Hawai'i Ocean Resources Management Plan Coordinated Working Group

Meeting Summary

February 3, 2022 9:00 am – 12:00 pm Zoom Meeting

Attendees:

	Nome	Agana,/Organization
	Name	Agency/Organization
1	Aki, Brayden	DLNR-DOFAW
2	Barcina, Keelan	OPSD-CZM
3	Buika, Jim	Maui County Planning Dept
4	Casey, Georgina	UH Manoa-SOEST
5	Chang, Sarah	OPSD-CZM
6	Chikasuye, Katia	HI-EMA
7	Coon, Jim	MACZAC
8	Derrington, Erin	Maui County Planning Dept
9	Eisen, Tom	OPSD-ERP
10	Fernandez, Phil	MACZAC
11	Guo, Jiangli	HDOT-HWY
12	Hekekia, Josh	OPSD-CZM
13	Hughes, Kira	HIMB
14	Idica, Romio	Kauai County Planning Dept
15	Iwashita, Darcey	DOH-PRCP
16	Kekoa, Luna	DLNR-DAR
17	Key, Brittaney	OPSD-CZM
18	Kimball, Heather	Hawaii County Council Member
19	Lander, Melanie	UH Sea Grant
20	Lee, Colin	UH Manoa-SOEST
21	Li, Shichao	OPSD-CZM
22	Lopera, Diana	DLNR-DAR
23	Low, Todd	HDOA
24	Marcoux, Stacia	DLNR-DAR
25	Maurin, Paulo	NOAA OCM
26	McMillen, Heather	DLNR-DOFAW
27	McPherson, Nancy	DHHL
28	Miyashiro, Scott	DOH-CWB
29	Moskowitz, Joshua	USACE
30	Nalley, Eileen	HIMB
31	Nishimoto, Bob	MACZAC
32	Nihipali, Justine	OPSD-CZM
33	Owens, Tara	UH Sea Grant – Maui County Planning Dept
34	Pap, Ruby	UH Sea Grant – Kauai County Planning Dept
35	Reder, Ben	USACE
36	Romine, Brad	UH Sea Grant

37	Roth, Katie	DLNR-DOFAW
38	Sayegusa, Jodi Higuchi	Kauai County Planning Dept
39	Schafer, Monique	HSEO
40	Sullivan, Kevin	Hawaii County Planning Dept
41	Suprenant, April	Hawaii County Planning Dept
42	Tadj, Yusraa	OPSD-CZM
43	Tavares, Kammie	UH Manoa-SOEST
44	Tsang, Anita	DLNR-DAR Grau Fellow
45	Usagawa, Barry	Honolulu BWS
46	Webster, Lisa	OPSD-CZM
47	Woznick, Theresa	HI-EMA
48	Young, Taylor	Kupu, DLNR-DOFAW
49	Yuen, Emma	DLNR-DOFAW

Welcome, Introductions and Office of Planning and Sustainable Development Updates

Justine Nihipali, Program Manager, Coastal Zone Management Program (OPSD-CZM), welcomed participants to the Coordinated Working Group (CWG) meeting. Participants introduced themselves and the organizations/agencies they were representing.

Identifying Actionable Steps to Reduce Land-Based Pollution (LBP)

Keelan Barcina, Project Analyst (OPSD-CZM), provided a brief overview about LBP and a recent LBP management report written by UH Sea Grant on behalf of the CZM program. This report outlines the State's current nonpoint source management framework, its shortfalls and successes, provides insights on research needs and possible project ideas. The report was used to inform a panel discussion around LBP for which Barcina introduced a panel of four speakers from various sectors whose work plays a role in the mitigation of LBP in our marine environments. In a round-robin format, panelists were asked questions tailored to their expertise and connections to LBP, followed by a group discussion.

The goal of the panel discussion was to discuss and identify actionable steps to mitigate LBP and build a shared understanding of how agencies are prioritizing LBP mitigation efforts. Through this discussion, the CWG became more informed of LBP impacts, management challenges, and LBP reduction projects ideas to be implemented under the ORMP. OPSD-CZM will leverage the outcomes of this discussion to inform actionable next steps and project ideas using existing program funds.

The panelists were:

- Kevin Sullivan, Long-range Planner, County of Hawaii Planning Department
- Heather McMillen, Urban & Community Forester/Kaulunani Coordinator, DLNR-DOFAW Kaulunani Urban & Community Forestry Program
- Eileen Nalley, Post-doctoral Researcher, Hawaii Institute of Marine Biology
- Darcey Iwashita, Planner, Dept. of Health Polluted Runoff Control Program

Panel Discussion:

Q1: What is your background and primary responsibilities, research focus or interests in your roles? How does land-based pollution (LBP) connect with the priorities and/or interests of your agency, work, or primary responsibilities?

