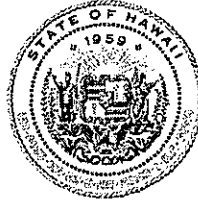
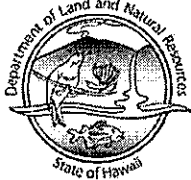


SCR 12

NEIL ABERCROMBIE  
GOVERNOR OF HAWAII



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

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

**Testimony of  
WILLIAM J. AILA, JR.  
Chairperson**

**Before the Senate Committees on  
ENERGY AND ENVIRONMENT  
and  
PUBLIC SAFETY, GOVERNMENT OPERATIONS, AND MILITARY AFFAIRS**

**Thursday, April 7, 2011  
2:45 PM  
State Capitol, Conference Room 225**

**In consideration of  
SENATE CONCURRENT RESOLUTION 12  
ENCOURAGING THE UTILIZATION OF BEST MANAGEMENT PRACTICES IN  
IRRIGATION TO CONSERVE OUTDOOR WATER USAGE WITHIN THE  
LANDSCAPE**

The Department of Land and Natural Resources (Department) supports Senate Concurrent Resolution 12 which encourages best management practices for outdoor landscape water use. This concurrent resolution is consistent with the water conservation goals and objectives of the Department's Commission on Water Resource Management and the State Water Code, Chapter 174C, Hawaii Revised Statutes.

The Department recognizes that a substantial proportion of a homeowner's water use occurs outdoors. Landscaping in government, resort, commercial, institutional, residential, and other settings consume a substantial amount of water. Best management irrigation practices to conserve water are essential to preserving our most precious resource. The Department is pleased the Landscape Industry Council of Hawaii is actively promoting water conservation and use efficiency in its industry. This is the kind of leadership that counts.

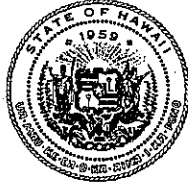
**WILLIAM J. AILA, JR.**  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

**GUY H. KAULUKUKUI**  
FIRST DEPUTY

**WILLIAM M. TAM**  
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

NEIL ABERCROMBIE  
GOVERNOR



GLENN M. OKIMOTO  
INTERIM DIRECTOR

Deputy Directors  
FORD N. FUCHIGAMI  
JAN S. GOUVEIA  
RANDY GRUNE  
JADINE URASAKI

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

IN REPLY REFER TO:

April 7, 2011

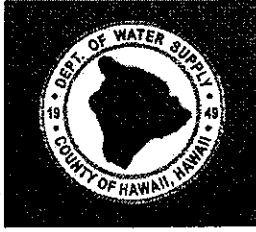
TESTIMONY OF THE DEPARTMENT OF TRANSPORTATION

SENATE CONCURRENT RESOLUTION NO. 12

SENATE COMMITTEE ON ENERGY AND ENVIRONMENT/  
SENATE COMMITTEE ON PUBLIC SAFETY, GOVERNMENT OPERATIONS, AND  
MILITARY AFFAIRS

The Department of Transportation (DOT) supports the use of irrigation water conservation best management practices on state roads and highways, and supports this bill which encourages conserving irrigation water.

DOT is currently developing the first in the nation, DOT Statewide Sustainable Landscape Masterplan which will incorporate and standardize the use of the Landscape Industry Council of Hawaii Irrigation Water Conservation Best Management Practices contained in the S.C.R. 12. The DOT Statewide Sustainable Landscape Masterplan will be completed in 2012.



**DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII**

345 KEKŪANAŌA STREET, SUITE 20 • HILO, HAWAII 96720

TELEPHONE (808) 961-8050 • FAX (808) 961-8657

March 31, 2011

Honorable Senator Mike Gabbard, Chair,  
and Members of the Water, Land, and Housing Committee  
Hawai'i State Capitol, Room 201  
Honolulu, HI 96813

Honorable Senator Will Espero, Chair,  
and Members of the Public Safety, Government Operations, and Military Affairs Committee  
Hawai'i State Capitol, Room 231  
Honolulu, HI 96813

**SENATE CONCURRENT RESOLUTION 12, ENCOURAGING THE UTILIZATION OF BEST  
MANAGEMENT PRACTICES IN IRRIGATION TO CONSERVE OUTDOOR WATER USAGE  
WITHIN THE LANDSCAPE**

Dear Honorable Chairs Gabbard and Espero:

The Department of Water Supply, County of Hawai'i, submits testimony in support of SCR 12:  
ENCOURAGING THE UTILIZATION OF BEST MANAGEMENT PRACTICES IN IRRIGATION TO  
CONSERVE OUTDOOR WATER USAGE WITHIN THE LANDSCAPE.

