

**LANA‘I PLANNING COMMISSION
REGULAR MEETING
JULY 17, 2019**

A. CALL TO ORDER

The regular meeting of the Lanai Planning Commission (Commission) was called to order by Ms. Shelly Preza, Chair, at approximately 5:00 p.m., Wednesday, July 17, 2019, in the Lanai Senior Center, Lanai City, Hawaii.

A quorum of the Commission was present (see Record of Attendance).

Ms. Shelly Preza: Thank you for being here tonight. Welcome to the July 17th Lanai Planning Commission meeting. So this is the official call to order. Jerry, thank you. So prior to public testimony we're actually going to do some things a little out of order tonight. We're just going to do Item C first because that does not require public testimony. It just going over a decision we made months ago.

C. ADOPTION OF WRITTEN DECISION AND ORDER

- 1. Proposed Findings of Fact, Conclusions of Law and Decision and Order denying the request for a Bed and Breakfast Home Permit by BRENDA and MIKE HINTON to operate Hale Nani, a two-bedroom home located in the R-1 Residential District at 516 Nani Street, TMK: (2) 4-9-010:050, Lanai City, Island of Lanai. (STLA T2018/0006) (J. Burkett)**

The subject application was brought to the Lanai Planning Commission for review because there are at least two permitted short-term rental home operations located within 500 feet of the subject property. Action on the application was taken by the Commission at the April 17, 2019 meeting.

The Commission may take action to adopt, adopt with modifications, or take some other action regarding the [proposed Findings of Fact, Conclusions of Law, and Decision and Order.](#)

Ms. Preza: So C.1. proposed findings of fact, conclusions of law, and decision and order denying the request for a bed and breakfast home permit by Brenda and Mike Hinton. So Commission members this the decision we made a couple of months ago to deny the short-term rental home permit application. So it's just coming back to us to make sure this is what we want to do so would someone like to make a motion regarding this? So the options are to move to adopt the denial, adopt with modifications, or take some other action.

Mr. Gerald Rabaino: Chair? We've been pondering on this thing for quite a while. It is understood that majority of us have come to a conclusion that we need to draft by law that we would deny all short-term rentals.

Ms. Preza: Well, so what we're drafting is just what regulations we'd like to see, but this is about a specific application. So it's just for this specific application what we're talking about.

Mr. Rabaino: Just for this particular one, for Brenda and Mike Hilton?

Ms. Preza: Hinton, yes.

Mr. Rabaino: Any of the Commissioners have anything to say?

Ms. Richelle Thomson: So just for clarification what you're doing he is making sure that this written Decision and Order reflects the decision that you made when it was heard several months ago, or a couple of months ago. So you're really just looking at the written document to make sure that it's an accurate reflection. So unless you see errors in the document or if, you know, for some reason it didn't reflect the record as you recall it, that's why you would make any changes. Otherwise, you would approve it.

Ms. Preza: Does that make sense to everyone, Commissioners? Great, do we want to have any discussion or would someone like to make a motion?

Ms. Caron Green: I move that we accept or adopt the Conclusions of Law as submitted.

Ms. Preza: Thank you. Would anyone like to second? Roxanne seconds. So all in favor, raise your hand. All opposed? Okay, great, so it passes unanimously. Thank you for that. So we got that out of the way.

It was moved by Ms. Caron Green, seconded by Ms. Roxanne Catiel, then unanimously

VOTED: To adopt the Findings of Fact, Conclusions of Law and Decision and Order denying the request for a Short-Term Rental Home Permit as submitted.

(Assenting: R. Catiel, C. Green, G. Rabaino, S. Samonte, C. Trevino)

(Excused: J. Delacruz, M. Martin, S. Menze)

B. PUBLIC TESTIMONY - At the discretion of the Chair, public testimony may also be taken when each agenda item is discussed, except for contested cases under Chapter 91, HRS. Individuals who cannot be present when the agenda item is discussed may testify at the beginning of the meeting instead and will not be allowed to testify again when the agenda item is discussed unless new or additional information will be offered.

Ms. Preza: Moving on. So this is what I believe everyone is here for tonight. So I will open public testimony, but I will say that if --. Since it seems like everyone is testifying on Item D.1., if you have time to stay and you would like to hear the presentation first prior to testifying

please let me know. But otherwise we're going to open public testimony. So I'll start with the first name on the list. Diane Preza, would you like to testify now? Okay.

Ms. Diane Preza: Aloha, my name is Diane Preza, and I'm going to read a letter on behalf of Mr. Kurt Matsumoto, who is the COO of Pulama Lanai. And he regrets he cannot be here, so I'll read a letter that he wrote:

Aloha Chair and members of the Lanai Planning Commission. Pulama of Lanai is supportive of the University of Hawaii and HAPS Mobile Inc.'s testing of high altitude drone technology on Lanai. Their work will include collecting data that will expand our knowledge of our watershed and in so doing support Kuahiwi a Kai, our collaboration with the National Fish and Wildlife Federation to restore the ecosystem on the windward slope of Lanai Hale.

I would like to highlight that Pulama Lanai has no investment in nor financial relationship with HAPS Mobile. We are allowing the University of Hawaii to lease land so that it can conduct drone research with HAPS Mobile. By allowing the University to move forward with their test period, you will be supporting an effort to bring technology based jobs to Lanai. While it is not a guarantee, Lanai will have an opportunity to compete to become the primary site for the HAPS Mobile development of their HAWK30 technology. This test period allows our island to compete with other sites around the world that HAPS Mobile is considering.

It is rare to find a situation where Lanai's isolation and limited infrastructure are a strength in competing for new economic opportunities. It is equally rare that the majority land owner is not the primary driver in developing the new economic opportunity for Lanai. The activity supporting the drone development will require a minimal infrastructure footprint and is not dependent on water as a critical component for success. We will retain our rural lifestyle and all of the access to our favorite parts of the island we enjoy today. Can you imagine a more ideal opportunity for Lanai?

As you consider the request before you tonight, I ask you to envision what Lanai could be like for our children and the generations that follow them if HAPS Mobile decides to develop their drone technology on Lanai. Think about opening up more opportunity --. Excuse me. Think about opening up more employment choices on Lanai. Think about Lanai being part of the technology economy, while still maintaining all of the qualities of our childhood days on the plantation. This request is the first step in achieving that goal. But we must take this first step in order to have the chance to see that vision become a reality. Mahalo, Kurt Matsumoto.

Ms. Preza: Thank you. Commissioners, do you have any questions for her? Okay, great. Thank you. So next on public testimony is Adam Purdy. Would you like to testify now or after? Okay.

Mr. Adam Purdy: So I'll be reading a letter from Mr. Elton Kinoshita, the principal of Lanai High and Elementary School.

Aloha Director McLean. I am writing in support of HAWK30 drone project on Lanai. This project will afford the students at Lanai High and Elementary School relevant and rigorous learning opportunities and more importantly, potential career options in an expanding industry. Our students often ask me what careers or college majors they should pursue. In the past it was easy to give them a response because careers and industries were not being phased out as rapidly as they are now. Today, I am telling my students that I can suggest career options that are currently viable and may be relevant for another ten or fifteen years, but beyond that, I am not so sure. I also give them a warning that whatever they pursue after leaving high school, it is likely that their career choice might fade away and they will have to retain to another or to enter a new field.

The speed of change has created a shift in how we do school. Delivering content to students is less critical as in the past with the access to technology students can simply Google anything they want or need to know. Instead we need to ensure our students leave with the competence and confidence to thrive in this constantly evolving world. Competence such as observe effective questioning, objective and deep research, risk taking and absence of fear of failure, resiliency, critical thinking and analysis, problem solving, learning to work effectively in groups, and articulation and presentation skills. These competencies are best learned through hands on projects.

Currently I am in discussions with a group that will provide the curriculum and training to students relating to drone piloting skills. I envision Lanai students having the opportunity to earn drone pilot licenses before they graduate from high school. Having the presence of the HAWK30 drone program on Lanai will complement the work our students are doing on campus.

Please consider allowing the project to go forward on our island. Thank you for your consideration.

Ms. Preza: Thank you. Commissioners, do you have questions for Adam? I have a question. So you recently graduated and you're going to go to study?

Mr. Purdy: Yes.

Ms. Preza: What are you going to study?

Mr. Purdy: I will be studying English Education at Minot State University in North Dakota this upcoming fall.

Ms. Preza: Awesome. And I was wondering do you have any personal thoughts about the drone project or having recently graduating from Lanai High?

Mr. Purdy: Well, personally for me, being that I have just graduated and I am going into an education field, this seems like something that would be very beneficial to the underclassmen

who are following me because growing up here on Lanai there aren't that many opportunities for us. A lot of the opportunities that we see here are mainly towards the biomed field, and that is great profession to go into, but that isn't for everyone. So I feel the more opportunities the students here on Lanai are given to view different careers, careers that they may not know, that the more prepared they will be as Mr. Kinoshita said, to go into this new evolving world.

Ms. Preza: Thanks Adam. Great. So next on the list is Debra Greene. Would you like to testify now? Okay.

Ms. Debra Greene: Aloha. I am visiting from Maui. I live in Kihei, and I'm here to testify against the proposed drone and the use of agricultural land. There are many reasons that this is not a good idea, and the theme seems to be lack of good faith on the part of those proposing it. An article in The Maui News had this headline: *Next Generation 5G Network May Be Taking Off On Lanai*. The program's goal is to develop and test a high altitude platform drone while providing advanced 5G service.

The IEEE which is the world's largest technical professional organization for electrical engineers publishes a magazine and in the March issue of this year, it describes the HAWK30 drone program and states that this is, quote, a secretive joint venture. The purpose of which is to deliver connectivity for 5G and the internet of things.

Yet on The Maui New website on July 15th, Mr. Purdy posted a comment stating, we have listened to your concerns. We have removed 5G from our testing. The main focus was flying for months on solar power, no fuel required. That comment is not in good faith because clearly that was not the main focus. The main focus as stated repeatedly was 5G.

We are all familiar with the strategy of scaling back a proposal in the face of public opposition in order to get something approved and then once the project has a toehold, developers do what they want in the end anyway.

In addition to 5G, the IEEE article traces the sketchy history of this particular drone. There have been two previous prototypes and both of them crashed. That's right. There has been no successful flight of this type of drone.

Why would you want to risk harming people and marine life with a highly experimental drone blanketing the island, even remote areas, and the ocean with toxic wireless radiation and potentially crashing at any moment? What is to be gained? This project will not provide jobs for those who live here because as far as I can tell it will employ 30 to 40 flight team members. How many people who live here are qualified to fly experimental aircraft?

I'm going on record requesting a copy of this Special Airworthiness Certificate issued for the HAWK30 and any appendices containing operational limitations for the HAWK30 UAS. The FAA Order 8130.34D requires that the UAS be operated within the line of sight of the operator

at all times. The Order prohibits commercial use of the UAS during experimental operations so 5G transmissions should not be allowed. Nor should it be allowed that it fly between 65,000 to 84,000 feet.

I want to finish by quoting Maui County Council Member Riki Hokama in a letter addressing this drone project, quote, the erecting of a structure ahead of the meeting with the community and ahead of the July 17th Planning Commission meeting show a lack of good faith. Moving so far along as to have a structure built signifies an assumption that is troubling and disrespectful to Lanai, to Lanai community. I couldn't agree more.

Ms. Preza: Thank you. Commissioners, do you have any questions for Debra at this time? I just have a quick question. I see on your -- the one you handed to the Commission members that you have a PhD. What's your PhD in?

Ms. Greene: My PhD is from the Ohio State University and I studied communications and somatics.

Ms. Preza: Thank you.

Ms. Greene: Thank you.

Ms. Preza: Great. You have a question for Debra? Okay.

Mr. Rabaino: On your eighth paragraph, Special Airworthiness Certificate issued.

Ms. Greene: Right.

Mr. Rabaino: What does it contain in your knowledge that you have been researching this?

Ms. Greene: I don't know what it contains. That's why I'm addressing, I mean, why I'm requesting it. But one of the concerns is that the --. Most of the regulations around drones require that the drones be flown within operator's sight at all times. And the way that this is being described that would not be happening. And I'm also concerned about experimental operation with 5G which again typically is not allowed. But I don't know because I haven't seen that documentation. That's why I'm requesting it. Does that makes sense?

Mr. Rabaino: No.

Ms. Greene: No? How can I --

Mr. Rabaino: Not what I was wanting to hear. Are you opposed to this 5G transmission?

Ms. Greene: Yes, absolutely, I'm opposed to it.

Mr. Rabaino: And you stated that it won't provide jobs for Lanai. Explain.

Ms. Greene: From everything that I've read.

Mr. Rabaino: Okay, you used the term everything. Clarify.

Ms. Greene: Well, there hasn't been that much information available. So from what I've read which is mainly an article in The Maui News newspaper, there was stating that there would be 30 to 40 air team members employed. And they're not, they're not, like, building any structures that would require, you know, construction workers. There's no electrical on the site so no electricians would be employed. So it's hard, it's hard for me to see how the jobs are --

Mr. Rabaino: Okay, I understand where you're coming from, but I'm not getting what I want to hear from you.

Ms. Greene: Okay.

Mr. Rabaino: Because number one, you're from Maui so you're concerned with Lanai.

Ms. Greene: Yes.

Mr. Rabaino: And what Lanai can gain through this 5G, and the people that work hard to get this thing going, okay. Because you say you oppose, and all these other stuff over here I wanted to know how far you went in depth of getting some answers. Because some of these things over here, you know, is not, it's like generalized, okay. It says in addition to 5G, IEEE article traces sketchy history. What do you mean sketchy history?

Ms. Greene: Well, two of the prototypes of this particular drone, they both crashed, so it hasn't been a successful project. It's highly, highly experimental. There hasn't been any successful flight of this particular type of drone, so that's a concern. Because the thing is huge. It's bigger, its wingspan is bigger than a jumbo jet. Its wingspan is larger than any military aircraft in existence. And if it's going to crash that means that it could potentially fall from the sky at any moment. Particularly if it's, you know, planned to stay aloft for period of time, up to a year, from what I understand.

Mr. Rabaino: Okay, I thank you for your concern, yeah, but as the meeting goes on I shall determine what, what needs to --. As the meeting goes on, if the answer that I'm waiting for someone to spill out might make me in favor of their project. But for your standpoint, yeah, my concern is if it affects Lanai, and gives Lanai the opportunity to move forward, I will be for the island of Lanai.

Ms. Preza: Jerry, sorry, I'm going to cut you off real quick because I feel like we haven't heard all of the presentations yet, and so maybe before --.

Mr. Rabaino: Okay.

Ms. Preza: I mean, thank you for your testimony, for your time. I don't want anything to happening with like the testifier.

Ms. Greene: Can I --

Mr. Rabaino: Well, thank you for your testimony.

Ms. Greene: Can I just say. Thank you. One last thing is like if the drone is proposed to fly at 65,000 to 85,000 feet approximately. And when you have something at that altitude and it's projecting, it's a beaming 5G signals, the, the area that it is going to potentially cover would be all of the Hawaiian Islands. You know, the further up you get from a location on earth, the bigger the range. And so it's, it's definitely a concern for all of the islands if this is going to be deployed the way that it sounds like it is.

Ms. Preza: Thank you for your time. We're going to move on to Simon Russell. Would you like to testify at this time or after the presentation? Okay.

Mr. Simon Russell: Aloha, Honorable Chair Preza and Lanai Planning Commission members. Mahalo for your service to our County, and mahalo for your time, reading and hearing my testimony today. My name is Simon Russell. I'm a second generation Hawaii family farmer living in Maui County, on the Island of Maui. I also represent Hui O Malama Aina and the work I do to advocate and educate for sustainable agriculture and a healthy environment.

Our Hui is opposed to this research being conducted in Maui County on the Island of Lanai. I have expertise in technology and education. Sorry. I have expertise in technology and agriculture that I'd like to share with you today. In my pervious capacity I have been a member of the Board of Agriculture, and I am somewhat concerned with this project from an agricultural zoning perspective.

You might be surprised to hear being that I'm opposed that my background is electronics and computer science. I previously held a certification as an FCC certified telecommunications technician. As a college student I had the good fortune of working with the research corporation of the University of Hawaii as an intern for NASA from 1993 to 1996. I worked at the Pacific Missile Range facility on Kauai building the world's highest flying aircraft at the time. It's called the Pathfinder. Its next build was called the Pathfinder Plus. I was an intern under the NASA for that entire period. I was on the flight crew. I helped launch the aircraft. And it needs a long runway, pretty long. If it's going to take off. I don't think it needs a long...if it's runway to land, so that's one observation.

