

Quarterly Report- June, July & August 2017

West Maui Watershed & Coastal Management Coordinator

JUNE

General

Completed download and payment for ArcGIS - next step is to re-learn software. Completed two days of field work, one evaluating accumulation of sediment at vetiver traps and the other replacing rain gauge parts, dismantling ISCOs etc. Working on siting new phase of coastal observation cameras- learned that there are no plumes in Honokeana, so while a coral health site, there is no need to deploy here. Trouble shot old cameras and determined they are all malfunctioning. Apparent shelf-life of 3 years in Hawaii.

Outreach/Education

HACD Conference R2R presentation: gave an R2R overview presentation to ~75 attendees of state Conservation District Annual Conference. Focused on sediment control and water quality results and related to how their work through conservation plans is very important in protecting stressed coastal resources. R2R was well represented with remarks by Rob, and presentations from Pomaikai and John, all three of which are in the R2R working group.

Akaku show: gave a 20-minute live TV interview about the R2R and Kumuwai campaign as a follow up to the fundraiser the previous week at Flatbread. Focused on individual actions and the urgency.

Stormwater stenciling: participated in first county-organized/MOC partnered storm drain stenciling event in anticipation of organizing similar activities in the west side this year. It was well run, very straight forward after trying a few times as well as a fun and effective way to increase awareness. It prompted many conversations with neighbors, so will be a direct outreach opportunity to share Kumuwai asks when we host a similar event.

OED Grant training: Attended morning training on how to submit a grant proposal to the Office of Economic Development at the County, which has over \$1 million available for environmental projects this year. We are submitting (through Project SEA Link) a proposal to support the R2R Rendezvous in ~ October 2017.

DOH Beach Monitoring Public Presentation: attended evening meeting to share about program. Connected with Surf Rider on partnering with Hui, met Meghan Dailer in person and made plans to meet up and talked to water quality consultant interested in Hui work opportunities.

Meetings

Priority site coordinator call: in a call with Paulo, Ray and Julia, shared updates from Kohala priority area, DAR and NOAA to increase coordination and the ability to benefit from lessons learned and projects advanced, funding and staffing intel from partners. It was a helpful way to touch base and will be repeated quarterly going forward.

Christy- Berkeley: discussed other projects and studies that could help inform her Master's project working on sediment retention in Wahikuli with the CORAL project. She is developing a professional paper detailing a few discrete practices that can be used.

Hui O Ka Wai Ola Steering Committee: two calls this month to work through need for strategic planning, partnership agreements, COM grant details, HCC session and more. Funding is approved for use in W Maui sites from North Beach. Meghan Dailer, DOH has agreed to join in a future meeting.

CORAL, project planning: met with Chana to determine if LID projects could be pursued under the quick turnaround of a current grant. Explored rain garden, floating wetland in drainage at golf course and Hulelo St drainage as possible approaches. Later determined rain garden permitting was not feasible in this timeline. Pursuing other ideas.

Hui O Ka Wai Ola HCC planning: we are hosting a session at the Hawaii Conservation Conference on how to set up a community based water quality monitoring program. We have decided to format like a cook

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book and talk about the ingredients that need to be included, and use examples from our experience to clarify. I am presenting on the first set of “ingredients”.

FAST meeting: partners reported-out on updates. LIDAR is on the list for the next round of national priorities, but not secured for short run. Drought meeting held in Maui- report-out shared later. Ayron from CWRG attended and shared about his plans to install stream gauges. DOFAW directed/DOH funded fencing is moving forward for priority watersheds- contract not signed yet. Bob W. is still working on nutrient modeling updates. DAR coral planner position posted again. COM starting storm drain mapping with EPA/DOH funds. USACE asked about modeling 2/5 watersheds more in depth, and extrapolate out. Marine transport piece with Curt is still a possibility. Corps goal is still to evaluation effectiveness of mitigation measures and compare (which UH model cannot do).

Bri and Donna, UHMC re: Ocean Color: met in advance of the NOAA team visit to get on the same page about status of the project. Bri has an Akamai internship for 7 weeks with focus on cal-val sampling from Donna’s boat and a small component of soil sampling for experimental fingerprinting work. Further discussion planned for next week was needed to fill in the shared gaps in understanding.

