

**STATE OF HAWAII**  
**DEPARTMENT OF HEALTH**  
P. O. Box 3378  
Honolulu, HI 96801-3378  
doh.testimony@doh.hawaii.gov

**Testimony in SUPPORT of SB0935-SD1**  
**RELATING TO CAPITAL IMPROVEMENT PROJECTS FOR WATER REUSE**

REPRESENTATIVE RYAN I. YAMANE, CHAIR  
HOUSE COMMITTEE ON WATER, LAND, & HAWAIIAN AFFAIRS  
Hearing Date: March 15, 2019                      Room Number: CR 325

1    **Fiscal Implications:** This measure may impact the priorities identified in the Governor's  
2    Executive Budget Request.

3    **Department Testimony:** Water is a precious resource that needs to be preserved and conserved  
4    to ensure sustainability for future generations. The Department of Health (Department) is an  
5    advocate for promoting the use of recycled water in Hawaii. The implementation of the two  
6    demonstration water reuse projects noted in the measure would help to conserve our water  
7    resource.

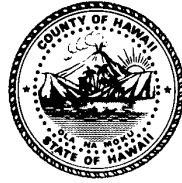
8            The Department strongly supports this measure as long as it does not impact the priorities  
9    identified in the Governor's Executive Budget Request.

10   **Offered Amendments:** None.

11            Thank you for the opportunity to testify on this measure.

Harry Kim  
Mayor

Wilfred M. Okabe  
Managing Director



William A. Kucharski  
Director

Diane A. Noda  
Deputy Director

## County of Hawai'i

### DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

345 Kekūanāo'a Street, Suite 41 · Hilo, Hawai'i 96720

Ph: (808) 961-8083 · Fax: (808) 961-8086

Email: [cohdem@hawaiicounty.gov](mailto:cohdem@hawaiicounty.gov)

March 13, 2019

Representative Ryan I. Yamane, Chair  
House Committee on Water, Land & Hawaiian Affairs  
Hawai'i State Legislature  
415 South Beretania Street  
Honolulu, Hawai'i 96813

**Re: SUPPORT FOR SB 935 SD1**  
**(Relating to Capital Improvement Projects for Water Reuse)**  
Hearing: March 15, 2019 (Friday)  
Time: 10:00 a.m.

Dear Chair Yamane and Members of the Committee on Water, Land & Hawaiian Affairs:

The County of Hawai'i (COH) supports SB 935 SD1.

Providing funds to help manage the reuse of limited water resources is supported by the COH. Included in the funds proposed by SB 935 SD1 is a provision to provide for design support for the reuse of water treated to an R1 standard from the Kealakehe wastewater treatment system. This provision is believed not only to represent sound policy, but is also in support of the water reuse goals proposed by the State. There have been significant costs borne by the COH associated with the R1 water treatment system, and having financial support for a system design encompassing the reuse of this water resource is much welcomed. COH supported SB551 and urges a positive vote for SB551 SD1 by your Committee.

Thank you for your consideration of this testimony.

Sincerely,

William A. Kucharski  
Director

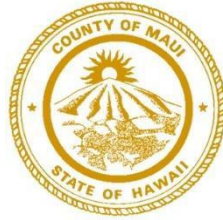
cc: Andrew Levin, Executive Assistant, Mayor's Office



**MICHAEL P. VICTORINO**  
Mayor

**JEFFREY T. PEARSON, P.E.**  
Director

**HELENE KAU**  
Deputy Director



**DEPARTMENT OF WATER SUPPLY**  
COUNTY OF MAUI  
200 SOUTH HIGH STREET  
WAILUKU, MAUI, HAWAI'I 96793  
www.mauewater.org

**Testimony in SUPPORT of S.B. 0935 SD1  
RELATING TO CAPITAL IMPROVEMENT PROJECTS FOR WATER REUSE  
WATER REUSE DEMONSTRATION PROJECTS**

