

## 2020 Outstanding Civil Engineering Achievement Award Winners

The American Society of Civil Engineers (ASCE) Hawaii Section is pleased to announce the 2020 Outstanding Civil Engineering Achievement (OCEA) Award winners. The purpose of this award program is to recognize projects that demonstrate important outstanding civil engineering accomplishments by Hawaii's design and construction professionals. To be eligible, projects were required to have been designed or constructed in Hawaii and completed within the last two years. Some of the key judging criteria included: Resourcefulness in planning and solving design challenges; Contributions to the well-being of people and communities; Pioneering use of materials and methods; Innovations in construction; Minimization of impact on physical environment; Composite application.

The following projects and project teams were honored and presented with awards at the ASCE Hawaii Section OCEA Awards Ceremony, held virtually on Zoom on Thursday, September 24th, 2020. Congratulations to our winners!

**2020 Hawaii Section Outstanding Civil Engineering Achievement Award and 2020 Best Large Project** (This project will be nominated by the ASCE Hawaii Section for the 2020 ASCE Region 8 Project of the Year award).

**Project Name:** Hawaiki Submarine Cable and Kapolei Landing Station

**Project Owner:** Hawaiki Submarine Cable USA LLC

**Submitted By:** Belt Collins Hawaii LLC

The Hawaiki Submarine Cable and Kapolei Landing Station are part of a remarkable civil engineering project connecting two continents and Hawai'i, New Zealand and American Samoa along the way with fiber optic telecommunications service. The approximate 9,320-mile-long fiber optic cable, with a 67 terabytes per second capacity, is carrier-neutral, offering bandwidth on the open market. It extends from Coogee, Australia to Pacific City, Oregon with connections to Mangawhai Heads, New Zealand, Tafuna, American Samoa and Kapolei, Hawai'i. The branching unit connecting Hawai'i with the trunk cable is located about 22 miles from the Kapolei shore.

Most of the cable from Australia to Hawai'i was laid on the seafloor with the last 3,500 feet, 2,500 feet within Hawai'i marine waters and 1,000 feet on the Oahu coast, installed by horizontal directional drilling. The drilled depth below the ocean floor ranges from 60 to 70 feet, with the landside segment entering at about -57 feet below sea level. The cable is within a 5-inch

diameter steel pipe in a 10-inch diameter borehole having a filled annular space. The Hawai'i connection is landed at a manhole adjacent to the landing station located along Farrington Highway. The connection includes six fiber optic pairs each providing about 10 terabits per second of data traffic.

Construction of Hawaiki cable system, including the marine survey, design, manufacturing and cable laying, took 27 months, with the landing station in Kapolei ready for service on July 20, 2018. In June 2019 Kapolei Hawaiki expanded the system's subsea network with a direct route to Los Angeles from the Kapolei Landing Station. On June 16, 2020 Hawaiki implemented a crucial upgrade to its Oregon point-of-interconnect, deploying a submarine network solution leveraging technology to create a more efficient and cost-effective link from Hawai'i, deploying state-of-the art GeoMesh technology. This latest upgrade offers reliability, availability and lower latency at a time when major capacity upgrades are needed due to the spike in demand triggered by the COVID-19 outbreak. The Hawaiki Submarine Cable and Kapolei Landing Station provide similar benefits for Hawai'i as the State adapts to dealing with the global pandemic.



### 2020 Best Water/Wastewater/Environmental Project

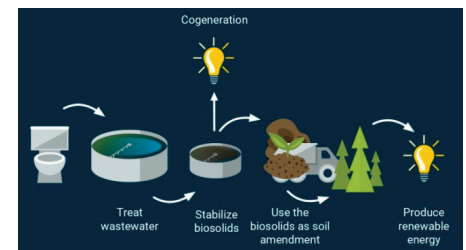
**Project Name:** County of Kauai Biosolids Management Plan

**Project Owner:** County of Kauai, Wastewater Management Division

**Submitted By:** Kennedy Jenks

The County of Kauai's (County) Biosolids Management Plan (Plan) project is a master planning effort with the objective of diverting

biosolids and food waste from the Kekaha Landfill and reusing the biosolids produced at the Lihue Wastewater Treatment Plant (WWTP) as a natural soil amendment for a green energy project on Kaua'i. Global warming is a big concern for our islands as climate change is already affecting the islands with record high temperatures, inundation from rising sea level, and more frequent extreme weather events. The islands are also heavily dependent on fossil fuels for energy which is a major contributor to global warming. The push for renewable, clean energy sources and reducing waste is at the forefront of the news nowadays. The Plan addresses these two elements (increasing renewable/clean energy and reducing waste) and they are the reason this is an important project for the islands. Additional goals of the project include reducing hauler truck traffic and landfill disposal costs and implementing digester gas reuse.



