

**ENVIRONMENTAL MANAGEMENT COMMISSION**

**COUNTY OF HAWAII**

**MEETING MINUTES**

**Wednesday, March 24, 2021**

**9:06 a.m. to 12:09 p.m.**

**(Online meeting via WebEx videoconferencing)**

Commissioners present:

Georjean Adams, Chair  
Rick Gaffney, Vice Chair  
John Burns  
Melissa Cardwell  
Dee Fulton  
Lee McIntosh  
Justin Pequeño

County staff present:

Ramzi Mansour, Director  
Dora Beck, Wastewater Division Chief  
Alika DeMello, Wastewater Operations Superintendent  
Chris Chin-Chance, Recycling Specialist  
Peter Sur, Secretary  
Malia Hall, Deputy Corporation Counsel  
Holeka Inaba, Council Member, District 8  
Wendy Baez, Council Legislative Assistant, District 8  
Tim Richards, Council Member, District 9  
Dot Kaili-Botelho, Council Legislative Assistant, District 9

Others present:

Rick Bennett, Nancy Cook Lauer, Sandra Demoruelle, Steve Holmes, Jennifer Navarra, Michelle Nicholls, Michelle Sorenson, Jerome Warren, others.

**1. CALL TO ORDER**

Chair Adams opened with a roll call and called the meeting to order at 9:06 a.m.

**2. APPROVAL OF MINUTES OF FEBRUARY 24, 2021**

**Motion and second:** Vice Chair Gaffney moved to approve the minutes, and Commissioner Cardwell seconded the motion.

**Discussion:** Commissioners offered no corrections. Commissioner Pequeno and Chair Adams made positive comments about the comprehensive nature of the minutes.

**Vote:** The minutes were approved as presented by voice vote. Ayes: 5 (Adams, Burns, Gaffney, Cardwell, Pequeño); Nays 0; Absent 3 (Fulton, Olson, McIntosh). Motion carried.

### **3. STATEMENT FROM THE CHAIR**

Chair Adams noted that the EMC is getting a new appointment for the District 2 seat, and should be approved at the April 7 meeting of the Council. Elyse Robinson from Hilo has been active with Zonta International and she is an economist. We can have someone who can help us with funding challenges. It was rumored that the District 3 nominee would be named shortly. And lastly Malia Hall is our new Deputy Corporation Counsel assigned to the EMC. Chair Adams asked the Deputy Counsel to introduce herself.

Deputy Counsel Hall said she had been with the County about five years. She is excited to be with DEM and to learn all about what commissioners do, and to help and guide the commission.

Chair Adams said it was going to be “Ramzi Day.” We spent a fair amount of time speaking about the Commission’s priorities and goals last meeting. Director Mansour is busy charging ahead, and we need to make sure we are providing the guidance that we need to provide.

### **4. PUBLIC STATEMENTS ON ITEMS ON THE AGENDA**

Jerome Warren commented on agenda item 5a (Unfinished business – Status report on EMC priorities). Commissioner McIntosh is the lead commissioner for the priorities for our Nā’ālehu sewer project. The County Council heard my recommendations on March 16. The Director and Department’s wastewater staff were at the meeting to give council members to give a briefing on the department’s plans. My testimony told the council to not blame the EPA for the Nā’ālehu sewer project’s oversized plans. I also said that this project needs an audit. I am also talking with the EPA. Back in 1988, the sewer plant for Hilo was overbuilt. There is a pattern of building too big. Mahalo.

Sandra Demoruelle commented on agenda item 6 (New business). Aloha and thank you commissioners. I would like to take this opportunity to address my longstanding concerns. I must say I am extremely disappointed about the way Director Mansour has ignored the concerns expressed by our Commissioner McIntosh and totally left the Ka’ū Large Capacity Cesspool closure project off his March Director’s Report. After all, in his February report, the Commission was told the Nā’ālehu draft environmental assessment would be published this month, but it was not. This is not a technical matter. So aren’t we owed an explanation? And aren’t Commissioner McIntosh’s concerns worthy of inclusion in the monthly Director’s Report? The Commission and the public rely on the director to provide transparency on these \$108,550,000 project to remove 240 homes from county owned gang cesspool. Please ask the Director to continue the monthly reports on these expensive projects, so that Commissioner McIntosh and all of us can stay informed. Thank you so much for allowing me to speak.

### **5. UNFINISHED BUSINESS**

- a. Status report on 2021 EMC Priorities – Each lead commissioner to provide *brief* report on assigned priorities.

- **Chair Adams**

- DEM reports each month on progress on ISWMP goals, with specific emphasis on reducing and recycling organic wastes. EMC provides comment and support with Council.

Chair Adams is very interested in the Integrated Solid Waste Management Plan. The resolution should be approved by the County Council in April, and one of the continuing efforts will be to make sure we implement the plan.

- DEM adopts an explicit philosophy of water resource management versus wastewater management and begins to reflect this in its planning and goals. (Example – Kealakehe WWTP).

Director Mansour is taking this approach and Chair Adams very much appreciates it. She will be keeping tabs on it.

- Get review from the State attorney general regarding the Konno decision that seems to unnecessarily prevent cost-effective, creative solutions to problems.
- Champion cross-agency and multiple stakeholder engagement in addressing life cycle issues of waste and wastewater management. Have joint commission meeting(s). Request presentations by other departments (e.g. HDOH, HDOT). (Co-lead Olson).
- Become involved in the Mayor’s sustainability planning process.

The sustainability summit was two days, and intense, and inspiring, and emphasized how much we need to think from an integrated systems approach. We need to do some overall planning, which is a theme we hear from the Director.

- **Commissioner Burns**

- Enhance the availability and capacity of transfer stations to ensure residents can effectively manage waste and reduce the likelihood of waste being improperly or illegally disposed.

Commissioner Burns has been going through the available online information for transfer stations. The item he was planning to address is when and where the transfer stations are open, and what types of items are being accepted for waste, and what those limitations are. He plans to get feedback from the actual department, because there is a lack of detail as to why there are restrictions to hours, whether there are union guidelines about them having to be staffed or how many people have to be on staff at a time. Those kinds of nuanced details are not publicly available.

Chair Adams encouraged Commissioner Burns to contact Solid Waste Division Chief Greg Goodale and Recycling Coordinator George Hayducsko. Both are very responsive.

- **Commissioner Cardwell**

- Support efforts on sustainable island-wide residential food waste composting:
  - i. Support identification of barriers and solutions with stakeholders.
  - ii. Pilot scalable, safe and cost-effective processes to collect and convert food waste and distribute valuable compost to users.

Commissioner Cardwell said she would be as brief as possible but she has a lot of information to share, so she hoped to be able to email what she has found. In a nutshell, she is working on supporting identification of barriers and solutions and stakeholders when it comes to her priorities. She had a meeting with Chantal Chung, Evan Lam, and Michael Pierron, and they had a really informative discussion. Ms. Chung is an incredible resource. She just had so much information. Commissioner

Cardwell also spoke with Monica Stone, who is a member of the composting consortium. We have all the resources; it's just a matter of the organization. One of the big barriers is the permitting process to legally have a composting facility. It's insane. Jennifer Milholen from the Kōkua Foundation on O'ahu sent out the permitting application. It took her eight months and is over 200 pages long. And this is just so they could have composting services at events and introduce programs into schools. The problem is that if somebody wants to compost at a small scale, they are basically held to the same standard that a mega-facility would have, so it doesn't really make any sense. What Monica Stone told her is the Department of Health is very understaffed, and they don't have enough resources to deal with the stuff that is coming down the pipe. We have one Health Department person for the East side and one person for the West side when it comes to this. And that is just simply not enough. They are totally overwhelmed. The Department of Health needs more resources and needs more funding. There is so much more.

The other thing, Commissioner Cardwell said, is that we really need more data. District contingency relief funds are available from council members to devote to a specific project. Council Member Villegas did "waste mapping" by giving eight questions to 21 different businesses. Questions included "what type of waste does your business primarily produce?" and "what do you do with your organics?" By collecting this information they were able to determine where the waste was coming from, and where the waste was going. In talking with Ms. Chung, Mr. Pierron, and Ms. Stone, and others, they are very impassioned, and very devoted, and every single one of them said we need data. There is an argument that there is not enough food waste on this island to warrant having composting facilities, and that is simply not true. There is one farm in Kona that contacted Ms. Chung and asked if she could compost 10 million pounds of coffee cherry pulp. That is one farm. We have tons of farms on this island that need material to be composted. What she would like to propose is that each district does the same thing, does waste mapping, and figures out where the waste is coming from and where the waste is going. She would like to share the rest in an email.

