



# LUA LINE



*A Publication of the Hawaii Water Environment Association*

Volume 14 Number 2

Internet Address: <http://www.hwea.org>

Summer 2001

## PRESIDENT'S MESSAGE

*By Steve Parabolicoli, 2001-2002 HWEA President*

Welcome to our mid-year edition of the Lua Line. Summer is nearly over and it seems that each year at this time, water related issues rise to the surface in our communities. In Hawaii, we have been impacted with below average rainfall in recent years that has resulted in dwindling levels of both ground and surface water resources. This is why as water professionals, we need to be strong advocates of water conservation programs which will allow our communities to make more efficient use of our water supplies. Whether it be through the distribution of water saving devices, the implementation of water recycling projects, or other water saving programs, we must all be supportive of initiatives that will extend our limited water resources. Another issue that seems to affect us here in Hawaii each summer is seasonal accumulation of seaweed on our beaches. This seaweed rots and produces hydrogen sulfide gas that people in the community believe originates in the neighborhood wastewater collection system. Also, when such things as seaweed blooms occur, many members of the community automatically blame discharges from the local wastewater treatment plant as the source of the problem. Most community members do not understand that wastewater treatment plants actually prevent water pollution and that other factors such as non-point source pollution pose serious threats to our water environment. The public needs to know that our wastewater treatment plants are staffed by well-trained and experienced operations personnel who are dedicated towards the protection of Hawaii's environment.



*Steve Parabolicoli*

***“The objective of the HWEA Executive Committee is to meet the needs of all its members.”***

We all need to do our part to educate our fellow community members about these important issues so that they understand that they can be part of the solution and not just part of the problem. HWEA has played a significant role in educating the public on environmental issues such as the examples cited above and we are continuing on with our vision of “Preserving and Enhancing Hawaii’s Water Environment”

through the hard work of our specialty committees and executive board.

There are a lot of WEF and HWEA activities coming up in the next few months. WEF’s annual conference, WEFTEC, will be held in Atlanta, Georgia on October 13 - 17, 2001. A few HWEA members will be attending this year’s conference with Roger Babcock and Vic Moreland/Peter Ono presenting papers. The PWO Softball - Golf Tournaments will be held in Kihei, Maui on Veteran’s Day weekend, November 9 -11, 2001. The Maui folks have

already held their first planning session for this event and it should be a lot of fun. We hope to have participation from each island and would like to extend an invitation to our engineering community to field a softball team or join the Sunday golf outing. HWEA’s Collection Systems Committee will be hosting its first biannual Collection System’s Conference on November 29 - 30, 2001 at the Ala Moana Hotel in Honolulu. Please visit our website at [www.hwea.org](http://www.hwea.org) for more information on these activities.

Planning is underway for the 2002 HWEA Annual

*(Continued on page 4)*

# The Proven Solution for Manhole Rehabilitation

Sauereisen is the easiest single-source solution for rehabilitation systems of deteriorated municipal infrastructures. No other manufacturer offers a complete family of materials with proven results.

## SewerGuard No. 210

- Resistant to HCl attack
- Prohibits water infiltration
- Liquid or spray applied

## Underlayment No. F-120

- Restores structural integrity
- Easy to install - layers in 2 hours, including downtime

## InstaPlug No. F-100

- Water plug material
- Stops active hydrostatic leaks
- Extremely fast setting

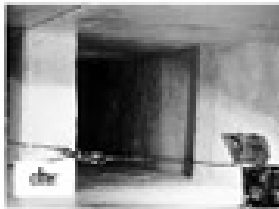
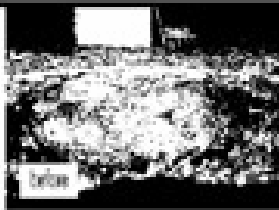
## NOOPool No. F-190

- Seals against infiltration
- Economical
- Safe and easy to apply

## Hydroactive Polyurethane

### Grout No. F-370

- Expands in the presence of moisture
- Stops leaks and fills voids in cracked or honeycombed concrete
- Fast setting



Rehabilitated with SewerGuard No. 210

**SAUERISEN**

Contact our knowledgeable technical staff to learn more about our economical rehabilitative products. If you want proven results, we have you covered.

**J.A. CRAWFORD CO.**

562-698-0901 • 925-449-6161

...since 1967

## 2001 SUMMER JOB BANK

For vacancy announcements for the **City and County of Honolulu**, please call the Department of Environmental Services at (808) 527-6667.

For vacancy announcement for the **County of Hawaii**, please call the 24-hour Job Hotline at (808) 961-8618.

For vacancy announcements for the **County of Kauai**, please call the Department of Public Works at (808) 241-6610.

For vacancy announcements for the **County of Maui**, please call Carol Kurisu of the Department of Public Works and Waste Management at (808) 243-7850.

## HWEA/WEF CALENDAR OF EVENTS

EVENT	DATE
WEFTEC 2001 (Atlanta, Georgia)	October 13-17, 2001
HWEA Annual PWO Softball/Golf Tournament	November 9-11, 2001
1st Biannual HWEA Collection Systems Committee Symposium/Workshop - Ala Moana Hotel (Honolulu, Hawaii)	November 29-30, 2001
HWEA Winter Lua Line	January 2002
AWWA/WEF 2002 Water Sources Conference and Exhibition (Las Vegas, Nevada)	January 27-30, 2001
24th Annual HWEA Conference - Hawaii Convention Center (Honolulu, Hawaii)	February 6-8, 2002
Disinfection 2002 (St. Petersburg, Florida)	February 17-20, 2002
Watershed 2002 (Fort Lauderdale, Florida)	February 23-27, 2002
16th Annual Residuals and Biosolids Management Conference (Austin, Texas)	March 3-6, 2002
Odors and Toxic Air Emissions 2002 (Albuquerque, New Mexico)	April 27-May 1, 2002
HWEA Spring Lua Line	May 2002

**NEWS FROM THE NATIONAL DIRECTOR**

**Victor Moreland, National Director  
Ph. 1-808-836-6919, Fax 1-808-833-2068**

**M** a n y things have happened since our last newsletter was read by the membership. A good number of things have been rescheduled, postponed, cancelled, or in some cases just forgotten. However, we will never forget what happen September 11, 2001, nine years to the day after Hurricane Iniki (to pinch, nip; sharp and piercing, as wind or pangs of love) hit Kauai. Each one has or will speak of tragedy, mourning loses, and the eventual road to recovery. I hope we don't have to go through either one of these types of events again.



*Victor Morland*

Your Board of Directors and committee folks are all working hard to provide you with good services and meaningful information. This means annual conference, specialty conferences, newsletters, and others forums for passing along valuable information you can use for your professional reference. Check out the website is has a lot of great information and links to other valuable websites as well.

Don't forget the WEFTEC October 13-17 in Atlanta, WEF needs our support more now than ever before. For further information about this event checkout the WEF website. Ken Ishizaki and I will be providing you folks with the WEF Board of Directors reports in the next issue.

Take care and be good out there, and may GOD bless you ALL.

**PWO NEWS**

**Jon Kawamura  
PWO Representative  
Ph. 1-808-847-8374, Fax 1-808-848-6532**



*Jon Kawamura*

**T**his October, the "Beach Biscuits", formally known as the "No Goats" team, will represent the state and HWEA at WEFTEC 2001, in Atlanta Georgia. We wish them all the best.

