

WATER RESOURCES COMMITTEE
Council of the County of Maui

M I N U T E S

Council Chamber

October 3, 2018

CONVENE: 9:10 a.m.

PRESENT: Councilmember Aika Atay, Chair (left at 10:12 a.m.)
Councilmember Elle Cochran, Vice-Chair
Councilmember Kelly King
Councilmember Yuki Lei K. Sugimura
Councilmember Stacy Crivello

EXCUSED: Councilmember Robert Carroll
Councilmember Mike White

STAFF: James Krueger, Legislative Analyst
Stacey Vinoray, Committee Secretary

Ella Alcon, Council Aide, Molokai Council Office (via telephone conference bridge)

Denise Fernandez, Council Aide, Lanai Council Office (via telephone conference bridge)

Dawn Lono, Council Aide, Hana Council Office (via telephone conference bridge)

ADMIN.: Jennifer Oana, Deputy Corporation Counsel, Department of the Corporation Counsel (left at 10:58 a.m.)
Edward S. Kushi, Jr., Deputy Corporation Counsel, Department of the Corporation Counsel (in at 11:03 a.m.)
Eva Blumenstein, Planning Program Manager, Department of Water Supply

OTHERS: Andrea Buckman, Program Manager, Leeward Haleakala Watershed Restoration and Partnership
Dan Eisenberg, Program Manager, East Maui Watershed Partnership

PRESS: *Akaku Maui Community Television, Inc.*

CHAIR ATAY: . . . (*gavel*) . . . Good morning, everyone. Good morning to your Water Resources Committee meeting here on Wednesday October 3, 2018. Time now is ten minutes past the hour of 9:00 a.m. We would like to bring this room to order and ask for decorum to be maintained and ask everyone with any noise-making device, cell

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phones, please silence them. Moving forward we want to introduce the Committee Members. Myself, Alike Atay, as Chairman. Recognizing our Vice-Chair Elle Cochran.

VICE-CHAIR COCHRAN: Aloha. Good morning, Chair.

CHAIR ATAY: I want to mention that Robert Carroll is excused this morning. We have Member Yuki Lei Sugimura.

COUNCILMEMBER SUGIMURA: Good morning, Chair.

CHAIR ATAY: Member Kelly King.

COUNCILMEMBER KING: Good morning.

CHAIR ATAY: And Member Stacy Crivello.

COUNCILMEMBER CRIVELLO: Aloha, Chair.

CHAIR ATAY: Good morning, all Members. I would like to recognize from the Administration, the Water Supply. I know that Director Baisa is currently at another site visit out in West Maui so representing the Department, Eva or Eva Blumenstein.

MS. BLUMENSTEIN: Good morning, Chair.

CHAIR ATAY: As well as Corp. Counsel Jennifer Oana.

MS. OANA: Good morning, Chair.

CHAIR ATAY: Recognizing our Committee Staff, Stacey Vinoray, James Krueger, out in Hana, Dawn Lono, Lanai, Denise Fernandez, and Molokai, Ella Alcon. I want to also recognize the, my Legislative Staff, Legislative and Policy Analyst, Trinette Furtado and Brian Bardellini. This morning, others attending and joining us with this presentation is Andrea Buckman of Leeward Haleakala Watershed Restoration Partnership and we have Dan Eisenberg of the East Maui Watershed Partnership.

. . . BEGIN PUBLIC TESTIMONY . . .

CHAIR ATAY: Members, we have one item on today's agenda, WR-5 Watershed Management and Protection, and to begin this meeting, I would like to begin by taking public testimony. Staff, is there anyone?

MR. KRUEGER: Mr. Chair, there is no one in the Chambers, waiting to testify.

CHAIR ATAY: No one in the Chambers to testify. For any individuals wishing to testify in the Chamber please sign up at the desk in the lobby, and for those if testifying from a remote site, please sign up with the District Office Staff. Testimony will be limited to

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the item listed on the agenda today. Pursuant to the Rules of the Council each testifier will be allowed to testify for up to three minutes per item and when testifying, please state your name, and any organization that you may be representing. Checking out into the District Offices, Hana Office, Dawn Lono, do you have anyone wishing to testify?

MS. LONO: Good morning, Chair. This is Dawn Lono at the Hana Office, and there is no one waiting to testify.

CHAIR ATAY: Thank you. Lanai Office, Denise Fernandez, do you have anyone wishing to testify?

MS. FERNANDEZ: Good morning, Chair. This is Denise Fernandez on Lanai, and there is no one waiting to testify.

CHAIR ATAY: Thank you. Molokai Office, Ella Alcon, do you have anyone wishing to testify?

MS. ALCON: Good morning, Chair. This is Ella Alcon on Molokai, and there is no one here waiting to testify.

CHAIR ATAY: I would like to announce any last call for any testimony here in the Chambers. I see that there is none. Seeing that there is no one else wishing to testify, if there are no objections, I will close public testimony.

COUNCILMEMBERS VOICED NO OBJECTIONS.

. . . END OF PUBLIC TESTIMONY . . .

WR-5 WATERSHED MANAGEMENT AND PROTECTION (CC 17-79)

CHAIR ATAY: Okay, Members, agenda item WR-5 Watershed Management and Protection. Today, we will be continuing our discussion of the matter of watershed management and protection, specifically the various watershed partnership grants that the County supports. At our last meeting the Committee received presentations from Hawaii Agriculture Research Center and the West Maui Mountains Watershed Partnership and reviewed their work. If you would like to reference those presentations in the future, they are all available for your review in Granicus. For today's meeting, we have with us Andrea Buckman from Leeward Haleakala Watershed Restoration Partnership, and we have Dan Eisenberg from East Maui Watershed Partnership to give presentations on their respective organization's work. It is the Chair's intention is to receive presentations from these two organizations today, and to schedule presentations from the remaining partnerships for future Committee meetings. Before we begin with presentation, I would like to ask the representative from the Water Department for any opening comments.

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MS. BLUMENSTEIN: Thank you, Chair. Yes, we're appreciate that you have Andrea and Dan here today. These are two really important partners for us, and I hope you will see in Andrea's presentation today that the project that, on the south, dry side of Haleakala is an enormous area that she addresses. It's heavily disturbed landscape. I think it's less than 5 percent of the original dryland forest remaining there. So, what they're doing restoration, restoring function to that watershed, there's so many benefits to that project that goes beyond freshwater supply. There's resilience for climate change. We look at preliminary projections for climate change and those specific areas from Kahikinui out towards Kaupo is going to be even drier than what it is today if you're looking at a 50 and a 100-year projection. So, any additional recharge and additional dryland forests in those areas is going to make that area more resilient for wildfires, freshwater supply, et cetera. So, although we don't fund a large portion of that project as a whole, it's more than 42,000 acres because we don't have service areas there. I mean, I hope you see that there are all these other benefits that are and there are other beneficiaries from the project, and the East Maui Watershed Partnership we do fund a big chunk of that, about 120,000 acres of really critical watershed area that does supply freshwater for both surface water and groundwater for the Department. So, those areas, in fact, are projected to get wetter with climate changes over a long period of time, but we're more concerned about invasive weeds and the changes of those watersheds that they are resilient enough to withstand the storms and the intense rainfall that could be projected. So key watershed areas, Dan Eisenberg is doing a fantastic job in managing a complex and large project so we hope you're going to see what the importance on what they're doing. Appreciate it.

CHAIR ATAY: Thank you for that opening. And with that I would like to introduce Andrea Buckman from the Leeward Haleakala Watershed Restoration Partnership. Ms. Buckman, go ahead with your presentation.

. . . BEGIN PRESENTATION . . .

MS. BUCKMAN: Aloha, Chair Atay.

CHAIR ATAY: Aloha.

MS. BUCKMAN: And aloha, Councilmembers. Thank you so much for the opportunity to come and speak and share with you about our efforts. We are restoring over 43,000 acres from Makawao around through Ulupalakua to Kaupo, and we've been a partner with Department of Water Supply and the County since 2006. So, your support has always been really fundamental to our success and our growth, and we are very appreciative for that. Okay. Got it. Okay. This is just an overview map showing kind of the context of where our work takes place. So, we have nine landowners at this point in time. It's kind of reduced over the years as land ownership has changed. We have some exciting new projects that we're working on in the next few years and one of those is in the pink section of Haleakala Ranch, that's at Ukulele. That's directly mauka of the Kahakapao Reservoir. We also have Kamehamenui just south of that. That's a 3,000-acre that was recently jointly purchased by the State,