The two unmanned aerial vehicles were developed by the same company that, I believe, developed the HAWK30 that is being asked to ship to Lanai. You can read about the development of the HAWK30 at a website that I have provided. Besides the agricultural zoning issue that's going to be before you and I guess the rest of the planning community, maybe even the Land Use Commission, my concerns about the deployment of 5G and the possible militarization of our Maui County airspace are here in my testimony. Debra already went into the crashes of the former iterations of the HAWK30. I believe one was called the Helios, crashed in 2003, and the Global Observer that crashed in 2011.

My concerns with 5G is untested technology. It really has no safety standards whatsoever. And in the words of the Federal Communications Commissioner Chairman, Tom Wheeler, he was speaking to the national press club. He says, unlike some countries, we do not believe we should spend the next couple years studying what 5G should be, how it should operate, and how it should allocate spectrum based on those assumptions. Like the examples I gave earlier, the future has a way of inventing itself turning innovators loose is far preferable to expecting committees and regulators to define our future. We won't wait for standards to be developed in the sometimes arduous standard setting process or in government lead activity. Instead we'll make ample spectrum available and then rely on private sector lit processes for producing technical standards that are best suited for those frequencies and use cases. Leadership and networks leads to leadership and uses which quickly moves across the borders.

So the policy of not considering the environmental and health impacts before rolling out a technology is unacceptable to my hui and, you know, our way of living our life here in Hawaii. I have four small children. I'm pretty aware of the impact on the brains of small children of high frequency radiations. It's not good. We on Maui are affected by the transmission of 5G from a drone flying at 85,000 feet. It will absolutely impact us.

My concerns about the agriculture use project are also laid out here, and I'll just flip to the back page because I know my time is running out. But basically the way I read the County Code, it talks about the different uses governing the ag land, and my understanding is that the --. I'm not going to actually call it a drone. This is actually --. We always call it unmanned aerial vehicle. A drone connotes a small flying object. This is a flying wing.

So Chapter 19.30A.060 under the Special Uses governing Agricultural lands in Section 7, it says the following uses of structures are prohibited. It talks about airports. So, I mean, if a giant flying wing doesn't need a long airstrip, then that's not called an airport then. I mean, I'm sorry, I must be out of line to be testifying about that here. But I would call it an airport in the ag district. So there's a zoning change that needs to happen, I think, and maybe that's why we're here today. So, that all.

Ms. Preza: Thank you for your testimony. Commissioners, do you have questions for Russell? I mean, Simon, sorry, Simon Russell? Great, thank you so much. Next we have

John Schaumburg. Would you like to testify now or after? Okay, thank you so much. Is there anyone else who would like to testify at this time or if not we're going to hear the presentation and then I will reopen public testimony? Alberta?

Ms. Alberta de Jetley: Thank you members of the Lanai Planning Commission. I didn't do a prepared speech because I wanted to be able to speak from my heart. Over the years I returned to Lanai to live fulltime in 1996. And since then we've had a tremendous amount of change in our community. But one of the changes that most impresses me is we come from a community of very strong leaders. Look across the street at the Lanai Community Health Center. Two women. Two women dreamt about that project and they took it from nothing. They took it from an idea that they had, and it materialized into one of the most beautiful community health centers in whole state.

Two women, Kathy Carroll and Loretta Hellrung, had a dream that we would create a sanctuary, a place for our homeless cats to protect our endangered seabirds. And look at what we created. We created a beautiful sanctuary.

Now we have this project. Over the years we've struggled to figure out what are we going to do as a community to bring more jobs and different kinds of economic basis into our community. We all know that we don't want to continue to build hotels here. We all know that our most precious resource on this island is our open space. Now we have one man, that man, George Purdy, who came to the community and he had an idea that he would bring drone technology. And against all odds, he's spending his own money, his own time, he went out and he attended drone technology workshops across the United States, did his homework, brought drone technology into our schools and shared it with our students. And now, he's caught one of the biggest possible fish that he could ever caught with bringing the HAWK30 to our islands. Do you know how much jobs it will actually create? We're not talking about 20 or 30 jobs. We're talking about building a whole industry that will bring more jobs, less people, better jobs, a better quality of life for all of us.

We don't want to keep bringing more hotels to our island. We don't want to create more service industry jobs. We already have enough of those. You look at the traffic on Maui. You look at the open space that has been gobbled up. We have someone here talking about ag. You look at our open pineapple fields. Do you see anything replacing them? I worked in the dirt for 13 years trying to develop my farm, and it was impossible. Now we have an agricultural venture called Sensei and it's going to be very possible. We have to stay ahead of the curve, so dream. Think about people like George Purdy. Think about people like Phyllis McOmber. Think about people like Jacky Woosley. Think about people like Kathy Carroll. Dream. Dare to dream; that's all I ask you to do. Take a chance with the HAWK30, take a chance with the drone project and let's all work together to bring new economies, new ventures to this island. Thank you.

Ms. Preza: Thanks Alberta. Do you have any questions, Commissioners, for her? Okay,

great. If you would like to testify you can testify into the microphone for the record. Sorry, if you could state all that -- it's for our record.

Ms. Kimberly Schlesinger: Okay, no problem. My name is Kimberly Schlesinger. I'm new to the island, but my husband has, you know, come here part-time since 1995. We do however over the years, you know, have a lot of friends that have raised their children here and that went and graduated from Lanai High School. Some of those young girls were your valedictorians here at Lanai High School. They've gone on to Cal Tech and some of the best colleges in the United States, but they can't come home. And they can't come home because there is no opportunity. And whether we'd like to admit it or not, you know, the world's changing and it's changing fast. And you know, our children, which we've worked so hard to provide better lives for, you know, can't come back unless in some way we can provide long-term opportunities and a better life. So, although the students may not be qualified today to run those drones, you know, we're never going to have a generation of children that are ever going to be able to do it if we don't provide opportunities and internships and, you know, ways that these kids can come back and use their training and their education.

So, the other thing I would also just like to share, the whole 5G thing and the satellite coverage, I have use, you know, carry a satellite phone when I go to remote places on this island or out on the boat in case I get some, you know, if there's distress in the ocean. One of the things that this would provide would be coverage over the ocean so I would imagine where there is no sea tow and where, you know, you have to coastal guard if you need to be rescued, you know, having coverage over the ocean so your cellphone would work between these islands, I think would be enough of a reason to do it in of in itself quite frankly in terms of safety. So just two thoughts from me. Thank you.

D. WORKSHOP

1. LANAI HIGH ALTITUDE PLATFORMS (HAPS) DRONE PROJECT PROPOSED BY THE RESEARCH CORPORATION OF THE UNIVERSITY OF HAWAII (UH)

UH is proposing to launch a program named HAWK30 to develop airborne 5G communications through the use of an unmanned, low-speed, high-altitude, solar-powered long-endurance aircraft flying between 65,000 and 80,000 feet for up to six months and using agricultural land off Kaupili Road, Lanai, Hawaii, for operations, take-offs, and landings. Watershed conservation and agricultural development mapping and surveying are two additional services to be provided by the HAWK30 program. TMK: (2) 4-9-002:061 0000 Use Determination (UD) 2019-0001 (K. Wollenhaupt)
[Transmittal Application](#)

This workshop is for information and discussion purposes only; no Commission action will occur at this time.

Ms. Preza: Thank you. Commissioners, do you have any questions for Kimberly? No? Great. Would anyone else like to testify at this time? Okay, so for now we'll close public testimony and we will reopen it after the presentation. So we'll move on to D.1. which Lanai High Altitude Platforms drone project proposed by the Research Corporation of the University of Hawaii. So I believe we have some presentations.

Mr. Bryan Esmeralda: Aloha everyone. Mahalo for the opportunity to speak this evening. My name is Bryan Esmeralda from Munekiyo Hiraga, and I will be presenting some background information on the project, and the Use Determination that was filed with the Planning Department. After my short presentation I will turn it over to members of the team to give, to talk a little bit more about the project itself and some of the more technical aspects of it.

So the applicant for the application that was filed was the Research Corporation of the University of Hawaii (RCUH). And again, Munekiyo Hiraga is the land use planning consultant for the project.

As has been stated, the project's purpose really is really two-fold. The first is to perform test flights to test the feasibility of providing low cost global wireless network coverage. And the second is to collect beneficial environmental information for the island of Lanai relative to watershed characteristics, intro-water resource characteristics, ungulate management in support of agricultural and conservation efforts on Lanai.

As was stated in the letter from Kurt Matsumoto, it is very unique that Lanai was chosen because of its isolation. The flat land, dominate trade winds and clear air space south of the island were some of the aspects that were looked in selecting Lanai for the location of this project. And the location of the field where the aircrafts will take off and land is located just south of the airport. You can see it's noted on the map here on the slide.

In terms of land use considerations, the project, or RCUH was given right of entry to approximately 200 acres of land on tax map key 2-4-9-2:61. The State Land Use, Lanai Community Plan, and County Zoning designations for this area of the property are all Agriculture. So although this type of use is not outright permitted on agriculture lands, through consultation with the Planning Department in recognizing the potential for agricultural benefits, the applicant was instructed and encouraged to prepare and file a Use Determination application for review and action by the Lanai Planning Commission. Again, just to clarify, tonight's meeting is just an informational workshop so action on the application will come at a later date.

In terms of physical improvements, again, 200 acres of land. The majority of this is intended to serve as a take-off and landing field for the aircrafts, so it will be kept in a mostly mode state. And in terms of, you know, physical improvements, the site will host a 10 storage facility

for the aircraft, three temporary field workstations and office trailers, a portable comfort station, and a generator to provide electrical power. These are all temporary improvements. You know, following the testing period, they will all be removed from the site.

This is just a quick overview of where the 200 acre portion is in relation to the airport. So the 200 acres is that circular area. And if you noticed off to the side, on the bottom right, a smaller circular area is where the physical improvements will be. It's sort of at the corner of Miki Road and Kaupili Road, across the Miki Road from the solar farm.

This is just a close up view of the mode area. And then a site plan for the temporary equipment that will be placed there. So again, storage tent, portable office trailers, a comfort station trailer and a portable generator. And an aerial photograph of that site.

So I'll just quickly go through some high level points and background information of the project. And again, the project team will come up, following my presentation, to get into a little more detail about it. But basically the HAWK30 program is developing new airborne overhead communication which would provide strong wireless service everywhere including areas that don't currently have service, and including over the ocean. Again, along with this wireless service...the aircraft -- sorry -- are able to provide additional services including as we mentioned water resource monitoring, ungulate monitoring, information relative to public safety, disaster preparedness and search and rescue. Those are some of the other capabilities of the aircraft. Again, the focus of this project is to support agriculture and conservation on Lanai. I just wanted to mention some of the other capabilities of the aircraft.

In terms of how it works, I'm sure they can explain it better than me, later, but basically radio relays on the aircraft will project the radio waves downwards to the surface of the earth. Traditional cellphone towers project horizontally. In addition, sensors that will be installed at various locations to collect the watershed and additional data will be placed along the island and the aircraft collect the data from those sensors as it passes over them.

These aircrafts require less transmittal power than do traditional cellphone towers, and they are able to cover a wider area with less transmittal power resulting in, you know, strong, reliable wireless service and a broader network of coverage.

So in terms of the aircraft itself, it's an unmanned, low speed, high altitude drone, solar powered, and propelled by 10 electric fans. The aircraft has the ability to fly above jet traffic between 65,000 and 80,000 feet for up to six months.

In terms of project phasing, the proposal is for what is being called proof of concept, so basically testing the ability of the airplane, the safety, and testing the technology. And if at some point, if following the testing Lanai proves to be viable for this technology there, we would look at additional phases including, you know, certification, further certification by the FAA and Federal Communications Commission, and at some point, a more permanent operation if Lanai proves to be viable, you know.

And in terms of the watershed research, this is meant to be in partnership with Pulama Lanai and existing DLNR watershed conservation efforts. The sensors and the software applications that are being developed for this project will be able to provide continuous monitoring of the Lanai Hale Watershed, and will report on data such as water levels, soil water content, wind and weather, and water quality. The data will be collected by a team on the ground with assistance provided by students at Lanai High School through a STEM program that's currently being developed. This program will also introduce drone work aeronautics and flight safety training into that curriculum. So providing that educational opportunity for the kids at Lanai High School.

Again, other research capabilities of the aircraft: surface watershed monitoring, subterranean ground monitoring, and ungulate presence and associated effects of that.

In terms of the Use Determination application that was filed, as mentioned the area -- this area of parcel 61 is zoned for agricultural use. However, through consultations and discussions with the Planning Department because of the potential for further understanding the state and threats of natural systems on Lanai related to ag, a Use Determination application was suggested that be filed. So in that sense, you know, the project can be considered in conformance with provisions in Hawaii Revised Statutes Section 205-4.5 and Maui County Code Section 19.30A. Specifically 19.30A states that other uses on ag land that supports agricultural purposes and that are approved by the Lanai Planning Commission are permissible.

Okay, so that concludes my presentation. I'm going to turn it over now to George Purdy.

Ms. Preza: Sorry, I think we're going to wait for public testimony. I would like to hear all the presentations prior to that please.

Mr. Esmeralda: Thank you Chair.

Mr. George Purdy: Aloha everyone. Nice to see I draw the crowd.

Ms. Preza: Sorry, could you please speak into the microphone? Thank you for our record.

Mr. Purdy: Aloha everyone. So I am George Purdy. George Kauhi Purdy the fourth. I am 11G to this aina. So speaking of that for us to look into the future we also need to look into the past. So my presentation here is how I came about this. So it all started from 2008. You guys remember that large brush fire that we had in the basin around November? That's unused ag land. That's the same time my mom passed. I was on Maui, but we actually had pre-fire planned that situation that when actually happened. And we only did it by just walking on the ground. But because agriculture left this island, it left an agricultural wasteland. And what is unique we've been part of organizations that tried to do something. Go out and farm, try to get land, but technology now after getting into this drone industry and for me to just get

into it, I have to bring up 2014, the Lanai Planning Commission crash. That's what really sparked me to get certified by the FAA. This is the first, fully certified when had no rules. I wrote my own book. I learned the system because I'm 21 year fire fighter at the airport. I'm a veteran of two services, a husband, a wife, and three kids. This community has helped me raise my son, my daughter, and my new to come. So this community here is so special.

Even after 2008 recession we had people losing their jobs, getting pink slips. Just seeing the economy and see people leave because there's nothing. In 2012, I wrote a document upgrading Hawaii's emergency response and Lanai, to me, had showed all the attribute of all your airports are below water. This island is like the Pearl Harbor of Hawaii. Our elevation, our community is so tight. They trained me in the incident command system. I took all the training. Linda Lingle's task force when we had Hurricane Katrina came and visit this island. In our meeting, they stated that if the State of Hawaii got wiped out, Lanai, you better plan for six months because nobody's coming. So part of that training I felt defeated and little pissed off because part of the training tells I will get help, this community will get help. From that point on, I decided how do I make things better from my own kuleana, what can I do? That led to the drone operation.

That night that that plane crashed, seven months before that we actually pre-fire planned as part of our airport disaster drill. First, ever, off airport in a situation that actually happened. It was chicken skin. It happened exactly the way we planned it except it was a mile away from the airport and 9:27 at night. 12 minute response time, from the time we saved the first three that were survivors, 55 minutes to an ER in Honolulu. That's better time than any other place for an isolated island. That is because we work hard to do what we do. I protect and I serve, number one. So that was my relief that for the drone, even though it was a 12 minute response time, it bothered me for two years. Because if I had that drone, I would have cut six more minutes off, and that on the heart is fricken hard. Then you meet the families. That's the environment I'm raised in, and I serve in for this community.

We had people, elders walk off, disappeared into the ag land. Can't find them. That's hurtful. So for me, I'm bringing the professional and responsible application of drones. So what would happen in the US when government started shoving drones down the community's throat, they used the policemen as the poster child. What do policemen represent? Invasion of privacy. Firefighters are known to go out there, put their lives on the line, and save you. So they should have used firefighters as the poster child to introduce drones. And this was said at the national level, and they finally agreed, and this was FAA. Once they realized that I was an airport firefighter, I was the only airport firefighter in the whole country that started his own company, veteran run. So this is where I started to gain notoriety.

For your two aircrafts that you said that crashed, there's one in the Smithsonian. We actually have a community member here went to the Smithsonian and found the Pathfinder, a successful flight and landing. So misinformation. Airworthiness is a certificate given after testing. That's what's all in here.

Today we have the Part 107 all those rules. I flew to Washington, sat there and created those rules knowing that there is future for me and this community in Hawaii. Nobody up there could figure out how to operate drone safety. This guy on this island, 11G's figured it out, and they respect me for that. Through traveling to all these conferences and whatnot I met this team. I could not have gotten this to happen if they did not respect me. That's tough.