I will be sending out Operator Achievement award nomination forms for WWTP Operators, Maintenance and Laboratory personnel. So start looking for those people who you think deserve recognition. Please help us recognize outstanding operators by sending in your nomination form as soon as possible.

I will be continuing Kevin's idea of a committee made up of people from the different islands. Please contact me if you are interested in participating in this committee.

If anyone has any questions please feel free to

**2001 SOFTBALL TOURNAMENT**

—The News is out—

**Location: Beautiful island of Maui**

**Date: some time in November**

**contact Jon for more info**

contact me via e-mail (aquaeng@gte.net) or by phone (322-3047).

## GOVERNMENT AFFAIRS COMMITTEE

**Robin Matsunaga, Committee Chair**

**Ph. 1-808-521-5361, Fax 1-808-538-7819**

**Walter Billingsley, Committee Vice-Chair**

**Ph. 1-808-521-5361, Fax 1-808-538-7819**

**T**he HWEA Governmental Affairs Committee tracked two bills (wastewater and water reuse) in the 2001 State Legislature - both introduced by the Department of Health.

The first DOH bill proposed delegating approvals of Individual Wastewater Systems (IWS) to the counties. Building permit application reviews were anticipated to be more timely if it could be processed entirely at the county level rather than requiring DOH approval for the IWS portion of an application. Some of the counties were supportive of this measure, but others

### PRESIDENT'S MESSAGE (cont.)

*(Continued from page 1)*

Conference. This year's conference committee is being co-chaired by Dwight Nakao and John Katahira. They have assembled an enthusiastic group of volunteers to plan and organize the conference which is tentatively scheduled for early February at a new location, the Hawaii Convention Center. If you would like to help out the committee with the conference, please call Dwight or John.

I would like to welcome all new members to our association. I would also like to thank those of you who have been participating in HWEA committees or activities and encourage both new and existing members to consider getting involved with a committee or activity. HWEA is only as strong as its membership; and by working together, we have and will continue to accomplish so much. If you would like to become more involved with HWEA, please give me or the committee chairs a call.

Until next time...Aloha!



*Robin Matsunaga*

had some concerns of the level of state funding to assume this task. Unfortunately, this measure did not pass this session.

The second DOH bill proposed emulating the County of Maui's requirement that any irrigation user connect to water reuse

mains that are in the vicinity. Irrigation with reclaimed water would help conserve potable water resources. While there would be a long-term savings, there can be a sizable initial investment to convert existing potable water irrigation systems to separate potable and reclaimed water systems. Due to the opposition of various irrigation users, the bill that emerged at the end of this session only encouraged irrigation water reuse, but did not mandate it.

The Government Affairs Committee looks forward to any input from our membership on potential legislative or regulatory needs. Discussions with potential affected parties would need to begin soon, prior to proposing any issues to the legislature. If

*(Continued on page 9)*

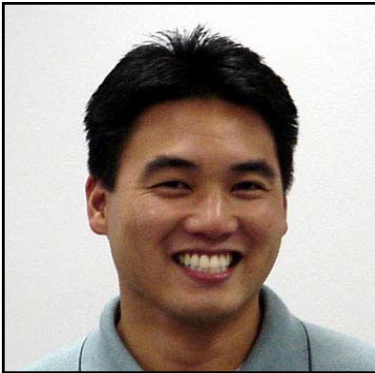
### Secretary-Treasurer's Report

as of July 31, 2001

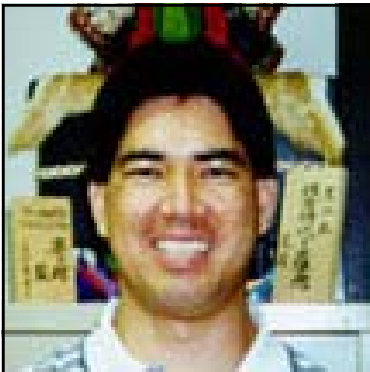
<b><i>Bank of Hawaii Accounts</i></b>	
Member Associations	\$2,000.63
<b><i>Merrill Lynch Accounts</i></b>	
Member Associations	\$5,541.56
Conference	\$81,961.16
<b><i>Petty Cash</i></b>	\$180.50
<b>TOTAL</b>	<b>\$89,683.85</b>

## CONFERENCE COMMITTEE

**John Katahira** Conference Co-Chair  
**Ph. 1-808-596-7790, Fax 1-808-596-7361**  
**Dwight Nakao, Conference Co-Chair**  
**Ph. 1-808-270-7988, Fax 1-808-270-7425**



*John Katahira*



*Dwight Nakao*

**A**loha! Great News! We're going to the Hawaii Convention Center in February 2002! Yes, you read/heard right, our 24<sup>th</sup> Annual HWEA Conference will be held at the Hawaii Convention Center, the State's largest convention facility, on February 6-8, 2002.

The decision to move our popular annual event was a hard and stressful task, however, with our Board's support the Committee took on the challenge for a change of scenery. We've been at the Blaisdell Center for the past

three years and we've grown a bit, so this should be a good change.

Since May, the Committee has been working hard organizing the details for this new site. We're also proud to announce our Sub-committee Chairs:

Exhibit:

Mr. Ian Arakaki, CH2M Hill & Mr. Dwight Ho, Insituform Technologies, Inc.

Technical Program:

Mr. Robin Hirano, The Limtiaco Consulting Group & Mr. Woodie Muirhead, Brown and Caldwell

Contributions:

Mr. Kyle Okino, URS Corporation & Mr. Mark

*(Continued on page 11)*

## WATER REUSE COMMITTEE

**(Joint HWEA/Hawai'i Section AWWA Water Reuse Committee)**  
**Eassie Miller, Committee Co-Chair**  
**(HWEA Representative)**  
**Ph. 1-808-523-8499, Fax 1-808-533-0226**  
**Elson Gushiken, Committee Co-Chair**  
**Ph. 1-808-637-5078, Fax 1-808-637-4779**

**T**he Reuse Committee has been actively involved with the review of the DOH's proposed changes to the DOH Water Recycling Guidelines over the past two months. The committee is preparing proposed language to supplement the NWRI 2000, Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse to ensure that the guidelines meet the needs of Hawaii. In addition to the proposed inclusion of the NWRI guidelines into the Water Recycling Guidelines, DOH has proposed to allow the use of R-1 recycled water for edible crop irrigation. Revisions to the Guidelines are scheduled for completion by the end of October 2001.

The revisions to HAR 11-62 are still pending. Dennis Tulang has committed to complete the revisions prior to retiring. Let's all monitor how this progresses.

The committee is supporting the Research Committee in scheduling an educational workshop for recycled water users in the food growers industry. Elson Gushiken, committee co-chair is leading our efforts.

Time sure flies when you're having fun. Planning for our next Water Reuse Specialty Conference is getting started. The conference is scheduled for September 2002 on the beautiful island of Kauai. We're searching for a few quality volunteers looking for excitement to join us in planning this conference.

If you are interested, please email or contact Eassie Miller.

