
Compilation of Public Testimony

Hydrologic Units:

Ukumehame (6004)

Olowalu (6005)

Launiopoko (6006)

Kaua'ula (6007)

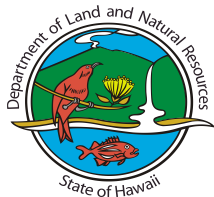
Island of Maui

March 2018

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State of Hawaii
Department of Land and Natural Resources
Commission on Water Resource Management



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This document is a compilation of all public testimony submitted to the Commission on Water Resource Management (Commission) on the Instream Flow Standard Assessment Reports for the Surface Water Hydrologic Units of Ukumehame (6004), Olowalu (6005), Launiupoko (6006), and Kaua‘ula (6007)

Testimony and/or comments contained herein were received at the December 6, 2017 Public Fact Gathering Meeting held at Lahainaluna Intermediate School, Lahaina, Maui, or were submitted to the Commission up until 4:30 p.m. on February 28, 2018.

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1) Frankie Caprioni

Mr. Caprioni's main comment was "who's going to enforce regulations?" The Commission can develop instream flow standards, but what good are they if they cannot be enforced. The Commission also needs input from native people in the area.

2) Rose Marie Duey

"Aloha. I'm Rose Marie Duey, a representative of Olowalu Cultural Reserve. I'm here to speak of Olowalu River. Olowalu Cultural Reserve has 74 acres of leases lands for 99 years from Olowalu Elua Associates. These lands are the significant cultural and archaeological burial sites, and most of its kuleanas. The mission of Olowalu Cultural Reserve is to preserve, perpetuate and educate the practices of our kanaka maoli by rebuilding what has been lost through years of plantation's disturbances. The heart of the reserve is in Olowalu's Valley, where the majority of its kuleanas lie in the ilis of Hawaiiikekee, Kaluaha, Paumaumau, Kamani, and Kaunukukahi. There are 40 kuleana with an acreage of 100 plus, which were partly in kalo and mahiai. Please ensure that we will have wai to continue our traditional and customary practices from the Olowalu River.

3) John V. Duey

Mr. Duey was speaking with regard to Ukumehameh Valley. In 1999, Pioneer Mill stopped harvesting sugar cane. In 2008, the lands were transferred to West Maui Investors, LLC. In 2006, the Maui Planning Commission and the developer agreed to an amount of water, whereby 1.7 million gallons per day (mgd) would go to the developer for lots, while 1.3 mgd would remain in the stream. On page 75 of the Ukumehame Instream Flow Standard Assessment Report, the number of archaeological sites is listed at 2, but there are actually more than 17 sites. On page 73, the average water use for taro is listed as 230,000 gallons per acres per day (gad), but page 90 of the report says 6,600 gad.

4) Ke'eaumoku Kapu

Mr. Kapu lives above the Palakikos and the Dizons. In reference to page 84 of the Kaua'ula Instrea Flow Standard Assessment report, Mr. Kapu has concerns that his TMK parcel, (2) 4-6-021-010 does not appear. In the past, he filed a registration of stream diversion works. Mr. Kapu referred to the Kumuli'ili'i v. Horner Case that involved the withdrawal of about 90,000 gallons of water per day. Mr. Kapu was awarded property and water rights through a jury trial and would like that information included in the report. There are approximately 47 patches in the valley. He is currently growing kalo on 5 patches, with 27 total patches in the area.

5) Uilani Kapu

Ms. Kapu stated that their family was from Kaua'ula. They are concerned about the out-of-watershed transfers and that there are approximately 50 to 75 people living in the area. "They don't know how to manage it. We used to manage it, until they formed their company. We were fine without their company, because we would take care of it, we would clean it, we would do

the cages and everything. We never had a problem of four days, no water. And because of this storm and everything now that we're dealing with, we go with five, six days without water to our homes. I have grandchildren that live up there. That's not healthy, that's not safe. But good thing I have a community center that I run in Lahaina that can help my babies to bathe before they go home. But still yet, that's not why I'm here. I'm here because this private water company transfers water to Launiupoko. Back then, the transfer of ahupua'a to ahupua'a was never taken up. It shouldn't be. It shouldn't be done now, because one ahupua'a sustains itself by its own water resources. And the other ahupua'a is supposed to do the same. Kauaula water is for Kauaula, for all the kuleanas that live there. We have over, I would say, 50 to 75 people within that area now. All the families have come home, and we depend on this. We depend on it for our household. We depend on it for our farming. We depend on it for everything, and that's why I come before you to ask you to look into it. Look into it deeply, because we deal with it daily. We don't need to go through what we're going through right now. With your information, I'm still reading up on it, I will do a written statement. I appreciate you folks coming, because we need to get down to what is right. Mahalo."

6) Jessica Kailani Ross

"Aloha mai kakou. My name is Jessica Kailani Ross. I am a lineal descendant of ohana in Launiupoko, in Olowalu, and in Ukumehame with my children and my kane, and Launiupoko and Olowalu are descendants of Naehu, and we have other kuleanas, but that's not to be discussed tonight. What I want to say tonight is this is an extensive survey. You've done a lot of work. Mahalo. You've put a lot of work into this. It's a lot to go over and a lot to consume and digest. First thing is, you're asking us to get back to you before December 30. I hope that's 2018. Is that 2018?" [Commission Staff: "2017"] "I'm going to ask you to extend that significantly. That's not sufficient time to go through all of this with ourselves and our community and get back to you with our analysis and recommendation. This is a very significant decision and process that will affect us way into the future, so we need more time. Like six months or a year would be good. But especially I want to say that kanaka maoli have been displaced from our aina for over a century, over a hundred years. Literally chased away, tricked out of our titles, sent to Kalaupapa when nothing else worked, probated then lands which were purchased by the plantation, and displaced in so many, many, many ways. And then educationally, having the culture and the language taken in 1900 when it was deemed illegal, punished when speaking in school or teaching your children with prison. In 1978 the law was reversed and we have a Renaissance going on and we're rediscovering our culture and our language, and our indigenous practices and the value of an indigenous economy. Many people have been displaced from their land for 150, 100 years or more, and we're finding our way back to our kuleanas, our land commission awards, and we're rediscovering how to live in a sustainable way. So as you make your decision, you have to keep in mind that as we return, we will reopen lo'i kalo and we will need the water. All the homeless, and displaced, and the economic disadvantages, and the prisons, and the education, and all those things are going to be solved because we're going to return to our aina and we're going to remember who we are. We know who we are. We don't have our land base. And as we return to our land base, we will return to lo'i kalo and we will need the water. So you need to keep that in mind and put a significant amount aside for reopening lo'i kalo and returning, rehabilitating the people. Mahalo."

7) Jonathan Scheuer

“Aloha. I am not from Maui. I’m from Oahu. I have the good pleasure to often be in front of the Water Commission for the last two decades, working with folks like Aunty Rose and Uncle John, with OHA, trying to get streamflow. I do represent a bunch of parties in front of the Water Commission, the National Park Service, Department of Hawaiian Home Lands. And I wasn’t going to testify because I’m not here for any of them. I’m just here because I’m interested in water in this area, but I felt compelled to testify. And I just have two things that I want to say really. One is just a very specific comment on the reports. On the reports, you guys have buried in there, a suggestion that using the Water Commission’s irrigation standard program that lo’i kalo needs 6600 gallons per acre per day. At least in the Ukumehame report. Maybe a zero was dropped off. It’s radically undercounting of how much water, even by USGS reports that the Water Commission has relied on previously which have said, at a conservative minimum, 150,000 gallons per acre per day is what lo’i kalo need. That’s what recently the Commission accepted and used in allocating water to DHHL in West Kaua’i. So that’s a minor, but not insignificant thing.

“The other thing I just want to say is, like, so first I want to start off that people have been in front of the Water Commission for two, three decades saying ‘hey, please revise these interim stream flow standards which had said dry streams are cool.’” So ‘thank you’ for starting to take initiative in revising those. I think that’s good, but i don’t think the process by which you’re doing this right now is the right process either legally or practically. Practically, it’s really good you’re starting with these four streams and you’re doing some work on West Kaua’i, or South Kaua’i I guess, East Kaua’i. I wasn’t sure where you said. But, to do this for all, almost 400 stream in the State, we’re talking like my grandchildren’s time by the time you’ve set instream flow standards, at which time climate change and other driving factors are going to create even more problems. On a practical matter as well, I have a PhD in Environmental Studies and I appear in front of you guys all the time, and I had a hard time following these reports and figuring out what the methodology was and what you were trying to do. So I think for the general public it might be almost impossible challenge to try and figure out what’s being proposed. But as near as I can understand, you’re trying to say, okay, we’re supposed to protect instream flows and there’s all sorts of things associated with instream flow standards like recreational uses, kalo growing, traditional and customary access, all these things. And so, we need to know what those are, and then we need to quantify how much water each of those practices need and what part of the stream. And I really think that reverses the burden of what you guys are supposed to do. Because really, the burden is never supposed to be on public trust uses of water. To quote the Hawai’i Supreme Court and Kaua’i Springs, the agency, in this case you guys, is supposed to apply a presumption in favor of public use, access, enjoyment, and resource protection. In other words, the instream flow standard should be the entire flow of the stream, except for what a private user can possibly justify as their reasonable / beneficial use. You could make it through all the streams in Hawai’i with that methodology and put the burden, not on you guys, who you guys actually work really hard to put these reports together. I’m sorry, it’s supposed to be the private diverters who are coming up and saying, yeah, we are proving that we’re not affecting native Hawaiian rights, we’re not affecting streamflow, we’re not affecting anybody’s kuleana rights, in order to take this amount of water we want for development.