Sullivan:

- An AICP-certified planner and arborist within the County of Hawaii Planning Department focused on long-range planning, coastal zone management and ORMP-related responsibilities, and interests in green infrastructure implementation.
- Connections to LBP:
 - At various levels of development, the County implements shoreline setbacks and a riparian buffer project.
 - Opportunities to address LBP during the Kona Open Space Network scoping session as part of the community development plan.
 - Recently worked with UH Manoa Urban and Regional Planning to put together One Water Roadmap, an initiative that looks at holistic management of the water resources as it traditionally once was on Hawaii Island.
- LBP considerations are relatively new across county departments, but this is important for public trust; silos inhibit holistic management of our resources and considerations of LBP.

McMillen:

- An Urban & Community Forester and who coordinates Kaulunani Program within DLNR-DOFAW.
 - Kaulunani mission: support all of Hawaii communities with a focus on equity to cultivate wellbeing and resilience through restorative and environmental justice, planting, caring for and growing relationships with the trees and forests that we live with and that are crucial to ecosystem on which we rely. We do this for our keiki, our kūpuna, ourselves, our 'āina and everyone's future.
- Research iinterests lie in the interconnections between people and place, cultural and environment, human and environmental health.
- Trees are an entry point for larger conversation about LBP management, not an end point; engage people collaboratively to take care of places and community.
 - Driver of LBP is invasive forests and ungulates. Fenced native forested areas prevent erosion and nutrient pollution. 30x30 goal to protect 30% of priority watersheds by 2030 a part of Aloha+ Challenge.
 - State's Trillion Tree Campaign Pledge to conserve, restore, and grow 100 million trees by 2030;
 supported by Kaulunani partners who have received funding for growing, distributing trees and outreach.
 - State Forest Action Plan's urban priorities: climate change mitigation, education and outreach, emergency management, health wellbeing, invasive species, ordinance and legislation related to tree care/protection, water quality, green infrastructure, fire prevention.

Nalley:

- A post-doctoral researcher working with Megan Donahue at HIMB and is affiliate faculty with UH-Sea Grant who researches the impacts of coastal pollution on ecosystem and human health in the Pacific Islands.
- Research/interests:

- Studying LBP in reef fishes and sediment to understand trophic transfer. Working with DAR,
 NOAA, non-profits, and UH colleagues.
- Determining pollutant prevalence in reef ecosystems, whether pollutants are accumulating in a manner that poses risk to biological health and human consumers, and to advise relevant mgmt. agencies of mitigation of these risks.
- LBP management is inherently interdisciplinary, and little is known about pollutants on reefs and reef
 fishes in reference to metals, PCBs, pesticides but there is a better understanding of nutrient impacts on
 coastal ecosystems.
- From a public health standpoint, we are also data limited in how pollutants accumulate in reef fishes and affect people.
- Optimistic and confident that LBP threats are manageable and can be mitigated, despite not knowing all the details.

Iwashita:

- A planner for the Polluted Runoff Control (PRC) Program within DOH-Clean Water Branch; program funded by CWA and overseen by EPA, overarching clean and safe water focus
- Responsible for implementing and updating State Nonpoint Source Management Plan through working with partners to target and prioritize areas for PRC projects and planning.
- Main task is to implement projects that address polluted runoff through annual RFPs or working with partners to implement projects and/or watershed coordination/planning, WQ monitoring, outreach/sponsoring events, provide funding for community outreach events and opportunities.
- PRC Program is entirely devoted to NPS pollution.
- Surface Water Protection Branch and NPS pollution regulation recently established and offers a regulatory approach to LBP management which is largely voluntary in Hawaii.

Q2: What can you say about Hawaii's urban tree canopy and how it plays a role in mitigating stormwater runoff?

What is the status and benefits of our urban tree canopy? Climate change connections?