## LABORATORY COMMITTEE

**Barney Asato, Committee Chair**

**Ph. 1-808-847-8356, Fax 1-808-842-1301**

**Anita Fernandez, Committee Vice-Chair**

**Ph. 1-808-879-6109, Fax 1-808-879-6369**



*Barney Asato*

PE Study 8 was held on May 9, 2001 with ten laboratories analyzing aliquots of an effluent sample collected from a wastewater treatment facility. Every laboratory except one submitted analytical results with supporting Data Quality

Control Reports. All analyses were completed within 8 hours of collection and reported results were derived using colony counts meeting the optimal 20-60 colonies per filter criterion. Sample transport temperatures were below 6°C for five labs, one lab reported 15.8°C and three did not provide data.

Five laboratories reported verification data. Verification rates for fecal coliform and *C. perfringens* colonies were 80% or higher. However, enterococcus verification ranged from 10% to 100%. Labs selected only 10 colonies for verification on a membrane filter with 20 to 60 enterococcus colonies. When all typical, presumptive enterococcus colonies on a membrane were verified, the verification rate was 58% for Method 1600 and 65% for Method 1106.1. Low enterococcus verification for the split sample was attributable to positive interference by *Streptococcus bovis*.

The relative standard deviation (RSD) was plotted to assess the trend of analytical precision between laboratories. The graph indicates inter-laboratory precision for enterococci, fecal coliform and *C. perfringens* membrane filter analyses have stabilized over the past four performance evaluation studies.

The next split event is scheduled for October 2001. I'll send out a notice about a month in advance.

Should you wish to comment or discuss these findings, please do not hesitate to call Barney Asato at (808) 847-8356.

**T**he Laboratory Committee administers the Voluntary Inter-Laboratory Split Sample Program to help labs improve the quality of their data. Each participating laboratory receives an aliquot of a single sample that may be analyzed for the three common bacterial indicators of pollution i.e. enterococci, fecal coliform and *C. perfringens*. Analytical results and data qualifiers are compiled and distributed. Results that are high or low from the average could be indicative of a breakdown in quality control. Adjustments to sample handling or analytical practices may be needed to correct deficiencies. The range of compiled results for all bacterial parameters has steadily narrowed showing improvement with each subsequent study since the start of the program in 1998.

The following is a list of laboratories participating one or more performance evaluation (PE) study:

- AECOS
- City and County of Honolulu Water Quality Laboratory
- County of Hawaii
- County of Kauai Sanitation Laboratory
- County of Maui Central Wastewater Laboratory
- Food Quality Lab
- State Dept of Health Environmental Microbiology
- State Dept of Health Maui District Health Laboratory
- State Dept of Health Waikeke Health Center
- State Dept of Health Kauai District Health Laboratory
- The Oceanic Institute
- University of Hawaii-Manoa Water Resources Research Center

The following report discusses the results of Microbiology PE Study 8 that was conducted on June 22, 2001.

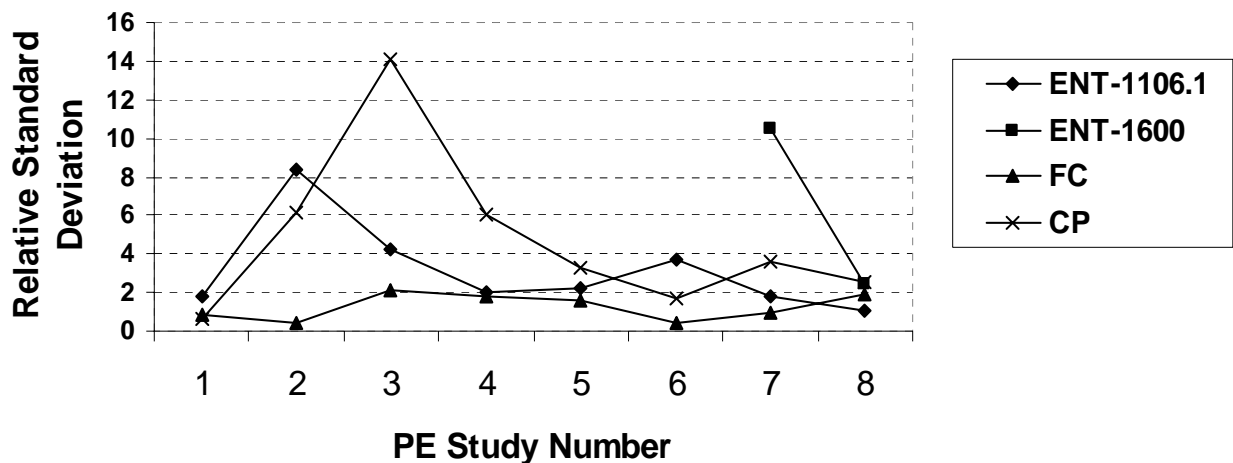
**Table 1: Microbiology PE Study 8 Test Results**

Lab Code	Enterococcus EPA 1600	Enterococcus EPA 1106.1 (Colony forming units per 100 mL)	Fecal Coliform SM 18:9222B	<i>C. perfringens</i> Armon et al 1987
1	-	320,000	12,000,000	21,000
2	570,000	410,000	12,000,000	21,000
4	340,000	-	-	13,500
5	-	320,000	7,500,000	12,500
6	540,000	410,000	-	22,000
7	260,000	390,000	-	13,000
8	400,000	400,000	-	22,000
10	-	380,000	-	-
11	-	285,000	-	-
12	320,000	-	6,800,000	19,000
Average	405,000	364,375	9,575,000	18,000
Median	370,000	385,000	9,750,000	20,000

**Table 2: Microbiology PE Study 8 Qualifying Remarks**

Lab Code	Qualifying Remarks
1	Sample transport temperature not recorded.
5	Positive and negative growth controls not performed.
7	Sample transport temperature not recorded.
10	Data QC Report not submitted with results; sample transport temperature at 15.8°C.

### Precision Between Laboratories Inter-Lab Split Sample Program



## Spotlight on Kenneth (Ken) Ishizaki, HWEA's Incoming National Director

Please give a warm welcome to HWEA's new, incoming National Director, Ken Ishizaki. Ken's name may sound familiar to you as he has been an active member of HWEA since he joined in the mid-1960s as a University of Hawaii graduate student. Ken chaired the Constitution and Bylaws Committee for several years and served as President of HWEA in 1976. Ken currently serves on the HWEA and WEF Water Reuse Committees.

Being asked to serve as HWEA's National Director is a great honor for Ken. In preparation for his term, Ken has been consulting with some of the past National Directors. Ken has put in a request to WEF to be a member of the Pacific Rim Committee. His current job has given him the opportunity to tour wastewater treatment operations in other states and countries, and he would like to share the technological information he has gained with the committee members.

Ken enjoys being a member of HWEA. He "likes how the organization is open to everyone, which provides him with an opportunity to meet operators, younger engineers, and women engineers". There were only three women in Ken's graduating class at UH, and he finds "the younger members are bright, articulate people." Ken values and appreciates all the friends he has made through HWEA. He feels very fortunate to have knowledgeable, good friends like Jimmy Kumagai, Hans Krock, Jimmy Honke, Vic Moreland, and Dennis Tulang.

Ken is Executive Vice-President of Engineering Concepts, Inc., an engineering consulting firm in Honolulu. He is the principal in charge of the planning and design of environmental engineering projects. His office is stacked with reports and paperwork. He does a lot of work with the Navy and travels approximately four times a year for projects.