Conservation of water use for irrigation is an area that needs legislative support. Water  
consumption data within our Department shows that irrigation in the drier regions of the Big Island can  
increase water use by up to three times as compared to areas that have heavier rainfall.

The Department recognizes that information about best practices for irrigation and conservation is  
seriously needed. To this end, the Department of Water Supply maintains conservation programs with  
dedicated full-time Department personnel who specialize in leak detection, energy management,  
operational efficiencies, and public information and education.

In addition, new policies for energy and water conservation are being developed at the Water Board  
level. SCR 12 will be extremely helpful in accomplishing our goals. Thus, the Department of Water  
Supply respectfully requests your support of this resolution.

Should there be any questions or if we can be of any assistance, please do not hesitate to call us at  
(808) 961-8050 or email us at [dws@hawaiidws.org](mailto:dws@hawaiidws.org).

Sincerely yours,

Milton D. Pavao, P.E.  
Manager-Chief Engineer

KA:dmj

*...Water, Our Most Precious Resource... Ka Wai A Kāne...*

The Department of Water Supply is an Equal Opportunity provider and employer.



**DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAI'I**

345 KEKŪANAŌ'A STREET, SUITE 20 • HILO, HAWAI'I 96720

TELEPHONE (808) 961-8050 • FAX (808) 961-8657

March 31, 2011

Honorable Senator Mike Gabbard, Chair,  
and Members of the Water, Land, and Housing Committee  
Hawai'i State Capitol, Room 201  
Honolulu, HI 96813

Honorable Senator Will Espero, Chair,  
and Members of the Public Safety, Government Operations, and Military Affairs Committee  
Hawai'i State Capitol, Room 231  
Honolulu, HI 96813

**SENATE CONCURRENT RESOLUTION 12, ENCOURAGING THE UTILIZATION OF BEST  
MANAGEMENT PRACTICES IN IRRIGATION TO CONSERVE OUTDOOR WATER USAGE  
WITHIN THE LANDSCAPE**

Dear Honorable Chairs Gabbard and Espero:

The Department of Water Supply, County of Hawai'i, submits testimony in support of SCR 12:  
ENCOURAGING THE UTILIZATION OF BEST MANAGEMENT PRACTICES IN IRRIGATION TO  
CONSERVE OUTDOOR WATER USAGE WITHIN THE LANDSCAPE.

Conservation of water use for irrigation is an area that needs legislative support. Water  
consumption data within our Department shows that irrigation in the drier regions of the Big Island can  
increase water use by up to three times as compared to areas that have heavier rainfall.

The Department recognizes that information about best practices for irrigation and conservation is  
seriously needed. To this end, the Department of Water Supply maintains conservation programs with  
dedicated full-time Department personnel who specialize in leak detection, energy management,  
operational efficiencies, and public information and education.

In addition, new policies for energy and water conservation are being developed at the Water Board  
level. SCR 12 will be extremely helpful in accomplishing our goals. Thus, the Department of Water  
Supply respectfully requests your support of this resolution.

Should there be any questions or if we can be of any assistance, please do not hesitate to call us at  
(808) 961-8050 or email us at [dws@hawaiiidws.org](mailto:dws@hawaiiidws.org).

Sincerely yours,

Milton D. Pavao, P.E.  
Manager-Chief Engineer

KA:dmj

*...Water, Our Most Precious Resource... Ka Wai A Kāne...*

The Department of Water Supply is an Equal Opportunity provider and employer.

