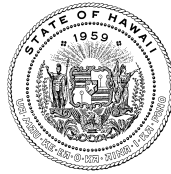


DAVID Y. IGE
GOVERNOR



WESLEY K. MACHIDA
DIRECTOR

LAUREL A. JOHNSTON
DEPUTY DIRECTOR

EMPLOYEES' RETIREMENT SYSTEM
HAWAII EMPLOYER-UNION HEALTH BENEFITS TRUST FUND
OFFICE OF THE PUBLIC DEFENDER

STATE OF HAWAII
DEPARTMENT OF BUDGET AND FINANCE
P.O. BOX 150
HONOLULU, HAWAII 96810-0150

ADMINISTRATIVE AND RESEARCH OFFICE
BUDGET, PROGRAM PLANNING AND
MANAGEMENT DIVISION
FINANCIAL ADMINISTRATION DIVISION
OFFICE OF FEDERAL AWARDS MANAGEMENT (OFAM)

WRITTEN ONLY
TESTIMONY BY WESLEY K. MACHIDA
DIRECTOR, DEPARTMENT OF BUDGET AND FINANCE
TO THE SENATE COMMITTEE ON ECONOMIC DEVELOPMENT, TOURISM, AND
TECHNOLOGY
ON
SENATE BILL NO. 766

February 13, 2017
1:15 p.m.
Room 414

RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR
EXPLORATION SYSTEMS

Senate Bill No. 766 establishes an excise tax on basalt cinder and trap rock sold by wholesalers or dealers; establishes the Pacific International Space Center for Exploration Systems (PISCES) Special Fund into which the tax will be deposited; and requires moneys in excess of \$1,000,000 in the PISCES Special Fund at the end of the fiscal year to lapse to the general fund.

As a matter of general policy, the Department of Budget and Finance does not support the creation of any special fund which does not meet the requirements of Section 37-52.3, HRS. Special funds should: 1) serve a need as demonstrated by the purpose, scope of work and an explanation why the program cannot be implemented successfully under the general fund appropriation process; 2) reflect a clear nexus between the benefits sought and charges made upon the users or beneficiaries or a clear link between the program and the sources of revenue; 3) provide an appropriate means of financing for the program or activity; and 4) demonstrate the capacity to be

financially self-sustaining. In regards to Senate Bill No. 766, it is difficult to determine whether the proposed special fund would be self-sustaining and whether there is a clear nexus between basalt cinder and trap rock sales and the PISCES program.

Thank you for your consideration of our comments.

TAX FOUNDATION OF HAWAII

126 Queen Street, Suite 304

Honolulu, Hawaii 96813 Tel. 536-4587

SUBJECT: MISCELLANEOUS, New Basalt Mining Tax

BILL NUMBER: SB 766; HB 574 (Identical)

INTRODUCED BY: SB by WAKAI, K. KAHELE, KEITH-AGARAN; HB by NAKASHIMA, BROWER, CREAGAN, EVANS, HOLT, JOHANSON, LOWEN, LUKE, NISHIMOTO, ONISHI, SAIKI, YAMASHITA

EXECUTIVE SUMMARY: Establishes an excise tax on basalt cinder and trap rock sold by wholesalers or dealers. Provides that the excise tax is paid into the Pacific international space center for exploration systems special fund. Requires moneys in excess of \$1,000,000 in the Pacific international space center for exploration systems special fund to lapse to the general fund.

BRIEF SUMMARY: Adds a new chapter to the HRS to establish a basalt mining tax. Provides that the tax is equal to 0.2% of the wholesale price of each item or article of basalt cinder and trap rock sold by the wholesaler or dealer. All proceeds of this tax are supposed to be deposited in the Pacific international space center for exploration systems (PISCES) special fund, to be used to support PISCES in its sustained and continued development of basalt-based products and materials.

Amends HRS section 201-80.2 to conform to the new chapter, and to provide that any special fund money more than \$1 million at the end of a fiscal year will lapse to the general fund.

EFFECTIVE DATE: July 1, 2017.

STAFF COMMENTS: Pacific International Space Center for Exploration Systems, or PISCES for short, is a Hawaii State Government Aerospace Agency located in Hilo, Hawaii. As part of the State Department of Business, Economic Development, and Tourism (DBEDT), PISCES conducts environmentally-safe field tests on Hawaii's volcanic terrain to experiment and validate advanced space technologies, operating under the jurisdiction of the Hawaii State Department of Land and Natural Resources (DLNR).

The proposed funding mechanism is a new tax on basalt or trap rock, all of the revenues from which would be earmarked to assist PISCES.

The proposed new taxing statute is two sections long. It is leaner than a bare-bones statute. If it is desired to go forward with the tax, consideration should be given to incorporating enforcement and administrative provisions in the general excise tax law, as is now done in chapter 239 relating to the public service company tax.

Perhaps PISCES is a worthy goal. But does that justify grabbing a pot of revenue without going through the normal budgeting process that also considers sweltering primary schools,

underfunded state pensions, or homelessness? And what about the needs of the counties who are also jockeying for a larger piece of the tax pie?

Rather than earmarking revenues, a direct appropriation of general funds would be preferable. Earmarking revenues for a particular purpose decreases transparency and accountability.

Next, it should be remembered that revenues diverted for a special purpose, in this case to fund PISCES, will not be counted against the state's spending ceiling or debt limit and will obscure the state's true financial condition.

Digested 2/8/2017



January 31, 2017

Members of the 29th Hawaii State Legislature

RE: HB574 and SB766– RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION SYSTEMS (PISCES)

I am writing in support of the passage of HB574 and SB766. The State of Hawaii has a genuine need to broaden its economic base. We now have a major opportunity to support that necessity.

Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications both in space exploration and on-island, generating significant interest from the aerospace sector and the local business community.

PISCES' continued work to expand and develop products and markets (including basalt-based concrete, basalt rebar, basalt mesh, cording and fabric) derived from Hawaii's naturally occurring basalt will positively impact the demand for quarried basalt in the Islands with long-term economic benefits. While produced internationally, the lack of a domestic basalt material industry in Hawaii offers an untapped market that could yield profitable returns resulting in increased employment. Basalt-based products and materials have the potential to create new manufacturing opportunities while significantly reducing Hawaii's dependence on imported products.

I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills

Sincerely,

Bill Walter
President

Aleks Velhner
Blue Planet Research
#71 – 1645 Mamalahoa Hwy. #2
Kailua Kona, HI, 96740

TESTIMONY IN SUPPORT OF:

HB574 and SB766– RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION
SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature,

I am writing in support of the passage of HB574 and SB766.

The State of Hawaii has a genuine need to broaden its economic base. We now have a major opportunity to support and fulfill that necessity.

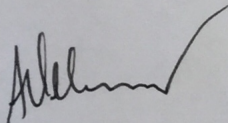
Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications both in space exploration and on-island, generating significant interest from the aerospace sector and the local business community.

PISCES' continued work to expand and develop products and markets (including basalt-based concrete, basalt rebar, basalt mesh, cording and fabric) derived from Hawaii's naturally occurring basalt will positively impact the demand for quarried basalt in the Islands with long-term economic benefits. While produced internationally, the lack of a domestic basalt material industry in Hawaii offers an untapped market that could yield profitable returns. Basalt-based products and materials have the potential to create new manufacturing opportunities while significantly reducing Hawaii's dependence on imported products.

I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills.

Mahalo,



Aleks Velhner



Grace Pacific LLC

A SUBSIDIARY OF ALEXANDER & BALDWIN, INC.

GP Roadway Solutions • GPRM Prestress • GLP Asphalt • Maui Paving

**SB 766
RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR
EXPLORATION SYSTEMS**

**JOSEPH SHACAT
MANAGER – ENVIRONMENTAL COMPLIANCE
GRACE PACIFIC LLC**

FEBRUARY 13, 2017

Chair Wakai and Members of the Senate Committee on Economic Development,
Tourism & Technology:

I am Joseph Shacat, testifying on behalf of Grace Pacific LLC on SB 766, “A BILL FOR AN ACT RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION SYSTEMS.” We respectfully oppose this bill.

The purpose of this bill is to establish an excise tax on the sale of basalt cinder and trap rock by any wholesaler or dealer. The monies collected from this excise tax will be used by the Pacific International Space Center For Exploration Systems in its development of basalt based products and materials.

While we understand the overall intent of this bill, we believe that it may have a negative impact on Hawaii’s aggregate production industry. At present, local aggregate production companies must compete with out of state imports of construction sand and asphalt aggregates. The imposition of a new Hawaii excise tax on basalt cinder and trap rock will put locally produced construction aggregates, which are primarily derived from basalt, at a competitive disadvantage to imported construction aggregates that are derived from granite. With much of the work in Hawaii’s construction industry operating

in a low-bid environment, any increase in cost could have a substantial impact on the ability of locally produced aggregates to compete with out of state imports. In addition, the imposition of this new excise tax may also increase the overall cost of construction in Hawaii.

Additionally, it seems that the bill might be difficult to administer as it is currently written. A large volume of construction aggregates are used by the producer (who would be considered either the wholesaler or dealer) for value-added products, such as ready-mix concrete or hot-mix asphalt. It's not clear how the wholesale rate would be established if the "wholesaler" uses these materials internally. Furthermore, it appears that the tax would be imposed at both the wholesale and retail (dealer) levels in the supply chain, effectively taxing the same goods twice. This would exacerbate the cost competitiveness issues outlined above.

Based on the foregoing, we respectfully request that this bill be held in Committee. Thank you for the opportunity to testify.



JAS. W. GLOVER, LTD.

GENERAL CONTRACTORS

License No. ABC-3

From:

Michael Pearrig
P.O. Box 871
Pepeekeo, HI 96783
808-935-0871

To:

State of Hawaii, Hawaii State Senate

RE:

State Bill 7665 RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATIONS SYSTEMS.

Please accept my testimony in strong opposition to SB 766. The Pacific International Space Center for Explorations Systems (PISCES) is part of an international effort to study space. Their work may have merits, but establishing tax and regulatory burdens on the construction industry to support one research organization does not.

This bill, SB 766, establishes a targeted excise tax on rock products and rock product dealers – this includes quarries, crushing companies, concrete companies, asphalt companies, pre-cast companies, distributors and retailers who sell rock products, and will benefit only ONE research entity, PISCES. One large, important industry segment will be made responsible for an added tax and regulatory burden for one research entity.

This bill not only establishes the tax, but will set up an entire regulatory system for tracking, paying and reporting this tax that will add burdens to both industry and government alike. It also sets (or reinforces) a bad precedent for a non-profit group to target specific industries to pay for their research or enterprise. Rather than approaching the rock industry for support, this group is using legislative action to fund their activities, and allows for a back door increase to the general fund when the targeted limit is met. This is bad policy and makes for bad government. It is very possible that the cost of setting up the system to collect and distribute the tax will exceed the cost of the tax revenues generated for PISCES.

Government agencies are the largest consumer of basalt products and the majority of the cost of the tax and its collection will be therefore passed on to the taxpayers. Surely there are more efficient and transparent ways to fund PISCES.

I am strongly opposed to this bill and sincerely request that legislators not pass it.

