, 2020

1:30 p.m.

Room 229

The Office of Hawaiian Affairs Beneficiary Advocacy and Empowerment Committee (OHA) will recommend that the OHA Board of Trustees **OPPOSE** 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,<sup>i</sup> 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.<sup>ii</sup> **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,<sup>iii</sup> 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.<sup>iv</sup> Diversions can significantly impair native watersheds and ecosystems,<sup>v</sup> and may lead to the proliferation of invasive species that severely reduce aquifer recharge and water availability rates,<sup>vi</sup> and that can significantly increase the risk of wildfires.<sup>vii</sup> 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."<sup>viii</sup> 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.<sup>ix</sup> 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 Committees to **HOLD** this measure. Mahalo nui loa for the opportunity to testify.

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<sup>i</sup> 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.").

<sup>ii</sup> 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)).

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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 wildfires."); 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 [Pōhāku] 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.





STATEMENT OF MAHI PONO, LLC  
TO THE SENATE COMMITTEES ON WATER AND LAND AND PUBLIC SAFETY,  
INTERGOVERNMENTAL, AND MILITARY AFFAIRS

Wednesday, February 5, 2020  
1:30 pm  
State Capitol, Conference Room 229

SB 2828  
RELATING TO WATER

Chair Kahele, Chair Nishihara, Vice Chair Keith-Agaran, Vice Chair Wakai, and members of the Committees on Water and Land and Public Safety, Intergovernmental, and Military Affairs:

Mahi Pono respectfully submits testimony in support of SB2828 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.



SENATOR KAIALI'I KAHELE, CHAIR  
SENATOR GILBERT KEITH-AGARAN, VICE CHAIR  
SENATE COMMITTEE ON WATER AND LAND

SENATOR CLARENCE NISHIHARA  
SENATOR GLENN WAKAI  
SENATE COMMITTEE ON PUBLIC SAFETY, INTERGOVERNMENTAL, AND MILITARY  
AFFAIRS

TESTIMONY IN OPPOSITION TO SENATE BILL 2828

February 5, 2020, 1:30 p.m.  
Room 229  
State Capitol  
415 South Beretania Street

Dear Chairs Kahele and Nishihara, Vice-Chairs Keith-Agaran and Wakai, and members of the Senate Committee on Water and Land and the Senate Committee on Public Safety, Intergovernmental, and Military Affairs:

Earthjustice **opposes SN 2828 to the extent that it proposes to amend the State Water Code**, HRS § 174C (“Code”), to insert the maintenance of reservoir water for fire safety purposes as a specific beneficial use under the Code’s “Declaration of Policy,” HRS § 174C-2. In short, while fire safety is certainly in the general public interest, amending the Code to justify the banking of water in former plantation reservoirs specifically or solely for such potential use is neither advisable nor necessary. Earthjustice notes that it does not oppose SB 2828’s other proposed amendment to the dam and reservoir statute, HRS § 179D-6, to direct the Board of Land and Natural Resources to work with relevant parties to use reservoirs for fire safety. Earthjustice does, however, **strongly oppose and advise against the piecemeal amendment to the Code**, as SB 2828 proposes.

Earthjustice has decades of experience in Hawai‘i water law, including the Code, and has been directly involved in the leading Hawai‘i Supreme Court cases interpreting and implementing the Code, including the seminal *Waiāhole* case, 94 Hawai‘i 97, 9 P.3d 409 (2000). As that case recognizes, the Code’s Declaration of Policy is the statutory expression of the public trust doctrine, which is more fundamentally a *constitutional* mandate. *See id.* at 145-46, 9 P.3d at 457-58. The Court found that the Code’s statutory public trust is “essentially identical” to the constitutional public trust. *See id.* This declaration of the public trust in the Code, which has remained the same since the Code was originally enacted more 30 years ago, is not the proper place for an ad hoc amendment to promote a specific use.

The proposed Code amendment is also questionable as a matter of prudent water policy. In its experience, Earthjustice is familiar with the widespread practice of successors to former plantations diverting flows from public rivers and streams in excess of actual needs and simply banking the diverted water in antiquated, unlined former plantation reservoirs, where the water is lost through seepage and evaporation, or is even dumped out of the reservoirs into drainage ditches and gulches. SB 2828's Code amendment would appear to endorse such water banking and waste, for the purported potential contingency of fire safety.

To be clear, Earthjustice does not oppose the use of reservoir water for fire control as an *ancillary* use and benefit of a reservoir that otherwise supplies actual needs for reasonable-beneficial offstream uses such as bona fide agriculture. Declaring the diversion and maintenance of fresh water reservoirs for potential fire control as a categorical beneficial use *in itself*, however, requires an additional leap that currently lacks concrete, substantive support. Such a blanket policy declaration necessitates more thoughtful and holistic analysis of the actual need for such reservoir supplies (depending on region-specific considerations), the overall benefits and costs (economic, social, and environmental) of continually maintaining them, as well as alternatives (e.g., using ocean water) and mitigation (e.g., requirements to line ditches and reservoirs to minimize waste).

Finally, to the extent that a bona fide public interest and need for reservoir water for fire safety can be shown, nothing in the Code presently prevents the Commission from facilitating and permitting such uses. In other words, SB 2828's proposed Code amendment is a "solution without a problem." Moreover, as discussed above, the proposed "solution"—i.e., a piecemeal insertion in the Code's declaration of the public trust doctrine—will only raise more questions and problems.

For the foregoing reasons, Earthjustice opposes SB 2828 and respectfully requests that it be **held, or at least amended to delete the proposed amendment of the Code**. Mahalo nui for this opportunity to testify. Please do not hesitate to contact us with any further questions or for further information.

Isaac H. Moriwake



Attorney  
Earthjustice

**SB-2828**

Submitted on: 2/4/2020 1:14:05 PM

Testimony for WTL on 2/5/2020 1:30:00 PM

<b>Submitted By</b>	<b>Organization</b>	<b>Testifier Position</b>	<b>Present at Hearing</b>
james Kimo Falconer	Individual	Support	No

Comments:

Dear Chair Kahele and members of the WTL committee,

West Maui is in a situation where none of the former sugar plantation reservoirs are holding water largely due to the CWRM rulings that has affected diverted water to no longer flow to this infrastructure. Most of the native forest lands and former sugar lands that lie fallow are inaccessible by ground crews to fight brush fires. MFD must use helicopters to dump water for fire control.

Due to the recent loss of water to these reservoirs the air crews must pull water from the ocean or even private swimming pools. Salt water is harmful to the soil and our native forests and ocean proximity is often too far to reasonably fight a high altitude or otherwise remote blaze. We are very lucky not to have injuries from recent fires. Most of these reservoirs, once filled can have the water redirected back into the streams if need be.

Please support a discussion to help in this situation and move this bill forward.

Mahalo,

James Kimo Falconer