### 2020 Best Special Project

**Project Name:** Royal Hawaiian Groin Replacement

**Project Owner:** State of Hawaii, Department of Land and Natural Resources

**Submitted By:** Sea Engineering, Inc.

The Royal Hawaiian Groin is located on Waikiki Beach on the South Shore of the island of Oahu. The original Royal Hawaiian Groin was a 350-foot-long concrete block structure built in 1927. The groin performed the critically important function of holding sand on Waikiki Beach. A failure would have resulted in the destabilization and eventual loss of over 1,700 feet of sandy shoreline located to the east of the groin. The purpose of the project was to replace the failing Royal Hawaiian Groin with an engineered structure designed for a future of higher sea levels and potentially stronger storms. Sea Engineering produced a resilient design suitable for the oceanographic conditions that may occur during the structure's 50-year design life, such as higher sea levels and extreme wave heights. The groin was



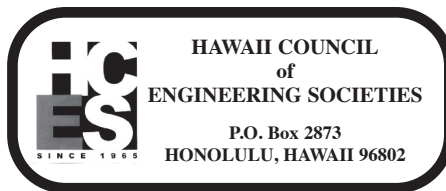
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**WILIKI MAILING LIST**

Additions and/or corrections to the Wiliki mailing list should indicate the proper society, institution or association. Corrections to email addresses should be submitted to your society coordinator.



HOME PAGE: [hceshawaii.org](http://hceshawaii.org)  
EMAIL: [hcesorg@gmail.com](mailto:hcesorg@gmail.com)

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**2021 HCES LIFETIME ACHIEVEMENT AWARD CALL FOR NOMINATIONS – Deadline: 18 December 2020**

The "HCES Lifetime Achievement Award (LTAA)" is provided annually to recognize the lifetime achievements of an outstanding retired engineer and is bestowed upon this individual who has contributed significantly to the development of engineering in the State of Hawaii, and who has made a noteworthy impact to the local engineering community. This award will be presented at the HCES Engineers Week Banquet on 20 Feb 2021.

The LTAA Selection Committee will select the recipient. Nomination packages shall be preferably submitted via email to [bill.lee@coffman.com](mailto:bill.lee@coffman.com) or may be mailed to:

Coffman Engineers  
745 Fort St, Suite 400  
Honolulu, Hawai'i 96813  
Attention: Bill Lee

**Nominations must be received via email or postmarked prior to 18 December 2020.**



<http://www.hawaiispe.org/>

**HSPE Officers for 2020-2021**

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Big Island Dir., NICET Chair '19-'20: Curtis Beck  
[curtbegood@mail.com](mailto:curtbegood@mail.com)

**NOMINATIONS WANTED**

Nominations for the 2021 **Engineer of the Year AND Young Engineer of the Year** candidates are being accepted. Nomination forms are available on the HCES website at [hceshawaii.org](http://hceshawaii.org) or by contacting Kurt Kunimune at [kkunimune@bowersandkubota.com](mailto:kkunimune@bowersandkubota.com). The awardees will be presented at the Engineer's Week Banquet in February of 2021. Nominations will be due by December 30, 2020. Mahalo!



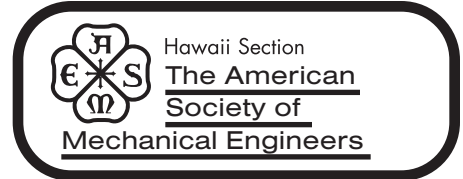
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[www.aacehawaii.com](http://www.aacehawaii.com)

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Vice Pres: Will Sparks, PSP  
Secretary: Yashaira Fletcher  
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As a member of the Board of the Council of Engineering and Scientific Specialty Boards (CESB), AAACE International offers a range of certification levels from technician to professional to expertise level including CCT, CCP, CEP, EVP and PSP Certification Programs.

The local section, AAACE Hawaii, was originally established in 1973. It achieved both the Platinum and Gold Award for six consecutive years 2014-2019. Our local area continues to achieve CCP, CEP, CST and PSP certifications. For more information, please visit <http://web.aacei.org/certification> and our local website [www.aacehawaii.com](http://www.aacehawaii.com).