You're doing their work for them, and that's not your job. Your job is to protect our rights. I try to say this with respect for your guy's work and for the Commissioners who are serving, but really you're taking something that should be simple and it's making it way, way too complicated, and putting the burden on folks like this to come out in the evening to justify what their needs are, when your first job is to be forcing private users to demonstrate that they actually need it. Mahalo."

8) Hinano Kaleleiki

"Aloha. My name Hinano Kaleleiki, Konohiki Kaleleiki. We've been in court for this matter forever. You guys are lawless. The United States is lawless. OK? I fought for my rights and I've been denied them completely from the lowest court to the highest court. To the point where your deputy attorney general Rod Rosenstein called me himself. I said, okay, you found the stepping stones, now what are you going to do with it? So, all this stuff going on where you taking, taking, taking. We already know the problem started back in the day. It's been stealing from one thing to the next, to the next, to the next. And now we're at this point where we got to deal with everybody's livelihood here, but never mind the kanaka. Never mind the kanaka. Kick 'em to the side, yeah. My kupuna, William Aiohu, walked me through that valley to show me what I needed to know. And people like that, if it wasn't for Frank Ka'ane telling him, eh, Williamo, the kid is up there. I going help him out. He tell me 'he don't go up there no more, because his family got duped out of their land.' And dad would say, dad was told, I give you a place in plantation, get you a job, no need worry about growing taro no more. So when they moved down into the plantation area, he says they lost their land. They went to the village store and go get something to eat, they take their land. Then they take the water. But see, in 1848 when they did the Mahele, as you guys have in your book there, that was an inventory of our King's assets. And that was the incorporation of his crew right there, the 245 konohiki. He made sure the land and the people would never be separated. This is why the foreigners have to work so hard at duping us. They have to do so many things just to cover up, inject, delete, all of that. Why can't we come back to simplicity. You arrive back to where it was put in perpetuity for the future generations. Didn't say sell. Didn't say ownership. Only person that had to pay taxes was the konohiki. That's what the poalima was for. Because people had the right and the lands of the konohiki. He took all that interest away from the royals so that they wouldn't be able to be taken as spoils of war. It's supposed to be protected. Protected for our people. You know, our government, our country, outlawed slavery in 1842, almost 20, maybe 30 years before the Civil War even took off. When the guys came here, they had the plan to do what they're doing now. So with the perpetuation of this crime continuously going on. All the documentation, with the State's stamp on it, it's annulled, it's frivolous. Your paperwork is frivolous. Now see, I can show the fabrication, I can show the manipulation, I can show you deletion, and I can show you how they take one LCA and move it completely onto another island. And they take the Royal Patent from another and put it someplace else. So, we really need to look at this and say, hey, we're all here now. Our King made sure the first three laws of his Constitution took care of the people. Then it told us, what we're supposed to do. There's a plan already set down. We shouldn't be changing anything. We shouldn't be adding anything. We should be mindful of our environment, but we gotta deal with jokers all the time. You know? And it's sad. Sad to watch our people suffer. I've fought in every terrain God's got on this earth. And I have to fight harder here than I did anywhere else in the world. I shit you not.

I think you guys ought to take a real look at what you guys doing, and focus in on the real problem. I think once you focus on that, you'll find that things will come a lot easier. Because then you'll be able to tell 'you cannot do that' because it's already used up. There's not enough for this, but you're going to go ahead and try and push that development through. It's always about the money. When everybody's dead and gone, the money don't mean shit. When the water's gone, you guys will pick up and leave. Where the Hawaiians going? Where you kanakas going? That's just the nature of your guys reach, from back in the day. This is what you do. Pilgrims landed on Plymouth Rock, and that was the destruction of the Indians. They made it to the West Coast, they shoot for the Pacific. The Spanish Inquisition, the Spanish Government has been very generous with their archives with me and it's amazing. It's amazing how much of our history is in here. You know, the Spanish have us on a map in 13th through 14th Century. This was their little sneaky path. This is how they would catch the current, hit North America, and come down from North America to South, because they go with the current. Your report gives all that. I see a lot with the short time I had to look at it. You guys know our rights. You know what's right, so you should just do the right thing. Correct it. Know there's not enough water."

9) Charlie Palakiko

I read that you guys noticed the stream was running, when was it, 2016. I don't know exactly what page, but it said it, that's when you guys observed that the stream was running at 2016. But that is not true. There's water that's reaching the ocean right now in Kaua'ula, but it's from... They're dumping it like maybe mid-way, not even mid-way. It traveled a lot. It took it 10 years for this thing to reach the ocean. Now we started in 2000. In 2001 we started cleaning the land, opening up our auwai, which is the Waimana auwai. That's the name of it. But we started at the 2000/2001. By 2002, I was putting water already into the ditch to run these patches. A few years later, we already were seeing 'o'opu in the stream, along with crayfish and clams which were from the reservoir. So what happened was, a few years later, we had mediation with the developers, with Peter Martin and everybody, West Maui Land, and they decided to put clean water back into the stream. When they first started putting water back into the stream, they dumped it at the dam. So they dump water. They put a 6-inch pipe. But, hey, we took it. We were OK, we'll take a little bit of the water. But it wasn't enough. So we built another diversion over their diversion to create more water to reach our patches. They broke the diversion at least three times. The third time they went break 'em, I caught them up there and they kind of fixed it. They left the material on the diversion there and they let it run for about a year. We were taking more than half the stream at that time, because they had to go really far to reach the stream. The stream never run. Wasn't saturated. So now, they broke it, and then they came like half way down, there's a pipe that comes across that fills the ditch. You know all about that. And they let go. They told me from the beginning, 'I going give you one million gallons, Charlie. Come on, I give you one million gallons.' Through the years, this pipe now, eh, I had to take it. They shut the river down on the top, they came half way down. I stay little bit more than half. It's not that much further from the dam. And they started dumping water from there. That water now been running, I don't know how many years already now, fifteen years? I been doing this for... My daughter is 16 now. So sixteen years already, the water been flowing. But it took it only 9 to 10 years. So if I started, let's say, 2002. So by 2011, 2012, it reached the ocean already. And there was stream life in there from the beginning, but you couldn't see it. It was just going, running

down, it was going into the ground. By 2015, I think I went down there, because it was running for a while. I just wanted to go see. I started walking in the stream at Puamana and I started to find 'o'opu. So get 'o'opu inside the stream. Had prawns, everything in there. And even now after the 2016 storm, all the 'ōpae that was in the mountain all came down. So now I'm finding 'ōpae all below the diversion. And I've seen them in my auwai, they're probably in my patches, they're in the stream, so I'm saying there is life in that stream. I've been running, I'm talking years already, so basically all we gotta restore is a small section of dry stream to connectivity. You know? And there's life in there already. That's why when I read stuff like this, page 46 says 'the HSA did not recommend that Kauaula hydrologic unit streams be listed as a candidate stream for protection based on riparian, aquatic, cultural, and recreational sources.' I look at that and I think, how can that be true? That no sound right to me. [Staff: That's just what's in the report from 1990.] However, 'there's currently no critical habitat in the lower reaches.' So basically, you guys saying no more fish, no more 'ōpae, no more nothing in the stream. That's what it sounds like in this report. That's what it sounds like to me. But, if you trying to put something out there for them for read, to see if we need water for this place, this not painting the right picture, seem like. You know what I'm saying? This just doesn't seem right to me. You know, so there is life in the stream. We know they're there. And they're trapped actually down there right now. They need to go home. And I don't know how much, what is that, a mile, mile and a half? I never did measure it, from where they're dumping the water now from the dam. So it's just a small section. You guys planning on putting water back in streams that no more water at all and trying to restore them. You see this stream, it's close to it already, of being restored. You know? So I cannot believe that it's not a candidate. You know what I mean? Why not? This stream get the most chance of any other streams that came that far from not having water. You know what I'm saying. So, this stuff was kind of bugging me. I just want to let you guys know that. [Staff: That's just from the 1990 study, way back.] That's where you guys took... I know. Later on I figured it out, 1990 was the study, but this is what you guys going give to the Board. This right here, right? Here Board, read this, see if Kauaula is... You know? It's like you telling them no more nothing in there, when there is. You know what I'm saying, eh? So that's my point here, is that, this needs to be corrected. They need to know what I just said. Eh, our stream get one good change for come back, and we're almost there already. Only get one small section of river that no more water. But that's your guy's job for figure out. You guys know what you guys doing. We leave it in your hands for now and we see how that goes. Thank you."