Chair Adams appreciated the update. She said it would be good to pull together some proposals and bring it to the group for further action. Give us something concrete to work off, she said.

Council Member Richards said that while the current draft of the operating budget removes district contingency relief funds in FY 21-22, there may be funding contained in the American Rescue Plan Act of 2021. We have to see what we can do about funding. He asked Commissioner Cardwell to contact his office to have a chat.

Chair Adams said she could work with Commissioner Cardwell to flesh out the proposal and then send it to the Secretary to distribute to the whole commission.

Director Mansour urged Commissioner Cardwell to work also with Recycling Coordinator George Hayducsko to gather data that may exist within the department. A waste characterization study has likely been done, so they may already have a handle on it. That would save some time and effort. Once you find out what information is missing, you could target that one.

- **Commissioner Fulton**

- Support public-private comprehensive sewage management for the Keauhou area.
- Recommend Council allow DEM to evaluate laterals to WWTP for Kailua Bay.
- DEM to identify priorities for moving its infrastructure at risk of sea level rise in the Kona area (indeed all areas) as part of county sustainability/climate planning efforts.

Cindy Punihaole and Vice Chair Gaffney have been the lead contacts for the Kahalu'u sewer improvement district. There has not been any activity of which she is aware since the last meeting. The other issue is the state of the sewer system on Ali'i Drive.

- **Vice Chair Gaffney**

- Support public-private sustainability planning in the Keahole area, particularly to achieve sustainable water treatment for reuse.
- Refocus efforts at Kealakehe WWTP to recover and use R-1 water locally.

Vice Chair Gaffney said his focus is the Kealakehe Wastewater Treatment Plant, and bringing it up to making it a water resources recycling plant, which is what it was always designed to be, but seemed to be diverted to other options, and the situation with the dumping of 1.8 million gallons per day of treated wastewater into a sump needs to stop. He said one of the initiatives that he had brought forward based on the need for a destination for the recycled water was to seek a new commission that would include a variety of State and County agencies working together toward a solution. That solution is moving R-1 water from the Kealakehe Wastewater Treatment Plant to the closest place where State agricultural leases exist, which is the Keahole Ag Park at the bottom of Kona Palisades, at the bottom of Ka'iminani Drive. There are multiple additional acreages adjacent to that ag park, which are already zoned for agriculture, and if less expensive water were available it would make those areas much more functional for expanding the agriculture in that ag park, as has always been the plan.

In order to do that, he reached out to Sen. Mike Gabbard, chair of the Committee on Agriculture and Environment. He said Chair Gabbard put forward Senate Concurrent Resolution 46, Senate Draft 1, which has been passed through the Senate and crossed over to the House. A companion resolution introduced by Rep. Nicole Lowen, House Concurrent Resolution 33, has passed through the Agriculture Committee and is waiting to be scheduled for a hearing by the Finance Committee. There has not been a lot of activity around these resolutions; however, the Department of Agriculture did say they had neither the time nor the money to get involved with participation, which did not deter the senators at all. The AEN Committee voted to move the bill forward and ignored the testimony from the Department of Agriculture. In the Vice Chair's opinion it was a complete cop-out from the Department, basically ignoring the need for additional agricultural needs to be made available. Vice Chair Gaffney does not know whether the resolutions will move forward. Sen. Gabbard has been fairly aggressive in making sure the resolution moves, and the Vice Chair is hoping the Finance Committee picks up the House companion. If it passes, it will support the creation of a new committee made up of every agency in the State and County governments involved with looking at the opportunities that are presented by the agricultural zone, which is adjacent to the NELHA-operated Hawai'i Ocean Science and Technology Park. This committee will include the Department of Transportation, which has to put the sewer lines underneath the highway, and complete the sewer line from Kealakehe Parkway to the Kealakehe Wastewater Treatment Plant, and then also produce the return lines that are necessary.

Now one other thing that is interesting with regard to sewage is that the Department of Land and Natural Resources has announced that it will build a center for West Hawai'i – basically a baseyard to host the Division of State Parks, the Division on Aquatic Resources, and other divisions, and their intention is to do it at the bottom of Ka'iminani, immediately adjacent to the ag park. That raises the issue of what they are going to do with their sewage, and their EA said they were going to connect to the sewage line that runs along Queen Ka'ahumanu Highway. No such line exists. So that was pointed out to them, and he also pointed out to them that there is a sewage treatment plant with capacity at the airport. One of the reasons the resolutions were addressed is to get DOT talking to DLNR, and the Department of Business, Economic Development, and Tourism, and so on. He is hoping DLNR will do the

right thing and connect to the sewage treatment plant at the airport rather than what they are planning to do, which is put in a septic system.

Chair Adams said the question to think about is in terms of what the Commission can and should do in this case. This is the cross-cutting integration that is a struggle for any individual group. We have a charter that specifies its role in relation to DEM and the Council, and where is our function? Think through that, and present any proposals you have for what help the Commission can be.

Vice Chair Gaffney said one specific thing right now is that anyone interested or willing to reach out to the Legislature could reach out to the Finance Committee and ask them to schedule HCR 33 HD1 and companion HR 26 HD1. That will breathe life into the process. That is an immediate function that's necessary.

Commissioner Cardwell asked the Vice Chair for more specific information about the legislation and whom to contact in the Finance Committee.

- **Commissioner McIntosh**

- DEM to re-evaluate plans for Pāhala and Nā'ālehu wastewater treatment to identify more reasonable cost solutions

Commissioner McIntosh said he listened to the presentation that Director Mansour gave to the County Council's RAWEEM Committee on March 16, 2021. He briefly touched on the original plans for Nā'ālehu and Pāhala, noting that the County couldn't pursue those plans because they made an agreement with the EPA, and they did not meet any requirements for that. Maybe the Director can expand on that. Supposedly the EPA approved them in the beginning. And that's about as far as he had on new information, he said.

- **Commissioner Olson**

- Champion cross-agency and multiple stakeholder engagement in addressing life cycle issues of waste and wastewater management. Have joint commissions meeting(s). Request presentations by other departments (e.g. HDOH, HDOT). (Co-lead Adams)
- Enhance solid waste and wastewater infrastructure, given expected population growth in the Puna district.
- Review and support sufficient funding and creative cost reductions recommended by DEM.

(Commissioner Olson was unable to participate in this meeting due to technological issues.)

- **Commissioner Pequeño**

- Find cost-effective solutions for managing floodwaters to avoid sewage discharge to Hilo Bay.

Commissioner Pequeño said he refrained from doing too much work on this topic with the pending confirmation of Ms. Robinson to the District 2 seat. Now that she is scheduled for confirmation by the Council on April 7, he is looking forward to connecting with her.

Chair Adams thanked the commissioners for keeping everyone up to date on their priority actions. If anyone wants to join with another group, let the Chair know so she can keep track. Otherwise, she is looking to the individual commissioners to come to the EMC with plans for action.

- b. Status report on action items from previous meeting

i. Mailing of agendas.

Chair Adams asked whether Mr. Warren received a copy of the agenda and meeting materials. Ms. Demoruelle replied in the affirmative.

The Chair apologized for the past omission. She understands it's important to deal with providing hard copy information in these crazy times, with the limited public access in the public libraries.

ii. Streamlining the Director's Informational Report.

Chair Adams said she sent a set of recommendations to the Director and to the Secretary on how to make the report a little less unwieldy. She asked for input on whether the latest version went too far, or whether there is still some information, or continuing information, that commissioners would like to have. She had her own concerns about whether we did lose too much in terms of the status and background of the wastewater treatment plant activities, because they are so complex and have so many steps to go through. And on the other hand, she didn't want to see a lot of repetition. So what she had recommended to see are the changes, the new things that have happened. Rather than putting all the background in the report. If other people have suggestions or would really like to see that come back, please speak up.

Commissioner McIntosh said that in his brief review the report was condensed, which was nicer, but he felt sometimes that it had a point or made a statement but didn't follow through by giving information about it. He had to go back to find specifics, so it was informative and easier to read but it felt like some information was left out or the Director was going to address it when he spoke to us. It wasn't very clear.

Chair Adams said if you look at it and would like to figure out what you would want to see, send her an email and we will try to work with the Department about how to make it a useful tool. And if there are some historical references that we need for a historical background, maybe there is another place to put it rather than constantly copying it in the Director's report every month. Maybe she and the Secretary need to come up with some online repositories to which they can refer elsewhere. Drop some ideas where you have been frustrated, and certainly we have the opportunity to ask the Director for the information when he gives his report.