Five years ago we started the STEM program on Lanai. Women and Tech sponsored by Maui Economic and Development Board gave me a shot. I taught the first drone 101 class on this island, kindergarten to 12th grade. We had 10 to 15 at a time. Through those conversations with these kids, they ask uncle, this is great stuff, but where am I going to go with this? Oh, I said, uncle's got a company. My company can't grow if I don't have pilots. So I started planting the seeds five years ago. But that had bothered me because I'm only a small company. There's not an institution in Hawaii that gave me a shot. Everybody said the government is going to shut me down, no money. But here I am speaking. I helped 32 fire departments in America set up their drone program. Hawaii is still late, and the expert is right here. Well, that's okay, they can call me back later. I figure you know what I need to go to the next level. I need to accomplish creating that pathway from school to an actual physical reality that they can see. I only wanted a small little drone test site, one I could afford, nobody gave me money. Just so happen my little, little bait, meeting these people, like auntie said, I caught the biggest damn ulua on the planet. But right now it's a tag and release it. We didn't eat it. Conservation. It's just tag. We can look at it, we can examine it, we can test it. Turn it loose to make more babies. Simple. More babies, more jobs.

So for the cycle of Lanai, construction, new owner, remodel, construction. And then we got no construction, down in the jobs people leave. We now can create vocational programs to teach, retrain the talented people here. It's very resilient.

Cell phone coverage a big deal on this island. That boy that spoke up here earlier, during this last hunting season, an ATV that he was driving went off 150 foot ravine. We were in a location, spotty coverage, we were using our phone, we had an app 360. I at least had an idea where he was at. I had no clue. This graduation year we would have had a funeral, and it would have been my son. But I can guarantee you because I got these drones, I would have find him like that. Done. Look at Amanda Elders getting lost in fricken Haiku area. These are little things that we got to think of, and what is unique about bringing this project here with all this communications, with all these applications, this community now can come to the table and set up a communication's plan with companies to figure out what they want, how much speed do they want. That has never been done on the planet, anytime. So a part of one of our mission is being a global leader. We pull this off, everybody would be following us. In emergency services when we do have an emergency it's site specific, so you only take care of that community. Anything outside of that can be different. But to address the situation in the right way is this right here. We talk. That's why I love about this place. They no like you, they going tell you right to your face. But then they get over it and start over again.

So the history is huge on this island. Auntie said people dreaming about, you know, I didn't realize that that's where I met auntie to dream about having that health center there. I feel honored that they even put me in that, that category. I don't feel I'm worthy, but I just do what I got to do. So to hear somebody come out, it's your opinion, that's good, but I going give you other aspects. We finally got hospice on this island. We get family that can't come back here. Just to be able to Face Time somebody, on the bed, in a room, a child, a friend, that is precious. So connectivity, we can find a balance. 5G, it's off the table. We listened, it's gone. But there's other aspects to this whole project. The part that was root that was missing is solar power electric aviation. Lanai has to bring fuel in, five to six dollars. Our electric bills is four to five hundred. If we can sustain using this drone to show electric powered flights is viable and safe, just imagine electric powered aircraft with an hourly rate of running of \$200. That's what the HAWK30 does.

NASA in the 50's and 60's, they were so afraid of their own calculations they're sending monkeys. So if the thing crash, oh well, you didn't see peanuts chasing them back then. This is just relevant so when we look to the future we look to the past, so I really, really did my homework and brought the best. And there were other people that they were rude in the last five years. I already know as the gatekeeper of this place, I'm not bringing them. But meeting Gene, UH, it's a perfect match. They came. They actually go out there and work and get dirty. Now that's respect, whole hana all the way down. And we went out there that land gave us chicken skin. That place showed us zero wind, and that's what this aircraft needs. And that's huge, to find that special place like in Pulama's letter, a place that everybody thinks is desolate, has nothing to offer. That project here will protect this airspace, this land, the way it is today because we need it to stay that way to maintain this future. Now that's power. The only reason why people started now to attack us, for me, that means we're on the right track because everybody else wants 'em. Makes sense? We not going to get attacked if we frivolous. But that's why I know we doing something good. This community who spoke up and said good things, I know I did my job. Five years of education had bring down the cowboy drone pilot to professionals. That's what I had set as a standard as a goal in teaching, and my company teaches. We've got a crew from Samoa coming to Hawaii to get a drone certified, go home to their country, and promote the same aloha. That's why we're different. I saw that and it took a while to get where I am, but it's what up here, the mana'o. Right here, my mana. This nobody get and this came from up here. This can burn, but it's here. These guys saw that. My company was chasing money. Nothing. As soon I stop chasing I get attention. How the hell does that work? But guess what? Look? They all here. We listen. We want to be one of those private companies that don't want to be like the other guys pushing down your throat. I learned that with the drones. You guys mention 5G dangerous, cool, I'm a fire fighter. I make decisions that put peoples' lives in a situation at any time. I take the information. I heard you. Pau, gone. That wasn't the purpose. It was just . . . (inaudible) . . .

And the thing is in radiating over Maui -- you, computer science, technical -- things can be adjusted. On the FCC list that we get, it will only radiate over that south agricultural bench. We chose that whole area out there because no nobody. We want to just prove it's possible.

So the next thing for the agricultural bench is the last 29 years nothing has grown. There has nothing been out there to see what are the effects. What the status of where it is today. By having this types of technology and what I do for the last five years flying around agriculture, movies, rescues, we see it all. I have the resume to prove to do it responsibly and that's what I brought here. For me, it was to show the kids dream big, uncle going help, but I going need you to come here. I brought the canoe here. I'm the steersman. Now I need paddlers. That's what I want. And if it's only an opportunity and it's short, at least they saw it, they touched it. They knew once it was real. That's big.

Like I said, I grew up in Ulupalakua. I grew up paniolo. I know that mountain like the back of my hand. That area reminds me of here. I found my fire station and my community here. I ain't going anywhere. I want to retire soon. But do I want to sit under the old man bench and just drink coffee? Hell no. With the restoration plans that we plan to do here, I mean, I'm excited to bring this tech, to actually go out there, get intelligible data that we can make fricken good choices and then apply the remedy and see if we actually accomplishing what we want in real time. Not wait 20 years. We can do monthly, daily. And the best part of this is this information that we getting is going to go to the school. Elton's letter. We going to have the first school that promotes and gets drone pilots. They got a job with me. That's \$375 an hour. Simple. An aircraft, almost \$2,000 an hour. Which one would you hire? If we can increase yield or take the status of what 29 years of sitting out there, take that information and actually go down the data base and pick the right plant to grow in that area instead of trying to plant something that needs water. There's ways to slowly change the environment back. And just being on the land you understand coming up from Manele, there's that temperature change. Why not pull water out of the air? There's devices we don't even have to touch that mountain. The more trees we plant, the more water we capture, we can regenerate our water. We can get our lo'i flowing again. We can have more water than we need. But that's 60,000 acres that's barren, it ain't going to collect anything. It's only adding to climate change, period. But here are the tools that we can see videos and pictures of what's happening, the chemical composites that can be pulled from these sensors is amazing. That's what these kids here had learned. They're coding. We had a set of twins here, they're in West Point. They won the Daniel Inouye award for STEM. They created an app that located all the fire hydrants on Lanai for the fire department. Because here our firemen rotate in and out. They don't stay long. Some of them do, some of them don't. So the new folks coming in are still maintaining that high level of response.

So for me having that drone, picking that site, starting in the ag district, is 60,000 acres, we're eliminating any possibility of people and we're going to map. We're going collect what has happened for the last 29 years without use. What are the effects? Where is it at now? Then we can go through the database with UH partnerships and figure out what to do. Test in small locations and done. But aircraft is here flying, we might as well use it. It's free. We don't have to pay for it. Students will be out there rubbing elbows with the smartest people on the planet. That's the kind of people I want hanging around my kids. How often do we get that? And just remember on this project is this face that brought the team together. Me. I've heard people out there say all these big shot names but who's this guy? The local guy. Everybody

kicking the local guy in the nuts. I'm like what? But this community backs me up. Got to get the full story. There's history here. Our roots is deep.

So other than that, like I said, this technology saves lives. This technology in the life-saving issue is an island saving issue. You treat this island with patient. Nobody sees our islands that way anymore. You got bleeding, direct pressure, figure it out, assess. That's my mindset. I'm taking my training in figuring out how to take it . . . (inaudible) . . . It's that simple. Treat this like your grandma. You don't want your grandma going to a veterinarian right? You want the best doctor on the planet. Guess what? We brought the best doctors or teams or tools to help us give the right diagnosis and the right remedy. That's the power of what we're doing. But we're doing it because the people want it. They understand. We share information. Like you say, we need information. Well, a lot of this path that we on it's brand new. But all the safety that is ever needed for my community it's right here. This is how I keep all community safe, but understanding this because I built it. I understand it.

Why Lanai? In the presentation, out there is perfect and I just asking for a shot. That's it. If it works, it works. But that aircraft did fly and did land, and so does NASCAR. NASCAR is always running around and crashing, but they improve our cars. Tesla, the same thing. That's just our human nature, to improve. Hawaiians were able to take something, adapted it, and make it better. That's my DNA, 11D. 11G? 5G got to catch up. They actually, this is faster. But I radiate friendship and aloha. All I ask is for support. Because look at the wildfires you guys went through. It's going to get worse. This tech because of wild land fires we had here, you now will have actionable data as an agriculture and a farmer how to plant things that won't burn and at least put more CO2 back into plant life and take it out of the air so we can control our climate.

So that's all for my presentation. So just remember, it's me, the team. But it was years of travel and if anything it's life safety. That's the way I think. This is mama earth. And like I said, my son, spotty, I don't mind improving the cell phone. We currently have 4G. Everybody's happy, but we've got dead zones. Like I said, I would have lost my son. I wouldn't be standing here today. I would have been depressed. But I'm glad he's here. He's going to Minot University, become an educator, he come home and teach because his dad, his mom has raised him that way. He'll come back and teach the next group. And then I've got my small one. He's three. He's my retirement partner. So the master of that place going be out there is the little guy, Luke Skywalker, but we call him Hawaiian Skywalker. And that was given nicknamed by Mike Carroll. But other than that, this to me is the give back, the opportunity, the chance of our future of our kids to do something. You know, work smarter, not harder, and that's the key behind all of this. We can do it safe. You plan the mission, you fly the mission. That's it. You deviate, then, yes you're negligible because you may cause harm. But I've crossed my T's, dot my I's, but Mother Nature is still in charge. We can do our best to be prepared to fly. Said you flew with those guys in Kauai, stuff happens when it's an experiment. But if we figure that it keeps crashing and we all figure out how to make it fly, then I might as well go under the bench, go drink coffee. It's that simple. But if anything else, that ends my presentation.

So that was the history of where we got today. I'm not the expert. I'm just a coordinator. And I come from the community's point of view and an educator. So my application on how I going help this island, I treat it like a patient. It breathes, it bleeds. Those are remedies that we as humans have control. Folks who donate money can see money being allocated, spent wisely. I've seen programs just spend money and just spit bullshit. I'm tired of it. No can. We no more money. Sorry for the other ones, but that's just the way I feel. This is from the heart. So hopefully I got everything squared away, and hopefully I make this community proud because you guys have made me proud to actually get it here. Yes, certain things came up before certain things came up. My team will help explain. But if anything, I take the blame. It's me. You know we're on an international level chasing this. So I wasn't playing in the United States. This was the United States chasing other countries who wants this. But this is for Hawaii pa 'aina. We the people can make this happen. So mahalo for my presentation. Thank you guys very much. Do you guys have any questions for me?

Ms. Preza: Thank you. Sorry, we're not going to do public testimony questions at this time because I think you have other presenters, so we'd like to hear the other presenters first and then.

Mr. Purdy: Okay.

Ms. Preza: Thank you so much.

Mr. Purdy: Thank you.

Mr. Ted Ralston: Bryan, can you find my presentation on here? I'm too old to figure that out. So wanted to --. I'll introduce myself in a second. I just wanted to reinforce some of the points George made. This man is actually a nationally respected agent and activist in this world of drones. I've been to meetings in, it was with George and the FAA in DC, in Alaska, in Las Vegas. He is called upon the FAA to speak to the FAA. This man has educated the FAA about itself in certain areas that are very important to move forward in a world of drone. A lot of it is because he's a fire fighter. Fire fighters are problem solvers. They follow the incident command system. They don't take no for answer. They get the job done, and then they answer questions later. And that's pretty much the mindset that George uses in everything. And I will say that just editorial I used to run a TV show on Honolulu and George is on it many times. But we have a problem because he has too many bright ideas for that half hour we have on the TV show. So we had to call him back, hey brother George, no more . . . (inaudible) . . . and get it done.

So let me just, if they find my pitch here. There we go. Ted Ralston is my name at the University of Hawaii. And I was born and raised in the plantation in Waimanalo, on Oahu, last century, the dinosaurs still going around, Earth was had ice on it and like that. And I, I had the distinctive and great pleasure of becoming a part of the civil air patrol which is an Air Force outreach to kids in Hawaii, in Waimanalo, in the 50's and 60's. 50's and 60's, got it? And I

got to contact aviation. I got to contact airplanes. I got to meet adults who cared about me and my interest in that subject. And I was so excited by aeronautics and aviation that I decided to make that my career. The problem was we didn't have that educational track at UH. I had to go to the mainland and learned all about cold and learned all about the mainland, and decided I didn't want to be on the mainland, but there was no place I could go after I graduated so I just stayed on the mainland. And, and I'm retired, long since retired. But anything I can do to make it possible for kids here to contact these kinds of technologies that might be interesting to them and then find a way to generate an avenue they can be a part of and business that they can get good at, and generate more copies of George Purdy and populate the world with the kind of thinking that is growing right here on this island that is so valuable.

Anyway, let me get to the formal material I had here. These are pictures and some words, and I'll try to talk myself through it. And we've got two others. We've got one other power point presentation and then a verbal discussion.

First of all this HAWK30 Lanai Program, HAWK stands for the, is the HAWK, is the mascot of the company in Japan that's providing this. 30 refers to the latitude, plus or minus 30 degrees where the sunshine is bright. For a solar airplane you care about latitude. The sponsors, HAPS Mobile in Japan. HAPS that abbreviation stands for High Altitude Pseudo Satellite, or High Altitude Platform System. Take your pick. It just means an airplane, that's unmanned, flies in the stratosphere for a long, long time to do whatever mission you want, communications, information transfer, science experiments, whatever it might be. In addition, aero-environment which we heard about earlier from you is a partner on this out in California. And Alphabet Google Loon is another partner in this. Google, of course, is interested in access to the internet. HAPS Mobile is really interested in connecting societies around the world by information. So, that's what's behind it.

The purpose, as it was indicated in Bryan's pitch, is to provide solar powered, reliable, stratospheric broad band communications. Broad band because that's what the world is heading to in terms of internet of things and tele-medicine and such that George referred to. And stratospheric because you can get the job done for one ten-thousandths of the output transmission power that you can by these big, gigantic radio head cell phone towers that we have on earth. So it's a dramatic reduction in power required to get the job done.

Engineering verification for this program is being done right now at NASA Armstrong Center which is a part of Edwards Air Force Base Complex. That will be July and August of this year. And the purpose of that testing is to verify the structure that controls the human interface, communications, all aspects of that airplane have be checked out at low altitude in the restricted airspace at Edwards. And to the question that got raised earlier, this airplane is not being run under 8134, it's being run PAO because this is a whole different document. So you won't find an 8134 until perhaps three years from now if that path is chosen. That's just a technical detail among us. We speak those kinds of terms.

So anyway, engineering verification, July and August. That plane will not come out here, will not move from Edwards until all of the engineering is satisfied. All engineering and structure, and software, and operations, and control, and the airplane is declared safe to operate. And then it will come out here. And our planning for Lanai, I have one in red here, the proof of concept is what we're intending for this year.

Proof of concept is one flight. It may take two or three rollouts to the field to get one flight, but it is one flight. It's one flight, 30-days in duration, and then back. And that's it. And that's what the proof of concept is all about. And it means a fairly exhaustive evaluation of reliability and of flight characteristics and of our work with the air traffic management system, and weather prediction, all those things coming together to promote that 30-day flight. That's the end of the proof of concept. And that's all we're asking for in this declaration of, or this identification of land use is for that one proof of concept flight.

At the end of that period which we hope is within the calendar 2019 is to then sit down and decide how we're going to proceed forward. Is there adequate technical margins here? Is there adequate business margin? Is it going to work? Is the proof of concept . . . (inaudible) . . . ? If so, then a certification program will be considered. A certification program will be about two, maybe two and a half years in length. And that is where the FAA will now get involved and certify the aircraft under certification rules that do not yet exist. So in addition to certifying, the rules have to be created because FAA has never certified this kind of an aircraft before. So that's kind of a joint venture with the FAA. And I might say that by congressional mandate, the FAA is mandated to go figure out how to certify this kind of aircraft and certify its operation. So they are looking at this in a very positive light because they need a program to wrap themselves around in order to achieve the future.

