

SB2369

Requires all public landscaping, highway beautification, and road construction and improvement projects to include native Hawaiian land plants, as determined by DLNR.

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
WATER, LAND, AND HOUSING
&**

PUBLIC SAFETY, GOVERNMENT OPERATIONS, AND MILITARY AFFAIRS

**Tuesday, February 7, 2012
1:15 PM
State Capitol, Conference Room 225**

**In consideration of
SENATE BILL 2369
RELATING TO PUBLIC LANDSCAPING**

Senate Bill 2369 proposes an amendment to Section 103D-408, Hawaii Revised Statutes (HRS), which would require all public landscaping, highway beautification, and road projects developed by the State to utilize native Hawaiian land plants. The proposed amendment would require, whenever possible, to utilize plants on the island or islands on which the species originated. While the Department of Land and Natural Resources (Department) acknowledges the merit of Senate Bill 2369, the Department nonetheless has concerns with the measure as presently drafted. The Department recommends amending this measure to remove the requirement for rule making and to address issues of supply and hardiness of the plants and signage.

The Department has concerns that the bill would encourage the collecting of native plants from wild populations to the detriment of the wild populations. The bill should require that the plants used for landscaping be from cultivated sources only, and not collected from the wild. Additionally, a third exception should be provided if there is a lack of available cultivated native plants that are environmentally suited to the project site.

The Department also believes that the signage provision in Section 103D-408(c), HRS, is excessive and cost and maintenance prohibitive if requiring a sign for every individual plant or separate group of plants. The scenic beauty of state roadsides would be spoiled by the hundreds and thousands of signs required.

Finally, the provision requiring rules is unnecessary and should be replaced with a simple requirement that the Department provide technical assistance in the form of a list of appropriate plants to use on each island.

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

GUY H. KAULUKUKUI
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WILLIAM M. TAM
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AQUATIC RESOURCES
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FORESTRY AND WILDLIFE
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KAHOOLAWE ISLAND RESERVE COMMISSION
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TESTIMONY OF MICHAEL R. HANSEN, DIRECTOR
DEPARTMENT OF BUDGET AND FISCAL SERVICES
CITY AND COUNTY OF HONOLULU

Sen. Donovan M. Dela Cruz, Chair,
and Members of Committee on
Water, Land and Housing;
Sen. Will Espero, Chair,
and Members of Committee on
Public Safety, Government Operations,
and Military Affairs
The Senate
The Twenty-Fifth State Legislature
State Capitol
Honolulu, Hawaii 96813

Dear Chair Dela Cruz, Chair Espero and Members:

Subject: WLH/PGM Joint Hearing - February 7, 2012 at 1:15 p.m. HST
Senate Bill No. 2369 Relating to Public Landscaping

Thank you for the opportunity to testify on S.B. No. 2369. The City & County of Honolulu opposes S.B. No. 2369 which requires all public landscaping, highway beautification, and road construction and improvement projects to include native Hawaiian land plants, as determined by DLNR. The bill's requirements have the potential to:

- 1) Increase the administration and/or oversight responsibilities of government contracting agencies;
- 2) Increase the overall cost of landscaping projects;
- 3) Increase the number of bid protests filed; and
- 4) Increase the cost of landscaping maintenance.

Thank you.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

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February 6, 2012

The Honorable Donovan M. Dela Cruz, Chair
and Members
Senate Committee on Water, Land, and Housing
State Capitol
Honolulu, Hawaii 96813

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

Dear Chair Dela Cruz, Chair Espero, and Members:

Subject: Senate Bill No. 2369, Relating to Public Landscaping

The Department of Design and Construction (DDC) respectfully offers the following comments on SB 2369. The bill proposes to require that, "All plans, designs, and specifications for new or renovated landscaping of any building, complex of buildings, facility, complex of facilities, housing, or highway beautification and road construction and improvement projects developed by the State, counties, or any political subdivision with public moneys shall incorporate native Hawaiian land plants;..." The bill goes on to require that, "A minimum of ___ per cent of a public landscaping project shall consist of native Hawaiian land plants," and that, "...the department of land and natural resources may, at its discretion, include land plants that are not native to Hawaii on the list."

DDC supports the stated intent of the bill, which is to ensure the continued cultivation and perpetuation of native Hawaiian land plants. However, we do have several concerns regarding implementation of the proposed requirement that are not addressed in the bill. These concerns are as follows:

1. In its present form, the extent to which implementation of this requirement would affect costs of the City's capital improvement projects is unclear. In general, City landscaping projects are strongly influenced by limited budgets and value-oriented designs.
2. There is also uncertainty as to the extent that implementation of this requirement would affect construction schedules of the City's capital improvement projects. If implementation of the bill increases the demand for native Hawaiian land plants beyond

The Honorable Donovan M. Dela Cruz, Chair
and Members
The Honorable Will Espero, Chair
and Members
February 6, 2012
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the current supply, completion of projects could be significantly delayed. Such delays would also increase project costs.

3. Implementation of this requirement could potentially increase the effort and associated costs of the City's landscape maintenance programs. City landscaping projects are strongly influenced by efforts to minimize maintenance requirements and their associated costs.

The City's goal is to execute its many capital improvement projects as expeditiously and efficiently as possible, thus providing the greatest value for taxpayer dollars. The proposed requirement should be carefully structured and implemented in phases to minimize the potential to negatively impact the City's capital improvement projects by increasing costs, paperwork requirements, and the duration of time required to complete projects.

Thank you for considering our concerns and for the opportunity to testify.

Very truly yours,


Lori M. K. Kahikina, P.E.
Director



Sierra Club Hawai'i Chapter

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SENATE COMMITTEE ON WATER, LAND, AND HOUSING SENATE COMMITTEE ON PUBLIC SAFETY, GOVERNMENT OPERATIONS, AND MILITARY AFFAIRS

February 7, 2012, 1:15 P.M.
(Testimony is 3 pages long)

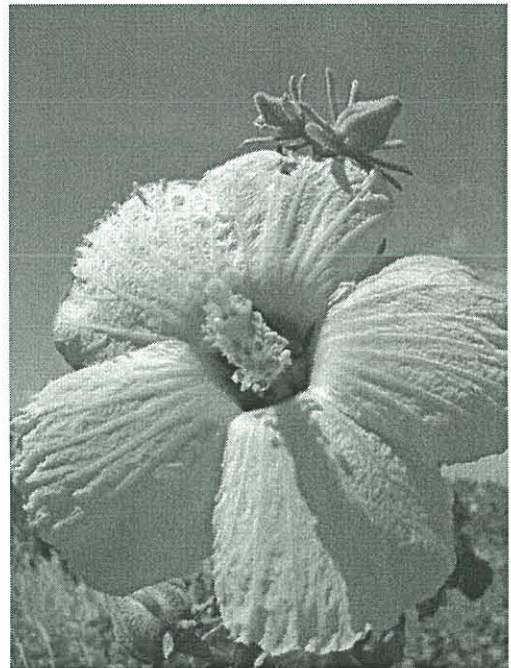
TESTIMONY IN **STRONG SUPPORT** OF SB 2369 WITH PROPOSED AMENDMENTS

Aloha Chair Dela Cruz, Espero, and Members of the Committee:

The Sierra Club, Hawai'i Chapter, with 9,000 dues paying members and supporters statewide, **strongly supports SB 2369**. This bill attempts to build upon the current law and require the use of native plants in state landscaping. This bill could perpetuate Hawai'i's culture and sense of place, advance the cause of rare plants found nowhere else in the world, and potentially create new local jobs while saving on long-term maintenance costs.

Hawai'i's stunning environment inspires us, nurtures us, and sustains us. It is the foundation of our culture. Many of our city and place names, like Aiea, Hauula, Kapalama, are named after a particular plant or animal. Many of our cultural stories, chants, and hulas are based on special plants found in unique areas.

Too often, we take the unique plants that form the basis for our culture for granted. It is only through the lens of time do we appreciate how these plants are slipping away. With each generation we're forgetting what these plants look like, where they grow, or how they connect us to the places we live.



Mao hau hele (state flower)

Hawai'i is well-known as the endangered species capitol of the world. With hundreds of plants and animals listed as endangered or threatened, there are more endangered species per square

mile on these islands than any other place on the planet. We're losing species at an unprecedented rate -- plants and animals that will never be seen again.

Our government could be on the forefront of perpetuating and advancing the use of native plants in its landscaping. By taking a leadership role, the buildings that form the center of our communities -- like schools and libraries -- and the roads that we travel on could celebrate and perpetuate Hawaiian culture. They could protect plants found nowhere else in the world. Imagine our Capitol having the state flower, the ma'ohau hele, planted nearby instead of mainland-hybrids? Or a row of ohia' planted alongside the Pali or Likelike highways?



T'iwi on mamane

This move is not unprecedented. Numerous counties like Dade County, Key Colony Beach, Key West, Lee County, Miami, and Scottsdale have all imposed native plant vegetation requirements on all landscaping, not just governmental action.

Our state could take a leadership role in protecting native plants that are at the heart of our culture instead of continuing the tradition of importing alien plants from foreign countries.

Proposed Amendments:

- (1) **Extend the Effective Date.** Nurseries will need time to "ramp up" their supply of native plants. DLNR will need time to pass rules. We suggest setting this law to go into effect at least one year out, say July 2013.
- (2) **Make Native Hawaiian Plants the default.** The current draft requires the Department of Land and Natural Resources to establish a list of native Hawaiian plants that might be used in landscaping. Instead, native Hawaiian plants should be presumed to be authorized. Non-native plants, such as noninvasive turf grasses, should be authorized via the rulemaking process.