## 6. NEW BUSINESS

- a. Presentation by Dr. Rick Bennett on an alternative, low-cost option for upgrading the Kealakehe Wastewater Treatment Plant discharge to R-1 water. (Requested by Vice Chair Gaffney).

Vice Chair Gaffney introduced Dr. Bennett as a previous Commission Chair. The Vice Chair continues to work with Dr. Bennett, and said his goal is to have Kealakehe Wastewater Treatment Plant be turned into a recycling enterprise. He is constantly aware of new information that is really valuable to us. The presentation is about improving the quality of water up to R-1 at the Kealakehe facility.

Dr. Bennett said longer versions of his presentations are available on YouTube (<https://youtu.be/tdapy9yZEUY> and <https://youtu.be/UboyWQh2eVE>).

He began his presentation by saying the Hawai'i Department of Health under Hawai'i Administrative Rules Section 11-62 defines classes of wastewater with reference to its disinfection status. R-1 recycled water has basically no restriction on how it can be used. So this is a process to remove significant threats

from microbial pathogens. It is disinfected, it is not sterilized. First and foremost, the water has to be filtered because filtration does take out a lot of organisms. It needs to get to a turbidity standard of 2 nephelometric turbidity units (NTU). That can be done by a number of techniques, the simplest of which is sand filtration. Once you produce R-1 water, it is suitable for all irrigation uses, including fresh vegetables.

The sun can be used to disinfect wastewater. At the Kealakehe WWTP, the raw sewage comes into Pond No. 1, and the fecal coliform count, which is a very general nondescript measure of organisms that may be associated with feces, can be as high as 10,000 to 100,000 per 100 mL, and then it moves to a series of ponds over a period of months or weeks. The water is heavily aerated. By the time it gets to Pond No. 5, the fecal coliform counts are down to 105 per 100 mL. The solar exposure here is very significant. The oxidation exposure is very significant. But 105 is a long way from the R-1 standard of 2.2 per 100 mL (seven-day median). And so what can we do to get it down to 2.2? We don't have to look too far. Over at the NELHA facility there are acres upon acres of solar ponds that are used to grow algae. They are relatively shallow and are being kept moving with paddle wheels. In countries other than the United States, this type of technology is being used to disinfect wastewater. It is fairly common in the Mediterranean, and the technology is fairly simple. Heretofore, we have talked about disinfecting wastewater with hard-engineered systems using lots of electricity to run ultraviolet lights in clarified water. It was estimated some months ago that this system cost around \$76 million to treat 1.8 million gallons per day of water. This doesn't make a lot of sense.

The National Renewable Energy Lab has looked at the cost of building these raceways for propagation of various types of algae and things. They are relatively inexpensive to build. For example if you had a 10-acre facility at \$42,000 an acre, you would have an investment of \$420,000 for 10 acres of solar ponds. That would more than likely be adequate capacity for 1.8 mgd and probably for 5 mgd. It all depends on the holding tank. This can be explored.

How sunny is it at Kealakehe? We all have an idea that it is a sunny place, and indeed it is. The State has solar radiation maps, and during the solar day from 10 a.m. to 3 p.m., that is when most of the solar energy is occurring. During the year, month by month it is pretty steady until you get into the winter months. On a daily basis the solar energy fluctuates due to cloud effects. Is this enough solar energy? Probably. We can calculate the area under the curve. It is the accumulation of all this solar energy that does this disinfection. So you do not need a perfect day to accumulate energy. Are we confident that sunlight inactivates pathogens? Yes, Dr. Bennett said. One review was conducted by Alexandria B. Boehm, the preeminent authority in microbes in the environment relative to human activities in wastewater. The science is sound. He showed an image of a water raceway out at NELHA. This is a proven design. High levels of sunlight-mediated disinfection occur. We take the energy and convert it into joules. It takes about 20 megajoules to do really good disinfection. Dr. Bennett showed a graph of the bacterial count of seawater that had been inoculated with sewage. There was a measured decline in bacteria until nightfall. The next day, the count went down to 10, which is where you need to be. In a day or two of Kona sun, you can get the kill rate down get a consistent R-1 level of 2.2.

Dr. Bennett then pivoted to his second topic, about a cost-effective option for water reuse. All over the country and all over the world, the modular membrane bioreactor systems are being used. There are tens of international companies that will make these modules available for small scale and large scale. Because they are scalable, it becomes a matter of bringing in additional units as you grow. This creates advantages for distributed cost over time, rather than plunking down millions of dollars at one time to build out for a future that may or may not come.

What these systems do is they bring in raw wastewater. The debris and garbage are removed through a grating system, and then it is mixed and pumped into the anaerobic first tank. It will outgas nitrogen to the extent that you want to recycle. In the second tank it is aerated and bacteria grow and they do a lot of processing with waste, and the sludge material is high in phosphorous. Our soils on this island are phosphorous-deficient. We can take that phosphorous and make it an additive to compost. Then it goes to the membrane filtration system. This is almost an ultra-filtration but not quite. It is capable of filtering out all significant pathogens, and these filters can be reused and over and over. The water ultimately goes to the tank where R-1 water is available for reuse.

As far as the advantages for Hawai'i Island are concerned, a modular system membrane bioreactor can be installed in Kealahou quickly and relatively inexpensively to produce R-1 water if we choose not to go the solar route. In Nā'ālehu, modular systems can be used to treat the homes that are going on to the gang cesspools. In his view if you are going to do that, you should do the entire community. With the membrane bioreactors you don't need waste treatment ponds, which would be a quite popular concept in Nā'ālehu. Similarly, in Pāhala, the membrane bioreactor modules can be installed, and then right across the highway are extensive acres of macadamia nut trees that can use the water. In addition, in Pāhala they are starting to grow coffee. They could also use the water to augment years that are a little drier than this one. The prognostication is that dryness and droughts are in our future. In Hilo, the wastewater treatment plant is in serious disrepair. The ocean outfall of the treated wastewater is not meeting discharge requirements. Again the membrane bioreactors could be a quick fix to the situation there. Rather than bring pipelines from the hills to the treatment plants, other modular treatment plants could be located in other facilities. The challenge in Hilo is what to do with the R-1 water because there is so much rainfall. And so it may become a very high quality discharge under discharge permits. There is a small wastewater treatment plant in Honoka'a. There are injection wells literally hundreds of feet from the coast. They are allowing secondarily treated non-disinfected wastewater to migrate into groundwater, which ultimately moves into the sea. This is probably not lawful given the Supreme Court decision for Maui.

So we can protect the ocean, we can close cesspits, he said. We can fix the wastewater treatment plants, and importantly we can create an irrigation economy. And that is a new concept for Hawai'i, but given what we have seen in other states and other countries when we make this water available, it does in fact create an irrigation economy. This water has value and there is an opportunity to recoup that value, even to the extent that the value of the R-1 water can help pay for the waste treatment. That would be a first.

In conclusion, some pretty critical economic considerations: By installing photovoltaic systems with the MBR installation, you can capitalize on energy savings performance contracts. These modules can be leased as opposed to purchased outright, and for the operations of these modules, which require fairly sophisticated technicians, the operations can also be contracted. There are opportunities to use enterprise zone funding to install these modules all over the island. And by taking water to R-1, there are no constraints on its use, so it adds value to the water. He was very concerned that if we start promoting R-2 water, we have to deal with the regulatory restraints, that we will further taint people's fear of reclaimed water. In order to address those fears, we have to start with the highest quality water first. In his experience, it took many, many years to gain confidence, and eventually farmers who said "no way" are bidding for the water as California experiences increasing drought. Lastly, Congress is considering two bills that have been tentatively valued at \$3 trillion for infrastructure improvements. We need to be shovel ready if we are going to get that money and use it. Dr. Bennett said he was

confident Hawai'i will get its share and to do cost-effective treatments that produce revenue that recycle resources. It's very important to our future.

Commissioner Cardwell asked Dr. Bennett whether there are any disadvantages that haven't been mentioned.

Dr. Bennett said solar disinfection is a proven technology that is being used at NELHA every day to produce value-added algae products. NELHA has said that they will help the County with design if they choose to go in that direction. The MBR modules, on the other hand, require a fair degree of sophistication. You cannot just turn them on and walk away. But the beauty is they have become completely instrumented, so a plant operator could sit at a computer anywhere and be monitoring the performance of the MBRs remotely. The level of control compared to "old-style" treatment plants is very high, but it is going to require a skill set. And there are several ways to approach that in Hawai'i County. One way is to train people up; the other way is to hire the expertise.