If that's all good and that works, a phase three would be an operational phase which would start in 2023 or after something like that. And of course each one of these phases it would be preceded by a visit to you here with a complete picture and a complete story of what we anticipate and hear your feedback and such. So this is just a one shot deal to get the proof of concept done and then we decide to collectively to go on from there.

I also want to say also that echoing something George said the proposal we put in had 5G in it, a lot of 5G in the various newspaper articles. So much huki huki came in the 5G, we just cut it out, gone, pau already. And so no more 5G. 5G will come back into the picture when the community of Lanai decides to, or if some other community has that in mind, fine, for yours, you get it. But this community will decide for itself what it wants in terms of communication protocol, wave form and such. And we can get the job done, the overhead collection, and the overhead analysis, and the watershed work, agricultural work can all be done fine on current protocols, 4G, and even 3G. So 5G is off the table. It just makes it a lot easier.

The reference here is referred a little bit. The Pathfinder in 1993 and 1998 flew a number of flights in different configurations in various test ranges across the country, now hanging in the

Smithsonian. This airplane is actually went back to that basic design to avoid the problems that we've heard that generated a couple of crashes and some initial off shoots that NASA created. This goes back to the basic design. And what it does is it adds in more modern solar cells for much more efficient solar collection and much more efficient batteries which weren't available then. Batteries that generated out of the auto industry basically. And by getting those better batteries on, the fossil fuel goes away. So there's no fuel on this airplane versus the ones that were earlier had fuel on them. So that's kind of the big picture and if you can hit the next slide.

There we go. One of the questions that always come up and we've answered it a lot, but I wish it would answer itself is what is the advantage of Lanai? By the way when I went away to college, it was Lanai. I came back after for years on the mainland, it was Lana`i so I'll try to get it right. But the advantage here is many form, and I just wanted to take you through what they are. First of all, we're already in the 30 degree latitude. Man, we're about 22 north, so we've got pretty good, abundant sunshine here. Great. Flat fields that came by virtue of nature and Dole prior to that. So the flat fields, zero slope, perfect for a landing field or a take-off field for an aircraft. And they have, in the sea bank, there is grass. We noticed that by cutting down to the ground level grass comes up. We've got grass. And George will keep on cutting it. Where is George? Cutting it, and it will just turn into mulch, more mulch and finer grass fields. Available by the way, for more than just the one take-off and landing that we're going to make, we can do community events there. The training for the school with UAD as you suggested. That's a fancy word for drone. And all of that can be done at that field. So it's useable for way more than just the one flight we're going to make.

We have a very favorable air traffic control system here in Hawaii. It's called HCF, Honolulu Control Facility, is the key term. This State, unique to all the States, the entire airspace is controlled by a single entity and a single agency out to 250 miles from all the coastlines. So that's about 500 by 900 mile footprint on earth, single control. So it's very easy to operate and manage something complex like a stratosphere aircraft in that environment. And we would have I would say a very understanding and very creative folks in the control center.

Night operations, there's no traffic at Lanai Airport scheduled after about eight o'clock at night till about seven in the morning. So the night is basically dark. In fact, runway extension is going to shut the airport down for about year at night and such. Our plan is to operate, in fact, our authorization would be to operate only at night. This airplane only will take off at around midnight or something like that and it would return between midnight and five in the morning 30-days later. The reason is there's no other air traffic around, and also the weather is much more compliant and benign at that time. And that operation is no conflict.

Favorable winds. The winds in the central plain believe it or not is very tolerant to this type of aircraft. Low winds and low turbulence so we had been surprised to find that out. But as George -- of course, George knew it all along because he can see. The dirt doesn't wind roll, and the trees, the brush grows straight. That tells you that there's no significant surface winds running at all times.

We have a safe path to the oceanic airspace. I'll show you the airspace path in a minute, but basically you can see this picture. I took it from the airplane, and that red decker is about where the field is in Kaupili and we just go southwest, just about five minutes over the island, and then we're over the ocean. And I'll show you that path in a minute. But the total exposure to the island is five minutes on the outbound, and five minutes on the inbound over unpopulated area. And if there is anybody who has any concern about a specific location there we can avoid that. Just need to hear about it.

One flight, 30-days, as I mentioned is our target for the, for the proof of concept. It's important to know that this is a -- even though people talk about a large wing span, this thing is really a slow flyer. It only has 20 horsepower on it, and it weighs about 3,000 pounds. Craig's airplane at the airport is about 2,500 pounds, has a 150 horsepower. So we are way down in power density, and way up in wing span. The span is high to get a lot of solar cells on it, and also you can get a high air dynamic efficiency. But the power is so low, when you're depend on the sun you're looking at low power. The thing can get out on its own weight. It only flies at 20 miles per hour. Anybody in this room can probably peddle a bicycle faster than this thing can fly. So it's being very slow, it's okay in small spaces. It doesn't mind that.

We have good test cases for robust, for the need robust communications here on this island. We've already heard that from testimony from George on getting down the cliff and having no connectivity. Maunalei in the valley getting information from the watershed there's no radio communications down there. The sea cliffs and such, so we have great test cases on this island for evaluating the effect of overhead communication. And we have great test cases for the public value. The watershed, public safety, communications in times of disaster, and there's no end of immediately identifiable values because we're kind of in a concentrated location here.

Last is this is a great program to inspire our young minds. Years and years ago I had a young mind and I was, as I mentioned, really inspired by being able to talk to people in this business, sitting in the airplane. I got my flying license when I was 16 in Waimanalo. Yeah, I just can't tell you how cool that was to do. So I want to have cool stuff for kids on this island to do, and kids on my island too. I'll send them over here.

So anyway, that's kind of why Lanai is so advantageous in this domain. There's no other place in the United States that has the combination of flat, the wind, and the air space compliance you might say, and tropical environment. This is it. And United States, to be in Hawaii is to be in the United States, and from a regulatory perspective, FAA and such, that's an extremely desirable position to be in because it is as open as any country is to experimentation and to create development.

Next chart, sir. The role that UH has in this program is basically we're under a support services contract to HAPS Mobile, who's the sponsor, and that --. There are three terms in that, in that contract. One is the agricultural and watershed technology incorporation, and

Dr. Brian Glazer is in the background, and Gene, he's going to be your passenger going home because we're going to keep him beyond his airline time. Anyway Dr. Glazer will tell you more about the technology and such. Have some samples here to talk about how that fits in the watershed picture, and watershed of course kind of important to agriculture. Second role is site preparation, which means locating it with George's help. Getting access, approvals, office trailers, shelters, shipping, power, internet, all the things needed in a temporary operation to get going. We're sort of camping out down there.

And I wanted to address the concern that Council Member brought up about, you heard irreverence, and lack of respect and such. Let me say that we've learned something in this program. Again, as we've all said, no one has ever done this before. Everything is new, for us, the FAA, and everybody including our planning people who have never seen this before. So we're all learning as we go along here. The other thing we're learning is that the commercial sponsors such as Soft Bank they have to see progress. And they measure progress by physical reality. Paperwork doesn't do them any good. Promises, no good. Plans, interesting. Show me something real. If you don't show me something real, I'm out of here. So we were in a foot race and still are with another country that would like very much to take this business away from us. We cannot falter on any step. And other countries are like that. They're, they'll go after this kind of business. So we have that issue. We had, as a result of the commercial pressure and a result of someone . . . (inaudible) . . . about NASA's readiness to do testing this June. They situations with mud, in the mud flats, they're in the dry lake, become mud flats. We had to have several different configurations of our program here in terms of the location. There's going to be a rectangular site, a circular site, and we had different locations of the equipment depending on what the nature of the testing would be. We had two different arrangements of land ownership or land access with Pulama. All these variations weren't settled until maybe six or eight weeks ago when they finally settled down. So we really couldn't put in our, our, our proposal to you until we had that nailed down hard because what you need in that, in that documentation is exactly what you see when you drive down the road. So that's why we're late in getting it in.

But I'll say that trust, and the trust that I'm speaking of is knowing George for seven years and working these things out together. Working with the community. Working with school. Seeing how everybody thinks together and wants to make this program move forward or any program move forward, frankly to bring STEM an opportunity with the kids. And believing that our, our leaders and LPC and such would see it the same way. I consider that trust. So we went on trust that we can take these latitudes and move forward realizing we're, your permission is going to have to follow behind that. What a true level of distrust or poor performance would be not to have brought the program here at all. Or to say, no, we're going to have to stand back and wait until this happens and then find the program go away. And so that's kind of like Elton Kinoshita meant or wrote in his letter. He said, hey, same situation, this is different folks. Education is different. These are different. We've got to be in a more flexible, agile but, but accurate way to go forward.

In fact that brings me to another point -- not on here. But as we do move forward we're going to have new information generating all the time like the NASA testing. We don't know what that's going to produce at this point in time. We don't know if that's going to get us behind schedule or what it's going to do. We need some way to bring you, the community, information, but we cannot do it and violate the sunshine law. So we have -- so we can't communicate with the LPC, I don't believe, except by putting newspaper articles out and such. So I'm just throwing out to the group at large here. This is going to be a fast moving issue with changing information that we have no control over. And I'd like to think of some way to bring it to your collective attention just so that everyone knows what's going on.

There we go. Okay. I think you're our new PIO. So we have site prep. The third, last thing, and this kind of come up with you talked about a little bit, FAA authorization. A really complicated area. Nobody really under -- it's hard to understand the FAA's level of authorization of what's called public aircraft operations. This aircraft is being operated under PAO, Public Aircraft Ops. You can find in US Code 49, and it is a method within the law where aeronautical experimentation is permitted provided it's for the public benefit. No commercial operations associated with it, but testing all the way up to preproduction operations which means certification. So we can run cert program all the way up through, under PAO. Once cert is done then it switches over to standard FAA civil certification. I'd be willing to talk to you more about that. It's a complicated subject.

The last thing, I didn't put a number on here because it's not our contract, but UH, right? Our idea, everything we do has to deal with local interested in STEM, get the kids going, give them something to talk about. My particular component of that is aeronautics, and I love to talk to that all day long, all night long. I'll be here tonight, we can talk about -- afterwards we go talk airplanes. I'd love to.

Future opportunities for this island, I look at this island as like my village on Oahu, of Waimanalo. We're kind of the same way and so I'm looking at opportunities there for kids as well and we got to pay the way forward. Now we all got something, when we were growing up we all got something. We got to leave something on the table for the next generation. You know five more years, you may be looking at the grass on the other side, right, so I got to do that now. Next chart.

Okay, you've seen this picture before that Bryan showed. Basically take-off and landing is just a flat dirt and there's rubble area around it for an overrun if we need it and then a location down here where a month ago when this picture was taken nothing there. Now there's a tent with temporary insulation. Next chart.

This is a, this addresses a little bit the concerns that came up over here. These are two of the pictures in our documentation with the FAA which is called an Application for Certificate of Authorization. Lots of words. And there's, like, you know, 10 pages of verbiage that goes with this, but the essential piece is here. And the left hand chart -- I'd rather give you a copy of this if you would like -- is the mechanism of getting off the island and getting into a climb

corridor. So I don't know if you can, if this makes a lot of sense. But you can see Lanai up there and we have this green band that is a low altitude transit corridor from the island out to basically past . . . (inaudible) . . . to the whisky 194 warning area. And that has to be below 7,000 feet all the way and it has to have a chase plane flying over it and airplane circling over it because it can't --. Airplane chase can't fly as slow as this thing flies. So the airplane gets -- the HAWK gets chased all the way out to the brown area and the brown area is where the climb will take place. So that's a much larger area and it makes kind of a gradual, spiraling climb to 65,000 feet. Once it's at 65,000, it moves over to a much larger area, in the magenta over here, which is the flight test area. Because it's got all of these crazy angles doesn't mean the airplane is going to fly those crazy angles. It's going to fly back and forth. But the way the FAA designates the airspace you have to have lines and dimensions. So we have a large high altitude airspace to fly back and forth, back and forth, back and forth, come over Lanai, get in range of this location, gets down in the watershed, and it uploads the data. Half an hour later we're back over and get it again. So every half an hour or so we'll be able to get a snap shot of what's going on at Maunalei.

This is the part that I really hope we can make at the end of the day. This assumes we're through the Phase One, the Proof of Concept. It assumes that we're through Phase Two which is the certification program, and it assumes it has something going here for a long time. This would be an aeronautics future for Lanai. And this picture here is the assembly site in California where the airplanes are being built. It's a very inefficient transportation from California to out here for the airplanes. It takes 10 conex boxes to bring one airplane out. Each conex box has 300 pounds in it. That's it. It's mostly air, and light weight structure. If we can compress all that in parts rather than in assemblies and bring out an airplane in one conex box instead of in 10 and assemble it here, with people in a building like that, under of course, zoning change and all the things we have to go through for that kind of building. But have a competent staff out here, trained from the local environment to build airplanes. And then if we start --. Now we have a need for laboratories to test things. Now we keep building this skill set and keep building the training that leads to the skill set right here on the island. In my mind, there's no reason this island can't have an aeronautics copy of what's taking place in space on Maui. You've got all the super computer in Kihei. You've got all of the analysis going on. We've got PDC over there. There's no reason that that Lanai cannot have an aeronautic space equivalent right here on this island. So aeronautic careers on Lanai. And of course, right away we would be the test place for all of the public safety, agricultural, watershed, environment for this island and the County. Of course, STEM and the schools will work right along with it. And as George had made mention many times, global leadership can come right here off this island as it already has under this man's hand. So I say to you that is the real target. And when I go away, if that's what we have, I'm going to be one really happy guy.

And one chart more, I think, George. To the subject of watershed conservation and agriculture, I'll speak to an introductory chart to introduce Dr. Brian. Brian, back there, there you are. Okay. He'll be talking to us in a minute. This is just a simple picture of the water cycle in Maunalei. I mean, in Lanai Hale. We have cloud rock, first of all from the kaiopua

sitting on top of the mountain. And we have the, the elevation of the air from coming from the windward side condensing off the water. We have the cloud drop or dew drop or sometimes rainfall. That's where we generate the water for the island right there. And then we have places where the water goes. It either goes sub-drain in ground water like down in Papukea, or it's in Maunalei or in other places along the way. Even some siltation now going on in Maunalei Bay now over here that we're going to take care of. So there's different ways water is stored. It's evaporated, it's lost, it's transported. We need to understand that

And the way you understand that is by putting sensors in place, in places where you can't otherwise get information back from today. There's examples, Brian has examples of water level sensors. We already have a weather station and ground water measurements going on, even to the point of including fire hot spot sensors for looking out because the watershed care about burn too, right? So there's different things that can be done to measure what is important to the watershed and then radiate that, broadcast that, have it picked up by the overhead drone in a place where you can't get it today. It goes up there. It comes down to Lanai High School, Dave Parman in the back and his kids start analyzing it, connect it with Brian Glazer's website which is shown down here. And the analysis, the assessment, and the planning on what you're going to do, the reaction to optimize that watershed is what comes out of this process. So we have direct and firm tie between this technology, this airplane, and the watershed on this island, the water production it generates and that's the key to the future of agriculture on this island. So to me this is cool stuff, analyzing something as large as that from a system perspective understanding how to optimize it. One question you might ask, are the trees the right trees up on top of the mountain? Munroe's Cooke Island Pines, some folks say you can get much better water collection and that's one thing it could be explored.

So let me not talk anymore. Let me turn it over Dr. Glazer, and he'll tell you about the UH program that does this, not yet in the watershed because they can't get the information from the watershed. This program we can now add watersheds to the analysis flow that is part of Brian's analysis system called smart coastlines. And then we'll have Jon Sprague talk a little bit about how that might apply here in the improvement and the understanding in Lanai.

Dr. Brian Glazer: Aloha. My name is Brian Glazer. I was born in Pittsburg and I've lived on Oahu for about 15 years. I'm a professor of Oceanography. Not agriculture. I'm not an engineer. I'm not a programmer. I dabble in tech understanding how sensors can inform us to solve problems in the environment. The last several years I have been engaged with my lab and working with several different non-profits, working throughout the islands, mostly a fish pond restoration. And so the, the title that we kind of operate on is this idea democratizing access from my perspective, ocean observing. It doesn't have to be just oceans, it can be watersheds, wherever water is, wherever it's flowing, and other problems that are associated with that.

I'm a professor in the Oceanography Department at UH Manoa, and out of the work that we've been doing lately with some low cost sensors we've hit a niche. There's --. If we could pass these around. This one measures water levels. When NOAA goes out and installs a tide

gauge, it's about \$300,000 and it takes the team a month to install it on a computer. You certainly can't carry it around. That's about \$200 in parts we built, my undergrads at UH Manoa, and we pass them around.

This is another water level sensor. We are able to afford to build this using undergrads as a learning experience, from the Engineering Department in my Oceanography lab at UH. We can afford to give to 7th to 12th grade teachers in classes and have them learn something about streams, and water flow, and water management.