10) Kanoelani Steward

“[Opening statement spoken in Hawaiian.] Aloha. My name is Kanoe. I'm from Lahaina, Maui. I'm currently working for The Nature Conservancy as an assistant marine coordinator in their Marine Conservation Fellowship Program, and in collaboration/partnership with the Division of Aquatic Resources, working with Uncle Skippy Hau over here. We've been collecting native fish and invertebrate data that includes all five species of 'o'opu, 'ōpae kuahiwi or kala'ole, 'ōpae 'oeha'a, and hīhīwai, and hapawai. And we're doing this research to look at the presence and absence, and abundance of these species in the middle and upper regions of Ukumehame, Olowalu, Kauaula, Kahoma, and hopefully Honolulu as well. I'm currently in the process of entering and analyzing all the data, so I apologize I don't have any concrete conclusions for you guys at this moment, but I will submit a draft report of our findings for

Ukumehame, Olowalu, and Kauaula to the Water Commission by the written testimony deadline of December 30. Unless that gets extended, like how aunty asked. But, what I can offer today and what I do want to share is our observations from Ukumehame, Olowalu, and Kauaula. And I'll start with Kauaula. It's just like a short list of different species that we've been seeing. Mainly, just highlighting on the native aquatic species. And so in Kauaula, when me and Uncle Skippy first walked down there, back in July, we actually saw a couple dead 'o'opu naniha, but this past time that we went down, last month, we seen nākea and 'akupa. Then, moving up in the middle areas, we also saw nākea over there as well. Above the diversion in Kauaula, we didn't see any fish, but we did see 'ōpae. Uncle Charlie guys pointed that out.

“In Olowalu, in the middle region of Olowalu, we saw a lot of nākea and nōpili. And in the upper Olowalu, we saw the same species, nōpili and nākea, as well.

“And then Ukumehame was exciting because there was a lot of old hīhīwai eggs in the middle region, as well as nōpili and nākea. And then we got to the top, more towards the top of the valley, we actually saw hīhīwai and 'ōpae kuahiwi, and nōpili, nākea, and 'o'opu 'alamo'o. Mahalo.”

11) Kekai Keahi

“Howzit. The guy who came up, where you from, Honolulu? You kind of went steal my thunder already, but I kinda want to go back to what he was saying. We was the last family for raise taro in Lahaina. But then Charlie was the first family to restart taro in Lahaina also. So a few years after we stopped farming in Kanaha, when we was in high school, we went back to Kauaula where Charlies guys was and we opened up two patches, eh, brah? And we went use one hose, on green garden hose, and you know to us, that was everything, even if it was from one hose. And, um, I was going to UH, later on when I graduated and went to UH and I got different taro species, we brought 'em back, we tried all kind different stuff. Was like one mad scientist type of experiment going on. And, just looking back at that time, we never really think about, whoa brah, you the only guy raising taro in Lahaina. Yeah? And we never thought was something that was that great. Until you get older and you start looking around, and it's like ho brah, you the only taro farmer in Lahaina. And then you start looking at why. And then you get frustrated. You get mad. Then we start trying to find solutions to the problem, which was basically not having water. And so, you know, we start to read up and you start to do studies and you look at the laws when it comes to water in the streams. I look at the laws, and it's pretty cut and dry and clear, somewhat. I understand you guys gotta do your studies to validate uses and stuff, but traditional and customary usage, appurtenant, the whole gamut, from water in the stream for instream life... Looking at that, and then I look at the river in Lahaina, except for Ukumehame after they went stop the plantation, I looking at the rivers in Lahaina. Ho, 100 percent dry. So where was the protection, where's this protection, for all these things that is stated in the law and that's supposed to be protected. Nobody protecting 'em. And so now, OK, we gotta figure out how we going get more water. And in Kauaula, here comes Peter Martin. Peter Martin wasn't even in the picture at the time we started. He's one rookie, but he pilau.

“So he come inside, and next thing we know, he start to dictate how much you can and cannot have. I was like wait a minute. One PUC don’t dictate our rights. Our rights is protected under law. And so then, here we go, we start to, especially like right now with you guys, it’s like, I feel like we need to validate our use. But our use is our right. And so that right is protected. And so, we shouldn’t have to validate to you guys the reason why we need the water. Also, the way things are now with the prices of homes and stuff like that we starting to see a lot more people moving home, going back to their land, and running into the same situation that we did when we first was kids in Kauaula. And it’s kinda sad, because I graduated maybe 25 years already, 27 years now... same story. No protection. And we still trying for validate our use. And so, we get frustrated. And, I know this is about Kauaula or down to Ukumehame, but Ayrone you know we was talking story, but in Kahoma we got the opportunity to kind of work with Kamehameha Schools which was... they crooks too, straight up... but to find out that Kamehameha Schools leasing out that area in Kahoma, the intake, to Pioneer Mill to dewater Kahoma and then Pioneer Mill having that opportunity to steal land like you seen in every other place. Was one shock to find out was one Hawaiian entity that allowed that to happen. And so for 10 years, man, I was 34 years old, I 44 now, 10 years, we been going back and forth, back and forth. I not saying it’s a done deal yet, but we finally got water back in the stream. Took about six to seven years to saturate that stream, and then we see water life returning. Skippy and Kanoe went into the streams, and you’d be shocked to see if you give life one chance, how fast she come back. Because in that stream, it’s pretty hard to walk around without almost stepping on one fish. It’s serious, yeah. But, also, seeing that in Kahoma and I looking across at Kauaula, I was like man, they was in it longer and we was able to kinda get through ‘em in ten years, but they still been going through ‘em yet. And, kinda sad. You kinda feel hurt. But, my main point is, we not here to validate our use. We’re here to exercise our right to the water. And, go see Peter guys. They gotta validate their use first. Not before we taken care of first, yeah?

“Get one rumor going around, they like sell their place. They no like be the water company anymore, because they see what’s coming down the pipe for the West side after looking what’s happening East Maui and Nā Wai ‘Ehā. It’s coming down the pipe. And, I like see that development run when those uses are protected and restored to the stream. I like see if they get enough water for that development. The County went screw up. They giving out permits, say OK these guys get PUC, I know State, giving out this PUC not even thinking about our rights to water. Giving them out, handing them out, and now if these rights are exercised and this instream flow, or interim instream flow standard is set, they going lose water. And already as is, yeah Charlie, summer time they struggling for water and they get the whole river. One more thing. Charlie never mention, but as long as I could remember, every week he calling the developer, ‘no more water.’ Calling the developer, ‘no more water.’ We not supposed to be calling him. He’s not the guy in charge. We’re not supposed to be calling him. If our rights are supposed to be protected, then we should be calling you guys. But then when we call you guys, ah kind of like shucks brah, not going happen. You know what I mean? And then you get the process. You gotta go through a process. I happy you guys doing this, and I happy you guys putting all that stuff together, yeah? But for the rest of you community, you guys gotta watchdog, read close. I never get chance for read too much stuff. Watchdog, read close. Make sure that everything in this report, when the thing go to the Commission, is exactly what you like and what we deserve under our rights. You guys understand? No take it for granted that everything going be all good. You guys gotta be vigil. So, as far as... Oh, one more thing. The

instream flow standard, interim instream flow, you was saying to me that at any point that can be amended, the flow, based on usage, in case we get more people return to the valley, then more water is needed for the valley as far as kuleanas and what not. So, I can see plenty guys going home, you just gotta give them one chance. Just like the fish, give them water, the people going come home. So, that's all I get for say. Thank you."

12) Foster Ampong

"Aloha. How you folks? My name is Foster Ampong. I'm from Lahaina. Couple things. Listening to the testifiers, Jonathan, Keeaumoku, Charlie, Bear, they all brought up very, very important points. What I want to address first is the narrative. When I looked at the notice, the flyer, what I noticed is that the Commission is coming to the public. Asking the public for information. I want to ask the Commission, what is it, what objective, what goal are you guys after for the West side? The other thing I want to talk about, again this is relative to the narrative. For the last hundred or somewhat years, the kanaka, the taro farmer, has always been approached and addressed as having to be the one with the burden of proof. Prove that you using the water, prove that you growing taro. Water Commission, as it is right now, you have X amount of development on the island that's drawing water. I would like to see the Commission address each stream and the amount of water each valley will need to raise taro. Because these taro patches are ancient. They were here thousands of years, literally, before any of the development that you see today. And so the water that has been drawn from the rivers, from these kahawai, has been drawn by the taro farmer for millenniums, from time immemorial. I would like to see this draft report reflect that. And as Jonathan stated, he brought some really good points. And so, my focus here, my testimony, is that this report that you have right now, as Charlie pointed out, is inadequate. It shouldn't even be submitted as it is. And I know you guys are working on it, and it's a work in progress. But I really, really want to see everybody's mana'o that was said tonight reflected in the final draft, because as Bear had pointed out the families are returning. You know, I may not, and I say may, I may not make it back to Lahaina, because I'm cultivating my wife's side of the family in other valleys. But I have children that are interested. And so, I would like to see the Commission address and look at how much water each taro farmer would need based upon the taro patches that's in the stream. So if you have one family that's using one or two patches, you can't say that, OK, that's all he's going to need. When in his whole 'ili 'aina, or his kuleanas, he may have 23, 25, 30 patches. So, the determination should be based upon that. That's the rationale that I want to see implemented. And the other rationale I want to see implemented is that plan for the taro farmer, not just for the tourists. Not just for the malahini that's going to move here in 10, 15, 20 years. Because it seems like the State moves a lot faster for them than they do for the taro farmer. And, you know, like it or not, taro farmer was here before anybody else. Mahalo."