McMillen:

- Hundreds of studies documenting the role of trees to mitigate stormwater runoff. Tree canopy absorbs and slows down the intensity of rain falling and filters runoff.
- Urban tree canopy data for Hawai'i is sparse and outdated. The best available data includes a study comparing tree canopy from Kalaeloa to Kaneohe, Oahu in 2010 and 2013. This report found a 5% reduction in tree canopy across this area = 76,000 trees.
 - Death by a thousand cuts: no one area where trees were cut down; big trees cut down for development. Most trees removed were on private property; 98% of losses were less than quarter acre each. Similar studies have not been done on neighbor islands.
- Statewide Tree Canopy Viewer launching next month. In collaboration with the Forest Service, NOAA. Viewer will show all islands and land use types (not just for urban areas) through 2020 and will have much more up to date snapshot of tree canopy across the landscape.
- Tree canopy benefits:
 - o If you're only going to plant one tree, plant and urban tree; for many people in our communities these are the only trees we come in contact with.

- Enormous amount of research supports green communities with more trees are happier, healthier, more resilient, and safer.
- Stormwater mitigation, cooling benefits, air filter, carbon sequestration, property value enhancer, crime deterrent, habitat, sources of food, place makers, memory keepers, social connections, family members/ancestors.
- Economic perspective: research on trees in Honolulu are the only kind of infrastructure that
 increase in value over time and have a 3x return on investment despite maintenance in the form
 of stormwater mitigation, pollution removal, cooling, etc.
- Important for equity and justice. Urban tree canopy not evenly distributed. 34% tree canopy coverage in Mānoa area versus 5% coverage in Moili'ili where it is 10-20F degrees warmer, median income \$80k lower, life expectancy 7 years less.
- In the face of climate change and declining urban tree canopy you can expect hotter temperatures, more flooding.
 - Tree Canopy Viewer will help us view our canopy statewide. Opportunities for stormwater-tree canopy comparisons. % canopy cover by census tracts and including income, asthma, life expectancy, cardiovascular health, SNAP, Native Hawaiian population.
 - Opportunity more informed discussion about how we can prioritize our effort collaboratively;
 LBP management is beyond any one agency.

Q3: Why are riparian buffers important for LBP mitigation and how do you see this being incorporated into local planning efforts?

What is needed to get us to the point where we can effectively incorporate riparian buffer considerations?

Sullivan:

- Benefits of riparian buffers:
 - o combat deforestation, prevent? Lessen impacts of? erosion, manages impervious area ratios, land terrain modifications, development limitations.
 - Can consider quality indicators and flow regimes depending on the accuracy of the modeling.
 - Act as buffers to protect surface water quality; riparian vegetation can reduce pollutants by recycling and trapping nutrients and stream temperatures.
 - Riparian areas very dynamic; transition between terrestrial and aquatic ecosystems presenting problems and opportunities
 - Can be well defined by soil characteristics and vegetation.
 - Provides habitat and food; promotes biodiversity.
- Current initiative: County exploring riparian and coastal setbacks. Specifically a riparian setbacks model
 for mapping and identifying where riparian areas are is the first step and this is done by identifying
 stream drainage networks.
 - Pilot study area along Hamakua coast (Honoli'i and Ma'ili streams); utilizing ArcGIS Hybrid tool for stream network and slope raster analysis to create polygon layer because topography is a primary influence.
 - This approach had some limitations in processing vegetation cover.
 - Looked at stream bank landform which did not have much change. 15–20-degree threshold to protect vegetated slopes for filtering capacity down to floodplain mouth. Many streams in this area lacking FEMA dfirm boundaries.
 - Looking at stream networks from a topographic and drainage basin aspect, we can get an idea of water contribution to flood volume analysis as a first step for more sophisticated models.

- What's needed: a functional buffer, multivariate analysis on riparian areas similar to that of the National Forest Service riparian buffer delineation model.
 - The National model requires 50yr flood height; model needs to be fit to several different rivers and these initial findings will feed into a model better suited for Hawaii Island.
 - Identifying where riparian areas are, how many acres, physical acres, wetland contributions, soil characteristics: RBDM model link
 - Model would account for stream, river course; additional inputs of wetlands and soil type, land cover classes; be independent of landform; relies on open-source data; would define riparian areas and a 3-dimensional space of interaction including terrestrial and aquatic ecosystems.
 - o Scaled step approach because never done before on Hawai'i Island or in the State
 - Would provide an overlay that may influence state land use amendments; East vs. West Hawaii can differ in policy considerations, but it's about water quality at the end of the day.
- Riparian solutions link: https://www.riparian.solutions/rbdmv6x

Q4: What are the common pollutants found in marine resources you study?

How has your research been useful for identifying the sources of LBSP?

Other than thorough monitoring and data collection, how can we work to improve our understanding of sources and volume of NPSP and its impacts on nearshore species and habitat through the lens of your research?

