

Aloha,

Thank you so much to everyone who participated in the Sustainable Saunders Interactive Launch Party on Earth Day at UHM April 20, 2007. It was a huge success with hundreds of students, faculty, staff, experts and community members contributing their ideas for a sustainable future for the campus and beyond.

Graffiti paper hung in fifteen theme areas captured suggestions from the many spontaneous conversations and are reported below without edit. There was much repetition and overlap of key concepts indicating that we share a common vision when looking at the big picture. The main philosophies that emerged were as follows:

1. Cradle to grave consideration integrated into procurement and processes
2. Infrastructure improvements to remove barriers to sustainable behavior such as recycling
3. Zero waste with vermiculture, paperless processes, biodegradable disposables
4. Less air conditioning, more natural day-lighting and ventilation
5. Maximum greening in rooms, on walls and roofs
6. Convenient, healthy food and exercise options on campus
7. Rainwater catching, native planting, low-flush toilets and waterless urinals for water conservation
8. Accept service, product and technology donations and form lease agreements with community businesses for mutual leverage
9. Only use resources when needed through sensors, system controls and behavior campaigns
10. Capitalize on every opportunity to generate and demonstrate renewable energy

Fun education, visibility to the process, honoring Hawaiian values and connecting the community also emerged as guiding principles as we move forward.

We have launched many projects at Saunders based on this collective input, We invite you to check our web site often to stay connected!

Thanks once again,  
The H.U.B. (Help Us Bridge) Student Sustainability Team

## 1ST FLOOR LANAI

### **Sustainable Food Vendors:**

Volcano Joe's  
Town

### **SUSTAINABLE SAUNDERS INFO/SUSTAINABILITY 101**

Experts:

Shanah Trevenna – Student Sustainability Coordinator, Futures Studies Student, HUB Member

Bruce Miller - Director of the Office of Sustainability

Mary Bailey - Earth Day Event Coordinator, Tourism Student, HUB Member

Michelle Jaffe – UHM Sierra Club, Urban and Regional Planning Student

Alex Frost – Community Sustainability Coordinator for The Big Island

Sid Snyder - Architect of Saunders Hall

### **RECYCLING AND THE WASTE STREAM**

Experts:

Tamara Armstrong – Kailua Free Recycling Pick-Up and Saunders Recycling

Edward Smith – Honolulu Recovery

Ron Nichols – Honolulu Recovery

Yang- Oahu Community Recycling

Suzanne Jones- City & County Recycling Coordinator

Priscilla Shaw- A&A Specialty Services

John Rosa- Pacific Recycling Services

May Ching – Plastic Bag Crocheting

Quinn Vittum & Selina Tarantino- Re-Use Hawaii

Kris Gourlay- The KNG Group

Terri Lo - Rolloffs Hawaii/ T & N Computer Recycling Services

Nik Nikolaidis- T & N Computer Recycling Services

Community Ideas:

- Private company take care of campus recycling
- UH needs to use its procurement process to favor vendors who offer cradle to grave recycling and reuse of their products in a responsible fashion, ie. computers
- Picture showing garbage produced by a 1000 people at cafeteria VS. Saunders interactive launch party compost
- Educational posters on wall so people can learn and know what's up
- More recycling bins, because people are seriously lazy, we got to help them at first until they catch on
- Raise alcohol and cigarette taxes (big time waste producers)
- Make all paper transactions digital
- City & County computer recycling program
- Adopt cradle to cradle principle that waste=food - separate in 2 categories: by technological and biological nutrients

- Trash fees based on weight per household and trash cops to catch roadside dumpers (Hmm...can I throw my trash in your yard because I don't like to pay☺)
- Building material reuse
- Environmentally friendly DBET or EPD cleaners
- Need facility to test cleaners (what are we using now?)
- Where can I recycle batteries without going to land fill?
- Scrap metal recycling incentive
- Switch to paperless filing
- Clear garbage bags and mandatory recycling
- Pack a small plate, cup and fork when you know a quick bite means disposable
- Live a sustainable lifestyle chee hee!