[www.asme-hi.com](http://www.asme-hi.com)

**ASME-HI 2020-2021 Officers**

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HCES Rep: Derick Kam  
Alternate: Froilan Garma

**NEXT ASME-HAWAII GENERAL MEMBERSHIP MEETING**

Date: Date yet to be determined depending on COVID-19 status and current State Social Distancing proclamation relaxation and depending if remote-virtual meeting conducted.  
Time: usually from 5:30 pm to 6:45 pm  
Place: Pre-COVID-19: at Johnson Controls, 550 Paiea Street (map and parking instructions found on the Hawaii Section website)  
Agenda: A copy of the agenda will be on the Section website.

As usual, all members, students and guests are invited and encouraged to attend our meetings. Please contact Chairman Froilan Garma for directions and for more information.

**MEMBERS' MILESTONES**

Recognizing milestones in the lives of our members...

- Charles Calvet retired from Hawaii Gas after 33 years. Calvet is a longtime member of ASME. At Hawaii Gas he held the positions of Director, Strategic Initiative Planning, and before that, Manager, Engineering. The last few years he had been working on the addition of LNG and RNG into the Hawaii Gas utility system. Before Hawaii Gas he was at W A Hirai & Associates. Calvet plans to remain in Hawaii.
- Derrick Kam, our Section Vice-Chairman, is stepping down as an officer of ASME-HI. He has been an ASME-HI officer for over 14 years.
- Derek Sato, our Section Group Page Administrator and Past-Chairman, is no longer coaching baseball and will be available for more activities with ASME-HI.

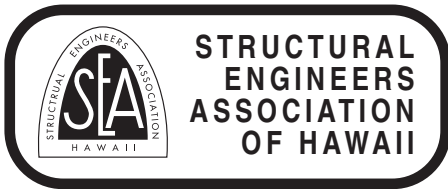
**PASSING MEMBERS**

- We are sorry to report that Wallace A. Hirai passed away September 12, 2020 at the Hilo State Veterans Home at the age of 91. He was the founder and former president of W A Hirai & Associates Inc. and former head of C. Brewer & Company Engineering Department in Hilo. He was a U.S. Army Korean War Veteran and a longtime member and supporter of ASME Hawaii Section.

**ASME HAWAII SECTION OFFICERS ELECTION**

ASME-HI is planning a SurveyMonkey election and survey for 2020-2021 officers. Please be aware that an email message will be sent to the membership with instructions on how to access the ballot and survey.





PO BOX 3348, HONOLULU, HI 96801  
 Web Page URL <http://www.seaoh.org>

**2020 BOB OFFICERS AND DIRECTORS**

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*dannyf@nagamineokawa.com*
- Vice President John Uno  
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- Secretary Jason Emoto  
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- Director (Yr 1) Rod Haraga  
*Rharaga.mih@gmail.com*
- Director (Yr 1) Lauren Tolentino  
*lauren@bondedmaterials.net*
- Past President Kevin Nakamoto  
*pukapig@yahoo.com*

**SEAOH Scholarships**

Congratulations to the four outstanding college students who were awarded SEAOH Scholarships this year. The scholarship program is funded by the annual SEAOH golf tournament, which was held on October 23, 2020 at Hoakalei Country Club.

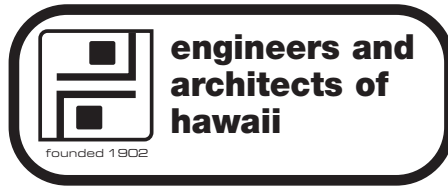
**Food Bank Donation**

SEAOH recently donated \$1,000 to the Hawaii Foodbank. Ron Mizutani, President and CEO of the Hawaii Foodbank accepted the donation from Danny Fujioka, President of SEAOH. Ron indicated that they have far exceeded their annual budget of \$400,000 due to the Covid19 pandemic. Food donations to the Foodbank has nearly stopped during the Covid19 pandemic. SEAOH's donation will help purchase additional food that will enable the foodbank to be prepared for any natural disaster and continue to feed families during the Covid19 pandemic.



**Danny Fujioka, SEAOH President and Ron Mizutani, Hawaii Foodbank**

**Next Meeting** on November 4, 2020. For information, contact SEAOH President Danny Fujioka.



**PO. Box 1901, Honolulu, HI 96805-1901**  
**An association for Hawaii's Engineers and Architects**

**WEB address:** [www.eahawaii.org](http://www.eahawaii.org)

**EAH 2020 Officers**

- |           |                 |          |
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| Director  | Bill Brizee     | 523-9636 |
| Director  | Joe Feind       |          |
| Director  | Dave Martin     | 543-4504 |

EAH is currently only having Zoom Meeting until further notice.