(d) To implement this section, the department of land and natural resources shall adopt rules pursuant to chapter 91 to establish a list of ~~[native Hawaiian land plants; provided that the department of land and natural resources may, at its discretion, include]~~ land plants that are not native to Hawaii ~~[on the list]~~ that may be used in public landscaping when native

Hawaiian plants are not available or are suitable for the intended purpose."

- (3) Remove the per cent requirement.** The per cent requirement might be difficult to enforce. For example, how does one categorize grass? Per plant? By cost? Simply by indicating it is the policy of the state to require the use of native Hawaiian plants should be sufficient.

We respectfully ask for these Committees to consider these amendments and to move this bill forward. Mahalo for the opportunity to testify.



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February 6, 2012

Senate Committee on Public Safety, Government Operations, and Military Affairs

Subject: Testimony on SB 2369

The Aloha Arborist Association (AAA) supports SB 2369 relating to requiring a percentage of native plants to be used on State projects in its current form. We suggest a percentage of 10% to be calculated on an annual basis for projects per department. We are an organization of 68 individuals and companies who work in the tree care industry.

Please refer to the Landscape Industry Council of Hawaii's (LICH's) latest testimony on SB 2369 for further information as to why we support this bill.

Respectfully submitted,

Steven Connolly
President



CONSERVATION COUNCIL FOR HAWAI'I

Testimony Submitted to the Senate Committee on Water, Land, and Housing
And Senate Committee on Public Safety, Government Operations, and Military Affairs

Hearing: Tuesday, February 7, 2012 1:15 p.m.
Conference Room 225

In Support of SB 2369 Relating to Public Landscaping

Aloha. The Conservation Council for Hawai'i supports SB 2269 which requires all public landscaping, highway beautification, and road construction and improvement projects to include native Hawaiian land plants, as determined by DLNR. In addition, as much as possible, only native species should be included in such projects.

SB 2369 makes good ecological and economic sense. It will encourage the use of native Hawaiian plants, which are beautiful, hardy, and, in many cases, the best choice for landscaping because they naturally occur here in the islands.

We were disappointed to learn that in the past few years, in some projects, Hawai'i Department of Transportation replaced native Hawaiian species with invasive ones. In one project, native iliahi (sandalwood), naio, kawelu grass, and puakala were replaced with invasive buffelgrass. We recommend that public agencies, such as DOT, be prohibited from planting invasive species on our islands.

Mahalo nui loa for the opportunity to testify. Please support SB 2369

Sincerely,

Marjorie Ziegler



Hawai'i's Voice for Wildlife – Ko Leo Hawai'i no na holoholona lohiu

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The Senate
Committee on Water, Land, and Housing
Committee on Public Safety, Government Operations, and Military Affairs
Tuesday, February 7, 2012
1:15 p.m., Conference Room 225
State Capitol

Testimony in Support of SB 2369

Aloha Chairs Dela Cruz and Espero, and Members of the Committees,

The Coordinating Group on Alien Pest Species (CGAPS) **supports SB 2369**, *Native Hawaiian land plants*, which would require that native Hawaiian plants be incorporated in public works landscaping projects.

CGAPS offers the following comments for discussion:

1. DLNR has the capacity to review non-native plants for landscaping (through the Hawai'i Invasive Species Council Hawai'i Weed Risk Assessment program—the HPWRA), to predict their potential to become invasive. The HPWRA was used to screen all the trees on the Maui County Planting Plan and the City and County of Honolulu's new planting list, and the same can be done for a state list. The screening results from the HPWRA were provided to the counties for their decision on whether or not to use species.
2. The percentage of native plants used may need to be different of different types of projects. For example, it is easier to use a higher percentage of native plants in managed areas such as building landscaping.
3. There needs to be clarification on the listing process for plants. DLNR alone does not have this capacity, and it should work with input from native plant producers, researchers, conservation groups, landscape architects, and maintenance managers.

Finally, I would like to thank everyone for moving this issue forward. It addresses invasive species concerns, promotes native Hawaiian culture and a unique sense of place, and potentially other benefits. Mahalo for your consideration.

Aloha,

Christy Martin
Coordinating Group on Alien Pest Species (CGAPS)
Ph: (808) 722-0995



LANDSCAPE INDUSTRY COUNCIL OF HAWAI'I

February 4, 2012

TESTIMONY FOR SENATE BILL N.O. 2369

SENATE COMMITTEE ON WATER, LAND, AND HOUSING
AND
SENATE COMMITTEE ON PUBLIC SAFETY, GOVERNMENT OPERATIONS, AND
MILITARY AFFAIRS

The Landscape Industry Council of Hawaii opposes Senate Bill 2369 in its current form due to the negative impact to our environment and financial hardship it will present to our tax payers and government agencies in these hard times.

As the president of the Landscape Industry Council of Hawai'i (LICH), I wanted to share with you the landscape industry's expertise on the benefits and impacts of the S.B. 2369 in its current form. Although I am the landscape industry president, I am also a state worker and have no financial interests from the passing of this bill but I am a native plant advocate.

The Landscape Industry Council of Hawaii has led the state on recent landscape sustainability initiatives: Invasive Species Initiative (the most aggressive in the nation, 2008), Irrigation Water Conservation Initiative (saving over 50% of outdoor water use, 2010) and Native Plant Initiative (only initiative for reintroducing native species in a built environment, 2010).

A mere 5% of the land below 1000-foot elevation is inhabited by native species¹ and frankly the amount in the built environment is around 1-2%. There are a number of reasons including agricultural practices altering the soil pH & minerals, invasive plants, lower maintenance non-invasive plants, greater drought tolerant non-native plants, excessively compacted soils, inorganic soils, lack of a native turf grass, lack of good native street trees, exotic ornamentals and our highly altered environment that is different than any ecosystem that a native plant has adapted to – simply no native plant is from an urban environment and adaptation take thousands to millions of years.

Key Points regarding SB2369:

- Requiring 100% native plants on State & County projects is impossible for many reasons:
 - No native turf grasses eliminating 80% of typical landscapes from a native requirement.
 - There are only a couple of native trees that thrive as street trees.

- Major public funded and maintained projects attempting 100% native plantings in the recent decade, led by recognized native plant experts, have mostly failed and have been a waste of tax payer's money.
- Only 10 native plant species have been found bulletproof in urban/developed landscapes and are popular.
- Hawaii's Landscape Industry initiatives that would responsibly and effectively address the need for natives are nascent and well planned but lack funding
- Native plants developed in completely differing conditions than the urban built environment, soils, competing plants, the entire soil profile, and the established urban maintenance practices, are detrimental to most native plants.
- Useable native plant species are mostly in the experimental stage, and plant breeding, trials, and field experience cultivating them on a large scale is effectively unknown territory even among the few experienced experts
- Widespread misconceptions about 'native plants' such as native plants are more drought tolerant than non-natives and low maintenance are a long way from being dispelled, and these false beliefs lead to wasted effort, wasted money, and failures in the actual conditions of the urban built environment.

So the real question is, what is a practical goal regarding native species? With an aggressive strategy for the built environment, Hawaii could develop a 'hybrid' environment of 30-40% native plants over the next 30 years. The good news is with current native plant knowledge, capacity and expertise; government agencies can and should currently utilize a minimum of 10% native Hawaiian plants for an annual total of public landscaping for each agency.

The Landscape Industry recommends proceeding at the legislative level to fund the native plant horticultural research so that the desired goal, an ever increasing percentage of natives established in our built environment, can be attained with scientific and practical horticultural knowledge, ensuring success. As more horticultural research is funded this total should be able to eventually be increased to 30 to 40%. In the absence of such preparations, large amounts of taxpayer's money will be wasted.

I will attempt to explain in more detail these key points regarding SB2369 from the perspective of the landscape industry's experience and expertise using native plants so you can find the opportunities to craft a great bill that will work for Hawaii.

Environment for most roads

Most roads are in dry grassland areas of our states as these are the lowlands are where most of our developments exist due to ease of construction and accessibility. A mere 5% of the land below 1000-foot elevation is inhabited by native species and frankly the amount in the built environment is around 1-2%. There are a number of reasons including agricultural practices altering the soil pH, extreme compaction, invasive plants, low maintenance plants, poor soils, exotic ornamentals and our highly altered environment that is different than any ecosystem that a native plant has adapted to – simply no native plant is from an

urban environment. There are really only 10 bulletproof native plants that make up over 90% of the native plants in the built environment. Any plant will survive anywhere with water and maintenance but how many government projects have irrigation and maintenance resources - the truth is sadly very few.

Street Trees

Street trees are the real green of any city far outreaching all the city's parks. Street trees are amazingly resilient to survive in a three-foot by three-foot planting pit and grow to a size that is relative to the scale of streets. Street tree canopies and roots are pruned for clearance for people, vehicles and street curb projects. The Monkeypod tree (*Samanea saman*) is a quintessential street tree in Hawai'i. Monkeypod trees thrive in the harsh streetscape with small planting areas and provide the most environmental benefits per tree in the form of shade, filtering air pollution and storm water retention. On a per tree basis, the Monkeypod is the most valuable environmental species in Hawai'i, with environmental benefits of \$238 per tree². On a per tree basis, the most valuable canoe tree is the Kamani (*Calophyllum inophyllum*) with benefits of \$85.47 per tree. On a per tree basis, the most valuable native tree is the Kou (*Cordia subcordata*) with benefits of \$56.71 per tree - that's means it takes 4 Kou to provide the benefits of one Monkeypod tree. The Monkeypod tree makes up only 3.1% of the population but because of its great size accounts for 15.1% of tree canopy cover in the City and County of Honolulu. It's a rule of thumb that programmatically a city should have no more than 10% of any one tree species so that a Dutch Elm disease or in our case the Wiliwili gall wasp doesn't ravage our entire city of every native Wiliwili tree (*Erythrina sandwicensis*). There are over 230,000 street trees in Honolulu and only 36 trees do well on our streets with one native tree and one canoe tree. Street trees help to clean the air, curb storm water runoff, raise property values, sequester carbon, provide shade, human social benefits and reduce energy costs.