REPRESENTATIVE, RYAN I. YAMANE, CHAIR  
REPRESENTATIVE, CHRIS TODD, VICE CHAIR  
HOUSE COMMITTEE ON WATER, LAND, AND HAWAIIAN AFFAIRS

Hearing Date: March 15, 2019  
Time: 10:00 AM

Room Number: 325

The Maui County Department of Water Supply (MDWS) **strongly supports** SB935. The proposed funding to develop a means to repurpose up to 9 million gallons of water annually at Kanaha Beach Park is an important step to address water reuse and conservation issues. Please consider revising the description for funding in Section 2.1 as follows:

[Installation] <u>Design, Permitting, and Approvals</u>	<u>\$200,000</u>
[Updates and Improvements] <u>Materials, Installation, 6 month Maintenance</u>	<u>\$250,000</u>
Total Funding	\$450,000

The proposed greywater reuse project will demonstrate that potable water can be repurposed and not wasted. By redirecting water from the park's showers, sinks, spigots, and hose bibs, and intercepting additional runoff from bioswales planted with native Hawaiian plants, we hope to reuse up to 40% of the potable water being consumed at the park. Appropriate signage and interactive stations will help educate the general public about how this greywater system works.

The greywater system includes an irrigation network fed by recycled, R2 or R1 quality water. Depending on the intensity of potable water use at the park, it will be flexible enough to produce tens of thousands of thousands of gallons of reuse water for daily irrigation purposes, instead of providing on potable water. This approach also makes the park much more resilient in times of drought. The proposed project will allow for less water stressing the park's septic system. Runoff interception by bioswales, will reduce surface runoff that would normally find its way to the ocean.

Thank you for your consideration.

*"By Water All Things Find Life"*

# BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA STREET  
HONOLULU, HI 96843  
www.boardofwatersupply.com




March 15, 2019

KIRK CALDWELL, MAYOR

BRYAN P. ANDAYA, Chair  
KAPUA SPROAT, Vice Chair  
KAY C. MATSUI  
RAY C. SOON  
MAX J. SWORD

ROSS S. SASAMURA, Ex-Officio  
JADE T. BUTAY, Ex-Officio

ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.  
Deputy Manager and Chief Engineer 

The Honorable Ryan I. Yamane, Chair  
and Members  
Committee on Water, Land and Hawaiian Affairs  
Hawaii State Capitol, Room 325  
Honolulu, Hawaii 96813

Dear Chair Yamane and Members:

Subject: Senate Bill 935, Senate Draft 1, Relating To Capital Improvement  
Projects for Water Reuse

The Honolulu Board of Water Supply (BWS) supports Senate Bill (SB) 935, Senate Draft (SD) 1, relating to capital improvement projects for water reuse demonstration projects.

Reuse projects on Maui and Hawaii island will advance reuse throughout the state by demonstrating the feasibility of new technologies that could be applied in other areas where reuse could provide quality irrigation water and reduce potable water use.

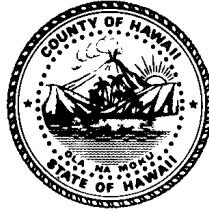
Thank you for your consideration of our testimony on SB 935, SD 1.

Very truly yours,



ERNEST Y. W. LAU, P.E.  
Manager and Chief Engineer

**Harry Kim**  
*Mayor*



**Wil Okabe**  
*Managing Director*

**Barbara J. Kossow**  
*Deputy Managing Director*

## County of Hawai'i Office of the Mayor

25 Aupuni Street, Suite 2603 • Hilo, Hawai'i 96720 • (808) 961-8211 • Fax (808) 961-6553  
KONA: 74-5044 Ane Keohokālole Hwy., Bldg C • Kailua-Kona, Hawai'i 96740  
(808) 323-4444 • Fax (808) 323-4440

March 13, 2019

Representative Ryan I. Yamane, Chair  
Representative Chris Todd, Vice Chair  
Committee on Water, Land, and Hawaiian Affairs

Dear Chair Yamane, Vice Chair Todd, and Committee Members:

**RE: SB 935, SD1 Relating to Capital Improvement Projects for Water Reuse**

Thank you for this opportunity to testify in support of SB 935, SD1, which includes funding for a water reuse project in Hawai'i County. We appreciate that the Legislature has taken the initiative to bring this project within reach.