13) Albert Perez

"Aloha. I'm Albert Perez. I like the first, I think it was the first comment that was made. It was like how are you going to know, if whatever standard you set, is being enforced. How are you going to enforce it. How are you going to know when, when it's not working. I think the only way is to make a presumption that the water is supposed to be in the stream for instream uses, for kalo farmers, for the ecosystem, the native fish. And then for every diversion that you have, you

need a gage. You need a meter. Before the diversion and after the diversion, so that you know exactly how much water is being taken. And this is the problem we're having in East Maui. There's very few gages, so we don't really know what's happening on each stream. You can go through all these motions, and I don't know what you're going to do with it, except maybe have another revision. It seems like a lot of time spent. I would like to know, and this I don't know, how much would it cost as compared to all of this staff time and the time that the public is putting in. How much would it cost to put in gages before and after each diversion? And to maintain those over time? That would be my suggestion.

My second comment is that I think that the public needs a lot more time for this. And, I would recommend it be an ongoing process. We have a West Maui Community Plan right now and I think that process is like 18 months or something. So the public is going through the draft line by line and making sure that we all agree that what it says is actually what is true. I noticed... I mean I didn't have time to look at all four of these hydrologic units, but there's one part in the Olowalu section that says the Hawaii Farm Bureau's opinion, basically, is that agriculture is a public trust use. I don't why we're putting in an advocacy group. Why are we putting that in, you know, in this document? We should be talking about what the facts are, if there's been case law, not what the Farm Bureau thinks. If you want to know what agricultural groups think, then there's also the Hawaii Farmers Union. I just think that's kind of misplaced. And that's all I have to say right now. I look forward to... I hope that you folks will extend the comment period. But, as Jonathan Scheuer mentioned, the presumption should be that the water stays in the stream unless people can prove that they have a justification for a reasonable and beneficial use offstream. Thank you."

14) **Victoria Nohealani Kaluna-Palafox (received December 28, 2017)**

INSTREAM FLOW STANDARD ASSESSMENT REPORTS (IFSAR)

**For the Hydrologic Units of
Ukumehame(6004)**

2017 DEC 28 AM 7:56

Date: Wednesday, December 6, 2017

Time: 5:30 p.m. to 6:30 p.m.

Location: Lahainaluna Intermediate School Cafeteria
871 Lahainaluna Rd. Lahaina, H.I. 96761

Please provide any comments you wish to offer on the public review drafts of the **INSTREAM FLOW STANDARD ASSESSMENT REPORTS** for each of the hydrologic units.

Area Ukumehame (6004) since May 23 & 24, 2009 and continuance til today December 26, 2017 and on. Total Length of pipes, which follows the old awai 1540 Feet. 6 feet header with 6 inch pvc pipes, more or less are set in the river above water fall. 1540 feet is for Kuleana usage. Water traditionally used for kuleana, home and agricultural usage. Water for domestic use for Kaluna-Palafox Ohana , approx..1000 gal. per day. Kuleana 4 taro patches and more to open. Home use and agricultural usage. Total acreage 9.1. Lcaw 6408:1; R.P 5124; T.M.K 4-8-01-057, Ahupua'a o Lahaina moku puni o Maui.

PLEASE PRINT **Name:** Viictoria Nohealani Kaluna-Palafox *VP* **Phone:** (808) 281-6731

Affiliation:
(if applicable) Kuleana

Address: 12½ mile marker Makanewa, Ukumehame, Lahaina, H.I
(96761)

Mailing Address: c/o (Post Office Box 11372, Lahaina, H.I (96761)

Email: vkalunapalafox1@gmail.com

Submit this form (plus additional sheets, if any) via mail or fax. Comments may also be e-mailed.

Mail: **Commission of Water Resource Management;** Department of Land and Natural Resources

P.O. Box 621

Honolulu, Hawaii 96809

ATTN: Instream Flow Standard Assessment Reports

Facsimile: (808) 587-0219

E-mail: dlnr.cwrn@hawaii.gov. (Please include information in the shaded area with e-mail)

All comments must be received or postmarked by December 30, 2017. Mahalo!

15) Launiupoko Irrigation Company, Inc. (Kaua'ula, received January 2, 2018)

Launiupoko Irrigation Company, INC

305 E. Wakea Ave., Suite 100
Kahului, Maui, Hawaii 96732

Phone: (808) 877-4202
Fax: (808) 877-9409

December 29, 2017

Jeffrey T. Pearson, P.E.
State of Hawaii
Commission on Water Resource Management
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

Re: ***Instream Flow Standard Assessment Report for
Kauaula; Hydrologic Unit 6007, Island of Maui***

Dear Mr. Pearson:

This letter provides comments on behalf of Launiupoko Irrigation Company, Inc. ("LIC"), a public utility, regarding the above referenced Instream Flow Standard Assessment Report ("IFSAR") for Kauaula, dated August, 2017 (Draft PR-2017-04). LIC understands that the IFSAR is being prepared to provide an inventory of the best available information for the Kauaula Hydrologic Unit. The draft IFSAR has been made available to the public as part of a public fact gathering process. LIC appreciates the opportunity to provide following comments on the draft IFSAR as part of this fact gathering process.

1. Land Use, page 22. The section on Land Use only references the State Land Use law. Maui County also has a system of planning and zoning in place that dictates the future land uses. The Maui Island Plan, adopted in December 2012, includes a Directed Growth Map to guide future growth on the island. Within the LIC service area, there is a 270 acre area designated within a Rural Growth Boundary. The guidelines for this growth area call for 50% of the land to be used as Park or Open Space. Excerpts from the Maui Island Plan are included in Attachment No. 1. Preliminary planning for projects within this Rural Growth has been initiated, including an assessment of the adequacy of the supply for the potable and non-potable water systems. See comment no. 7 below and Attachment 2.
2. Hawaii Stream Assessment, page 47. This section notes that restoration of streamflow and increased connectivity could lead to development of a richer and more native-dominated community in the stream. There is no mention of the Lahaina Watershed Flood Control Project (LWFCP) and the potential impact the structure may have on upstream migration from the ocean. See the Final EIS at http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2004-01-08-MA-FEIS-Lahaina-Watershed-Flood-Control.pdf. The LWFCP includes a debris basin near the bottom of

2017 JAN -2 PM 3:47
COMMISSION ON WATER
RESOURCE MANAGEMENT

Kauaula Stream just mauka of Honoapiilani Highway that will capture and re-route the primary stream flow to a new 3,600 foot long grass-lined channel (with sediment basin) leading to a new shoreline outlet. The new shoreline outlet and the majority of the 3,600 foot grass lined channel already have been constructed. The creation of a large debris basin collecting all of Kauaula Stream's flows together with a new shoreline outlet for the discharge Kauaula Stream's primary flows would appear to present potential impacts to upstream migration and should be included in the analysis of the potential benefits of streamflow restoration.

3. Outdoor Recreational Activities, Section 5.0, page 48. This section includes the following sentence: *"However both tourists and local residents are often seen recreating along the lower reaches of Kauaula Stream and there is a hiking trail that follows the stream up the valley, although access to this trail is not easy."* We are unaware of a permitted hiking trail following Kauaula Stream up into the valley. The lower portion makai of Honoapiilani Highway runs through the Puamana residential community and the channel is privately owned. A greenway easement was established along a small portion along the southern bank as part Puunoa and Makila Phase 2 subdivisions, however, there are no mauka or makai connections and the easement has not been improved for hiking. There are no known existing trails following along the stream, especially in the upper lands within the Conservation District which are managed as part of the West Maui Mountain Watershed Partnership. The statement regarding the existence of an existing hiking trail is not accurate and its inclusion in a state issued report could lead residents or tourists to believe there is open public trail along Kauaula Stream and into Kauaula Valley. This statement should be deleted.
4. Instream Hydropower Generation, Section 9.0, page 62. It should be noted that the existing hydropower plant primarily supplies power to the Maui Electric Company grid and also supplies electricity for the pumping of potable water from wells during off-peak hours.
5. Protection of Traditional and Customary Hawaiian Rights, Section 12.0, page 69. The reference to Figure 12-2 on the bottom of page 69 is not referring to ahupuaa in the Kauaula area and should be referencing Figure 12-1.
6. Table 12-1, Tax map key parcels with associated Land Commission Awards, pages 71-88. Table 12-1 is intended to identify tax map key parcels and associated Land Commission Awards and Grants. The table was presented as an attempt to identify the potential for future appurtenant rights claims within Kauaula. The table appears to have relied on outdated information. The table lists Pioneer Mill as the owner of a number of

parcels, however, Pioneer Mill has not owned most of the identified parcels since 2001 when it sold its Kauaula lands to Makila Land Co., LLC. Also, there are a number of TMK parcels along Kauaula Stream located in TMK Plats 4-7-003 and 4-7-012 which include LCA's and which are not listed in the table. In order to provide the best available information, the ownership as well as listing of appropriate TMK numbers should be updated.