So from that we were encouraged to start a company just very recently. The ink is still drying on that paperwork . . . (inaudible) . . . as well as full disclosure we have no income in this yet, but there is the potential for growing this company.

So how many folks have been to Heeia? Okay, so I got my start thinking about ahupua'a management in Heeia fishing pond in 2004, and over the last five years we've taken a very simple problem, like as a researcher, a fund of oceanographer with master science foundation funding, I couldn't afford to put out sensors at each of the makaha just to understand how much water was flowing in and out of the fish pond during the restoration of the puka and how the hydrology of the pond is changing. That frustrated me. So in 2015, I said there's got to be a better way and started dabbling with some electronics and knew enough to get started and then was able to hire a real engineer to make what we do now robust. That's scaled now. We're supporting about 150 sensors in five states most of which are collaborating data back live to the web. You can go there smart coastlines dot org, and see the potential for some of this.

So having lived here for 15 years and worked really closely with, with Paepae o Heeia. I have an appreciation for the place, right, and I really love it. I go there and it still gives me, you know, chills just to go to these places and get the opportunity to work with fish pond groups. Being a trained oceanographer, I also try to think of these places like this, a box model, right. What I really want to do is understand how the biology, the geology, the chemistry operates within the box, the pond. What I need to know are exchanges represented by these arrows. What's being deposited, whether it's rainfall or pollution, what's coming in through rivers, what's exchanging with the tides with the makahas. If we don't have numbers on those arrows, right, how much, we have no idea what processes are occurring in the ponds. In order to put numbers on these, SGD, submarine ground water discharge, right, saltwater intrusion. All of these kinds of problems of mixing fresh water and salt water together in coastal zones, we need to deploy sensors to do it. If I get a grant from National Science Foundation, I have to buy a \$25,000 instrument, I get one of them, right. I put it out in the middle of the pond, it doesn't tell me anything at all about the next watershed, you know, two miles away. It doesn't tell me anything about the diversity within the pond itself. So that lead me to this sensor development type technology.

We're now working with the hui, about 15 different groups on four islands and 15 fish ponds. The first sensor that I passed around with the solar panel on, we got some funding from

National Science Foundation to do a workshop. We brought in about 30 folks from 15 different fishponds. Folks who are like me, aren't engineers, aren't programmers, maybe aren't comfortable working with electronics or sensor techs, and we built these in three days. We were funded by NSF and Kamehameha Schools provided the land on Windward Oahu to bring these folks together. It was so much fun. And each of them, then, at the end of the workshop got to go home, explain to TSA what this thing is and why they're trying to carry it on an airplane and then go home and install their own tide gauge in their own watershed. All of sudden hyper local tides are now a thing because we can afford to run this on a shoe string and give you an URL so that anybody with smart phone or a computer can now measure in real time what the tides are doing and not have to play that guessing game, where is the nearest NOAA tide gauge, and why is it three hours before I see high tide or low tide at my site.

Okay, so water is really the low hanging fruit, right. You don't have to be an oceanographer, you don't have to be an engineer to know that this is not normal. So a newly restored fishpond wall, right, this is a glimpse of our future. This was last year during the epic King Tides or high tides in December. Next highest tides is going to be maybe about two weeks from now, so probably some of you are seeing coastal flooding here.

This is Waikiki, right. So this is a problem and water is the low hanging fruit. And we now have a technology, a robust technology at low cost to be able to measure this at scale. So the way that we do is we capitalize on some of the emerging technology out of Silicon Valley, right. So without this and making inexpensive technology available we couldn't have done this. I mean, without some of the open source coding that's available to us now we couldn't have done this, but we are on the leading edge of applying some of that high technology to coastal watershed applications, and we now get high tide, low tide, high tide, low tide, just as well as the \$300,000 NOAA applications with a few hundred dollars in parts.

Last year, last January we had an earthquake up in the Aleutian off of Alaska. We all wondered whether or not we'd see a tsunami on our windward facing shores. At about right here the tsunami watch was issued. Three hours later the tsunami watch was cancelled. About six hours later, this is Makai Pier on Windward Oahu, we caught that 13 centimeter high tsunami wave with, again, \$200 in parts right next to NOAA's, you know, multi-hundred thousand dollar installation. So it was a moment of pride for us. We've had these sensors out for about four or five years now so we're pretty, we're pretty robust. It's now routine for us to add on new sites.

We were challenged by a group about two years ago to try to scale this from my lab to more undergrads and out to K through 12, starting with 7th graders anyway. So that's where we came up with the best acronym I've ever had. I won't beat this one: Strategic Monitoring and Resilience Training in the Ala Wai Watershed, SMART Ala Wai. So the streams that flow into the Ala Wai Canal, we wanted to engage 7th to 12th graders to not just pick up trash but also learn something about sensor technology, learn something about watershed science. So now the 7th graders who want to be coders, who want to sit inside, in the air-conditioning, and just

type, they're learning something about resiliency and coastal watershed because their friend wants to go and save the whales, right, or something, is getting excited from the sensor technology that they can help them use. The kids who want save the whales are learning about engineering and tech and coding because they have to. And they now have the capability because instead of the instrument that they need being \$15,000 that I would never let them have, now, I can afford to bring two of them on a flight for an afternoon and pass it around, right. If someone steals it, they steal it, right. If it gets broken, lost, or stolen, nah, we'll make another one.

This is Manoa, right, in the upper valleys of course, not the heavily concrete infested Manoa.

So lowering cost but maintaining rigor meteorological and hydrologic. When we go out and install a wind gauge, it would look something like this. We have solar panels similar to on the sensor that's passed around. Rain gauge is the pictured here on the left. And so in some cases we buy commercial manufactured sensors. They're a few hundred of dollars or a few thousands of dollars. But instead of being 10, 15 thousand dollars, they remain at that few thousand dollar price point because build all of the other electronics to collect data and provide telemetry. I'm telemetry agnostic. I don't care if it's a cell phone chip on the sensor that's being passed around. I don't care if it's like walkie-talkies for two computers. I don't care if it's a drone at 60,000 feet. What I do care about is whether or not I have a signal and have the band width to transmit the data at the appropriate spatial scale that we need the data for. What I'm told -- this is my first trip to Lanai, so you tell me where we need the sensors. You tell me what we need to sense. But what I do care about is whether or not we have signal. And so the reason I'm here tonight is I was invited by Ted and others to come and talk about the sensor applications when all of that band width provides for no dead zones. To me, that's pretty exciting.

Lowering cost, maintain rigor. Point one degree C temperature. What's an oceanographer doing . . . (inaudible) . . . We had some folks from . . . (inaudible) . . . thinking about tropical agriculture, thinking about the effects of one of half degree or two degree warming on tropical soils. So what happens when we warm the soil plot? How do we measure that? The same kind of technology that we use with cheap temperature sensors, measuring point one degree C degree accuracy temperature for coral reef bleaching we can apply in the dirt. We go out, we bury these sensors in the dirt, we put in a couple of heating probes, and then start to look where the soils acting like sinks or sources for CO2 under different warming or moisture conditions.

Low cost, but maintaining rigor custom data loggers. So again we wanted to be able to enable this in hands of kids to provide inspiration in STEM access. That's where we challenged, I challenged our engineer to make something that was less than a hundred dollars in parts. So that second sensor that's passed around is built from a PVC pole, right, from City Mill. The internal parts are 3D printed and custom made in my lab. The external parts are also 3D printed, and we can submerge these to about 5,000 psi, or 4,000 meters. We can get deep. The integrity now that comes from 3D printers is pretty amazing. And the beauty of that is we

don't have to ship things back and forth. We can ship a file over e-mail and anybody with a 3D printer anywhere in the world can then replicate then this device.

Okay so again, smart coastlines dot org. 150 sensors in five states. Next slide.

People are hungry for tech solutions to environmental problems. We've spun a couple of UH undergrad courses where we challenge students what do you want to measure. Let's see if we can do it for less than five hundred bucks a sensor. I've had -- this is the coolest my e-mail has ever been or probably ever will be again from Eric Schmidt. Thanks. Let me know if you can meet to talk about the internet or ocean things. High profile interest and opportunity to really scale this where we can make an impact and understand our environment. We can drag coastal oceanography and watershed science to where meteorology was 60 years ago, like it's easy to put up a wind sensor or measure rainfall. It's harder to do that from a holistic watershed thinking system which, of course, is how ahupua'a were managed appropriate several hundred years ago. And that's the beauty of this.

And then we operate at a recharge facility. So if schools or researchers tell me, hey, I need that, right. I need a tide gauge in my watershed, here's 2,500 bucks, and here's your tide gauge.

Again, the public has captured the potential for this. We've run training workshops for public fish pond restoration groups and well as K through 12 educators. The, the ability to take advantage of technology that didn't even exist five years ago, and apply those to ecosystem and watershed science is pretty exciting. And that's all I have.

Mr. Jon Sprague: Alright, so I was thinking I'd have a lot say when I came up here. But the previous presenters have presented a majority of information that I think is really important on this project. So my name is Jon Sprague. I'm one of co-directors for Conservation for Pulama Lanai, and I have the privilege to wake up every morning and go to work and think about how do I help this community and this company help this land? And how do I help this community use the land in a way that is appropriate and that is stable now and going forward? But when I wake up in the morning often times I'm a little tired because there are things that cause me to lose sleep and there are things that give me headaches. And so I just want to touch on two things that cause me to lose sleep and one headache because at least for me, in my work, and the future of using this land responsibly I think is important and pertains to this project specifically.

So the first thing is I lay awake at night thinking about my staff, and that's because they go places on this island where it's dangerous. There are steep cliffs. There are torrential floods if we get a lot of rain. And a lot of those areas don't have cell coverage and they don't have radio coverage, and they work at all times of night in all kinds of different places. And that does give me heartburn. And so one good thing that I look forward to for a project like this is the ability to have them call out if they get themselves into trouble and get assistance when they need it. But it's not just my staff, it is also the rest of the community as well. We have

thousands of hunters that are on the landscape every year. We have thousands of people who go fishing. We have thousands of people who are boating or snorkeling off of our coastlines, and all of those people are doing things that are inherently risky and potentially can get themselves into trouble, and that does concern me, very regularly.

Getting away from that, one of the things that gives me a little bit of headache though is again our responsibility is to try to protect the land and to use the land responsibly. And there's a saying within the scientific community which is you can only protect the things that you know about. And the thing that gives me headaches is I don't know a lot of things. It's not to say there isn't some information out there, but how do we protect the water if we don't know about where the water is falling. How do we protect the water if we don't know about water infiltration into the watershed in more detail? How do we find the little micro climates of where that water is falling? How do we manage undulates on the landscape in a way that's responsible? I don't know something more specific about the number of ungulates, the number of deer, number of sheep on the landscape, where are they going, how you're moving back and forth, things like that. How do we, how do we out plant appropriate plants, either for agriculture, for landscape restoration or to help the land be more resilient for climate change and ungulate pressure if I don't know something about the nutrients in the different parts of the island. And then how do I protect the reefs? How do we protect the reefs from erosion if we don't know the areas where the soil is coming from? That's all information that is expensive. (A), it may not exist. (B), it's expensive to get. (C), it's so expensive that you can only get it in a couple of small places. And so one of the things that I am very excited about and the promise of this technology with these inexpensive sensors is we can put them out in the landscape and we can start to ask those questions and we can start to be more responsible of how we manage the landscape in a way that is sustainable.

Which kind of gets me to the last thing that keeps me awake at night. Well, there's a lot of things, but this is the last one that I will mention and that is fire on the landscape. We're fire prone. Hawaii is fire prone. We have a very aggressive non-native assemblage of species of plants that are fire tolerant and they start fire cycles where a fire comes through and that lets more fire prone plants grow in faster because they grow faster than native, non-fire species, and it's a cycle. And so our ability again to get information about rainfall in specific parts of the island, to get multi-spectral imagery of the plant covers in those area to measure how the plant community is doing, and for us to adapt our fire management and response in cases where it gets really dry is going to be, if the technology pans out, vastly improved. The ability to really parse out both in time and space where we need to pay attention to is going to be really, really significant.

So from those perspectives and for the work that we do that's where I think that this project could really pay off. And that's all I really wanted to highlight from our program. And so I guess with that I'll end it unless there's someone else who is going to speak after me. Alright, mahalo.

Ms. Preza: Thank you so much presenters for all of the information and for everyone who stayed to listen. I am going to re-open public testimony, but I think first we're going to have a short, brief break. So about five minutes. So if everyone could be back so we can restart promptly. Thank you.

(The Lanai Planning Commission recessed at 6:56 p.m. and reconvened at 7:03 p.m.)

Ms. Preza: Okay, so thank you all for being here. Commissioners, I know you probably have questions for the presenters, but because there were people waiting prior to the break and throughout the presentations we're going to do public testimony first if that's okay with you folks. Good? Because I'm sure they'll ask some questions that maybe we have as well.

So I would like to mind everyone too if you're testifying please direct it towards the Commission, and then if there are questions that we would like the presenters to answer then we will request them to do so. So first, John Schaumburg since you waited.

Mr. John Schaumburg: Thank you and aloha, and thank you for your service. Volunteering isn't easy. I would just like to recommend the approval of this project. I think it's a great opportunity for the entire island of Lanai, from the economic stand point to the educational stand point. And I can't overstate the educational opportunities that give our school kids this, this great opportunity to learn more about technology, to learn more about the environment, to learn more about Lanai, and to be of service in the future. So, thank you for your approval.

Ms. Preza: Thank you. Commissioners, do you have any questions for John? Okay, great, we'll move on. So Riki Hokama, would you like to testify?

Honorable Council Member Riki Hokama: Chair, thank you. Residents, I come before this evening more as your Councilman to share some thoughts with you with this discussion this community is going to have regarding this subject matter. So a couple of things, one, I think we've got a great opportunity to the local boy, who had a great local idea, and you know, planted a seed and now we have some opportunities. I like that. I think Lanai should have that opportunity to nurture and plant something good.

So, saying that, I just want you want to be aware of certain things as your Councilman. I look at you to make your decisions accordingly regarding this matter. One, what is the role of the university? And if there is any public funds, salaries, I don't know, then you should be asking why is there not an environmental assessment and a FONSI declaration. Okay.

So for Mr. Purdy, I'm just going to say I am happy to work with him because there are things in this County that can slow him down definitely. But there's things we can help him in making and ensuring that he has opportunities in a timely manner that should things progress with the community's understanding and support, that the timing is not going to be so much of the County. Because I understand what some of his partners may expect. But they may have a clearer vision than what we have. What we saw tonight was very general; I like that. But

what was the specifics as in regards to Lanai? Not too much. Okay. I know what they saying they're going to provide, but it wasn't clear enough or detailed enough for me to understand those key components especially about water. You talking to us, we've been here for over 100 years. Okay, we help build this island, my family. We built that tunnel through Maunalei . . . (inaudible) . . . So think we bought enough to speak for this island.

So one of the things that I want to share as your Councilman, though, also from a policy perspective your County is concerned through your Council because I've already had the complaints, what is my property rights above my land? Because some people use drones for not too good things, like Peeping Tom, whatever you want to call it. I already get complaints from property owners on what is their rights of the airspace over their land? Okay, my colleagues in Washington D.C., Maryland, Virginia have sold airspace over public highways and have allowed private developers to put hotels above what was once just airspace over a highway. So somebody is saying somebody can own that airspace and somebody has put value and money on that airspace for transactions and development. So why is all of this in your thing? I don't know. You've got the Deputy Planning Director to help you with that.

Also the other thing that are in for Hawaii maybe we not too ma'a about what is happening nationally. Like I say, Monday I voted. So Monday, all 3,069 counties is now -- because we got word from the White House -- is going to work with Congress with 5G and everything else moving forward we will not ignore the County's land use and zoning laws. Okay, this maybe Congress's big attempt on how they're going to deal with big tax in the next few years. But we have a general agreement that local county zoning and land use regulations will not be discarded and not be used as guidance in governmental reviews and approvals. Okay, so you're going to hear a lot of exempting this, exempting that. You still have your kuleana, okay.

Like I said, there's great opportunities. I like what George is doing, okay. But need to safeguard this community. So maybe with Corp Counsel and Planning Department they can put certain things such as a report back to you folks in the implementation. And, who is going to own this data? Is it the university's? Is it George's? Because your County has a lot of data and if your public data has a value and we need your permission to utilize your data. So all of these things they're collecting about you up there, who does that belong to and who is it going to be sold to? Okay, that's a part of your responsibility to us. Ask those questions, get those answers, and decide for us what is in our best interest.

Okay, so, I've got a lot more to share, but I think that's enough for tonight on this subject. But I hope you will give this thought and consideration because I see some great opportunities for Lanaians on Lanai. So, again, please take these things into your consideration. Thank you.