Nalley:

- In marine fish we often think about mercury in tuna and swordfish that bioaccumulate, but in doing this work we started from the point of knowing very little about what types of pollutants are in reefs fishes.
- The type of pollutant varies by location; industrial more metals, PCBs; agricultural areas pesticides; residential household chemicals, pesticides, rodenticides
 - Legacy pesticides hang around for a very long time and can be problematic down the road.
 - Types of pollutant that you see provide info on signature of that place.
- Preliminary work establishing baselines and looking at types of land use, and results are largely what we expect: landfill sites (Kewalo) having lead, PCBs; Pu'uloa finding DDT and its derivatives, PCBs; Maunalua Bay: arsenic (agriculture) bioaccumulation. Clear indicators of bioaccumulation in some cases.
- There's a paradigm that biomagnification is the greatest within higher trophic levels, but small, long-lived resource fish such as kole with high fat content have been found to have high accumulations of organic pollutants. Important to continue to look at these in the context of human health.
- Important to improve our understanding through the environmental justice perspective.
 - Subsistence fishers may be micronutrient-limited, have underlying health risk factors due to socio-economic situations, or are reliant on imported food Your exposure is intertwined with other factors that contribute to your health on and individual and community level.
- This work is valuable in understanding what's happening on the lower trophic levels and not necessarily on a commercial level, but on a recreational and subsistence fishing level.
- We can also focus on ecosystem scale initiatives.
 - More global meta-analyses looking at physiological stress thresholds for corals allows a comprehensive view on ecosystem scale by 1) providing clear evidence of certain pollutants (e.g. Cu); extreme bias to some pollutants over others, and 2) modelling impacts over life cycle.
- Importance of multi sector partnerships.
 - Ex. A coastal health working group comprised of conservation professionals, researchers, the WASH sector bringing together people from silo fields.

• LBP is a very manageable problem, and we need to creatively leverage resources we currently have to elicit action.

Q5: A shortfall within our current LBP management system includes single parcel-scale management of LBP which only considers impacts to the immediately adjacent areas; however, watershed scale planning is gaining national traction. Are there examples from your work that frames LBP management projects or initiatives on a watershed or region scale?

Iwashita:

- For our program we use watershed-based plans to guide our pollution reduction projects. These plans are very technical with specific set of components set by EPA; CWA-oriented.
 - Main goal of the DOH-PRC is to get water bodies that exceed pollutant concentrations to meet water quality standards (WQS).
 - ~40+ watershed plans in place and it is within these watersheds where DOH-PRC can spend funds to implement watershed-scale projects.
 - Challenges to prioritize watershed and implement projects evenly across watersheds with limited staffing, resources.
 - Watershed plans also include implementation schedules; priority areas and projects or best management practices (BMPs); and monitoring and tracking.
- Watershed-scale successes:
 - West Maui Ridge to Reef Initiative (website). Success in having a coordinator to manage activities within 5 priority watersheds in the area by tracking water quality projects and improvements. The watershed coordinator also conducts planning and stakeholder outreach engagement to reduce sediment and nutrients runoff.
 - He'eia watershed, Oahu. A priority watershed, but have been implementing projects for over a
 decade having invested over \$2M in CWA funds not including match from partner agencies.
 Engaged with several community groups to restore upper, middle, and lower portions of the
 watershed.
 - Windward Mall, Oahu impervious surfaces
 - Mix of projects to address sediment and nutrients.
 - 2016 and 2018 He'eia Stream met turbidity, phosphorus, and nitrate+nitrite WQS for wet seasons; EPA recognizes this success. Still working there today with UH-Sea Grant and Paepae o He'eia at fishpond and TNC controlling ungulates.
 - One dry season impairment for nitrates in He'eia still needs addressing but making progress to address this.
 - Our program looks at whether it's a healthy ecosystem and not just meet WQS; want community engagement and participation. A combination of various partners and a watershed coordinator can continue this success.
- Planning phase success: the inclusion of point-source and nonpoint-source pollution in the watershed plan which is typically limited to a TMDL plan.
 - Takes the parcel-based approach of looking at dischargers (point-source) and land use (nonpoint source) and implementing the ahupua'a approach by implementing on both sides of land-based pollution.
 - Would be great to have that all implemented and tracked and seeing what's working as far nonpoint source pollution goes; and potentially water quality trading to offset pollution from one source by another.

 Mentioned <u>integrated planning</u> that occurs at a scale larger than watershed planning, and is something DLNR-DOFAW is considering.