7. Quote from Handy, et al., page 90. The quote from Handy, et al., which is intending to provide a limited regional description of the area is actually describing the area east of Maliko in northeast Maui.
8. Kauaula Stream Diversion, Tables 13-1 and 13-2, page 97. Table 13-1 should be updated to include the estimated median flow of the Kauaula Diversion as reported to CWRM by LIC. The notation under table 13-2 should be revised to delete the sentence stating that no water is being diverted at this location. The staff photos from 2017 are evidence that the diversion is still operational.

A detailed assessment of the potable and non-potable systems serving the Kauaula and Launiupoko areas entitled "Adequacy of Potable and Non-Potable Supply for the Three Proposed Makila 201H Projects" was prepared by Tom Nance Water Resource Engineering in May 2017. The report was previously transmitted to your office for comments as part of the Polanui Gardens draft 201H application. (CWRM comments were provided in a memorandum dated 8/25/17; REF: RFD 4655.6.) The report contains current information on the diversions from Kauaula and Launiupoko Streams as well as information on existing and projected usage. We are transmitting the report to you as Attachment 2 so that the updated information can be incorporated into the IFSAR, as appropriate.

9. Utilization of Important Agricultural Lands, page 102. The second to last sentence states that "Nearly 30 percent of Kauaula is designated agricultural land (Table 13-3)." This sentence would be more accurate if it specified that "Nearly 30 percent of Kauaula is designated as prime agricultural lands and other important agricultural lands by ALISH." (As noted on page 22 of the report, 47.2 percent of Kauaula is designated agricultural under the State Land Use law.) Also, the previous sentence is referring to incentives for Important Agricultural Lands (IAL's). The incentives related to IALs stems from changes to HRS Chapter 205 and are separate and distinct from the ALISH system. There are no IAL designated lands in Kauaula. If the intent is to include information on the IAL designations and programs, then this would be better treated as a separate paragraph or subsection.

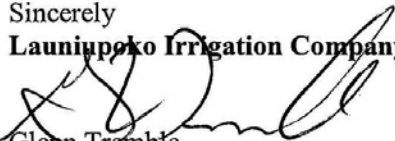
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Re: ISFAR for Kauaula
Page 4
December 29, 2017

10. Diverted Water from Kauaula Stream, pages 105-106. Please refer to the attached report by Tom Nance (Attachment 2) for updated information on stream diversion rates.
11. Irrigation Needs of the Kauaula Service Area, page 88. The report uses existing TMK layers and remote sensing data to approximate the amount of acreage and type of agriculture and landscaping. While this may provide a cursory survey of the acreages in intensive agricultural use we have concerns regarding the accuracy of this method, especially without groundtruthing the results and/or contacting the property owners. A quick spot check of the data revealed some errors. For instance TMK parcel 247001029 was listed as 122 acres in size and containing 14.5 acres of dragonfruit. In actuality the parcel size is 27 acres and does not appear to contain dragonfruit. Parcel 247010044 which does contain a significant amount of dragonfruit was listed as having no agricultural use. Also the date of the aerial imagery is important since uses may have changed in the meantime. If CWRM staff is interested in providing a mailout survey to property owners, we are willing to assist since LIC maintains an active mailing list of all customers.

The attached report prepared by Tom Nance contains information on recent usage of the LIC system as well as projected demand. This information should be examined and utilized in the IFSAR where appropriate.

If you have and questions, need any further information or would to inspect the site, please feel free to contact me at 808-877-4202 or via email at glenn@westmauland.com.

Sincerely
Launiupoko Irrigation Company, Inc.



Glenn Tremble
Secretary/Treasurer

Attachment 1: Excerpts from Maui Island Plan – Makila Rural Growth Area
Attachment 2: *Adequacy of Potable and Non-Potable Supply for the Three Proposed Makila 201H Projects*; Tom Nance Water Resource Engineering; May 2017

305 E. Wakea Ave. Suite 100
Kahului, Maui, Hawaii 96732

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16) Launiupoko Irrigation Company, Inc. (Launiupoko, received January 2, 2018)

Launiupoko Irrigation Company, INC

305 E. Wakea Ave., Suite 100
Kahului, Maui, Hawaii 96732

Phone: (808) 877-4202
Fax: (808) 877-9409

December 29, 2017

Jeffrey T. Pearson, P.E.
State of Hawaii
Commission on Water Resource Management
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

2017 JAN -2 PM 3:47
RESOURCE MANAGEMENT

Re: ***Instream Flow Standard Assessment Report for
Launiupoko; Hydrologic Unit 6006, Island of Maui***

Dear Mr. Pearson:

This letter provides comments on behalf of Launiupoko Irrigation Company, Inc. ("LIC"), a public utility, regarding the above referenced Instream Flow Standard Assessment Report ("IFSAR") for Launiupoko, dated August, 2017 (Draft PR-2017-03). LIC understands that the IFSAR is being prepared to provide an inventory of the best available information for the Launiupoko Hydrologic Unit. The draft IFSAR has been made available to the public as part of a public fact gathering process. LIC appreciates the opportunity to provide the following comments on the draft IFSAR as part of this fact gathering process.

1. Land Use, page 22. The section on Land Use only references the State Land Use law. Maui County also has a system of planning and zoning in place that dictates the future land uses. The Maui Island Plan, adopted in December 2012, includes a Directed Growth Map to guide future growth on the island. Within the LIC service area, there is a 270 acre area designated within a Rural Growth Boundary. The guidelines for this growth area call for 50% of the land to be used as Park or Open Space. Excerpts from the Maui Island Plan are included in Attachment 1. Preliminary planning for projects within this Rural Growth has been initiated, including an assessment of the adequacy of the supply for the potable and non-potable water systems. See comment no. 4 below and Attachment 2.
2. Outdoor Recreational Activities, Section 5.0, page 40. This section includes the following sentence: "*However both tourists and local residents are often seen recreating along the lower reaches of Launiupoko Stream and there is a hiking trail that follows the stream up the valley, although access to this trail is not easy.*" We are unaware of a permitted hiking trail following Launiupoko Stream up into the valley. A greenway easement was established along a portion along streambed as part of the Mahanluanui Subdivisins, and a short trail segment was constructed from Wailau

Place to the Launiupoko Reservoir. There is also a trail leading to the stream diversion for management purposes. However, there are no known existing trails following along the lower reaches of the streambed, or in the upper lands within the Conservation District which are managed as part of the West Maui Mountain Watershed Partnership. The statement regarding the existence of an existing hiking trail following the stream and up the valley is not accurate and its inclusion in a state issued report could lead residents or tourists to believe there is open public trail along Launiupoko Stream and into Launiupoko Valley. This statement should be modified or deleted.

3. Table 12-1, Tax map key parcels with associated Land Commission Awards, pages 63. Table 12-1 is intended to identify tax map key parcels and associated Land Commission Awards and Grants. The table was presented as an attempt to identify the potential for future appurtenant rights claims within Launiupoko. The table appears to have relied on outdated information and contains inaccuracies. The LCAs listed as falling within State owned land (4-7-001: 004) are not located within this TMK and instead are located along Kauaula Stream, outside of the Launiupoko area. The table lists Pioneer Mill as the owner of parcels 16, 17 and 18, however, to our knowledge these are shoreline properties which were never owned by Pioneer Mill. Parcel 21 no longer exists. Also, the TMKs within LCA 82 are not listed. In order to provide best available information, the ownership and location of TMK parcels should be updated.
4. Launiupoko Stream Diversion, Tables 13-1 and 13-2, page 71-72. A detailed assessment of the potable and non-potable systems serving the Kauaula and Launiupoko areas entitled "Adequacy of Potable and Non-Potable Supply for the Three Proposed Makila 201H Projects" was prepared by Tom Nance Water Resource Engineering in May 2017. The report was previously transmitted to your office for comments as part of the Polanui Gardens draft 201H application, Appendix L. (CWRM comments were provided in a memorandum dated 8/25/17; REF: RFD 4655.6.) The report contains current information on the diversions from Kauaula and Launiupoko Streams as well as information on existing and projected usage. We are transmitting the report to you as Attachment 2 so that the updated information can be incorporated into the IFSAR, as appropriate.
5. Utilization of Important Agricultural Lands, page 76. A sentence in this paragraph is referring to incentives for Important Agricultural Lands (IAL's). The incentives related to IALs stems from changes to HRS Chapter 205 and are separate and distinct from the ALISH system. There are no IAL designated lands in Launiupoko. If the intent is to

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Re: ISFAR for Launiupoko
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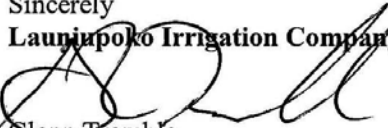
include information on the IAL designations and programs, then this would be better treated as a separate paragraph or subsection.