Commissioner Burns commented that not all frequency bands of the solar spectrum disinfect equally. So the actual rates of disinfection available are dependent on the actual ultraviolet wavelengths than photosynthetic radiation. So just saying the simple area under the curve can be a rate for disinfecting capacity in a day is slightly oversimplified. The actual rates will depend on quantifying the ultraviolet spectrum at whatever site you choose.

Dr. Bennett said in his longer presentation he talks more about UV-A and UV-B, and both have a role.

- b. Request for discussion on holding a limited meeting, subject to HRS Section 92-3.1(a) at the Hilo Wastewater Treatment Plant and possible other WWD facilities. (Requested by Commissioner Cardwell. Requires 1) approval of a motion by a two-thirds vote of the entire board "that it is necessary to conduct an on-site inspection of a location that is related to the board's business at which public attendance is not practicable"; 2) concurrence by the director of the office of information practices; and 3) public notice of said limited meeting under HRS 92-7.)

Chair Adams said we hear Hilo is a disaster area at the wastewater treatment plant and a couple of Council Members have managed to get tours, and Commissioner Cardwell asked if we could set something up. She asked the Secretary to address the legal requirements for a limited meeting under HRS Section 92-3.1(a).

The Secretary said the requirements were largely laid out in the agenda and also added that there is a requirement for the meeting to be videotaped, unless granted an exception from the Office of Information Practices.

Deputy Counsel Hall added that these kinds of meetings are usually discouraged because the public cannot participate. But if there could be some sort of recording to be made available to the public, it would be better for transparency.

Chair Adams said that if you have managed to sit through the March 16, 2021, presentation to RAWEEMC that Director Mansour did, he showed video of the different wastewater treatment plants, including Hilo's. That in itself was very informative. The chair was "not jazzed" about going to see a

wastewater treatment plant, as she pretty much knows how they work. It would be up to the other Commissioners whether they would want to get something arranged or individually, one or two, could seek an opportunity for visits.

Deputy Counsel Hall confirmed that up to two Commissioners could attend and report back to the full Commission.

Commissioner Cardwell said that while she did not watch the Director's presentation, she did review some of the information presented by Steven Holmes. There's something about going to a place in person and seeing it in person that can be more effective and a motivating factor to push for change. She could set that up for herself but if others would be interested in having a limited meeting, we would need to determine that.

**Motion and second.** Commissioner Cardwell made a motion for the Commission to hold a limited meeting at the Hilo Wastewater Treatment Plant, to which Commissioner Pequeño seconded.

**Discussion.** Commissioner McIntosh said that if Commissioners watch the entire March 16, 2021, presentation from about the 34-minute mark it clearly describes the terrible condition at the plant. He said he did not need to go there and see it. It is a safety issue for him and the Director being around when it's not necessary because video taken clearly shows the awful conditions. He himself would not want to go and would not support a limited meeting at that location.

Chair Adams also said she would not support the motion.

**Vote.** On a roll call vote, Ayes: 3 (Burns, Cardwell, Pequeño,); Nays: 4 (Adams, McIntosh, Fulton, Gaffney); Absent: 1 (Olson). The motion was not carried.

Following the vote, the Chair encouraged Commissioners who were still interested to contact the Department. The Secretary added that he had more video of the plant and would make them available. [https://youtu.be/iasDt\\_pDmks](https://youtu.be/iasDt_pDmks)

- c. Request for discussion on supporting the establishment of funding mechanisms, including but not limited to an enterprise fund, for wastewater treatment.  
(Requested by Commissioner Fulton)

Commissioner Fulton said she preferred to defer this discussion to later in the agenda, after hearing from the Director.

## **7. REPORTS/CORRESPONDENCE**

- a. Director's Informational Report. (Note: the report is posted online with the agenda under *www.hawaiicounty.gov>Our County> County Calendar> (Meeting date)*).

Director Mansour said the reason for the video clips in the March 16, 2021, presentation is we wanted to bring the facility to the RAWEEM Committee. Not many people are able to tour the facilities, so he figured he could bring the facilities to them. The Secretary has more videos that address the visualization of the sites. It would be helpful and if you could schedule time, let the Wastewater Division Chief know when. Make sure you wear the proper shoes when you come into the facility, he said, so it doesn't create safety concerns. Sometimes a visualization is worth so much to the decision making.

As Commissioners have seen through the presentation, the County and the Department face major concerns from a finance point of view, from a maintenance point of view, getting things done, just putting things together back the way things should be, the Director said. It's unfortunate but we have a lot of work ahead of us. The major concern that we really need to work on is getting advice from you, the Commission, on how to tackle this financial situation we have, because without money we cannot get things done. Unfortunately the Capital Improvement Projects list has things that have been on the list for the last 10 years. We cannot continue the status quo. We cannot continue depending on the mercy of getting a grant or a low-interest loan. Our debt ratio may not fit the criteria. We have to be self-sufficient. We have to be sustainable. And we have to have financial stability, so we can start doing the things that you guys are bringing up. There's a lot of work. There are a lot of projects – \$600 million to \$1 billion worth of projects. That's not easy because the reason we got to this point is we let it accumulate. It's unfortunate, but now we got to face it. I look at you, the Commission, to give us advice, he said, on how to navigate through that, and in talking to your communities, what is the best way we can reach within the community to get a win-win.

There are so many ideas floating around, from enterprise funding, which can make us more sustainable, to setting certain fees. We could follow what the City and County of Honolulu did in 2009 when they got their consent decree. Because they were in our situation, unfortunately, back then. The consent decree got them back in shape. Now financially, they're very strong. They are able to put the membrane bioreactor system as a secondary treatment, but not the container-type MBR. It's a big project because of the amount of the flow they are getting. So their financial structure is very strong to comply with a consent decree and an administrative order on consent.

That's the number one priority. Without the money, we could have as the wish list all these projects. But how are we going to get them? And the priority projects are going to kick the non-priority projects out of the picture, and that is what we are facing. Currently our entire budget is only \$15 million. That's basically zero compared to the CIP project cost. That only covers operations and very minor maintenance costs. Even if we can get loans and bonds on \$15 million, it is not going to get us anywhere. We are in a Catch-22, and we need to come out of it. And we need to start thinking about what is the best way to set up our finance structure to get these projects up and running, so we can be environmentally safe and protect the safety of our employees at the sites. So there are a lot of challenges.

Chair Adams asked the Director to expand on enterprise funding versus the semi-autonomous agency model. It seems that one of the issues is that if you have an enterprise fund, you are charging fees for all the services you are providing. It seems that one of the challenges here as illustrated in Nā'ālehu and Pāhala is the people who are using those services could not pay the fees necessary to run the kinds of facilities that we have been talking about. And one of the issues is, who should pay? Should it be island-wide? Should it be the service area for a particular facility, or do we go begging to everybody and anybody who can give us money through federal grants, which is also at the whim of whatever administration is in place? So it seems like one of the things we could get a sense from the Commission is do we think fees are the way to get enough money to back up some loans and bonding, and how widespread are we able to assess those fees? Is there enough of a feeling on this island that everybody on this island wants all the water be saved, or is it more "I'll pay for all I need, and I'll pay the least amount of money for what I need"? Chair Adams asked for comments from other commissioners.

Commissioner Cardwell said that fees are an important part of the picture. It was brought up at our meetings a couple of times that if ever we were to create some kind of waste collection infrastructure, then we would need to charge people, and that is how it works in most places. This is one of the few places no money is collected for that. She also said that fees are part of the picture but there's also the financial management part of the picture that you have to look at. We have a current landfill contract with Waste Management Hawai'i, and this WMH contract requires the county has to produce 400 tons of material to go into the landfill every year. If that doesn't happen, the County is fined. So she wanted to find out is this in fact true, and are we being fined for that? It's very similar to what is happening in Honolulu with the contract with Covanta and H-POWER. There was a three-year period from 2013 to 2016 when the City and County of Honolulu paid out \$6.2 million. We need to look at – yes, we need money going in, but we also have to look at – is there money that is going out that is due to poor contracts, essentially, and if that's the case then we need to change that. That's systemic failure. So she would like to get more information about that. Maybe there are other things the County is being fined for. And so this is a systemic problem, she said.

Director Mansour replied by saying fortunately we have not paid penalties. Because the WMH contract involves confidential information he cannot share much more, but he said the Department is looking into that contract and the legality of it. That is solid waste; it does not have anything to do with wastewater because you cannot mix special funds. Even if you could save money in solid waste, it has to go to solid waste services. And that solid waste fund is being funded by 50 plus-percent of the general fund. Any money that gets saved goes back to the general fund, and you become under the mercy of where that money goes. It could go to roads, police departments, fire departments.

