



City and County of Honolulu Storm Water Utility Study Stakeholder Advisory Group

September 20, 2022, 4:15-6:45 pm
Hybrid Meeting
via Zoom & Mayor's Conference Room

ATTENDEES

AARP (Kealii Lopez)
American Society of Civil Engineers (ASCE) (June Nakamura)
Board of Water Supply (BWS) (Barry Usagawa)
Building Owner and Managers Association (BOMA) (Melissa Pavlicek)
Hawai'i Green Growth (Shelley Gustafson)
Hawai'i Reserves (Jeff Tyau)
NAIOP | Commercial Real Estate Development Organization (Darian Chun)
Neighborhood Board #25 (Bernie Marcos)
Neighborhood Board #31 (Levani Lipton)
O'ahu Resource Conservation and Development Council (Sophie Moser)
Roman Catholic Archdiocese of Hawaii (Frank Doyle)
The Nature Conservancy of Hawaii (Kim Falinski)
Wai'anae Mountains Watershed Partnership (Yumi Miyata)
Waikiki Business Improvement District (Jennifer Nakayama)

Public Agency Staff

Randall Wakumoto (Program Administrator, Storm Water Quality Division, City and County of Honolulu
Department of Facility Maintenance (DFM))
Dawn Szewczyk (Director and Chief Engineer, City and County of Honolulu DFM)
Roger Babcock (Director, City and County of Honolulu Department of Environmental Services (ENV))

Consultant Team

Juli Beth (JB) Hinds (Birchline Planning LLC)
Joan Isaacson (Kearns & West)
Laurens van der Tak (Jacobs)
Tiffany McEachen (Jacobs)
Ming Ding (AECOM)
Cami Kloster (G70)
Janice Jensen (G70)
Jessica Chiam (AECOM)

Members of the Public

Lauren Roth Venu
Doug Harper
Ashley Endo
Christin Reynolds
Warren Mamizuka
Lori Yamada



1. Welcome and Agenda Overview

Cami Kloster (G70) welcomed everyone and reviewed the meeting agenda and protocols.

See slides 1 to 5 of the presentation materials provided at StormWaterUtilityoahu.org.

2. Public Comment

There were no public comments. See slides 6 and 7 of the presentation materials.

3. Introduction of New Advisory Group Representatives

An announcement was made to the group that new Advisory Group members are being recruited to fill current vacancies. See slide 8 of the presentation materials.

4. Remember Sharon Tomoe Schneider

Lori Yamada, chair of the Kaimuki Neighborhood Board and member of Envision Kaimuki, shared about her experiences knowing and working with Sharon. Cami highlighted some of the many things Sharon was involved in and the level of her commitment to her community, as exemplified by her family's suggestion for donations in her honor to be given to organizations she was involved in and passionate about. See slides 9 and 10 of the presentation materials.

5. Roundtable Alohas

Cami invited each of the Advisory Group members to share the important things that happened with their organization over the summer. Each group member shared a brief synopsis of their work. See slide 11 of the presentation materials.

6. Storm Water Utility Updates

a. Formation process updates and b. Cost of service study updates

Juli Beth "JB" Hinds (Birchline Planning) gave an update on the cost of service study.

In 2019 AECOM conducted a detailed study of the total storm water related costs incurred by the Department of Facility Maintenance (DFM) as well as other City departments. AECOM has updated the analysis with new projections. The current DFM budget and 2023 and 2024 projections on Slide 15, which were compiled by DFM and AECOM, are very close to the middle ground ("Plan C" or "not the ultimate ideal, but improved over basic compliance") budget scenario that was developed in 2019. In summary, while there are still challenges, storm water investments are relatively on target for FY23 and FY24.

Currently, the City is currently focusing on its hiring challenges and is putting forth a major effort to fill vacant positions. It is also likely in the short term that City Council will commit American Rescue Plan Act (ARPA) funding to complete the Storm Water Master Plan, which was a key desire of the community heard in the 2019-2020 outreach, and other climate resilience efforts. In another important development for storm water services, stream channel cleaning equipment is recommended for funding to improve this area of operations.



