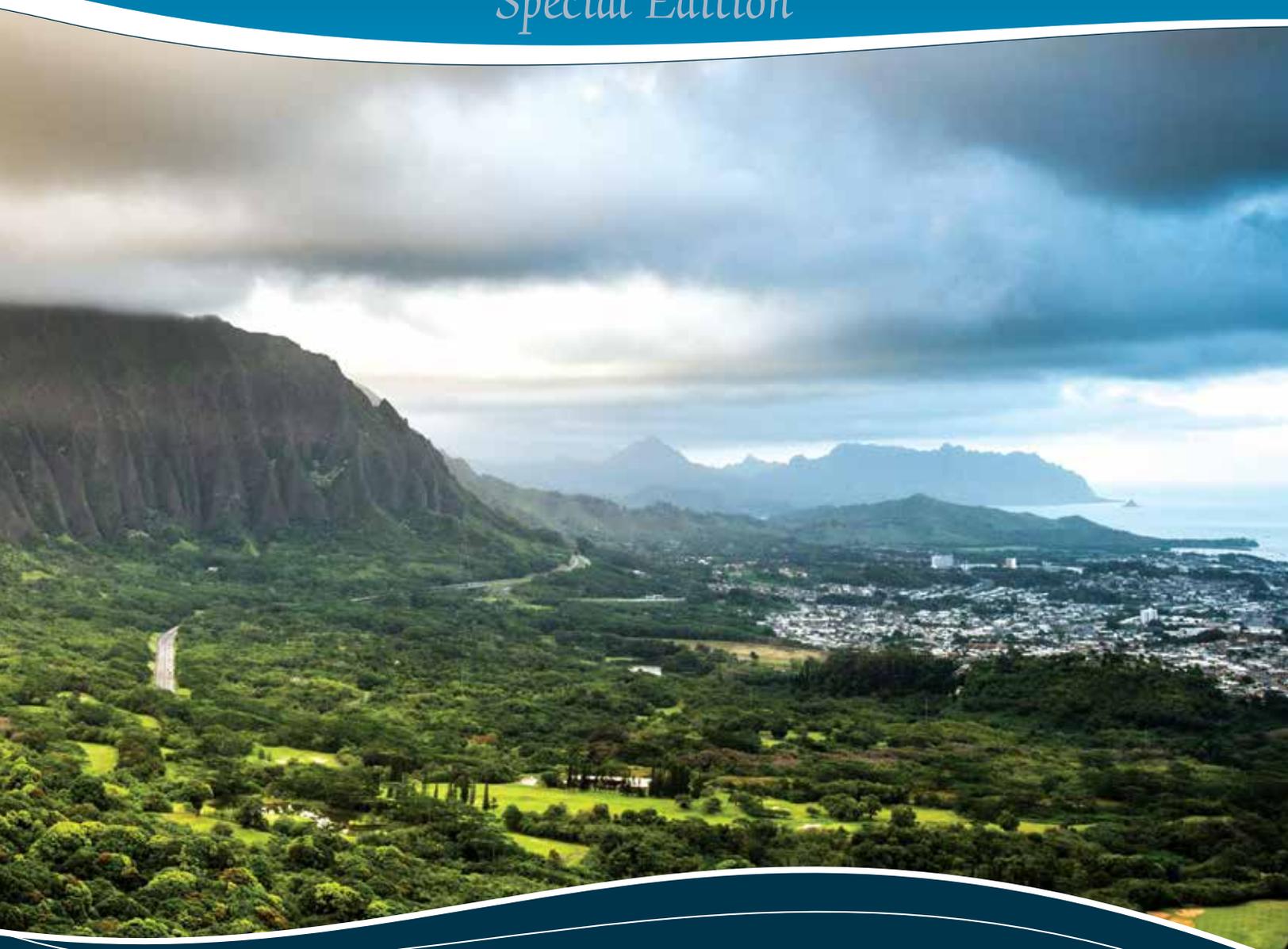


# *Ka Pili Kai*

University of Hawai'i Sea Grant College Program • Vol. 36, No. 1 • Spring 2014

*Special Edition*



## **Ascent**

Building a Secure and Sustainable  
Water and Energy Future for Hawai'i



## Ascent: Building a Secure and Sustainable Water and Energy Future for Hawai‘i

April 15, 2014

University of Hawai‘i Sea Grant College Program (UH Sea Grant), University of Hawai‘i at Mānoa Chancellor Tom Apple, and U.S. Senator Brian Schatz have partnered to bring world-renowned experts from across the state and nation to the University of Hawai‘i for a day-long conference. These experts will address key underlying issues of sustainability, and engage directly with high school and college students who are poised to lead these efforts in the future.