Q6: (ALL) Did any of the suggested recommendations within the LBP management report resonates with your agency's priorities and/or your research?

If so, what are some of the first steps to take on this recommendation? Challenges, obstacles? Any actionable steps outside of what is mentioned in the LBP management report?

McMillen:

- Raising awareness that green infrastructure is infrastructure.
- Call for a cognitive shift among policymakers.
- Example: In 1990's, New York invested 1.5B in forest protection to meet EPA standards to avoid the need to building \$8B wastewater facility; saved money by promoting forest health.
 - Example: In 2016, CA water code established watersheds as a component of water infrastructure to provide a mechanism to finance maintenance and repair source watersheds.
- Important to recognizing green infrastructure to address nonpoint source pollution and stormwater management.
 - Recognition of GI at federal level; Congress passed the Infrastructure Improvement Act that
 defines GI as the range of measures to provide a suite of storage, evaporation, infiltration
 services, etc.
- Increasing green jobs.
- In HI, capital improvement and bond funding cannot be used to fund green infrastructure (i.e., trees). That's a challenge and needs to change.
 - If trees are seen as GI, and GI is recognized as a kind of infrastructure we could finance more of this work. Help needed to make policy makers understand, and this can be done through data (visualization).
 - Citizen forester program training folks to map, identify plant species, and assess basic
 measurements of trees. Focus on municipal trees: street and park trees. Citizen Foresters use a
 platform called PG Cloud to enter data and calculate ecosystem benefits. That platform is based
 on software called iTree which uses algorithims to produce economic and ecosystem values of
 the trees.
 - Example: By end of 2021, 23,000+ trees assessed through program; provide \$333,718 stormwater benefits; prevented 3.65M gallons of runoff.
- Link: https://dlnr.hawaii.gov/forestry/lap/kaulunani/citizen-forester-program/Foster tree ambassadors. Recognize trees as infrastructure.

Sullivan:

- The validity and updated nature of underlying data that we use around the State to do our studies and modeling is important for effective planning.
 - o Ground truthing habitat and vegetations layers. Data updates including GIS.
- Section 2 (Success and Shortfalls) highlighted the funding and staffing shortages.
- Lots of good recommendations and opportunities. Dependent on how far our legislators want to go.
- Keep doing what we're doing; LBP conversations are continuing to grow. Keep these discussions going; educate as many people as we can.
- Implement the range of options that are currently on the table.

• Analyze Zoning reform considerations through the One Water approach to understand if exclusionary zoning is working?

Nalley:

- We know what we need to do, and with all the different agencies and partners outlined in the report
 there needs to be a call for new a framework(s) that supports increased interagency cooperation around
 shared goals.
- Would like to see the development of initiatives, framework that are creative, future thinking. Much of
 our work tends to be more reactive when something terrible has happened, we can do better with
 climate change predictions.
 - We do have reliable models that can inform mitigation efforts before a disaster happens and hold those accountable.
 - Greatest impediments: 1) lacking resources for actions, 2) cannot continue to allow major polluters to self-regulate because you can't expect voluntary disclosure, and 3) more regulatory teeth for greater accountability.
- A conservation approach is needed over restoration and remediation when thinking about LBP.

Iwashita:

- The recommendation that makes watershed planning more accessible.
 - o Part of that could feed more into preventing and protecting rather than restoring.
 - Most of the watersheds are impaired and restoration based.
 - The amount of work to model and get data is prohibitively expensive and difficult for a lay person to put it all together. Getting the tools available where it doesn't cost \$200k for technical assistance.
 - Challenges: people willing to implement the project in priority areas, but not many people to implement all parts of the plan. Not enough funding or resources even though what we know what needs to be done. Choices between what we can prioritize and do with available resources.
- Watershed planning process also includes and focuses on the CNCPC Program which addresses urban sources of pollution through management measures.
 - Not quite at the point where climate change and environmental justice is incorporated in CNCPC but looking for ways to increase social considerations. May be a relic of EPA requirements for the program, but it is pushing out more directives related to CC and EJ.
 - EJ screening tool by EPA. Incorporating different criteria from this tool in watershed plans for social considerations when achieving goals and planning and less technical aspects of watershed restoration (e.g., relying primarily on water quality data).

CWG Discussion

Question (Buika): There's a needed for agricultural BMPs for county permits. Are there any master lists or planning practices to implement during permit review to to minimize agriculture runoff? **Answer** (Iwashita): National Resource Conservation Service has a conservation practice standards field guide. [insert link from chat]. Tailored towards Hawaii. Exhaustive list of conservation practice standards; EPA incorporates into agricultural management measures.