### **WORM BIN COMPOSTING**

Experts:

Joy Harten-Johnson – Environmental Science student, HUB Member

Mike Elhoffe - Styrophobia Compostible products

- Industrial composting on island
- Sugar cane bagasse compostible plates at all food vendors
- potato/corn starch compostible utensils at all food vendors
- Discontinue use of paper towels in bathrooms:ie. Use hand driers or vermiculture(worms eat paper towels)
- Zero waste

### **BICYCLING**

Experts:

PP Karl Kim – Saunders Bicycling Community Team, Chair of Urban and Regional Planning

Cyrus Camp – Kvibe, Futures Studies Student

Chris Sayers - City Bicycling Commission

Community Ideas:

- Bike everywhere
- Campus wide bike paths
- On-campus bike repair shop
- More bike stands
- Showers in Saunders and public buildings

## 3RD FLOOR LANAI

### Sustainable Food Vendors:

Banana Man  
Da Spot

### CLIMATE CHANGE/ENVIRONMENTAL JUSTICE

#### Experts:

Henry Curtis – Life of the Land  
Josh Cooper - Trained by Al Gore  
Elizabeth Fujiwara - Lawyer  
Michelle Medeiros - ForestEthics  
Jane Schoonemaker - UHM Global Environmental Science  
Shannon Wood - Windward Ahupua'a Alliance, Trained by Al Gore  
Stuart Scott - Climatecorps.org, Trained by Al Gore  
Fred McKenzie - Oceanography  
Jack Jkitti & Craig Coleman- Student Climate Change Commission  
Prof. Barry J. Huebert - Oceanography, Ocean CO2 levels

#### Community Ideas:

- Encourage responsible media coverage
- No acidification
- No more food poisoning on campus
- Promote personal responsibility
- Collaborative community sustainability
- Eat local
- Vote
- Open windows and turn off A/C
- Promote sustainable business competition plans with monetary rewards
- Communicate with other sustainability builders internationally
- Discover solutions we can work with together
- Co2 killing coral reef
- Aloha aina = malama aina
- Permeable concrete outdoors
- A greenspace.org instead of myspace.org
- Plants everywhere,...indoors and out
- Compost
- Have a fundraiser where people run a bicycle to charge a battery which runs a smoothie stand
- Keep doors open
- One acre of hemp can provide enough fiber to produce as much paper as an acre of trees . The hemp acre is harvestable up to 4 times a year. It will take 25 years for an acre of trees to grow back. Explore the possibilities of hemp. Ask why we don't use this valuable resource more.
- It's not about consumption, it's about digestion. The pranah/mana is all around
- How open are we to efficiently utilize the energy we have?

- The bus = 350 running vehicles plus 7 million gals of diesel
- Paint interior court walls white to reflect light into rooms
- No co2 emission vehicles on campus
- Recycle locally and build industry to reuse recycled materials to produce local goods
- Catchment toilets
- End junk mail
- Don't print what you don't need
- Water catchments do not exhaust tension wells
- Change all paper products to 100% post consumer recycled (copy paper/brochures/toilet paper/catalogs) or use alternative fibers
- Have recycle bins everywhere
- Solar panels on top of buildings
- Invest in mass transit and do it right
- Woof and other organic gardening organizations
- Redefine "leader"
- More concerts like Blue Planet festival
- Carpool club
- Better bike roads
- "Car sharing is caring"
- Bike everywhere
- Go vegan
- Bring your own plate and utensils
- Hang clothes to dry in sunshine
- Love and listening not pride and ego-This will be the ultimate way to connect to the same frequency and truly make a change
- Create a shift
- Elect smart politicians who get it
- Ride your bike