Ascent highlights include a welcome by Chancellor Tom Apple, opening remarks by U.S. Senator Brian Schatz, Chairman of the Senate Water and Power Subcommittee, and an opening plenary address by U.S. Senator Barbara Boxer, Chairman of the Senate Committee on Environment and Public Works.

After the opening plenary address, distinguished panelists will be participating in a roundtable discussion with state and local experts to examine risks and propose solutions to energy and water resource security, and the complexities of climate change.

As the capstone of the conference, UH Sea Grant, Senator Schatz, and Chancellor Apple will also host one of its most prestigious seminar series in sustainability, which honors Stephen and Marylyn Pauley. Nobel Laureate and former Vice President of the United States Al Gore will provide the fifth lecture in this series.

*“We look forward to the positive outcomes this conference will generate with the collaboration of stellar and progressive minds. In no other place is the concept of sustainability more important than being located at least 2,500 miles from the nearest major land mass.” - UHM Chancellor Tom Apple*

*“A future in which we create economic and social opportunities for all, advance an enriching quality of life, preserve cultural inheritance, and promote stewardship of our natural resources for future generations is within reach.” - UH Sea Grant Director, Professor E. Gordon Grau*

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The University of Hawai‘i was designated a Sea Grant College in 1972, following the National Sea Grant College and Program Act of 1966.

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Cindy Knapman

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Heather Dudock

**On the Cover:** In Hawai‘i, no point in the state is further than 29 miles from the coast. As a coastal state, what happens on land, in particular, issues surrounding population growth, land development, transportation, and building design, have greatly intensified the demand on finite coastal resources. Cover photo: Panoramic view of the Ko‘olau mountain range and Kāne‘ohe, O‘ahu. Shutterstock

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Hawai'i



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## MESSAGE FROM SENATOR BRIAN SCHATZ

Aloha! It is my honor to join Chancellor Tom Apple and UH Sea Grant Director E. Gordon Grau in hosting this conference.

As a national leader in clean energy development and sustainability, Hawai'i is the perfect place to bring together local experts and global leaders like Vice President Al Gore for this important conference on our future.

I'm passionate about developing a clean energy economy and protecting our environment to make Hawai'i more self-sufficient and sustainable. As Chairman of the U.S. Senate Committee on Energy's Water and Power subcommittee, I have co-sponsored bipartisan legislation to provide an investment tax credit for grid connected energy storage. This bill could ease our national dependence on foreign oil and create clean energy jobs here at home. I also introduced the Utility Energy Service Contracts Improvement Act, a bill aimed to expand federal clean energy projects, reduce energy usage and help save taxpayer dollars.

I got my start with UH Sea Grant and I extend a personal mahalo to their program for providing critical support to train the next generation on issues that are so important to our future, like adaptation to climate change and sustainable development.

Sincerely,

A handwritten signature in black ink that reads "Brian Schatz".

BRIAN SCHATZ  
United States Senate

## INTRODUCTION



Can Hawai'i achieve a sustainable future? Can we continue to promote economic growth and development while maintaining our special quality of life and at the same time reducing our environmental footprint? Any attempt to do so will require creative strategies, innovative public policies, and the adoption of new and emerging technologies. It will also require achieving broad based support that will be required for public investment in a green future.

**Ascent: Building a Secure and Sustainable Water and Energy Future for Hawai'i** is a conference designed to develop strategies that will lead to change. In bringing together leading national and local experts, Ascent will address key underlying issues of sustainability, and provide a 'road map' for the state on how to break free of the 'business as usual' environment that impedes progress.

Coastal communities and economies are directly connected to their land and sea ecosystems. The future of our communities and our coasts, the economies they support, and the quality of life that they provide will be tied to how well we manage this connection.

Hawai'i is unique in many ways. It is the most isolated island archipelago in the world, separated geographically from the U.S. mainland by over 2000 miles. Unfortunately, the same qualities which

make us different from almost every other location on earth also make us extremely vulnerable to a changing climate.