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nursery, and really kind of up our team's capacity in that way. The non-profit status, we're working on wildfire planning so we'll have partnership wide community wildfire protection plans in place. We're trying to revamp and reignite our outreach program that was so vibrant during the Auwahi years whenever we were partnered with that group. So, we're looking now, that we have these more front country sites that are more accessible and don't require helicopter access. We'll be able to better reengage with our community. Supporting the Ukulele and Kamehamenui project development. We're working on some research projects for hydrology, and we've recently redone our website so you can take a look at that. It's not completely finished. There's some incomplete pages, but it's really exciting to have that kind of modern and reflecting more the scope of our projects, and then the fog drop capture system which I'll talk a little bit more about later. So, this is the Ukulele project site. It's 100 acres right here. This is directly mauka of Kahakapao Reservoir. So, we're excited to partner on that project with Haleakala Ranch, and be able to do some planting there. That's mostly what we're going to focus on planting and the fence inspections. This is the new Kamehamenui project. Over 3,000 acres there. This was always in the partnership, but because of landownership difficulties...the land ownership changed, it was in limbo for a few year so now we're going to be able to have access to that site, and you can drive right to it right off of the highway in Kula and it's going to be a great site to be able to take students, especially trying to engage with our Upcountry schools and County water system users more directly. A big thing that we've been focused on in the last year is fire prevention and response planning. We just see it time and again in these dry leeward areas with the fire prone grasses that have now dominated most of those areas. So, was the 2016 fire at Kahikinui that burned over 6,000 acres and then the, of course, a big storm that happened after. So, these are trucks up here, so you can see the size of this waterfall of mud and sediment just going right into the ocean. So, you know, every time this happens, it becomes more urgent and more apparent, and we've done a lot of work with Firewise, and Pacific Fire Exchange. I also spoke at the, it's the first annual Pacific Fire Conference this year that was held in Kona about our efforts with the Kahikinui Hawaiian community there to help better prepare their community, and be more proactive in terms of preventing fires and being able to address them. So, this just quickly shows the partnership so far it goes around here, and a lot of our partnership now, we have community wildfire protection plans for and we've asked for funding this year to work with Pacific Fire Exchange and Firewise to finish this area. Kahikinui and Department of Hawaiian Homes has their own plan currently and that was just updated so we're hoping to get the rest of the slope from Ulupalakua Ranch to Kaupo covered and planned for. To address that as well, you know, without the forest cover in a lot of these areas on leeward Haleakala, erosion mitigation is a big issue. So, we're looking at taking areas like this and doing different trials. This, we've used invasive trees that we've harvested in other sites to serve as barriers, check dams for the sediment, experimenting with different types of erosion control materials, and then you can see here, some of these areas shortly after those sediment barriers have been installed we're able to plant into that nice top soil that accumulates there. So, these are koaia, and there's wiliwili trees and aweoweo, some of those drier more drought-tolerant species that are actually working really well in these areas. So, we've been encouraged by this. This is a project that I'm looking for funding on the big scale to do some bigger studies about erosion and the

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sedimentation that's happening so that we can maybe pursue Department of Health level funding. These areas are just so vast and these tiny efforts that we're doing in order to learn are just not going to be enough to really address these issues without, I think, that Federal level or greater amounts of funding and support. This is the project at Nu'u. You can see just the fence. We're seeing some of the revegetation occurring in some of these erosion mitigation areas. This is one of our platforms where we land and camp. This is at Kaupo Ranch. So, we just finished the fence this year. It's protecting 200 acres, and that ties that project at Nu'u that I just showed into Kipahulu Forest Reserve and the windward forest that's right over here, and this is Haleakala National Park. So, you can see that just fencing and removing that pressure of animals, really makes a big difference. There was some grass depression that's taken place there and we work with the park to do some Christmas berry and strawberry guava control. We're really looking forward to starting to see this area below expanded in terms of the native forest. This is that project site. There's some redneck koa trees and brilliant important seed sources for us at this site. Rapid ohia death. We're working to, you know, continue to do surveys, be vigilant of trees that are symptomatic. Our partners at the park just identified another tree. So, this is, we've had three suspect trees so far at two different sites at Kahikinui and then one site recently at Kaupo, and so far, all the tests have come back negative, but we are doing quarterly aerial surveys in partnership with the State, and then our crews are always really vigilant when they're in the mountain to look for those symptoms. Multi-agency collaboration. As you guys know, we're all running on kind of small funding compared to the tasks that we have at hand so partnering and working together is really important for us and fortunately we're really all, I think, enjoy that opportunity to learn from one another and kind of collaborate. So, this was the big push for pine control at Ulupalakua Ranch this year from Ulupalakua Ranch across upper Department of Hawaiian Homes. Over 70 people, I think, there was 16 different agencies from private ranchers, community groups, Invasive Species Committee, the Forest Bird Recovery Project, I mean, East Maui, West Maui, everybody came together and it was really, really fun and we got, more importantly, a lot of work done that we wouldn't have been able to do on our own in that two-day period so that was exciting. We still continue to work with Hawaii Agricultural Research Center. We have three HARC sites that we collaborate with them on and help maintain. Our crew is going out there tomorrow. Oh, actually, no today they're out there at Honolua and Haleakala Ranch and in addition, we've done a koaia seed farm on Nu'u Mauka Ranch where we've got some lower-elevation species growing to make our seed collection more efficient. We've been working a lot on getting our backcountry base camp set up to prepare us for these big restoration efforts now that the fences are getting closed. So, this a lot of work to build these small platforms, but you can see in that this type of terrain being able to land our gear, our plants, and our crew safely, is really important and then we're able to put a shelter up on that platform and have a secure dry, warm place in the evening. So, this is, can you see this one? This is at Nu'u. So, this just shows the kind of terrain that we're working in and I just want to kind of mahalo the crews that all do this type of work because it's dangerous, it's rugged, it's not easy and to go and spend, you know, a week up here away from your family is a challenge, and it takes a lot so I just want to give them their respect that they deserve.

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COUNCILMEMBER KING: I just wondered if they were able to land a helicopter on that. I mean, this is how you get there too?

MS. BUCKMAN: Yeah, so we land the helicopter on this platform and there's also a little LZ right down here where sometimes, you know what, they'll drop the crew off here and then they'll drop the gear off right here, and this is our water catchment system. We're trying to get water catchment and solar capacity at all of our camps so we're doing less transported materials and because the clouds come in here really fast and so that...

COUNCILMEMBER KING: But they do land the helicopter and let you get off. They don't like drop you the same way, right?

MS. BUCKMAN: No, no. They land us on the platform. Thank goodness. Yeah, because before landing in here was like kind of, pretty sketchy to find us a safe place that was where you wanted to be working. So, planting and natural regeneration. Now that we've had some of these projects at Kahikinui, the partnerships that we have with the State of Hawaii and Kula Natural Area Reserve in Kahikinui Forest, we're able to some of this regeneration happening on a big scale. So, we do a combination of planting strategically where there aren't the native, where the native diversity isn't remaining, and then in a lot of areas we see the root suckers coming up from the koa. That's a really, it's a blessing that we have that species to work with because it's enabling forest cover to return with minimum planting in terms of that species. We do still try to plant different seed sources in there, and then that's why the HARC sources are important too so that we have both resilient seed sources and just a diversity so that you're not just having only clones back in the system, and that makes it more resilient from disease and things like that, but I'll just show a few pictures of some of these areas. This is Puu Makua. This is one of our earliest sites where I started working with back in the Auwahi days in the early 2000's and then since then Sempra and the wind energy project have continued that. This is a bat mitigation area, but you can really see what, what's able to happen, and what areas we're able to reclaim. This is, sorry this is from the helicopter, but I just thought it was still really exciting to start to see this area being regreened, and the this is an area that was sprayed in preparation for planting. This is just, you know, just the fencing alone does a huge amount of...it's very successful just on its own, and then when you're able to add the planting in it's really important to help that recovery process take place. You want the system to be working on its own. So, this is our fog drip capture project at Kahikinui, and I put this photo up, the waiapo is the water that is captured on the leaves and it's even more valuable because it's never touched the ground. So, I just think that's such a beautiful concept, and it's a really valuable resource in leeward areas and so in 1997, the study was done at Department of Hawaiian Home Lands with U.S. Geological Survey and University of Hawaii. That professor, Dr. Juvik, has now, he's retired, and so he has time to come back and he's helping us with this at Kahikinui. So, Department of Hawaiian Home Lands funded that so that's why it's going to be taking place for that community who doesn't have access to a County water system at this time, but I just see this, we're setting up a demonstration project, and so we will be able to quantify this, once again with the more modern materials that are available

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now and our modern climate system since that original study was done so long ago. So, I think this could be something that rural farmers or areas that don't have access to the County water system yet, could utilize and it could be something that the County can work with as another model for providing water to our communities outside of rainfall, and also, we're looking at this first set to Department of Hawaiian Homes to help refill reservoirs for fire response. It's another huge missing piece out there is when there are those fires having sustainable consistent sources of water that rainfall alone don't provide. Hydrology studies, we're working with U.S. Geological Survey at Ulupalakua Ranch. There's also another study going on at Nakula where they're looking at restoration and how that's impacting hydrology. This particular study is looking at invasive versus native forest cover and the water infiltration. So, we're looking at, you know, leeward Haleakala, at this point we don't provide the community with a lot of our freshwater, but the aquifers are significant. About 10 percent of our island's water supply currently is held in those aquifers so I think there's potential for that, and looking at the recharge maps, you know, of course we don't have as much recharge as the areas that receive a lot of rainfall, but the more that we're able to revegetate these areas and tap into that fog drip precipitation system that used to feed that whole region, I think that we could improve this map and hopefully be bringing more recharge and more stream flow to these drier sides. Our education program again, is just really close to our hearts so we're still continuing to see seed ball program at schools. We're really looking for funding for an outreach person that can take this on. It's just our staff that's continuing to do this, but this year we reached over 1,400 students doing classroom education, and then the hands on seed ball making and this is kind of the outcomes of those seed balls in these really, really rugged areas just helping to get native seed sources back on the island. And then a new project, I am on the board of the Hui o Waa Kaulua as well and sail on the crew from Mookiha O Piilani. So, we're partnering with them on some grants and trying to find funding to do more exchanges in that way to get the canoes, the practitioners reconnected with the forest as it once was. It was really important for people who were accessing and utilizing forest resources to care for those areas so we want our junior voyagers to go up and help us plant, and that we're going to be having koa plantings at Kaupo, and I just think it's a really exciting way to bring things full circle. There's a lot of archeological history that's at Kahikinui, an important archeological site that was dedicated to navigation, and so this is just something that we're excited about to bring forward and just partnering outside the box. So, I just wanted to thank you again for your support, and I'm happy to answer any questions that you have.

CHAIR ATAY: Thank you. Thank you, Andrea. You know, just watching your presentation, before I go any further, you know, definitely want to commend your staff, your organization and all the other workers that are all involved in this conservation industry that we have here in Maui County. I mean, you know, we've seen the other presenters, we've seen the kinds of terrain and you guys are slinging in into deep mountain crevices. You know, you got put the hats off to all of these workers in this conservation arena. I have a question for you. What's your biggest threat to the watershed that your organization manages in terms of invasive species?