Kahana Village: Met with property manager to introduce to R2R and request permission to sample on property with Hui O Ka Wai Ola to fill in the data gap for Kahana. Vicki was a delight to meet having been on property for 30 years and observed changes with the stream and beach. She was amenable to having sampling every 3 weeks on her property and is keen to hear results.

Marxan project meeting with Anne, DAR, UCSB: phone call to kick off Marxan project for West Maui. Since this will mostly be about mapping out possible areas for FMAs, Russell provided most of the input. Offered the R2R Rendezvous as a venue for connecting with fishers if we host a fishing tournament again.

Ocean Color site visit and planning: took visiting NOAA partners, PR rep, and UHMC partners on reef and land visit to west Maui to illustrate the stressors and solutions of relevance. This was followed up by and afternoon meeting on the specifics of the Ocean Color tools and a discussion on how these could be used to assist with watershed management.

Ocean Color Project workshop: full day workshop organized by NOAA to present and discuss the tools. Gave a presentation on R2R effort with an emphasis on what is known and unknown, and the role the ocean color products could plan in improving management.

Lowe Development, Ted and Jim: with Wes and Paul, met with the developers tasked with re-developing Kaanapali common area and golf course into a more profitable configuration to support state retirement funds. Reviewed proposed concept drawing and provided input about the use of LID. Primary goal was to discuss the use of the gulch just above the highway as an area for mixed recreational use and sediment trapping. They expressed support for the concept, but did not go so far as to give permission to move forward with the idea. Further work in developing a concept and meeting again are likely next steps. They expect it to take another ~4 years to have permissions and permits to move forward with their re-development. We would hope to have clearance well before then.

HCC CBSM planning call: joining team presenting on Community Based Social Marketing at HCC. I will be leading a break-out table about using pledges as a behavioral change tactic based on theory and our experience with WM Kumuwai.

Project Updates

Urban water quality monitoring: removed easily transported instrumentation. Two ISCOs are locked, the UH team lost the keys, so will need bolt cutters to remove. Permission granted to use ISCOs for CORAL work in Wahikuli and Honokowai, but a monitoring plan is needed to ensure this will answer appropriate questions. No response from PI about the final report status or steps.

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Vetiver for erosion control: while the pilot project has wrapped up, Paul Sturm from RTR was on-island, so ground-truthed additional sites for planting in the CORAL Wahikuli project.

Hui O Ka Wai Ola: New team leads are being trained to take on two sections of West Maui. Future volunteers are shadowing W Maui team in preparation for expansion.

N Isotope Testing: Meghan from DOH has offered guidance in expanding testing to other areas. The plan is to meet in July to discuss next steps for Kapalua where there is some indication of sewage, and how to approach other areas of concern.

Wahikuli Stream Sediment Reduction: Christy moving forward with design plans, Matt Kondolf (Berkley professor) set to return to Maui in July, discussions with landowners taking place. Areas for subsequent vetiver plantings have been identified. Homeless camp area in lower watershed gulch seems promising for a mixed-use practice.

JULY

General

Assisted with two days of field work with USGS re: stream bank strength tests in Wahikuli and Honokowai watersheds. Time went into planning HCC sessions with respective teams, and planning logistics and permissions for multiple field missions.

Outreach/Education

Hui O Ka Wai Ola and CBSM presentations: attended the Hawaii Conservation Conference for one day. Presented at a breakout table on the use of pledges as a tactic in CBSM and the “recipe” for successful community based water quality monitoring programs at the water quality workshop. Both workshops were very well attended and received.

HPR, The Conversation: went on an HPR talk show to promote the Climate Matters video featuring R2R work prior to the release of the [Documoment](#).

Ocean Health Index Workshop: participated in workshop led by Eva Schemmel, now with Conservation International who is working on an index for the whole state that would allow status across many parameters to be known and compared. It is a very challenging exercise because there are not necessarily the same data sets available across the area. Signed up to weigh in on water quality section in a future call.

Meetings

Jeff & Howie Kihune re: stormwater facilities project: along with Liz, met with the developers about to start building an affordable housing community next to the golf base yard where we are planning to make facilities and behavioral improvements to improve water quality of run-off. They shared plans and ideas for where measures could be placed. While too late to incorporate LIDs into this site, they showed the site plan for the next project in Kapalua, and expressed openness to modifying design to include LIDs.