Ken has been with the company since its inception in 1986. Previously, he was employed by M&E Pacific.

Ken resides in Kailua with his wife, Carol. They have a daughter who just graduated from college. Born and raised in Honolulu, Ken received his B.S. and M.S. degrees in Civil Engineering from the University of Hawaii. He is licensed in Hawaii, Oregon, and the Commonwealth of the Northern Mariana Islands. When Ken's not working, he spends his time watching sitcom reruns like *Mash*, *Cheers*, and *All in the Family* on Channel 32. He loves to watch TV.

In addition to HWEA, Ken is also a member of the American Water Works Association and American Society of Civil Engineers. He was formerly a member of the State of Hawaii Environmental Quality Commission from 1984 to 1990 and is currently a member of the State of Hawaii Board of Certification for Wastewater Treatment Plant Operators.

Ken's term as National Director begins on October 13, 2001. We wish him luck, and have total confi-



Ken Ishizaki in his office at Engineering Concepts, Inc.

## PUBLIC EDUCATION COMMITTEE

**Roy Abe, Committee Co-Chair**

**Ph. 1-808-524-3771, Fax 1-808-538-0445**

**Ann Tsuhako, Committee Co-Chair**

**Ph. 1-808-593-1264, Fax 1-808-596-0204**

The HWEA Public Education Committee is actively pursuing ways to reach people in our community. As a joint effort with the Collection Systems Committee, we are developing a Public Service Announcement program to people about their responsibility in keeping our wastewater system functioning properly. Topics such as proper grease disposal and not connecting downspouts to the collection system are some of the messages that we would like to get across. We are in the process of selecting the production company to create these PSAs now. It is a tough decision because all are well qualified.

The Public Education Committee and the Student Affairs Committee were also involved in selecting a high school student to represent Hawai'i in the Stockholm Junior Water Prize competition. The Stockholm Junior Water Prize (SJWP) is the most prestigious international youth award for a water science research project. Its purpose is to increase students' interest in water-related issues and research, and to sensitize them - as future leaders - to global water challenges. This year's state-wide winner is Jeremy Albano who's research project entitled "Copper Iron Sulfate Analysis in Flooded Lowland Taro Fields: Environmental Health Implications on the Use of Copper Sulfate as a Control Method for the Apple Snail" was submitted to the national competition. Unfortunately, Jeremy's paper did not win the national competition, however, we would like to congratulate him on a job well done.

During the upcoming school year, the committee will also be involved in a program at Moanalua High School where seminars will be held to promote science, math and engineering to female students.

The committee is also creating an exhibit board to



*Roy Abe*

promote our organization at community fairs and events. This board will feature HWEA events and committee activities. Its goal is to create awareness of the many benefits that our organization and its members provide to the community.



*Ann Tsuhako*

We would also like to inform you of our availability to make presentations on various topics. If you are looking for speakers for community events, feel free to call us and make a request. The members of our committee come from varying backgrounds and would be happy to make a presentation for you to promote awareness of our organization and educate the public on issues that affect our community.

## GOVERNMENT AFFAIRS COMMITTEE

*(Continued from page 4)*

you have any comments or suggestions, please call Walter Billingsley or Robin Matsunaga at 521-5361, George Takamiya at 438-1038, or Myron Nomura at 591-8820.

### FUKUNAGA & ASSOCIATES, INC.

*Consulting Engineers ~ Civil ~ Environmental ~ Sanitary*

**1388 Kapiolani Boulevard, 2nd Floor  
Honolulu, Hawaii 96814**



Telephone: **(808) 944-1821**  
 Fax: **(808) 946-9339**  
 E-mail: **fainc@aloha.com**  
 Internet: **http://www.fainc.org**

## COLLECTION SYSTEM COMMITTEE

**Jon Nishimura, Committee Co-Chair**  
**Ph. 1-808-944-1821, Fax 1-808-946-9339**  
**Tina Ono, Committee Co-Chair**  
**Ph. 1-808-523-4067, Fax 1-808-523-4642**



*Jon Nishimura*

**T**he HWEA Collection System Committee includes members with a broad range of experience and interests related to wastewater collection systems. Among the areas of interest that the committee is involved in are collection

system operations and maintenance, collection system planning and design, national and local regulatory policies and requirements, and new technologies for system construction and rehabilitation. In effort to share information with HWEA's general membership, the committee will regularly publish articles in the Lua Line covering current topics of interest concerning collection systems.

The topic for this issue is the County of Maui's Collection System - Preventive Maintenance Plan (PMP), written by the Collection Systems Operation and Maintenance Subcommittee.

*(See [page 11](#) for related article)*

### HWEA Collection System Conference

Planning for the first Bi-Annual HWEA Collection System Conference is well underway. The collection system committee is hard at work organizing the conference which is scheduled for Thursday and Friday, November 29-30, 2001 at the Ala Moana Hotel in Honolulu. There will be a variety of interesting topics covered including sewer flow modeling, low pressure sewers, collection system maintenance experiences, trenchless technologies, Capacity, Management, and Operational and Maintenance



*Tina Ono*

(CMOM) and lots more. The following is a partial listing of confirmed speakers and topics submitted for the conference.

“City Sewer Flow Modeling Program – Finally!”

Tina Ono, City & County of Honolulu, Department of Design and Construction

“Service Request / Work Orders Management through GIS”

Greg Camara – Synergen, Inc.

“Best O&M Practices to Support CMOM” & “CMOM Regulatory Status Activity in Various EPA Regions”

Rick Arbour – WEF CMOM Task Force

“Low Pressure Sewer makes further Inroads in Hawaii”  
 Leighton Lum – RM Towill Corp.

“NASSCO Pipeline Assessment and Certification Program (PACP)”

“What Makes a Project Go Bad?”

John Jurgens – Trenchless Resources International

“Collection System Maintenance: From Stone Age to New Age”

Clem Padeken, Eddie Chiu and Walter Medina – City & County of Honolulu, Department of Environmental Services

The Collections System Conference program is starting to shape up and we are waiting for confirmation from other speakers such as Jim Courchaine -- WEF CMOM Task Force, Reggie Row – CH2M Hill, Tracy Takamine – County of Maui, and Pete Bellows – Brown & Caldwell. The conference will also provide opportunities to network with other professionals in the wastewater collection system field. For the most current listing of the program, please visit the HWEA website at [www.hwea.org](http://www.hwea.org).

If you or anyone you know would like to present at

*(Continued on page 13)*

## County of Maui’s Collection System Preventive Maintenance Plan (PMP)

The County of Maui, Wastewater Reclamation Division operates and maintains five (5) wastewater reclamation facilities that receive raw wastewater from all sewer areas in the County of Maui. The island of Maui collection system includes approximately 200 miles of gravity collection lines and a total of forty-one associated wastewater pumping stations.

The wastewater collection system network is made up of several different types of materials including cast iron, PVC, Techite (fiberglass reinforced pipe), VCP, and concrete. Over the years, the County of Maui has evolved to using Ductile iron, PVC, and polyurethane-coated iron piping.