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MS. BUCKMAN: Aside from, you know, the ungulate issue with deer that's even more and more of an issue, having to build higher fences and that threat of ingress is constantly there. The plant species, our biggest issues is probably the grasses are huge and then the rest of our time is mostly on invasive trees. We're trying to focus on pine, silk oak, strawberry guava, biconia [sic], these species that both threaten the windward forests. Like biconia [sic], we're spending a lot of time on Haleakala Ranch to keep that from going into Waikamoi, and some of those windward water source forests, but those tree species that can really change things quickly. We're fortunate in that we don't have Clidemia yet. We don't have Himalayan ginger. We don't have some of those groundcover invasives that are really, really problematic in the wet areas. So, our works mostly focused on the invasive trees that are wind dispersed.

CHAIR ATAY: Alright. Thank you. You know, earlier we had not the recent meeting, but I know we had a visit with Art Medeiros from Auwahi and he showed us the slides of what the old native forests was and what the now current native forest, and I think in your presentation, we can also see the contribution of planting trees yeah. I recently attended the Global Action Climate Summit that was held in San Francisco, and I met several global leaders in what they called ecological restoration work or environmental transformation, and these guys take entire mountains and entire valleys that were very bare and barren like a dessert and transformed them by planting trees and brought everything green back. So, I can see the slides that if we invest more in the planting of more trees, I think we can do a couple of things. One would be carbon sequestration, addressing this climate change, as well as, increasing our watershed's ability to recharge. So, I commend that work. Members, I want to open the floor up for questions. Member King?

COUNCILMEMBER KING: I'll go first I guess. Okay, I have a few questions. And just I was making notes throughout the presentation, but thank you for being here. And one was you had a 5 percent private funding. Is that, does that include contributions from Kaupo and Haleakala Ranch since they seem to be beneficiaries?

MS. BUCKMAN: That does actually. Kaupo Ranch has given us a cash donation last year. Most of the other private landowners don't contribute in terms of cash, but they contribute in terms of infrastructure or space allotment, access, fence materials, irrigation supplies, consultation, that kind of thing. But Kaupo does, has given us some funding directly which is really great.

COUNCILMEMBER KING: Okay, great.

MS. BUCKMAN: Yeah, most of that though, most of our private funding is from like Hawaii Community Foundation or Atherton Family Foundation, those kinds of nonprofits.

COUNCILMEMBER KING: Okay. Seems like the, well, so the partnership with the ranches is mainly them allowing you to be on their property?

MS. BUCKMAN: Yeah, and giving up those significant acres of their land to restoration. So, we, you know, I feel like if we had to ask our private landowners for, you know, if we

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got in a situation where we really needed money, that they would be there for us, but we try to, you know, incentivize this type of work by making it easy for them as much as possible. By giving us that access it's a pretty big risk and a pretty big contribution that they make by offering this up. So, we try to find money from outside sources.

COUNCILMEMBER KING: Okay. And then, one question I had and, Chair, just thinking about all these different watershed areas, is, do we have anywhere...I've never seen like a map of Maui that shows where all the different watersheds are and how they interlap. But as I was thinking about that, I was wondering if there has ever been an effort for all these different watershed groups to collaborate on...you know, everyone's saying they need staff for outreach and education, and you know, maybe even collaborate on a map of volunteer opportunities that the Maui Visitors Bureau could help you distribute to, you know, for ecotourism to our tourist population, but if all the watersheds were working together and people who were living in West Maui could look at the opportunities in the West Maui Watershed, and people who were living or who are staying in Kihei could look at the, you know, yours and the other ones that were focused around Haleakala and then that could, that information could be housed together. So it doesn't, not every watershed reinventing the wheel, but you all, all of your projects working together. Has that ever been talked about?

MS. BUCKMAN: Yeah, that's a really good question, and right now, Dan and I both participate in the Hawaii Association of Watershed Partnerships. So, that's the Statewide group of watershed partnership coordinators, and I can provide you with a map that shows Maui and then Statewide all those acreages. It's over 2.2 million acres that watershed partnerships contribute to protection and restoration of, but we meet regularly, quarterly in person once a year and kind of talk about these common issues and challenges. How we can share resources, how we can galvanize what resources we do have, and then more specifically on Maui, Dan's organization along with Maui Forest Bird Recovery Project and West Maui, I believe, or MISC they started the Maui Mauka Conservation training group which I was a guest presenter at this year. So, this is the first year that we've participated in it, but that invites people from the tourism industry to come and learn about all the different issues, all the different conservation groups, volunteer opportunities, things like that. So, we really are trying to connect more with the tourism industry in that way. So, I think, they are working on a map or some kind of calendar of events on that website. So maybe Dan can speak to that more, but we're working towards that.

COUNCILMEMBER KING: Okay well I just, yeah, I brought it up because I would like to see, Chair, as we move into the next Budget Session, some real institutional types of partnerships where those programs, you know, because you guys are busy taking care of the watershed and you're not experts on how to write, make brochures and contact, so there really needs to be a --

MS. BUCKMAN: Right.

COUNCILMEMBER KING: --partnership between and maybe not just the visitors bureau but maybe also the community associations and, you know, for local, you know, people

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who live here who want to volunteer. But I just, I see every watershed trying to do the same thing with their outreach program, and if we could somehow collaborate we could, I think, save a lot of money and still outreach and cover the whole island.

MS. BUCKMAN: Right.

COUNCILMEMBER KING: So that was...

CHAIR ATAY: I think, Member King, thank you for that thought, and I think we could ask the Department to note that, and maybe the possibility that in the future the Department of Water could be the host of bringing the different watershed partnership groups together on an educational forum. Maybe that's something that we can bring up with the director.

COUNCILMEMBER KING: Yeah, and then talk about what shared resources we could create for all the watersheds, and then, the only other question I had at this time is about those, the fog gathering screens and I just wanted to find out if the Department of Water Supply had any input in what...have you seen those before, and have you seen them working before? I'm really interested because I've never seen anything like that before.

MS. BLUMENSTEIN: Thank you, Chair.

CHAIR ATAY: Go ahead.

MS. BLUMENSTEIN: Well, personally I have not seen one live, but we looked at a few research papers and see, you know, how much can you generate, how much square footage does it take to get monthly supply for a household to see for the long range-- what is long-term planners--to survival alternative in those dry areas so, and we think that it could be. I think you by 3,000 square foot fog drip catchment you would generate up to like 20,000 gallons per month, I think.

MS. BUCKMAN: Twenty thousand...

MS. BLUMENSTEIN: So, that's, you know, a little less than an average household, but so it's doable, but then it's very seasonal too. So, we have not considered it for the department system, but it's an alternative source where there's few alternatives on the dry side.

COUNCILMEMBER KING: Okay, and it works...

MS. BUCKMAN: Yeah, it's really specific. Sorry.

COUNCILMEMBER KING: Is it specific conditions that it works under?

MS. BUCKMAN: It's more about the elevation because that cloud layer on the leeward side is pretty regular, it's pretty consistent. It's more consistent than rainfall.

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COUNCILMEMBER KING: Okay.

MS. BUCKMAN: But it, you have to get the systems up high enough to where they're at that 3,500 foot or so elevation. Three thousand feet is about the lowest where it would be probably worthy of that investment. So that's...the biggest cost beyond, you know, the system itself is the water transport system; the pipes, and then you know, in areas like this at Kahikinui, we're looking at do you use stainless steel pipes, do you use the plastic pipes that could potentially burn. So, there's a lot of different ways to do that, and so that's why we're kind of looking at these modern materials and options now with this new project. So, what we're hoping to come out with is like a report so that we can show you guys what this actually does produce. We're going to do smaller scale systems at our camp sites as well so that we can see, you know, on a small scale and a more community-sized scale what this costs and how much water it's actually producing.

COUNCILMEMBER KING: Okay and, I think, it's relevant in terms of the reforestation that's going on, especially with the koa trees. So, if we're bring the reforestation down to lower elevations, and that's a possibility of putting water at lower elevations that takes less piping to get to the communities then that kind of speaks to the importance of the reforestation at the lower elevations as well.

MS. BUCKMAN: Right. It's a missing piece, I mean that's something that I didn't mention here but, you know, looking forward, we have to start focusing on all the way down to the ocean and restoring those corridors. We can't take on the entire vast spaces that are so degraded at this point, but at least connecting the areas that are fenced and protected down to the ocean so that at least those stream corridors are better able to filter the sediment out and slowdown that pace of water so that recharge can take place.

COUNCILMEMBER KING: Okay. Thank you. Thank you, Chair.

CHAIR ATAY: Yeah, thank you. Members? Member Cochran?

VICE-CHAIR COCHRAN: Thank you. Thank you, Chair, and thank you for your presentation, all especially the hard work as Chair mentioned in his opening comments, and wow a lot of improvements throughout the years and a lot of blood, sweat and tears for sure go into it. And I love that the fog drip idea and looking forward to continued research on that, but I wanted to, yeah, elaborate a little bit more on the whole collaboration. I know one of your slides, the multi-agency collaboration outreach, and you said you had gotten everyone from across, you know, our counties to pitch in, and just kind of call this one big work day and all the hands came together. So, I think more coordination of those types of efforts would truly be helpful, and then of course bring into the fold our haumana, our students of the area which I see that happening too. So, it's really an exciting time, and I know it's at, we're at a very pivotal time too that should these types of efforts fall away and get ignored, we are in, will be in a world of hurt, and so it's so important and I do applaud

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this Council and our Water Department for the efforts we put in. I see a nice big chunk on that pie of your funding sources, Federal level, but you know, I always cringe at the thought of how much our DLNR division on the State level get, which is very, very miniscule in the bigger picture of the State budget, and it's so important because it affects us all, and I think, what you're talking about the efforts, that needs to be highlighted. So, when you go to these Hawaii Association of Watershed Partnerships on the State level, I'm hoping that you're all are collectively your voices are brought to that level of budgeting to say this is what we do, look at the efforts, I mean show these so they get into your heart and soul of who you are and what you do on a daily basis to protect what we all reap the rewards of, the visitors, especially, and our residents and our future, and our culture and on and on, you folks know. So, do you folks do like lobbying efforts collectively when it comes to the State-level budget? Because it really does literally trickle down to the efforts you can do, what we can do, and you know, our SRF loans and things it all adds up. So how, what kind of presence and voice do you folks have collectively up at that level?