Historic Properties

Historic federal and state laws protect historic buildings and sites and restricting replacement plants to native may or may not be a problem. Native alternatives will in some cases not meet the intent of the historic design but other times native alternative will suffice.

Turf Grass

One of the biggest issues facing this bill is turf grasses. Short turf grasses are 75% or greater of all urban green spaces and there are no native turf grasses. The landscape industry needs to develop a native turf grass cultivar or variety. We currently use about 5 turf grasses for all the different situations; wear resistant for sports, salt tolerant for seashore and nonpotable water, full sun, shade, and drought resistant. Our public parks, golf courses, athletic fields, roadsides, lawns, building lawns and playgrounds all rely on short turf grasses. Sustainability wise, Seashore Paspalum is the only turf grass that will thrive with nonpotable water saving our precious potable drinking water.

Erosion Control

Vetiver grass, (*Chrysopogon zizanioides* 'Sunshine') a sterile non-native plant, has very promising erosion control applications growing on hardpan, poor compacted soils and systemically eroded areas. The State DOT is actively working on pilot projects comparing the erosion benefits of Vetiver and native plants. Vetiver grass will be 1/10 the cost of more costly erosion control systems of plastic grids, fabrics, and metal soil anchors. Vetiver could be the magic bullet for eroded embankments providing a low cost and environmentally friendly solution reducing erosion and sediments entering our storm water drains and silting our reefs.

Endangered Species

The Tobacco plant (*Nicotiana glauca*) is generally considered a weedy invasive plant and is not actively cultivated for harvesting in Hawai'i. But ecologically is important for the continued survival of a federally listed endangered native Hawai'i species, the Blackburn Sphinx Moth³. Some roads on the Island of Hawaii are habitats for the Blackburn Sphinx Moth.

Native Plant Biodiversity

This bill would reduce our native plant diversity by homogenising native plants and reducing distinct varieties of native species. The landscape industry does not currently curate the source of plants and propagates one genetic version millions of times. So a plant like Naupaka from Oahu will end up on every other island and there is no way currently to verify the origin of a plant. Hawaii enjoys some of the most diverse plant genetics in the world. A recent study showed that Ohia (*Metrosideros polymorpha*) enjoyed 30 times more genetic diversity⁴ in Hawaii than a particular Pine with a range across the entire western United States. The industry through the LICH Native Plant Initiative is working hard to resolve this issue, but we're years away from meaningful results.

Invasive Polynesian Canoe Plants

When it comes to Hawaiian canoe plants, 17 of the 25 have been screened by the Hawai'i Pacific Weed Risk Assessment⁵ for potential invasiveness. The Hawai'i Pacific Weed Risk Assessment is the only objective based plant risk assessment data in Hawaii. Ten are low risk. Three are high risk or potentially invasive and four are between low and high risk. One such species is the Kukui tree (*Aleurites moluccana*) is an invasive canoe plant not from Hawai'i but is culturally and medicinally important. Some of the remaining yet to be screened eight canoe plants have obvious invasive characteristics such as the super invasive Hau Tree (*Hibiscus tiliaceus*).

Financial Perspective

Requiring all state projects to exclusively use native plants would be great financially for the landscape industry but with our current practices and lack of native plant research from our local universities would be substantially more expensive to plant and substantially more expensive to maintain than non-native plants. From my experience at the State, the installation averages double to triple the non-native installation costs and double the costs to maintain versus non-natives. While state projects are using native plants, more financial resources are

needed for long-term success. Recent public transportation projects using exclusively native plants have had poor success rates, notably Mokulele Highway⁶ on Maui cost tax payers \$8.1 million less than 5 years ago to install and less than 10% of the native plants remain. Honolulu City and County installed native plants at Diamond Head Lookout less than 10 years ago and 0% remains. Department of Land and Natural Resources installed native plants at Makapuu Lookout and less than 20% remains. One successful project is Interstate H-1 at Bishop Museum, which employed two bulletproof native plants and 5 years later more than 80% remains. Why did this project succeed where the others failed - irrigation and less invasive species present in surrounding properties. Less than 10% of public lands have irrigation. All of these projects cited employed the premier native nurseries and conservation experts on the design, construction and maintenance.

Hydroseeding Cost Efficiency

Hydroseeding is a quick, economical, and effective means of establishing plantings where seeds are mixed together in a slurry of mulch and essential fertilizers and sprayed uniformly across the soil, creating a favorable, nutrient rich environment for the germination and establishment of seedlings into the soil. Typically grass is hydroseeded but shrubs and trees can also be utilized as long as the seeds are small. Developing low cost hydroseeding techniques for native plants is a critical step for using native plants on the scale of large projects like roads, highways and large developments. Hydroseeding is generally less than 10% - 20% of planting costs. There are a number of DOT research projects discovering the means of hydroseeding native plants but the results are very preliminary.

Water Conservation

Seashore Paspalum (*Paspalum vaginatum*) is the only turf grass that can be irrigated with water with a salt content. Most non-potable (recycled water) has high salt and kills all grasses except for Seashore Paspalum⁷. The Honouliuli Water Recycling Facility in Ewa Beach on O'ahu provides 12 million gallons⁸ (mgd) of non-potable water every day with 10 mgd for irrigation of golf courses with Seashore Paspalum turf grass and 2 mgd for industrial use. There are a number of sustainability benefits of converting to recycled water use for non-drinking purposes. On O'ahu, our water aquifers are close to their maximum output. Recycled water saves groundwater for drinking. It's environmentally sound, renewable, drought-proof water source. Recycled water is less expensive to develop than other new sources of water. All golf courses and Fort Weaver Road utilize Seashore Paspalum in Ewa Beach due to the lack of potable drinking water for landscapes. Seashore Paspalum is considered an invasive plant. A widespread misconception about native plants is that they are more drought tolerant and lower maintenance than non-natives leading to wasted efforts, wasted money, and failures in the actual conditions of the urban built environment this is supported by the fact that a mere 5% of Hawaii's dryland forests, lowest rainfall zone, is inhabited by native species.

Inorganic Soils

Transportation projects are typically society's largest earthwork projects involving excavating substantial amounts of topsoil resulting in the remaining soils being inorganic subsoils. Inorganic soils are an extremely challenging and inhospitable to all plants save a few non-native plants. To prevent substantial erosion and sediments entering our waterways ending up on our ocean reefs, quick growing non-native grasses are employed.

National Precedence

If this bill passes Hawaii would be the first state in the nation to require 100% native plants on all publically funded projects. The same challenges presented in this testimony are present elsewhere in the United States and the solutions to tackle these issues have yet to be resolved anywhere.

State Project Process

State projects take years to development with all the required processes and enacting this bill would require design changes on current projects that would have cost impacts and project delays. Also a project with non-native trees involving transplanting to another site; would these non-native trees have to be destroyed since we can't use funds for non-native trees?

Public Perception versus Buying Habits

When the general public is surveyed it's common to support native plants and environmental issues but why does the public overwhelming purchase non-native plants? Ask yourself, how many natives are in your yard? There's native plants at all the local plant nurseries so it's not a supply issue. The truth is that the public wants bright colors in plants, fruit trees, soft turf grasses and low to no maintenance plants for their yards. More horticultural research is needed to address these desirable elements in native plants. There's also a public education element required to popularize native plants that just really started in the past five years in Hawaii. Government should utilize more natives to demonstrate to the public, but public projects have to successful or native plant use will decrease.

To make Senate Bill 2369 a success, I would suggest one of three approaches or a combination to avoid these impacts and take advantage of this opportunity for government to lead by example. The short-term solution would be limit native plants to the perimeter of the building footprints and include additional maintenance funds to agencies affected particularly the State Department of Education and the State Department of Accounting and General Services.

A second solution is to require 10 percent of non-turf grass on the annual total of publically funded projects for each government agency. This would allow for projects more suitable for natives to have greater than 10 percent and projects that are inhospitable for natives to have less than 10 percent. As research produces more viable native plant solutions the percentage could be gradually increased from 10 percent.

The third and long-term solution is to financially support the Landscape Industry Council of Hawaii (LICH) Native Plant Initiative and/or earmark native plant research at the

University of Hawaii for the responsible use of native plants in the built environment. This is the elephant in the room, this is the bold move to make as a leader, and this will achieve an important component of sustainability and protect and enhance one of the distinctive elements that make Hawai'i so special. The estimated budget for LICH Native Plant Initiative is \$38.5 million over ten years.

The LICH Native Plant Initiative (NPI) is a long-term effort to change the paradigm of using non-native plants and reverse the decline of native plants by promoting the responsible use of native plants in their original range of distribution. The LICH NPI is an inclusive, transparent, and truly collaborative nonprofit initiative bringing together professionals from the landscape industry, conservation, forestry, agricultural, government, education and science to protect and enhance our native biodiversity.

I am genuinely enthusiastic about Senate Bill 2369 as a native plant advocate, since government is the current leader in the use of native plants and should use more native plants to demonstrate and educate the general public. The Landscape Industry would love to work together to make Senate Bill 2369 a real success, please contact me at my email address: 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

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. Since the landscape industry is mostly a service-based industry, the money stays local and has a multiplier effect on our economy.