A sound Preventive Maintenance Plan (PMP) is the key component necessary in achieving the Collection System’s Program goals. The County’s wastewater collection system dates back to the 1930’s, when wastewater was collected and disposed into individual cesspools, to the 1990’s, where the County has in place regional collection systems and wastewater reclamation facilities. The PMP that began as a manual system is evolving into a system that utilizes detailed record keeping and more advanced computer technology as key components. The program has reached a level where the County can identify problems associated with the collection systems through the use of the latest technology to resolve the problems in the system, whether it is grease buildup, a broken/cracked pipe, root intrusion, infiltration and inflow, etc.

Preventive maintenance is vital to the success of the collection system’s operations. The general approach utilized by the County of Maui includes the following key elements:

1. Documentation of Maintenance Activities - includes field preventive maintenance inspection and lineflushing, flush deficiencies, and closed-circuit television (CCTV) inspection reports. Information gathered from these reports are collected and recorded in a collection system rehabilitation status outline from which work orders are generated and prioritized.
2. Evaluation of Inspection & Maintenance Activi-

ties – includes a comprehensive review of field inspection reports, as well as trouble calls activities to identify any new problems within the collection system or verify if known problems have worsened. Preventive maintenance scheduling is adjusted to reflect corrections or added defects in the collection system.

3. Regular System Maintenance – Each line in the County’s collection system is hydro-jetted at least once every four (4) years to maintain a free flowing piping system, and the systems are inspected and evaluated to assess the pipe network and manhole conditions as a whole.

For more information regarding the County of Maui’s Collection System, contact Paul Morioka (808)270-6294 of the HWEA Collection Systems Committee.

### CONFERENCE COMMITTEE (cont.)

*(Continued from page 5)*

Goodrowe, MGD Technologies, Inc.

Operations Challenge:

Mr. Jon Kawamura, Aqua Engineers, Inc. & Jeff Rebugio, Aqua Engineers, Inc.

Publications:

Ms. Gayle Takasaki, State Dept. of Health, WWB & Ms. Lori Kajiwara, State Dept. of Health, WWB.

Registration:

Ms. Lisa Ishida-Kimura, Hawaii Pacific Engineers, Inc. & Mr. Kristopher Swanson, Hawaii Pacific Engineers, Inc.

Social Events:

Mr. Michael Nishimura, Metcalf & Eddy, Inc. & Mr. Andy Huang, Metcalf & Eddy, Inc.

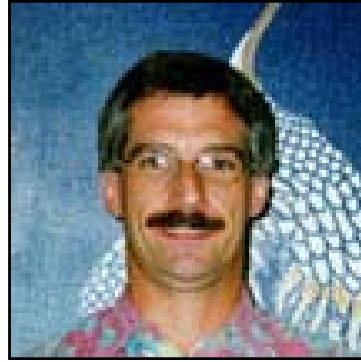
Please contact anyone of these individuals for more information about our 24<sup>th</sup> annual conference. Come join us, as we collectively work at, “Taking Care of Hawaii’s Valuable Water Resources”. And a side note, the Hula and Pro Bowl extravaganza events will occur the weekend before our conference.

## RESEARCH COMMITTEE

**Roger Babcock, Jr., Committee Chair**  
**Ph. 1-808-956-7298, Fax 1-808-956-5014**

The Research Committee has recently been revived from its catatonic state. The committee organized a very successful one-day workshop on Maui entitled "Sanitary Sewer Overflows: regulations, evaluation, control" on November 19, 1999. The workshop was co-sponsored by Hawaii Section ASCE and attended by over 80 engineers who listened to mainland speakers from the EPA and AMSA as well as several of our favorite local experts. The workshop actually turned a profit of approximately \$700. The research committee dropped out of site for a while after this. The committee was involved in co-sponsorship of another successful workshop on April 16, 2001 on "Epidemiological Approaches to Measure Transmission of Diseases from Drinking and Recreational Waters" which is summarized by committee member, Dr. Roger Fujioka (*see page 14*),

The committee is currently actively working on a new workshop tentatively entitled "Acceptable Uses of Reclaimed Water," to be held November 19, 2001 at the new Kapolei Hale. The effort is being assisted by the joint HWEA/AWWA Water Reuse Committee and the Honolulu BWS. The workshop will be geared to reclaimed water users (particularly farmers) as well as others involved in the production, wholesaling, marketing and sales of agricultural products. The initial basis for this workshop was the fact that DOH is currently revising the Reuse Guidelines to allow R-1 irrigation of fruits and vegetables which was previously forbidden in Hawaii but has been allowable and practiced in California for decades. The goal of the workshop will be to educate potential future users as well as others involved in market acceptance on the safety and benefits of using reclaimed water. Therefore, if and when such water becomes available, they will be inclined to accept it if it is cost competitive with other sources. Presentation topics will likely include a) an



*Roger Babcock, Jr.*

overview of DOH's revised reuse regulations with emphasis on the treatment and monitoring requirements, safety factors, back-up provisions, reporting requirements, etc.; b) an overview of the research and experience basis behind the DOH regulations; c) an overview of BWS plans for water recycling; d) a presentation by an agricultural extension agent on the nutrient benefits and any necessary changes to farming practices; e) a presentation by a speaker from the mainland who can talk about first-hand experience using reclaimed water on fresh produce and selling it to an accepting market. Stay tuned for updates on this workshop or contact any of the committee members with your ideas/suggestions.

### Sources of Research Information:

1. The Water Environment Research Foundation (WERF) has a web page at (<http://www.werf.org/>). WERF currently has a variety of on-going projects including \$8 million for 2001 alone (these projects are listed on the web page). WERF sells reports describing the results of completed research. Generally, WERF announces RFPs for specific new solicited topics in August with a deadline of October 30<sup>th</sup>; winners are notified in April. New RFPs for 2002 are not yet available (as of August 22<sup>nd</sup>). It should be noted that many of the projects are awarded to consulting firms and utilities (not just universities).
2. The American Water Works Association also has a research branch (AWWARF) which sponsors research on drinking water issues and is set-up very much like WERF (<http://www.awwarf.com/>). AWWARF funds even more research than WERF (about \$9 million per year) and also has many projects conducted

*(Continued on page 13)*

**RESEARCH COMMITTEE (cont.)**

*(Continued from page 12)*

- by utilities and consultants (see the web page for RFPs and deadlines).
3. The Water Resources Research Center at UH has a web page (<http://www2.hawaii.edu/~wrrc/WRRC.html>) which includes brief summaries of all on-going projects and links to abstracts of all projects ever completed by WRRC. WRRC publishes periodic Newsletters and sponsors seminars on water/wastewater topics on the first and third Thursday of every month during the academic year (3:00-4:30 pm). To get on the mailing list for seminar announcements and Newsletters call Philip Moravcik (956-3097) or send e-mail to [morav@hawaii.edu](mailto:morav@hawaii.edu).
  4. The UH library catalogs, databases, dissertations/theses, etc. can all be searched online at the library web page (<http://libweb.hawaii.edu/uhmlib/>). This page also has information about borrowing books, etc. The UH libraries have 2.9 million volumes, however this is only the tip of the iceberg since

the UH library can get virtually any book from anywhere in the country on a loan basis for a very nominal fee. In addition, if you search a database and want a journal article that is not in the UH collection, for a nominal fee, the library will Fax to you a copy of virtually any research article that was ever published in any journal (UNCOVER service).