6. Irrigation Needs of the Launiupoko Service Area, page 80-89. The report uses existing TMK layers and remote sensing data to approximate the amount of acreage and type of agriculture and landscaping. While this may provide a cursory survey of the acreages in intensive agricultural use we have concerns regarding the accuracy of this method, especially without groundtruthing the results and/or contacting the property owners. A quick spot check of the data revealed some errors. For instance TMK parcel 247001029 was listed as 122 acres in size and containing 14.5 acres of dragonfruit. In actuality the parcel size is 27 acres and does not appear to contain dragonfruit. Parcel 247010044 which does contain a significant amount of dragonfruit was listed as having no agricultural use. Also the date of the aerial imagery is important since uses may have changed in the meantime. If CWRM staff is interested in providing a mailout survey to property owners, we are willing to assist since LIC maintains an active mailing list of all customers.

The attached report prepared by Tom Nance contains information on recent usage of the LIC system as well as projected demand. This information should be examined and utilized in the IFSAR where appropriate.

If you have and questions, need any further information or would to inspect the site, please feel free to contact me at 808-877-4202 or via email at glenn@westmauiland.com.

Sincerely
Launiupoko Irrigation Company, Inc.


Glenn Tremble
Secretary/Treasurer

Attachment 1: Excerpts from Maui Island Plan – Makila Rural Growth Area
Attachment 2: *Adequacy of Potable and Non-Potable Supply for the Three Proposed Makila 201H Projects*; Tom Nance Water Resource Engineering; May 2017

Attachment 1

Directed Growth Plan

Table 8 - 27: Kahoma Planned Growth Area

Background Information:			
Project Name:	Kahoma Infill	Directed Growth Map #:	W3
Type of Growth:	Urban Infill	Gross Site Acreage:	18 Acres
Planning Guidelines:			
Dwelling Unit Count:	Approximately 68 Units ⁴¹	Residential Product Mix:	100% SF
Net Residential Density:	7-10 du/acre	Parks and Open Space ⁴² :	NA
		Commercial:	NA

Makila

The Makila planned rural growth area is located east of Lahaina Town on the mauka side of Honoapiʻilani Highway. The rural project shall be developed using a CSD plan that is intended to preserve open space; maximize the efficient use of infrastructure; and protect natural, agricultural, and scenic resources. The CSD plan shall cluster development within portion(s) of the site to keep the remainder of the land undeveloped and protected. The project may include limited neighborhood facilities and services to support the Makila community. The site is surrounded by agricultural lands.

Planned Growth Area Rationale

The Makila project is a rural subdivision adjacent to agricultural subdivisions that have occurred in and around Launiupoko. Linkages should be developed between the Makila project and neighboring communities including Launiupoko and Lahaina Town. An emphasis should be placed on providing safe pedestrian pathways and supporting regional-greenway systems. A 500-foot greenbelt shall be provided along the makai side of the project to ensure an open space buffer within the growth area and between the Honoapiʻilani Highway Bypass and future rural development. The project should utilize Low Impact Development techniques, such as drainage sedimentation control systems, to mitigate the potential for flooding makai of the project and to prevent nonpoint source pollution from entering coastal waters. The Makila planned growth area is depicted on Figure 8-13 and Directed Growth Map #W3. Table 8-28 provides a summary of the planned growth area.

Table 8 - 28: Makila Planned Growth Area

Background Information:			
Project Name:	Makila	Directed Growth Map #:	W3
Type of Growth:	Rural Growth	Gross Site Acreage:	270 Acres
Planning Guidelines:			
Dwelling Unit Count:	Approximately 200 Units ⁴³	Residential Product Mix:	SF – CSD
Net Residential Density:	1-2 du/acre	Parks and Open Space ⁴⁴ :	≥ 50%
		Commercial:	Neighborhood Serving

⁴¹ Additional units may be permitted through a transfer of development rights program or to provide affordable housing in excess of what is required by law. Unit counts may be further defined through the entitlement process in response to infrastructure and environmental constraints.

⁴² The distinct boundaries of the parks and open space, specific location of the recreational uses, and the precise amenities will be further defined during the West Maui Community Plan Update and the project review and approval process.

⁴³ Additional units may be permitted through a transfer of development rights program or to provide affordable housing in excess of what is required by law. Unit counts may be further defined through the entitlement process in response to infrastructure and environmental constraints.

⁴⁴ The distinct boundaries of the parks and open space, specific location of the recreational uses, and the precise amenities will be further defined during the West Maui Community Plan Update and the project review and approval process.

Directed Growth Plan

Olowalu Town

The Olowalu Town planned growth area is located approximately four miles south of Lahaina Town on the southwestern foothills of the West Maui Mountains. Olowalu is rich in cultural, scenic, natural, and marine resources. The area's coral reefs are among the healthiest in the main Hawaiian Islands. Olowalu is known for its small plantation village environs, supported by small neighborhood-commercial uses along Honoapi'ilani Highway with convenient access to the ocean.

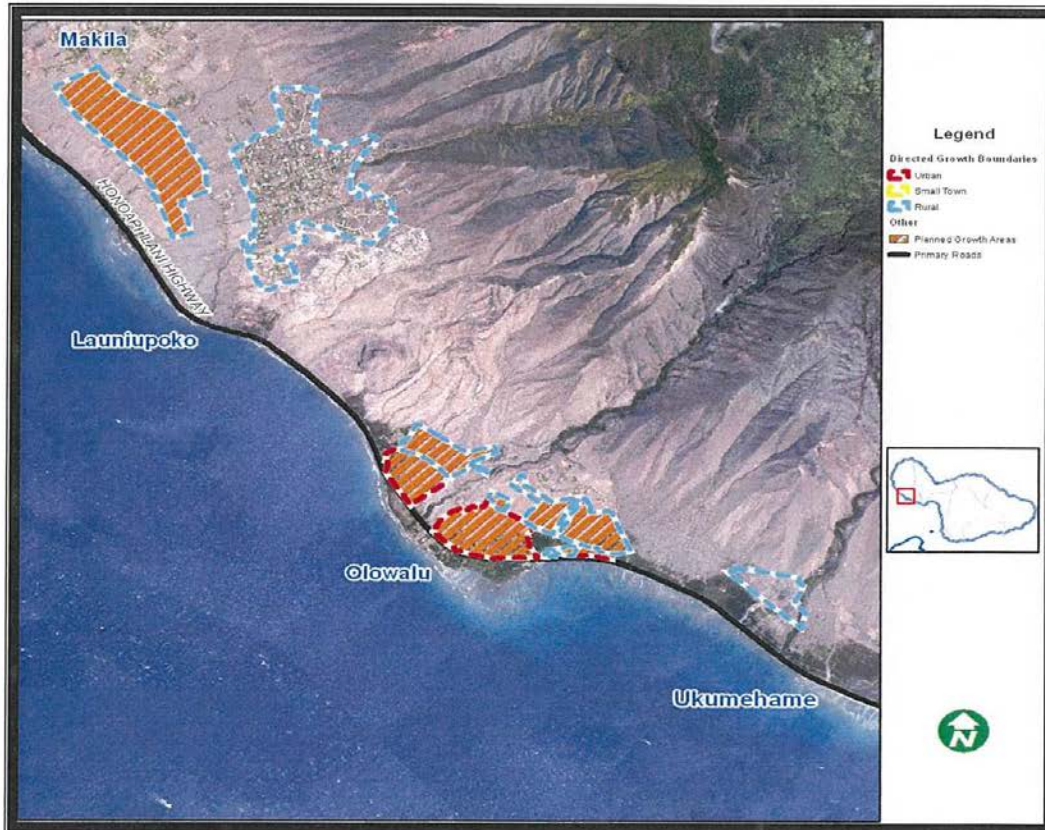


Figure 8-13: Olowalu Town – Planned Growth Area.

Planned Growth Area Rationale

The project is intended to meet the needs of Maui residents as a revitalized and sustainable Olowalu community. Olowalu Town will provide housing, employment, recreational, and cultural opportunities in the context of a mixed-use sustainable community that preserves the area's natural, cultural, and historic resources. Olowalu Town is envisioned as a pedestrian-friendly community that integrates a variety of housing types with employment opportunities, commercial, and recreational uses developed concurrently with public services and infrastructure.

Attachment 2

Adequacy of Potable and Non-Potable
Supply for the Three Proposed
Makila 201H Projects

Prepared for:

West Maui Land Company, Inc.
305 E. Wakea Avenue
Kahului, Hawaii 96732

Prepared by:

Tom Nance Water Resource Engineering
560 N. Nimitz Hwy. - Suite 213
Honolulu, Hawaii 96817

May 2017

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INTRODUCTION

Three Makila 201H projects have been proposed which would add a total of 208 residential lots to the area now served by two private systems, Launiupoko Water Company (LWC) for potable water and the Launiupoko Irrigation Company (LIC) for non-potable irrigation use. This report addresses the adequacy of the LWC and LIC systems to supply the three 201H projects.

DESCRIPTION OF THE THREE MAKILA 201H PROJECTS

Locations of the three Makila 201H projects are shown on Figure 1. They are adjacent to each other and will border on the Lahaina bypass highway when it is extended south from its present end at Hokiokio Place. Proposed development of each of the three projects is described below.