## **SAVING ENERGY AND WATER**

### Experts:

PP Robert Brewer - ICS PhD student

Howard Wigg – DBEDT Energy Analyst, Lighting specialist

Peter Rossegg – Hawaiian Electric

Gail Suzuki-Jones – DBEDT Energy Analyst

Karen Shishido – DBEDT Energy Analyst

Carla Din - Apollo Alliance

Chris Steele – Grace Pacific

Kevin Vegas – Grainger energy efficient products

Tommy Silva – T&T Tinting

### Community Ideas:

- Convert lighting to super high efficiency T8's
- Install motion sensors

- Tint windows
- Receiving direct sun with high visibility/high heat reflective films
- Test before and after for temperature differences
- Determine which rooms are used after hours and program A/C system
- Automatic A/C temp control and shut off
- Have lighting vendors donate different energy efficient lamps one vendor per floor
- Have HECO monitor energy use on each floor
- Rain storage tanks
- Install high efficiency A/C system w/ VFD's (Variable Frequency Drives)
- Dehumidification
- Program for dehumidification only during cool days
- Keep temp above polar levels
- Waterless urinals
- Dual flush toilets
- Infrared sensor faucets
- Only one elevator,...Only if needed
- Stop using elevators
- Power computer labs only when needed
- Turn off power in rooms when not in use
- Automate electricity use
- Windows and NOT A/C
- Switch to paperless electronic filing
- Create a green roof with grass and other vegetation
- Grow your own food in yard, lanai, roof top community garden
- Replace turning sink knobs to push ones that regulate water use
- Plant trees around building to create micro climate
- Big windows
- Recycle bins on every floor
- Hold more awareness fundraising, free concerts, and benefits to bring people with similar goals and ideas together more often than once a year.
- Natural ventilation
- All rain water drains into landscaping and not storm drains
- Bicycle powered computers
- Energy audit for the campus
- Convert entire campus to super T8 lights
- Solar tube (funneling in sunlight to rooms with no windows)
- Xeriscaping (landscaping requiring minimum water use)
- Give bus passes to students
- Financial companies will lease energy saving equipment @ no initial cost could reduce bill from 20 mil to 15 mil in 3 years
- Install high performance window tinting on all windows
- Turn off bathroom lights when not in use
- Roof top gardens
- Take the Stairs
- Natural Ventilation

- Install dehumidification feature
- Stop running a/c and lights 24-7 in attempt to dehumidify
- Use water from fountain run off to water irrigate the plants
- Recycle water
- Develop an energy efficient procurement program
- Install sensor lights - Med school has these lights now
- Stairs are sustainable and sexy,...check out my butt!
- Heat recovery units in athletic facilities to make water
- Filter system in water fountains so don't have to buy water bottles
- Waterless urinals
- Composting toilets
- Report leaking water sprinklers
- Use timers and drip irrigation
- Retrofit A/C's to high efficiency variable air volume
- Use solar panels on top of buildings
- Passive cooling systems for new buildings

#### **4TH FLOOR LANAI**

##### **Sustainable Food Vendors:**

Kokua Market

India Cafe

##### **SOLAR/WIND/OTEC**

Experts:

PP Jon Abbott – 21st Century Technologies

Meleana Judd – Inter-Island Solar Solutions

Eric Kwan – Zero Emissions Leasing

Chad Kabins –Ecopono Energy Solutions

Richard Figliuzzi – Energy Management Group, Building Mounted Wind Turbines

Mary Beth Ruth - Energy management Group

Will Rolston – Natural Energy Laboratory of Hawaii, OTEC

Marc Unowitz - Island Energy Solutions

Community Ideas:

- Passive solar
- Solar is a gift from God
- Domestic solar water heating and PV
- Commit to a renewable energy portfolio for UH
- Solar leasing and power purchase agreements
- Solar on every roof at UH
- Building mounted wind turbines at certain locations on campus
- Solar and wind assessment for the campus
- Wind turbines on the top of Saunders

## **BIODIESEL/ETHANOL/HYDROGEN**

### Experts:

PP Norm Wang – PhD focus on Biofuels

Juanita Matthews– PhD focus on hydrogen

Oz Jarvie – Biodiesel advocate

Bryan Collins – Pacific Biodiesel

Michael Treslet – Grove Farm, Ethanol

Keith Rollman – Sustainability Advisor to the Mayor, Biodiesel

James “Mitch” Ewan - Hawaii Natural Energy Institute, Hydrogen

### Community ideas:

- Start testing and creating hydrogen renewable energy
- Minus 85 fuel which improves mileage and not lessen it
- Take primary treatment from Honolulu waste water facility
- Add to emissions from H-power
- Use algae to refine to biodiesel
- Use invasive species of algae species too.
- Algae equals 5,000 gal per acre
- Kuku equals 380 gals per acre
- Grow algae in Saunders pond for bio diesel
- Dedicate some roof space for photobio-reactors that grow algae for bio diesel
- Install bio-hydrogen fermentation unit in Saunders and use enzyme fuel cells to produce electricity
- Use grass clipping or tree clippings for cellulosic ethanol production on campus
- Use 10% biodiesel on campus shuttle(campus transport)