MS. BUCKMAN: Right now, I mean, we face some pretty serious limitations on what we're legally able to do in terms of lobbying, but we do participate in outreach, and so we try to meet with the different legislators throughout the year, hopefully take them on a site visit so that they can see for themselves and make their own decisions, but become more aware of the challenges we're facing and the successes that we're having as well. So, we try to do that. We've built in, HAWP, the Statewide organization built in some funding for us this year so that our outer island coordinators can go and have more opportunity to interface with those legislators personally because I do think that's important for them to see different faces, to see the people that are doing the work on the ground and/or representing the people that are doing work on the ground. But like you both mentioned, I think it's a deficit within our organizations and it is, there's a professional level of PR and information showing that could be taking place and I think we all kind of suffer for that. We have these amazing things, but you know, there's no one here. I don't know who will see this. We could be sharing this on a bigger, you know, a much bigger scale, but it does take expertise, and time, and funding, and that's the kind of things that, I think, as the managers, when you're faced with decisions on money, it's got to go to the mountain first. So, yeah, that's something that I think we could, I would appreciate that, you know, further thought on, and as you mentioned, Chair, the innovation that's out there, you know, in San Francisco and elsewhere in the world in terms of getting private funding to address these issues is there, and it's growing. So, I hope that we can all contribute to that and keep in communication. Yeah, we do hope to do outreach with legislators more this year.

VICE-CHAIR COCHRAN: Yeah, very...

CHAIR ATAY: Thank you for what you shared, but you know, although you can look out here in the Chamber you see no one and I'll emphasize, don't feel that it's not, for not. There's a lot of other folks there on TV land that's, was able to view your presentation and I hope what you're sharing reaches them also so that they have a better understanding. Yeah. Thank you. More questions?

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VICE-CHAIR COCHRAN: Thank you, Chair, but I think too highlight also during this past Budget Session and Ms. King thinking, you know, for the upcoming next one which I will not be here, I believe probably, perhaps Ms. King and others here will have an opportunity, but you know, we're seeking for the tourism industry to be part of this because that's the outside world per se coming here. Why did they come? To see rain forests and waterfalls and nice beaches and blue, you know, clean oceans and reefs with fish. So, all this is the efforts that you folks are doing mauka that affects makai, and yes, it is that central that portion in between, that connectivity has been lost after our plantations and ranching have fell away. So, this open fallow fields now occur and so I know there's efforts in this realm which we need more work on, but I think as a County and government, we can help assist right. We can help guide the efforts and put it on that bigger global international level for people to understand who we are, what we do, please be a part of, come to our islands, and help, come to our islands and learn, and if, you know, pitch in. Is it monetary, is it hands-on, boots on the ground, however, but I think these efforts can be, can start from the top and work down to the level that you folks are at, and I'm excited, you know, because I think we got some great people stepping up to the plate to want to make these bigger decisions, and it's going to be awesome and again, it is a very pivotal time. We have some huge water issues. I come from West Maui. I live in Honolua itself and myself personally have been without water for about ten months now, and it's a work in progress to figure out transmission of the source. So, thank you for protecting the head waters and the wao akua because people down here need that. So, thank you for that, but please reach out and make sure that the budget decision makers know your needs and we'll work hard to get it to you to make sure you can continue the work that you do. So, thank you for your efforts.

MS. BUCKMAN: Thank you. I really appreciate that.

VICE-CHAIR COCHRAN: Yeah.

CHAIR ATAY: I have a question from Member Crivello?

COUNCILMEMBER CRIVELLO: Yes, and thank you. Thank you for your work, and thank you for being here. I sincerely believe in watersheds as one of the original founders of the east watershed project on my island of Molokai, and our Nature Conservancy people and the partnership that we do with private landowners, and as far as trying to raise funds also. So, I appreciate your multi-agency collaboration, and you know, just getting all the seeds ready for us to plant. So, my question is when you did the rapid ohia death survey, did you see anything going on on our island and in your forest?

MS. BUCKMAN: So far, I think the State is doing individual surveys on Molokai as well. The State does quarterly surveys around Haleakala. So, these are the only things that have been picked up so far, these three instances where suspect trees were identified and noticed and tested, but it just takes, you know, one storm or --

COUNCILMEMBER CRIVELLO: Right.

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MS. BUCKMAN: --one, you know --

COUNCILMEMBER CRIVELLO: Right.

MS. BUCKMAN: --disease --

COUNCILMEMBER CRIVELLO: Exactly, exactly.

MS. BUCKMAN: --instance to bring that, to make the trees and the systems more vulnerable and especially in leeward areas where without that protective buffer of all the forest and multi-layered system, you know, when there are storms and heavy events like that, it causes branches to break and scarring in the trees and things, and that's what opens up the potential for those types of pathogens to enter the system. So, I think it's important to also do the quarterly surveys, but maybe after storms as well and just try to...we've been working with the rapid ohia death. There's a Statewide working group and I know there's a lot of funding being sought for outer islands like rapid test kits and even spore sampling kits and things like that where you can set up these sensors and they can see if anything is, you know, coming over from Hawaii island and these leeward areas and quickly identify that. So, I know the Parks Service is experimenting with that and USGS. So, we're hoping to kind of expand that capacity to both detect and then respond. There's been in recent weeks some e-mails going around and meetings about how do we set up inter-agency rapid response systems to know exactly what to do, who can call the helicopter, who can, you know, write the checks or call the volunteers, and so there's, that's being organized right now. So that's the most we can do, but as far as I know, nothing else has been identified since Kauai.

COUNCILMEMBER CRIVELLO: Okay, just the three that you...well thank you. Thank you for your work.

MS. BUCKMAN: Thank you.

COUNCILMEMBER CRIVELLO: I also feel that I can appreciate your extension into the schools because that's where the conversation goes home to the adults, to the parents, and to the families. So, if that's our captive audience, you know, more so and hopefully the Department of Education is very supportive as well as perhaps funding that extension to bring in your resource people into the classrooms. Wonderful work. I know, I think back home, the Molokai Land Trust does that as a means of also educating about the plants that we have, and actually like the ohia, how it just, you know, holds on into, you know, like your fog drip project yeah --

MS. BUCKMAN: Right.

COUNCILMEMBER CRIVELLO: --and how that helps to, you know, ensure the rainforest continues on that part. So, I just want to add my appreciation and however we can help, which we've had. I think Council has been and the Department of Water Supply

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has been very, very supportive, and even from the visitors industry, we receive the tourist accommodation tax. Wish we would get more from the State, but we know that's applicable that we can use these funds unrestrictedly as to how we can add more to this. So, it's a full on, like the work that you're doing, fully collaborative. So, I appreciate your work. Mahalo.

MS. BUCKMAN: Thank you for that, and I have, I do get to work with Ed folks and --

COUNCILMEMBER CRIVELLO: Yes.

MS. BUCKMAN: --Stephanie from time to time. Stephanie's been really helpful in that erosion study because you guys have done so much amazing work at Kawela documenting that. So, we're hoping that we can take some of that existing research and save funding, and time by having the USGS scientists extrapolate it.

COUNCILMEMBER CRIVELLO: Right. Right.

MS. BUCKMAN: You know, do take the slope angle of Nuu and places like that, and not have to take another ten years to do a full study, but have some sound information on what those rates would be compared to Molokai. So, it's been really fun to learn from them and work with them.

COUNCILMEMBER CRIVELLO: And they learn from you. It's an exchange of...and a strong network with passion I believe. It comes with passion for the work that you do. Yes, I think, throughout the years the work that Ed folks as well as Stephanie coming in, and a wide range of community volunteers sure makes a difference like all the other projects that we have with our watershed. Mahalo.

MS. BUCKMAN: Well, thank you. Mahalo.

COUNCILMEMBER CRIVELLO: Thank you. Thank you, Chair.

CHAIR ATAY: Okay. Thank you, Ms. Buckman, for your work and your agency's work, and today's presentation. Members, we're going to take a one-minute recess and allow our next presenter to get his software...

COUNCILMEMBER SUGIMURA: I have a question, Chair.

CHAIR ATAY: Yes, Member Sugimura?

COUNCILMEMBER SUGIMURA: Yeah. So, thank you very much.

MS. BUCKMAN: Sure.

COUNCILMEMBER SUGIMURA: Very impressive, your presentation. So, do you do work then with the Auwahi Wind?

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MS. BUCKMAN: We...

COUNCILMEMBER SUGIMURA: You do Ulupalakua Ranch so they're heavily you know, Kahikinui and in partnership . . . *(inaudible)* . . . so.

MS. BUCKMAN: Yeah, most of our work...we haven't worked directly with them to date, but we, I just had a conversation with George and Ray this week, and that's something that we're trying to expand upon, and even getting their crew to come out with us, and we started moving in that direction because I've worked with them mostly at Kahikinui, and the ways that they assist that community with the different projects out there, but most of that stuff has been more, you know, community based assistance. But as far as the forest work, we're trying to move more in that direction because they do have a lot of experience and that's what George and I were talking about. The seabird research, the bat research, just the planting and the things that they're doing. We all need to sit down once in a while and say, how's this going, well how you dealing with that, and what's working and what's not. So that's something that we're definitely, definitely moving towards, but we haven't yet.

