

## SDWB PRESENTS AWARDS TO STATE SCIENCE FAIR WINNERS FOR GROUNDWATER or DRINKING WATER PROJECTS

As part of our continuing effort to promote ground water and drinking water in the Hawaii Education System, the Department of Health, Safe Drinking Water Branch participated in the 50<sup>th</sup> Annual Hawaii State Science Fair held April 2-4, 2007 at the Neal Blaisdell Center Exhibition Hall. One of the key elements to a successful ground water and drinking water program is the education and awareness of the public. One of the best ways to educate the public is by educating students about our water resources. By funding activities such as providing awards to the State Science Fair, we hope to further student interest in science and the utilization and protection of our water resources.

This year, the Safe Drinking Water Branch reviewed the following drinking water/groundwater-related projects:

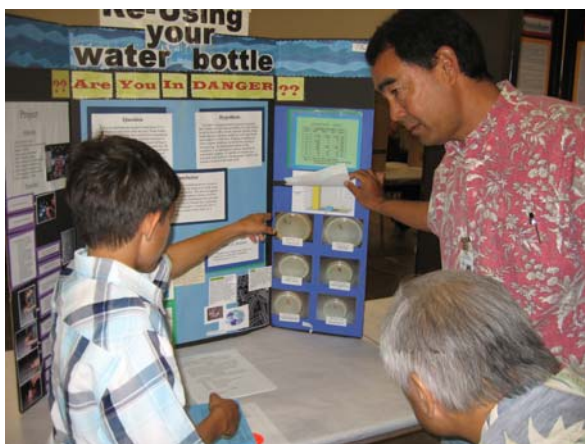
### Junior Research:

- (1) **Chemistry:** Andrew Mazi, Holy Nativity School, "What is the Best Drinking Water? Bottled? Filtered? Tap? Natural?"
- (2) **Environmental Science:** Kelsie Sasabe, YuiChi Lo, and Kacie Fujino, Aiea Intermediate School, "Which Simple Filter Works Most Effectively to Remove a Sample Pollutant From Water?"
- (3) **Microbiology:** Lauren Claypoole, Island School - Kauai, "Toxins in Bottled Water"
- (4) **Microbiology:** Joey Silva, St. Anthony Parish School - Kailua, "Re-Using Your Water Bottle, Are You in Danger?"
- (5) **Microbiology:** Sarah Tamashiro, St. Andrew's Priory, "How Clean is the Ice in Fast Food Restaurants?"

### Senior Research:

- (6) **Chemistry:** Karly Kanehiro, Kailua High School, "Water vs. Water"
- (7) **Environmental Science:** Shireen Flores, Waipahu High School, "Sink or Swim: Determining the Toxicity of Water Samples Collected Within the Waipahu Community"
- (8) **Environmental Science:** Donna Kim and Hazel Agpaoa, Waipahu High School, "Comparing the Efficiency of Various Methods of Water Purification"

Below: SDWB judges Mel Hamano and Mike Miyahira listens as Joey Silva explain his science fair project on re-using water bottles. "To re-use or not to re-use?"



Above: Sarah Tamashiro's project on how clean is the ice in fast food restaurants draws interest during the public viewing as people try to figure out which restaurants failed. "I think I ate there!"

Now in our fourth year, the Safe Drinking Water Branch judges (Mel Hamano, Michael Miyahira, and Daniel Chang) selected the following winning projects:

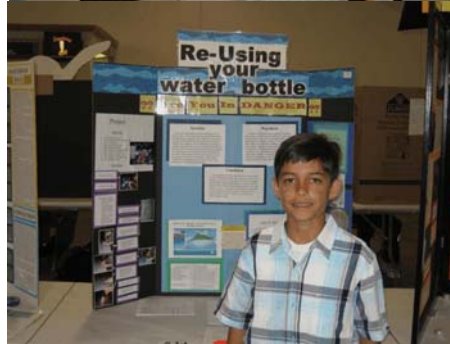
**Sarah Tamashiro**  
St. Andrew's Priory  
**"How Clean is the Ice in Fast Food Restaurants?"**

**Selected for: Outstanding Individual Junior Research Project in any subject category related to groundwater/drinking water. First Place**  
Received Certificate of Achievement, \$150 Cash Award.



**Joey Silva**  
St. Anthony Parish School  
**"Re-Using Your Water Bottle, Are You in Danger?"**

**Selected for: Outstanding Individual Junior Research Project in any subject category related to groundwater/drinking water. Second Place**  
Received Certificate of Achievement, \$100 Cash Award.