Regular meetings are held 2 times per month on Fridays. Meetings start at NOON and have ended PROMPTLY at 1:00 pm for over 110 years.

Members, guests, and the Public are welcome to join EAH meetings. Email [eahawaii@gmail.com](mailto:eahawaii@gmail.com) to get the Zoom meeting links.

**Next EAH Zoom Meetings**

**Friday November 6th and Friday Nov 20th - Programs TBA.** Visit EAH WEB page for details and links on EAH Programs at [eahawaii.org](http://eahawaii.org).

**EAH Zoom Meeting: October 9 Friday. A Covid 19 Forum by Working Professionals**

**with the topic: "The Covid 19 Office".** The questions were: How has Covid 19 Impacted how your office operates? How do you maintain communications? What has worked well? What has not worked? How will or may Covid 19 change how you work after Covid 19? On the panel were Bill Brizee, Ahl Principal (Architect); Maria Tome, Hawaii State Energy Office, Director Energy Efficiency and Renewable Energy; Rob Kinslow, Sustainability Director, Ola Hawaii, 1st VP EAH; Andrew Stanton, Start Out! Inc., President, San Francisco. To be posted to EAH YouTube

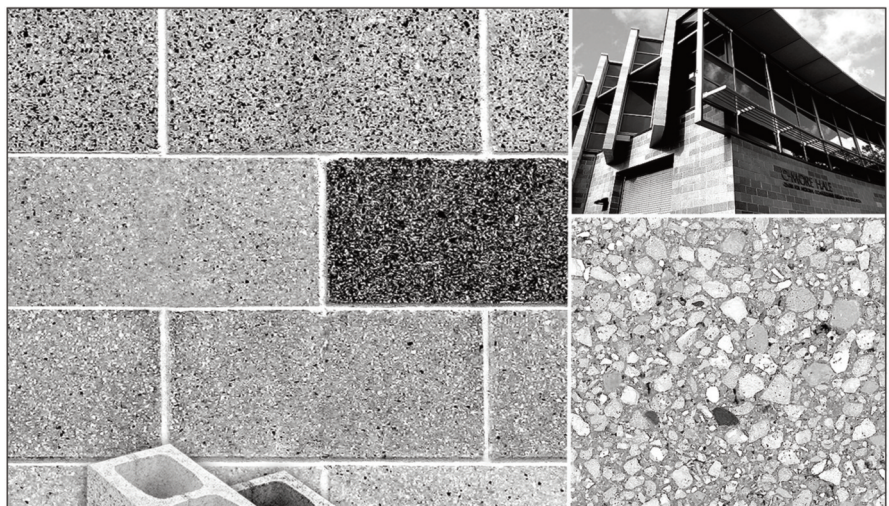
**EAH Zoom Meeting: October 23 Friday Speaker: Sam Dannaway, Fire Protection Engineer, Topic: "The Second Great Chinatown Fire"**

Sam spoke about the Great Chinatown Fire of January 20, 1900, which was the second great conflagration experienced in Honolulu, the first having occurred on April 18, 1886. The 1900 fire resulted in the near complete destruction of the Chinatown district bounded by Kukui Street, Nuuanu Street, Queen Street and River Street. This talk will focus on the story of events leading up to the great fire. The story has many elements of a good novel. There was the threat of a quickly spreading epidemic of plague, racial and ethnic issues, bold and decisive leaders, heroic actions of the fire department, and of course a really big fire! To be posted to EAH YouTube.

**EAH Zoom Meeting September 23 Wednesday**

**Program: "The Mauna Kea Summit Astronomical Site Survey, 1965-1967"**

*continued on Page 5*



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**Deadline for Wiliki is November 15th**



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 email: [jkage@ascehawaii.org](mailto:jkage@ascehawaii.org)  
 YMF Pres.: Carly Kaneko, P.E.  
 email: [ckaneko@ascehawaiiyfm.org](mailto:ckaneko@ascehawaiiyfm.org)

**EXECUTIVE COMMITTEE MEETING**

Last held: October 7, 2020  
 Next meeting: November 9, 2020

**ASCE HAWAII SECTION DINNER MEETINGS**

The continued health and safety of our membership is our top priority and we will continue to monitor the COVID-19 pandemic. Future in-person ASCE Hawaii Section events, including our section dinner meetings, are still temporarily on hold. We will keep you informed via e-blasts and/or notices posted on our website at [ascehawaii.org](http://ascehawaii.org) when they will be scheduled. Please continue to stay safe, watch out for each other, especially our kupuna, and continue to be vigilant about best health practices.

