



**STATE OF HAWAII  
DEPARTMENT OF ACCOUNTING  
AND GENERAL SERVICES  
P.O. BOX 119  
HONOLULU, HAWAII 96810-0119**

TESTIMONY  
OF  
RUSS K. SAITO, COMPTROLLER  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
TO THE  
HOUSE COMMITTEE  
ON  
WATER, LAND, & OCEAN RESOURCES  
ON  
March 23, 2009  
S.B. 1645, S.D. 1

RELATING TO STATE BUILDING CODE

Chair Ito and members of the Committee, thank you for the opportunity to testify on S.B. 1645, S.D.1.

The Department of Accounting and General Services (DAGS) opposes this bill because it would undermine the process that has been established for adopting building codes and amendments for Hawai'i. The State Building Code Council, which was established by Act 82 of the 2007 Legislature, follows a comprehensive process specified by HRS 107, Part II, State Building Code and Design Standards, in adopting State building codes from the national and international codes developed by national and international organizations. This process involves extensive review by expert committees of architects, engineers, and industry experts, unanimous approval by a subcommittee of county building officials, and approval by the full Council, followed by public hearings and the rulemaking process by which the building codes are put into effect.

Furthermore, the State Building Code Council recently approved the International Building Code for adoption as a State Building Code. The International Building Code includes a procedure in Section 104.11 for experts in such matters to technically evaluate and approve construction materials. The International Code Council (ICC) also enables proponents of new or alternative construction materials to document the structural properties of the material for which consideration is desired based on testing.

The ICC has certified one species of bamboo for use as a construction material. Other materials, including other species of bamboo should be submitted to the same process for certification and approval for use. Following a process such as laid out by the ICC ensures that all construction materials are technically substantiated in accordance with national standards. Asking the State Building Code Council to develop criteria and standards for use of other species of bamboo as construction material in Hawai'i defeats the purpose of the extensive technical substantiation the ICC is designed to provide and upon which not just Hawai'i but other states and county agencies rely.

DAGS recommends that this bill be held.

Thank you for the opportunity to testify on this matter.

## Testimony for SB1645 on 3/23/2009 9:30:00 AM

mailinglist@capitol.hawaii.gov [mailinglist@capitol.hawaii.gov]

**Sent:** Sunday, March 22, 2009 6:27 PM

**To:** WLOtestimony

**Cc:** [REDACTED]

# LATE TESTIMONY

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Testimony for WLO 3/23/2009 9:30:00 AM SB1645

Conference room: 325

Testifier position: support

Testifier will be present: No

Submitted by: Leimana Pelton

Organization:

Address: [REDACTED]

Phone: [REDACTED]

E-mail: [REDACTED]

Submitted on: 3/22/2009

### Comments:

Bamboo building is the wave of the future for Hawai`i and all we need is an open mind of learning from the state building council to move forward. Mahalo for your support SB1645.

I am R.C. Leimana Pelton. I am president of Bamboo Village Hawaii., Inc a nonprofit whose mission is to promote the eco ethical industry of bamboo utilization, and Eco Terrestrial Concepts, LLC., a ,bamboo design and build company. I was originally tutored by the world's greatest bamboo architect, Simon Velez of Colombia, SA., in 1996. He taught me all the practical knowledge of utilizing bamboo as a construction material, and his unique system of joinery and design. His master bamboo builders tutored me in construction technique. Since then my focus has been to develop a joinery system for bamboo that requires less training and reduces the labor factor. I have spent the last ten years evolving this joinery system especially designed to make constructing with bamboo easy for someone with some knowledge of the characteristics of bamboo now available in workshops and books. I also planted, on my land on the Big Island, the same bamboo species they grow in Colombia, Guadua Angustifolia, known internationally as a superior timber species, and which is soon to be submitted for ICC testing for inclusion in the Uniform Building Code. In addition I have for 10 years grown many other timber species of bamboo. I also built the first pest treatment plant in Hawaii specifically designed for bamboo by Dr. Walter Leise of Germany. I have taught bamboo construction in Hawaii, continental U.S., and in Europe, co- designed with Simon Velez and taught building professionals how to build what is now the largest bamboo structure in Europe, near Milan, Italy.