Ms. Preza: Thank you so much. Commission members, do you have any questions for Councilman Hokama? Okay, great. Thank you. So would anyone else like to testify at this time? That's all I have signed up on the list so --

Mr. Stanley Ruidas: Good evening Commissioners. My name is Stan Ruidas, resident of Lanai. I support this project. I know George's dad before I knew George. Years ago in the Air Force my job was doing sensors and I cannot tell you any more than that. Yeah, this is good for Lanai so, and I support it, and that's all I got. Thank you.

Ms. Preza: Thank you. Any questions Commission members for Stan? Great. Anyone else?

Mr. Ben Ostrander: Thanks everybody for putting this on, everyone who spoke, and also the, you know, people testifying now.

Ms. Preza: Sorry, can you state your name please?

Mr. Ostrander: My name is Ben Ostrander, and I'm not really in any position on this. I think, I think most people shouldn't have too much of a position. There's just so little that I think generally the public really doesn't know as much as they do know so I kind of implore you guys to just try and ask as many questions as can. Hopefully we get more people in the community. Maybe if there's another meeting we have a larger venue with more seating I think more people would attend. But, you know, I think you guys have a great task in front of you. There's some great promising things. George, always, you know, great to talk with him and how passionate he speaks about this project going on. And, you know, with Professor Glazer and the information that he talked about and the potential for all the different things that could be done here on Lanai for, you know, our natural resources or safety of community members and helping first responders help people out. All great things. And then, and then like Mr. Hokama spoke about also the privacy issues, that's very important as well in my, in my opinion. And all of those things I think, really if you have a decision --.

If you've already decided where you're at, I would be kind of ask yourself again. Really I think there's a lot of questions, whether it's an environmental impact statements, privacy issues, and kind of, you know, the idea of the economic opportunities for us now and as well as the future people coming up. Great opportunities, but how long term are they? Is this, you know, we have kind of like, it's the pilot project of between now and December 2019, kind of seeing if it's viable. At that which point is it, you know, economically. It's not going to last forever where this is going to be making money here. I might be wrong, but just kind of how I see it where, hey, the thing works, great place to test, does it goes someplace else, and then nothing really is much left here that is long term. But, you know, I just want to thank everybody and see you guys again.

Ms. Preza: Thank you. Commissioners, any questions for Ben? Great, Butch?

Mr. Reynold "Butch" Gima: Good evening. My name is Butch Gima. As a former Commissioner I would suggest and recommend to you that just because the shelter to house the drone is already been built does not mean this should be a slam dunk. I was very disappointed in the response by the gentlemen responding to Riki's statement about them putting it up before getting all of the approvals. I think you have a responsibility to ask the

questions, and I think it's incumbent upon the applicant to convince you why it should be approved and that you shouldn't approve it just because the thing is already built.

I still have a lot of questions. There's a lot of unclear information provided about the business model and how they're going to make this operate. Because I was talking to Ben during the break, this kind of reminds me of, you know, when new teachers come to our school, a lot of the students ask them, oh, how long you going to stay? And I have that question for this project. I wish this project to be successful especially as John had mentioned about the benefits for the students and the STEM program. And yet I'm not real clear and I don't know if you guys are clear about what the business model is and to make it sustainable. I would hate for this project to promise all of these things and then they leave after it finds out it doesn't work. So I think they have to be very up front with you about not only the viability of the project, but how sustainable it will be. There's a lot of promise regarding the watershed monitoring as it relates to water and how the Lanai Water Advisory Committee to make up recommendations to the Commissioners.

So, to reiterate, please don't think this is a slam dunk because they already built the damn thing. They should have come first, got all of the approvals, and then done it the correct way. Thank you.

Ms. Preza: Thank you. Commissioners, any questions for Butch? Great, anyone else would like to testify at this time? Myles?

Mr. Myles Saruwatari: Thank you Commissioners. Myles Saruwatari. First of all I want to thank everybody who came to make this presentation. This is a great opportunity, not only for Lanai, but Hawaii in general, the world in general. This is brand new technology. It's been around for what maybe 15 to 20 years. And if anybody expects right now guarantees as to what this would all lead to your dream. Nobody can give you a guarantee. It's a venture. It's like the hotel up here what they're doing. It's a venture. They can't give you a guarantee they're going to be successful. They can't guarantee you they're going to make money and hire people. Okay, it's a venture that they're taking a chance on and we're on Lanai are, are joining with them on this adventure because we're putting our hopes in what they do, just as we're putting our hopes in what this company will do.

But I don't think that right now people can say, well, they're not making any guarantees. They can't. Okay, even they said, if flies, it flies, if doesn't, it doesn't. So who's to say, well, we want to guarantee that this is going to fly if we're going invest our time, if we're going to invest our community in this. We can't. We just have to trust that what they do is it's going to be in our best interest also. And what they do, you know, they're going to be up front about it. You know, business is business no matter how you look at it. You know, you can't ask of this is going to guarantee me this. If you're a smart business man, smart business man you don't give a guarantee. Anybody with a brain knows that, but you try to sell what you have. And if you're a good businessman, okay, you try to do the best you can not only for yourself but for the people who invested in you.

So I think that right now, it's a good invest for Lanai. Number one, it's a ground floor for the kids to get involved in an industry that really has no school basis right now. You know, you can't go to college where you go, hey, I want to be drone pilot. You know, there's no such thing. And if you can get in on the ground floor, and you can create interest in that industry for yourself, and if there is interest in you in that industry, maybe down the line when the industry does expand, you have some working knowledge of that industry. You can, maybe, alright I do want to invest my, my time in this. This is what I want to do for a living.

Because right now, like I said, I couple of years ago, I went to awards ceremony. The boys took home zero. Nothing. The girls took home everything. I went to Merrill Taguchi, I go, how come? And you know what he told me? Ah, the boys just kill time. They don't see a future. This is an opportunity. Their future. Okay, maybe not all of them will be interested, but those who will be interested, it gives them the opportunity to get in on the ground floor right now in the educational process because it's not really an industry yet. You know, it's not like making cars. You know, like when they first came out with the jets. How many of the jets crashed before they actually were used by the military? Many crashed. You know, being a test pilot back then was like, you know, you're taking your life in your hands. But this is not the same thing. You know, people not taking their lives in their hands, but their taking the future in their own hands. And I think if you really feel that, you know, you want Lanai to expand and grow, you've got to take a little bit of a chance. And this is not like, like life threatening, you know, this is just an opportunity for people to do something with their lives especially the young people, to get involved in an industry that although it's new, it could, it could lead to, you know, many great opportunities down the line.

So I think that well regardless of, you know, them building up the building first or whatever, it's kind of like a technical, you know, whatever. It really, in the biggest scheme of things, it doesn't mean much. What means more than doing something like that is what is this going to provide for the kids? And I think it's your responsibility to give the kids as much opportunity as they can get. And this opportunity is not available anywhere else. We're lucky so I think give the kids a chance to learn this technology, to learn this industry, and hopefully down the line it will may lead better things for them, you know, elsewhere in this country. Okay, there's no guarantee they're going to be there 20 years from now. Okay, again, it's business. You know, even the hotels, who's to say the hotels are going to be here 20 years from now? Nobody can tell me they know because I don't know. I don't think anybody knows. But the only thing you can put your faith in is alright there's an opportunity for us to do something, do it, and let it lead us where it leads us. But you have to do it because if you don't give the chance to the kids, what do they have here on Lanai?

You know, I heard somebody tell me one time me, oh, they can work at the hotel. I'm like, oh, whoopee-do. I go look when they opened the hotels they hired billions of people, and then a couple of years later, they laid off people, they cut wages, they cut hours. I go, you know, there's no guarantee. So you got to create opportunities for the kids that are viable for them and the community. And this, I believe, is a great opportunity, you know.

I mean, where would be without Henry Ford? He changed manufacture in this country. You know, put out a lot of cheap cars at a fast rate in mass production. And people said, ah, it's not going to work, nobody wants to buy that cheap piece of junk. And you know what, it worked. Everybody follow the same principle now in manufacturing. That's why we buy from China because it's cheap.

Ms. Preza: Sorry, I'm going to have to cut you off because it's getting a little late, and but I think we understand the sentiment behind what you're saying, you're supporting it and creating opportunities.

Mr. Saruwatari: Yeah. Alright, thank you.

Ms. Preza: Thank you. Commissioners, do you have questions for Myles? No? Thank you. Would anyone else like to testify at this time? This is the last chance before Commissioners we're going to have a chance to ask questions. So if not, then I'm going to officially close public testimony. So Commissioners, I would just like to remind everyone that we're not taking any action on this. This is for discussion only, and if you have any questions for the presenters now is the time to do that. So, Commissioners, any questions or thoughts about what's presented? Yeah, Caron?

Ms. Green: I never fail in this department. I want to thank the presenters for kind of clarifying a few issues here, and I do have some questions related to this. First of all I would like to know and I'm sorry I forgotten your name. Ted. You had up there and if you could bring it up again exactly where this drone is going to be flying because I was a little confused. I saw the takeoff plan, but then there was kind of an irregularly shaped area, but it was to the side of Lanai which gave me the impression that it's not flying directly over Lanai. Is that a correct impression or did I not really understand that picture?

Ms. Preza: Sorry, if you could please speak into the microphone. Sorry, this is so we can have an audio recording.

Ms. Green: Is it possible to bring up the picture again?

Mr. Ralston: The picture that you're referring to is that magenta gigantic blob up there.

Ms. Green: Yes.

Mr. Ralston: And that is an allocated airspace availability. The mission can be flown anywhere inside there.

Ms. Green: Right.

Mr. Ralston: That's the way the FAA designates the air access. The mission itself would

depend on what phase of the testing is going on. It may run lateral tracks perpendicular to the sunlight to generate maximum input to the solar cells. It could operate in the other direction to operate with minimum radiation on this solar cells. If we had we had the Maui fires happening again, it would go over Maui, and, or, if we had the volcanos on the Big Island, it would go over Big Island. So it depends on what the, what the objective is. If it's technical testing it would then be oriented in some specific way to highlight that aspect testing. If it's to serve a public need that we hadn't thought about, to merge, then it would deviate and do that. That, that purple or . . . (inaudible) . . . block is simply an allocated airspace that the FAA sets aside and so it operates within there, within that boundary.

Ms. Green: Okay, well, we don't have it up again, but I'd like to see what I didn't see.

Mr. Ralston: Sure. George will pull it up. There we go.

Ms. Green: Okay there. I'm sorry, from my angle, I can't see. When you said it took off, you said it's over land for five minutes and then it's out over the ocean.

Mr. Ralston: Yes.

Ms. Green: As it gains in altitude.

Mr. Ralston: Very slowly.

Ms. Green: Yeah. But once it's up in altitude it's at that magenta area.

Mr. Ralston: Right.

Ms. Green: What I cannot because there's it looks like a land mass to the right-hand corner there.

Mr. Ralston: That's called Maui.

Ms. Green: That's Maui. Okay. So I don't see --

Mr. Ralston: George, do you mind . . . (inaudible) . . . Brother touch 'em.

Mr. Purdy: So right here is Maui.

Ms. Green: Uh-huh.

Mr. Purdy: And this magenta area is . . . (Inaudible. Did not speak in a microphone) . . .

Ms. Green: Okay, so can you show me Lanai on that? Where's Lanai. That's Lanai. Okay, I could not discern that from the map.

Mr. Purdy: . . . (Inaudible. Did not speak in a microphone) . . .

Ms. Green: So what I would understand is in phase one you will be restricted to this area. But you're saying should you get to phase two and three, it may be expanded so that you could go over the other islands.

Mr. Ralston: Yes. Phase one is just the proof of concept; does everything work including the sensors on the watershed and reception of them and that sort of thing. Phase two is FAA certification which if we get to that point is a pretty aggressive examination of all the stressing points in the flight demo. So they would figure out what the maximum physical loads are, the air-dynamic loads, maximum, you know, for magnetic interference, all these things that are maximum threat areas and that operate in them a lot to generate reliability data associated with the worst that you can get. That's typically how the FAA works. And so that would probably be, I'm guessing, it could all be accomplished within that, within that magenta box. We would have to go over, we wouldn't have to request another airspace allocation for that purpose. If we get into production operations, the aircraft that leave here on Lanai, it would end up around somewhere around the world. It takes a long time to get there, but with six months, you get plenty of time.

So, if West Africa was the area that needed to be served with communication. The aircraft would leave here and two weeks later would show up over West Africa. And so the whole domain of high altitude air is as I mentioned, FAA doesn't have regulatory policy in place yet. So part of this program is to develop that regulatory policy along with certification policy, along with this aircraft. This is like the Wright brothers if you will. When they came up, nobody knew what to do with certification and authorization.

Ms. Green: So you're bringing in another aspect that plays into what people have been talking about is we were talking initially about its application for Lanai specific. But you're saying Lanai could operate as a base for anywhere in the world as a launching pad for drones?

Mr. Ralston: Yeah, as someone said earlier, I think it was this speaker prior to the business model isn't set. We don't have that. We're the university. We're providing test services. We don't really have a prior knowledge of the business model of the company. But in general the idea of the stratosphere is to have access to anywhere in equatorial belt around the world. So wherever the service is needed that's where you put the . . . (inaudible) . . . That doesn't mean they start there. So aircraft from Lanai could emanate anywhere around that area. When they, as they're arriving and departing Lanai, all of them would be equipped with a sensor technology to capture Lanai data from the watershed or fire safety or whatever it might be. So even though an aircraft is designated for some other part of the world, it doesn't mean it isn't also serving Lanai in and out of the area.

Ms. Green: Okay, so in your phase one, you are going to be doing more than just testing, whether it's up there, they're going to stay. You're going to be taking readings on the ground

here for watersheds, etcetera, etcetera. Is Google going to be involved in phase one with the 3 or 4G transmission or is that something for later? So I guess what I'm asking you is if in addition to just testing to see if this thing flies and goes up and can stay up for six months, what exactly else are you going to try to accomplish in that, in that three-month period, in the six-month period of time. Oh, 30-days? Sorry, 30-days.

Mr. Ralston: Continuous reading of instrumentation placed in the watershed, and that would be by whatever wave form is, is current in the sensors. I think Brian's equipment runs on 2G or 3G. It could be on 4G, but we'll have to find out what that is and match with the receiver on the aircraft. We should think as the aircraft as one thing, as a sky hook. It just holds payloads. The payloads are where the issues come up. The payload could be whatever wave form you want. And we would match the wave forms of the receiving element on the airplane with whatever the transmitters on the ground are going to be which would be more than likely 3G or 4G.

Ms. Green: One of the concerns that was expressed today was 5G. What are the issues with four and three?

Mr. Ralston: Four and three are in place today, and so we're not --. Whatever issues are present I'm not familiar with. I will point out that the transmission levels on these solar powered stratospheric aircraft is extremely low compared to the transmission levels of the cell phone towers we're familiar with. Cell phone towers typically run at 10 kilowatts, and transmission power on this is less than a watt. So it's less than a flash light in terms of energy output. About one ten-thousandth of what you find in the towers that are on mountain down here.

Ms. Preza: Thank you. Commissioners, other questions? Jerry?

Mr. Rabaino: My concern is that when you start this project you said your first phase will be in that magenta area, right? Okay, I'm going to focus just on Lanai. In Maunalei and Haola gulch, and Koikili Ridge, do you have any monitoring system there to monitor the water evaporation, accumulation, during the day, evening and night?

Mr. Ralston: What we need to do is work with Jon Sprague and others to determine what is the most useful measurement that can be made in the, I would say, the October time period this year. We would make the sensors, get them installed, and whatever they may be. Water flow is a difficult one, but water level is straightforward, and, and chemical.

Mr. Rabaino: You didn't install anything, correct?

Mr. Ralston: Correct. They're not installed yet.

Mr. Rabaino: Okay, you answered that to number one. I don't want to go into the

technicalities. Okay, it's not installed, when are you going to install it in order to get data reading?

Mr. Ralston: The plan is to have that start in August with Dave Parman's school program, and with Brian who was here and left already. And Dave, in collaboration build the sensors here at Lanai High School. And then under the guidance of Diane and Jon and others install them at points that are useful and interesting and not dangerous in the watershed for this phase one testing.

Mr. Rabaino: Second question. What is your agreement, consensus with the UH and your program, and who is funding it financially? I have several others that I have listed on here, and it reflects just Lanai, okay. I don't care you fly here and there and everywhere, that's not my concern. Water issue is number one; you haven't installed it. Maunalei, Koikili Ridge, Haola Gulch, Naha, okay. When I first moved here we planted trees under Don Ritto was still Oceanic. We planted Awehe'e trees up there to see if the water if the trees would survive in that area. So need to install, number one.

Ms. Preza: Sorry, Jerry did you --

Mr. Rabaino: STEM program, how's the kids.