**ASCE's COVID-19 RESOURCES PAGE**

<https://collaborate.asce.org/covid-19/home>

Reminder that ASCE has launched a COVID-19 resources page with online tools and tips in one convenient place. The page includes links to free programs, training, and resources, the results of COVID-19 industry impact surveys, and relevant online discussions with fellow members. The page also offers several ways to work more effectively while at home and activities to take advantage of in the down time you may have – even fun things to do with the keiki! And don't forget that all members have 10 free PDHs! Now may be a good time to catch up on some of those technical on-demand webinars.

**COMMITTEE POSITIONS**

ASCE Hawaii is looking for volunteers to fill the following committee positions: One (1) Student Practitioner Advisor (Senior Engineer, Life Member, or Retired professional preferred). If you are interested or have questions on any of these positions, please contact President Dayna Nemoto-Shima, [dnemoto@ascehawaii.org](mailto:dnemoto@ascehawaii.org).

**MEMBERSHIP**

If you haven't already done so, please renew your ASCE membership, which includes 10 free PDHs. You can renew your membership at [www.asce.org](http://www.asce.org).

**ASCE HAWAII SECTION STUDENT SCHOLARSHIPS**

Please help us increase our scholarship endowment so that we can recognize deserving students. We continue to accept tax-deductible donations with the goal of increasing the annual scholarships. Make your check payable to

'ASCE Hawaii Section' and include the note 'Walter Lum Scholarship Fund' and mail to: ASCE Hawaii Section, P.O. Box 917, Honolulu, HI 96808-0917. If you have any questions, please contact Eric Tomishima at [etomishima@ascehawaii.org](mailto:etomishima@ascehawaii.org).

**ASCE JOB LISTINGS**

The following job listings are currently posted on the ASCE Hawaii Section website:

- **AECOM** (Civil Engineers II)
- **City and County of Honolulu** (Civil Engineer III, IV, V, Mechanical Engineer V, & Electrical Engineer V)
- **G70** (Civil Designer, Civil Engineer, Civil Project Manager, Construction Manager)
- **HDR** (Senior Civil Engineer, Senior Engineering Project Manager, Project Manager, & Water/Wastewater Engineer)
- **Kennedy/Jenks Consultants** (Project Manager, Staff Engineer for Honolulu Office and Staff Engineer for Hawaii Office)
- **Nagamine Okawa Engineers Inc.** (Structural Engineer)
- **Stantec** (Task Order Manager, Office Engineer, Junior Office Engineer, Lead Engineer-Assistant Resident Engineer, Track Inspector, Sr. Project Scheduler)
- **SSFm** (Civil Engineer V, Structural Engineer IV)

For further information, please visit <http://www.ascehawaii.org/job-listings.html>.



**2020-2021 YMF Officers**

Carly Kaneko, President  
[ckaneko@ascehawaiiyfm.org](mailto:ckaneko@ascehawaiiyfm.org)  
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 Kapiolani Street, Past President  
[kstreet@ascehawaiiyfm.org](mailto:kstreet@ascehawaiiyfm.org)

**YMF General Meeting**

The next YMF general meeting is TBD. Due to COVID-19 and social distancing mandates, YMF general meetings will remain on hold for the foreseeable future. Please be sure to check out our website and social media channels for the most updated information and for details on virtual events. If you are interested in attending and learning more about the various professional, social and service opportunities

available through YMF, please contact YMF at [yfm.hawaii@gmail.com](mailto:yfm.hawaii@gmail.com).

**Scattergories Game**

On September 24th, eight ASCE YMF members came together over Zoom to play a game of Scattergories. We shared many laughs as we thought of creative and humorous answers to fit the game. While playing, we learned a few things along the way as we had to fact-check some answers, were reminded of our childhood through some old memories, and even made new friends. Thank you to those who participated and made the event fun!



**2019-2020 ITE Officers**

President: Jennylyn Tapat  
[JTapat@wilsonokamoto.com](mailto:JTapat@wilsonokamoto.com)  
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 Sec/Treas: Jasmine Teramae-Kaehuaea  
[jkaehuaea@atahawaii.com](mailto:jkaehuaea@atahawaii.com)

The ITE Hawaii Section held a virtual speaker meeting on October 21, 2020. We heard from Randy McCourt who is the current International President of ITE. Randy's presentation highlighted the findings of the recently released publication "What a Transportation Professional Needs to Know About Counts and Studies During a Pandemic".