Future year budget projections, while ultimately subject to City Council decisions and financial limits, reflect DFM's intentions and the input received from the Stakeholder Advisory Group and community. Highlights of the current AECOM budget projections include new investments in the area of core NPDES compliance (funding staff positions for grant writing and management, and a larger trash task force), initiating a Green Stormwater Infrastructure (GSI) incentive program, creating a dedicated road maintenance crew for GSI, urban forestry (as a cooperative with the Department of Parks and Recreation, and increased stream maintenance (using equipment planned to be secured with ARPA funds). Funding has not yet been allocated, but these priorities identified by the Stakeholder Advisory Group are starting to show up in the budget and the budget projections. See slide 16.

Randall Wakumoto (DFM) explained that a back-end analysis is being performed to assess the additional program elements beyond the core NPDES compliance and what these elements would mean in terms of number of personnel, cost, etc. Based on community input received to date, more GSI implementation and flood control are desired. The expected level of service for these types of programs island-wide was translated into the budget projections. The actual budget does not yet reflect these programs but including these as planned and desired items is essential to develop eventual funding.

DFM does not currently have plans to introduce a storm water utility bill to City Council. A draft bill was prepared for submission, but the timing with the pandemic and inflation was not right. After elections DFM will reengage with City Council members and see what their appetite is for introducing the fee next year. DFM continues to work on storm water planning efforts, i.e., the Strategic Plan with the vision and long-term goals.

See slides 12 and 16 of the presentation materials.

Please note: For all Q&A / Discussion sections, the notes with dashes (-) represent comments and questions from the Stakeholder Advisory Group and the notes with open points (o) represent the project team's responses.

- Initially when you were putting the fee together, was there a special fund?
 - o Randall explained that the two-step process was changed to one step (special fund + utility) after speaking to council members. He noted that DFM has everything ready, it's just a matter of timing.

7. Mālama Maunaloa/Follow-the-Drop Pilot Project

Lauren Roth Venu of 3R Water introduced the Follow the Drop pilot project utilizing an app being developed by 3R Water with funding from the City Storm Water Quality Division. Mālama Maunaloa, a local nonprofit, is a partner in the pilot project. They focus on the restoration of Maunaloa Bay with ties to terrestrial activities and related water quality threats to the Bay.

The Follow the Drop app assists landowners in choosing and sizing GSI for their property. This project was a good opportunity to crowd-source the work and have homeowners contribute to water conservation and water quality protection through the installation of Green Stormwater Infrastructure (GSI) at their residence. The pilot program is testing the app to obtain user feedback,



baseline condition data, and identify the types of GSI that could potentially be installed at these residential and commercial properties. 'Āina Haina was selected because it has flooding and water security issues—and provides opportunities for ground water recharge.

Doug Harper, Executive Director for Mālama Maunalua, was also able to leverage the pilot program to obtain funding for watershed modeling to determine priority watershed areas. The project has a One Water approach and BWS is a partner. There are opportunities to link to current BWS programs (i.e., rebate programs). The study has clearly shown that there is a need to start thinking beyond rebates only for rain barrel and to move towards support for other larger storm water capture opportunities.

Mālama Maunalua remotely assessed ~1,800 properties using the Follow the Drop app for opportunities to install GSI and reduce storm water runoff. Lauren provided examples including a residential area with ~80 homes and an area with commercial properties (see slides 23-26) and compared the volume of runoff with the volume of recapture and recharge.

After the baseline study, 3R Water worked in the community with Mālama Maunalua to identify residents' level of interest in and barriers to installing GSI. Mālama Maunalua created the website rainwaterhawaii.com to encourage residents in East Honolulu to sign up for free storm water assessments. The opportunity to sign-up for an assessment was shared via 500 doorhangers, social media posts, and sign-ups at restoration events and incentivized with a chance to win a free rain barrel.

Mālama Maunalua received funding from the Hawai'i Community Foundation (HCF) to look at commercial properties in the area. They also received a National Fish and Wildlife Foundation (NFWF) grant to conduct site evaluations for GSI installation with Follow the Drop. This pilot was focused in targeted areas in 'Āina Haina, Niu Valley, and Kuli'ou'ou. Mālama Maunalua conducted a survey, and participants identified improving stream and ocean water quality as being of high importance to their neighborhood.