Sincerely,

Michael Pearrig

Honolulu

P.O. Box 579 • Honolulu, HI 96809
tel (808) 591-8977 • fax (808) 591-8978

Hilo

890 Leilani Strret • Hilo, HI 96720
tel (808) 935-0871 • fax (808) 961-9237

Kona

P.O. Box 4116 • Kailua-Kona, HI 96745
tel (808) 329-4113 • fax (808) 326-6017

Lihue

P.O. Box 1929 • Lihue, HI 96766
tel (808) 245-3609 • fax (808) 246-6209

From: mailinglist@capitol.hawaii.gov
Sent: Thursday, February 9, 2017 5:17 PM
To: ETT Testimony
Cc: jim.gomes@hawaiiancement.com
Subject: Submitted testimony for SB766 on Feb 13, 2017 13:15PM

SB766

Submitted on: 2/9/2017

Testimony for ETT on Feb 13, 2017 13:15PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
JIm Gomes	Hawaiian Cement, Cement Division	Oppose	No

Comments: Please accept my testimony in strong opposition to SB 766. The Pacific International Space Center for Explorations Systems (PISCES) is part of an international effort to study space. Their work may have merits, but establishing tax and regulatory burdens on the construction industry to support one research organization does not. This bill, SB 766, establishes a targeted excise tax on rock products and rock product dealers – this includes quarries, crushing companies, concrete companies, asphalt companies, pre-cast companies, distributors and retailers who sell rock products, and will benefit only ONE research entity, PISCES. One large, important industry segment will be made responsible for an added tax and regulatory burden for one research entity. This bill not only establishes the tax, but will set up an entire regulatory system for tracking, paying and reporting this tax that will add burdens to both industry and government alike. It also sets (or reinforces) a bad precedent for a non-profit group to target specific industries to pay for their research or enterprise. Rather than approaching the rock industry for support, this group is using legislative action to fund their activities, and allows for a back door increase to the general fund when the targeted limit is met. This is bad policy and makes for bad government. It is very possible that the cost of setting up the system to collect and distribute the tax will exceed the cost of the tax revenues generated for PISCES. Government agencies are the largest consumer of basalt products and the majority of the cost of the tax and its collection will be therefore passed on to the taxpayers. Surely there are more efficient and transparent ways to fund PISCES. I am strongly opposed to this bill and sincerely request that legislators not pass it. Sincerely, Jim Gomes General Manager, Cement Division

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

Do not reply to this email. This inbox is not monitored. For assistance please email webmaster@capitol.hawaii.gov



Dr. Paul van Susante
Michigan Technological University
Department of Mechanical Engineering
R.L. Smith Building, MEEM815
Houghton, MI 49931

TESTIMONY IN SUPPORT OF:

HB574 and SB766– RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature,

I am writing in support of the passage of HB574 and SB766.

The State of Hawaii has a genuine need to broaden its economic base. We now have a major opportunity to support and fulfill that necessity.

Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications both in space exploration and on-island, generating significant interest from the aerospace sector and the local business community.

PISCES' continued work to expand and develop products and markets (including basalt-based concrete, basalt rebar, basalt mesh, cording and fabric) derived from Hawaii's naturally occurring basalt will positively impact the demand for quarried basalt in the Islands with long-term economic benefits. While produced internationally, the lack of a domestic basalt material industry in Hawaii offers an untapped market that could yield profitable returns. Basalt-based products and materials have the potential to create new manufacturing opportunities while significantly reducing Hawaii's dependence on imported products.

I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries. I am looking forward to collaborate with PISCES on continued testing and technology development projects

I would greatly appreciate your affirmative consideration of these bills.

Mahalo,

Paul van Susante



February 13, 2017

Testifier's Name & Affiliation: Rodrigo Romo, Program Manager, PISCES

Presenting to: Committee on Economic Development, Tourism & Technology

Date & Time of Hearing: Monday, February 13th, 2017. 1:15PM.

Measure #: SB766

Testimony in Support of SB766: Relating to the Pacific International Space Center for Exploration Systems (PISCES).

To the members of the Committee on Economic Development and Business:

I am here to support the intent of Senate Bill 766. The PISCES Board of Directors has not yet taken a position on this measure, so I am here to present my testimony as the Program Manager for PISCES.

PISCES is administratively attached to the Office of Aerospace Development within DBEDT. PISCES' purpose is to expand and diversify technology-based enterprises in Hawaii by leveraging our State's substantial assets and capabilities in space exploration.

One of the ways we do this is through applied research. Our research projects must have a dual application; an application for Space Exploration and a local application that provides economic benefits to the State.

One of the areas where we are focusing our research is materials science, specifically in studying new and innovative uses for Hawaiian basalt as a building material. Through this work, PISCES has successfully designed and produced a variety of basalt-based materials proven to be stronger than residential concrete. One material we produced was tested and shown to be three times stronger than specialty concrete.

As a result, our work using Hawaiian basalt has generated interest in the Aerospace community as a means to utilize In-Situ Resources on the moon or Mars for construction of infrastructure. The same research has the potential to create new markets in the State of Hawai'i through the development of new applications and new materials such as sintered basalt pavers. These pavers can be made using the waste product of local quarries, turning a liability into an asset. In addition, materials like basalt fiber and fiber-derived products such as rebar, mesh, fabric and rope can be derived using locally mined basalt.

The purpose of this bill is to provide a sustained, market-driven revenue stream that will enable PISCES to engage in applied research activities that will result in a higher demand for locally mined basalt and potentially generate a new industry.

The funds provided through this measure will be utilized to:

- Create a database indexing the characteristics and compositions of basalt from different quarries throughout the state. Basalt from different sources, even different eruptions, have different characteristics that makes them more suitable for different types of applications or processes.
- Cover engineering costs and testing of the different materials or applications identified through research.
- Continue research on different ways in which the materials already produced can be utilized, shaped, tooled and manufactured with the possibility of creating a new industry.
- Perform research on additive manufacturing (3D printing) on a large scale for potential applications in the construction industry.
- Focus on potential uses of waste streams generated by quarries to convert them into a valuable resource.
- Procurement of lab equipment required to conduct materials testing.