Celebrating 26 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

References

1. Ecosystem Status for 2008. Percentage of terrestrial ecosystems surviving as native plant communities, Hawaii Conservation Alliance, 2008.
2. City of Honolulu Hawai'i Municipal Forest Resource Analysis, Center for Urban Forest Research, USDA Forest Service, Pacific Southwest Research Station, 2007.

3. The Department of Land and Natural Resources (DLNR) Division of Forestry and Wildlife website, Blackburn's Sphinx Moth Project.
<http://hawaii.gov/dlnr/dofaw/native-invertebrate-conservation-program/projects/blackburns-sphinx-moth-project>
4. Crawford, N. G., C. Hagen, H. F. Sahli, E. A. Stacy, and T. C. Glenn. 2008. Fifteen polymorphic microsatellite loci from Hawaii's *Metrosideros polymorpha* (Myrtales: Myrtaceae), a model species for ecology and evolution. *Molecular Ecology Resources* 8: 308–310.
5. Hawai'i Pacific Weed Risk Assessment
<https://sites.google.com/site/weedriskassessment/home>
6. "The green behind the greenery, Native plants prove costly, difficult for highway landscape," Maui News, June 1, 2008,
<http://www.mauinews.com/page/content.detail/id/504419.html>.
7. Turf Management, Seashore Paspalum, J.T. Brosnan and J. Deputy Department of Tropical Plant and Soil Sciences, University of Hawaii at Manoa College of Tropical Agriculture and Human Resources, Feb. 2008.
8. Honolulu Board of Water Supply,
<http://www.boardofwatersupply.com/cssweb/print.cfm?sid=1103>.



LANDSCAPE INDUSTRY COUNCIL OF HAWAII

February 6, 2012

TESTIMONY FOR SENATE BILL N.O. 2369

SENATE COMMITTEE ON WATER, LAND, AND HOUSING
AND
SENATE COMMITTEE ON PUBLIC SAFETY, GOVERNMENT OPERATIONS, AND
MILITARY AFFAIRS

The Landscape Industry Council of Hawaii supports with comments Senate Bill 2369.

The Landscape Industry Council of Hawaii has led the state on recent landscape sustainability initiatives: Invasive Species Initiative (the most aggressive in the nation, 2008), Irrigation Water Conservation Initiative (saving over 50% of outdoor water use, 2010) and Native Plant Initiative (only initiative for reintroducing native species in a built environment, 2010).

Key Points regarding SB2369:

- The Landscape Industry supports requiring 10% native plant minimum on State & County projects as an achievable goal. More than 10% is unachievable at this time due to:
 - No native turf grasses eliminating 80% of typical landscapes from a native requirement.
 - There are only a couple of native trees that thrive as street trees.
 - Major public funded and maintained projects attempting 100% native plantings in the recent decade, led by recognized native plant experts, have mostly failed and have been a waste of tax payer's money.
 - Only 10 native plant species have been found bulletproof in urban/developed landscapes and are popular.
 - Hawaii's Landscape Industry initiatives that would responsibly and effectively address the need for natives are nascent and well planned but lack funding
 - Native plants developed in completely differing conditions than the urban built environment, soils, competing plants, the entire soil profile, and the established urban maintenance practices, are detrimental to most native plants.
 - Useable native plant species are mostly in the experimental stage, and plant breeding, trials, and field experience cultivating them on a large scale is effectively unknown territory even among the few experienced experts
 - Widespread misconceptions about 'native plants' such as native plants are more drought tolerant than non-natives and low maintenance are a long way from being dispelled, and these false beliefs lead to wasted

effort, wasted money, and failures in the actual conditions of the urban built environment.

With an aggressive strategy for the built environment, Hawaii could develop a 'hybrid' environment of 30-40% native plants over the next 30 years.

The Landscape Industry recommends 10% native plant requirement and proceeding at the legislative level to fund the native plant horticultural research so that the desired goal, an ever increasing percentage of natives established in our built environment, can be attained with scientific and practical horticultural knowledge, ensuring success. As more horticultural research is funded this total should be able to eventually be increased to 30 to 40%. In the absence of such preparations, large amounts of taxpayer's money will be wasted.

I will attempt to explain in more detail these key points regarding SB2369 from the perspective of the landscape industry's experience and expertise using native plants to understand our recommendation of the 10% minimum to meet the challenges government is confronted with choosing the right plant:

Environment for most roads

Most roads are in dry grassland areas of our states as these are the lowlands are where most of our developments exist due to ease of construction and accessibility. A mere 5% of the land below 1000-foot elevation is inhabited by native species and frankly the amount in the built environment is around 1-2%. There are a number of reasons including agricultural practices altering the soil pH, extreme compaction, invasive plants, low maintenance plants, poor soils, exotic ornamentals and our highly altered environment that is different than any ecosystem that a native plant has adapted to – simply no native plant is from an urban environment. There are really only 10 bulletproof native plants that make up over 90% of the native plants in the built environment. Any plant will survive anywhere with water and maintenance but how many government projects have irrigation and maintenance resources - the truth is sadly very few.

Street Trees

Street trees are the real green of any city far outreaching all the city's parks. Street trees are amazingly resilient to survive in a three-foot by three-foot planting pit and grow to a size that is relative to the scale of streets. Street tree canopies and roots are pruned for clearance for people, vehicles and street curb projects. The Monkeypod tree (*Samanea saman*) is a quintessential street tree in Hawai'i. Monkeypod trees thrive in the harsh streetscape with small planting areas and provide the most environmental benefits per tree in the form of shade, filtering air pollution and storm water retention. On a per tree basis, the Monkeypod is the most valuable environmental species in Hawai'i, with environmental benefits of \$238 per tree². On a per tree basis, the most valuable canoe tree is the Kamani (*Calophyllum inophyllum*) with benefits of \$85.47 per tree. On a per tree basis, the most valuable native tree is the Kou (*Cordia subcordata*) with benefits of \$56.71 per tree - that's means it takes 4 Kou to provide the benefits of one Monkeypod tree. The Monkeypod tree makes up only 3.1% of the population but because of its great size accounts for 15.1% of tree canopy cover in the City and County of Honolulu. It's a rule of thumb that programmatically a city should have no more than 10% of any one tree species

so that a Dutch Elm disease or in our case the Wiliwili gall wasp doesn't ravage our entire city of every native Wiliwili tree (*Erythrina sandwicensis*). There are over 230,000 street trees in Honolulu and only 36 trees thrive on our streets with one native tree and one canoe tree. Street trees help to clean the air, curb storm water runoff, raise property values, sequester carbon, provide shade, human social benefits and reduce energy costs.

Historic Properties

Historic federal and state laws protect historic buildings and sites and restricting replacement plants to native may or may not be a problem. Native alternatives will in some cases not meet the intent of the historic design but other times native alternative will suffice.

Turf Grass

One of the biggest issues facing this bill is turf grasses. Short turf grasses are 75% or greater of all urban green spaces and there are no native turf grasses. The landscape industry needs to develop a native turf grass cultivar or variety. We currently use about 5 turf grasses for all the different situations; wear resistant for sports, salt tolerant for seashore and nonpotable water, full sun, shade, and drought resistant. Our public parks, golf courses, athletic fields, roadsides, lawns, building lawns and playgrounds all rely on short turf grasses.

Erosion Control

Vetiver grass, (*Chrysopogon zizanioides* 'Sunshine') a sterile non-native plant, has very promising erosion control applications growing on hardpan, poor compacted soils and systemically eroded areas. The State DOT is actively working on pilot projects comparing the erosion benefits of Vetiver and native plants. Vetiver grass will be 1/10 the cost of more costly erosion control systems of plastic grids, fabrics, and metal soil anchors. Vetiver could be the 'magic bullet' for eroded embankments providing a low cost and environmentally friendly solution reducing erosion and sediments entering our storm water drains and silting our reefs.

Endangered Species

The Tobacco plant (*Nicotiana glauca*) is generally considered a weedy invasive plant and is not actively cultivated for harvesting in Hawai'i. But ecologically is important for the continued survival of a federally listed endangered native Hawai'i species, the Blackburn Sphinx Moth³. Some roads on the Island of Hawaii are habitats for the Blackburn Sphinx Moth.

Native Plant Biodiversity

This bill might reduce our native plant diversity by homogenising native plants and reducing distinct varieties of native species. The landscape industry does not currently curate the source of plants and propagates one genetic version millions of times. So a plant like Naupaka from Oahu will end up on every other island and there is no way currently to verify the origin of a plant. Hawaii enjoys some of the most diverse plant genetics in the world. A recent study showed that Ohia (*Metrosideros polymorpha*) enjoyed 30 times more genetic diversity⁴ in Hawaii than a particular Pine with a range across the entire western United States. The industry through the LICH Native Plant Initiative is working hard to resolve this issue, but we're years away from meaningful results.

Invasive Polynesian Canoe Plants

When it comes to Hawaiian canoe plants, 17 of the 25 have been screened by the Hawai'i Pacific Weed Risk Assessment⁵ for potential invasiveness. The Hawai'i Pacific Weed Risk Assessment is the only objective based plant risk assessment data in Hawaii. Ten are low risk. Three are high risk or potentially invasive and four are between low and high risk. One such species is the Kukui tree (*Aleurites moluccana*) is an invasive canoe plant not from Hawai'i but is culturally and medicinally important. Some of the remaining yet to be screened eight canoe plants have obvious invasive characteristics such as the super invasive Hau Tree (*Hibiscus tiliaceus*).