## **5TH FLOOR LANAI**

### **Sustainable Food Vendors:**

Govinda's

Papa Lucks

## **WHOLE PROJECT VISIONING AND FINANCING**

### Experts:

PP James Sullivan – Sustainability Coordinator, Actus Lend-Lease

Evan Tector – Forward Foundation

Stefan Beresivsky – Energy Industries

Senator Russell Kokubun - Chair, Hawai'i 2050 Sustainability Task Force

Ian Costa – Director of Planning Kaua'i

Rob Parsons – Former Sustainability Coordinator of Maui County

James Brown – Hawaii Energy Alliance

Lawrence Scott – AC Project Management

Carlann Biederman- Innovative Projects Consulting

### Community Ideas:

- Promotions: make people aware of your projects

- Work with economic department
- Market sustainability to future marketers,....they can change a lot about cultural change in US and world wide
- Outdoor classrooms with internet and power
- Start with Saunders Courtyard
- Have meeting with each department to see what they want
- Help every part of this community engage together
- Bring awareness on importance of sustainability
- HOW: marketing and advertising,...Americans love to shop,...give them something to buy
- Paperless filing
- Become aware of more Island wide issues
- Visit, keep the North Shore .org or defend oahucoalition.org
- “Support sustainable development instead of paving over paradise”
- Partner ships and collaborations happened when people talk to others about their visions
- Get clear about your ideas then communicate
- Using S.S. as a platform, create a campus sustainability plan, include all the students and faculty, include local regional, and global contents
- Get off the grid within 2 years
- If you visualize it, take tangible action and make it happen so that others can experience a change
- Save Honolua Bay: visit honoluabay.org
- More funding from sustainable sources
- HECO rebates
- Ask contractors for in-kind donations, they could use the publicity
- Raise taxes for non-resident/non homeowners
- Tax tourists
- Hold back \$ form Feds

## **ARCHITECTURE/DESIGN/LEED**

Experts:

Sean Connelly - Architecture Student, HUB Member

Gordon Grau – Director of Sea Grant

Steve Meder – UHM Center for Smart Building and Community Design

Joe Hagedorn – Mechanical Engineer and LEED specialist

Red Mahan – Architect for Healthy Housing

Gordon Karau – Architect specializing in bamboo

Laura Ayers – Philip White Architects

Stacey Shepard – Philip White Architects

Vance Arakaki - Business student, Construction, HUB Member

Fred Creager – Architecture Associate Professor

Nick Butterbaugh- Architect

### Community Ideas:

- Green Walls
- Provide/Design rooms for relaxation /yoga to promote happiness and anti-stress areas
- Boxing bags made out of hemp
- Photoremediation=restore wetlands; use plants to treat sewage
- Compost toilets (no water-Google it: "SunMar")
- Low Flow toilets and sinks, waterless urinals
- Choose grass Roof
- Raise rates for car parking and use funds for free bicycle use like in Holland
- Light colored roof to deflect heat
- Roof top PV's
- Showers for active people
- All light and A/C have to be auto off when no live body can be detected(IE Sensors)
- Energy efficient Lighting
- Rain water catchment - use water for edible gardens  
ie. used for irrigation
- All animal and human waste should be recycled back upon the land [The old sugar cane fields]mixed with compost the sun in tropical climate should reduce the manure to white powder[a natural fertilizer for the soil]
- Low VOC(volatile organic compounds) paints and carpet
- Solar powered power point presentation in classrooms and to eliminate chalk or marker pen boards
- Recycled Glass mosaic on inner courtyard Facing concrete railing
- Bamboo furniture
- Compost toilets
- Roof top gardens
- Grey Water system
- Sealed compost collection bins in lounge areas
- Bamboo wall paper
- Collect rain water form roof and each floor and bring down to irrigate plants and garden
- Recycling chute to service all floors and paint it with art
- Sensor for temp and A/C
- Occupancy sensors to turn off light when no one in room
- Operable windows for natural air flow
- PV panels power elevators and common areas
- Rain water catchment
- Wind turbines
- Intensive planting=cooler microclimate, cleaner air, psychological benefit, could be edible