We ask your support for this bill which can lead to the expansion of Hawaii's mining industry and may create sustainable and profitable manufacturing opportunities in our State.

A handwritten signature in black ink that reads "R. Romo".

Rodrigo Romo
Program Manager
PISCES

Statement of
JOHN DeLONG
President
Hawaiian Cement
before the
**SENATE COMMITTEE ON ECONOMIC DEVELOPMENT, TOURISM AND
TECHNOLOGY**

Monday, February 13, 2017
1:15 PM
State Capitol, Conference Room 414
in consideration of

SB 766
**RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION
SYSTEMS BASALT EXCISE TAX**

Members of the Senate Committee Economic Development, Tourism and Technology:

This testimony is submitted in strong opposition to SB 776. The Bill is bad public policy for a variety of reasons:

The purpose of the Bill is to subsidize the development of an experimental product that is alleged to possess favorable qualities that are unproven and speculative. The bill contains scientific sounding buzz words like “laser manufacturing” and “robotic placement” that have no relationship to developing a commercially feasible, locally produced construction material. This Bill is a thinly veiled effort to finance research projects that are unable to secure funding from traditional sources that require much more detailed vetting.

Hawaii construction costs are already among the nation’s highest due to the unique challenges of being a remote island location. Aggregate mining is particularly expensive in Hawaii because of high permitting costs, high royalty rates demanded by land owners, high union labor costs, high environmental compliance costs, unusually high costs to secure explosives because of transportation and restrictive ATF regulations, and the list goes on. Many Hawaii residents are forced to work multiple jobs due to the high cost of housing. Young families either live with relatives or move to less expensive locations because they can’t afford a place of their own. Adding addition taxes to an already heavily taxed industry will make housing and construction even more expensive. This Bill only adds to the already high cost of living in Hawaii while providing no measurable advantage.

The vague and unproven benefits of this Bill are far outweighed by its very real and quantifiable detriments. Construction sand and asphalt aggregates are already being imported into the State. If the cost to product local aggregates continues to rise a tipping point will soon be reached where it is more cost effective to import all aggregates into Hawaii and another important local industry and its attendant jobs and tax revenue will be lost.

We urge a strong NO vote for SB 766.



Written Statement of
Robbie Melton
Executive Director & CEO
High Technology Development Corporation
before the
Senate Committee on Economic Development, Tourism & Technology
Monday, February 13, 2017
1:15 p.m.
State Capitol, Conference Room 414

In consideration of
SB766
**RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION
SYSTEMS.**

Chair Wakai, Vice Chair Taniguchi, and Members of the Committee on Economic Development, Tourism, and Technology.

The High Technology Development Corporation (HTDC) **supports the intent** of SB766 that establishes an excise tax on basalt cinder and trap rock sold by wholesalers or dealers. Provides that the excise tax is paid into the Pacific International Space Center for exploration systems special fund and requires moneys in excess of \$1,000,000 in the Pacific International Space Center for exploration systems special fund to lapse to the general fund.

As part of HTDC's vision to create 80,000 new innovation jobs in Hawaii earning \$80,000 or more by 2030, HTDC supports initiatives aimed at promoting technology and innovation jobs.

Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications both in space exploration and on-island, generating significant interest from the aerospace sector and the local business community.

PISCES' continued work to expand and develop products and markets (including basalt-based concrete, basalt rebar, basalt mesh, cording and fabric) derived from Hawaii's naturally occurring basalt will positively impact the demand for quarried basalt in the Islands with long-term economic benefits. While produced internationally, the lack of a domestic basalt material industry in Hawaii offers an untapped market that could yield profitable returns. Basalt-based products and materials have the potential to create new manufacturing opportunities while significantly reducing Hawaii's dependence on imported products. HTDC comments that an alternative funding source may be more appropriate.

We support this initiative as long as it does not replace our priorities requested in the Executive Budget. Thank you for the opportunity to offer these comments.



WADE H. WAKAYAMA
President

February 10, 2017

To: The Honorable Glenn Wakai, Chair
and Members of the Senate Committee on
Economic Development, Tourism and Technology

Re: **TESTIMONY OPPOSING S.B. 766 RELATING TO THE PACIFIC
INTERNATIONAL SPACE CENTER FOR EXPLORATION SYSTEMS**

HC&D, LLC
2344 Pahounui Drive
Honolulu, Hawaii 96819
P. O. Box 29968
Honolulu, Hawaii 96820
Telephone: 808/832-9200
Facsimile: 808/832-9450
www.hcdhawaii.com

Dear Chair Wakai, Vice Chair Taniguchi and Members of the Committee:

Please accept my testimony on behalf of HC&D (formerly Ameron Hawaii) in strong opposition to S.B. 766 which proposes a tax on basalt cinder and trap rock wholesalers and dealers to be paid into the Pacific International Space Center for Explorations Systems (PISCES.)

HC&D is one of Hawaii's largest construction material manufacturer and supplier, operating two basalt quarries, one each on Oahu and Maui. Nearly 100% of our products sold to the construction market for infrastructure, homes and buildings, contain basalt. This proposed bill will not only result in a 0.2% increase in the cost of a major component (basalt) in Hawaii's roads, sewer pipes and systems, homes, schools, and most other building and construction projects in our State, it will also result in a financial burden as quarries, rock processing companies, concrete and asphalt producers, and precast product manufacturers deal with the administrative requirements of licensing, filing periodic returns, payments, record keeping and audits needed to comply with the new tax. All the costs will continue to snowball as the domino effect hits independent rock haulers, building contractors and consumers, including home owners and the State itself.