With education, bamboo makes friends across the world. mahalo for your support.

Mahalo for your support!

**Testimony for SB1645 on 3/23/2009 9:30:00 AM**

mailinglist@capitol.hawaii.gov [mailinglist@capitol.hawaii.gov]

**Sent:** Sunday, March 22, 2009 6:15 PM

**To:** WLOtestimony

**Cc:** [REDACTED]

**LATE TESTIMONY**

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Testimony for WLO 3/23/2009 9:30:00 AM SB1645

Conference room: 325

Testifier position: support

Testifier will be present: No

Submitted by: Shawn James Leavey

Organization:

Address: [REDACTED]

Phone: --

E-mail [REDACTED]

Submitted on: 3/22/2009

Comments:

BIG MAHALO for your support of bamboo!

**Testimony for SB1645 on 3/23/2009 9:30:00 AM**

mailinglist@capitol.hawaii.gov [mailinglist@capitol.hawaii.gov]

**Sent:** Sunday, March 22, 2009 8:37 PM

**To:** WLOtestimony

**Cc:** [REDACTED]@johnstondesigns.com

**Attachments:** Letter of Support for SB N~1.pdf (88 KB)

**LATE TESTIMONY**

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Testimony for WLO 3/23/2009 9:30:00 AM SB1645

Conference room: 325

Testifier position: support

Testifier will be present: No

Submitted by: Dean Johnston

Organization: Dean Johnston Designs

Address: [REDACTED]

Phone: [REDACTED]

E-mail: [REDACTED]

Submitted on: 3/22/2009

Comments:

Aloha

The importance of bamboo in the State of Hawaii's future cannot be over-emphasized.

Our opportunity to shift from to agriculture which heals the aina, creates sustainable jobs and produces multiple economic and environmental benefits is here.

Thank you very much for your thoughtful consideration.

Mahalo

Dean Johnston M.Arch. LEED AP

## Dean Johnston Designs

789 Hamana Place Haiku, HI. 96708  
www.deanjohnstondesigns.com dean@deanjohnstondesigns.com  
808•575•9650 office 808•264•2273 cell

# LATE TESTIMONY

March 20, 2009

To whom it may concern,

I am very excited to see the legislature taking the proactive role in bringing sustainability to the Hawaiian islands.

Many species of bamboo are proven to be stronger than steel, durable with proper non-toxic preservation strategies and ecologically sound. Additionally all of the tropical (non-invasive) species recommended provide the most efficient windbreaks and erosion control available.

Tropical, clumping, non-invasive bamboo species are ideally suited to Hawaii's climate and volcanic origin.

They are drought resistant requiring minimal irrigation, they are giant perennial grasses requiring only to be planted once ever in some cases and 25 to 75 years in other cases.

They flourish on marginal soil requiring very little input of fertilizers and no chemical/petroleum based fertilizers, herbicides or pesticides at all.

They sequester 40% more carbon than trees, and are able to remediate polluted soils and hazardous sites safely into structural construction components.

My award winning Masters of Architecture thesis (Univ. of Hawaii, 2002), produced in collaboration with the University of Hawaii College of Engineering and School of Architecture, tested six bamboo species, four from Hawaii and two from Vietnam. In those tests one of the Vietnamese species was *Bambusa stenostachya*, which is now the first and only structural bamboo recognized nationally by the International Codes Council. In my testing the four Hawaiian grown species tested equal to or stronger than the currently approved species.

We have proven that we are growing world class structural bamboo. Hawaii is now at the cusp of becoming a certifiable producer and exporter of the first U.S.A grown structural bamboo.