- LEED Cert. should be required
- IDP should get involved (IDP???)
- Nature is natural
- Sustainable design based on Hawaii's climate and style is imperative
- Research locally available resources to build human structure: bamboo, recycled concrete, straw
- Roof mounted PV's
- Extra Insulation
- Operable windows and vents
- Cross Ventilation
- "sustainable design should be a part of every design project"
- Consult the Hawaiian artists and professors on design and function
- Use the *mana* of them to create a Polynesian/green design
- Use New Zealand as a model
- Large sale canopies which are attached by cables for shading
- Yoga on Lanais
- Places to hang hammocks between classes
- Sustainable affordable housing alright for all
- Transparent floors across courtyard from 5<sup>th</sup> floor level
- Incorporate water fall element an 6<sup>th</sup> and 7<sup>th</sup> floor hydroponic growing around courtyard
- Downstairs may need supplemental lighting

## 6TH FLOOR LANAI

### Sustainable Food Vendors:

Ono Pono

Well Bento

### SUSTAINABLE EDUCATION AND CURRICULUM

Experts:

PP David Nixon – Public Policy Professor

Paul Berry – Media Education

Denise Konan – Interim Chancellor UHM

Lyla Berg – Representative for Education

Dean Otsuki & Suzanne Frazer- BEACH (Beach Environmental Awareness Campaign Hawaii)

Gerald Marten – Environmental Tipping Points

Luciano Minerbi – Professor of Sustainability

Susan Chandler - Interim Director of Public Policy Center

Pauline Chinn - College of Education and Curriculum Development

Mary Tiles - Chair of UHM Sustainability Council

Travis Idol - Natural Resource and Environmental Management

Jeannie Lim – UHM Institute for Peace

Kim Kido - Mechanical Engineering Student  
Ira Roter - Sustainability Internship Professor  
Jon Osorio- Director of the Center for Hawaiian Studies  
Lilikala Kame'eleihiwa- Professor of Hawaiian Studies

#### Community Ideas:

- Sustainability without incorporating the general public in collective visionary and ideal future we will remain stuck in the status quo
- The only way to really see sustainable change is by “mind-shifting” 5% of total population, shift from revolutionist thinking to sustainable thinking
- War is not sustainable
- Wholistic (sustainable) education should be the basis of all education
- We have to change the revolutionist approach to education
- Everyone learns Hawaiian when they start school
- Market bi-lingual
- Incorporate traditional Hawaiian values into educational curriculum
- Require NREM (Natural Resource and Environmental Management), TPPS ?, PACE, ETAL classes in core requirements to reach all of the student population in increasing awareness (environmental, social and other areas which need improvement) especially for business majors
- More sustainable courtyard type areas set up for large groups and classes
- Have vermiculture classes for students and dorms
- Big businesses can help, they just need to be on board ie. Salt Lake City Utah
- Make the school cafeterias use recycled paper plates and corn/sugar cane
- Recycle cans
- Discussions that help diffuse/decenter authority and knowledge and open pluralistic discussion
- Expand and support service learning opportunities
- Make labs an opportunity to serve and connect with the community
- Learn by doing not by watching and listening only
- Sustainable dorms
- Outdoor classrooms
- Intergenerational classes
- Location for hosting a cultural exchange
- Attract retired professionals to be students with free classes and free registration
- Create degrees called: sustainability, sustainable engineering, sustainable development, sustainable landscaping, sustainable education “Hi my name is \_\_\_\_\_ my major is sustainable Hawaii Living, I go to UH Manoa”
- Life labs garden classrooms
- UH Ashram – encourage the growth of sustainability through an intergeneration yoga community at UH – yoga has 8 stages or branches: 1.Yamas 2.Aisma (do no harm to self, others, all living things and planet) 3.Niyames (self purification) etc.
- Teach the keiki about sustainability and about the truth
- Map based short course on urban growth for students and citizens

## **FOOD SECURITY/ORGANICS/NUTRITION**

Experts:

Uncle Maka-Taro

Kim Coffee-Isaak – Agricultural Leadership Foundation of Hawaii

Matt Johnson – Agricultural Development Program Manager

Matthew Loke – Department of Agriculture

Sarah Styan – DuPont Agriculture and Nutrition

James “Kimo: Yamaguchi – UHM Food Services Manager

Thomas Drury & Matt- IKOH/ Ono Pono

Community Ideas:

- Increase/sponsor educational programs on nutrition and healthy foods
- Healthy food = healthy happy life/school/community and world
- Create awareness of our food shed where food come from,...what it takes to go,...transport and store
- New labeling requirements
- Environmental footprint for your food
- New 20/20 goal 20 days food supply in Hawaii by the year 2020
- Urban garden movement
- Backyard gardens
- Empty lot community gardens
- Green Roof gardens
- All city parks support community gardening
- State funding for organic farmers
- Sustainable agriculture
- Better markets for farmers
- Better help for farmers
- Watch out for invasive species
- K-12 school gardens
- Each school is food sufficient
- A new generation for farmers trained right in their own school gardens
- Aquaculture
- Stop/boycott Monsanto
- Decentralize and democratize food production
- Buy locally
- Fruit/veggie from local gardens(more nutrients with less travel from the earth to your plate)
- Many of us eat fruits and veggies all our live and never know what the plant it grew on looks like
- Let's get to know our food

- Local and fresh
- Food forest
- Food not lawns
- Sheet mulch that grass and plant some veggies
- Hydroponics
- Learn how to grow your own food
- Make available info on how to grow food
- Grow native plants of the region or others that survive without extra watering (not hard in Hawaii)
- Gardening 101,...student involvement
- Student run organic veggie and fruit gardens all over campus
- Food for thought: IF we wanted food self sufficiency now we would need to use 239,000 acres of our 249,000 acres of good agriculture Land. Complete food security will be difficult at current technology
- From 1059 to now, agriculture. As total % of economy decreased from 12% to 2%, but pre contact Hawaiians grew all their food & fish
- 1st time in history we don't know where our own food comes from - slow food movement is changing this. Yeah slow food
- HI is vulnerable to losing food imports
- Solar fruit dehydrates on the roof
- Plant coconut trees and avocados
- Space for a big organic garden
- Industrial hemp

## **7TH FLOOR LANAI**

Ra Chocolate  
Spicy Pesto

### **ALTERNATIVE FUTURES**

PP Jake Dunagan – PhD Futures Studies Student

Dr. Jim Dator – Futures Guru

Stuart Candy – Student Engagement Rep for Sustainability Council, Futures Studies PhD

Aaron Rosa – Futures Studies PhD

### **GREEN ROOF/WALLS/SUSTAINABLE LANDSCAPING**

Experts:

PP Leyla Cabugos – PhD – Indigenous plants for Green Roof

Virginian Cirabella – Straw Bale Housing

Dr. Andrew Kaufman – UHCTAHP Green Roof

Dawn Easterday – Landscape Architect, ASLP Green Roofs

Rick Barboza - Hui Ku Maoli Ola, Hawaiian Plant Specialists

Kevin Butterbaugh - Environmental Planning, EDAW Inc.

Sonja Caymaz - Assistant of Representative Cynthia Thielan, Industrial Hemp Advocate

### Community Ideas:

- To be able to eat fruit from so many trees, have a snack by just walking around
- Earth, Air, Water, Fire, let's stick with those, let's not be pushed by Global Warming Scare to commit to "alternative" fuels sources that are going to be harmful in the long run depleting our forests
- Grey water toilets=gardens
- Remove the transmitters from our roof and put them away from the human contact. Better Feng Shui and better health
- Live Aloha
- If no funding, you can ask for donations of materials, work, maintenance, skills, people will come forward
- Make Del Monte Corp pay for making the soil at Kunia toxic
- Go after other pineapple companies that have but BDB agent orange and their chemicals; they should pay for what they have done.
- Save La'au Point on Molokai
- Saving energy is key

### HEALTHY LIFESTYLE

#### Experts:

Isao Kaji - Traditional Medicine student, HUB Member

Katie Fisher - Hawaii Health Guide, Chinese Medicine

Michael Siaz – Hawaii Health Guide

Calvin Hoe – Culteral Learning/instruments

Heather Ritchie – Meditatlon

Amy DeFilipe - Yoga Hawaii

Rachel Priest - Healing with Sacred Sound

Ginny Walden – Qui Gong

Tyler Morgan – Reiki

Orion Stanbro – Lomi Lomi massage

Dori - Lomi Lomi massage

Melissa Lehua Novikoff – Lomi Lomi massage

Michael Hamilton – Qui Gong, Acupuncture, Traditional Medicine

Raven Crum - local clothing creator