Financial Perspective

Recent public transportation projects using exclusively native plants have had poor success rates, Mokulele Highway⁶ on Maui cost tax payers \$8.1 million less than 5 years ago to install and less than 10% of the native plants remain. Honolulu City and County installed native plants at Diamond Head Lookout less than 10 years ago and 0% remains. Department of Land and Natural Resources installed native plants at Makapuu Lookout and less than 20% remains. One successful project is Interstate H-1 at Bishop Museum, which employed two bulletproof native plants and 5 years later more than 80% remains. Why did this project succeed where the others failed - irrigation and less invasive species present in surrounding properties. Less than 10% of public lands have a functioning irrigation system. All of these projects cited employed the premier native nurseries and conservation experts on the design, construction and maintenance.

Hydroseeding Cost Efficiency

Hydroseeding is a quick, economical, and effective means of establishing plantings where seeds are mixed together in a slurry of mulch and essential fertilizers and sprayed uniformly across the soil, creating a favorable, nutrient rich environment for the germination and establishment of seedlings into the soil. Typically grass is hydroseeded but shrubs and trees can also be utilized as long as the seeds are small. Developing low cost hydroseeding techniques for native plants is a critical step for using native plants on the scale of large projects like roads, highways and large developments. Hydroseeding is generally less than 10% - 20% of planting costs. There are a number of DOT research projects discovering the means of hydroseeding native plants but the results are very preliminary.

Water Conservation

Seashore Paspalum (*Paspalum vaginatum*) is the only turf grass that can be irrigated with water with a salt content. Most non-potable (recycled water) has high salt and kills all grasses except for Seashore Paspalum⁷. The Honouliuli Water Recycling Facility in Ewa Beach on O'ahu provides 12 million gallons⁸ (mgd) of non-potable water every day with 10 mgd for irrigation of golf courses with Seashore Paspalum turf grass and 2 mgd for industrial use. There are a number of sustainability benefits of converting to recycled water use for non-drinking purposes. On O'ahu, our water aquifers are close to their maximum output. Recycled water saves groundwater for drinking. It's environmentally sound, renewable, drought-proof water source. Recycled water is less expensive

to develop than other new sources of water. All golf courses and Fort Weaver Road utilize Seashore Paspalum in Ewa Beach due to the lack of potable drinking water for landscapes. Seashore Paspalum is considered an invasive plant. A widespread misconception about native plants is that they are more drought tolerant and lower maintenance than non-natives leading to wasted efforts, wasted money, and failures in the actual conditions of the urban built environment this is supported by the fact that a mere 5% of Hawaii's dryland forests, lowest rainfall zone, is inhabited by native species.

#

Inorganic Soils

Transportation projects are typically society's largest earthwork projects involving excavating substantial amounts of topsoil resulting in the remaining soils being inorganic subsoils. Inorganic soils are an extremely challenging and inhospitable to all plants save a few non-native plants. To prevent substantial erosion and sediments entering our waterways ending up on our ocean reefs, quick growing non-native grasses are employed.

State Project Process

State projects take years to development with all the required processes and enacting this bill would require design changes on current projects that may create cost impacts and project delays.

Public Perception versus Buying Habits

When the general public is surveyed it's common to support native plants and environmental issues but why does the public overwhelmingly purchase non-native plants? Ask yourself, how many natives are in your yard? There are native plants at all the local plant nurseries so it's not a supply issue. The truth is that the public wants bright colors in plants, fruit trees, soft turf grasses and low to no maintenance plants for their yards. More horticultural research is needed to address these desirable elements in native plants. There's also a public education element required to popularize native plants that just really started in the past five years in Hawaii. Government should utilize more natives to demonstrate to the public, but public projects have to successful or native plant use will decrease.

To make Senate Bill 2369 a success, we suggest a requirement of 10 percent minimum of non-turf grass areas on the annual total of publically funded projects for each government agency. This would allow for projects more suitable for natives to have greater than 10 percent and projects that are inhospitable for natives to have less than 10 percent. As research produces more viable native plant solutions the percentage could be gradually increased from 10 percent.

The long-term solution is to financially support the Landscape Industry Council of Hawaii (LICH) Native Plant Initiative and/or earmark native plant research at the University of Hawaii for the responsible use of native plants in the built environment. This is the bold move to make as a leader, and this will achieve an important component of sustainability and protect and enhance one of the distinctive elements that make Hawai'i so special. The estimated budget for LICH Native Plant Initiative is \$38.5 million over ten years.

The LICH Native Plant Initiative (NPI) is a long-term effort to change the paradigm of using non-native plants and reverse the decline of native plants by promoting the

responsible use of native plants in their original range of distribution. The LICH NPI is an inclusive, transparent, and truly collaborative nonprofit initiative bringing together professionals from the landscape industry, conservation, forestry, agricultural, government, education and science to protect and enhance our native biodiversity.

I am genuinely enthusiastic about Senate Bill 2369 as a native plant advocate, since government is the current leader in the use of native plants and should use more native plants to demonstrate and educate the general public. If you have any questions, feel free to contact me at my email address: 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

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Online at www.landscapehawaii.org

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<http://hawaii.gov/dlnr/dofaw/native-invertebrate-conservation-program/projects/blackburns-sphinx-moth-project>
4. Crawford, N. G., C. Hagen, H. F. Sahli, E. A. Stacy, and T. C. Glenn. 2008. Fifteen polymorphic microsatellite loci from Hawaii's *Metrosideros polymorpha* (Myrtales: Myrtaceae), a model species for ecology and evolution. *Molecular Ecology Resources* 8: 308–310.
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landscape," Maui News, June 1, 2008,

<http://www.mauinews.com/page/content.detail/id/504419.html>.

7. Turf Management, Seashore Paspalum, J.T. Brosnan and J. Deputy Department of Tropical Plant and Soil Sciences, University of Hawaii at Manoa College of Tropical Agriculture and Human Resources, Feb. 2008.
8. Honolulu Board of Water Supply,
<http://www.boardofwatersupply.com/cssweb/print.cfm?sid=1103>.



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TESTIMONY FOR SENATE BILL No. 2369

Senate Committee of Water, Land and Housing And Senate Committee on Public Safety, Government Operations and Military Affairs

February 5, 2012

While I agree that native plantings should be encouraged for landscape uses in Hawaii, I oppose Senate Bill 2369 in its current form to the negative impact to our environment and the financial hardship it will present to the State of Hawaii and its tax payers during these current economic times.

Many native plants simply do not grow well at elevations below the 1,000-foot elevation because of past agricultural practices, invasive plants and the lower maintenance requirements of non-invasive imported plant material. Many native plants are not as drought tolerant as non-native plants, especially in the excessively compacted inorganic soils found below the 1,000-foot elevation. The reason there are very few native plants is that most native plants were not designed to survive in an urban environment.

Requiring 100% native plants on State and County project is impossible both physically and economically. For example, there is no native turf grass, there are only a couple of native trees that thrive as street trees and very few native plants can stand up to the modern urban area generated by dense populations, car exhaust, foot traffic, and etc.

Over the past decade, attempts by native plant experts to maintain 100% native plantings have mostly failed and/or have proven expensive. Public projects simply will not have the labor force to devote to this type of plant care and will quickly deteriorate.

While I am opposed to SB2369 as written, I do encourage the Bill to be modified to encourage the use of native planting in a small portion (10 to 20%) of any new or major renovation of a public building, provided funding can be found to maintain these plantings properly.

Thank-you for your time, and please do not hesitate to contact me if any questions.

Allan Schildknecht

Allan G. Schildknecht, ASLA-CID
IRRIGATION HAWAII, LTD.

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746 Ilaniwai Street
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808-591-2122
rubberstampplantation.com**

WLH/PGM Committees
Hawaii State Capitol
Honolulu, Hawaii 96813

SB 2369: Opposition

Aloha,

SB 2369 would expand HRS 103D-48. I urge you to reconsider this amendment. All of us want indigenous plants to thrive, but they can be fragile and not suited to every site. For example, yesterday (Sunday, February 4) I ran into a groundskeeper at KCC who was putting together a native plant garden, and she was explaining the problems she was encountering getting them to survive. She said she was a master gardener, so I believe she knew what she was talking about.

She said she was losing as many plants as she was planting, given the limitations of the setting. She was looking for ways to make them work, but was battling shade and runoff, among other problems.

This gardener was a part-time employee who was donating full-time work, so clearly her heart is in the right place. If she was required to use native plants—and I'm not sure she was on that site--you can imagine that the state would pay over and over again for plants doomed to die

While I'm sure you mean well, I'm not sure any of you Senators have green thumbs, backgrounds in horticulture or agronomy, or are master gardeners. Mandating a specific number or percentage of native plants per site or state contract is as silly as requiring a heart surgeon to use a particular valve in every cardiac surgery. I wouldn't want to be under that surgeon's knife, would you?

Let's let the experts make those calls. Otherwise we'll be wasting more money and good intentions on more failures. Please don't require state or federal contracts to satisfy minimum native plant requirements.

Mahalo,

Debra Zeleznik
Rubber Stamp Plantation

VETIVER SYSTEMS HAWAII
304C Iolani Avenue
Honolulu, Hawaii 96813
808-536-5444
vetiversystems@gmail.com

February 5, 2012

Via electronic mail only to:

Chair and members
WLH/PGM Committees
Hawaii State Capitol
South Beretania Street
Honolulu, Hawaii 96813

Re: **SB 2369**; Testimony in opposition

Aloha, Senators,

I oppose **SB 2369**, which proposes to expand the protections included in HRS 103D-48.