We have the expertise to develop the proper criteria to establish qualified Hawaii grown and properly processed structural bamboo as a safe, strong and durable construction material.

Benefits of establishing structural bamboo as a certified building material include,

1. Reduction of water currently used to irrigate sugar cane and pineapple.
2. Reduction of imported petroleum based fertilizers, pesticides and herbicides.
3. Job creation: Growing, propagating, maintaining, processing, manufacturing etc. . .
4. Improved health of the aina.
5. Carbon sequestration: which may be marketable as credits.

I have attached two images of an international art exhibit, currently touring South America, which is housed in the world's largest bamboo structure to date through which thousands of visitors pass each day.

Mahalo  
Dean Johnston M.Arch. LEED AP





**Testimony for SB1645 on 3/23/2009 9:30:00 AM**

mailinglist@capitol.hawaii.gov [mailinglist@capitol.hawaii.gov]

**Sent:** Sunday, March 22, 2009 11:18 PM  
**To:** WLOtestimony  
**Cc:** [REDACTED]  
**Attachments:** PTestamony for bamboo bil~1.docx (1 MB)

**LATE TESTIMONY**

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Testimony for WLO 3/23/2009 9:30:00 AM SB1645

Conference room: 325  
Testifier position: support  
Testifier will be present: No  
Submitted by: Leimana Pelton  
Organization: Bamboo Village Hawaii, Inc.  
Address: [REDACTED]  
Phone: [REDACTED]  
E-mail: [REDACTED]  
Submitted on: 3/22/2009

**Comments:**

I request that the Building Commission seek input from recognized experts in the bamboo utilization field.



**Testimony for SB1645 on 3/23/2009 9:30:00 AM**

mailinglist@capitol.hawaii.gov [mailinglist@capitol.hawaii.gov]

**Sent:** Sunday, March 22, 2009 11:03 PM

**To:** WLOtestimony

**Cc:** [REDACTED]

**LATE TESTIMONY**

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Testimony for WLO 3/23/2009 9:30:00 AM SB1645

Conference room: 325

Testifier position: support

Testifier will be present: No

Submitted by: Lennart Lundstrom

Organization: Individual

Address: [REDACTED]

Phone: [REDACTED]

E-mail: [REDACTED]

Submitted on: 3/22/2009

**Comments:**

The approval of Bamboo species already tested in 2002 and found suitable for construction will help to develop an agricultural/industrial product that has been shown to be the most effective carbon sequester and soil conserving plant known. While much work is needed to codify bamboo joinery as well as harvest and preservation criteria this bill should be moved through our legislature as soon as possible.

**Testimony for SB1645 on 3/23/2009 9:30:00 AM**

mailinglist@capitol.hawaii.gov [mailinglist@capitol.hawaii.gov]

**Sent:** Monday, March 23, 2009 7:11 AM

**To:** WLOtestimony

**Cc:** [REDACTED]

**LATE TESTIMONY**

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Testimony for WLO 3/23/2009 9:30:00 AM SB1645

Conference room: 325

Testifier position: support

Testifier will be present: No

Submitted by: Maria Isotov-Chang

Organization: Land & Water Planning and Consulting

Address: [REDACTED]

Phone: [REDACTED]

E-mail: [REDACTED]

Submitted on: 3/23/2009

Comments:

TESTIFIER'S NAME AND TITLE: Maria N. Isotov-Chang, Land Use Planner, Land & Water Planning and Consulting

COMMITTEE: COMMITTEE ON WATER, LAND, & OCEAN RESOURCES

DATE: MONDAY, MARCH 23, 2009

TIME: 9:30am

MEASURE NUMBER: (SB1645)

COPIES FOR THE COMMITTEE: 13 COPIES

Please support SB 1645

Bamboo could be Hawaii's next Sugar. Bamboo has the potential to provide a significant economic engine to our agricultural economy and create Hawaii's first heavy manufacturing economy (i.e. paper, building materials, kit-homes, affordable housing, flooring, furniture etc...) In addition, to this it is also excellent for erosion control, carbon sequestration, and by-products like animal feed from leaves. Please support Senate Bill 1645.