Ms. Preza: Jerry, sorry, do you want to let him answer your first question before you keep going about financial?

Mr. Rabaino: Yeah. Okay, but, no, I just --

Ms. Preza: Yeah. I think I'm getting lost in what you're saying so maybe if you could just focus on one for now?

Mr. Rabaino: Your STEM program.

Mr. Ralston: Your question one was funding the university. This is totally funded by the sponsor, Soft Bank, out of Japan.

Mr. Rabaino: Out of Japan. Okay, and then number two would be in phase one, working with Jon or Josh Jon, when you guys going implement the data from the areas from Maunalei Gulch, going to Haola, going to Keamoku. You have any instrument there that would be reading those data and furnishing those data to the school under the program?

Mr. Ralston: The intention is to generate those sensors, put them in place, and have them read during the phase one flying. But phase one flying, you know, maybe in October, we don't know yet. Something is that time period. So we have between now and then to build the sensors, install them, and then hook them up to Brian's website.

Mr. Rabaino: That's all for now but I want to see the phases and how would you present to the Commissioners within the three month period, or let's say two month period, once you install those device for the water that I want to know about and the areas that I'm concerned about. Secondly, what is your connection and the program that you sharing with the STEM and report back to the Commissioners so we have data that we can look at. I know there's other issues as like Riki Hokama, our Councilman, has provided so I guess each --. My, my concern for me as a Commissioner is number one the water usage, how much data you collect, what is your connection with the school and what the kids going to learn through that data, and while you're working with Jon, okay. The other Commissioners may have other areas that they may be interested in. I'm interested in those three categories. If you can come back and give information when everything is implemented and operating. Thank you.

Ms. Preza: Sorry Jerry, so you're asking specifically about you want them to outline their plan in more detail or when it is actually collecting data then have that reported back?

Mr. Rabaino: Yes. Yeah.

Ms. Preza: Okay. So I think what we need to talk about also just so everyone has a clear sense, and maybe Jordan you can speak to this is because people were presenting tonight about more information, we're not taking any action. At a future meeting will we be taking action to approve a permit or what is, what is our role in this as Commissioners?

Mr. Jordan Hart: Thank you Chair. Jordan Hart, Deputy Director of Planning. So tonight is just a discussion and basically direction for the Department and the applicant on information you would like to see before having a report brought to you for decision on a Use Determination of whether or not this is should be a permitted agricultural use.

Ms. Preza: Thank you. I just wanted put that out there so we're all on the same page with it will be coming back to us with a Use Determination. Sure.

Mr. Ralston: Question for you. The questions that Gerald asked, how do we get those answers back to you? Do we do a periodic report to you?

Ms. Preza: Jordan can answer.

Mr. Hart: Chair, I think that what would happen is similar to most other applications where the applicant would work with the Department. The applicant would prepare their own information. The Department would prepare additional research. That information would be put together in a report that would be provided to the Commissioners in advance of the meeting just like most other land use applications. There could potentially at the Chair's pleasure also be additional opportunity for a presentation to the community and the Commission prior to any kind of discussion or decision.

Ms. Preza: Thank you. Yeah, so if we could compile kind of, Commissioners, like what kind

of data you would like to see forthcoming, and then they can get that data to the Planning Department, they can get it to us. I think it will be important for community members to also be informed. I think we had a good turnout in terms of some community coming out, but I know there were a lot of people who weren't able to make it because they were working or they have other commitments. I don't know if it's so much as question for any of the presenters, but what is the plan for, I guess, educating the community about what was talked about tonight or is there any plan to, like, get public input? Because I will say that I understand it was addressed earlier with the tent being put up and it was because you had to show, you know, some kind of progress commercially. But I think for a lot of community members, I know there has been some positive perceptions because of the opportunities for kids. But just in talking to some people in this community, it didn't look good that the tent went up and there was a blessing before there was any community meeting or you know an opportunity for community input. And while there has been, you know, positive perception that we've heard about, I've also heard people that, you know, had concerns. So is there a plan to better inform the community and is there any plans for that?

Mr. Ralston: Let me ask George to talk about that.

Mr. Purdy: So since we've arrived here so I've done it the past many times especially doing for shoreline fishing managements where I've held weekly meetings so that I could accommodate all the folks that was always working. I can hold this type of same information and have the 101 sit down. I can do it for the next four weeks, one day a week, and just so I can capture everybody. I've done it in the past because I understand that people work. I will make the time to put a one hour sit down, find a place, a location and I just need a --. What you call that thing. Brain is fried. Other than that, that's what I can do. I'm always been doing a lot of community education out towards once a week, no problem. I can put a schedule out and we go from there.

Ms. Preza: Thank you. I do have a couple of questions as well, and Commissioners feel free to, if you have questions, like I don't want to dominate the conversation. So, sorry, just so I have this in my head. I know it seems like it's been tested a couple of times, but how much research has been done about this aircraft, I guess? And like so I understand that this first stage is kind of, like, testing the viability of it. But I guess I'm wondering like safety wise, like, is there a plan in place. And I think just in general for like when you folks come back to us. I understand we got this booklet that's available to the public online as well if you're interested in seeing it. It's pretty, you know, it's pretty thick, but the only --. I mean the part that's actually talking about the project itself, you know, and like the plans for it is just this part of the book pretty much. So I thought there was going to be a little bit more detail about, you know, like projected timeline. You know, I know there's some dates in here, but a more detailed timeline, you know, safety plans, or like maybe a layout too of exactly who the, like, Jerry asked a question about like who's funding it. And then I know we didn't have a representative from HAPS here so just more information I guess.

Yeah, so, but safety wise, can you say anything about that? Because I think that's a concern that a lot of testifiers or like letters that came in to us from people on Maui were concerned about 5G, but also potential for crashes and stuff like that so.

Mr. Ralston: Yeah, I think we can certainly talk about that right now. Of course 5G is off the table to make it easy and it's gone. And so that anything associated with 5G is sometime in the future, not here anymore. The testing is going on in Edwards Air Force Base now, and we don't have access to that at UH. We get that through HAPS mobile. But all the aspects associated with flight safety would be fire safety, structure, communications, command and control, stability, durability, engine overheat. All of these things that are associated with aircraft flight are being exhausted, exhaustively examined there and they have to pass through the NASA testing before anything comes out of here. So the aircraft part of it and the flight part of it will be verified at NASA.

The piece out here is the operational piece; getting it in the air and getting it out over the ocean. So what that results in is what is called a Safety Risk Management Analysis conducted by George and his team at the airport. Under FAA 4139 obligations where anything within a five mile range of an airport, a 139 airport, must have a safety plan for a new element in that area. This is a new element within the airport operating area, so we'll go through a safety risk management with that team. That would look at issues associated with getting the airplane off the ground and back to the ground. And any issues that come up there have to be mitigated and accommodated as appropriate. That will be sometime between now and September, which means August.

Ms. Preza: Okay, thank you. Commissioners, other questions?

Mr. Purdy: Just to answer that last question. So I do have a copy from the existing book that I have. It gives you a general, the guidelines that we follow. There's all these . . . (inaudible) . . . I'll make you guys a copy and then you guys can have it.

Ms. Preza: That would be great.

Mr. Purdy: So that's detailed from the small aircraft that we fly today. It's the same all the way through. So the standards and the procedures are set and right now we're just making sure, double checking that from the small . . . (inaudible) . . . 107 operators of 55 pounds or less to the largest aircraft that's going to be known to fly, it's the same set procedures.

Ms. Preza: Okay, thank you. Jordan?

Mr. Hart: Chair, I recognize you guys are all very familiar with each other, so I just, for the process, if we could make sure that any copies that you give go through basically your land planner, your land planner, to our staff planner so that they're into the Commission's record as opposed to getting side correspondence that, you know, isn't the public process. Thanks.

Ms. Preza: Thank you. I would also --

Ms. Green: Can I just ask a follow up question on yours? So what I'm understanding about what you said about the safety is all those tests will be done in labs on the ground. None of those tests will be done with it flying until it comes here. That will be first time it's going to be tested flying.

Mr. Ralston: Flight test, flight testing is going on this month and next month at Edwards Air Force Base in California on the dry lake. And that will be the primary examination of structure, controls, operations, radios, all that will take place per NASA's standard test guidelines for new aircraft. So it will thoroughly tested and shaken down. In fact the airplane has maybe 100 pounds of test equipment on it, so it a lot of sensors and such, and wires that are used to measure stresses and deflections. All of that is being done this month and next month at Edwards.

Ms. Green: Thank you for the clarification. And could I just ask one question of the Planning Commission? And that is are we going to be just approving the phase one or are we --? You know, in other words that they can do the 30-days test, that would be the extent of the initial approval?

Mr. Hart: It is the phase one. Point of clarification I think that you can establish the timeline that's described for phase one, but yes, phase one.

Mr. Preza: Sorry, kind of piggy backing on that. Since it's July and you're talking about doing flight testing in October, that's dependent on it going through the Planning Department, coming to us for approval, and then us approving it?

Mr. Hart: It is. Obviously it is so, you know, part of, part of how soon it comes back to the Planning Commission is what the Planning Commission ask the Department and the applicant to investigate to put together in a report to present back to you.

Ms. Preza: Thank you. I think I do have a --. I mean, I'm sorry. You definitely --. I want to hear your questions too before I forget. Because I feel like there is somewhat of timeline here, right. If the flight test is temporary as we were reading, it's saying that everything that was put out there would be removed by December. So the timeline would just be adjusted depending on approval from the Commission and the Planning Department?

Mr. Ralston: The other factor consideration is the solar cycle, and so sunlight starts becoming a problem in November time period, so I think that's probably our, our end point is, is that time period. Other than that you can't do the, necessarily the long mission. There could be, there could be some accommodation made to a shorter mission based on what the available sunlight is.

Mr. Preza: Sorry, so basically what you're saying is all of these decisions would have to be made within the next month or do, month or two, in order to keep to schedule and like with the solar? Okay.

Mr. Ralston: Yeah, we'll do whatever we can to support what you need information wise to pushed that forward.

Ms. Preza: I definitely agree with some of what some of the testifiers said about conducting an Environmental Impact Assessments. I think that would be interesting for our Commission to see and evaluate. Chelsea?

Ms. Chelsea Trevino: Thank you. Okay, so I think much of the testimony and the things are going on is because, you know, where there is an unknown there's a fear. So there's a lot of fear. I think some of this stuff too we're going by, oh, so-and-so said, who said that, oh, this is what they say or that's what they say.

Much of it is us trusting -- and that's been an issue -- because we've got to talk about balancing this economic and educational opportunity with your health and safety. And I think that was kind of the concern of the two people who came from Maui was, was this idea of, you know, our physical safety as well as our health safety. So I don't know if for me personally just somebody just saying that it gives off, off less radiation if that's the right term -- I don't know if I'm using the right term -- then a tower is sufficient enough for me.

We all know we have this stuff flying through our houses because we all have internet and Wi-Fi and what not. I think for us we need something tangible in the sense of explain to me exactly, you know --. Because I wrote on here more information on the effects of data rain. I didn't know what to call it. Because if we're talking about it that this something new, then that means we're talking possibly we don't really understand or know yet, the effect, rights. Even if it is 3G, 4G versus 5G. So that's a little bit of, you know, an area where it's very gray, and people are conferenced. I think for many people it's good to know that yes this flight testing is happening elsewhere before it comes here because that's what some people were kind of discouraged about.

The advantages of having this on Lanai, I mean, are enormous. I think though that much of, much of this stuff is up in the air. And when we're dealing with new things we thread lightly, but we have to thread swiftly. And I understand that that's what you folks are dealing with as far as the people who are initiating this project. They're wanting to move it forward quickly. However, I don't want us to make hasty decisions without having, you know, making sure that we are taking care. I'm not saying that nobody wants to take care of the island or the land, but let's kind of just be sure that, you know, if we're talking about trust, be honest. Oh, we're not quite sure yet what the effects of this will be, you know, on the birds, or on whatever. We do know it's high enough in the air that it's like, you know, we're not even breathing it, but you know.

So, I think, right now, we're just talking about a 30-day trial period. The data that it takes in, I agree, is totally stuff that we can use. But I think Councilman Hokama brought up a good, good question about like who owns the data, who is going to have access to the data. Right now we know that the teachers are going to have like a web page or something. Is that what --? It sounded like he was getting data through a web page of some sort or whatever. I think there's concern about we know that there's useful data, but then there's also data when we talk about privacy and what is this going to mean for people who live on Lanai and how much data is Pulama is going to be able to have to just on a whim say, hey, pull up the, pull up what you saw over there on this, you know, on that, on that person's yard over there. I don't know. I mean, I'm just saying those are things that people are concerned about here. And so I think those are the things that we're talking about as far as kind of assurances or expressing exactly how this goes. I understand that much of this is up in the air; you don't know. Like you said this is only the test period. We can't go to phase two until you complete phase one. And phase one could not be a success and then you have to just, okay, build from there.

Because this report does say by December of 2019 everything will be removed. I highly -- I don't believe that. So I think we need to just be very upfront with information whether it is something we have to say we're not sure of but this is our intention. However, we have to make decisions based on whatever information is given to us. So, I think when we talked about the trust issues and things like that, I think that, that kind of falls into play with what decision we're trying to make here because again it's a new venture and we understand that. How, what can we do? How can we make the process move forward in a way that's conducive to everyone who's involved including, you know, the people who live here.

Mr. Ralston: Can I give you a little bit of an answer right now? Just from the, from the radio communication, radio frequency energy piece the operation would be no different than we are today. That is today we own cellphones in our pockets, and they're underground, and people in airplanes sometimes turn it on, sometimes don't --. This is basically there's no difference. It adds nothing to the circumstance we have today. Whatever we have today is what we're going to meet under this condition. Since we've taken 5G off of it. If we had 5G in the question would be different but now that's gone. So there is no influence relative to what we have radiating around this room right now.

Second thing on the data ownership that's a really interesting issue. There's no cameras on this thing, so no one is going to take a picture of somebody in the backyard like that. The only sensor element is picking up the watershed sensors. So that water, the data from those will belong to Pulama, I guess, or whoever owns the land in which that, where that sensor is placed. And maybe that could be different locations. I'm not familiar with the land layouts where these sensors will go, but that certainly can be defined. And if there was, even with Pulama, I would think they want to authorize the collection of that data before we just go put a sensor in. I mean, you got to have a right of entry and some other means of making sure you're in the right place. So data ownership will belong to whoever owns that land in that area.

The plan we have for collecting it is to use the university's smart coastline's website to collect all of the information. If that isn't acceptable to Pulama and they don't want to have that information shared with Molokai and Oahu and such we can go separately. We don't have to have it go to that website.

So I guess in simple form, whoever owns the land owns the data. And we need right of entry and they own the data. We have to have permission to use it to analyze it, but that's their, their data. And as far as the cellphone usage is concerned, it's no different than in this room.

And we'll get you updated schedules as, as --. In fact, that's part of my, part of our, our work with George is to keep updating on things here because there could be things happening at Edwards, at NASA that are going to delay things. There could be software changes have to be made. It could be structural change. We don't know what they are yet so that will all influence what really shows up out here. And it happens so fast it's way faster than the formal cycle of reporting, and that's part of the problem we fell into because the program moves faster than the cycle of reporting can occur. So if we use these weekly reports that will be like informal, but it will be at least advisory in terms of what's going on and we can periodically in some way, formally, let you know what's going on.

Ms. Preza: Thank you. Sorry, I'm going to ask something real quick. Because echoing Chelsea, I think, we definitely we just care about the community and we're not trying to make it cumbersome for anyone because I think, some of us, we do, we care about the kids here and so in that sense, you know, opportunities we can see why that can be good. But I think also what was lacking in this report was kind of what Chelsea was saying was research, you know, backing what you're saying. It's not like we distrust you, but I think it would be helpful for all us to see, you know, articles or anything backing what you're saying. And you know, even provided with something saying different. And you know, I saw all the testimonies with links to various websites saying 5G showing negative aspects, but I think some other data is very helpful.

I also -- when we mentioned Environmental Impact Assessment I noticed there was some negative reactions from the audience and I just wanted to know if there is any or why it would be a negative implication for asking an environmental impact assessment to be done. Besides, is it just time?

Mr. Hart: So Chair, Jordan Hart, Planning Department. So, yeah, number one, there's -- it's a time. Let me back up a little bit. First of all, the Planning Department has no stake in the timing of this, this process. We basically want to be supportive of the applicant. We recognize that there is a time implication. It's a pretty large undertaking, and so, you know, we were cooperative in putting this workshop forward in order to get the ball rolling. You know, we received the application on June 19th, so it is pretty fast, but recognizing the time issues that the applicant is dealing with.