Polanui Gardens 201H. This project would consist of 16 agricultural lots of about one (1) acre in size, 50 urban residential lots, a 4.2-acre park, and 9.3 acres of irrigated open space.

Makila Rural East 201H. This project would consist of 45 1-acre agricultural lots, 46 urban residential lots, a country store, a 2.0-acre park, and 24.2 acres of irrigated open space.

Makila Kai 201H. This project would consist of 24 agricultural lots of 1.5 acres in size, 25 rural lots of 0.5 acres in size, a 1.4-acre park, and 22.2 acres of open space that will not be irrigated.

PROJECTED POTABLE AND NON-POTABLE SUPPLY REQUIREMENTS OF THE LWC AND LIC SYSTEMS

The premise of this report is that the LWC and LIC systems must be able to supply the existing Makila agricultural subdivisions and the three 201H projects at their collective full build-out. These ultimate potable and non-potable supply requirements are quantified in the sections following.

Ultimate Potable Supply Requirement for the LWC System

LWC's projection of its ultimate potable supply requirement at full build-out is presented on Table 1. The tabulation is based on the following:

- For all of the 280 lots in the existing Makila agricultural subdivisions, it is assumed that all lots would have two dwelling units and that the potable water use of each dwelling would average 600 gallons per day (GPD), meaning a total of 1200 GPD for each lot. For currently occupied

Table 1
PROJECTED POTABLE WATER DEMAND AT BUILD-OUT
Supplied by Launiupoko Water Company

Last Updated: April 6, 2017

	Saleable Lots	Gross Area	Allowed Dwellings			Average Day Consumption Rate	Average Daily Demand
			Primary	Accessory	Total		
EXISTING AGRICULTURAL SUBDIVISIONS							
Mahanalua Nui Phase I	73	145 Ac.	73	73	146 DU	x 600 gpd/DU	==> 87,600 gpd
Mahanalua Nui Phase II	16	36 Ac.	16	16	32 DU	x 600 gpd/DU	==> 19,200 gpd
Mahanalua Nui Phase III	41	107 Ac.	41	41	82 DU	x 600 gpd/DU	==> 49,200 gpd
Mahanalua Nui Phase IV	37	146 Ac.	37	37	74 DU	x 600 gpd/DU	==> 44,400 gpd
Mahanalua Nui Phase V	10	319 Ac.	10	10	20 DU	x 600 gpd/DU	==> 12,000 gpd
Makila Plantation Phase I	19	300 Ac.	19	19	38 DU	x 600 gpd/DU	==> 22,800 gpd
Makila Plantation Phase II	24	135 Ac.	24	24	48 DU	x 600 gpd/DU	==> 28,800 gpd
Makila Plantation Phase III	5	123 Ac.	5	5	10 DU	x 600 gpd/DU	==> 6,000 gpd
Pu'unooa Phase I	14	80 Ac.	14	14	28 DU	x 600 gpd/DU	==> 16,800 gpd
Pu'unooa Phase II	14	154 Ac.	14	14	28 DU	x 600 gpd/DU	==> 16,800 gpd
Makila Ridge	11	518 Ac.	11	11	22 DU	x 600 gpd/DU	==> 13,200 gpd
Makila Ranches Phase I, Lots 9 and 11	2	37 Ac.	2	2	4 DU	x 600 gpd/DU	==> 2,400 gpd
Makila Ranches Phase II	11	214 Ac.	11	11	22 DU	x 600 gpd/DU	==> 13,200 gpd
Makila Nui	3	252 Ac.	3	3	6 DU	x 600 gpd/DU	==> 3,600 gpd
Subtotal - Existing Subdivisions	280	2,566 Ac.			560 DU		336,000 gpd
FUTURE MAKILA RURAL SUBDIVISIONS							
Polanui Gardens 201H							
Ag Lots (1+ Acre)	16	10.2 Ac.	16	0	16 DU	x 600 gpd/DU	==> 9,600 gpd
Urban Single-Family Lots	50	14.4 Ac.	50	0	50 DU	x 3,000 gpd/Acre	==> 43,200 gpd
Park		0 Ac.				x 1,700 gpd/Acre	==> 0 gpd
Irrigated Open Space		0 Ac.				x 3,000 gpd/Acre	==> 0 gpd
Subtotal	66	24.6 Ac.			66 DU		52,800 gpd
Makila Rural East 201H							
Ag Lots (1+ Acre)	45	24.0 Ac.	45	0	45 DU	x 600 gpd/DU	==> 27,000 gpd
Urban Single-Family Lots	46	14.6 Ac.	46	0	46 DU	x 3,000 gpd/Acre	==> 43,800 gpd
Country Store (5,000 s.f. floor area)	2	0.8 Ac.				x 140 gpd/1000 s.f.	==> 700 gpd
Park		0 Ac.				x 1,700 gpd/Acre	==> 0 gpd
Irrigated Open Space		0 Ac.				x 3,000 gpd/Acre	==> 0 gpd
Subtotal	93	39.4 Ac.			91 DU		71,500 gpd
Makila Kai 201H							
Ag Lots (±1.5 Acre)	24	41.4 Ac.	24	24	48 DU	x 600 gpd/DU	==> 28,800 gpd
Rural Lots (0.5 Ac.)	25	14.5 Ac.	25	25	50 DU	x 600 gpd/DU	==> 30,000 gpd
Park		1.4 Ac.				x 1,700 gpd/Acre	==> 0 gpd
Irrigated Open Space		0 Ac.				x 3,000 gpd/Acre	==> 0 gpd
Subtotal	49	57.3 Ac.			98 DU		58,800 gpd
Subtotal - Future Subdivisions	208				255 DU		183,100 gpd
TOTAL - All Subdivisions	488 Saleable Lots				815 DU		519,100 gpd

Table 2
PROJECTED NON-POTABLE WATER DEMAND AT BUILD-OUT
Supplied by Launiupoko Irrigation Company

Last Updated: April 6, 2017

	Saleable Lots	Gross Area	Area Under Irrigation		Average Day Consumption Rate	Average Daily Demand
			% of Gross	Net Area		
EXISTING AGRICULTURAL SUBDIVISIONS						
Mahanalua Nui Phase I	73	145 Ac.			x 5,400 gpd/Lot	==> 394,200 gpd
Mahanalua Nui Phase II	16	36 Ac.			x 5,400 gpd/Lot	==> 86,400 gpd
Mahanalua Nui Phase III	41	107 Ac.			x 5,400 gpd/Lot	==> 221,400 gpd
Mahanalua Nui Phase IV	37	146 Ac.			x 5,400 gpd/Lot	==> 199,800 gpd
Mahanalua Nui Phase V	10	319 Ac.			x 5,400 gpd/Lot	==> 54,000 gpd
Makila Plantation Phase I	19	300 Ac.			x 5,400 gpd/Lot	==> 102,600 gpd
Makila Plantation Phase II	24	135 Ac.			x 5,400 gpd/Lot	==> 129,600 gpd
Makila Plantation Phase III	5	123 Ac.			x 5,400 gpd/Lot	==> 27,000 gpd
Pu'unoa Phase I	14	80 Ac.			x 5,400 gpd/Lot	==> 75,600 gpd
Pu'unoa Phase II	14	154 Ac.			x 5,400 gpd/Lot	==> 75,600 gpd
Makila Ridge	11	518 Ac.			x 5,400 gpd/Lot	==> 59,400 gpd
Makila Ranches Phase I, Lots 9 and 11	2	37 Ac.			x 5,400 gpd/Lot	==> 10,800 gpd
Makila Ranches Phase II	11	214 Ac.			x 5,400 gpd/Lot	==> 59,400 gpd
Makila Nui	3	252 Ac.			x 5,400 gpd/Lot	==> 16,200 gpd
Subtotal - Existing Subdivisions	280	2,566 Ac.				1,512,000 gpd
FUTURE MAKILA RURAL SUBDIVISIONS						
Polanui Gardens 201H						
Ag Lots	16	20.4 Ac.	90%	18.4 Ac	x 3,000 gpd/Acre	==> 55,080 gpd
Urban Residential Lots	50	14.4 Ac.	0%	0 Ac	x 3,000 gpd/Acre	==> 0 gpd
Park		4.2 Ac.	100%	4.2 Ac	x 1,700 gpd/Acre	==> 7,140 gpd
Irrigated Open Space		9.3 Ac.	80%	7.4 Ac	x 3,000 gpd/Acre	==> 22,320 gpd
Subtotal	66	48.3 Ac.		30.0 Ac		84,540 gpd
Makila Rural East 201H						
Ag Lots (1+ Acre)	45	36.8 Ac.	90%	33.1 Ac	x 3,000 gpd/Acre	==> 99,252 gpd
Urban Residential Lots	46	14.6 Ac.	0%	0 Ac	x 3,000 gpd/Acre	==> 0 gpd
Country Store	2	0.8 Ac.	0%	0 Ac	x 3,000 gpd/Acre	==> 0 gpd
Park		2.0 Ac.	100%	2.0 Ac	x 1,700 gpd/Acre	==> 3,400 gpd
Irrigated Open Space		24.2 Ac.	80%	19.4 Ac	x 3,000 gpd/Acre	==> 58,080 gpd
Subtotal	93	78.4 Ac.		54.4 Ac		160,732 gpd
Makila Kai 201H						
Ag Lots (±1.5 Acre)	24	41.4 Ac.	90%	37.3 Ac	x 3,000 gpd/Acre	==> 111,780 gpd
Rural Lots (0.5 Ac.)	25	14.5 Ac.	80%	11.6 Ac	x 3,000 gpd/Acre	==> 34,800 gpd
Park		1.4 Ac.	100%	1.4 Ac	x 1,700 gpd/Acre	==> 2,380 gpd
Irrigated Open Space		22.2 Ac.	0%	0 Ac	x 3,000 gpd/Acre	==> 0 gpd
Subtotal	49	79.5 Ac.		50.3 Ac.		148,960 gpd
Subtotal - Future Subdivisions	208	206 Ac.		134.7 Ac.		394,232 gpd
TOTAL - All Subdivisions	488	2,772 Ac.				1,906,232 gpd