From: lennart.lundstrom@hawaii.gov  
 Sent: Sunday, March 22, 2009 10:49 PM  
 To: TIATestimony  
 Subject: SB1645,SD1 WLO Committee Hearing, Conf. Rm. 325

# LATE TESTIMONY

To: Committee on Water, Land and Ocean Resources

Rep. Ken Ito, Chair  
 Rep. Sharon E. Har Vice Chair  
 March 23 2009  
 Conference Rm.325  
 9:30 am

Aloha

I urge you to consider this bill as a high priority for the future of Hawaii. While more work is needed to fully utilize bamboo as a construction material in Hawaii much of the work has been done and the rest can be extracted from existing data.

The five species of bamboo tested in 2002 should be approved and used as a baseline for the approval of other equally useful species.

Criteria must be established for harvest and preservation treatment of bamboo for use in construction.

Joinery of bamboo in construction is critical to it's succesful application as a building material. There are many examples of modern inovations, like filling the hollow internodes with cement or polymer and bolting structural members together or using specially designed steel brackets to connect structural members securely. Our legislature should make use of the knowledge of persons familiar with these techniques in formulating a building code that allows the use of bamboo.

Bamboo Is a renewable/sustainable resource, many species are very suitable as construction material. It only take 10 years for a bamboo plant to reach a size and durability to produce construction material every year that can be harvested sustainably for the life of that species, in some cases idefinitely.

The cultivation of bamboo in watershed areas, especially those prone to erosion, can greatly improve soil conservation and ocean water quality. Bamboo roots have an unmatched ability to hold soil in place, in established groves the roots of bamboo can make up as much as 60% of the total soil matrix.

Bamboo has the highest transpiration rate of any plant. It will absorb more carbon and produce more oxygen than a natural rainforest. Bamboo also converts groundwater to atmospheric humidity at a higher rate than any other plant. While our climate in Hawaii is mostly dependent on Pacific Ocean weather patterns we can be among the first to put this resource to use and serve as a model for large scale cultivation in places where the use of bamboo as a cultivated crop for building material could make a huge difference in the rate of global warming.

Trade in carbon credits is a current reality, with bamboo as a viable crop we can reach a high level of tradable carbon squistration while adding a new product to our agricultural and industrial economy.

As the Chapter Representative of the Hawai'i Chapter of the American Bamboo Society I would like to offer any additional information or assistance that you may require, we have lots more to tell you.

Please do all you can to move SB 1645 through our legislature with the appropriate amendments as soon as possible, I will do everything I can to help with this.

**Testimony for SB1645 on 3/23/2009 9:30:00 AM**

mailinglist@capitol.hawaii.gov [mailinglist@capitol.hawaii.gov]

**Sent:** Sunday, March 22, 2009 7:30 PM

**To:** WLOtestimony

**Cc:** [REDACTED]

**LATE TESTIMONY**

Testimony for WLO 3/23/2009 9:30:00 AM SB1645

Conference room: 325

Testifier position: support

Testifier will be present: No

Submitted by: Robert Grimes

Organization: Individual

Address: [REDACTED]

Phone: [REDACTED]

E-mail: [REDACTED]

Submitted on: 3/22/2009

**Comments:**

Please forward this bill so we can use the incredible resources found in local bamboo. We will teach the children of Hawaii to grow, use and eat, and create new markets for our locally grown bamboo. Please, please allow this transformation to occur. I will work tirelessly to promote and teach the uses and benefits of bamboo. Please allow us, the passionate leaders for Bamboo in Hawaii to pursue a future we can all be proud of. Let me inspire the children who now sit in class bored and stiff. Mahalo, Bobby G