COUNCILMEMBER SUGIMURA: May I connect you with them?

MS. BUCKMAN: Sure.

COUNCILMEMBER SUGIMURA: And they're an awesome organization, the wind side and they really are connected with, they do great community partnership. So, that, and then I also was, wanted to just ask you about your seed ball. So, the 1,400 students that you've connected with, tell me a little bit more, and are they, are you basically working with the Upcountry schools or who, what schools are they?

MS. BUCKMAN: Yeah, mostly we focused on the Upcountry schools. Kamehameha Schools is our biggest partner in that in terms of the classroom work. We've also done...and Montessori. That's where it kind of got started because our former field supervisor's son was a student there. So, that's what kind of got that whole ball rolling. So, to speak, but mostly Upcountry schools. That's just our area of influence so we try to stay focused on that. I did get contacted by a teacher in Kihei recently so, you know, I hope to do more with the hotels even, but the student work we try to stay Upcountry where our area of influence is, and then the bulk of the students was from the ag in the classroom days with Haleakala Ranch. So that's where they have sixth graders from all over the island come and, you know, they all cycle through these different learning opportunities. So, it's really neat how it ties conservation, and agriculture, ranching, all that together. So that has helped us really reach a lot of students that we wouldn't have the time to go interface with, you know, on a school-by-school basis. So that's been fun. I think this was our second year, second or third year, yeah, maybe third year that we've done that with Haleakala Ranch. So, it's great in that they host it, they set everything up, and we can just show up with clay and let the kids do the work and connect. so.

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COUNCILMEMBER SUGIMURA: That's fabulous. Kula School, Elementary School has ag in the classroom. They're trying to develop that where they actually have land which was the old Keokea Elementary School, you might've been seeing some of that in paper.

MS. BUCKMAN: Yeah, I saw that.

COUNCILMEMBER SUGIMURA: So, that might be another good connection. I think you also said that you're short of staff to really focus on that alone, but that might be another good connection with Mr. B, the principal there. He's like pretty awesome.

MS. BUCKMAN: Okay, yeah, we haven't worked with them just yet, but that's a really good idea. Yeah, thank you.

COUNCILMEMBER SUGIMURA: But thank you for your good work.

MS. BUCKMAN: Yeah, thank you.

COUNCILMEMBER SUGIMURA: Appreciate it.

CHAIR ATAY: Member Cochran?

VICE-CHAIR COCHRAN: Chair, real quickly. Thank you. Those seed balls, I remember when Pomaikai Crozier was here, and we're talking about after the fire event in West Maui, and because everything's just been kind of the sleights been wiped clean after the fire, it would be really awesome to have our natives, you know, spread the seeds, shoot em out there. What is it the bullet? kind of like how you do the...

MS. BUCKMAN: The herbicides?

VICE-CHAIR COCHRAN: No, no, no. Not herbicides. Not the ballistic stuff, hydro mulch.

MS. BUCKMAN: Yeah, hydro mulch.

VICE-CHAIR COCHRAN: Okay. Like hydro mulching efforts. So, with this, these seed ball things you're talking about be helpful to something like that?

MS. BUCKMAN: It absolutely would, and you know, that's one of the biggest gaps in terms of preparing for that scale of response is the availability of native seeds. So, when I look at all this abandoned, you know, ag land and former sugar cane land, I can see like aalii farms and aweoweo farms and, you know, there's opportunity for that because that's our biggest limitation is the seeds, getting seeds from regionally appropriate sources that we could have at the scale to respond to that level of fire, even to respond at Nuu. Like one site we can't get enough seeds and seed balls to even fill one hopper of the, because we worked with Windward Aviation to look at using their seed distribution hoppers to spread that over a large area, but we can't even fill one of those because we just don't have the seed availability. So, that's a limitation. I think that's an opportunity for someone to get involved in agriculture and, you know, I don't know

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where the money, how you produce money on it, but I know that the State is interested in that as well, a big seed storage facility, and you know, maybe you can offer a per pound price, just like any other commodity that produced for those seeds in storage because you know, you end up purchasing, there's a lot of money that goes into their fire response. They use some non-native species sometimes just to try to reclaim the soil. So, I think it's a big gap and an opportunity, but I think it's a really viable option.

VICE-CHAIR COCHRAN: Yeah, okay. No, very good. Thank you. We'll work on that. Okay, thank you, Chair.

CHAIR ATAY: Alright.

MS. BUCKMAN: Mahalo, appreciate your time.

CHAIR ATAY: Thank you for sharing, Ms. Buckman, and all the, your agency's work. As I mentioned earlier, we're going to take a short recess so that we can prepare for our next presenter. We stand in recess. . . .(gavel). . .

RECESS: 10:12 a.m.

RECONVENE: 10:20 a.m.

VICE-CHAIR COCHRAN: . . . (gavel) . . . Aloha, will the Water Resources Committee please reconvene. As you can see, I am not Alikea Atay. I am the Vice-Chair of the Water Committee Ellie Cochran, taking Mr. Atay's place at this time. He had prior engagements to attend, but we are, the show must go on, and we have Mr. Dan Eisenberg here from East Maui Watershed Partnership to present to us. So, Mr. Eisenberg, the floor is yours, and thank you so much for being here.

MR. EISENBERG: Okay, thank you, acting Chair and Councilmembers. Yeah, so I'm Dan Eisenberg, representing the East Maui Watershed Partnership. I am starting with a view here of this really expansive, this is actually just a portion of the expansive area that makes up the East Maui Watershed. This is looking from about Kopiliula Stream, up about 3,500 feet back towards Makawao, and this is just a portion of the area that the County funds our project to manage, and that collectively we manage a lot more of the mountain with the help of our partners. So, just a quick outline what I'm hoping to go through here to give you guys a little more information about us, is just a partnership formation and brief history, the resource management theory that we've used through the year, the watershed partnership's mission, and some discussion of our management plans, management plan, and the different versions of it through the years. How our project's organized, the geographic scope, resources and threats that we deal with, some stakeholder input, and I'll give you guys a little example at the end; a little more detail about some of the management activities that we go through. So, just an old picture. Some decision makers from 1991, or the 1990s at least. Our partnership was formed in 1991. We were the very first watershed partnership across the State and yeah, I'm stressing here that these managers got together voluntarily to

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work on these landscape-level projects. Conservation had happened on a smaller scale dictated by land ownership boundaries before our partnership formed, and these examples like, Andrea was pointing out on some of her previous maps, and like we see in East Molokai and all across the State, have really been pulled off by these watershed partnerships that work, that pull together these pieces across the land ownership boundaries. So, I've got a map up here, but I'm focused less on the geographic area here as just, what I would actually like to focus on is more the legend there where I'm pointing out who our partners are. I've got the State Department of Forestry and Wildlife and I called out separately the Natural Area Reserve's portion of DOFAW because, I think that, they really deserve a special recognition for the really high level of management and hard work that their team does. Not just in Hanawi NARS in East Maui, but across the State. I think that they really don't get enough credit a lot of times. They can kind of slip in to the bigger, the ideas that people might have about like the bigger bureaucracy of the State management, but there really is specialized teams within DOFAW, and we're seeing more and more of that out of the forestry program, outside of NARS but the state does do a lot of on the ground management in the forests these days, and I think that they really deserve some substantial recognition for that. East Maui Irrigation is one of our partners, Haleakala Ranch, The Nature Conservancy, Waikamoi Preserve, as I'm sure you guys already know, and they'll tell you a lot more about, but the lands owned by Haleakala Ranch and East Maui Irrigation, but under perpetual conversation easement for The Nature Conservancy, and so the County through this grants program does independently outside of our ask fund work in Waikamoi Preserve. And the County of Maui has always been one of our partners since the inception of the watershed partnership as well. The only partner that's not a large landowner, but, you know, very important and always has been nonetheless. Okay, so I've got East Maui's Watershed Partnership's mission statement. The overall mission of EMWP is to continue protecting East Maui's primary water source including, but not limited to the native forested watershed by significantly reducing targeted threats, and I wanted to share that, but I also wanted to kind of place that right next to this phrase that I took from the very beginning, like the first paragraph of the Department of Water Supply's grant application which says, the Department of Water Supply's Watershed Protection Grants Program was established to maintain and increase efficient hydrologic processes which feed our surface and groundwater supply, and non-native animals and non-indigenous plant species threaten the watershed's ecosystem and must be controlled and eradicated to ensure sufficient water recharge. Both of these statements kind of have two parts. There's one of them that's it's important to protect the water supply, and the second is that there's important threats out there, and they're more specifically defined in the grant application, but what we stand for is in line with what this grants program is asking for, and I just kind of wanted to point that out. So, yeah, I, like I said, I want to, I'm going to probably through this presentation keep coming back to some of the work that I'm so proud of that is carried out in the East Maui Watershed by our partners, but what the grants program funds is one project of the University of Hawaii Pacific Cooperative Studies Unit. I've got, we've got set, this is all the whole lower part of this organizational chart. We've got currently seven people, one of these positions is vacant, but two of them, and two of them are part time, but we're a small staff that carries out specific tasks for specific