Further, though I appreciate the intent of PISCES's research, establishing tax and regulatory burdens on the construction industry will not only increase the already high costs of building anything in Hawaii, it will negatively affect the health of the entire construction sector and reduce economic growth in Hawaii. Targeting specific businesses such as ours, that have no relationship to the sole program being funded, is in my opinion, ill advised.

HC&D, LLC urges a NO vote for to S.B. 766.

Thank you for the opportunity to submit testimony.

Sincerely,

Wade H. Wakayama
President

Ontario Drive & Gear Limited
220 Bergey Court
New Hamburg, Ontario, Canada N3A 2J5

TESTIMONY IN SUPPORT OF:

HB574 and SB766– RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION
SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature,

I am writing in support of the passage of HB574 and SB766.

Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications both in space exploration and on-island, generating significant interest from the aerospace sector and the local business community. Much of this research has been conducted in partnership with international organizations, including our company, Ontario Drive & Gear Limited, which has provided a prototype lunar rover on loan to PISCES.

PISCES' continued work to expand and develop products and markets (including basalt-based concrete, basalt rebar, basalt mesh, cording and fabric) derived from Hawaii's naturally occurring basalt will positively impact the demand for quarried basalt in the Islands with long-term economic benefits. While produced internationally, the lack of a domestic basalt material industry in Hawaii offers an untapped market that could yield profitable returns. Basalt-based products and materials have the potential to create new manufacturing opportunities while significantly reducing Hawaii's dependence on imported products.

I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills.

Mahalo,



Perry Edmundson, P.Eng.
Space Project Manager
Ontario Drive & Gear Limited

Pauline Roth
HC3 Box 13581
Kea'au, HI 96749

TESTIMONY IN SUPPORT OF:

HB574 and SB766— RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION
SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature,

I am writing in support of the passage of HB574 and SB766.

The State of Hawaii has a genuine need to broaden its economic base. We now have a major opportunity to support and fulfill that necessity.

Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications both in space exploration and on-island, generating significant interest from the aerospace sector and the local business community.

PISCES' continued work to expand and develop products and markets (including basalt-based concrete, basalt rebar, basalt mesh, cording and fabric) derived from Hawaii's naturally occurring basalt will positively impact the demand for quarried basalt in the Islands with long-term economic benefits. While produced internationally, the lack of a domestic basalt material industry in Hawaii offers an untapped market that could yield profitable returns. Basalt-based products and materials have the potential to create new manufacturing opportunities while significantly reducing Hawaii's dependence on imported products.

I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills.

Mahalo,

A handwritten signature in black ink that reads "Pauline Roth". The signature is written in a cursive, flowing style.

Pauline Roth

Charlotte Godfrey-Romo
1445 Waianuenu Ave
Hilo, HI 96720

TESTIMONY IN SUPPORT OF:

HB574 and SB766– RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION
SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature,

I am writing in support of the passage of HB574 and SB766.

As an intermediate Science Teacher I appreciate and value the possibilities that agencies like PISCES bring to our future generations. PISCES has been actively involved with the students of the school where I teach and they have presented our students with a world of opportunities in STEM related careers .

The State and its keiki will benefit from activities developed by PISCES.

Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications both in space exploration and on-island, generating significant interest from the aerospace sector and the local business community.

I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills.

Mahalo,



Charlotte Godfrey-Romo

Middle School Science Teacher

Curtis Rodgers Jr
Brick & Mortar Ventures
92 S Park St, San Francisco, CA

TESTIMONY IN SUPPORT OF:

HB574 and SB766– RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION
SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature,

I am writing in support of the passage of HB574 and SB766.

The State of Hawaii has a genuine need to broaden its economic base. We now have a major opportunity to support and fulfill that necessity.

Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications both in space exploration and on-island, generating significant interest from the aerospace sector and the local business community.

PISCES' continued work to expand and develop products and markets (including basalt-based concrete, basalt rebar, basalt mesh, cording and fabric) derived from Hawaii's naturally occurring basalt will positively impact the demand for quarried basalt in the Islands with long-term economic benefits. While produced internationally, the lack of a domestic basalt material industry in Hawaii offers an untapped market that could yield profitable returns. Basalt-based products and materials have the potential to create new manufacturing opportunities while significantly reducing Hawaii's dependence on imported products.

I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills.

Mahalo,



Curtis Rodgers
Vice President
Brick & Mortar Ventures

TESTIMONY IN SUPPORT OF:

HB574 and SB766— RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature,

I am writing in support of the passage of HB574 and SB766.

The State of Hawaii has a genuine need to broaden its economic base, and make a lasting contribution to the emerging in-space economy. The measures now before you will support and fulfill that necessity through the great work being done at PISCES.

Through applied research, PISCES has successfully manufactured innovative materials using local sources of basalt with applications in-space and on-island. This research into In-Situ Resource Utilization technology is what attracted RedWorks to PISCES, and it is our hope that through your support of PISCES' continued work in Basalt-based construction technology, Hawaii will signal its position as a center for innovation in space and construction.

RedWorks is working to develop on-site 3d printing construction products as a means of addressing affordable housing concerns across the United States and habitation on the Moon and Mars. To these ends, we encourage you to give PISCES your full support to continue developing Hawaii's own capabilities toward hyper-local basalt-based construction materials that already exceed the performance of traditional concrete. Both of our organizations are working to introduce new construction solutions that would drastically reduce the need for material imports for construction projects. This should be of chief concern for Hawaii given the state's reliance on imported commodities and material goods. RedWorks believes that the future of construction and manufacturing is local, and states who lead the way in encouraging the development of these technologies will benefit with stronger economies, new business, and job opportunities that will improve the lives of your state's residents for the long term.