**Lauren Claypoole**  
Island School, Kauai  
**"Toxins in Bottled Water"**

**Selected for: Outstanding Individual Junior Research Project in any subject category related to groundwater/drinking water. Third Place**  
Received Certificate of Achievement, \$75 Cash Award.



**Karly Kanehiro**  
Kailua High School  
**"Water vs. Water"**

**Selected for: Outstanding Individual Senior Research Project in any subject category related to groundwater/drinking water.**  
Received Certificate of Achievement, \$150 Cash Award.



**Shireen Flores**  
Waipahu High School  
**"Sink or Swim: Determining the Toxicity of Water Samples Collected Within the Waipahu Community"**

**Selected for: Outstanding Individual Senior Research Project in any subject category related to groundwater/drinking water.**  
Received Certificate of Achievement, \$150 Cash Award.



The Safe Drinking Water Branch will continue to work with the Hawaii Academy of Science, School Science Fair Coordinators, and teachers to increase interest in Environmental Science and Water Resources.

**NOTICE OF PUBLIC PARTICIPATION AND INPUT ON THE PROPOSED DRINKING WATER TREATMENT  
REVOLVING LOAN INTENDED USE PLAN FOR THE STATE OF HAWAII FISCAL YEAR 2007  
AND THE FEDERAL FISCAL YEAR 2008 APPROPRIATION**

The State of Hawaii Drinking Water Treatment Revolving Loan Fund, also known as the Drinking Water State Revolving Fund (DWSRF), is required to develop an Intended Use Plan each year as part of the U.S. Environmental Protection Agency's (EPA)- DWSRF grant. EPA provides grants to the State of Hawaii annually for the construction of drinking water infrastructure and to support other drinking water programs.

For State Fiscal Year 2008, the Hawaii DWSRF program expects to receive approximately \$8,229,000 in Federal Funds. The Intended Use Plan explains how the new and existing funds will be utilized for the construction of drinking water infrastructure projects on the Priority List of Projects and the support of drinking water activities.

During the week of May 14, 2007, a public notice will be published statewide in the Honolulu Star Bulletin, the Hawaii Tribune-Herald, the West Hawaii Today, the Maui News, and the Garden Isle newspapers. The public notice period will be open for at least thirty days, during which comments on the Intended Use Plan will be accepted. Upon written request, a public hearing may be scheduled.

Information regarding the Intended Use Plan may be obtained by writing or calling the Safe Drinking Water Branch, 919 Ala Moana Boulevard, Room 308, Honolulu, Hawaii 96814, (808) 586-4258.

**AWWA HAWAII SECTION ANNUAL CONFERENCE**

We, the AWWA Hawaii Section Conference Committee, would like to invite all members and non-members to the 2007 Hawaii Conference. This year's conference "**WATER - DIVERSIFICATION IS THE KEY**" will be held at the Hawaii Convention Center and hosted by the Ala Moana Hotel.

The pre-conference kicks off on Tuesday, May 22, 2007 with two workshops. The first is presented by Brown & Caldwell, "**Storm Water Reclamation and Reuse in Hawaii.**" This workshop for Hawaii's engineering community will provide an opportunity for participants to identify key issues related to storm water reclamation and reuse and will also solicit input from participants. The second workshop, "**Operations and Maintenance of Water Systems to meet the Ground Water Rule**" will be presented by Rural Community Assistance Corporation which is designed as an interactive workshop for operations and maintenance personnel. Attendees will take part in hands-on exercises.

Jon Muraoka, AWWA Hawaii Section Chair, will open the conference with a warm welcome on Wednesday, May 23, 2007 at 9:00 a.m. Wednesday's highlights will include a keynote address by AWWA President, Mr. Terry Rolan; a presentation by Jonathan Scheuer of the Office of Hawaiian Affairs on "**Diversification to meet water needs**" and the "**Ono Water Contest.**" We will end the day with the always popular meet and greet sponsored by the trade show exhibitors.

Thursday's event include presentations by Elisa Speranza, CH@M Hill on "**Water Infrastructure at a Turning Point**", and University of Hawaii's Professor and Earth Justice Attorney, D. Kapua Sproat, on "**Legal Aspects of Water Diversification.**" The pipe tapping contest will be followed by our annual awards luncheon with guest speaker, Gwen Fujie. We then invite all of you to join us this evening at the beautiful Ala Moana Hotel for our conference banquet.