As an island state, Hawai'i faces heightened challenges regarding energy, water, and waste management. We use incredible amounts of energy, most of it is provided by petroleum, and produce tons of waste, most of which is directed to our landfills. Water issues such as groundwater contamination and unsustainable use continue to be of concern. If we are going to leave a Hawai'i that is worth inheriting by our children and grandchildren, we need to reduce our carbon and environmental footprints, and we need to start today.

Ascent will focus on several key components of sustainability vital to moving towards a green future in Hawai'i: energy; water; green building; community design; water resources; and cultural traditions and knowledge.

The goal of this conference is to focus attention at the highest level within the state on "What needs to be done to move us toward a sustainable future?" A future in which we create economic opportunity for all, advance an enriching quality of life, preserve cultural diversity, and promote stewardship of our natural resources for future generations.



## Ascent Objectives

- Bring together national and local leaders in developing, promoting, and financing sustainable solutions to the problems we face in Hawai'i along with key stakeholders from government, industry, academia, the private sector, and citizens across the state to recommend specific action steps.
- Develop a clearer understanding of what federal programs in energy, transportation, housing, and economic development might be helpful in reaching sustainability goals.
- Highlight the considerable resources of the University of Hawai'i, its research and community outreach capabilities that it can apply to the many sustainability challenges facing the state, and recommend specific action steps.
- Create a forum for bringing forward new ideas and solutions to address current and future problems.
- Foster community connections to accelerate widespread adoption of clean energy, creative financing, smart growth, and green building practices.
- Review the potential value and contribution of new technologies (pros and cons) for achieving energy sustainability and reducing water consumption throughout the state.
- Look at potential new public-private partnership approaches for financing sustainability projects and creative ways to incentivize investment in sustainability technologies.
- Consider changes that might be reflected in the State Coastal Zone Management Plan, State Ocean Resource Management Plan, and other key state planning documents that would promote sustainable energy and water resource management.
- Prepare a report for the Governor that provides the foundation for ongoing committees to implement an agenda for change.
- Ensure that cultural heritage and diversity is reflected and preserved in all sustainability planning and project recommendations.



## PLENARY ADDRESS

### U.S. Senator Barbara Boxer

CHAIRWOMAN, U.S. SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS



A national leader on environmental protection, Senator Boxer is the first woman to Chair the U.S. Senate's Committee on Environment and Public Works (EPW). Senator Boxer also chairs the Senate Select Committee on Ethics, making her the only sitting Senator to chair two Senate committees. As EPW Chairman, Senator Boxer has focused the Committee's efforts on creating jobs, safeguarding public health, and protecting the environment. She has won numerous awards for her efforts to create a cleaner, healthier environment and for her dedicated work to address the threats of climate change.

Senator Boxer is a senior member of the Senate Commerce Committee and the Senate Foreign Relations Committee, where she chairs the first subcommittee ever to focus on global women's issues. She is also a member of the Democratic leadership in the Senate, serving as the Chief Deputy Whip since 2005. She assumed office in January 1993 after 10 years of service in the House of Representatives and six years on the Marin County (California) Board of Supervisors. In November 2010, she was reelected to her fourth term in the Senate.

## PANEL MEMBERS

### Mr. Geoffrey Anderson

PRESIDENT, SMART GROWTH AMERICA

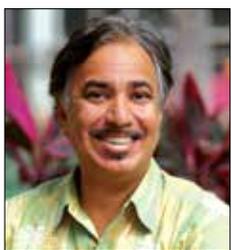


Recently named by Partnership for Sustainable Communities as "One of the 100 Most Influential Leaders in Sustainable Community Planning and Development," Geoffrey Anderson came to his current position as President and CEO of Smart Growth America after eight years heading the Smart Growth Program at the U.S. Environmental Protection Agency. He is a leader in the smart growth movement, and one of the minds behind the foundational *ten smart growth principles*. With an extensive list of publications, Anderson has served as an expert witness in front of the U.S. Congress, has been interviewed

and cited by the *New York Times*, *Newsweek*, the *Washington Post*, Fox News, NPR, and numerous other outlets and publications. As a regular conference speaker, Anderson has provided assistance to numerous communities across the country including in-depth work in Cheyenne, WY, Prince George's County, MD, and the flagship smart growth project Atlantic Station in Atlanta, GA.