**COLLECTION SYSTEM (cont.)**

*(Continued from page 10)*

the conference please call Tom Myers (523-8499) or Tina Ono (523-4067) for more information or visit the HWEA website at [www.hwea.org](http://www.hwea.org). If you would like to help at the conference please call Lance Manabe (944-1821). This promises to be an interesting and informative conference, so don't miss out. *Any members out there that are interested in participating in the collection system committee are encouraged to contact Jon Nishimura at 944-1821 or Tina Ono at 523-4067.*

**R. M. TOWILL CORPORATION**  
 Planning • Engineering • Environmental Services • Photogrammetry • Surveying • Construction Management

Serving Hawaii's Wastewater and Water Needs Since 1930

Waikamilo Business Center  
 420 Waikamilo Road Suite 411  
 Honolulu Hawaii 96817-4941

Visit us on the web at [www.rmtowill.com](http://www.rmtowill.com)

**Sand Island WWTP Expansion**  
 Island of Oahu - 2005

**Kulaia WWTP**  
 Island of Kauai - 1993

**Kulaia Highway Interceptor Sewer**  
 Island of Hawaii - 1989

## Summary Report: A Workshop on Epidemiological Approaches to Measure Transmission of Diseases from Drinking and Recreational Waters

by Dr. Roger Fujioka

The workshop entitled "A Workshop on Epidemiological Approaches to Measure Transmission of Diseases from Drinking and Recreational Waters" presented by Dr. Rebecca Calderon, Chief of Epidemiology & Biomarkers Branch, National Health & Environmental Effects Research Laboratory, USEPA, Research Triangle Park, NC. This workshop was unusual in that it was co-sponsored by five organizations (American Society for Microbiology, Water Resources Research Center/UH, Department of Health, AWWA/Hawaii Branch and Hawaii Water Environment Association). Each of the organizations made a contribution so this workshop could be implemented.

This workshop took advantage of the American Society for Microbiology (ASM) program to provide an ASM Foundation Lecturer to the annual meeting of the Hawaii Branch of ASM. Since a relatively small number of people actually would hear Dr. Calderon's presentation at the ASM function, Roger Fujioka of WRRC arranged for Dr. Calderon to make public presentations while she was here in Hawaii. As a result, a workshop was arranged to begin at 1:30 PM on April 16, 2001 at the Kewalo Conference Room, Ward Warehouse. Cost for this room was paid for by the Drinking Water Program of DOH and proved to be a convenient site with lots of free parking. The facilities also allowed for ease of serving refreshments which were paid for by the research committees of AWWA and HWEA.

Approximately 50 people showed up, including some from the neighbor islands. Dr. Calderon presented two lectures. Each lecture was followed by a discussion with a panel comprised of members of the five co-sponsoring agencies. Panel members representing HWEA were Lee Mansfield and Vic Moreland.

Dr. Calderon's first presentation entitled, "Drinking Water Epidemiology Research Program: An Overview" addressed drinking water problems faced by the nation and her organization's program to address this national issue. After discussion and a break, Dr. Calderon gave her second presentation entitled, "Evaluation of Potential Health Effects Associated with Non-Point Sources of Enteric Microbial Organisms." This second presentation addressed pollution of recreational waters by point sources (sewage) and by non-point sources (land run-off). Her epidemiological studies showed that high fecal bacteria in recreational waters is predictive of diseases among swimmers if the source of the fecal bacteria is sewage (point source) but not if the fecal bacteria is from nonpoint source.

The significance of her finding is that in the assessing risk to fecal bacterial contamination of recreational waters, it is assumed that the source of all fecal bacteria is from point source. However, in Hawaii and many other places, the source of fecal bacteria in environmental waters is primarily from nonpoint sources. She ended her presentation by stating that her office could look into problems from different states but the state must request assistance since her office does not routinely seek to address problems within individual states.



CIVIL ENGINEERING AND PLANNING  
WASTEWATER AND WATER TREATMENT  
CONSTRUCTION MANAGEMENT SERVICES

### **Hawaii Pacific Engineers, Inc.**

1132 Bishop Street, Suite 1003  
Honolulu, Hawaii 96813-2830  
Phone: (808) 524-3771  
Fax: (808) 538-0445

**MEMBERSHIP COMMITTEE**

**Alma Takahashi, Committee Chair**  
**Ph. 1-808-270-7420, Fax 1-808-270-7425**  
**Yvonne Miyasato, Vice-Chair**  
**Ph. 1-808-270-7419, Fax 1-808-270-7425**



*Alma Takahashi*

Plus, each time you recruit a new member, your name will be entered in the Grand Prize Raffle to be held in August, 2001:

**Grand prize:**  
 \$1,000 American Express Gift Certificate

**Second prize:**  
 \$500 American Express Gift Certificate  
**Third prize:**  
 \$250 American Express Gift Certificate

**T**he HWEA would like to welcome the following new members:

- |                   |                  |
|-------------------|------------------|
| Rengaraj Selyaraj | Paul Ouchi       |
| Dennis Hamamoto   | Ian Arakaki      |
| Ben Machol        | Merton Ogata     |
| David Yamamoto    | Thomas Andrews   |
| Martin Jay Shain  | Dan Clark        |
| Wynne Ushigome    | Melvin Matsumura |
| Lyman Morikawa    |                  |

**MEMBERSHIP RECRUITMENT CONTEST**  
**(August 1, 2000 to July 31, 2001)**

The 2000-2001 WEF membership recruitment contest ended July 31, 2001. Mahalo to the following members for their recruitment efforts:

	Number of members recruited 2000-2001
Dwight Nakao	2
Eric Agena	2
Ivan Nakatsuka	2
Walter Billingsley	2
Keith Uemura	1
Kevin Nakamura	1
Lori Kajiwara	1
Roger Babcock	1
Steve Parabolicoli	1
Eassie Miller	1

To become a recruiter, tell prospective members about the value of WEF/HWEA membership (member discounts, networking opportunities, technical information, professional development, committee involvement, etc.) and give them a WEF membership application. Be sure to print your name and WEF ID # on the "WEF Sponsor Name" and "Sponsor ID" line before giving the application to a colleague. You will receive sponsorship credit when your prospect joins. Applications can be obtained from the Membership Committee or at [www.hwea.org](http://www.hwea.org). All applications and inquiries can be sent to:

HWEA  
 PO Box 2422  
 Honolulu, HI 96804  
 -or-  
 Alma Takahashi  
 County Wastewater Reclamation Division  
 200 South High Street  
 Wailuku, HI 96793

Prizes for the 2000-2001 WEF recruitment contest are:

<u>Prize</u>	<u>Level</u>
Business Card Holder	2-9 members
Cell-Phone Calculator Alarm Clock	10-19 members
Cell-Phone AM/FM Radio	20-49 members
Cell-Phone Holder with Organizer	50+ members

**HWEA MEMBERSHIP STATUS AS OF**  
**July, 2001**  
 A

# CALL FOR PAPERS

## HAWAII WATER ENVIRONMENT ASSOCIATION 24<sup>th</sup> Annual Conference February 6, 7, & 8, 2002 Hawaii Convention Center - Honolulu, Hawaii

The Hawaii Water Environment Association (HWEA), a member section of the Water Environment Federation (WEF), is seeking papers for presentation at its 24<sup>th</sup> annual conference. The conference will include a wide variety of topics related to the wastewater field with an emphasis on the following topics:

- **Collection and Treatment Process Design**
- **Facilities Operations and Troubleshooting**
- **Process Control**
- **Corrosion and Odor Control**
- **Regulations, Enforcement, and Compliance**
- **Hazardous Waste**
- **Environmental Laboratory**
- **Computer Systems, Instrumentation, and Control**
- **Management and Administration of Environmental Facilities**

If interested, please submit abstracts in hard copy and/or electronic format (approximately 250 words) along with the proposed title, name(s) of speaker(s), author(s), company/agency affiliation, address, telephone and facsimile number, and e-mail address.