On Friday, "**Top Opps Competition**" steals the show as operators challenge each other in a spirited team format to answer questions on water industry operations. This year's field trip is to the Pearl Harbor Naval housing Red Hill storage tank, where you will get to see "**Tank Robotic Inspection and Cleaning.**" Finally, we ask that you please sign up early for our annual "**Water for people golf tournament**" at Coral Creek Golf Course.

We look forward to your attendance and remind you to take advantage of our early bird registration rates.

**Roy J. Silva, Conference Chair, 2007 Hawaii Section, AWWA**

**Other invited speakers include:**

Jim Purzycki, ABPA/BAVCO	“Backflow Prevention”
Joy Gannon, RCAC	“Financing Infrastructures & Development”
Dr. Steven Duranceau, Duranceau Consulting Services, L.L.C.	“Dealing with Consumers and Corrosion Problems”
Rick Zimmer, Montgomery Watson Lab	“Laboratory Certification”
Gwen Fujie	“Tongue Fu”
Rob Crow, Underground Solutions	“Pipe Restoration”
Ramsey Hemaidan, Fluid Conservation Systems	“Water Reduction & Leak Control”
Mike Miyahira, Department of Health, Safe Drinking Water Branch	“A Local Regulatory/Water System Perspective on the New Groundwater Rule”
Paul Seitz, Maui Department of Water Supply	“Filter Life”
Tom Vandenburg, Esq., Dongell, Lawrence, Finney, LLP	“Perchlorate Update: Litigation, Regulation, & Science”
Kim Neiner, Data Radio	“Wireless SCADA Design Consideration, Serial and Ethernet”
Denis Guibert, GE Water & Process Technologies Business	“Immersed Membrane Plant in Hawaii” (Grove Farm)
Ann Hajnosz, RW Beck	“Asset Management”
Mike Stark, Basin Water, Inc.	“Ion Exchange”

*Program subject to change, please see the AWWA Hawaii Section website at [www.awwa-hi.org](http://www.awwa-hi.org) for updated information and registration materials. For additional information, registration fees, and how to register, please contact Lorrie Shiraishi at (808) 748-5215 or (808) 550-9010 (fax) or [lshiraishi@hbws.org](mailto:lshiraishi@hbws.org) (E-mail)*

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**HAWAII SECTION, AMERICAN WATER WORKS ASSOCIATION  
1<sup>st</sup> ANNUAL TOP OPS CONTEST**

**ENTER YOUR TEAM IN HAWAII’S “COLLEGE BOWL” OF THE WATER INDUSTRY**

**WHERE: 33<sup>rd</sup> ANNUAL CONFERENCE, ALA MOANA HOTEL**

**WHEN: FRIDAY, MAY 25, 2007 - - 8:30–10:30am**

**For more information  
and to enter, contact:**

**Earl Ichimura  
(808) 488-8434  
e-mail: [puralearl@hawaii.rr.com](mailto:puralearl@hawaii.rr.com)  
Web page: [www.awwa.org/conferences/contests/topops](http://www.awwa.org/conferences/contests/topops)**

**January WTPO Passing Rate Increases**

Exam results. The 1st 2007 Water Treatment Plant Operator (WTPO) certification exams were held in Wailuku, Hilo and Kona in late January. Six operators sat for the exam, and four passed for a passing rate of 67%. The passing rates for grades 1 and 2 operators, and the overall passing rate improved! The breakdown by grade is as follows:

Grade	Passed	# of Examinees	Passing Rate	Passing Rate - July 06
1	3	3	100%	75%
2	1	2	50%	0%
3	n/a	0	n/a	n/a
4	0	1	0%	0%
total	4	6	67%	55%

*Congratulations to those operators who passed the exam, and to those who took the time to study!*

2007 exam dates. Please make note of upcoming exam dates and deadlines:

Certification exam	Exam Date	Applications due
Distribution System Operator (DSO)	<b>4/24/07*</b>	1/24/07
WTPO	<b>7/24/07</b>	4/24/07
DSO	<b>10/23/07</b>	7/23/07

\*the Maui exam is scheduled for 4/26/07

CEU approval. If your DSO or WTPO certification expires on 11/30/07, you were mailed a renewal reminder in March, along with a listing of your CEUs recorded to date. If you need to have other CEUs *approved* and recorded, please fill out the Course Approval form (purple) and send it in as soon as possible. The Board of Certification must review and approve CEUs for credit, and the board only meets quarterly (in February, May, August and November).