### Mr. Kyle Datta

GENERAL PARTNER, ULUPONO INITIATIVE



Kyle Datta is a co-founding partner of Ulupono Initiative, which was formed in 2009 by Pierre and Pam Omidyar to invest in three key areas to make Hawai'i more sustainable: locally produced food, renewable energy, and waste reduction. Ulupono Initiative is an impact investment firm that invests in innovative Hawai'i-focused businesses and philanthropic organizations to catalyze large-scale economic and social change. Previously, Datta served as the CEO of U.S. Biodiesel Group. He was also a vice president at Booz Allen Hamilton and served as managing partner of the firm's energy practice in Singapore, and as leader of the U.S. Utility practice.

Datta is co-author of the Rocky Mountain Institute books *Winning the Oil End Game* and *Small is Profitable*. Datta also serves on the board of directors for Blue Planet Foundation, Parker Ranch, and Hawai'i BioEnergy, LLC, a Hawai'i -based partnership aimed at reducing local energy costs, greenhouse gas emissions and dependence on imported fossil fuels through renewable bioenergy projects.

## Mr. Bruce Karas

VICE PRESIDENT, ENVIRONMENT AND SUSTAINABILITY, THE COCA-COLA COMPANY



Mr. Karas is the Vice President of Environment & Sustainability for Coca-Cola Refreshments. In this role, he leads the environmental sustainability strategy development and implementation for Coca-Cola in North America. He has more than 20 years of experience as an environmental, health and safety professional and has practiced in a wide range of industrial operations in the U.S., Canada and China. He is a Certified Industrial Hygienist in Comprehensive Practice, a Certified Safety Professional, and is a Registered Occupational Hygienist in Canada.

## Dr. Stephen Meder

ASSISTANT VICE CHANCELLOR, PHYSICAL, ENVIRONMENT AND LONG-RANGE PLANNING, UNIVERSITY OF HAWAI‘I AT MĀNOA



Dr. Stephen Meder is the Assistant Vice Chancellor for Physical, Environment and Long-Range Planning at the University of Hawai‘i at Mānoa. He also holds a joint academic appointment there as he serves as the Director of the School of Architecture’s Environmental Research and Design Lab and as the Director of the Center for Smart Building and Community Design at the UH Sea Grant College Program.

At a state level he serves on the Hawai‘i Clean Energy Initiative’s Energy Efficiency Task Force. On a campus level he has initiated many sustainable design and energy efficiency programs. His office supports the UHM Sustainability Council and he was a founding member of the Chancellor’s Commission on Climate Change. His work at the administrative level emphasizes sustainable design with integrated campus planning and policies.

His research, teaching, and publications are focused in the areas of solar design and sustainable building design practices. In 2007 he received a national American Institute of Architects Eco-Literacy Award for combining his classroom teaching with community outreach. He was awarded the University of Hawai‘i Hung Wo and Elizabeth Lau Ching 2008 Community Service Award.

## Ms. Hermina Morita

CHAIR, HAWAI‘I PUBLIC UTILITIES COMMISSION



Hermina Morita was appointed to the Hawai‘i Public Utilities Commission (PUC) and named Chair of the Commission on February 3, 2011 by Governor Neil Abercrombie. She is the first woman to chair the PUC in its 100 year history.

Upon her confirmation on March 14, 2011, Morita resigned from her position in the State of Hawai‘i House of Representatives, where she served as a legislator for 15 years, including 13 years as the Chair of the House Energy & Environmental Protection Committee.

While in the legislature, Morita played key roles in establishing energy-related policy, including renewable portfolio standards, energy efficiency portfolio standards, greenhouse gas emission reduction targets, and a carbon tax on petroleum products dedicated to energy and food security initiatives. Prior to her experience as a legislator, Morita worked as a business manager in the retail, construction, and visitor industries. She has also served on the Kaua‘i Planning Commission and Kaua‘i Police Commission.