**Abstracts are due by October 31, 2001. Please mail abstracts to:**

HWEA 2002 Conference Program  
c/o Brown and Caldwell  
119 Merchant Street, Suite 200  
Honolulu, Hawaii 96813

For additional information, please contact:

Robin Hirano of The Limtiaco Consulting Group by phone at (808) 596-7790 or e-mail, robin@tlcghawaii.com, or

Woodie Muirhead of Brown and Caldwell by phone at (808)523-8499 or e-mail, wmuirhead@brwncald.com.

## HWEA SPECIALTY COMMITTEE ROSTERS

COMMITTEE	MEMBERS					
<b>Collection System</b>	Jon Nishimura (Chair)			Tina Ono (Vice-Chair)		
	Roy Abe	Eric Agena	Mark Goodrowe	Craig Nishimura	Russell Leong	
	Tim Steinberger	Paul Morioka	Tom Myers	Gary Skipper	Walter Chong	
	Scott Kunioka	Lance Manabe				
<b>Conference</b>	John Katahira (Co-Chair)			Dwight Nakao (Co-Chair)		
<b>Constitution &amp; Bylaws</b>	Lee Mansfield (Chair)			Vacant (Vice-Chair)		
<b>Government Affairs</b>	Robin Matsunaga (Chair)			Walter Billingsley(Vice-Chair)		
	Cheryl Okuma-Sepe	Dennis Tulang	George Takamiya	James Honke	Myron Nomura	
<b>Laboratory</b>	Barney Asato (Chair)			Anita Fernandez (Vice-Chair)		
	Merlita Empeno	Myron Honda	Snookie Mello	Robert Rychlinski		
	Pat Sheppard	Lyle Shizumura	Terrence Tanaka	Lourdes Vasquez		
	Bruce Zhang					
<b>Membership</b>	Alma Takahashi (Chair)			Yvonne Miyasato (Vice-Chair)		
<b>Newsletter</b>	Anna Lee (Chair)			Greg Chung (Vice-Chair)		
	Kristie Ching	Suzette Hokama	Jay Stone			
<b>Nominations</b>	Lance Manabe (Chair)					
<b>Pretreatment</b>	Dwight Nakao (Chair)			Ken Kawahara (Vice-Chair)		
	Bill Anderson	Ranold Fujioka	Pam Tsugawa			
<b>Public Education</b>	Roy Abe (Co-Chair)			Ann Tshako (Co-Chair)		
	Ken Windram	Kyle Yukumoto	Steve Parabolicoli	Joe Padron		
	Lara Hutto	Lance Tokuda	Dave Nagamine	Edith Eldeen		
	Grace Tulang-Moss	Lori Kajiwara	Tim Steinberger			
<b>Research</b>	Roger Babcock (Chair)			Vacant (Vice-Chair)		
	Roger Fujioka	Denis Lau	Lee Mansfield	Ray Matasci		
	Robin Matsunaga	Tim Steinberger	Ross Tanimoto	Ken Tanno		
	Dennis Tulang	P.Y. Yang				
<b>Safety</b>	Dan Peters (Chair)					
<b>Student Activities</b>	Ivan Nakatsuka (Chair)					
<b>Water Reuse</b>	Eassie Miller (Co-Chair)			Elson Gushiken (Co-Chair)		
	Victor Moreland	Robert Miyasaki	Kenneth Ishizaki	Peter Ono		
<b>Web Page</b>	Russell Okita (Co-Chair)			Mark Goodrowe (Co-Chair)		

---

**2001-2002 HWEA BOARD OF DIRECTORS AND SPECIALTY COMMITTEE CHAIRS**


---

**Steve Parabolicoli, President\***

County of Maui, Wastewater Reclamation Division  
 200 South High Street  
 Wailuku, Hawaii 96793  
 Phone: 1-808-270-7426, Fax: 1-808-270-7425  
 E-mail: steve.parabolicoli@co.maui.hi.us

**Tina Nakasone, Vice President\***

Hawaii Pacific Engineers, Inc.  
 1132 Bishop Street, Suite 1003  
 Honolulu, Hawaii 96813-2830  
 Phone: 1-808-524-3771, Fax: 1-808-538-0445  
 E-mail: tmuhawaii@hawaiiengineers.com

**Peter Ono, Secretary/Treasurer\***

Brown & Caldwell  
 119 Merchant Street, Suite 200  
 Honolulu, Hawaii 96813-4413  
 Phone: 1-808-523-8499, Fax: 1-808-533-0226  
 E-mail: pono@brwnald.com

**Lance Manabe, Past-President & Nominating Chair\***

Fukunaga & Associates, Inc.  
 1388 Kapiolani Blvd., Second Floor  
 Honolulu, Hawaii 96814  
 Phone: 1-808-944-1821, Fax: 1-808-946-9339  
 E-mail: Lhmanabe@yahoo.com

**Victor Moreland, National Director\***

1378 Mahiole Street  
 Honolulu, Hawaii 96819  
 Phone: 1-808-839-7848, Fax: 1-808-833-2068  
 E-mail: vdmiao@earthlink.net

*Effective October 2001*

**Kenneth Ishizaki, National Director\***

Engineering Concepts, Inc.  
 1150 South King Street, Suite 700  
 Honolulu, Hawaii 96814  
 Phone: 1-808-591-8820, Fax: 1-808-591-9010  
 E-mail: eci@get.net

**Jon Kawamura, PWO Representative\***

Aqua Engineers, Inc.  
 P.O. Box 390039  
 Kailua-Kona, Hawaii 96739  
 Phone: 1-808-322-3047, Fax: 1-808-322-3140

**Jon Nishimura, Collection System Chair**

Fukunaga & Associates, Inc.  
 1388 Kapiolani Boulevard, Second Floor  
 Honolulu, Hawaii 96814  
 Phone: 1-808-944-1821, Fax: 1-808-946-9339  
 E-mail: fainc@aloha.com

**Tina Ono, Collection System Vice-Chair**

Phone: 1-808-523-4067, Fax: 1-808-523-4642  
 E-mail: tono@co.honolulu.hi.us

**John Katahira, Conference Co-Chair**

The Limtiaco Consulting Group  
 615 Piikoi Street, Suite 1605  
 Honolulu, Hawaii 96814  
 Phone: 1-808-596-7790, Fax: 1-808-596-7361  
 E-mail: john@tlcghawaii.com