If you need to *take* courses for CEUs, you can refer to the "Approved CEUs" sheet for ideas. The UH Outreach College will again offer courses this summer. *Please note that training subsidy from EPA has been spent, therefore the Outreach College program will be charging more for courses.* The tuition of approximately \$85 per 8-hour course will be closer to the actual cost of providing training! As always, options also available to earn CEUs are: AWWA workshops and the annual conference in May, Statewide Wastewater Operator Training Center courses, the Montana Operator Basics CD course (newly approved), correspondence courses through California State University at Sacramento (CSUS), and online courses through AWWA and CSUS.

As you know, we've revised our internal CEU tracking system so that 10 contact hours equals one "CEU-10". *The number of approved contact hours you must earn to renew remains the same as it has been.* Grade 1 or 2 operators need eight contact hours (0.8 CEU-10s) per two-year renewal period. Grade 3 or 4 operators need 16 contact hours (1.6 CEU-10s).

Application for certification. You can download copies of the DSO (or WTPO) Certification Application form, Exam Registration form, or CEU Request form from the DOH SDWB website at: <http://www.hawaii.gov/health/environmental/water/sdwb/index.html>. You can also call Kumar Bhagavan or Ann Zane at 586-4258 for copies of these forms.



# The 2007 American Rainwater Catchment Systems Association Conference



August 15-17, 2007  
Kilauea Military Camp (KMC)  
Hawai'i Volcanoes National Park, Big Island of Hawai'i

## Aloha!

Join us as we celebrate sustainable living through rainwater catchment

Rainwater harvesting enthusiasts, practitioners, and experts will join at the 2007 American Rainwater Catchment Systems Association Conference to discuss a broad range of rainwater catchment topics, including potable and non-potable household supply, storm-water runoff control, groundwater recharge, sustainable development, floods and droughts. This conference will present information valuable to users, public health officials, academics, designers, installers, architects, builders, product vendors, students, planners, and water utility staff. The conference will be held at Kilauea Military Camp located on the Island of Hawai'i.

FOR MORE INFORMATION, PLEASE VISIT OUR WEBSITE:

**[www.arcsa07.com](http://www.arcsa07.com)**

OR CONTACT:

**University of Hawai'i at Hilo  
Conference Center**

200 West Kawili Street  
Hilo, Hawai'i 96720-4091

Phone: 808-974-7555

FAX: 808-974-7684

E-mail: [arcsa07@hawaii.edu](mailto:arcsa07@hawaii.edu)



Hosted By:

- Hawai'i Rainwater Catchment Systems Association in conjunction with UH Manoa's College of Tropical Agriculture & Human Resources
- The Rotary Clubs of Hawai'i
- Hawai'i Department of Health Safe Drinking Water Branch
- The County of Hawai'i

The 2007 American Rainwater Catchment Systems Association conferences comes to Hawai'i Volcanoes National Park on the Big Island August 15–17, 2007. Water professionals, academics, planners, homeowners, architects, engineers, and agriculturists from around the world will come to learn, network, and share at this biennial conference. Early registration ends May 15. See the website: <http://www.arcsa07.com>, for more information. The conference venue is Kilauea Military Camp, which itself uses captured rainwater for irrigation.

Keynote speaker is Andrew Lipkis, founder of TreePeople, the largest urban citizen forestry group in the world, whose mission now encompasses all manner of urban sustainability.

Also at the conference, two tours will be available: a walking tour of Kilauea Military Camp and a bus tour of a community almost entirely dependent upon rainwater harvesting.

Following is a sampling of other talks:

On the Big Island, a rainwater catchment system under design by 2020 Engineering of Bellingham, Washington, is designed to serve all water needs for a “green” ranch, including the potable demands for both the residence and livestock. The system features a small-scale automated sand filter and an ultra-violet light unit for disinfection. 2020 Engineering uses a Holistic Engineering approach, applied to rainwater harvesting and sustainable “green” building practices, recognizing that the effectiveness of any water resource plan is dependent on numerous unpredictable influences, and therefore, the whole situation relating to our water resources must be taken into account.