First, any mandate that expands a kuleana such as native plants will result in waste, anathema to local culture as well as most others. Most experienced landscapers will readily admit that, despite the best intentions, many native plants simply will not survive in a particular location or satisfy the requirements of the proposed application. Accordingly, this protectionism will benefit a few select specialty nurseries in the short term, while dooming the aesthetic and functional applications of native plants in the long term.

You've undoubtedly noticed a myriad of failed public landscape projects in your respective districts. These were expensive, publicly-funded plantings that died because of lack of maintenance. In many cases, they failed because they simply weren't watered.

In some cases, the contracts were flawed. Many landscapers and/or nurseries have adopted a "plant 'em and leave 'em" policy, strictly adhering to the terms of contracts that require only a 90-day maintenance period. Tight contractual maintenance periods virtually ensure that the plants, all of which are fungible and many of which—including native plants—are fragile, will die. While these policies guarantee that a nursery will enjoy repeat business, it's a wasteful use of scarce public funds.

I promote, grow, and install Vetiver, a non-invasive clump grass with a vertical root system 12-15' deep that anchors soil and stabilizes slopes. It's grown in hedges as a grass retaining wall. No less an expert than Rick Barboza admits that NO native grass or sedge has a root system deeper than 2-3 feet. When I encounter people who insist that an inhospitable site include only native plants, I respond, "Sometimes native plants need some help. That's what Vetiver does. Install native plants AFTER Vetiver stabilizes the site."

Although native plants enjoy some staunch and persuasive advocates, blanket efforts to protect that narrow segment of the market do all of us, including the taxpayer, a gross disservice. Please leave HRS 103D-48 alone.

Thank you!

Very truly yours,

Mary A. Wilkowski, Esq.
Vetiver Systems Hawaii LLC
Owner

Dane Wicke

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 06, 2012 8:53 PM
To: WLH Testimony
Cc: lelan@kauainursery.com
Subject: Testimony for SB2369 on 2/7/2012 1:15:00 PM

Testimony for WLH/PGM 2/7/2012 1:15:00 PM SB2369

Conference room: 225
Testifier position: Support
Testifier will be present: No
Submitted by: Lelan Nishek
Organization: Kauai Nursery & Landscaping, Inc.
E-mail: lelan@kauainursery.com
Submitted on: 2/6/2012

Comments:

We support the Landscape Industry Council of Hawaii position as submitted on February 6, 2012, which is in support of SB2369 with comments.

Dane Wicker

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 06, 2012 2:14 PM
To: WLH Testimony
Cc: matthewklynch@gmail.com
Subject: Testimony for SB2369 on 2/7/2012 1:15:00 PM

Testimony for WLH/PGM 2/7/2012 1:15:00 PM SB2369

Conference room: 225
Testifier position: Support
Testifier will be present: No
Submitted by: Matthew Lynch
Organization: The Asia-Pacific Center for Regenerative Design
E-mail: matthewklynch@gmail.com
Submitted on: 2/6/2012

Comments:

This measure is a simple and cost-effective step in the right direction to beautify Hawaii's urban landscape, and has the potential to strengthen our biodiversity and therefore the resilience of our ecosystems, and move towards producing restorative impacts upon our environment & community.

The Asia-Pacific Center for Regenerative Design supports Measure SB2369 to include native Hawaiian land plants, as determined by DLNR, in all public landscaping, highway beautification, and road construction and improvement projects.

TESTIMONY FOR SENATE BILL N.O. 2369
FEBRUARY 6, 2012

SENATE COMMITTEE ON WATER, LAND AND HOUSING
AND
SENATE COMMITTEE ON PUBLIC SAFETY, GOVERNMENT OPERATIONS,
AND MILITARY AFFAIRS

The goal is laudable, but let's not forget that the best can be the enemy of the good.

The Landscape Industry Council of Hawaii was recently praised, at the State Conservation Conference, by the Emeritus Forester from UH Hilo, as the only landscape industry in any state, nationwide, that has stepped forward proactively to cooperate and lead in the fight against invasives and the use and promotion of native plants.

Substantial practical and scientific difficulties face us as we move in the right direction.

A blanket 100% native requirement will absolutely not work, and its failures will become more publicly prominent than the many past failures have been.

A reasonable goal, with benchmarks and action plans and stakeholder partners, of 25% to 30% of our built-environment plantings transitioning to 'natives' can be done.

There are only about 10 usable native-plant 'propagules' (horticulturally-known and repeatable vegetative materials for planting in quantity), available in Hawaii. There is a lack of widespread experience and research on the dozens and dozens more that are needed if real native plantings are to be successful.

This means that the State needs to team up with Landscape Industry and UH and conservationists and its own agencies to make this essentially social and urban landscape activism a success. Even within the government agency construction projects success is not assured unless more research and capacity building in the industry is done.

Just as ranchers, hunters, fishermen and surfers are the practical, real-world environmentalists, so our landscape industry: gardeners, landscape architects, parks and golf course managers, contractors, nurserymen, and suppliers, are the practical environmentalists of the urban and suburban world. A public site or building with dead native plants assists no one and, frankly, this has often been the result so far.

Let the State help fund the non-profit educational LICH-Foundation, for the Native Plant Initiative, and all parties can work together for a real-world, practical success.

Boyd Ready, Vice-President
Landscape Industry Council of Hawaii
PO Box 22983, Honolulu HI 96823
boydready@hawaii.rr.com, tel. 306-9307

February 6, 2012

The Honorable Senator Donovan M. Dela Cruz, Chair
Committee on Water, Land and Housing
The Honorable Senator Will Espero, Chair
Senate Comm. on Public Safety, Government Operations, and Military Affairs
Hawai'i State Capitol
Honolulu, HI 96813

RE: Testimony of qualified support for SB2369 relating to public landscaping

Chairs Dela Cruz, Espero and Members of the Committees:

Thank you for this opportunity to present testimony on SB2369.

The Outdoor Circle believes that it is a great idea to encourage the planting of native species along our roadways and at public buildings. However, we are concerned the legislation not be so overreaching in its goals that it includes requirements that for whatever valid reasons, might be difficult to fulfill.

Chief among the potential problem list is the availability of desirable native plants for this purpose. For that reason we think it is essential that if a list of native Hawaiian plants is established as proposed, that it be as broad as possible to make it easier to find approved plants for various projects.

However, the problem of native plant availability makes it extremely difficult to require that these public landscaping projects include a minimum percentage of native plants. The availability of native plants varies at different times of year in each county and the overall availability of native species always varies from county to county. These variables cannot be legislated away and could very well make it difficult or impossible to meet minimum planting percentage, depending on the circumstances.

Mahalo.

Bob Loy
Director of Environmental Programming

~~XXXXXXXXXX~~

From: mailinglist@capitol.hawaii.gov
Sent: Sunday, February 05, 2012 8:56 AM
To: WLH Testimony
Cc: jaydeputy@gmail.com
Subject: Testimony for SB2369 on 2/7/2012 1:15:00 PM

Testimony for WLH/PGM 2/7/2012 1:15:00 PM SB2369

Conference room: 225
Testifier position: Oppose
Testifier will be present: No
Submitted by: James C Deputy
Organization: Individual
E-mail: jaydeputy@gmail.com
Submitted on: 2/5/2012

Comments:

I oppose SB 2369 in its present form. It is a misconception that all native plants are suitable for use in the built urban environment. Native plants are adapted to localized natural environments, and most do not survive in the altered urban environment. The bill should be amended to read appropriately adapted native plants or other non-invasive plants shall be used for the designated purposes.

James C Deputy
Landscape Specialist UH/CTAHR Retired

~~2009/11/04~~

From: mailinglist@capitol.hawaii.gov
Sent: Sunday, February 05, 2012 11:43 AM
To: WLH Testimony
Cc: lgla@lava.net
Subject: Testimony for SB2369 on 2/7/2012 1:15:00 PM

Testimony for WLH/PGM 2/7/2012 1:15:00 PM SB2369

Conference room: 225
Testifier position: Oppose
Testifier will be present: No
Submitted by: Loriann Gordon
Organization: Individual
E-mail: lgla@lava.net
Submitted on: 2/5/2012

Comments:
Aloha Messrs.,

As a licensed landscape architect in the state of Hawaii, I write in opposition of the bill shown above (native species only).

Rather than re-inventing the wheel, simply refer to Chris Dacus's thorough letter. It gives all the real world Reasons why this measure would be be a disaster and utter failure..

Kind regards,
Loriann Gordon Landscape Archirect

~~XXXXXXXXXX~~

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 06, 2012 10:03 AM
To: WLH Testimony
Cc: david@hawaiiinursery.com
Subject: Testimony for SB2369 on 2/7/2012 1:15:00 PM

Testimony for WLH/PGM 2/7/2012 1:15:00 PM SB2369

Conference room: 225
Testifier position: Oppose
Testifier will be present: No
Submitted by: David Fell
Organization: Hawaiian Sunshine Nursery
E-mail: david@hawaiiinursery.com
Submitted on: 2/6/2012

Comments:

This bill appears on the surface to be beneficial but doesn't take reality into consideration.

Eliminating exotic plants would eliminate the beauty of the islands. There is a place for natives but there is also a place for exotics. Less legislation is preferable to more. This bill will damage the islands for everyone.