**Dwight Nakao, Conference Co-Chair**

County of Maui, Wastewater Reclamation Division  
 200 South High Street  
 Wailuku, Hawaii 96793  
 Phone: 1-808-270-7420, Fax: 1-808-270-7425  
 E-mail: pretreat@shaka.com

**Lee Mansfield, Constitution & Bylaws Chair**

GMP Associates, Inc.  
 1100 Alakea, Suite 1800  
 Honolulu, Hawaii 96813  
 Phone: 1-808-521-4711, Fax: 1-808-538-3269  
 E-mail: gmpassoc@lava.net

**Robin Matsunaga, Government Affairs Chair**

Belt Collins Hawaii  
 680 Ala Moana Blvd.  
 Honolulu, Hawaii 96813  
 Phone: 1-808-521-5361, Fax: 1-808-538-7819  
 E-mail: rmatsunaga@beltcollins.com

**Walter Billingsley, Government Affairs Vice-Chair**

Phone: 1-808-521-5361, Fax: 1-808-538-7819  
 E-mail: walter@beltcollins.com

**Barney Asato, Laboratory Chair**

Department of Environmental Services  
 City & County of Honolulu, Sand Island WWTP  
 1350 Sand Island Parkway  
 Honolulu, Hawaii 96819  
 Phone: 1-808-847-8356, Fax: 1-808-842-1301  
 E-mail: yoshi1@gte.net

**Anita Fernandez, Laboratory Vice-Chair**

Phone: 1-808-879-6109, Fax: 1-808-879-6369  
 E-mail: anitaf@shaka.com

**Alma Takahashi, Membership Chair**

County of Maui, Wastewater Reclamation Division  
 200 South High Street  
 Wailuku, Hawaii 96793  
 Phone: 1-808-270-7420, Fax: 1-808-270-7425

**2001-2002 HWEA BOARD OF DIRECTORS AND SPECIALTY COMMITTEE CHAIRS (cont.)**

E-mail: alma.takahashi@co.maui.hi.us

**Yvonne Miyasato, Membership Vice-Chair**

Phone: 1-808-270-7419, Fax: 1-808-270-7425

E-mail: yvonne.miyasato@co.maui.hi.us

**Anna Lee, Newsletter Chair**

Engineering Concepts, Inc.

1150 South King Street, Suite 700

Honolulu, Hawaii 96814

Phone: 1-808-591-8820, Fax: 1-808-591-9010

E-mail: alee@ecihawaii.com

**Greg Chung, Newsletter Vice-Chair**

Phone: 1-808-488-0477, Fax: 1-808-488-3776

E-mail: engrsol@gte.net

**Dwight Nakao, Pretreatment Chair**

County of Maui, Wastewater Reclamation Division

200 South High Street

Wailuku, Hawaii 96793

Phone: 1-808-270-7920, Fax: 1-808-270-7425

E-mail: pretreat@shaka.com

**Ken Kawahara, Pretreatment Vice-Chair**

Phone: 1-808-527-5377, Fax: 1-808-527-6214

E-mail: kkawahara@co.honolulu.hi.us

**Roy Abe, Public Education Co-Chair**

Hawaii Pacific Engineers

1132 Bishop Street, Suite 1003

Honolulu, Hawaii 96813-2830

Phone: 1-808-524-3771, Fax: 1-808-538-0445

E-mail: rabe@hawaiipacificengineers.com

**Ann Tshako, Public Education Co-Chair**

MGD Technologies, Inc.

777 Kapiolani Blvd., Suite 401

Honolulu, Hawaii 96813

Phone: 1-808-593-1264, Fax: 1-808-596-0204

E-mail: annt@mgdinc.com

**Roger Babcock, Jr., Research Chair**

University of Hawaii at Manoa

Department of Civil Engineering

2450 Dole Street, Holmes Hall 383

Honolulu, Hawaii 96822

Phone: 1-808-956-7298, Fax: 1-808-956-5014

E-mail: babcock@wiliki.eng.hawaii.edu

**Dan Peters, Safety Chair**

Department of Environmental Services  
City & County of Honolulu, Sand Island WWTP  
1350 Sand Island Parkway  
Honolulu, Hawaii 96819  
Phone: 1-808-847-8327, Fax: 1-808-848-6532  
E-mail: mda0054@co.honolulu.hi.us

**Ivan Nakatsuka, Student Activities Chair**

Austin, Tsutsumi & Associates

501 Sumner Street, Suite 521

Honolulu, Hawaii 96817

Phone: 1-808-533-3646, Fax: 1-808-526-1267

E-mail: inakasuka@atahawaii.com

**Eassie Miller, Water Reuse Co-Chair (HWEA)**

Brown and Caldwell

119 Merchant Street, Suite 200

Honolulu, Hawaii 96813-4413

Phone: 1-808-523-8499, Fax: 1-808-533-0226

E-mail: emiller@brwnncald.com

**Elson Gushiken, Water Reuse Co-Chair (AWWA)**

Phone: 1-808-637-5078, Fax: 1-808-637-4779

E-mail: egushiken@aol.com

**Russell Okita, Web Page Co-Chair**

Fukunaga & Associates, Inc.

1388 Kapiolani Blvd., Second Floor

Honolulu, Hawaii 96814

Phone: 1-808-944-1821, Fax: 1-808-946-9339

E-mail: hweainfo@lava.net

**Mark Goodrowe, Web Page Co-Chair**

MGD Technologies, Inc.

**ATTENTION LUA LINE READERS**

The *Lua Line* is a publication of the Hawaii Water Environment Association. It is published three times a year, with Spring (April - May), Summer (August - September), and Winter (December - January) issues. Its readership consists of over 400 individuals comprised of consulting and government engineers, wastewater treatment plant operators, laboratory technicians, university research staff, equipment vendors, students, and concerned citizens.

If you are interested in advertising in the *Lua Line*, please contact Anna Lee at 1-808-591-8820 or Greg Chung at 1-808-488-0477.

**MEMBER SERVICE E-MAIL**

msc@wef.org	address changes, membership inquiries, subscription inquiries, or anything related to membership
pubs@wef.org	order publications, check on order status, price quotes
confinfo@wef.org	registration questions & requests for conference information
techniq@wef.org	technical questions
webfeedback@wef.org	your comments about our website

**In This Issue of the Lua Line  
Volume 14, Number 2**

	<b>pg</b>
President's Message	1
HWEA/WEF Calendar of Events	2
News from the National Director	3
PWO News	3
Secretary-Treasurer's Report	4
Government Affairs Committee	4
Conference Committee	5
Water Reuse Committee	5
Laboratory Committee	6
Spotlight on HWEA's Incoming National Director	8
Public Education Committee	9
Collection System Committee	10
Research Committee	12
Workshop Summary Report	14
Membership Committee	15
HWEA Specialty Committee Rosters	17
HWEA BOD & Specialty Committee Chairs	18
Member Service E-Mail	20



**HAWAII WATER ENVIRONMENT  
ASSOCIATION • SINCE 1962**  
P.O. Box 2422 • Honolulu, Hawaii 96804  
Internet Address: <http://www.hwea.org>

**Presorted Standard  
U.S. Postage  
PAID  
Honolulu, Hawaii  
Permit No. 258**

*CHANGE SERVICE REQUESTED*



*Printed on recycled paper*