I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills.

Sincerely,



Keegan Kirkpatrick
Chief Executive Officer
RedWorks
751 Lancaster Blvd.
Lancaster, CA 93534

Ruth Niino-DuPonte
1230B Puhau Place
Hilo, HI 96720

TESTIMONY IN SUPPORT OF:

HB574 and SB766– RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION
SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature,

I am writing in support of the passage of HB574 and SB766.

The State of Hawaii has an urgent need to broaden its economic base. We now have a major opportunity to support and fulfill that necessity.

Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications both in space exploration and on-island, generating significant interest from the aerospace sector and the local business community.

PISCES' continued work to expand and develop products and markets (including basalt-based concrete, basalt rebar, basalt mesh, cording and fabric) derived from Hawaii's naturally occurring basalt will positively impact the demand for quarried basalt in the Islands with long-term economic benefits. While produced internationally, the lack of a domestic basalt material industry in Hawaii offers an untapped market that could yield profitable returns. Basalt-based products and materials have the potential to create new manufacturing opportunities while significantly reducing Hawaii's dependence on imported products.

These bills are necessary to provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills to support the cutting-edge, yet highly applicable results being accomplished by PISCES.

Mahalo,



Ruth Y Niino-DuPonte

*Megan Moseley
1025 Ukiu Rd. Apt. B1
Makawao, HI 96768*

TESTIMONY IN SUPPORT OF:

HB574 and SB766– RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION
SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature,

I am writing in support of the passage of HB574 and SB766.

The State of Hawaii has a genuine need to broaden its economic base. We now have a major opportunity to support and fulfill that necessity.

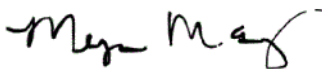
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I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills.

Mahalo



Megan Moseley

James R. Kennedy, PhD

PO Box 1939
Hilo, HI 96721

TESTIMONY IN SUPPORT OF:

HB574 and SB766-- RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature:

I am writing in support of the passage of HB574 and SB766.

The State of Hawaii has a genuine need to broaden its economic base, in general, and on Hawai'i Island in particular. We now have a major opportunity to support and fulfill that necessity.

Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt, which have real applications both in space exploration and on-island. These are generating significant interest within the aerospace sector and also our local business community.

PISCES' continued work to expand and develop these products and markets (including basalt-based concrete, basalt rebar, basalt mesh, cording and fabric) based on Hawaii's naturally occurring basalts will positively impact the demand for quarried basalt in the Islands with long-term economic benefits. While produced internationally, the lack of a domestic basalt material industry in Hawaii offers an untapped market that could yield profitable returns. Basalt-based products and materials have the potential to create new manufacturing opportunities while significantly reducing Hawaii's dependence on imported products.

I believe that the passage of these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills.

Mahalo,

A handwritten signature in black ink, appearing to read 'J.R. Kennedy', written in a cursive style.

James R. Kennedy, PhD

Hugh D Kefford
PO Box 6637 Hilo, HI, 96720
102 Opio Rd, Hilo HI 96720

TESTIMONY IN SUPPORT OF:

HB574 and SB766– RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION
SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature,

I am writing in support of the passage of HB574 and SB766.

The State of Hawaii has a genuine need to broaden its economic base. We now have a major opportunity to support and fulfill that necessity.

Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications both in space exploration and on-island, generating significant interest from the aerospace sector and the local business community.

PISCES' continued work to expand and develop products and markets (including basalt-based concrete, basalt rebar, basalt mesh, cording and fabric) derived from Hawaii's naturally occurring basalt will positively impact the demand for quarried basalt in the Islands with long-term economic benefits. While produced internationally, the lack of a domestic basalt material industry in Hawaii offers an untapped market that could yield profitable returns. Basalt-based products and materials have the potential to create new manufacturing opportunities while significantly reducing Hawaii's dependence on imported products.

I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills.

Mahalo,

Hugh D Kefford

*Nick Gencarelle - Smarter Building Systems LLC
4 Porter Ave.
Newport, RI 02840*

TESTIMONY IN SUPPORT OF:

HB574 and SB766– RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION
SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature,

Aloha.

I am writing in support of the passage of HB574 and SB766.

Smarter Building Systems LLC in RI, which has particular defined projects aligned with the expertise of Pisces in motion, sells basalt fibers, fabrics and reinforcements for concrete.

We have a very unique opportunity to introduce an invention to NASA and the world for an energy storage mechanism using basalt that can have significant impact on current energy storage methodologies. Not only on earth but most very significantly in space. We implore you to understand the potential economic benefits of this technology. Presently we have the interest not only of NASA but Sandia Labs in NM to develop this technology. Pisces will be an integral part of this development for space and Earth energy storage. Many jobs will be created upon successful development.

Our advanced basalt fiber knowledge also offers the ability to replace fossil fuel dependent fiberglass and carbon fiber to a great degree. In housing, commercial and composite constructions basalt offers a “greener”, non-respirable, less environmentally imposing and long-term life expectancy than other fibers with many superior properties. You have the resource and gift of the very volcanoes that provide for these materials to be made locally forever producing economic resource that can reduce imports and reduce price for these most important products.

The State of Hawaii has a genuine need to broaden its economic base. We now have a major opportunity to support and fulfill that necessity.

Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications both in space exploration and on-island, generating significant interest from the aerospace sector and the local business community.

PISCES’ continued work to expand and develop products and markets (including basalt-based concrete, basalt rebar, basalt mesh, cording and fabric) derived from Hawaii’s naturally occurring basalt will positively impact the demand for quarried basalt in the Islands with long-term economic benefits. While produced internationally, the lack of a domestic basalt material industry in Hawaii offers an untapped market that could yield profitable returns. Basalt-based products and materials have the potential to create new manufacturing opportunities while significantly reducing Hawaii’s dependence on imported products.