**BOARD OF WATER SUPPLY**

CITY AND COUNTY OF HONOLULU  
630 SOUTH BERETANIA STREET  
HONOLULU, HI 96843



April 5, 2011

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman  
DENISE M. C. DE COSTA  
ANTHONY R. GUERRERO, JR.  
THERESIA C. McMURDO  
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio  
GLENN M. OKIMOTO, Ex-Officio

WAYNE M. HASHIRO, P.E.  
Manager and Chief Engineer

DEAN A. NAKANO  
Deputy Manager

The Honorable Mike Gabbard, Chair  
and Members  
The Senate  
Committee on Energy and Environment

and

The Honorable Will Espero, Chair  
and Members  
The Senate  
Committee on Public Safety, Government  
Operations, and Military Affairs  
State Capitol, Conference Room 225  
Honolulu, Hawaii 96813

Dear Chairs Gabbard and Espero and Members:

Subject: Senate Concurrent Resolution (SCR) No. 12, Encouraging  
the Utilization of Best Management Practices in Irrigation  
to Conserve Outdoor Water Usage Within the Landscape

Thank you for the opportunity to provide testimony on Senate Concurrent Resolution No. 12,  
Encouraging the Utilization of Best Management Practices in Irrigation to Conserve Outdoor Water  
Usage Within the Landscape.

The Board of Water Supply supports the conservation of Hawaii's precious water resource through  
the implementation of best management practices in irrigation efficiency.

Proper planning, design and maintenance of the landscape and irrigation system, efficient watering  
techniques, selecting xeriscape plants and managing the nutrients in the soil will reduce waste of  
our natural water resources and sustain the health of groundwater aquifers.

Your consideration of our testimony on SCR 12 is appreciated.

Sincerely,

WAYNE M. HASHIRO, P.E.  
Manager and Chief Engineer



**LANDSCAPE INDUSTRY COUNCIL OF HAWAI'I**

March 29, 2011

TESTIMONY FOR SENATE CONCURRENT RESOLUTION N.O. 12

COMMITTEE ON ENERGY AND ENVIRONMENT

COMMITTEE OF PUBLIC SAFETY, GOVERNMENT OPERATIONS, AND  
MILITARY AFFAIRS

Landscape Industry Council of Hawai'i (LICH) strongly supports Senate Concurrent Resolution 12.

LICH advocates water conservation research & development and best management practices to conserve outdoor water usage within the landscape.

Landscape irrigation uses upwards of fifty percent or more of our household water. A poorly maintained or installed irrigation system can waste up to fifty percent of water due to inefficient irrigation practices, poor components, evaporation and runoff.

Maintaining and installing water efficient irrigation systems is one of the most effective ways to reduce wasted drinking water, reduce run-off, stormwater sediments and optimize plant health by applying the correct amount of water.

Senate Concurrent Resolution 12 encourages large water users to adopt Irrigation Water Conservation Best Management Practices to improve the efficiency of all existing and new landscape irrigation installations savings upwards of fifty percent through low-cost practical measures.

If you would like to discuss this further feel free to contact me at 927-3503 or email at [chris.dacus@gmail.com](mailto:chris.dacus@gmail.com).

Chris Dacus  
President  
Landscape Industry Council of Hawai'i  
P. O. Box 22938, Honolulu, Hawai'i 96823-2938

### Landscape Industry Council of Hawai'i

As a professional association, the Landscape Industry Council of Hawai'i has a proud history of providing information to policy makers on matters concerning the science and profession of the landscape industry.

Hawaii's landscape industry is one of the fastest growing and largest segments of the green industry with an economic impact of over \$520 million annually and full time employment of over 11,000 landscape professionals.

Celebrating 25 years, LICH was formed in June 1986, the Landscape Industry Council of Hawai'i is a state wide alliance representing Hawaii's landscape trade associations: Aloha Arborist Association, American Society of Landscape Architects Hawaii Chapter, Hawaii Association of Nurserymen, Hawaii Island Landscape Association, Hawaii Landscape and Irrigation Contractors, Hawaii Society of Urban Forestry Professionals, Kauai Landscape Industry Council, Maui Association of Landscape Professionals, Professional Grounds Management Society, Big Island Association of Nurserymen, and the Hawaii Professional Gardeners Association.