We did initiate the conversation with the applicant about whether or not HRS 343 is triggered which is what Councilman Hokama was talking about. The, the belief of the applicant at this time is that there is no trigger because it's not government land and it's not government funds. We need to have a little bit further discussion and flush that out further. If it were concluded that there is an HRS 343 trigger and there is no exemption, there's no way that would be completed in the time frame that's being discussed here. But, it is the responsibility of the Planning Department to completely verify, you know, the conclusion of that and we'll do that in consultation with the applicant on the relevant triggers for HRS 343 compliance.

Ms. Preza: Can you remind everyone what H --?

Mr. Hart: That is the Environmental Impact Statement law for the State of Hawaii.

Ms. Preza: Thank you.

Ms. Green: I guess I kind of had a question mark when Riki said we needed an Environmental Impact Study too because I thought this has a very small footprint. It's going to take off and it's going to land, so I'm just trying to understand what we need an environmental assessment for. What would it, what would it tell us?

Mr. Hart: Chair if I might. Even the report, HRS 343 is a very specific environmental impact statement, environmental assessment document. You know, there will be an environmental assessment that will be in the Planning Department's staff report. It's not going to be --. Well, I'm not going to say it's not going to be, but provided there's no triggers, it won't be prepared to the format required by HRS 343.

To speak for the Councilmember, he can clarify himself, my understanding of his line of questioning was, you know, if this is a University of Hawaii project, you know, is, is the, is there government funding involved. And the applicant replied that it was completely funded by private funds so, you know, that seems that the use of government fund trigger is not established by this. There are a number of other triggers we need to revisit and just make a conclusion on that subject which we will do prior to bringing this item back to the Planning Commission.

Ms. Preza: Thank you. Commissioners, do other Commissioners want to see that? Or I mean, I know you folks are going to discuss the triggers, but are you interested in seeing an environmental impact assessment?

Ms. Thomson: I'm just going to piggy back on what Jordan was speaking about. So not every project requires a full blown Chapter 343 Environmental, either Assessment or a full blown Environmental Impact Statement. So you have to first look at what is this use that's being proposed and are there any triggers and it's specifically listed out under that state law in the admin rules. So not all projects actually trigger that state law. It doesn't mean that a land use

won't have certain environmental impacts, but whether or not that law is triggered is what we're talking about.

Ms. Preza: But -- sorry -- but there could be. I mean, I understand there are triggers in place, and laws, and we can't ask for something that's not, you know, needed. But you're saying full blown versus perhaps like something short? Explain. Just something. I think I would just like more information. Like I feel like I didn't get enough information in this packet.

Mr. Hart: Chair, if I might. What I was trying to explain prior is that there will be an Environmental Assessment that's part of the staff report to the Planning Commission. If there are no --. If there are triggers for HRS 343 compliance it's a completely different conversation and the, the expected conversation that we think we're having will change completely.

If there are not triggers for HRS 343 compliance, then the Planning Department will prepare a staff report that will include an environmental analysis. Some of that information will be gathered by the Department. A lot of it may be provided by the applicant.

Ms. Preza: Understand. Thank you. Sorry Jerry, I know you had a question. Did you want to ask that question now? Are you awake, Jerry?

Mr. Rabaino: . . . (Inaudible) . . .

Ms. Preza: Okay, so lost your question, okay. I -- just a quick question. Because you know you're anticipating starting if everything, we approve everything, everything gets rolling for the flights to take off in October. There is something that's saying there will be 30 to 40 flight specialist. So, given this timeline, do you already have 30 to 40 off island specialists lined up who are going to come to do it? So this question is two-fold. I'll let you answer this first.

Mr. Ralston: As we said back at the first time we had a public meeting and it was back in September, we kind of asked if there are folks who have prior aeronautical or technical experience who want to be a part of the ground crew, and about three or four people raised their hands. So if there's some way we could get the word out that we could use people in some part-time capacity that would be great.

As far as the 30 to 40 people coming, half of them are airplane people and half of them are communications people. And George is arranging housing for them, a combination of here and on Maui. And that's the, that's just the size of the crew. But we can use anybody who we can get a hold of who's got technical experience here we can use them.

Ms. Preza: But this will be just for like the flight test which will be 30-days or so. So it's not very, it's not a long-term thing.

Mr. Ralston: For this, this is a one flight test, so there's not a lot of use of people whoever they may be because it's one shot. And so we need ground handlers to handle, you know, moving

the airplane around on the ground for the --. Probably taking out of the shelter two or three times to test the solar cells or something like that, and then push it back in. So we need ground crew, and we'll need ground crew when it returns. Animal control; we've got to keep the deer off the runway at night. So there's, you know, there's tasks that people who have local knowledge would be great at, and I don't think the people coming from aero environment would know about those things. So there's a use for local folks to assist immediately in the program.

Ms. Preza: Thank you. I understand short-term, you know, we definitely need to use off island talent for, you know, aeronautical kinds of things. I think just looking long term, Commission, we are usually concerned with creating, you know, diverse economy, but jobs opportunities for local Lanai people so thinking about capacity building here. And I know that's why we want to start the program with the kids which I think is great, but you know even if there's older adults who perhaps if there's a way to provide training, comprehensive training or getting a certificate or something so that it can be local Lanai people manning the drone. I think that is a priority, would be a priority for me long term because I don't think it makes sense to have 30 to 40 jobs created, but them going to just off island people and I don't think it really helps our economy that much. But I think because I was reading too that there are plans to utilize Lanai residents to supplement the team in all these fields and I understand using definitely local talent for, you know, game control and local knowledge. But if there's a way to be actively training people in the more technical side. I'm not familiar with aeronautics and that kind of stuff and I know it takes years of experience to be able to understand all that. But if there's a way to actively involve community members in maybe the more complex sides of things, I would appreciate that. And Commissioners, do you feel the same? Yeah, investment in the community, I mean, that's what we're all about.

Mr. Purdy: So I have a quick one. It's easy to remember. So under the FAA, any type of flying, this is a good saying to remember. We crawl, walk and run. So that's the simple terms in aviation that we use so that we stay away from mishaps. So my whole point is as this aircraft gets here and the folks are interested, there's a shadow process where you just sit back, you watch and you just learn. You pick the interest that you want. So I've already created, as they get here, ways to introduce each little part to through the meetings that I'll be holding is I'll be getting their interest from the community what are you interested in. That way I can break them up into groups. So we go down there, it's not too much interfering with the technical sides because there's only two aircraft on the planet. We really don't want to break it right away, but we want to start getting involved just by watching. Old style, when we go fishing, the keiki behind all, and then they just watch and bring that back. And that's all this is. That's the first step and that's crawling, then walk, and then we run. That's the pilots of the future.

Ms. Preza: Great. If, you know, in the plan you can maybe outline more about that plan long term and then just kind of a more a detailed project timeline because I think we're talking, okay, short-term flight testing happening in the next few months. Then they're saying the structures will be taken down. I think a lot of people in the community aren't educated about

that so I'll be sharing that with them that it's a very temporary structure. But if it's extending operations to 2023 then that means that they will training in between that for Lanai people or, you know, if there's no facility then how are people going to get trained in watching if it's not happening is what I'm asking.

(Mr. Gerald Rabaino is excused from the meeting at approximately 8:12 p.m.)

Mr. Purdy: Okay, so that's where we still have the --. Well, just dropped by the grant. The STEM program that was created here, we want to put that hangar out there as an outdoor classroom. So we want to continue what women and technology left us and pick up with David Parman and Kinoshita's goal of signing that contract to get the students their pilot license by high school. That's a set program. That program basically we taking it out there. So that airfield will act as our hobby and educational center to professional piloting in between flights.

Ms. Preza: So the structures will not be removed?

Mr. Purdy: During the flight test, we've got 30-days. If we want our students to slowly learn about everything we can still use it as an outdoor space to go over the books to start learning the lingo, start going over FAA requirements. And we start with reading books and then applying it to what's happening.

Ms. Preza: I think when you folks come back to the Planning Department and they relay information to us maybe, maybe better outline that.

Mr. Purdy: Okay, the educational system.

Ms. Preza: Educational stuff and also saying --. Because you're saying all the structures will be removed by December 2019, but if there's a way to repurpose it for education then I think that should be included as well.

Mr. Purdy: Okay.

Ms. Preza: Sorry, I know it's getting late. Commissioners, do you have any other questions at this time? Thank you so much the presenters for your time and your knowledge. And for everyone who came to testify we really appreciate it and appreciate your patience.

E. DIRECTOR'S REPORT

- 1. Reports from members who attended the Native Hawaiian Law Training on June 7, 2019.**

Ms. Preza: So with that we will move on because we still have other agenda items. So moving on to Item E, Director's Report. I think Jerry was the only who attended the Native Law Training and he just left so we're going to bypass Item E.1.

Number two is the Hawaii Congress of Planning Official Conference from September 11th to the 13th. I don't know. Is anyone going to speak about that or is it kind of just a reminder that it's happening and you can sign up?

2. Hawaii Congress of Planning Official (HCPO) Conference, September 11 to 13, 2019, at the Sheraton Maui Resort & Spa, Kaanapali.

Mr. Hart: Yeah, it's just a reminder. We're working very hard and it's a very important function for the Planning Department. We're basically hosting all planners, you know, the planning industry statewide on Maui and it's a very good opportunity to learn and to meet other people who are doing other planning commissioners. So anyway, just to remind you that it is coming and it is actually a very important thing for the planning industry which are participants in.

Ms. Trevino: Oh, I have a question. So I was looking at the agenda thing for this conference and it looks like the first day is the, like, the outings I guess I'll call it, which I would assume that Lanai people would participate in the Lanai one. I don't know. Or is it just pick anyone. However the Lanai one starts at like six-thirty in the morning and it's people coming to Lanai. So I'm just curious if one was to participate could those of us who live on Lanai maybe just meet up and then go back with them versus going overnight early to be here at six-thirty a.m. to come here because I thought that was a little strange and I wasn't sure if there was guidance on like on --. Are there certain ones that we would want to go to?

Mr. Hart: So --

Ms. Trevino: Because that's something I don't think anybody looked at it and I did, and I was like wow we should all be going to this.

Mr. Hart: Let me answer a portion of that and then the rest of it Leilani will answer. First of all, you know, whatever you're interested in is what you should ask to participate in. There is, there is a capacity for all of them so making that clear early is important. Regarding the logistics I'll let Leilani respond to those portions.

Ms. Preza: Yeah, and maybe I'll talk to you about this after too.

Mr. Hart: Introduce yourself.

Ms. Preza: I'm not sure I'm going to attend, but I think it would be interesting for those of us who may not be able to attend the full thing to go to the one that's on Lanai perhaps. Okay, we coordinate with you?

Ms. McCrory: . . . (Inaudible) . . .

Ms. Preza: There's a limit on Lanai so we might not be able to participate?

Ms. McCrory: . . . (Inaudible) . . .

Ms. Preza: Yeah, but to Sensei. Transporting the people who are participating. But since the activity is Sensei, right, farms?

Ms. Trevino: There was a lot of things that they're going to.

Ms. Preza: Oh, okay, we can talk about it later. Or do you guys want to talk about it right now or move it on?

Mr. Hart: Chair, if I might add. I don't think that you should discuss. I mean, you're free to do whatever you want. I think that you should basically find out which ones you want to do and express to the Planning Department as quickly as you can. If Pulama wants to make side arrangements with you. I know that the Planning Department is establishing this with, you know, the expectation that we're going to have to be hosting people from all over the state. And so it wasn't necessarily thought of getting the vehicles, planning the routes wasn't necessarily thought of in the context of, of Lanai Planning Commissioners only, but we definitely want to accommodate you and, and you can negotiate with Pulama as well.

Ms. Trevino: I just didn't want to Will Nellie just be like spin the wheel and whichever one it lands on like if there were certain ones that we felt for our community member or us serving for Lanai community that would be better for us to go to. That was more of where I was going with that.

Mr. Hart: The final thing I'll say on this subject is that maybe improving your capacity to serve Lanai might be visiting some of the other things as well. So that's, that's why I was saying, you know, look at the list and see what speaks to you and then, you know, make arrangements to participate in that.

3. Open Lanai Applications Report as distributed by the Planning Department with the July 17, 2019 agenda.

Ms. Preza: Thank you. So E.3. is open Lanai applications report, so that was provided to all of us. Do you have anything to ask?

Mr. Hart: Nothing to say. Please go ahead and review that. If you have any questions we can respond to those items.

Ms. Preza: Sorry. Actually in looking over it, I did have a question about right here. Sorry. So...the one for Hale Lanai, Lorrie Nielson that's open. I thought we had denied that. Did we? That was the one that was going to sandwich the Asuncion house. So it's noted open, but it's still open.

Mr. Hart: I will verify that. If the Commission voted to deny it, it should not be open and it would just be an error on our list.

Ms. Preza: Yeah, we did.

Mr. Hart: I'll verify that.

Ms. Preza: Okay. The one we had --. That was the Hinton's. I don't think it's on here.

Ms. Trevino: . . . (Inaudible) . . . Which one is that? So I just had a question in regards to the one that we had last meeting that there was a trigger and then a house was sold so the trigger was removed. I think there was some questions in regard to like the water thingy and what not. Well, it's not coming back to us, but I did notice that the house that was sold it still has a "For Sale" sign. It still has the short-term rental sign out in front of it. This was the house that was supposedly sold that took the trigger away. And I don't know if you've already moved forward with the permit for that, the house that was applying. However I don't know who to -. I want to send some photos in or ask some questions in regard to that whole parking situation that they said because when I went back and looked there's actually cement blocks on that side of the house and then they have bushes growing in front of the sidewalk that they're designating as their driveway. So I just, I just was like, okay, wait a minute. How do we --? What do we do about this?

Mr. Hart: Point of clarification. Are we talking about the house that --

Ms. Trevino: Fraser.

Mr. Hart: -- was sold or the one that --?

Ms. Trevino: Well, the one that was sold still has the signs and that was kind of like I was like, what.

Mr. Hart: Okay.

Ms. Trevino: And then the house on Fraser that was applying for the permit, well, they were going to look into the whole water thingy, which I looked and it's the black sewer thing that's there. But there's also cement -- what do you call those things -- barriers that are coming down on -- is that Twelfth Street. Because the way that they had the parking diagram on their map was you actually came in off of Fraser Avenue, over the sidewalk, to the side of the house. But they actually have bushes that they are starting to grow there. And then there's a

small little grass opening on the Twelfth Street side and then the cement blocks. So I was like, I guess the thing was just the whole --. And yeah, I don't know that they're being honest about the way that they're creating their plans.

Mr. Hart: We'll verify that. They need to enter and exit through their legal driveway, so we'll look into that.

Ms. Trevino: Okay, thank you.

Ms. Green: Could I say something also along the same one? I was really bothered last time on where they put their sign. And I looked, now the sign is not on Fraser which is the busier street. It's on the side street and it's right smack next to the house about midway around the house. I think if it's on a corner lot, there should be two signs, one on each street or else it's got to be right there at the corner where people can see it obviously. It's not obvious where it currently is, and I mentioned it last time, and it's not changed.

Mr. Hart: I do. I do. What I'm thinking about is --. Okay, regarding the rules on the placement of signage, that's potentially something that can be changed when you're reviewing the proposed revisions to the short-term rental home permit ordinance.

With regard to the application sign for this pending application, I'm not sure how much longer that sign would be relevant, but there will be a contact sign. That sign will be installed. If approved that sign will be installed to the standards that are established in the code currently.

Back to the other conversation about which portion of their property is their legal frontage, I'm expecting that's where the sign would be located.

Ms. Trevino: . . . (Inaudible) . . .

Mr. Hart: I'm going to go ahead and verify that and not just tell you I know the answer to it right now.

Ms. Preza: Okay, good. Yeah, more information if can. Thank you.

Mr. Hart: Thank you.

4. Agenda Items for the August 21, 2019 meeting.

Ms. Preza: So no other comments on the open applications. Agenda items for August 21, any, anything on that or we'll be updated later? Oh, Commission members do you have anything that you would like to see on the next agenda? Okay, Caron will not be here.

F. NEXT REGULAR MEETING DATE: August 21, 2019

Ms. Preza: So if that's it, then Item F, our next regular meeting is on August 21st, 2019 and I'd like to officially adjourn at 8:24 p.m. Thank you all so much.

G. ADJOURNMENT

There being no further discussion brought forward to the Commission, the meeting was adjourned at 8:24 p.m.

Respectfully submitted by,

LEILANI A. RAMORAN-QUEMADO
Secretary to Boards and Commissions II

RECORD OF ATTENDANCE

PRESENT:

Roxanne Catiel
Caron Green
Shelly Preza, Chair
Gerald Rabaino
Shirley Samonte
Chelsea Trevino, Vice-Chair

EXCUSED:

John Delacruz
Mililani Martin
Sherry Menze

OTHERS:

Jordan Hart, Deputy Planning Director
Kurt Wollenhaupt, Staff Planner
Richelle Thomson, Deputy Corporation Counsel