## U.S. Senator Brian Schatz

CHAIRMAN, U.S. SENATE WATER AND POWER SUBCOMMITTEE



Brian Schatz is a United States Senator representing Hawai'i. As Chairman of the U.S. Senate Water and Power subcommittee, Senator Schatz is leading efforts to promote the development of clean energy to make Hawai'i more self-sufficient and sustainable. He also serves as Chairman of the Tourism, Competitiveness, and Innovation Commerce subcommittee where he is working to help Hawai'i's high-quality visitor industry and support local jobs and businesses.

From 1998 to 2006, Schatz was a member of the Hawai'i State House of Representatives where he held several influential positions including House Majority Whip. In 2010, Schatz was sworn in as Lieutenant Governor of Hawai'i. As Lieutenant Governor, he led the state's clean energy efforts including the Hawai'i Clean Energy Initiative, a federal and state partnership to advance renewable energy and energy efficiency in Hawai'i.

Schatz was previously the CEO of Helping Hands Hawai'i, one of Hawai'i's largest non-profit social service organizations.

As Hawai'i's senior United States Senator, Schatz serves on three Senate committees essential to Hawai'i: Commerce, Energy and Natural Resources, and Indian Affairs.

## Mr. Nainoa Thompson

PRESIDENT, POLYNESIAN VOYAGING SOCIETY



Over the past 35 years, Nainoa Thompson has inspired and led a revival of the traditional arts associated with long-distance ocean voyaging in Hawai'i and throughout Polynesia. He is the first Hawaiian to practice the art of wayfinding on long distance ocean voyages since such voyaging ended in Hawai'i around the 14th century.

He studied traditional, non-instrument navigation under Micronesian master navigator Pius Mau Piailug of Satawal, Yap. Nainoa now teaches a system of wayfinding, or non-instrument navigation, that he developed synthesizing traditional principles of ancient Pacific navigation and modern science.

Devoted to education, Mr. Thompson continues to develop and implement a multi-disciplined, culturally relevant program focused on teaching children of Hawai'i the values of Polynesian voyaging. The program emphasizes both traditional and modern scientific knowledge of the environment, and stresses the importance of eco-cultural principles of conservation toward ensuring a safe, healthy, sustainable future for Hawai'i and Island Earth.

## STEERING COMMITTEE MEMBERS

Assistant Professor Rosie Alegado; Mr. Geoffery Anderson; Mr. Stephen Anthony; Dr. Roger Babcock; Dean and Professor Maenette Benham; Ms. Pelika Bertelmann; Mr. John Carey; Ms. Celeste Connors; Mr. Mitch D'Olier; Dr. Mary Donohue; Professor Aly El-Kadi; Mr. Joseph Ferraro; Assistant Professor Oceana Francis; Dr. Roger Fujioka; Mr. Gary Gill; Mr. Matthew Gonser; Professor E. Gordon Grau; Mr. Neil Hannahs; Mr. Maurice Kaya; Dean and Professor Denise Konan; Ms. Jacqueline Kozak-Thiel; Dr. Darren Lerner; Ms. Dawn Lippert; Mr. Jim Lyon; Ms. Laura McIntyre; Assistant Vice Chancellor Stephen Meder; Assistant Professor Wendy Meguro; Dr. Phil Moravcik; Ms. Hermina Morita; Dr. Darren Okimoto; Associate Professor Michael Roberts; Dr. Richard Rocheleau; Mr. Harrison Rue; Mr. William Tam; Assistant Professor Mehana Vaughan; Ms. Asia Yeary; Ms. Jan S. Yokota

## *The Capstone of the Ascent Conference...*

**University of Hawai'i at Mānoa**  
Chancellor Tom Apple and  
U.S. Senator Brian Schatz present

### **A University of Hawai'i Sea Grant College Program Stephen and Marylyn Pauley Seminar in Sustainability**



Former U.S. Vice President

# Al Gore

**April 15, 2014 • 7:00 p.m.**  
**Stan Sheriff Center, UH Mānoa Campus**

**The School of Ocean and Earth Science and Technology:**  
In Celebration of 25 Years of Science and Service

Tickets are free and available to the public at:

- Stan Sheriff Center Ticket Office
- UH Mānoa Campus Center Ticket, Information & ID Office

Tickets are also available online for a minimal fee:

<http://www.etickethawaii.com/>

For more information, visit: <http://seagrants.oest.hawaii.edu>



*This seminar is part of the Stephen and Marylyn Pauley Seminar in Sustainability series, organized by the University of Hawai'i Sea Grant College Program and co-hosted by the University of Hawai'i at Mānoa, the University of Hawai'i Foundation, and other partners, which periodically hosts speakers of the highest distinction.*

Al Gore was first elected to the U.S. Congress in 1976, and served consecutive terms until he was inaugurated as the forty-fifth U.S. vice president on January 20, 1993. He served in this capacity for eight years under President Bill Clinton.