February 6, 2012

Aloha Senators Delacruz (Chair, WLH) and Espero (Chair, PGM) as well as Senators Solomon (V. Chair, WLM) and Kidani (V. Chair, PGM),

I'm writing to ask for your support in the passing of SB 2369 through your respective Committees. Our government far too long has overlooked the importance of native Hawaiian plants and we are in jeopardy of completely erasing 70 million years of natural history and evolution on these islands. Within the last 200 years we have managed to take our surroundings for granted to a point that now secures Hawaii as the "Endangered Species Capitol of The World". With that title we've also succeeded in uprooting our host culture by stripping the landscape from which it was molded and depends on so much.

One of the main problems contributing to this situation is the fact that Hawaii's lowland dry forest was the center hub for biological diversity. Unfortunately this is where we all live, work and commute through today. In following our State's lead of promoting native plants for improved watersheds, the utilization of native plants in government landscapes and roadside projects would be proper follow through, since the watershed doesn't stop at the mountain tops.

In addition to the economical benefits associated with healthy watersheds and water security as portrayed in "The Rain Follows the Forest" native plants also keep visitors wanting to come to Hawaii! Millions of people come here from all over the world to see the uniqueness of these islands, however, we've transformed it to look like every other "Tropical" place on Earth. There is no difference in the landscaping here today from the landscaping in Thailand, Mexico, the Bahamas, the Philippines, etc.... What is different is the price! It's way cheaper for people in the mainland to go to the Bahamas and Mexico than it is for them to come to Hawaii and the same goes for people in China and Japan to go to Thailand and the Philippines. They can see the same "tropics" there as they can here, but for less money. If it's Hawaiian Culture they want to see, well, we already know that too is being diluted by its surroundings so who knows how long that will last. We can't restrict the real Hawaii to museums and botanical gardens. Ironically, botanical gardens were meant for people of Hawaii to see the plants of the world, instead that's where we go to see plants of Hawaii. There is definitely something wrong with that picture.

By restoring the plants that once thrived in the lowlands through the State's landscaping and roadside projects then perhaps the rest of our island residents and businesses will follow that lead and for once we can reverse the downward spiral and bring Hawaii back.

Mahalo,

Jan-Marie Agua

February 6, 2012

Aloha Senators Delacruz (Chair, WLH) and Espero (Chair, PGM) as well as Senators Solomon (V. Chair, WLM) and Kidani (V. Chair, PGM),

I'm writing to ask for your support in the passing of SB 2369 through your respective Committees. Our government far too long has overlooked the importance of native Hawaiian plants and we are in jeopardy of completely erasing 70 million years of natural history and evolution on these islands. With in the last 200 years we have managed to take our surroundings for granted to a point that now secures Hawaii as the "Endangered Species Capitol of The World". With that title we've also succeeded in uprooting our host culture by stripping the landscape from which it was molded and depends on so much.

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By restoring the plants that once thrived in the lowlands through the State's landscaping and roadside projects then perhaps the rest of our island residents and businesses will follow that lead and for once we can reverse the downward spiral and bring Hawaii back.

Mahalo for your concern,



Rick Barboza

46-403 Haiku Rd. Kane'ohe HI, 96744

February 6, 2012

Aloha Senators DelaCruz (Chair, WLH) and Espero (Chair, PGM) as well as Senators Solomon (V. Chair, WLM) and Kidani (V. Chair, PGM),

I'm writing to ask for your support in the passing of SB 2369 through your respective Committees. Our government far too long has overlooked the importance of native Hawaiian plants and we are in jeopardy of completely erasing 70 million years of natural history and evolution on these islands. With in the last 200 years we have managed to take our surroundings for granted to a point that now secures Hawaii as the "Endangered Species Capitol of The World". With that title we've also succeeded in uprooting our host culture by stripping the landscape from which it was molded and depends on so much.

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By restoring the plants that once thrived in the lowlands through the State's landscaping and roadside projects then perhaps the rest of our island residents and businesses will follow that lead and for once we can reverse the downward spiral and bring Hawaii back. Aikea!

Mahalo,

Richele L. Awana

February 6, 2012

Senators DelaCruz (Chair, WLH) and Espero (Chair, PGM)
Senators Solomon (V. Chair, WLM) and Kidani (V. Chair, PGM)

Aloha Senators,

Herewith is my personal testimony in support of passing of SB 2369 through your respective Committees. As one studied, trained and practiced in Native Hawaiian architecture and planning, I humbly submit that the State considers the role that Native plants have with our natural and built environment. Hawaii faces and will continue to face the adverse impacts of the natural environment, which is continually challenged by multiple invasive sources, including noxious plants, poor planning and the pressuring demands for increased built environment. In order to help alleviate these unfortunate realities, support for the development and planting of appropriate Native plant species here in Hawaii is crucial.

Aside from visitor experience and expectations, Hawaii must evaluate how it can share an ecologically responsive message with partners throughout the world. This "export" from the Endangered Species Capitol of the World (Hawaii) has the potential of meaningfully identifying Hawaii as a multifaceted destination where our partners may understand the importance and management of preserving and protecting fragile and fleeting cultural and natural resources. Passage of SB 2369 is one of the numerous, but necessary, steps that should be taken toward restoring Hawaii's unique sense of place, responsibly acknowledging past biological oversights, and communicating the State of Hawaii's new commitment towards conservation and preservation.

Mahalo,



Kaiwi Nui Yoon

~~AWARNING~~

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 06, 2012 12:23 PM
To: WLH Testimony
Cc: kimnb99@hotmail.com
Subject: Testimony for SB2369 on 2/7/2012 1:15:00 PM

Testimony for WLH/PGM 2/7/2012 1:15:00 PM SB2369

Conference room: 225
Testifier position: Support
Testifier will be present: No
Submitted by: Kim Yamauchi
Organization: Individual
E-mail: kimnb99@hotmail.com
Submitted on: 2/6/2012

Comments:

February 6, 2012

Aloha Senators Delacruz (Chair, WLH) and Espero (Chair, PGM) as well as Senators Solomon (V. Chair, WLM) and Kidani (V. Chair, PGM), I'm writing to ask for your support in the passing of SB 2369 through your respective Committees. Our government far too long has overlooked the importance of native Hawaiian plants and we are in jeopardy of completely erasing 70 million years of natural history and evolution on these islands. With in the last 200 years we have managed to take our surroundings for granted to a point that now secures Hawaii as the "Endangered Species Capitol of The World". With that title we've also succeeded in uprooting our host culture by stripping the landscape from which it was molded and depends on so much. One of the main problems contributing to this situation is the fact that Hawaii's lowland dry forest was the center hub for biological diversity. Unfortunately this is where we all live, work and commute through today. In following our State's lead of promoting native plants for improved watersheds, the utilization of native plants in government landscapes and roadside projects would be proper follow through, since the watershed doesn't stop at the mountain tops.

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By restoring the plants that once thrived in the lowlands through the State's landscaping and roadside projects then perhaps the rest of our island residents and businesses will follow that lead and for once we can reverse the downward spiral and bring Hawaii back.

Mahalo,
Kim Yamauchi

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 06, 2012 4:46 PM
To: WLH Testimony
Cc: laurajeanknudsen@gmail.com
Subject: Testimony for SB2369 on 2/7/2012 1:15:00 PM

Testimony for WLH/PGM 2/7/2012 1:15:00 PM SB2369

Conference room: 225
Testifier position: Support
Testifier will be present: No
Submitted by: laura knudsen
Organization: Individual
E-mail: laurajeanknudsen@gmail.com
Submitted on: 2/6/2012

Comments:

This is such an easy and effective for the govt to take a pro-native plant stance, support local businesses like Hui Ku, and work towards saving our native species, many of which are threatened. Great idea, Mahalo.

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 06, 2012 5:15 PM
To: WLH Testimony
Cc: fokamoto@hawaii.edu
Subject: Testimony for SB2369 on 2/7/2012 1:15:00 PM

Testimony for WLH/PGM 2/7/2012 1:15:00 PM SB2369

Conference room: 225
Testifier position: Support
Testifier will be present: No
Submitted by: Frani Okamoto
Organization: Individual
E-mail: fokamoto@hawaii.edu
Submitted on: 2/6/2012

Comments:

lane Wicke

From: Mele Look [melelook@gmail.com]
Sent: Monday, February 06, 2012 12:37 PM
To: WLH Testimony
Subject: SB 2369

RE: SB 2369

Aloha kakou:

Native Hawaiian plants are an essential part of what makes Hawai'i unique, and critical to the life of our Native Hawaiian culture and ecosystems. Please support in the passing of SB 2369 through your respective Committees. Our government far too long has overlooked the importance of native Hawaiian plants and we are in jeopardy of completely erasing 70 million years of natural history and evolution on these islands. With in the last 200 years we have managed to take our surroundings for granted to a point that now secures Hawaii as the "Endangered Species Capitol of The World". With that title we've also succeeded in uprooting our host culture by stripping the landscape from which it was molded and depends on so much.

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Mahalo,

Mele Look

February 6, 2012

Aloha Senators Delacruz (Chair, WLH) and Espero (Chair, PGM) as well as Senators Solomon (V. Chair, WLM) and Kidani (V. Chair, PGM)

Please support **SB 2369** through your respective Committees.

I'm writing to ask for your support in the passing of SB 2369 through your respective Committees.

The places people live shape the attitudes and lifestyles necessary to reconnect to the environment, create community, and perpetuate the values that make Hawai'i unique.

Despite Hawaii's limited land size, nearly all of the Earth's biomes, soil types, and microclimates are represented. From coral reefs to alpine deserts, the majority of Hawai'i's native flora and fauna are found nowhere else; an exemplary instance of evolution and biodiversity in which Hawai'i's culture has coevolved and developed.