I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills.

Mahalo,

Nicholas J Gencarelle

Owner Smarter Building Systems LLC

401-481-8422

*Ernesto Esparza
PO BOX 1022
Pahoa, HI 96778*

TESTIMONY IN SUPPORT OF:

HB574 and SB766– RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION
SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature,

I am writing in support of the passage of HB574 and SB766.

The State of Hawaii has a genuine need to broaden its economic base. We now have a major opportunity to support and fulfill that necessity.

Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications both in space exploration and on-island, generating significant interest from the aerospace sector and the local business community.

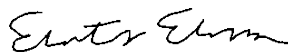
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I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills.

Mahalo,

Ernesto Esparza



Kyla P. Defore
339 Kauila St. Apt# 6
Hilo HI, 96720

TESTIMONY IN SUPPORT OF:

HB574 and SB766— RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION
SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature,

I am writing in support of the passage of HB574 and SB766.

The State of Hawaii has a genuine need to broaden its economic base. We now have a major opportunity to support and fulfill that necessity.

Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications both in space exploration and on-island, generating significant interest from the aerospace sector and the local business community.

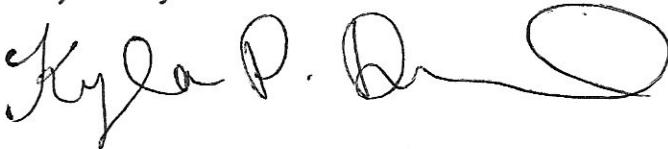
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I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills.

Mahalo,

Kyla P. Defore

A handwritten signature in black ink, appearing to read "Kyla P. Defore", with a large, stylized flourish at the end.

Larissa Belcic
425 Washington Boulevard, #1802
Jersey City, NJ 07310

TESTIMONY IN SUPPORT OF:

HB574 and SB766– RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR
EXPLORATION SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature,

I am writing in support of the passage of HB574 and SB766.

As a visiting researcher with PISCES in summer 2015, I saw first-hand PISCES' commitment to developing novel materials for use in space exploration; indeed PISCES' position at the front edges of innovations is what brought me to work with them in support of my own research on space mining technologies and their cultural contexts.

With these bills, there is an opportunity to tap into the rich economic potential of PISCES' research and successes in this area. Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications both in space exploration and on-island, generating significant interest from the aerospace sector and the local business community.

PISCES' continued work to expand and develop products and markets (including basalt-based concrete, basalt rebar, basalt mesh, cording and fabric) derived from Hawaii's naturally occurring basalt will positively impact the demand for quarried basalt in the Islands with long-term economic benefits. While produced internationally, the lack of a domestic basalt material industry in Hawaii offers an untapped market that could yield profitable returns. Basalt-based products and materials have the potential to create new manufacturing opportunities while significantly reducing Hawaii's dependence on imported products.

I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills.

Mahalo,



Larissa Belcic
Project Designer, OFICINAA
MLA, Harvard University Graduate School of Design

Nyra Dee
575 Mililani St.
Hilo, HI 96720-4327

TESTIMONY IN SUPPORT OF:
HB574 and SB766– RELATING TO THE
PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION SYSTEMS (P.I.S.C.E.S.)

Dear Members of the 29th Hawaii State Legislature,

I am writing in support of the passage of HB574 and SB766.

The State of Hawaii has a genuine need to broaden its economic base. We now have a major opportunity to support and fulfill that necessity.

Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications both in space exploration and on-island, generating significant interest from the aerospace sector and the local business community.

PISCES' continued work to expand and develop products and markets (including basalt-based concrete, basalt rebar, basalt mesh, cording and fabric) derived from Hawaii's naturally occurring basalt will positively impact the demand for quarried basalt in the Islands with long-term economic benefits. While produced internationally, the lack of a domestic basalt material industry in Hawaii offers an untapped market that could yield profitable returns. Basalt-based products and materials have the potential to create new manufacturing opportunities while significantly reducing Hawaii's dependence on imported products.

I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills.

Mahalo,

Nyra Dee

Nyra Dee
Science Dept.
Hilo High School
556 Waianuenue Ave.
Hilo, HI 96720
ndee@viking.k12.hi.us

From: mailinglist@capitol.hawaii.gov
Sent: Saturday, February 11, 2017 4:09 PM
To: ETT Testimony
Cc: fu_dog_5@yahoo.com
Subject: *Submitted testimony for SB766 on Feb 13, 2017 13:15PM*

SB766

Submitted on: 2/11/2017

Testimony for ETT on Feb 13, 2017 13:15PM in Conference Room 414

Submitted By	Organization	Testifier Position	Present at Hearing
robert	Individual	Oppose	No

Comments:

Please note that testimony submitted less than 24 hours prior to the hearing, improperly identified, or directed to the incorrect office, may not be posted online or distributed to the committee prior to the convening of the public hearing.

Do not reply to this email. This inbox is not monitored. For assistance please email webmaster@capitol.hawaii.gov

Christina Cauley
1029 Ainako Ave. Hilo, Hawaii 96720

TESTIMONY IN SUPPORT OF:

HB574 and SB766– RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION
SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature,

I am writing in support of the passage of HB574 and SB766.

The State of Hawaii has a genuine need to broaden its economic base. We now have a major opportunity to support and fulfill that necessity.

Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications both in space exploration and on-island, generating significant interest from the aerospace sector and the local business community.