Question to counties (Yuen): Follow up on Integrated Planning EPA process – Do the counties have efforts that look into this opportunity? If so, is it a good model for meeting CWA regulations?

Answer 1 (Buika): Maui County currently does not have any efforts that look into integrated planning but hoping to move into that direction of watershed-based planning. Currently reactive to a parcel-by-parcel issues. Aside from permitting resources, the County has long-range planning resources but not enough resources to tackle regional/[watershed] projects. Need for proactive planning.

Answer 2 (Sullivan): Hawaii County undertook project to create the One Water Roadmap in collaboration with UH Urban and Regional Planning and various stakeholders; final report completed. At the moment, unsure how it coincides with the CWA changes.

Comment (Yuen): This process is not just "integrated planning" in the general sense, it has regulatory teeth within the process and other counties have utilized this.

Question to McMillen (Barcina): One of the recommendations is to further engage public entities. As somebody whose program who actively engages community groups how have these relationships led to the successes of your program in mitigating land-based pollution/non-point source pollution/stormwater runoff? What are some of the lessons learned that may be transferable to other agencies looking to leverage the support from community organizations?

Answer (McMillen):

- Mentioned the Citizen Forester program.
- General guidance and observations: everything we do is collaborative in the urban realm. Most trees not under DOFAW jurisdiction; most are either county or private.
- Lesson: community groups are nimble and in touch with community needs; saw this during Covid. Environmental stewardship groups shifted from normal work to provide food, planting material, lesson plans, school supplies, etc. They are much more adaptive and agile than government agencies.
 - Paper available here:
 https://scholar.google.com/scholar_url?url=https://www.fs.fed.us/psw/publications/giardina/psw_2021_giardina007_dacks.pdf&hl=en&sa=T&oi=gsb-gga&ct=res&cd=1&d=2425759372586762472&ei=lVYqYqLyELiP6rQPr-ecuAg&scisig=AAGBfm2CiIFGX2ryebc4qSq50wWEu9_NEQ
- Lesson: to build trust through partnership and it takes time; think tree time, not grant cycle period.
 - o Indigenous knowledge: when collaboratively thinking about programs and interventions; remember community have holistic approaches to challenges; holistic perspectives.
- Tool: Stewardship Mapping and Assessment; coming online next month. Two project areas: O'ahu Kona and Ko'olaupoko; and Hawai'i Island- North Kona and South Kohala. Inventory of mālama 'āina groups; who taking care of our places, what work they're doing, where on land scape, who working with who?
 - Helps us understand hotspots and gaps of stewardship and to be strategic.
 - On Oahu, 128 groups participated 600+ unique organizations they work with. Not comprehensive but a good snapshot. Found stewardship densities areas: Maunalua, Kawainui Marsh, Ala Wai watershed, He'eia all areas that impact LBP; each one represents a network of community groups, researchers, agencies etc.
 - Opportunities to learn from community groups and how they're connected; learn about the main hubs working across the region or topic areas. Can potentially inform your own work.

Question to DAR (Barcina): Amy comments or reactions to the Stewardship tool mention (above). Would something like this be helpful for Marine 30x30 planning?

Answer (Tsang): Definitely a tool that'll be useful for informing what areas people are interested in establishing MMAs. Tree canopy viewer will also be of value for demographic data.

Comment (McMillen): We are exploring the integration of stewardship layers into tree canopy layers to understand relationship between GI and social infrastructure. If that doesn't work, both platforms will be available separately.

ORMP Updates and Announcements

Justine Nihipali shared an overview of the bills being tracked by CZM staff during the 2022 Legislative Session. List of bills was emailed to CWG members.

Other bills shared by ORMP partners that might be of interest to the CWG:

SB 2619: Relating to Environmental Regulations Measure Status (hawaii.gov)

- Proposes amendments to HRS Chapter 342D to include agricultural runoff
- DOH supports the intent but will be opposing as they are already in the process of establishing a Surface
 Water Protection branch which will address runoff from agricultural lands

HB 1672: Relating to Special Improvement Districts (companion SB 2725) Measure Status (hawaii.gov)

- Expands the rationale for the creation of special improvement districts to include environmental research and natural hazard mitigation
- Could potentially be a vehicle for funding the implementation of community-scale adaptation projects

Next Steps & Housekeeping

Upcoming meeting dates:

• Coordinated Working Group: May 5, 2022

Adjournment