Curt, USGS: met up after his field work to discuss next phase of work through USACE that his group will be doing. Starting this fall, they will be 3D modeling scenarios for how sediment disperses from the landscape into the nearshore environment. This will include runs with various weather/ocean conditions, and well as with and without mitigation measures in place. The specifics will be decided closer to the project start. We discussed his sense about Kahana watershed, and he indicated it was

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likely the sediment loads from this area are negatively impacting the Honokowai reef. This is key, as it means we need to prioritize getting improvements to the Kahana Nui Basin.

Ranae, NRCS: with Chana from CORAL, met with Ranae to discuss ideas for modifications to structures (such as bridges) in Wahikuli stream to get a sense of history and viability of ideas. She offered to get out in the field with an NRCS engineer to look at sites in question. Discussed NRCS programs for funding practices we have been looking at. If we can get a lease longer than the contract, there is ~75% payment for native forest planting, riparian buffers etc. and up to 90% if the contract holder is Hawaiian. The deadline for this year is 10/20.

Berkley Matt Kondolf site visit: hosted professor for two days for meetings and site visits with grad student Christy and CORAL team to advance planning of restoration ideas. Decided on the R&R site (recharge and recreate) concept in the lowest part of Wahikuli stream above the highway. This area could be suitable for redirecting water in high flow and spreading into an area that could also serve as a walking trail in dry weather. Also discussed potential PhD student who may be willing to visit and consult on LID inclusion on specific development plans.

USCRTF planning call for WG meeting in FL: worked on the agenda for the meeting which is focused on moving towards the goal of priority watershed site graduation. Coordinators will be presenting framed in terms of progress towards meeting the goals for graduated status. Break out groups will work on implementation plans for each area with a smaller focus on ideas for sustainability (how to make the initiatives stand without federal support).

Rob Warner, NOAA: met with Rob just before his departure about progress and next steps in the Ocean Color project. Some of the cal-val work will not be completed this summer, but the processing side is not ready yet, so it is no loss if not completed. Plans are to fund better equipment for the following summer and continue to work with intern, Bri. Connected intern with DAR research outing to get at needed site for data collection. Rob is setting up follow up discussion with team at the lab so that all are clear on which products will be most useful for watershed management.

Meghan Dailer, DOH: met with Meghan, who is still a temporary hire at DOH on Maui doing coastal water quality monitoring (bacteriological for mostly tier one sites). At Russell's suggestion, invited her to join the R2R Working Group, which she accepted. We discussed the results from the seaweed samples for N isotope, and she offered help with sampling method and the drying oven for further sampling. It is anticipated she will be an incredible asset to our effort given her research background, energy and interest in the issues. Prior to the WG invitation, she read all four volumes of the watershed plans!

R2R Rendezvous planning meetings: met first with Liz to discuss how to structure volunteer meeting and work on OED grant. Met with Makai Watch and Kumuwai volunteers who were excited about the event and offered ideas and volunteer time to support. Since hope is in short supply, the likely theme is related to ocean optimism and outreach areas will revolve around what people can do to be a part of the solution.

Kirsten Oleson's Lab, UH: along with CORAL staff, Christy, Ayron and Paul Sturm, met with the team of grad students and interns working on west Maui projects under Kirsten. They walked through modeled products to date and shared a copy of the GIS files. Met the intern who completed the coastal photo analysis, and those continuing to work on the nutrient modeling and solutions to reduce loading. We discussed alternate scenarios we would like modeled, for example, a 50m riparian buffer on the gulch top.

USCRTF Working Group: checking in on the Florida meeting, watershed updates, sub-committee progress and interval of meetings going forward. There is some uncertainty in federal agencies at the moment about priorities in the near future.

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Janet, Student contact through CWRM: met with grad student from U of Michigan at the request of Ayrton. She is working on a model to map land use to ocean impacts. The scale she is modeling is state-wide, so perhaps not too useful for us, but good for other applications. Shared many contacts on related work of this scale that may be useful.

Project Updates

Facilities Storm Water Management: got third and final property on board to participate. Kaanapali Beach Hotel has several needs identified earlier by CORAL in their baseyard, and allow one example of a resort setting so that lessons learned can be transferred to many other parties.

Hui O Ka Wai Ola: after HCC, interest in state-wide network grew, and a call was held including DOH rep Myron to talk about possibilities. Meetings scheduled for next two months for steering committee and strategic planning to address the need to think clearly through potential growth and expanded partnerships. Testing continues and a new volunteer training is set for August.