Storm water assessment participants identified 164 opportunities for GSI retrofits (see slide 33). An overwhelming number of participants (83%) were interested in rainwater catchment. There was some interest in rain gardens (12%), and low interest in permeable pavement (1%). Lauren noted that sometimes people need to have rain gardens and permeable pavement explained before they can express a preference for those options. According to the assessment over 800,000 sf of impervious area could be treated or removed just from these participants. Mālama Maunalua is cataloging people who are interested in these projects and looking for funding to install.

3R Water also conducted a post-assessment survey on the app. The top barriers to implementing GSI on site identified by the assessment were cost and not knowing how to install or who to call. These barriers point to the need for more workforce development and for non-profit organizations to have a list of contractors they can refer people to. The assessment and post-assessment illustrated that there is strong interest in the community, but some barriers exist and need to be addressed. People using the app were also looking for a dashboard displaying the amount of water captured and the amount of money saved. These features are currently in development.

Mālama Maunalua will work to obtain funding to implement more GSI projects. They are also looking at coral planting and fisheries outreach as new programs to get community involved and



interested in these types of projects. The NFWF grant is for 2 years, and receiving an initial grant increases the likelihood of future funding. The project is in step 3 of 4 and additional funding is needed for the final step.

See slides 17 to 39 of the presentation materials.

Q&A/Discussion

- There are different opportunities for pervious areas and impervious areas. What opportunities are available if the ground is impervious?
 - o Lauren: The app guides the user to draw the impervious surface area and—assumes storm water will be captured from these surfaces. There are lots of options for capturing storm water from a roof. If you want to physically remove it from your driveway, you can install pervious pavement. For properties that are entirely pervious, adding planter boxes is an option and a good solution for commercial businesses. Diversion is another good way to address impervious areas.
- Is there a rebate for using Low-Impact Development methods?
 - o Randall: DFM is engaging with BWS on possible ways to include these types of rebates. (Barry responded in chat with more)
 - o Lauren: Bringing in other types of LID methods beyond basic rain barrels is on the table for the City and BWS.
- I'm interested in having more of our members educated on these opportunities.
 - o Randall: SWQ provides trainings on rain barrel/garden installation. We have seen that people are interested in learning about it, and do not know how to do install on their own. They may be looking for who to call for the installation.
 - o JB: Not knowing how to implement GSI is a challenge nationally. The logistics, combined with affordability issues, are significant barriers to large installations. Cleveland is one city that pays for it up front. One option could be a community fund that could advance that money outside of the public sector. This could be important for priority recharge areas or areas with low equity. Also, there are many new rainwater capture products on the market beyond rain barrels (e.g., tall skinny tanks, fencing) to address space issues.
 - o Randall: The city is not able to recommend specific people/contractors.
- A rain garden will be installed on Harding and 11th Ave in Kaimukī. Construction begins next week.

8. Hawai'i Community Foundation One Water Summit

Christin Reynolds (One World One Water) shared about attending the One Water Summit in September 2022 in Milwaukee, Wisconsin. Hawai'i Community Foundation funded and supported the delegation to the Summit and restated the HCF commitment to the 100mgd. Honolulu was recognized at the Summit for institutionalizing collaboration. Those who attended want to bring that momentum back home to build a resilient infrastructure for our city. There is a movement to leverage the currently available federal funding and look for ways to get federal dollars to the community level. Other attendees at the meeting shared their experiences and perspectives.



Barry Usagawa (BWS) said he appreciated HCF for funding the delegation. Between 300-500 people attended the Summit from various areas of water management. There were many exciting and robust discussions and a big emphasis on stormwater management and GSI around the country, as well as strong sentiments around equity, climate equity, resilience and affected disadvantaged communities. Communities and agencies are striving to work together on the cross benefits. He also shared that BWS is close to an agency review draft of the East Honolulu Watershed Management Plan. It identifies 29 projects, a large portion of which are water quality and conservation-type projects and includes many One Water strategies and policies.

