### George R. Arivoshi 999 Bishop Street, 23rd Floor Honolulu, HI 96813

#### April 1, 2014

## TESTIMONY IN SUPPORT OF HCR138 / HR99 - DESIGNATING JULY 20, 2014, AS "TRANQUILITY BASE DAY" IN HAWAII TO HONOR THE FORTY-FIFTH ANNIVERSARY OF THE APOLLO 11 LUNAR LANDING AT TRANQUILITY BASE AND URGING THE UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION TO INCLUDE TRANQUILITY BASE AND ASSOCIATED ARTIFACTS ON THE WORLD HERITAGE LIST.

Dear Members of the 27<sup>th</sup> State Legislature,

I strongly support the intent of these resolutions to designate July 20, 2014 as "Tranquility Base Day" and to encourage UNESCO to include the Apollo 11 landing site and associated artifacts on the World Heritage List.

Hawaii played an instrumental role supporting the Apollo 11 lunar mission - from training astronauts Neal Armstrong, Buzz Aldrin, and Mike Collins for this adventure on the volcanic soils of the Big Island, to providing a vital communications link with the Apollo spacecraft through the Kokee Tracking Station on Kauai. The legacy of Apollo, and Hawaii's contributions to this historic venture, are clearly worthy of both statewide and international recognition, and can serve as a catalyst to inspire the next generation of space scientists, engineers and entrepreneurs who will pioneer the frontiers of space.

As such, I would urge you pass HCR138/HR99, and would be happy to address any questions you may have concerning this recommendation. I may be reached by e-mail at kyahiku@wik.com, by phone at (808) 544-6765, or by fax at (808) 544-8398.

Thank you for the opportunity to testify on these resolutions.

Aloha,

Jenge Rhingths George R. Ariyoshi

GRA:khy

STATE OF HAW

# DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

No. 1 Capitol District Building, 250 South Hotel Street, 5th Floor, Honolulu, Hawaii 96813 Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804 Web site: www.hawaii.gov/dbedt NEIL ABERCROMBIE GOVERNOR

> RICHARD C. LIM DIRECTOR

MARY ALICE EVANS DEPUTY DIRECTOR

Telephone: (808) 586-2355 Fax: (808) 586-2377

Statement of

RICHARD C. LIM Director

Department of Business, Economic Development & Tourism

before the

## HOUSE COMMITTEE ON VETERANS, MILITARY, & INTERNATIONAL AFFAIRS, & CULTURE AND THE ARTS

Wednesday, April 2, 2014 8:30 a.m. State Capitol, Conference Room 312

in consideration of

#### HR99 / HCR138

#### DESIGNATING JULY 20, 2014, AS "TRANQUILITY BASE DAY" IN HAWAII TO HONOR THE FORTY-FIFTH ANNIVERSARY OF THE APOLLO 11 LUNAR LANDING AT TRANQUILITY BASE AND URGING THE UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION TO INCLUDE TRANQUILITY BASE AND ASSOCIATED ARTIFACTS ON THE WORLD HERITAGE LIST.

Chair Takai, Vice Chair Ito, and members of the Committee. The Department of Business, Economic Development and Tourism **supports** these resolutions to designate July 20, 2014 as "Tranquility Base Day" and to encourage UNESCO to include the Apollo 11 landing site and associated artifacts on the World Heritage List.

Hawaii played a monumental role in supporting the Apollo 11 lunar mission – from training astronauts Neal Armstrong, Buzz Aldrin, and Mike Collins for this adventure on the volcanic soils of the Big Island, to providing a vital communications link with the Apollo spacecraft through the Kokee Tracking Station on Kauai. As such, it is most appropriate for our State to both recognize and commemorate this historic achievement through the proposed "Tranquility Base Day" proclamation, as well as to encourage UNESCO to officially designate the Apollo 11 landing site and related artifacts as World Heritage properties.

Thank you for the opportunity to testify on these resolutions.



03/31/2014

Testimony in strong support of Hawaii State Resolutions: HCR 138 and HR 99; and HCR 133 and HR 97

Statement of Buzz Aldrin, Apollo XI

To the Members of the 27th Hawaii State Legislature:

I would like to offer my strong endorsement of Hawaii State Resolutions – HCR 138 and HR 99; and, HCR 133 and HR 97, which will build on, and substantially further, the many early successes already demonstrated by your strong support of the Pacific International Space Center for Exploration Systems (PISCES).