Wahikuli Stream Sediment Reduction: summer intern Christy is working on pared down practice design after the need to re-scope became clear. 1400 vetiver plants installed on kickouts on state land and degraded road closed in second round of planting.

R2R Rendezvous: pre-proposal from COM OED was accepted and full proposal was submitted by Project SEA Link. Partners have been notified of Oct.28th date, a radio spot set up to promote in Sept. and ideas of how to incorporate other elements, like a Chasing Coral screening and a GIS showcase. The fishing tournament is going forward, and volunteers have started asking for community prize donations.

Floating Pilot Wetland: with LID funds unallocated, CORAL built two small floating wetlands which were installed in the golf basin just Makai of the highway. These 4'x8' PVC and lattice rafts were planted with vetiver and a mix of natives to see which will grow well. Water samples will be taken this week and again periodically to see if there are any notable changes in nutrient concentrations. This is a pilot, since it is unknown how quickly the roots of vetiver will grow in this setting, and if seasonal die-off of plants in a dynamic that will need to be managed to not have an unintended nutrient contribution.

AUGUST

General

Rain gauge download completed for the quarter. Wrote and submitted grant to Castle for funding coordinator position for 2018-19 to match (part of?) NOAA/DAR. Had regular meetings with Liz and Wes to coordinate on the various projects we are working on. Helping to coordinate USACE field work in mid-September to install stream gauges with CWRM.

Outreach/Education

MNMRC Presentation: gave an hour-long overview about R2R progress, and added highlights on all ongoing research effort in our area. The science portion enthusiasm reinforces what we have seen, which is the public is very interested in hearing about the research. We have organized science cafes at Kohola Brewery in Oct and Nov and expect they will be well attended.

GIS Support: Hudson has been kindly offering support for getting started again on ArcGIS, including tips for specific tasks and providing data layers.

Radio Show, KAKU The Tub: With Liz, were guests on hour-long show where we plugged the R2R Rendezvous, Coastal clean-up in Sept. and individual actions for ocean health.

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Meetings

R2R Working Group: first meeting to include Meghan Dailer from DOH. Spent some time discussing her past work and how it related to N isotope sampling recently completed. Discussed the beach re-nourishment and re-development projects, both in Kaanapali coming up to share concerns and perspectives. Discussed need for sustainability planning for watershed coordination into the future and possible partners/funding opportunities. This will be a larger conversation taking place over an extended timeframe.

UH Sea Grant, Daniele re: urban basins: one of the professors who participated in a Sea Grant site visit to W Maui last spring has continued to think about solutions for the in-stream sediment issues raised at the time. Daniele Spirandelli has been working up ideas with professors from Berkeley about ways we may be able to use urban sediment/recreation basins as they do in WA and elsewhere. The Berkeley professor was in the state, so came for a site visit (while I was at Task Force, so Wes C hosted). They visited several sites and will continue to work on approaches for different in-stream sediment scenarios.

Castle Foundation, Eric Co: worked with Eric on timeline and scope for letter of interest and final proposal for support for watershed coordination. They are keenly interested in lessons learned coming from this initiative, as well as plans for sustainable support into the future, so these were included in the scope. The proposal will be reviewed in the September board meeting. There was not confidence in the ability to support half of the position, and recommended finding a third funder for the balance of the NOAA match/support needed.

USCRTF Meeting in Florida: attended four days of meetings at the Fort Lauderdale meeting. Many of the issues faced in Florida are very different from ours coming in part from the pressure of a large population intensifying fishing, recreation, runoff, dredging etc. Meetings included a marine debris workshop, where I learned NOAA has already created a plan for Hawaii that should be looked into. In the sedimentation and turbidity workshop, heard about work to set water quality standards established to protect specific marine life. Much focus was on dredging and how to stop work if thresholds are triggered, which is different than our dynamics here, but perhaps there are ways to use ocean color products to evaluate and track changes from coastal development projects and require interventions where needed. Presented at the Watershed Workshop to inform discussion on steps towards graduation. There is discussion about the need to create a standard implementation plan first, then the sustainability plan, some of which may be furthered at the DC meeting in February. Reported out to steering committee on our accomplishments in the past year. In the business meeting heard more details of USGS reef valuation study and learned about an adopt a reef initiative that uses crowd sourcing to evaluate changes over time. Connected with agency and jurisdictional partners between meetings and at evening receptions.