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fundamentals in the watershed, and all that happens in the network of other resource management that's happening by our partners in the watershed. But I think it's important to recognize that these partners are the decision makers, and have worked through at least three different substantial versions of our Watershed Management Plan, one of which, the most recent of which was just approved this summer. We updated our management plan and the partners are who does that. The executive committee who's a subset of our partners works directly to oversee me, and they work in conjunction with the University of Hawaii to do that. I help oversee this kind of chain is the on-the-ground resource management. I also have a 60 percent of FTE program in data assistant that helps with administrative and data stuff that is a really important piece of our project, and this is that piece, the community outreach and education. We're fortunate we're one of the few projects across, at least Maui County that I know of that does have a dedicated person towards community outreach and education. It's always one of the most tenuous positions to fund. We, I don't think we've ever completely laid off that position, but we've had had to cut the FTE, and we've had to even officially share that position between West Maui Mountains Watershed Partnership and East Maui at least one time in the past. I'll speak more about that later, but we do have a dedicated person at 75 percent of FTE towards community outreach and education. Okay, so where are those projects that I was talking about. This is the places that we work, and all three of these are at least partially funded by the watershed partner, or sorry, the Department of Water Supply's Grants Program. I've got a big area from this geographic feature here is Keanae Valley or Koolau Gap. To the west here, this is directly adjacent to The Nature Conservancy's Waikamoi Preserve. So, there's a big, big chunk of land just to the east of that that we have fully fenced since the mid-2000, mid-aughts, and is essentially completely ungulate free. We have, and this is where, the focus of all of our management happens. We also constructed a fence out here above Hana. This is Waihoi Valley that flows down to, like you can see Hamoa and Koki right down here, is sort of is the headwaters of those streams, but all the way out to the Hana Airport and beyond as well. And then we work with Leeward Haleakala Watershed Restoration Project and contractors that are funded by Haleakala Ranch and Puu Pahu Reserve to the far south, yeah sort of south and west of our project sites. One of the things that's really nice about this project site is its accessibility. We're talking about some of the community outreach and education. This is a spot we can drive up to, and so it's a place that we bring volunteers to do native planting. It's a place we can demonstrate as a walk-up site visit for the day to, for people to see our site, but all these areas, everything that's, essentially everything that is aligned on this map is all fenced, and so this was a lot of hard work. I'll demonstrate somewhat what that looks like, but this is one way of representing what about two miles of fencing looks like on the ground there. This is fence material that we had staged at, up at resource management in Haleakala National Park when we were doing some construction close to the time I started with the project, but you know, this is like one, maybe two, tractor trailer loads of material, but so that's not crazy. You know, they can unload that at Walmart with a forklift, you know, in an hour or whatever, but every single piece of that material was moved by us less than 600 pounds at a time by the helicopter, and dropped every 100 meters along all these, like this is, you know, at least 20 miles across just the bottom fences. There's also a lot of internal fences. The

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whole top part was fenced by Haleakala National Park and so, yeah, just the fencing piece of the puzzle is a big expensive hard work piece of it, and you know, it's not engineered the way that you engineer a building, but there is a lot of thought, a lot of like on-the-ground work that needs to go into designing the location of this fence. It's done by the guys on the ground, you know, the details of it are done by the guys on the ground out there planning, like foreseeing trees falling five years from now, foreseeing maximum flows of streams, foreseeing weaknesses and landslides that might happen to avoid future maintenance costs. So, yeah, what resources are inside these areas, it's pretty fabulous, it's pretty beautiful, it's tremendously diverse, there's, and I guess, for the purposes of this talk, there's a lot of water resources out there. There's high rainfall rates pretty consistently through the whole year. There's really high rates of infiltration into the soils and recharge at the aquifers, and there's also the history of the infrastructure there to collect surface water for private and public use. Yeah, just a couple more shots of the watershed. This is the top of, this is Wailua Nui area, a little farther west looking down that Keanae Valley. The same sort of area from the air. This is Waikamoi Preserve in the background, Koolau Gap in the middle, and Wailua Nui to the left. Okay, so yeah, benefits of healthy native forests. We, all this stuff is based off of, or at least I think, up until at least the last bullet point is all based off of scientific research that's cited in our grants program application, but a decrease in evapotranspiration that's through the process of plants growing, the water that's cast off into the atmosphere, increase in cloud water interception, that's the scientific word for the mist capture screens that Andrea and we were discussing. The trees do that themselves naturally. I think that Andrea touched on that as well too, but that's, yeah, how they use their leaves and their bodies to capture water directly out of the clouds, even if it's not precipitating, decrease in erosion and sedimentation in the near-shore environment, decrease in non-point source pollution as we're removing all these animals, and in addition to all that there's of course, you know, we want to talk about the water, but I think it's important not to lose track of the aesthetic cultural, ecological, and recreational resources that this work does contribute to. Yeah, so in all those years that our partnership has existed for the most part, well actually for, up until 2003 from 1991 till 2003, the work that the partnership did was just by pooling extra resources that the partners had and there was no staff, there was no UH project, there was no dedicated crew. The partnership worked, and started a lot of these really substantial projects, and did most of the groundwork for the planning of what we're still carrying out today before they had even started to raise funding on the scale that they received from the County and the State and all the other resources that we tap into these days, but yeah, so we only started hiring staff, and this is some of the very first ones that were on the crew. Included in this picture are, in 2003 I think. And we, yeah, built another really substantial fencing project pretty much right after we finished the first one. This was that project I was showing on the map that's right above Hana. So yeah, we're talking about the connection between those native forests, healthy native forests, and the water availability. What I'm illustrating on this map, in the background is kind of subtle here, but I took the very best vegetation map that we have for the entire State. It was made by folks at the USGS, Jacobi and Price, and it's got about like 30 or 40, at least different classifications of vegetation, and so usually when you display it, it's useful to look at it in like a small scale, but if you zoom way out, you lose any of that

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detail between all like 50 of those classifications or, and so what I did was just dumb that down completely to illustrate all land cover pieces that they called native land cover and all land cover pieces that they called alien land cover. And it's not, you know, it's rough at this scale, but I, yeah, coded the native ones, the ones that are native dominate blue, and alien dominated pink, clipped that out for just the watershed partnership area that I showed in those bright colors on one of the first slides, and I just wanted to illustrate how much native-dominated forest there is out there, and the focus that our project places on protecting those areas. It also illustrates that there's more work that could be done, you know, like just in terms of protecting what's out there. I think there's still potential there. It does get a lot more marginal on the boundaries, but yeah, without these big-scale projects that you guys help fund, all of these huge swaths of native forests would be lacking the production that they're currently getting. This is just really rough. I won't spend a ton of time on it. It's not super scientific, but I was just looking at a few different like surveys of what folks had demonstrated or at least had expressed as whether they're supportive of our project, this kind of work, or not, and this was a survey that was done by the Department of Water Supply in their efforts to update the Water Use and Development Plan. I think that was 2016 or so that this was put together, and there's a whole list, you probably can't read them on your copy, I don't know if you can or cannot, but there's a whole list of like really good ideas, really good practices, every one of them makes sense, and they're asking people whether they agree with that idea, disagree with that idea, or no opinion. Out of that long list, the very most supported effort that, practice that was described was 90.18 percent of the respondents agreed that the County should expand programs to control invasive and non-native plants and ungulates, pigs, deer, et cetera and expand reforestation measures. So, I don't know, I think that I feel like we're on the right track and yeah, the, there's an 85 percent here, but yeah, that was the only response I got anything into the 90s. Another survey that came up over the last year, I think a lot of folks that are in the room here were at the water round table survey that was hosted by the Sustainable Living Institute of Maui at the University of Hawaii Maui campus, and that was a wide-ranging event. There was a lot of top, like a wide, wide range of topics that were discussed at that event. Some of them related to watershed protection, but some of them towards other stuff that's farther down the line from where our project gets involved with. but in the survey that went out through that project one of the questions that was related to watershed protection said what steps could Maui County, or Maui communities take to promote conservation, recharge, reuse, and lessen the pressure to rely more on the East Maui waters above current and 2020 projected levels, and yeah, the number one response from that diverse group of people that were involved in that event, was to expand watershed partnerships and restore native ecosystems to allow more water to recharge the aquifers. So, yeah, how do we, what do we do to carry that out through the grants program. There's very specific deliverables that are required for the...well the deliverables aren't required, but we're required to very specifically define our deliverables of what we will do for the grants programs and for Maui County, and we got fence inspection and maintenance of repair, invasive plant control and removal, resource monitoring, community outreach, and native plantings for restoration and outreach. Yeah, these are our top priorities of what I need to do to help carry out my management plan for my partners, and this is the specific stuff that we do for the

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County. So, what does it look like? I'll try and go fairly quickly through this, but fence maintenance and inspection. We're fortunate that in the wet forests for the most part, we haven't, we don't have to deal with deer in most areas. So, this is generally what we build is a 48 inch hog wire fence with a 36 inch apron that lays flat on the bottom to discourage digging by pigs. There's digging from pigs on the outside of the fence, and a healthy substrate of native ferns and I see Pilo. I'm sure there's a handful of other species on the left over there. These fences all require a lot of maintenance. It's one thing to build all these fences, but really the only reason that we're able to keep these areas so free of ungulates over so many thousands of acres is to inspect them, be really vigilant with our fence inspections. We definitely always inspect fences quarterly, but we'll also do them immediately after storm events. There's a lot of, a handful of our fence sections that are being checked three times this quarter because of like, we'd already done them for our regular schedule, and then after both hurricanes or near hurricanes, had to repeat the process. This is the sort of thing that happens potentially, what we're looking for. This generally, you have tree falls and there not always as extreme as this, but tree falls and high-water events blowing out stream crossings. We do a lot of monitoring, I did update this graph, but I didn't put the new one in the slide, but we deal with monitoring along transects, fixed stations along trails that we traverse through our resource management work keeping track of in a real systematic way ungulate presence and absence, and the presence and absence of any non-native plants along 13 transects. We build and maintain appropriate infrastructure. I think sometimes like the, there's a lot of supplies that, I feel like it's a ton of money of supplies that are required in these grant programs and ask sometimes sort of thing that we're trying to provide for the guys that are working so hard out in the field as at least if we're going to tell them to sleep out in the mountain for a few days, not in that mud, but on that deck ideally. And yeah, I mean they're modest, but that's something like that goes a long way at the end of the day, especially if you're anticipating going home that night, bad weather moves in, helicopter can't pick you up, we've got half a dozen spots like that across the mountain, that even if it's not exactly where they're planning on ending their day, that they can at least hike a mile or two to. Yeah, we do community volunteer-based watershed restoration. This is one of the projects we do at Puu Pahu Reserve, where we can drive up to. Just working with school groups, community groups, anybody that's kind of an organized group of at least 12 people we'll make the time to go, we'll buy a few hundred plants and take the whole crew off the mountain for the day to give them an experience, hands-on seeing the difference between the native plants and the non-native plants out there. Hopefully, we just started this project a couple years ago, but hopefully bring some of the groups back to sites they visited when they were younger even to show them the progress that's happening. And yeah, our community outreach and education program is, it's healthy and strong and it's always, it's a big part of my management plan that I'm supposed to carry out as well too. You know, we talk about like consolidating the efforts, and I think that there's a lot of room and progress that we can make by doing that, but at the same time, if we're cutting the people that are available to do these kinds of activities, there will be less of these activities out there too because it takes a lot of work to organize transportation for a school group, and to line up all the pieces with getting permission for entering Haleakala National Park and liability waivers for Waikamoi Preserve, and just