Online at [www.landscapehawaii.org](http://www.landscapehawaii.org)



Testimony of The Nature Conservancy of Hawai'i  
Supporting S.C.R. 12 Encouraging the Utilization of Best Management Practices in Irrigation  
To Conserve Outdoor Water Usage within the Landscape  
Senate Committee on Energy and Environment  
Senate Committee on Public Safety, Government Operations, and Military Affairs  
Thursday, April 7, 2011, 2:45PM, Rm. 225

---

*The Nature Conservancy of Hawai'i is a private non-profit conservation organization dedicated to the preservation of Hawaii's native plants, animals, and ecosystems. The Conservancy has helped to protect nearly 200,000 acres of natural lands for native species in Hawai'i. Today, we actively manage more than 32,000 acres in 11 nature preserves on Maui, Hawai'i, Moloka'i, Lāna'i, and Kaua'i. We also work closely with government agencies, private parties and communities on cooperative land and marine management projects.*

---

The Nature Conservancy supports S.C.R. 12 and its purpose to encourage best management practices in outdoor water usage. We also would like to express our deep appreciation to the Landscape Industry Council of Hawai'i and its members for their leadership on water conservation and management, plant selection, and invasive species prevention and control.

According to a recent national poll conducted by The Nature Conservancy, the vast majority of Americans don't know where their water comes from. Three quarters of those polled couldn't name the source of the water they use for drinking, bathing, cooking, or watering their yard. Many simply thought that their water comes from the tap. Others thought the source was the ocean. The poll illustrates a disturbing disconnect between people and nature. It also suggests that if we aren't aware of the source of the water we rely on, it's difficult for us to value and protect it.

The Hawaiian Islands lie in a relatively arid part of the Pacific, 2,500 miles from the nearest continental landmass. Rainfall in the surrounding ocean is only 25 to 30 inches a year, yet freshwater is abundant here. Where does it come from? The answer lies in the convergence of winds upon the Islands' richly forested mountains. As warm ocean air moves inland, it is forced upwards by the mountainous terrain, cooling and condensing on its forested slopes. The upland forest captures water in the form of mist, fog and rain, absorbing and releasing it into streams and underground aquifers for our use and consumption.

The importance of having a reliable source of fresh water and conserving the water we have cannot be overstated. Water is not a luxury, it's a necessity. The work of LICH and its membership, along with the kind of support provided by S.C.R. 12, are critical to establishing the foundation and implementing the tools needed to appreciate and protect our fresh water resources.

BOARD OF TRUSTEES

S. Haunani Apoliona Christopher J. Benjamin Anne S. Carter Richard A. Cooke III Peter H. Ehrman Kenton T. Eldridge  
Thomas M. Gottlieb Donald G. Horner J. Douglas Ing Mark L. Johnson Dr. Kenneth Y. Kaneshiro Bert A. Kobayashi, Jr.  
Faye Watanabe Kurren Eiichiro Kuwana Duncan MacNaughton Bonnie P. McCloskey Bill D. Mills Wayne K. Minami Michael T.  
Pfeffer James C. Polk H. Monty Richards Jean E. Rolles Scott C. Rolles Crystal K. Rose Nathan E. Smith Eric K. Yeaman

Testimony for ENE/PGM 4/7/2011 2:45:00 PM SCR12

Conference room: 225

Testifier position: support

Testifier will be present: No

Submitted by: Rick Barboza

Organization: Hui Ku Maoli Ola

Submitted on: 3/31/2011

Testimony for ENE/PGM 4/7/2011 2:45:00 PM SCR12

Conference room: 225

Testifier position: support

Testifier will be present: No

Submitted by: Bruce Guard

Organization: ISI Hawaii Water Solutions

E-mail: [bruce@isihawaii.com](mailto:bruce@isihawaii.com)

Submitted on: 4/6/2011

Allan & Pamela Schildknecht  
45-203 Puali Koa Place  
Kaneohe, Hawaii 96744  
Telephone: (808) 235-7959  
Facsimile: (808) 247-0118

March 30, 2011

TESTIMONY FOR SENATE CONCURRENT RESOLUTION No. 12

Committee on Energy and Environment

Committee of Public Safety, Government Operations and Military Affairs

*As the only Landscape Irrigation Design Consultant in the landscape and turf industry recognized as an EPA WaterSense Partner, I strongly advocate for water conservation, research and development, specifically within the State of Hawaii.*

*Landscape irrigation can use up to 50% or more of our household water and too many of our both private and municipal landscape systems are poorly maintained and operated. This results in inefficient irrigation practices, excessive evaporation and runoff of our important resource "Water".*