This has been the financial structure for waste management elsewhere in the world and across the country. Most of the waste management departments across the country started out under public works. And then they find out that because it is a health and safety issue, they are getting categorized as a second priority under public works. They start getting pressure and fines from regulatory agencies. They find out, we cannot sustain running a department under the mercy of other departments. So the waste management departments started branching out on their own because they cannot be under the umbrella of public works. They are a health and safety department, and they have to deliver right in the moment. They cannot wait to fix stuff five or 10 years down the road, and that's the reason they became a standalone department. And most of the departments started with the general funding, but also they found out themselves that other departments take money away from them, so they are not getting the priority they need. So they start becoming more enterprise fund, or special fund, or autonomous board funding.

And the difference between an autonomous board and an enterprise fund is that an autonomous board has its own charter, its own bylaws. An enterprise fund still could be overseen by the County Council. An enterprise fund is fee-based funding that is based on the service you provide to customers. And our County is not like the City and County of Honolulu. We probably get 1 percent of their flow. Our island only treats 4.5 to 5.0 million gallons per day. That's nothing, compared to the size of our island. So we definitely need to start connecting people to the sewer. And how are we going to do that? Instead of looking at treatment and putting the money there, we need to start looking at how we can fund the infrastructure to bring the sewer collection system in an affordable way in front of people's homes, so they can connect. If we connect, our customer base goes up, and our revenue increases. So this is one way to run the business model. We could do it that way, but it is costly to bring the infrastructure and trying to hook up everybody. The other way of doing it is environmental fees. We could set up environmental fees for sewage protection of shorelines, and have everybody pay for it, even tourists.

You could attach a tax to tourism that could come just to the sewer funding, to protect our pristine water shoreline. So there are so many other options. It's the will of the community and it's the will of the political powers to say, OK, definitely we need to have the system in place. We cannot continue with the status quo. There are different structural funding mechanisms that we could put in place. If you expand your customer base, you will have more revenue, and it will be cheaper for everyone who is contributing into the system. Everybody's going to benefit from it. If we start collecting money from everybody to do that, it's a win-win.

Hilo and Kealakehe are the two biggest plants we have. Some people don't understand how an operation goes. A facility is a facility. So let's say we are running a 5 mgd plant, versus a 10 mgd plant. It's still going to cost the same amount of money for operations, because you are still dealing with same mechanical parts, still dealing with the same infrastructure parts. You are dealing with the same structure. Because sometimes people will say, you have a smaller plant, you need fewer staff. It doesn't work that way. Staff still need to maintain the same type of equipment that you have for a bigger facility; it's just the flow that is different.

Hopefully that gives you an idea of the challenges we are facing. We really cannot continue having these outdated broken facilities and hoping for a miracle to happen. We need to take the leadership and we need to start setting things in place, the Director said. He asked for the Commission's help in navigating through that. If we are going to do all these projects and convert the facilities to R-1 and have the Hilo plant plant up to speed and fix it, our staff can start walking around without the idea of falling in to the wastewater, he said. We need to get there.

Commissioner Cardwell asked the Director for his thoughts on Dr. Bennett's presentation of potential solutions about a Kealakehe Wastewater Treatment Plant R-1 upgrade that would be more affordable than the existing design plan.

Director Mansour replied that it depends how you define affordability. If you don't have the money, nothing is affordable. We didn't have the \$160 million proposed cost to start, or the \$76 million. Affordability is defined on what do you want to do and do you have the money to do it, and what are your priorities? Do you want to get a \$25,000 violation per day or start chasing something that you don't have the money to buy? It was a great presentation. We are looking at options as we speak. Dr. Bennett hit it right on. The solar radiation is beneficial for disinfection, but when you get to the low level of disinfection necessary, the sun becomes less effective in taking the bacterium count to 2.2 per 100 mL. So it's going to require more exposure. Your detention time would take two days or more, so you are probably looking at a 140-acre site to be able to design the raceway to allow the sun to penetrate a certain depth. The design is based on detention time and water velocity. Usually you want to have a minimum of velocity so the water can stay in there to get the adequate exposure to the rays. The wavelengths make a big difference on the treatment. Sometimes when you get cloudy days you lose 50 percent of the sunlight reaching the water. So you have challenges. When we design things, we look at things from a standpoint of constructability, practicality, and operational challenges. With these type of designs, you also encourage algae to grow. If you have algae that is preventing the sunlight from getting to the water, you defeat the purpose. So you have to design it because wherever there is sun and there is water, you're going to have algae. If not algae, you are going to have duckweed growing along the entire raceway.

So there are a lot of operational challenges but that concept has been in existence since the time of the ancient Egyptians. That's how they used to drink their water, by using the sun to kill bacteria, and they

used to design small channels to route the water to their villages. In disadvantaged countries, people go to water streams and rivers and lakes, and they capture some of the water and they put it in it recyclable water bottles. It's great for allowing the sun rays to get into the water. That's what Mother Nature gave us. It is proven science, but is that practical science? That's what we as engineers analyze. The sun already is doing us a great favor. The science is already proven when it comes to that.

Chair Adams redirected the conversation to a "higher altitude." There is this issue of, are we making people connect and using DEM services and therefore we can get a lot of fees in, or do we look at it from the sustainability concept of, all of us and including all our visitors, have a stake in benefiting from the quality of our environment, including our waterways and in the ocean, as well as land contamination and litter. And so we all benefit from the entirety of the island and should all contribute to maintaining it, is her philosophy. So how do we convince people that, yeah you may not be individually connected to this particular wastewater treatment plant, but you are enjoying the fact that everybody wants to live here because it is such a wonderful environment. And that has value, and you need to pay for it. It just seems like different directions to come from, and I think that it should be that that the engineers figure out how to achieve the environmental quality that we need in the cheapest and most practical way, and make it happen. And we figure out how we fund it. Mr. Warren, one of the testifiers, had made a comment of we have had the practice of overbuilding – buying the biggest and the best, and assuming we will grow into it. That's more an engineering challenge of how do I meet the specifications, and what is the cheapest long-range way to do that? And we have got to look at OK, what kind of money can we bring to bear, and it is something that is all of our kuleana. And that is a political position that we would take to the Council from the Commission, perhaps, saying this is something the whole island needs to buy into and understand that one of the taglines for the zero waste group is there is no "away." Away is our island. We can't throw things away. We have to manage our entire ecosystem, and that's not free. The chair said she was interested in others' approaches to this.

Commissioner McIntosh said he wanted to point out that we do have some mechanism in place as far as tourists paying for different things are concerned, via the transient accommodations tax. Unfortunately, instead of providing money to the counties, the Legislature has been taking it away. And so it does exist, and the idea that not everyone on island who lives here pays for these different services is not true, because anyone who lives on the island pays property taxes, and that goes to fund the county and all its services. If you have connection fees related certain services you use, that's understandable. But to pay property taxes for those nowhere near a treatment plant, to tell us we now have to pay a separate fee on top of everything, he said that is not going to go over well at all, period, anywhere. No one will like that even if you say, well, you are protecting the environment. Well, no, because you are paying property taxes. The idea behind property taxes is you charge what you need. And right now the County plays favorites. They carve out, OK you can pay less because we want to encourage you, and different things like that. If we all pay a little bit, then it adds up over time to cover what we would like to do.

Chair Adams said the concept of building it into the property tax is on the table and that's one way to do it. Tapping into the visitor industry is another idea. Chair Adams said the Commissioner's point is well-taken, and a lot of it is about educating people of the value of paying more. It's kind of a pay me now or pay me later concept as well.

Commissioner Fulton wished to bring the discussion back to enterprise funds, and read out a brief definition: A government's general fund is a pool of cash raised from taxes and can be spent wherever the government needs it. An enterprise fund is more specific. An enterprise fund can only be spent on a specific purpose. And this obviously has a lot of value because in the past when the problem isn't talked

about or people turn their back on the problem, it's been ignored. So an enterprise fund has a lot of advantages. Most of the funding comes from fees related to the fund's mission. Further, government doesn't have to rely on the fees to cover all the fund's spending. We can get bonds. If necessary, a government can pay for some of the services with tax dollars. Most of the financing however comes from fees or bonds backed by future fee payments. And the beauty of the bonds is the bonds earn a favorable rating because of the structure, which they are guaranteed a certain revenue stream makes those bonds more marketable and more susceptible to favorable ratings. So that translates to cheaper funding for the County. Tying fees and services together through an enterprise fund has advantages in that the general public can see how much it costs to provide particular services and why the fees are set at a certain level. It's not always possible to balance fees and the cost of services perfectly. A fee may run in the red one year, which is a sign the government needs to raise fees. If the fund turns a profit, the money turns to operations in the next fiscal year, and fees might drop. She concluded by saying she thinks there are advantages and was happy to see Council Member Inaba in the meeting because she said this was a matter for County Council action.