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organizing all those people, and then actually leading the groups with small enough ratios of staff to students or community members, to make the experience meaningful. Another event that we're really proud of is the Native Species Art Exhibition that many of you have attended different years. You're always all invited. Sometimes the invitation comes from the Hui Noeau, rather than the East Maui Watershed Partnership that we've, which is another non-profit that's funded, that gets substantial funding from the County. It's an awesome resource for us to help us really expand the professionalism of this event and make it a free and open to the public and yeah, in that event we get hundreds of art pieces from Maui residents that feature native species, and they're all juried and a handful of them are selected to be displayed in a professional gallery. One of the things that's nice about this is, even though it's a real professional event in our exhibition, it's also open to keiki divisions too, and so we get a lot of participation from some of the schools that it's not practical or feasible for them to be able to make the field trips up into the watershed. This is a great way for them to still spend time focusing on native species, get a classroom presentation from our community outreach and education liaison, and potentially see their work in a professional setting. Yeah, and then I'm really glad Andrea brought up the newest piece of our outreach and education program is this loose organization that we call the Maui Mauka Conservation Awareness Trainings. It's a collaboration between our outreach program, the Maui Invasive Species Committee, and the Maui Forest Bird Recovery Project. All three of us are UH projects under the Pacific Cooperative Studies Unit, and they, yeah, the entire emphasis of this program is reaching out very directedly, very targeted towards people that interact, guides that interact with tourists in any way. And so, you know, just examples or, the people that drive the little tour busses on the Hana Highway, the hiking guides, the helicopter pilots, the boat tours, anybody like that, you know, they're talking all day and they're telling stories about the island and a lot of times they're telling stories about the forests and the plants that people are seeing. And so we're just keying them into the conservation topics that we find most, you know, as professionals, find most valuable, and you know, maybe it's more useful to talk about rapid ohia death, and the threats from, you know, that you as a person coming from the Big Island could be contributing to the threat of potentially introducing that to Maui. Maybe that's a little more important to talk about than some story about Plumeria flowers or something like that, you know, which you know, people are interested in, but we're just trying to add a little more richness and tap into those folks that, you know, leverage those folks that are spreading messages all day trying to tap our messages about conservation of our watersheds, and the impact of our watersheds on the health of the islands, and the tourism experience. Yeah, so you guys, yeah, are a huge part of funding that outreach and it's greatly appreciated. We do a lot of weed control these days. I just say invasive alien weeds like Himalayan ginger, Miconia, strawberry guava, and strawberry guava out-compete native species creating mono-cultures and completely displacing native vegetation that's from some of my management documents that were given to me. This is just outside of Makawao. This is Himalayan ginger, it also goes by Kahili ginger, but we're try and avoid the use of the Hawaiian name on that one because it's an introduced species and it's one of the most aggressive invaders of the back-country project sites that we're tasked with managing, and so yeah, it's bad. It's on IUCN's list of 100 worst invasive weeds. It's, there's been lots of work done in New Zealand to

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help manage it. It's, there's lots of places across Hawaii that have really, really a strong impact from it, and we're getting just real sparse populations of it, and a lot that real intact native forests that where you can picture those blue areas from my native forest map. It's spread by birds, but it smothers young native seedlings, prevents forest regeneration, outcompetes native plants, reduces nitrogen, promotes erosion, inhibits stream flow. This is one of the spots, sorry I don't have a more zoomed out one, but this is Koolau Gap about, this is 3,000-foot elevation right here. In 2007, we detected a small population of it here, did some modest control work. It didn't seem, we hadn't seen it anywhere nearby there, and we were concerned, but at that time, we were building that fence above Hana. It wasn't our top priority, and we just hadn't experienced an infestation like that before and didn't know what to expect, but we did some modest control in 2007. And it wasn't until 2014, that we got to come back, and survey more extensively for it, and well we had surveyed extensively, but we got to do some, focus some real resources, some additional funding that we received towards the control of that plant there, and we found it expanded, probably at least four fold in that first pass, which led us to do a lot more substantial surveying across this purple Wailua Nui management unit and we found these two additional populations, but nothing else. So, we've been controlling that really aggressively for the last, since that 2014 realization every year, about 40 or 50 acres a year, and expanded that to the leading edge of where there's denser populations of it in Koolau Gap to keep it from spreading into the thousands and thousands of acres of pristine watershed area right above there. And we're recording data along this whole process. Every ten meters that the guys control a plant, they add up the sum of the size of everything that they just controlled, and we're able to analyze that, and as we are starting in 2018 and 2019 to revisit these sites that we've already controlled, it's going to go a lot faster in the future because, you know, or in the present time it is going a lot faster because the population's already been knocked down, and we're treating it before it's reaching reproductive maturity. But it's going to be really interesting to analyze that data of how much faster it went in terms of both man hours, but also like actual plants controlled. So, we're collecting all that along the way, and yeah, that's one of our big projects, and some of what we do inside those fences. So, yeah, selected long-term priorities. We want to support and contribute to efforts to better quantify the effects of watershed management practices on water availability, and modify management accordingly. I think that that's something that's really in our interest, in all of our interests, and definitely, I'm sure you're hearing it from everybody, but we've got a terrible concern about the threat of rapid ohia death becoming established on Maui. So, we're monitoring with every helicopter flight, all the staff's trained on what to look for. There's the more formal quarterly surveys, but at the same time, we see every flight that we're on as one of those surveys which is, you know, we fly probably, I mean, we fly about 100 hours a year, and so pretty much every week we're doing something in the helicopter. And yeah, we'd like to diversify funding and seek sustainable sources of course, and diversify your stakeholder input as well. So, yeah, that's all I have for you guys. So, thank you very much for your time, and thank you.

VICE-CHAIR COCHRAN: Thank you, Mr. Eisenberg. Thank you very much, and, Members, we have...and, Department, do you have any comments in reference to East Maui Watershed Partnership and your folk's relationship?

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MS. BLUMENSTEIN: I can just add, yeah, we've been funding their core functions for a long time and our goal, our intent is really to make sure that, I think I sound like a broken record when I say this, but they can rely on that consistent funding level year after year so that they know, you know, . . .*(inaudible)*. . . the expectations and deliverables are clear, they're focusing in on key areas for us, then so you won't see much changes in funding levels. Again we do that when there's something new, a new threat, expanded acreage, storms, things like that. So, we just hope that this body will consider that, that we rely heavily on the work they do to ensure that our fresh water supplies are intact.

VICE-CHAIR COCHRAN: Yes, okay very much. And just a quick, we are at bare quorum, ladies, and it is the ladies again in the house, so thank you, ladies. Ms. Oana, had to take care of some personal matters, and, but we do have Mr. Corporation Counsel Ed Kushi here with us, but we are not deliberating so I believe we're okay, and we're just here for some discussion purposes. Ms. King?

COUNCILMEMBER KING: Thank you. Thank you, Chair. Yeah, just a couple questions. I didn't see a graph on the funding, you know, how the funding is divided up, so what percentage is the County and what percentage is the private funding? Do you know off the top of your head?

MR. EISENBERG: Yeah. I know that the County funding, at least like the figure that's popping into my head is that in our grant applications, in recent years it's between 30 and 40 percent of the salaries that I've been, that have been funded through the County. The bulk of, the remainder of that is funded by the State and there's probably less, I would say less than 5 percent of our overall budget is funded by private donations. There's a few large, consistent donors that do help continue to fund our project.

COUNCILMEMBER KING: Okay, but, is that just...so you said 30 to 40 percent salaries, is that all you count pretty much?

MR. EISENBERG: No, no. That's the figure that I had ready on the top of my head. I think I'd say that it's pretty, that that's pretty consistent across like all the other budget categories.

COUNCILMEMBER KING: All your expenses. So, your entire budget the County is about 30 to 40 percent of that?

MR. EISENBERG: Yeah, I would say about. Yeah, it might be a little higher than that, but yeah, I'm sorry I don't have a more exact figure, recent figure for you, but...

COUNCILMEMBER KING: Okay, that would be good to know.

MR. EISENBERG: Yeah, I'm pretty...I'm...

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COUNCILMEMBER KING: It would be good to see, you know, the graph that was in the previous one --

MR. EISENBERG: Yeah.

COUNCILMEMBER KING: --that showed how much is State, and how much is if there's anything coming in from...do you get any Federal funding?

MR. EISENBERG: Not since 2015 I haven't.

COUNCILMEMBER KING: Okay, and then the only other question I had was the stakeholder survey. I think the one you were talking about with, was that not the Na Wai Ehu [sic] group that, it was a workshop that was, two-day workshop at the college?