Hawai'i's environment supports a rich and diverse biological heritage—an estimated 91% of flowering plants, 81% of birds, and 99% of terrestrial snails and arthropods are found nowhere else on the planet. However, with over 350 endangered native plant and animal species, Hawai'i has become the "endangered species capital of the world." The biological heritage of the Hawaiian archipelago is the foundation of Hawaiian culture, providing the resources for food, shelter, medicine, tools, and entertainment. Many cultural practices and place signifiers are directly linked to plants only found in Hawai'i; threats to Hawai'i's wildlife resources therefore threatens the very essence of Hawaiian culture.

Life in such a place provokes an endless array of questions and imperatives for shaping the futures of humanity, especially for those who understand (and appreciate) the value of Hawai'i's dynamic environment, history, and culture.

Our government far too long has overlooked the importance of native Hawaiian plants and we are in jeopardy of completely erasing 70 million years of natural history and evolution on these islands. With in the last 200 years we have managed to take our surroundings for granted to a point that now secures Hawaii as the "Endangered Species Capitol of The World". With that title we've also succeeded in uprooting our host culture by stripping the landscape from which it was molded and depends on so much.

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By restoring the plants that once thrived in the lowlands through the State's landscaping and roadside projects then perhaps the rest of our island residents and businesses will follow that lead and for once we can reverse the downward spiral and bring Hawaii back.

Mahalo,

SEAN W CONNELLY
2969 Manoa Road
Honolulu Hawaii 96822
+1 (808) 255-5453
seanwconnelly@gmail.com

Dane Wicker

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 06, 2012 4:05 PM
To: WLH Testimony
Cc: dana1@hawaii.rr.com
Subject: Testimony for SB2369 on 2/7/2012 1:15:00 PM

Testimony for WLH/PGM 2/7/2012 1:15:00 PM **SB2369**

Conference room: 225
Testifier position: **Support**
Testifier will be present: No
Submitted by: Dana Anne Yee, ASLA, ISA CA, LEED AP
Organization: Individual
E-mail: dana1@hawaii.rr.com
Submitted on: 2/6/2012

Comments:

As an active Landscape Architect in the State of Hawaii and Past President of the American Society of Landscape Architects, I strongly support Senate Bill 2369 (SB2369) as it relates to utilizing Native Hawaiian Plants for Public Landscapes. Native plants are an important part of our natural environment and must be protected and preserved now and for future generations. Dana Anne Yee, ASLA, ISA CA, LEED AP, Dana Anne Yee, Landscape Architect, LLC.

I am writing in support for SB2369, requiring native plants to be used in landscaping. This bill should be passed because Native plants are naturally drought resistant and do not require a lot of water. They also have important cultural significance. Furthermore, exotic plants should not be used because they have the potential to be invasive, which could disturb Hawaii's unique ecosystems.

Thank you,
Ryan Hoan

Dane Wicker

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 06, 2012 1:07 PM
To: WLH Testimony
Cc: davidlhenkin@yahoo.com
Subject: Testimony for SB2369 on 2/7/2012 1:15:00 PM

Testimony for WLH/PGM 2/7/2012 1:15:00 PM SB2369

Conference room: 225
Testifier position: Support
Testifier will be present: No
Submitted by: David Henkin
Organization: Individual
E-mail: davidlhenkin@yahoo.com
Submitted on: 2/6/2012

Comments:

Please pass this legislation to ensure that public projects incorporate the plants that are native to this 'aina. Mahalo.

COMMITTEE ON WATER, LAND, AND HOUSING
COMMITTEE ON PUBLIC SAFETY, GOVERNMENT OPERATIONS,
AND MILITARY AFFAIRS

Testimony for SB2369

Date 2/6/12

Ivory McClintock
4300 Hokualele Rd.
Anahola, HI 96703
(808) 652 9564
ivorykealani@gmail.com

To: Chair Donovan M. Dela Cruz, Vice Chair Malama Solomon, Chair
Will Espero, Vice Chair Michelle N. Kidani & Committee members of
both Water, Land, and Housing & Public Safety, Government
Operations, and Military Affairs,

I am writing in **support** of SB 2369 Relating to Public Landscaping
and hope that you will support this measure as it pertains to the
beauty of our islands and preservation of our culture. The importance
of integrating native Hawaiian land plants into our landscapes will not
only beautify the landscapes of our islands but will best maximize the
space of land as plants that are native to the state require less
maintenance and resources for them to thrive in their natural habitat.
Mahalo for allowing me the opportunity to testify.

Sincerely yours,

Ivory McClintock

TRAVIS IDOL
55 S KUKUI ST. D2302
HONOLULU, HI 96822

06 FEBRUARY 2012

TESTIMONY FOR SENATE BILL 2369

SENATE COMMITTEE ON WATER, LAND, AND HOUSING
AND
SENATE COMMITTEE ON PUBLIC SAFETY, GOVERNMENT OPERATIONS, AND
MILITARY AFFAIRS

I am writing in opposition to SB 2369 as currently written. The requirement for the use of 100% native Hawaiian plants for landscaping of most state projects is simply not feasible. As a researcher and professional at the University of Hawaii, I have seen the use of native plants in landscaping on the UH-Manoa campus increase dramatically in the 10 years I have been here. I have also been involved in relandscaping the Sherman Laboratory courtyard with native plants. This project won two landscaping awards: one from the Outdoor Circle and another from Scenic Hawaii (the Betty Crocker Landscape award). I was also involved in a project to use native plants for green roof boxes, which got a lot of good press and served as a teaching demonstration for various groups.

Despite my past involvement and enthusiasm for native plants in public places, the testimony of Chris Dacus, head of the Landscape Industry Council of Hawaii (LICH) spells out the arguments against this measure quite well. Their recommendation to support the LICH native plants initiative is a better course of action for the legislature. I fully sympathize with the motivation for this bill, however. There are many native plants that are suitable for landscaping, and they have been integrated in many large and medium-sized landscaping projects, e.g. public and private school campuses. These projects demonstrate clearly that native plants can and should be a *part* of many landscaping projects, but we simply cannot rely upon them to provide 100% of the plants we need in all settings and for all purposes.

An amended bill perhaps could commission a task force or fund a study to work with the LICH, the University of Hawaii, native plant growers, and landscapers who use native plants to develop a list of suitable native plants and the environments and purposes for which they can be used. This list would then serve as the primary resource for plant selection in public landscape projects. Funding for public landscape projects by contractors could be tied to the use of native plants where suitable, and the list, of course, could be expanded over time as we improve our knowledge of how to use native plants and develop improved native plant materials and varieties for landscaping.

What this bill makes clear is that native plants in Hawaii have good potential for use in landscaping, and that more work needs to be done to identify and develop suitable species, appropriate locations and purposes, and best management practices for integrating natives. In some cases, use of 100% native may actually be feasible, but the reality is in most cases, we will need to rely on a mixture of native and introduced species to meet our needs. I hope the Senate will act accordingly to ensure the best use of Hawaii's native flora in landscape projects, now and in the future.

From: mailinglist@capitol.hawaii.gov
Sent: Monday, February 06, 2012 12:51 PM
To: WLH Testimony
Cc: kshishido02@yahoo.com
Subject: Testimony for SB2369 on 2/7/2012 1:15:00 PM

Testimony for WLH/PGM 2/7/2012 1:15:00 PM SB2369

Conference room: 225
Testifier position: Support
Testifier will be present: No
Submitted by: Karen Shishido
Organization: Individual
E-mail: kshishido02@yahoo.com
Submitted on: 2/6/2012

Comments:

Chair Dela Cruz, Chair Espero, Vice Chair Solomon, Vice Chair Kidani, and Members of the Committees:

I support Sb2369 which would require all public landscaping, highway beautification, and road construction and improvement projects to include native plants. Native plants are best suited to our climate and soils and will require far less inputs of water, pesticide and fertilizer (and therefore funds) than conventional turf grass and imported species. Conserving potable water and keeping chemicals out of stormwater runoff are in line with our sustainability goals as a community. As a sustainability consultant working with green buildings, I have often seen how properly selected native landscaping thrives and offers aesthetic and environmental benefit. These plants lend a strong sense of place that is of value to all who will enjoy them in public works projects. Thank you for the opportunity to submit testimony.

Sincerely,

Karen Shishido

Makiki, Honolulu HI 96822

February 6, 2012

TESTIMONY FOR SENATE BILL N.O. 2369
SENATE COMMITTEE ON WATER, LAND, AND HOUSING
AND
SENATE COMMITTEE ON PUBLIC SAFETY, GOVERNMENT OPERATIONS, AND
MILITARY AFFAIRS

I fully support Senate Bill 2369 since it can promote public awareness on conservation and environmental protection and it can help reduce invasive species spread.

Incorporating native Hawaiian plants in landscape projects funded by public moneys can help showcase Hawaii's unique flora while creating a Hawaiian sense of place. Native plants can help acquaint and educate the public about the natural history of Hawaii as it provides a view of what plants/ecosystems evolved/existed in the islands for thousands of years. Educating the public on native Hawaiian plants through landscape projects will give them a greater appreciation of biodiversity and a sense of environmental responsibility.

Aside from promoting public awareness on environmental protection and biodiversity conservation, the utilization of native plants in landscapes can help mitigate invasive species. Roads, in particular, are one of the main pathways wherein an invasive plant can establish and spread. Planting native species on roadsides can help limit areas wherein invasive plants can take root. Substituting natives instead of non-native species can also reduce the risk of introducing potentially invasive plants.

Orville Baldos

Graduate student, Tropical Plant and Soil Sciences
University of Hawaii at Manoa
obaldos@hawaii.edu