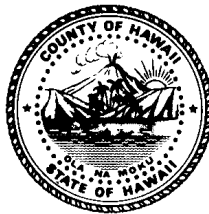
Managing the reuse of limited water resources is becoming more and more important, and this project is in alignment with the water reuse goals proposed by the State.

We ask for your favorable action on SB 935, SD1, as well as possible incorporation of this project into your priorities for the State budget.

Respectfully Submitted,

Harry Kim  
MAYOR

**Karen Eoff**  
Council Vice Chair  
Council District 8 - North Kona



Phone: (808) 323-4280  
Fax: (808) 329-4786  
Email: karen.eoff@hawaiiicounty.gov

## HAWAI'I COUNTY COUNCIL

County of Hawai'i  
West Hawai'i Civic Center, Bldg. A  
74-5044 Ane Keohokalole Hwy.  
Kailua-Kona, Hawai'i 96740

March 13, 2019

### COMMITTEE ON WATER, LAND & HAWAIIAN AFFAIRS

Representative Ryan I. Yamane, Chair  
Representative Chris Todd, Vice Chair

**Testimony supporting HB935 RELATING TO CAPITAL IMPROVEMENT PROJECTS FOR WATER REUSE;** Authorizes the issuance of general obligation bonds for two water reuse demonstration projects.

WLH, March 15, 2019 at 10:00 a.m., Conference Room 325

Dear Committee:

On behalf of myself and constituents of Council District 8, North Kona, support for the above referenced Bill is expressed, with brief testimony provided as follows:

The reuse of treated R1 water to irrigate lawns, County facilities, State and County Parks is a significant step and measure to address the sustainable use of our potable drinking water in West Hawai'i. The reuse of R1 water conserves drinking water for consumption.

We support the reuse of reclaimed R-1 water to service the planned Kealakehe Regional Park of 193 acres comprised mostly athletic fields such as football, soccer, green spaces, and a great lawn. The reuse of treated R1 water for irrigation will keep our cost of irrigation to a minimum while keeping our ball fields green.

We urge you to approve this measure to authorize the issuance of general obligation bonds for a water reuse demonstration project at the Kealakehe Wastewater Treatment Facility.

Sincerely,

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KAREN EOFF, Council Vice Chair  
Council District 8, North Kona

KE.wpb

Testimony of The Nature Conservancy of Hawai'i  
Supporting SB 935 SD1 Relating to Capital Improvement Projects for Water Reuse  
House Committee on Water, Land & Hawaiian Affairs  
Friday, March 15, 2019, 10:00 AM, Room 325

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*The Nature Conservancy of Hawai'i is a non-profit conservation organization dedicated to the preservation of the lands and waters upon which all life depends. The Conservancy has helped protect more than 200,000 acres of natural lands in Hawai'i and Palmyra Atoll. We manage 40,000 acres in 13 nature preserves and work in over 30 coastal communities to help protect the near-shore reefs, waters and fisheries of the main Hawaiian Islands. We forge partnership with government, private parties and communities to protect forests and coral reefs for their ecological values and the many benefits they provide to people.*

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The Nature Conservancy supports SB 935 SD1

Easily available fresh water is not a limitless resource here in the middle of the Pacific. Several locations in the state have experienced prolonged drought in recent years. Science indicates that the likely effects of climate change in Hawai'i will include:

- More frequent and more severe storms that can increase runoff and siltation; but
- Overall, less rainfall in many locations and therefore less fresh water; and
- Higher temperatures that affect watershed health and can be beneficial to pests.