PISCES' continued work to expand and develop products and markets (including basalt-based concrete, basalt rebar, basalt mesh, cording and fabric) derived from Hawaii's naturally occurring basalt will positively impact the demand for quarried basalt in the Islands with long-term economic benefits. While produced internationally, the lack of a domestic basalt material industry in Hawaii offers an untapped market that could yield profitable returns. Basalt-based products and materials have the potential to create new manufacturing opportunities while significantly reducing Hawaii's dependence on imported products.

I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

PISCES taking the lead in the responsible growth of these industries will provide greater opportunities to Hawaii's youth through providing local internship opportunities in geology and engineering. Providing these opportunities will increase local students' expertise in economically relevant fields, further making them competitive applicants for post-graduation jobs that would best be filled by those who understand Hawaii's complex present and historical relationship with land use.

As a student, PISCES provided my paid internship in geology. The experience and connections provided by PISCES lead to my successful NASA internship the following year. Hawaii must further develop such opportunities for students and post-graduation, for the success of our youth and the future of the state.

I would greatly appreciate your affirmative consideration of these bills.

Mahalo,

Christina Cauley

Dr. Luke Flynn
94-1115 Hahana Street
Waipahu, HI 96797

Dear Members of the 29th Hawaii State Legislature:

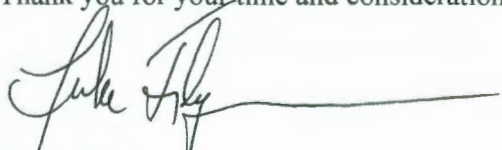
I am writing to express my strong **SUPPORT** for **HB574 and SB766 – Relating to the Pacific International Space Center for Exploration Systems (PISCES)**.

In 1992, I graduated from the University of Hawaii at Manoa with a PhD in Geology & Geophysics. I have lived in Hawaii for 30 years and raised two children here who also graduated from UH. I am now a professor in the Hawaii Institute of Geophysics and Planetology (HIGP). Throughout my research career, I have managed 26 external grants and contracts worth approximately \$50M or an average of \$1.9M/year since graduation. A very high proportion of these funds are used to support faculty co-Investigators, staff, and students that have all supported the State economy. Since 2002, I have been the Director of the NASA Hawaii Space Grant Consortium (HSGC) and the NASA Hawaii EPSCoR Programs. The function of HSGC is to provide STEM education and NASA workforce development opportunities in Hawaii. The function of NASA Hawaii EPSCoR is to expand aerospace research infrastructure within the State. Finally, since 2007, I have been the Director of the Hawaii Space Flight Laboratory (HSFL). HSFL's objective is to design, build, test, launch, and operate small spacecraft from the Hawaiian Islands. On November 3, 2015, HSFL's first launch from the Pacific Missile Range Facility did not achieve orbit. However, there were a lot of successes. The world took notice that Hawaii can become a space-faring State, and the world took notice that our local students built a satellite that passed all tests for space flight.

I apologize for the long introduction, but, as with space flight opportunities, I believe that these bills offer a chance for the State of Hawaii to broaden its economic base in a new growth area for construction and manufacturing. PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications to space exploration and conventional construction here in Hawaii. PISCES' continued work to expand and develop products and markets (including basalt-based concrete, basalt rebar, basalt mesh, cording and fabric) derived from Hawaii's naturally occurring basalt will positively impact the demand for quarried basalt in the Islands with long-term economic benefits. While produced internationally, the lack of a domestic basalt material industry in Hawaii offers an untapped market that could yield profitable returns. Basalt-based products and materials have the potential to create new manufacturing opportunities while significantly reducing Hawaii's dependence on imported products.

I have had the privilege to be constantly amazed by the creativity of our students. In that same spirit, I believe that PISCES is already well on its way to developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy. I would greatly appreciate your affirmative consideration of these bills.

Thank you for your time and consideration,



Dr/ Luke Flynn

*Douglas Bath
20 Hoaka Rd.
Hilo, HI 96720*

TESTIMONY IN SUPPORT OF:

HB574 and SB766– RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION
SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature,

I am writing in support of the passage of HB574 and SB766.

The State of Hawaii has a genuine need to broaden its economic base. We now have a major opportunity to support and fulfill that necessity.

Through applied research, PISCES has successfully manufactured innovative materials using Hawaiian basalt with applications both in space exploration and on-island, generating significant interest from the aerospace sector and the local business community.

PISCES' continued work to expand and develop products and markets (including basalt-based concrete, basalt rebar, basalt mesh, cording and fabric) derived from Hawaii's naturally occurring basalt will positively impact the demand for quarried basalt in the Islands with long-term economic benefits. While produced internationally, the lack of a domestic basalt material industry in Hawaii offers an untapped market that could yield profitable returns. Basalt-based products and materials have the potential to create new manufacturing opportunities while significantly reducing Hawaii's dependence on imported products.

I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills.

Mahalo,



Douglas Bath

Kris Zacny
630 S Orange Grove Blvd, Apt 2
Pasadena, CA 91105

TESTIMONY IN SUPPORT OF:

HB574 and SB766– RELATING TO THE PACIFIC INTERNATIONAL SPACE CENTER FOR EXPLORATION
SYSTEMS (PISCES)

Dear Members of the 29th Hawaii State Legislature,

I am writing in support of the passage of HB574 and SB766.

The State of Hawaii has a genuine need to broaden its economic base. We now have a major opportunity to support and fulfill that necessity.

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I believe these bills will provide PISCES with the sustained, market-driven revenue it needs to continue developing cutting-edge, basalt-based products and materials that will directly benefit Hawaii's economy, and quarry and mining industries.

I would greatly appreciate your affirmative consideration of these bills.

Mahalo,

Kris Zacny

A handwritten signature in blue ink, appearing to read 'Kris Zacny', with a stylized flourish at the end.