I am delighted to see the continued outstanding leadership that you are demonstrating in supporting the development and operation of this truly unique and vitally important capability that will serve Hawaii, the United States, and the international space community, as a premier planetary analog test bed to help prepare for humanity's next bold frontier - the scientific investigation, sustainable exploration, commercial development, and settlement of space.

The importance of this new capability has been widely recognized both nationally by NASA, NOAA, and other federal and state agencies, as well as by the broader international community, which is now coming together to collaborate here on the Big Island to further our mutual goals in space, as is evident by the many memorandums of understanding and agreement which have been signed over the past two years.

In recognition of this leadership, and in anticipation of an important major milestone in human history - the 45<sup>th</sup> Anniversary of the historic Apollo XI lunar landing that Neil Armstrong and I were privileged to undertake on July 20<sup>th</sup>, 1969, while our crewmate Mike Collins orbited overhead, I would like to offer my strongest endorsement of State Resolutions HCR 138 and HR 99, to designate July 20<sup>th</sup>, 2014 as 'Tranquility Base Day', to honor the historical site where man first stepped upon another world.

I would like to further strongly endorse the companion call for the United States to urge the United Nations Educational, Scientific and Cultural Organization to designate Tranquility Base, and its associated hardware and artifacts, as an International World Heritage Site, to preserve this important site for all humanity, and for future explorers, to enjoy and to recognize this remarkable accomplishment for all mankind.

I would also like to strongly endorse State Resolutions HCR 133 and HR 97, which would endorse the planned partnership between PISCES, the National Aeronautics and Space Administration (NASA), other State Agencies, and several private sector industry partners, to collaborate in the research and development of 'basaltic concrete and other additive materials' to exploit the use of basalt, and other indigenous materials, from the Big Island's abundant lava flow fields to produce materials and structures to validate the ability to create similar materials on the moon, and other planetary bodies, that would be created from readily available planetary in situ resources.

The use on in situ resources, a term that NASA and commercial space sector researchers refer to as In Situ Resource Utilization (ISRU) has been identified as one of the most important processes to enable future affordable and sustainable human exploration and settlement of space, as it will make it possible to create needed surfaces, structures, habitats, and other capabilities, to support human activity in space, as compared with the extremely high costs of transporting such structures from the Earth to the moon, or other planetary bodies.

Following the successful demonstration of this research, it is anticipated that it will prove possible to apply this technology to manufacture and fabricate basaltic concrete surfaces, and other structures, that could be applied to many of Hawaii's roads, and other industrial needs, thereby substantially reducing the high cost of importing these materials from the mainland, and other suppliers across the globe to meet these needs.

Therefore, in recognition of the importance of conducting this research for exploration, and subsequently leveraging this capability for the economic benefit of the State of Hawaii, I also strongly endorse the proposal to extend the research phase of this work to address industrial applications here in Hawaii.

I firmly believe that the investment that you are making today in supporting PISCES, and in endorsing this exciting and promising new exploration research and technology, and its eventual application to meeting the needs of the State, will undoubtedly assure Hawaii a unique leadership role in this challenging new frontier, while also contributing substantially to the economic prosperity and well being of the State.

I again, strongly encourage your continued leadership in supporting PISCES - a timely and vitally important asset for not only your State, but also for our Nation, and for the broader international space community, as well as for the State of Hawaii.

Thank you for the opportunity to testify on these resolutions.

TSmg aldress

Buzz Aldrin Apollo XI



Penn State Abington

1600 Woodland Road Abington, PA 19001 215-881-7300 www.abington.psu.edu

March 21, 2014 The Twenty-seventh Legislature, Regular Session of 2014

Dear Legislators,

It is my understanding that the Hawai'i Senate will soon consider HR99/HCR138 designating July 20, 2014 as "Tranquility Base Day in Hawaii to honor the forty-fifth anniversary of the Apollo 11Lunar Landing at Tranquility base and urging the United Nations Educational, Scientific and Cultural Organizations to include Tranquility Base and associated artifacts on the World Heritage List." If you are able to realize such a designation, it will mark an important step in the understanding and eventual management and study of these cultural resources, which stand as some of the most significant in the history of human cultural evolution.