MR. EISENBERG: Yeah, I don't know if it was, I don't think it was Na Wai Ehu [sic] but...

COUNCILMEMBER KING: It was East Maui Watershed workshop.

MR. EISENBERG: It was. Yeah, it was called the East Maui --

COUNCILMEMBER KING: Okay.

MR. EISENBERG: --water round table, watershed roundtable.

COUNCILMEMBER KING: Okay. I think that was the one I was at.

MR. EISENBERG: Yeah.

COUNCILMEMBER KING: For the full two days.

MR. EISENBERG: Yeah.

COUNCILMEMBER KING: And there were about, I don't know, 60 people there the first day and then...

MR. EISENBERG: Yeah, that's correct.

COUNCILMEMBER KING: Okay, and then on the other survey, who was surveyed because there's, it looks there's about 110 people that were surveyed and it doesn't really say how you, you know, who you surveyed or...

MR. EISENBERG: Sure...

VICE-CHAIR COCHRAN: Ms. Blumenstein, you had a comment?

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MS. BLUMENSTEIN: Yeah, I'll respond to that. That was just a copy from the service that we did in the Water Use and Development Plan public process. So, we did online, that was an online survey, but we did an additional handout at the meetings.

COUNCILMEMBER KING: Okay, but that, was that, like the general population or just the people that came to the meeting, the meetings?

MS. BLUMENSTEIN: I would assume because it is an anonymous survey.

COUNCILMEMBER KING: Oh.

MS. BLUMENSTEIN: It was online at SurveyMonkey, but we distributed requests to participate in the survey to everyone who came to the meetings, but it's just --

COUNCILMEMBER KING: Okay.

MS. BLUMENSTEIN: --on our website in general, so we don't know who the respondents are.

COUNCILMEMBER KING: Okay, but those are, survey monkeys are targeted. You have to actually receive it. So, you sending it to the people that came to the meetings on the water use plans...

MS. BLUMENSTEIN: Yeah, so all participants, regardless of which region they participated in.

COUNCILMEMBER KING: Okay, I'm just wondering because I'm, back to the earlier conversation on who are we reaching, and who is participating and this is the stuff that the general population needs to know about. So, this is like a targeted, people who are actually actively interested, and coming to meetings, but those meetings I've been to have been kind of small. So I think it does bear, you know, a greater education effort across our...because, you know, we all don't know how connected our water use is to some of these other issues. So, that's all I have, Chair. I was just curious about that.

VICE-CHAIR COCHRAN: Okay, yeah. Thank you, Ms. King.

COUNCILMEMBER KING: Thank you for being here, and thanks for your presentation.

MR. EISENBERG: Thank you.

VICE-CHAIR COCHRAN: Any other Members had any questions or comments for Mr. Eisenberg and their efforts?

COUNCILMEMBER SUGIMURA: No, I just want to thank him for presenting. I see him at the Upcountry farmers market once a month when I'm there so I talk story with him, but thank you for your good work. Appreciate it.

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MR. EISENBERG: Thank you for your support.

VICE-CHAIR COCHRAN: Mr. Eisenberg, the first thing that comes to mind, I actually was looking through my photos. I was waiting for a plane at the Kahului Airport, and saw the little cuttings they have in the plastic bags that they sell, and there's a whole wall of Himalayan ginger. So, can we not have them be selling that main culprit in the stores? How has anyone, and this could be, go for Andrea too, but how, is there any outreach there or to ban them or to tell them please do not sell them because this is the negative effects?

MR. EISENBERG: Yeah, yeah. So yeah, it falls under, I mean I hate to like pass the buck, I would like to be --

VICE-CHAIR COCHRAN: Yes.

MR. EISENBERG: --involved, as involved and possible, as possible, but I think it falls under the jurisdiction of the State Department of Agriculture.

VICE-CHAIR COCHRAN: Okay.

MR. EISENBERG: And I would just say that, I know that outreach, I wish I had more specifics, I know outreach has been done in the past to try and discourage that kind of practice, as perfect example of the kinds of practices that it seems to me like should be within their mandate, but I think it's always gotten, I don't know the specifics of what the pushback has been. But what I would like to add is just that with last year's passing of the, in the State Legislature, and with the support of the Department of Agriculture the interagency biosecurity plan, I think that the State Department of Agriculture has taken, they've been proactive but then they've also been pressured to take a lot more, take these kinds of issues a lot more seriously and I think that there is steps that are happening in the right direction to address that kind of concern.

VICE-CHAIR COCHRAN: Yeah. Ms. Blumenstein, you had comments? And before you answer I also, I think that goes across the board for all nurseries because it drives me nuts to see Lantana growing, selling, I'm not a fan of oleander, I mean, let's push the native vegetation more so. And I see so many invasive that are being sold on purpose and now people are planting them, maybe not knowingly that it can take over and spread, or not, but I think if it's just not there at the source to be sold and given out, we should attack it at that point. So, anyways, Ms. Blumenstein?

MS. BLUMENSTEIN: Thank you. I just wanted to add, when the Department reviews and provide comments to other agencies on discretionary permits, like a Change in Zoning or a special use permits or something like that, we ask that a condition of a development would consider using native plants and landscaping, et cetera to, not just to rely on ambient rainfall and conserve water, but also to prevent the influx of non-native species into the watershed. So, that's just another layer of outreach.

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VICE-CHAIR COCHRAN: Right. Very good, and then, Ms. Blumenstein, so is there a way to track that though to make sure that they're following and the enforcement angle, is there something on that problem?

MS. BLUMENSTEIN: Well, when those recommendations if they become a condition of discretionary permits, there's really, I don't believe that there's anyone that goes out on site to police it whether they were...you will see probably a photograph of installed landscaping, but you know, we don't really have any...the permit is we're not the approving agency so then that falls on the Planning Department or depending where it originated.

VICE-CHAIR COCHRAN: Okay, well we'll get someone on that. Yes? Well, Mr. Eisenberg, did you have a comment?

MR. EISENBERG: All I wanted to say was that I totally agree and we're supportive of one of our messages is, you know, to do landscaping with native species at home, but I also, I think, like another piece of that is that the funding that you guys give for the larger scale restoration projects and that, like some of this reforestation work is some of the money that keeps those native nurseries, native plant nurseries economically viable. And so, you know, if they can kind of know how many big sales they are going to have through the year, it makes their business able to operate on a smaller scale for the landscaping clients, and the homeowners like to have access to high quality native vegetation as well.

VICE-CHAIR COCHRAN: Very good. Ms. King?

COUNCILMEMBER KING: Yeah, I just, that was really disturbing what you just shared to see the Himalayan ginger being sold at the airport for people to take. I guess, we're exporting our invasive species, but I think, that could be resolved, those kinds of things could be resolved with just sending a note to the Director of Transportation and asking them to do, you know, to do, you know with the list of invasive species into, you know, that are, you know, that do get sold. I just can't believe that they would want that to be happening. I'm pretty good friends with Ford Fuchigami, and I can see him just shudder if he knew that that was being sold at his airport. So I don't, I think it would be, I mean I think that should be part of outreaches like just distributing a list of invasive species, you know, because we have the things people aren't supposed to bring in, but they should not be selling those to take out of the State either. That's pretty outrageous that they...

VICE-CHAIR COCHRAN: Thank you. Anyone else had comments or questions? Okay. Mr. Alike Atay did want to know what organizational goals, what goals you have set, and what have you accomplished for this fiscal.

MR. EISENBERG: Yeah, so our, yeah, our goals are maintaining zero ungulate presence across the 6,000 acres of the five specific management units that are called out in our DWS proposal, and our, we have a big target of beginning the retreatment of that Himalayan ginger control project that I illustrated in detail in the last slides, and

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we're, yeah, making excellent progress on both of those fronts. I am...haven't finished our last fence check cycle, so I can't say for sure that there, as a result of the storms that there hasn't been any animal ingress into those areas, but for the fence checks that we have done this quarter, we're keeping up with all of that. We, yeah, we're meeting all of our outreach goals in terms of, yeah, the highly successful Native Species Art Exhibition that was pulled off despite the, we had one hurricane right before the receiving day for the show and another one, I think, within a week of the opening reception, but stayed on track with that. We, yeah, we're making tremendous progress with weed control project on a different species, gorse at Haleakala Ranch's Puu Pahu Reserve. Once again, having just completed a first pass of treatment of every mature, or sorry, of every plant in that entire management unit, and planning on revisiting that cycle before any of those plants meet, I'm sorry, reach reproductive maturity. Yeah, so, but yeah I feel like all the reporting I've done recently has been, I mean, we've been hitting all of our goals and yeah, I don't feel like we're falling behind with any of those explicit deliverables that we've promised.

. . . END PRESENTATION. . .

VICE-CHAIR COCHRAN: Thank you, and thank you very much. Members, at this time any final questions for either of our presenters here today? If not, I want to say thank you very much. Thank you, Department, and everyone who put this meeting together, and the presentations. So, with no further business, first I'm going to defer the items with no objections.

COUNCILMEMBERS VOICED NO OBJECTIONS

ACTION: DEFER.

VICE-CHAIR COCHRAN: And also with no further business, this meeting is adjourned.
... (gavel) ...

ADJOURN: 11:17 a.m.

APPROVED BY:



ALIKA ATAY, Chair
Water Resources Committee

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Transcribed by: Jaydee Giron

WATER RESOURCES COMMITTEE
Council of the County of Maui

October 3, 2018

CERTIFICATE

I, Jaydee Giron, hereby certify that the foregoing represents to my ability, a true and correct transcript of the proceedings. I further certify that any way concerned with the cause.

DATED the 25th day of October, 2018, in Kahului, Hawaii

A handwritten signature in cursive script, appearing to read "Jaydee Giron", is written above a horizontal line.

Jaydee Giron