**Motion and second.** Commissioner Fulton made a motion to have the Commission send a letter to the County Council to move forward on doing whatever is necessary to set up enterprise funding for wastewater management, to which Vice Chair Gaffney seconded.

**Discussion:** Commissioner McIntosh said he understood enterprise funding to be essentially carving out a special fund for wastewater and it will be used for their operations. It could not be taken back and put into the general fund. His question was, to prevent the fees from skyrocketing, is the County able to put in money from the general fund into the enterprise fund to prop it up until we are able to build out the systems to support more customers?

Director Mansour said Commissioner Fulton's description hit it right on. He had been working with enterprise funds for the last 30 years or so. It's a way to give you financial stability. Also you are limited on the rate fee increase. It depends how it's set up. Sometimes it rises every five years per the consumer price index and you can cap it at that rate annually so at the cost of living adjustment is built into the rate. The challenge is it depends on how you are going to set up the enterprise fund. If it's going to be fee-driven for services, then you are only able to charge people receiving the service, so your basket of revenue is going to be smaller, but it's going to be at a higher cost to offset the higher capital operations and maintenance costs. If you set it up based on county-wide fees, then you are going to share the cost, which is going to be way lower because your customer base will be the whole county, and you can start adding tourists too.

The Director's recommendation is that what we need to do is to retain financial consultants. They do this for a living; they know the laws. Maybe hire the right people do a RFP to solicit a third party to come in and analyze the financial structure within the County, understand the Hawai'i Revised Statutes, and give us recommendations with options. He thought this would be easier for anyone involved because you are getting an independent review from people who do it professionally. The City and County of Honolulu did that when they established their enterprise fund. They have a financial consulting fund that came in and assisted them. When he was in California he worked with HF&H Consultants. They go around and advise municipalities on establishing the proper funding for solid waste and wastewater. This is the time to start taking that direction rather than keeping spinning our wheels and figuring out the best option. Let the expert tell us what the best option is, and present it to our Council Members.

Chair Adams said that was a good idea and suggested that Commissioner Fulton modify her motion to say “yes we support the concept of enterprise funding to the council and recommend that a consultant be hired to flesh out just what that program would be.” Commissioner Fulton then withdrew her motion in order to restate it better.

**Motion withdrawn by introducer.**

**Motion and second.** Commissioner Fulton made a new motion to have the Commission send a letter to the County Council to recommend bringing in a financial consultant to consider, among other options, enterprise funding and energy savings performance contracts (for wastewater treatment), to which Vice Chair Gaffney seconded.

**Discussion.** Vice Chair Gaffney asked Director Mansour if there are available consultants with the expertise necessary in EPA Region 9, for federal expert advice at less cost than a private contracting firm.

Director Mansour said we could reach out to Region 9. We may be able to get a list of consultants that they recommend, but that is something we could reach out to get. His understanding was that HDOH and EPA are not funding any planning or design work. Starting at the beginning of the year, they said DEM is not getting any funding when it comes to planning or design documents. They are not going to fund any consultant that comes in for planning or design purposes. So that is going to create a gap for funding. In the past, they used to fund us. Now we are going to try to figure it out, and that is why these financial consultants that have the know-how and have been in the business and have advised so many municipalities, they can assist with navigating us.

Vice Chair Gaffney clarified this is not a design or build financial request to the EPA, but rather about enterprise funding, to which Director Mansour agreed. They may look at it from a planning point of view, the director said.

Chair Adams said she also liked the idea of enterprise funds. We are in the business of keeping our water and our land clean, and how we achieve it in the most cost-effective practical manner, and how we plan for the long-term maintenance of our operations. If you take a long-term planning perspective on our operations, she thought it’s a really good discipline.

**Vote.** On a roll call vote, Ayes: 7 (Adams, Burns, Cardwell, Fulton, Gaffney, McIntosh, Pequeño,); Nays: 0; Absent: 1 (Olson). The motion was approved.

Following the vote, Commissioner Fulton agreed to write the letter together with assistance from Vice Chair Gaffney. Chair Adams hoped the consultants could be asked to look at multiple kinds of fee-based systems. Commissioner McIntosh agreed, saying the consultant could look at each option and present to the rule-making body, which is then able to make an informed decision on the best route to take.

Chair Adams said there were concerns about solid waste on the issue of losing some money, and asked Director Mansour to comment on how the EMC could help.

Director Mansour said solid waste in Hawai‘i County was not in as bad shape as wastewater, because we aren’t talking about facilities that haven’t been maintained for more than 30 years. The challenges for solid waste is about continuing to provide programs because there’s so much desire, and rightfully so,

for compost, for recyclables, how we get to zero waste and achieve all these goals. More than 50 percent of our department's budget comes from the General Fund. This coming year we will be getting almost \$27 million through the General Fund. Our total budget is \$37 million. Two of these contracts we have are taking almost 33 percent of our entire budget, and we are looking now at finding ways and renegotiating these two contracts so we can reduce the financial liabilities. We are trying to find out – maybe we also have to do the same, food for thought too, the consultant also could look at getting a land use fee structure set up – but we don't want to overwhelm the community with two major failing divisions because of financials.

Unfortunately, when he first came on to the job it reminded him back to when he was hired in Kern County, California, to go from what Hawai'i County is doing now, to a gate fee structure. They were having 18 landfills with no fees. People were driving in from Los Angeles trying to use the landfills in Kern County because they were free. Commercial entities and the public were coming in because of all these free services. Subtitle D, Title 27, under the Clean Water Act and the Resource Conservation and Recovery Act came about in 1993; therefore everyone was supposed to convert to a lined landfill, and that was true as well for the State of Hawai'i. You start thinking that's going to add extra costs because it's a federal mandate and the EPA says everyone has to start having a lined landfill, and you think, that's going to add extra costs. Chair Adams hit it right on, he said, you look at it from a business point of view, and the business needs to be able to offset the capital cost, the construction cost, the operational cost. Because you cannot take it out of property taxes. These types of services are not intended to be collected and taken out of property tax.

Right now we get \$40 of every \$1,000 you pay in property tax. Is \$40 adequate to manage the entire solid waste business when it comes to programs and building new landfill cells, maintaining the closure for life of these facilities, recyclables, compost, all these types of waste that comes to our landfill, and process it, deal with the hazardous waste? All of that costs money – \$40 of every \$1,000 we pay. It's not enough keep the programs and keep providing the services that everybody wanted. It's unfortunate, but we are giving almost 4 percent of the entire General Fund to solid waste. We are at their mercy of the General Fund. We lost \$2 million this year, so we have to cut down on programs. That is why we cut back on hours on the transfer stations.

So we need to have a more comprehensive plan countywide when it comes to solid waste. Number 1, is it efficient the way we are doing it now, by having 22 transfer stations, by having everybody taking their garbage into the landfill without doing the sorting, without taking the plastic or cardboard out of the garbage bag, because of convenience? Or should we start putting the collections in place, like universal collections where, maybe we start encouraging people to recycle by giving them the three containers so they change their habits. Science tells you that sometimes you can change the human habits if you change how they interact, how you deliver to them. If you see a green container, you're going to put the grass in the green bin. Blue container, you know you aren't going to put the plastic and the cardboard into the same garbage bag that you are going to take to the transfer station. Because you don't want to make three, four, five trips. So if we get into the psyche of how humans interact through public education and through evaluating the current system, and being able to provide compatible services but yet achieve more.

And these are the challenges that the Director has seen before. He lived it back in 1993, when he created the gate fees where everybody pays. Commercial and residential paid \$38 per ton at the time. Because usually we estimate every household disposes of 1.0 to 1.5 tons annually. So if you put a cost per ton – right now we are charging commercial entities \$120 per ton. You could take that say,

residential, you guys pay nothing, pretty much. People say we are paying for property tax. Well, property tax goes to protection. That's the intent. It goes to the Police Department, the Fire Department, and that is the intent of the property tax. It was not intended to provide a service such as solid waste, because people look at it as a business.