*Properly designed, installed and maintained irrigation systems can dramatically reduce the outdoor water usage and preserve it for higher priority uses. Too many irrigation systems use more water than what is required for the soil, slope and plant materials utilized. While the State and its University Systems have conducted studies in plant-water demands in agricultural crops, primarily sugar cane, pineapple and selected food items, little or no research has been done for the landscape plant material which covers our islands.*

*Senate Concurrent Resolution 12 encourages large water users to adopt Irrigation Water Conservation Best Management Practices to improve the efficiency of all existing and new landscape irrigation installations and operation, which can result in upwards of a 50% water savings at little or no cost to the consumers.*

*Please feel free to contact me at any time if you have any questions or concerns we can assist you with on this subject.*

Aloha,

Allan G. Schildknecht



SCR12

March 30, 2011

To: Hawaii State Senate, Committee with kuleana for Water Conservation

Testimony in Favor of Resolution for Best Management Practices in Water Conservation

From: Boyd Ready, 59-661 Alapio Road, Haleiwa HI 96712

Dear Senators:

Nearing the end of a 25 year service to the public as a licensed landscape contractor, and having taken an especial interest in the craft of irrigation design, installation, and maintenance, I believe I have seen a slice of our water use in this world that is pertinent to the question before you.

Our many large water users, beset by budget woes, and mostly deficient in employee training in the care and use of irrigation systems, are scandalously lacking in water stewardship. Everyone has seen the broken sprinkler geysering alongside a highway. But what we don't see are the gigantic wastes of water quietly going on at night as automatic timers are improperly set to water far more often and longer than is necessary.

A typical 3" pipe serving a public grounds, running at nearly full blast at the repeated robotic command of an ignorantly programmed timer, can waste 150 gallons per minute, 9000 gallons per hour, and, if watering 3 hours nightly when twice a week would do, blow 7 million gallons a year into the air uselessly.

New and low cost control equipment, including sensors and computers automatically re-setting run times, if properly used and installed, can and will save much waste. We owe it to our sense of love for the land to encourage best management practices.

In the 1978 Hawaii Constitutional Convention the people's delegates mandated that the State of Hawaii would create a water conservation plan. This has yet, 33 years later, to be completed. We understand that a contract to do so has recently been let, by the State Commission on Water, with the Corps of Engineers assisting, and so that such a plan will soon to be prepared for our people's benefit and use. Your assent to the proposed resolution before you will affirm the legislature's continuing resolve to protect the 'wai' of our 'aina' and to encourage sustainable use of this precious gift.

Respectfully,  
Boyd Ready  
C-27 Landscape Contractor

Testimony for ENE/PGM 4/7/2011 2:45:00 PM SCR12

Conference room: 225

Testifier position: support

Testifier will be present: No

Submitted by: Josephine Hoh

Organization: Individual

Submitted on: 3/31/2011

Comments:

Water is a crucial resource for Hawaii. As you know almost every component of our lives can be affected without sufficient water. Lets not waste water. Please support SCR 12 to encourage and adopt conservative measures for our water usage. Mahalo.

Testimony for ENE/PGM 4/7/2011 2:45:00 PM SCR12 .

Conference room: 225

Testifier position: support

Testifier will be present: No

Submitted by: Matt Lyum

Organization: Individual

Submitted on: 4/7/2011

Comments:

Please promote water conservation, while maintaining our green space.

Testimony for ENE/PGM 4/7/2011 2:45:00 PM SCR12

Conference room: 225

Testifier position: support

Testifier will be present: No

Submitted by: Jennifer Lucien

Organization: Individual

Submitted on: 4/7/2011

Comments:

TESTIMONY FOR SENATE CONCURRENT RESOLUTION N.O. 12 COMMITTEE ON ENERGY AND ENVIRONMENT COMMITTEE OF PUBLIC SAFETY, GOVERNMENT OPERATIONS, AND MILITARY AFFAIRS

Dear Chairs and Members of the Committee,

This resolution encourages sound practices in water conservation and ultimately can save government agencies money if put into place. The net result is better environmental stewardship and less budgetary constraints.

I respectfully urge you to pass this resolution as is.