Lowe Development, Kaanapali Projects: with Wes C, met with local Lowe contact Ted to discuss the R&R project concept and next steps (which are to provide a more detailed description of the project specifics, especially as they pertain to the items that will trigger permitting). In addition, they are interested in funding a nutrient reduction project such as a floating wetland up to ~\$10k. I have looked into FWS funding a learned about at TF, but am unsure if it would be straightforward enough (payment mechanism). In addition, there has been intense community opposition to the re-development project resulting in a Save Kaanapali group, t-shirts and standing room only at the last public meeting. We need to be careful how we align, and make sure the R2R is not used in greenwashing that may erode trust with the local community needed to accomplish other tasks.

Ocean Health Index, Water Quality: joined call to review Eva Schemmel's draft index for the water quality component of the Ocean Health Index. While a worthwhile project to determine metrics and data sets that can be rolled together to assign values to track over time, it is very challenging to include what is meaningful while being limited by availability of state wide data.

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NOAA Endangered Species meeting, Joel & Randy: met Joel and Randy in W Maui to discuss the R2R and upcoming projects that have an interface with their interests. They noted with green turtles still being listed the beaches in much of Kaanapali would be listed as critical habitat, which could be helpful. Also shared Kaanapali Beach Re-nourishment plan as they had not seen it, and may have insight to help make sure the coral is protected.

Hui O Ka Wai Ola Steering Committee meeting: met for first time in a couple of months. Invited new team leads to join so they understand this part of the organizational structure. Worked through issues with uninsured volunteer, grant updates, roll out plans for South Maui, website updates and some of the technical aspects of data management. We are getting back to regular meetings since too many issues accumulate.

KLMC, Jeff Rebugio: with Wes C, met with Jeff to discuss vetiver and other project work in his area. We will be meeting with his field lead to prevent further future damage to our plantings, and following harvest season try to meet with equipment operators as well. There is openness to continuing kick-outs on KLMC land (following review of summary of plans) and biggest development was news that 400 acres are being fenced for a cattle grazing lease. This will require they repair the siphon to allow water to cross the gulch. Since this area will be sub-leased we are working to have riparian buffers added to the lease considerations, since the lease would allow access to NRCS funding for planting work. This will have a long lead time, but in the short term we will work out details of concept to share so it can be incorporated into lease language.

WMSWCD Board Meeting: board does not think that using road crossings in Wahikuli gulch to retain more water is practical since they were built for the rail line, not retention. Plans for sediment retention in Hahakea/Wahikuli from 20 years ago always included multiple basins high and low since this area is steep making it challenging when there is water passing through. There was support for retrofitting Dam #8, as well as ideas for using the full basin area to create bays at the back that could trap sediment in series.

Project Updates

Facilities Storm Water Management: meeting date set with third property to lay out concepts, and meeting day with consultant arranged for October to begin scoping out project and BMP evaluation in earnest.

Hui O Ka Wai Ola: volunteer training went well and there are now a dozen more qualified volunteers helping with northern R2R sites and soon the south Maui expansion. South Maui team lead was selected and has been training with west side team. Site selection will take place in September with an anticipated launch in October. All grants submitted are moving forward, but no final word yet from NFWF or COM. Strategic planning and volunteer potluck planned in the next couple of months.

Wahikuli Stream Sediment Reduction: Christy submitted final report including rough design of R&R area. More edits needed. Other student finished draft of rendering. Community volunteer took drone shots to facilitate design work. Maintenance work (watering) taking place twice per week after gel failed to hold water as hoped. Berkley/Sea Grant visit provided ideas and potential for more going forward. Permission from NOAA was secured to also work in Honokowai. Duane started as full time employee on this project and will be taking on vetiver maintenance and native plan propagation.

R2R Rendezvous: flyers and promotional headers have been created, hui partners contacted for material for scavenger hunt, food and prize sponsorship secured, promotion started and next volunteer

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planning meeting set. The media plan has been drafted and research partners contacted for opportunities to share.

Floating Pilot Wetland: plants are doing amazingly well and have stimulated interest from Lowe Development. A monitoring plan needs to be set to make sure the right information is being tracked so we can expand to other areas.