Roger Babcock (ENV) said most City departments were represented by their director on the City One Water panel and this was part of what the award committee found “award-worthy”. One thing that stood out to him from the Summit was equity and thinking about how to spread the benefits and actions throughout O’ahu. Some considerations were affordability pricing, activity CIP, services provided, and representation within the industry (e.g., service providers).

Randall highlighted the focus on collaboration that resonated throughout the entire conference. He commented that Roger and Barry did a great job with their on-camera interview. This interview will debut in October on “A Day Without Water”. Randall said he observed Summit engagement from community members in addition to professionals and agencies. Community representation was high in the working group he participated in, and he found the discussions helpful for the development of the Storm Water Master Plan and GSI Plan.

Barry said that the national recognition gives O’ahu’s One Water program a lot of energy that will hopefully result in real programs and implementation. He is looking forward to feedback from the SAG for implementation.

See slides 40 to 42 of the presentation materials.

9. Storm Water Strategic Plan and Storm Water Master Plan Updates

Cami shared about Storm Water Strategic Plan public meetings held in August. Approximately 26 people attended and provided feedback and questions on the public review draft. The people who attended were generally appreciative, and there were not a lot of major comments. See slides 43 and 44 of the presentation materials.

Randall said the City is targeting two separate funding sources for the two plans being developed: the Drainage, Flooding Climate Adaptation and Asset Renewal and Replacement Plan and the GSI Plan. The timeframe to develop the GSI Plan is short.

The City is taking a proactive asset management approach for the core strategies and will be conducting a gap analysis over the next few months. Randall reviewed the process for the development of the plan (see slides 45-50).

DFM uses several tools and technologies for asset management. Data collection and analysis will help to highlight gaps in GIS data. Color-coding will help with modeling and to identify for priorities for allocating resources. Cityworks software helps the City visualize where inspections have been conducted. So far only 7% of the system components have been assessed (see slide 51-54).



Randall showed several example maps to show how these tools have been used to identify again infrastructure in different O’ahu neighborhoods such as Kalihi-Pālama, Chinatown, Wilhemina Rise, and Mānoa Valley (see slides 55-63). These maps show that older systems are mostly located in the Honolulu corridor. The City will use this data in Cityworks to determine both the probability and consequence of failure and to begin to prioritize repairs to the system.

Another focus of these plans is on partnerships and funding opportunities. There are many different financial options that the City has not tapped into (see slides 87 and 68). The federal government is looking for opportunities with the infrastructure bill. The City is working to be ready to qualify for them.

Randall shared what he learned about community engagement at the GSI Leadership Exchange, a tech workshop focused on the GSI that had an in-depth discussion of values of collaboration, community outreach and feedback. The workshop he attended focused on the Equity Guide booklet and tools including more collaboration with communities. This booklet is generating a lot of interest and it is relevant for the City and County of Honolulu’s storm water work.

See slides 45 to 72 of the presentation materials.

Q&A/Discussion

- Social equity, public health, and climate resilience are all good things, but a 4th bullet should be added for coastal resources. We should be asking: how clean is the water, who uses that water, which places/coral reefs are we trying to save? Because we’re an island and our ocean matters so much, can we add a line for ecosystem health (i.e., downstream system sensitivity)? How do we reflect the fact that people want to see their reef thrive? What is the cost of failure to the people who use that place (residents, cultural resources, tourists)?
 - o Randall said the probability of failure analysis focuses more on the technical side. The consequence of failure is where you start bringing in that triple bottom line to see what the priorities should be.
 - o JB said that is a good point as we don’t often ask and incorporate what the value of protecting something that’s already healthy from potential degradation would be.
 - o Randall said it was factored in as a weighting in consequence of failure analysis in the back-end analysis. This is something that needs further discussion (see slide 64).

10. Wrap up

Next Meeting: Proposed for January 24, 2023 (Tuesday)

Cami thanked everyone attending the meeting and set the date for the next Stakeholder Advisory Group meeting, to be held in a hybrid format with the in-person meeting again taking place at the Mayor’s Conference Room.

See slides 73 to 75 of the presentation materials.