In Austin, Texas, a decommissioned power plant built in 1950 will find new life as a mixed-use civic, cultural, office, retail, and hotel center, with about 80,000 ft<sup>2</sup> of catchment area and more than 100,000 gallons of storage furnished by adaptive reuse of the original turbine-generator infrastructure’s cooling tanks and discharge pipes. Captured rainwater will serve landscaping, fountain makeup, and stormwater control. “This historic building reuse plan, in combination with sustainable design and construction principles applied to new construction and landscaping, promises to make the project a highly visible example of civic project planning,” according to project planner Kent Butler, Director of the University of Texas Center for Sustainable Development.



Architect's rendering of civic, cultural, and commercial conversion of Seaholm Power Plant, which will use existing power-plant infrastructure for rainwater storage.

(Courtesy Roma Design Group, LLC and Southwest Strategies Group and University of Texas Center for Sustainable Development)

In 2003, two public agencies established a Community-Based Water Quality Monitoring Program for the Outer Marshall Islands, to serve three purposes: (1) to establish a bacterial baseline data for rainwater catchments or tanks; (2) to raise the community awareness on water quality issues – poor quality water and its health impacts on youth and the elderly, and to establish baseline data on sanitary facilities; and (3) to educate the community in drinking water sources quality monitoring and to share environmental data to allow the public agencies to upgrade their knowledge on environmental monitoring. To achieve the third goal, a newly developed simple hydrogen sulfide (H<sub>2</sub>S) screen has been developed for detecting the presence or absence of pathogens more simply than with the traditional coliform membrane filtration method, according to Abraham Hicking of the Republic of the Marshall Islands Environment Protection Agency.

Moving to sustainable water management to mitigate the effects of drought in semi-arid rural Brazil, Johann Gnadlinger will describe two national programs: one program builds a cistern for every family to assure safe drinking water, which would guarantee a drought-proof source of drinking water for every family. A complimentary program, One Piece of Land, Two Types of Water, encourages every rural family to own enough land to for sustainable food production, and two types of water: one for human consumption, one for irrigation and livestock. The program will also encourage green water conserving technologies, such as contour tillage, vegetative soil protection, as well as cisterns for supplemental irrigation of vegetable gardens, for poultry raising and beekeeping, shallow wells, rock cisterns for water for livestock, subsurface dams, catchments of rainwater diverted from roads.

From Germany, Klaus Koenig speaks of the compounding effects of educating children and adults about rainwater harvesting. Not only are citizens becoming aware of the part rainwater plays in water conservation and reducing stormwater flows, but even the Hamburg Environmental Authorities recognized the benefit of RWH to environmental protection. Pre-school-age children are treated to a Water Theater. At one school, a rooftop catchment irrigates a small garden. Vegetables from the school are used in the school’s restaurant. For adults, an organization was founded to promote water recycling and rainwater catchment. Koenig will also speak on decentralized measures for stormwater management. In rural areas, he proposes an activated soil zone in rural areas. In cities, he suggests a rainwater storage tank with retention basin for overflow.

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**In this Issue of “The WaterSpot”:**

State Science Fair Winners.....	1
Notice of Public Participation and Input on the Proposed DWTRLP Intended Use Plan.....	3
AWWA-Hawaii Section Annual Conference.....	3
Operator Article.....	5
Rain Catchment Conference.....	6

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*Please send your  
suggestions, ideas,  
questions or  
comments to:*

**THE WATER SPOT 2007**  
**Safe Drinking Water Branch**  
**State Department of Health**  
**919 Ala Moana Blvd., Room 308**  
**Honolulu, Hawaii 96814**

*Fax us at (808) 586-4351,  
Attn: “THE WATER SPOT 2007”*

**SDWB WEB SITE:**  
*<http://www.hawaii.gov/health/environmental/water/sdwb>*



**LINDA LINGLE**  
**Governor of Hawaii**

**CHIYOME LEINAALA FUKINO, M.D.**  
**Director of Health**

**LAURENCE K. LAU**  
**Deputy Director for  
Environmental Health**

*We provide access to our activities without regard to race, color, national origin (including language), age, sex, religion, or disability. Write or call our Affirmative Action Officer at Box 3378, Honolulu, HI 96801-3378 or at (808) 586-4616 (voice) within 180 days of a problem.*

***The Water Spot 2007 (April/May 2007)***  
**Safe Drinking Water Branch**  
**Environmental Management Division**  
**Hawai'i Department of Health**  
**919 Ala Moana Boulevard, Room 308**  
**Honolulu HI 96814**