Gore authored the bestsellers *Earth in the Balance*, *An Inconvenient Truth*, *The Assault on Reason*, *Our Choice: A Plan to Solve the Climate Crisis*, and most recently, *The Future: Six Drivers of Global Change*. He is the co-recipient of the 2007 Nobel Peace Prize, with the Intergovernmental Panel on Climate Change, for "informing the world of the dangers posed by climate change."

## ABOUT THE STEPHEN AND MARYLYN PAULEY SEMINAR SERIES

Presented by the Sea Grant College Program, the Stephen and Marylyn Pauley seminar series honors the Edwin W. Pauley Foundation's significant support of the University of Hawai'i, Dr. Stephen Pauley's remarkable individual sustainability efforts, and Mrs. Marylyn Pauley's national and visionary leadership in higher education.

Seminar speakers are individuals with extraordinary achievement and vision in their respective fields and who have demonstrated an ongoing passion to connect scholarship to application for the betterment of humankind. Each seminar is unique with academic, social, cultural, economic, and environmental importance and often stimulates associated events such as workshops, legislative hearings, and other activities.

Stephen and Marylyn Pauley Seminars in Sustainability are only offered when a particularly significant, timely and critical issue and notable speaker are identified.

### Previous Pauley Seminars

October 20, 2004

**Stephen Pauley, MD, FACS**



*Light Pollution: How Outdoor Lighting Affects Our Quality of Life, Our Health, and the Health of Our Environment*

After a career as a physician and surgeon, including providing surgical care to children in Ecuador via the non-profit Operación Esperanza, Dr. Pauley has applied his intellect in support of one of his core values, promoting the development and adoption of sustainable practices. His passions include reducing light pollution through the dark sky movement, restoring salmon runs to the rivers of the American West and scholarship on environmental and human health. He is an adjunct faculty member of the University of Hawai'i Sea Grant College Program.

November 2, 2006

**Richard Jackson, MD, MPH**



*Moving from Planning to Practice: Next Steps for Livable Communities*

Richard Jackson is Professor and Chair of Environmental Health Sciences at the School of Public Health at the University of California, Los Angeles. A pediatrician, he has served in many leadership positions in both environmental health and infectious disease with the California Health Department, including the highest, State Health Officer. For nine years he was Director of the CDC's National Center for Environmental Health in Atlanta and received the Presidential Distinguished Service award.

October 8, 2008

**Edward Mazria, Founder & CEO, Architecture 2030**



*Now, it's Personal...*

Founder of Architecture 2030, a non-profit, non-partisan, independent organization established in 2002 in response to the global warming crisis. Architecture 2030 seeks transformation of the building sector from a greenhouse gas emissions giant to a central part of the solution to global warming by changing the way buildings and developments are planned, designed, and constructed. An internationally recognized architect, Mr. Mazria is the recipient of numerous awards including the AIA Design Innovation Award, Commercial Building Awards from the U.S. Department of Energy, and "Pioneer Award" from the American Solar Energy Society. He is the author of numerous published works including *The Passive Solar Energy Book*.

March 13, 2012

**Joseph Stiglitz, Nobel Laureate**



*Where Long-Term and Short-Term Goals Converge: Using Sustainability As An Impetus for Economic Growth*

Joseph Stiglitz was awarded the 2001 Nobel Prize in economics and is a Professor at Columbia University. Professor Stiglitz previously served as Chairman on the Council of Economic Advisers for President Clinton and as Chief Economist and Senior Vice President for the World Bank. He continues to advise the Obama Administration, as well as the governments of other countries. Author of numerous New York Times best sellers, including his 2010 book *Freefall: America, Free Markets and the Sinking of the World Economy*.

*Seminars are co-hosted by the University of Hawai'i Sea Grant College Program, School of Ocean and Earth Science and Technology (SOEST), the University of Hawai'i Foundation, and supporting partners with additional funding from community contributions.*



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