We are under so many regulatory mandates from the State and the EPA. If you say commercial costs you \$120 per ton to pay at the landfill, if we take that cost per ton to residents and start charging an annual fee of \$120 per ton per parcel, then you have an equal field. Then you are going to generate revenue that is going to offset the service costs, and you are going to charge the same amount of tonnage you charge others. So \$120 or \$200 per year, that comes out to \$15 per month for residential beneficial use of that landfill. Everybody generates waste. Everybody is going to use the landfill, so we need to start looking at how we are going to set a fee. With the solid waste we have been lucky because we have the administrative rules. Maybe we could use the administrative rules as our vehicle to set monthly or annual fees, based on the tonnage that every household uses. Then you set the fees and maybe you could put that \$120 or \$200 per year on the tax bill as an assessment fee for the purpose of using the landfill, or you could do it monthly at \$15 a month. And he thought this is the vehicle that could get us more financially stronger to be able to provide the composting and get to zero waste, and get to recyclables, and thinking outside the box. This will assist solid waste moving forward.

Chair Adams said we have a solid waste management plan coming up and certainly funding is part of that. Maybe at a later meeting we can go through all the mechanisms for funding solid waste and recycling operations, and focus the letter that we are sending to the Council now on wastewater because that is the biggest pain right now. But we would follow up with some recommendations on how we can fund a better solid waste management and preferably a resource management approach to waste, to encourage recycling and composting, et cetera.

On the legislative update, Chair Adams said there was an active bill (HB 1298 HD1) to take away money from the glass deposit. Any general fund monies not already spent are going to be stolen. Are those pressing and need to be dealt with?

Director Mansour recommended that commissioners read the bills. It's an area where the Department looks to the Commission for advice on legislative matters. We are bringing it to your attention because we want you to read it and be familiar with it. And if your recommendation is to object to that, we need to speak out with one big voice. Some of these bills could be beneficial, some could not. So that's where he would be seeking advice from the Commission. These are the bills, if you have not read them, read them and maybe advise us next meeting what the Department needs to do.

Commissioner Cardwell said HB 1298 HD1 would take \$5 million collected from HI-5 and direct them into the State's general fund for unrestricted use in the operating budget, due to a drop in the general excise tax collections in the last year.

Director Mansour said Hi-5 is one of our successful programs. It would be good for the Commission to dive in and try to save some of these programs.

Commissioner Cardwell asked what effect removing the special fund would have on the Hi-5 program.

Director Mansour said that once it goes into the State's general fund and it is not designated to be spent in any way, we may not have control over that particular program. We need to dive into it more and

brainstorm, and ask questions. Maybe next meeting, let's talk more about it and see the impacts and the pros and cons. Some of these bills, if we don't catch it and it becomes a law, and we find out afterward, it would be a problem.

Chair Adams said this appears to be related to the concept of an enterprise fund. This is dedicated money, generated by the people who are making something that could be recycled, and generating funds that allow us to do the recycling. So it does make zero sense. She did note that in the language for HB 1299 HD1, it was contingent on the Solid Waste Management Plan being approved. And she was assuming it would be getting approved, so we wouldn't be at risk of losing that money. But for HB 1298 HD1, she knew less about it. It appeared to be the Legislature trying to grab whatever extra money they can. For the other one, it's the philosophy of we get dedicated funds and we use it to achieve our goals, whether it is wastewater treatment or recycling, and it can't be constantly picked away. We'll do some more research on that and see what kind of timeframe there is for putting out comments.

Commissioner Cardwell wanted to ask a couple of clarifying questions. DEM's budget is about \$37 million and there are two contracts that take up about a third of that. What are those two contracts?

The Director said the two contracts are for Waste Management Hawai'i and Hawaiian Earth Recycling. Commissioner Cardwell asked whether HER deals with our cardboard. Cardboard is handled by Business Services Hawai'i, Chair Adams said.

Commissioner Cardwell also wanted to respond to the Director's prior comments about changing human behavior and changing habits. She wanted to bring attention to what is happening with our cardboard on this island. We collect about 1,900 tons per year, and that cardboard is shipped to Taiwan. It takes 28 days for the cardboard to reach Taiwan, and every day that a ship takes to get to Taiwan, it is using 217 tons of bunker fuel. We need to make some changes, she said. We really need that cardboard to stay on island for compost. In order to be more sustainable, we need to know this is our problem. The County is engaged in some practices that are against our benefit. She didn't know how much that contract with Business Services Hawai'i is to ship the cardboard to Taiwan, but she would like to know. We need to look at how we are spending our money, and she was sure there were other examples of mismanagement of money. We don't need to ship our cardboard to Taiwan. We need that here. This is what the composting consortium is working on. They are looking at all of these different pieces that are dysfunctional. She was going to be bringing more information about these things. It's important we bring awareness about our resources that we need here.

Chair Adams asked the Director to address the cancellation of funding for the life cycle assessment program. It doesn't make sense to spend more in producing global warming gases to recycle our cardboard in Taiwan.

As far as the cardboard issue is concerned, it is something you can use for composting, Director Mansour said. Unfortunately, when the contract was negotiated with HER, the RFP with the idea to do composting, but that never came to fruition, and they ended up amending the contract to exclude composting from it. We are going to be in discussion with them, trying to figure it out. We cannot continue the status quo for just creating mulch without benefiting from the composting process that we intended to have, to start. We are going to go back to the original intent of the contract and try to figure a way of how to bring the compost back into it. She was right about getting permits these types of facilities in composting is a nightmare. Not too many people can, if we are going to start introducing biosolids from wastewater into the compost, because you have to meet the Code of Federal Regulations

and you have to be permitted by the Department of Health, because there are certain requirements. Anybody who is going to be in that business has to meet certain criteria to be able to be licensed. Currently HER does not have a permit to do composting, and maybe that is the reason they never did it to start. He was digging deep and trying to get into the history behind it, and figuring out how we transition back to compost. We don't have to take the cardboard to Asia if we can use it here as part of the composting process.

Commissioner Cardwell said she knew Mr. Rich Flammer has been in contact with some of the people working on the issue. He helped set up composting facilities in municipalities in California, Connecticut, Mexico, and possibly Guatemala. She has his contact information and will be reaching out to him in the next couple of days.

Director Mansour said that is one of the things that he looks to the Commission to provide advice. The current contract with HER had the intent to create a composting facility, but that never came through. That's why a lot of people are frustrated. We are paying that much money but not getting compost out of it. We need to get into the compost. His understanding is HER came in with the idea that we are going to build in-vessel facilities and they never carried it through.

Commissioner Cardwell commented that it may have been a "blessing in disguise" because the plan was very flawed and we have talked about it in other meetings. The facility they were planning didn't make sense for the island and there were other issues related to how organics were to be delivered into the facility, and how the compost was going to be distributed. There were all kinds of issues with that, so it was good that it didn't end up happening because there was a better way to approach it, which is with a decentralized composting system. That is something with which Mr. Flammer can help us.

Director Mansour reminded the Commission to be careful about procurement laws. If we as the County end up talking to these people, we're probably going to do them a disadvantage in submitting an RFP on the project. We just have to be careful sometimes. He asked Deputy Counsel Hall to address the legal aspects of it. Sometimes you can chase a consultant coming in but they would be somewhat restricted to submit an RFP on the project. Could the Commission start negotiation with consultants on process and designs or ideas that may go out for RFP, and would the consultant be able to submit an RFP if involved in the solicitation early in the game, he asked the Deputy Counsel.

Deputy Counsel Hall said she would definitely advise against Commission negotiations. They don't have the County's power of negotiation, but if they want to do an investigation and get information, that's one thing. Procurement has very specific rules. If you speak to people as representatives of the County they would probably be unable to procure, or submit proposals, or bids. That's something to be careful about. You don't want to exclude people. We want more competition and we want all the proper people to come to the table. You need to be very aware of all those different rules. Between meetings you can reach out to her if you have questions about the parameters of contact with others, she said.

Chair Adams said regarding composting, we had some information in the last meeting and we need to have more discussions, and maybe that's something that she and Commissioner Cardwell could work around regarding what recommendation we want to make formally to the Council and to the Department on options they should be looking at for feasibility on this island, and the distributed composting. We had some good information but the devil is always in the details, so we just need to come back and outline how we can help in going forward. She didn't think we need to go out and find new contractors. That's not our job. Our job is to say, we want you to accomplish these end goals, and

how you accomplish them and with whom is the Department's responsibility. But to define the goals and approaches that we want to be included in the discussion is certainly our role, she said. Maybe that's something to talk about that we could put on the agenda for next time.

Commissioner Fulton made a comment about the Director's report. She noticed that the chloride numbers on Ali'i Drive were not being offered in the report this time around. Last time there was something of an uncomfortable discussion about the dramatically elevated chlorides. While it wasn't her intention to have that discussion again, she would like to have access to what the data says in the periodic testing at the plant and at the wells. So if it's not presented in the report, is there an alternative spot to go, online or otherwise, to access that data?