Hawai'i is already exhibiting telltale signs of climate change. UH's Rainfall Atlas catalogues a century of declining rainfall and fewer trade wind days. Summer temperature records have been broken across the state and a record number of storms have taken aim at Hawai'i over the last few years.

In response to these conditions, we must plan and implement mitigative and adaptive measures to ensure the resilience of our natural and human systems. Healthy Hawaiian forests that are not overrun by invasive species act like a sponge, collecting rain and moisture, slowly delivering fresh water into streams and aquifers, absorbing greenhouse gases, and reducing runoff and siltation into near shore waters during storm events.

Additionally, we must improve our efficiencies and reuse of our fresh water resources, including the types of reuse demonstration projects proposed in HB 935.

BOARD OF TRUSTEES

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Email: [communications@ulupono.com](mailto:communications@ulupono.com)

HOUSE COMMITTEE ON WATER, LAND, & HAWAIIAN AFFAIRS  
Friday, March 15, 2019 — 10:00 a.m. — Room 325

**Ulupono Initiative Supports SB 935 SD 1, Relating to Capital Improvement Projects for Water Reuse**

Dear Chair Yamane, Vice Chair Todd, and Members of the Committee:

My name is Murray Clay and I am Managing Partner of Ulupono Initiative, a Hawai'i-based impact investment firm that strives to improve the quality of life for the people of Hawai'i by working toward solutions that create more locally produced food; increase affordable, clean, renewable energy; and better manage waste and fresh water resources. Ulupono believes that self-sufficiency is essential to our future prosperity and will help shape a future where economic progress and mission-focused impact can work hand in hand.

**Ulupono supports SB 935 SD 1**, which authorizes the issuance of general obligation bonds for two water reuse demonstration projects, because it aligns with our goal of preserving Hawai'i's water resources.

Water is the most important natural resource and critical to the survival of the people of Hawai'i. Therefore, water must be protected and managed in a diligent manner. Water reuse is often the most environmentally prudent method of caring for our fresh water supply. Climate change, which has led to a 23 percent decrease in rainfall on O'ahu from 1980 to 2010<sup>1</sup>, highlights the need for water preservation measures.

Funding for the Kanaha beach park greywater reuse project and the Kealakehe wastewater treatment facility will help to demonstrate that we can preserve water as a resource for the people of Hawai'i.

As Hawai'i's water issues become increasingly complex and challenging, we appreciate this committee's efforts to look at policies that protect our water resources.

Thank you for this opportunity to testify.

Respectfully,

Murray Clay  
Managing Partner

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<sup>1</sup> Board of Water Supply 2016 Water Master Plan,  
<https://www.boardofwatersupply.com/bws/media/files/water-master-plan-final-2016-10.pdf>



**HAWAII COMMUNITY FOUNDATION**  
*Amplify the Power of Giving*

**COMMITTEE ON WATER, LAND, & HAWAIIAN AFFAIRS**

Date: Friday, March 15, 2019

Time: 10:00am

Place: Conference Room 325

Subject: Senate Bill (SB) 935 SD1 Relating to the Capital Improvement Projects for Water Reuse, **AMENDMENTS REQUESTED**

Aloha Chair Yamane, Vice Chair Todd, and Members of the House Committee on Water, Land, and Hawaiian Affairs,

Hawaii Community Foundation strongly support **SB935 SD1** which authorizes general obligation bonds for capital improvements to Hawaii's water reuse systems. This measure supports the implementation of two projects, the Kanaha Beach Park and Kealekehe Wastewater Treatment Facility. For the Kanaha Beach Park, we support Maui's request to revise the funding to the following:

<b>Kanaha beach park greywater reuse project</b>	
[Installation] <u>Design, Permitting, and Approvals</u>	<u>\$200,000</u>
[Updates and Improvements] <u>Materials, Installation, 6-month Maintenance</u>	<u>\$250,000</u>
<b>Total Funding</b>	<b>\$450,000</b>

For the Kealakehe Wastewater Treatment Facility, we ask that the funding is revised to the following:

<b>Kealakehe Wastewater Treatment Facility project</b>	
Design	<u>\$750,000</u>
<b>Total Funding</b>	<b>\$750,000</b>

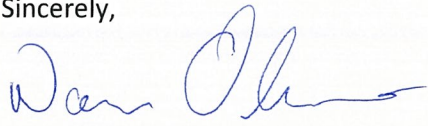
And that 'the sum appropriated for the capital improvement project shall be expended by the County of Hawaii **Department of Environmental Management**' instead of 'county of Hawaii'.