While the idea of cultural protection, much less archaeological research, on objects and sites located on the Moon or on other celestial bodies in the solar system might seem far-fetched, it is important to note that such research is already underway. For example, NASA's Lunar Reconnaissance Orbiter (LRO) has been orbiting the Moon for years now and returning pictures of the landing areas of the manned Apollo spacecraft missions, the first images of these sites since the last Apollo mission in 1972. This use of a scientific orbiter as an archaeological platform, searching for abandoned relics of the first era of human exploration of space, continues a long-standing interest by the National Aeronautics and Space Administration in the archaeology of space exploration. Given Hawai'i's long interest in the exploration of space, your consideration of this site in your legislation is most welcome.

Kind regards, 194-1

P.J. Capelotti, Ph.D.
Associate Professor of Anthropology Penn State University, Abington College Rydal 103 Abington, PA 19001



## **College of Arts and Sciences**

Department of Anthropology MSC 3BV New Mexico State University P.O. Box 30001 Las Cruces, NM 88003-8001 575-646-2725

State of Hawaii, The Twenty-seventh Legislature Regular Session of 2014

March 21, 2014

Dear Legislators,

This is a letter in support of and testimony for HR99/HCR138 designating July 20, 2014 as "Tranquility Base Day in Hawaii to honor the forty-fifth anniversary of the Apollo 11Lunar Landing at Tranquility base and urging the United Nations Educational, Scientific and Cultural Organizations to include Tranquility Base and associated artifacts on the World Heritage List." Recently, Lisa Westwood and I cochaired a symposium on the space heritage at the annual meeting in Honolulu of the Society of American Archaeology and met with several senators and legislators in early April last year and appreciated their enthusiasm for Hawaii's long historic connection with space exploration. We both have worked with the California and New Mexico State Cultural Properties Review Committees to place Tranquility Base on the lunar surface on both the California and New Mexico State Registers of Cultural Properties in 2010. I am a professor of Anthropology at New Mexico State University and have worked on the field of space archaeology and heritage for the last 13 years as well as being part of a NASA team which issued the Lunar Historic Sites Guidelines in 2012.

Hawaii is one of the most important places in the US as the Apollo Program was developed and served as a critical location for the training and involvement with the astronauts who first landed on the Moon at the site. I believe that this resolution honors Hawaii's contribution to the history of the exploration of space, without which we might not have reached the Moon. HR99/HCR138 provides a testimony for Hawaii's contribution to space exploration and Tranquility Base as a space heritage site.

I appreciate your efforts and those of like-minded preservationists in this endeavor and heartily support the resolution.

Best regards,

Beth Laura O'Leary Ph.d Professor in Anthropology



Pauline Roth <proth@hawaii.edu>

Support for HR99/HCR138

1 message

Lisa Westwood <Lwestwood@ecorpconsulting.com> Fri, Mar 21, 2014 at 1:31 PM To: Rob Kelso <rkelso54@gmail.com>, "Polly Roth (proth@hawaii.edu)" <proth@hawaii.edu>, "Donaldson, Milford Wayne (mwdonaldson13@yahoo.com)" <mwdonaldson13@yahoo.com>, "O'Leary, Beth (boleary@nmsu.edu)" <boleary@nmsu.edu>

Legislators:

Please consider my support for the passage of HR99/HCR138, designating July 20, 2014 ad Tranquility Base Day in Hawaii to honor the 45<sup>th</sup> anniversary of the Apollo 11 lunar landing at Tranquility Base on the Moon, and urging UNESCO to designate it on the World Heritage List. Hawaii's role in the history of human space flight is important, and passage of this resolution will honor Hawaii's place in this monumental event in human history. Through passage of this resolution, I ask the state of Hawaii to join the states of California and New Mexico in honoring the success of the Apollo 11 mission, but also in taking a critical step in preserving this part of the history of Hawaii, of our nation, and of our human species.

I fully support this resolution and appreciate your consideration.

Sincerely,

Lisa D. Westwood, RPA

**Cultural Resources Manager** 

**ECORP Consulting, Inc.** 



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