Director Mansour said usually the data are shared with the Department of Health. It is definitely accessible. The idea is, there are different kinds of data. There are what we call process data versus preliminary data to give us an idea of how we need to process things. So the preliminary data, we cannot – because this is to set up the process forward, but the one we use for process, and that goes to the Department of Health, we could find a way to put on the website for you guys to utilize. He just wanted to make sure that they understand wastewater treatment is a very complicated biological and chemical matter. Some data may be interpreted without an understanding of the concept, and just to let you know that with the chloride and the discussion we had, maybe the Commissioner felt the discussion was uncomfortable, he said. But it is up to us to figure out contributing factors and just to give you an idea, the chloride level in the seawater is almost 19,000 mg/l, versus the 3,500 mg/l we found in the sewer, he said. So there are a lot of different factors, a lot of different interpretations. If anyone has a question, give a call, we'll go through the technical aspect of it, he said. He ran a few numbers and shared them with Dr. Bennett on the chloride in the sewer line system.

Commissioner Fulton asked to be included on these communications, now that the Director knows that she has an acute interest in the issue.

Director Mansour welcomed the idea. He added that Dr. Bennett did a good calculation and they were working on trying to figure out the amount.

Commissioner Fulton asked to see the data so she could have some eyes on what's happening down there, in the interest of transparency.

Director Mansour said one item we need to start looking at is, we are trying to get all the people along the shoreline connected. And the ones not connected, we are working with our Corporation Counsel to start sending them letters. We came up with a boilerplate letter to go to these people to allow them so many days to connect, he said. If not, we are taking legal action and hopefully going through the court system. Our goal is to get these people hooked up to the system rather than continue their cesspools right into the shoreline.

Commissioner Fulton said that brought up the next discussion topic, a news article about a bed and breakfast establishment on Ali'i Drive in District 7, which was permitted by the Leeward Planning Commission to proceed even though it is on a cesspool. She would like to suggest that the EMC encourage the LPC to become educated about cesspool alternatives. We do have a 2050 mandate to get everyone converted off cesspools. There are private solutions to cesspools, and there are more and more every year. There is a group based in Honolulu and led by Stuart Coleman called WAI (Wastewater Alternatives and Innovations). She would like to invite WAI to give a presentation to the Leeward

Planning Commission, so that the group could point the bed and breakfast establishment toward a better solution rather than to say go ahead, dump your stuff in a hole in the ground right beside the ocean, and when a solution comes along, that will be fine.

Chair Adams replied that existing cesspools and septic systems are not under the responsibility of the Department of Environmental Management. Our Charter is clear that we are not to get involved in things involving the Department of Health. Certainly as an individual, one could communicate with the Leeward Planning Commission.

Director Mansour said his intent is always to continue communicating with the Planning Department. He had already mentioned it to Director Kern and they were going to set a meeting between the two departments to discuss the possibility of how we are going to handle the sewer infrastructure within Planning and the issuance of permits. If a developer comes in and if we give an incentive to start putting in sewer infrastructure, then we don't have to rebuild the whole infrastructure later down the road. Their obligation is to start putting the infrastructure in as they do the development. So with that question with the cesspool, maybe they need to give them the incentive to hook up to the nearest sewer line, and see how far it is from the nearest sewer line, and maybe come up with some financial strategy of how to fund it and to start converting properties now rather than waiting for 2050.

Chair Adams said it was good that the Director was talking with Planning. It was an item on the Director's Report and commented by Ms. Demourelle. There is a statewide cesspool conversion working group and the Director is part of it. There's a lot of information online and we don't have the wherewithal to duplicate that effort. So learn about it, it's this whole fascinating part of how we integrate across all the different planning and operations that affect the environment, she said. All approved

See the Director's Informational Report on the following topics:

1. Legislative update  
(Pp. 19-20)
2. Requests for updates: The commissioners have requested informational updates on the following:
  - i. Clarification on whether the funds (\$10.5 million) previously earmarked for the now suspended county compost facility are available for alternative approaches (e.g., smaller scale distributed composting facilities). [Requested by Commissioner Cardwell for further discussion]  
(Pp. 20-22)
  - ii. Response to the Commission's letter of October 26, 2020, in support of Energy Savings Performance Contracting [Requested by Commissioner Adams]
  - iii. Request for information on cancellation of the Recycling Section's Environmental Life Cycle Assessment. [Requested by Commissioner Adams]  
(Pp. 20-21)
  - iv. Request for update on DEM administrative rules relating to enforcement of failure to connect to a sewer [Requested by Commissioner Adams]
3. Solid Waste Division Projects and Updates  
(Pp. 18-19)
4. Wastewater Division Projects and Updates

(Pp. 12-14)

5. Correspondence to Chair Adams and EMC members from Steve Holmes on various topics:
  - v. Supporting creation of enterprise funds
  - vi. Leasing of electric vehicles
  - vii. Hilo Wastewater Treatment Plant

## **8. FUTURE AGENDA ITEMS**

Chair Adams asked commissioners to state any future agenda items they want to have listed today, or they can send her an email.

- a. Follow up on action items determined today.

She and Commissioner Cardwell can talk about next steps to take relative to recycling. If there are others, please send it to her and they will be worked into the agenda.

- b. Other (Commissioners may suggest items they would like placed on the next agenda.)

Commissioner McIntosh would like a discussion on the Wai'ōhinu Transfer Station, how the construction would accommodate the public, and whether it would be open.

Chair Adams said she would also be looking at action items. We will get that draft letter from Commissioner Fulton, and it would be a good idea to send it around to people just to make sure we covered the items that people thought we are going to be doing in that letter. Otherwise, we'll just be coming up with ideas for the letter.

She also asked commissioners to comment about things you liked or didn't like about the Director's Report. If things are missing, let us know.

## **9. ANNOUNCEMENTS**

The next meeting is scheduled for April 28, 2021, at a location to be determined or online. Please contact the Department of Environmental Management or monitor the website for updates.

Chair Adams by then would be past her second shot, so she is OK with meeting in person but not sure if the other commissioners feel the same way about whether the next meeting will be virtual in April. Commissioner McIntosh said that would be up to the County and State emergency orders what we are allowed to do.

Chair Adams said that may indeed be under discussion. She wasn't sure how meetings were being held elsewhere. The Council is meeting in two places, Hilo and Kailua-Kona, and so is "semi-virtual." How about we just let you know what the latest status is, she said.

Commissioner Cardwell said that COVID-19 issues aside, she really likes the virtual meetings. It's a lot more convenient for commissioners and they are not having to drive from one side of the island to the other. Their carbon footprint is smaller, more of the public can attend. So she is in favor of virtual meetings indefinitely.

Chair Adams agreed with that.

Commissioner Fulton also concurred with continuing virtual meetings.

Commissioner McIntosh liked not having to drive 90 minutes east or west every month, though he finds it easier to understand people in person and interject rather than online. It is harder on the public for those in his district who may not have computers and connectivity.

Commissioner Pequeño, noting this is his last meeting as a commissioner, wanted to say that he supports continuing having meetings virtually, and he thanked Commissioner Fulton with helping get started with the virtual meetings. He was excited for where this was going.

Vice Chair Gaffney said he prefers virtual meetings too. There was a huge impact from commissioners driving back and forth across the island, and although some still have trouble with access, a bigger chunk of the general public are able to join us on virtual meetings than are able to join us for in-person meetings.

Chair Adams said the Commission appears to have reached a consensus. Perhaps we could have at least one or two meetings together as a bonding exercise. Sometimes it is easier to communicate issues easier in person, but there are definite advantages to virtual meetings if we can ensure connection. The odds are good we will still be virtual in April so stay tuned, she said.

Chair Adams thanked outgoing Commissioner and former Chair Pequeño for his participation with the EMC. She thanked him for his efforts, and she assumed he will still keep track of what the Commission will be up to, and help with Ms. Robinson's transition onto the Commission (pending her April 7 confirmation).

All commissioners give Commissioners Pequeño a round of applause for his service.

Commissioner Pequeno said mahalo, and it has been a joy working with each of you. He wanted to reemphasize he is proud of where the Commission is going, and he has so much faith them as individuals and as a team, working with the Department to improve the conditions for our island people.

## **10. ADJOURNMENT**

**Motion, second, and vote.** Vice Chair Gaffney made a motion to adjourn, to which Commissioner Fulton seconded. The motion was carried by unanimous consent (7-0-1; Olson absent), and the meeting was adjourned at 12:09 p.m.

Respectfully submitted,

Peter Sur, Secretary