Please join us at our next virtual meeting on November 18, 2020. We will hear from City and County of Honolulu Department of Transportation Services on their Transportation Impact Analysis Guide that incorporates a multimodal review of proposed projects. Additional information will be emailed to members and friends of ITE. If you would like to be add to the ITE mailing list, please email Jasmine Teramae-Kaehuaea at [jkaehuaea@atahawaii.com](mailto:jkaehuaea@atahawaii.com).





**2020 Award Winners, continued from Page 1**

designed to withstand hurricane conditions with 50-years of projected sea level rise. Under these conditions, a 6-foot wave would be breaking on the groin structure.



**2020 Best Studies and Research Project**

**Project Name:** Investigation of Cesspool Replacement Alternatives in Upcountry Maui

**Project Owner:** Hawaii Department of Health, Safe Drinking Water Branch (SDWB)

**Submitted By:** Dr. Roger Babcock, University of Hawaii at Manoa

The Hawaii State Legislature passed Act 125 (2017) that mandated all cesspools in the state be replaced by 2050. There are over 88,000 cesspools in the state and cost estimates range from \$20,000 to \$50,000 for replacements, with some locations requiring advanced treatment to include nitrogen removal and disinfection. The total capital cost alone for cesspool replacement could range from \$1.8 to \$4.4B. DOH-SDWB commissioned a study to conduct a cost-benefit analysis for the replacement of all the cesspools in Upcountry Maui. This involved modeling the transport of nitrogen coming from each individual cesspool (and other area sources) in groundwater to receptor wells (for calibration) using MODFLOW, then modeling the transport of reduced nitrogen inputs from



various replacement technologies for all the cesspools.

This research study contributed to the well-being of the residents and visitors to Maui who are being impacted by the use of cesspools by determining the costs and benefits of cesspool replacements to be used to help make decisions regarding how to proceed, how much that is going to cost, and ultimately who should pay. The project offers solutions to a very challenging problem and utilized a mixture of tools including detailed cost estimating, complex fate and transport groundwater modeling using MODFLOW software, and the innovative use of decision science modeling to incorporate social objectives into the analysis.

**2020 Best Small Project**

**Project Name:** Punaluu Beach Park Emergency Erosion Protection Design-Build

**Project Owner:** City and County of Honolulu, Department of Design and Construction

**Submitted By:** Sea Engineering, Inc.

Punaluu Beach Park is located on Oahu's windward coastline and is owned by the City and County of Honolulu. The park is a narrow strip of coastal plain located between Kamehameha Highway and the shoreline. The park's primary amenity is the comfort station which was constructed in 1968. The park's shoreline is experiencing chronic erosion, and the erosion fronting the comfort station has been carefully monitored for several years. In early 2020, persistent high-water levels and waves eroded the shoreline, severely undermining the comfort station's foundation. Further erosion would have required the City to close the comfort station to protect public health and safety. The City and County Department of Design and Construction contracted Sea Engineering to develop an economical erosion

mitigation solution that could be quickly installed. Sea Engineering's quick response with rapidly deployable, economical, and **low environmental impact** solutions allowed the City to keep the comfort station open throughout the project. This project is an excellent example of the City government working together with a private engineering and construction company to save a valuable and irreplaceable community resource. The project is not clearly an engineering project or a construction project, but rather a project that embraces the best of both, and along with a healthy dose of sound judgement and broad teamwork, the project has already been shown to be a success.



**EAH, continued from Page 3**

**Speaker: Jim Harwood, UH Institute for Astronomy (Retired).** Jim Harwood provided a firsthand talk on how astronomy started on Mauna Kea, and the experiences of those who observed in primitive and dangerous conditions far away from any human contact night after night at very high altitude, in the cold and wind and dark, in order to determine the best site on the mountain for a major telescope. In 1965, John Harwood was charged with managing the Mauna Kea Site Survey by John Jefferies to establish the best place to build and support a major new telescope. He will share his role in the first surveys to define the roads, support facilities and the observatories that bring the stars closer to us and shared with the World. Jim's wife, Pat, also shared her experiences. This Zoom meeting is available EAH's YouTube Channel with this link [https://youtu.be/XwtMOFL\\_iHo](https://youtu.be/XwtMOFL_iHo).

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