Water reuse has been recognized internationally as a strategy for combatting climate change, drought, and reduced fresh water supplies. Since water reuse is still considered new and innovative in Hawaii, demonstration projects will be a key aspect in ensuring that the public feels safe as we increase its usage. We believe that demonstration projects generate visible results on the ground and are an effective mechanism for forging partnerships between the public, private, and community sectors.

HCF strongly supports **SB935 SD1** and we stand ready to collaborate and assist in moving Hawaii towards increased water reuse and strengthened water security.

Should you have any questions about this testimony, please feel welcome to contact me at [dokano@hcf-hawaii.org](mailto:dokano@hcf-hawaii.org).

Sincerely,

A handwritten signature in blue ink, appearing to read "Dana Okano", with a long horizontal flourish extending to the right.

Dana Okano, PhD, AICP  
Program Director of Strategies, Initiatives and Networks  
Hawaii Community Foundation



ONE WORLD ONE WATER  
 677 Ala Moana Blvd, Suite 1100  
 Honolulu, Hi 96713

Testimony in Support of SB935 SD1  
 Relating to the Capital Improvement Projects for Water Reuse  
 House Committee on Water, Land, and Hawaiian Affairs  
 March 15<sup>th</sup>, 2019; 10:00am; Conference Room 325

**Subject:** Senate Bill (SB) 935 SD1 Relating Capital Improvement Projects for Water Reuse; **AMENDMENT REQUESTED**

Aloha Chair Yamane, Vice Chair Todd, and Members of the House Committee on Water, Land, and Hawaiian Affairs,

At One World One Water we are dedicated to reinvesting in water infrastructure and restoring natural environments, and we strongly support **SB935 SD1** that authorizes general obligation bonds for capital improvements to Hawaii’s water reuse systems. This measure supports the implementation of two projects, the Kanaha Beach Park and Kealekehe Wastewater Treatment Facility. For the Kanaha Beach Park, we support Maui’s request to revise the funding to the following:

**Revised Language for Section 2.1**

<b>Kanaha beach park greywater reuse project</b>	
[Installation] <u>Design, Permitting, and Approvals</u>	<u>\$200,000</u>
[Updates and Improvements] <u>Materials, Installation, 6-month Maintenance</u>	<u>\$250,000</u>
<b>Total Funding</b>	<b>\$450,000</b>

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**Revised Language for Section 2.1**

<b>Kealakehe Wastewater Treatment Facility project</b>	
Design	<u>\$750,000</u>
<b>Total Funding</b>	<b>\$750,000</b>

And that ‘the sum appropriated for the capital improvement project shall be expended by the County of Hawaii **Department of Environmental Management**’ instead of ‘county of Hawaii’.

Water reuse has been recognized internationally as a strategy for combatting climate change, drought, and reduced fresh water supplies. Since water reuse is still considered new and innovative in Hawaii, demonstration projects will be a key aspect in ensuring that the public feels safe as we increase its usage. We believe that demonstration projects generate visible results on the ground and are an effective mechanism for forging partnerships between the public, private, and community sectors.

This bill will help Hawaii become more resilient to climate change and will help us reach the goals of the Fresh Water Initiative, so as an organization committed to improving our water systems **we ask your support of SB935 SD1** to invest in Hawaii’s future.

Please contact us at [globalwater@gmail.com](mailto:globalwater@gmail.com) should you have any questions or require additional information regarding this matter.

Sincerely,  
*One World One Water*