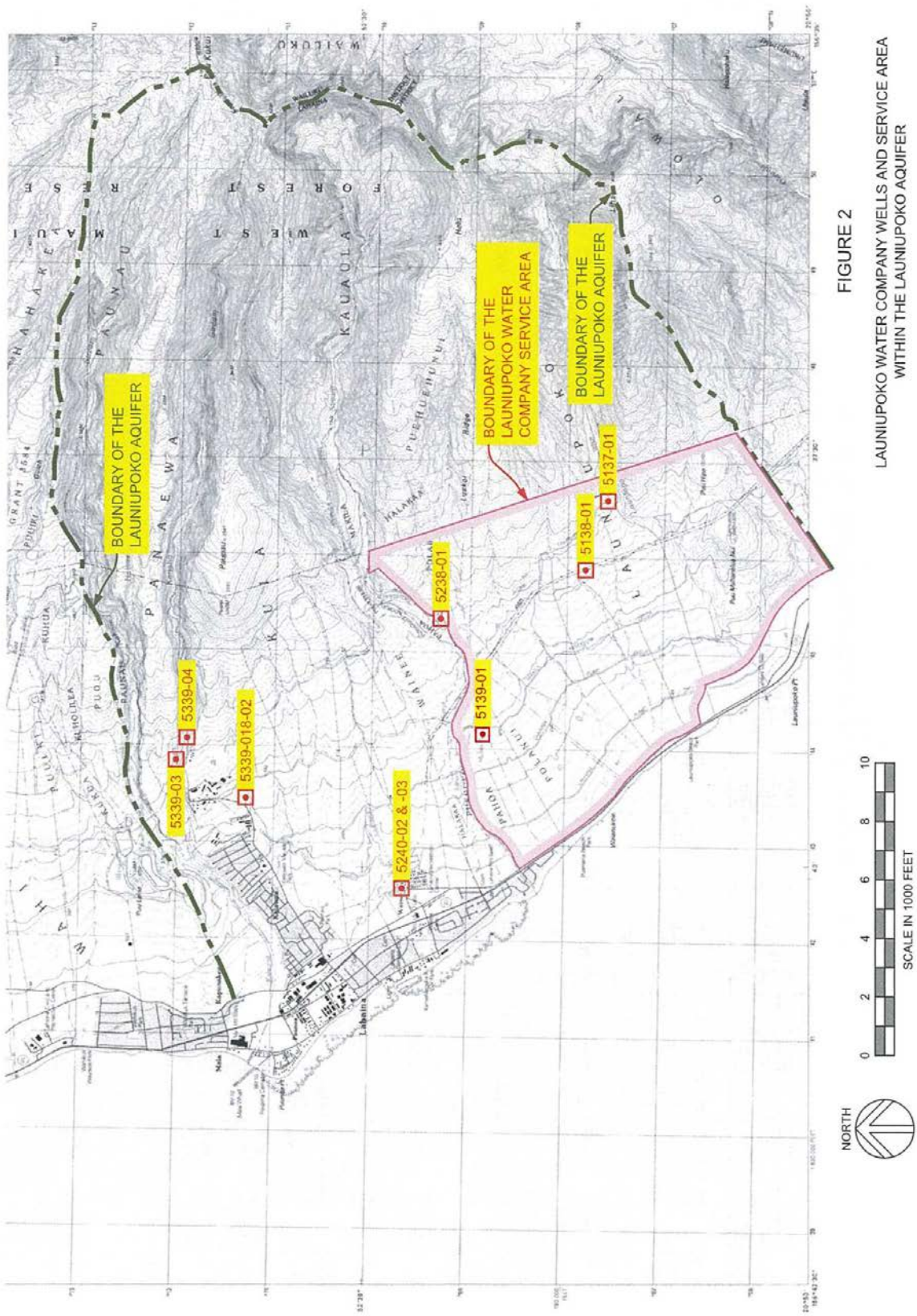


FIGURE 2
LAUNIUPOKO WATER COMPANY WELLS AND SERVICE AREA
WITHIN THE LAUNIUPOKO AQUIFER

Figure 3. Total Pumpage by Wells in the Launiupoko Aquifer from January 1986 to February 2017

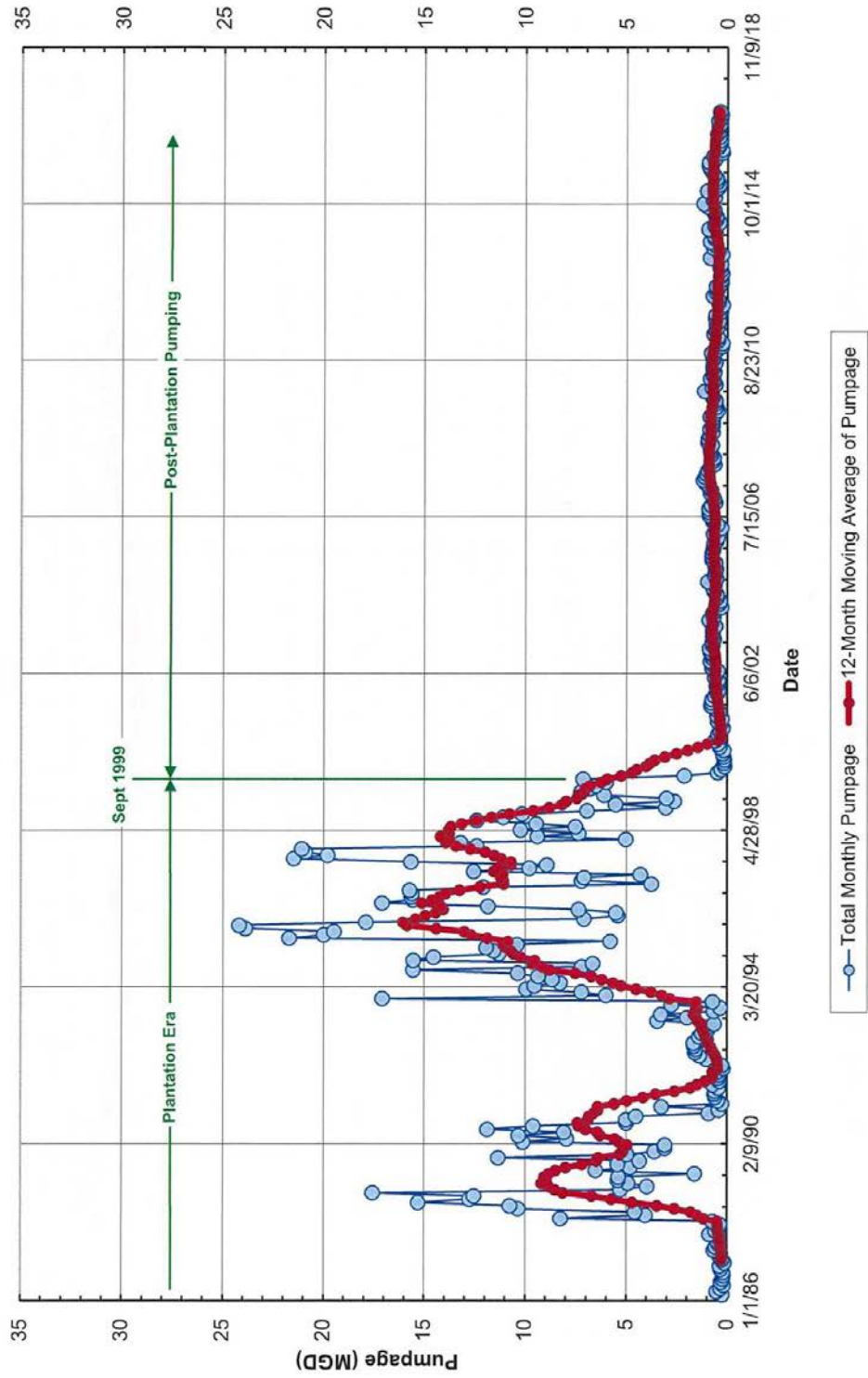


Figure 5. Total Pumpage by the Three Launiupoko Wells from their Start of Use in August 2004 through February 2017

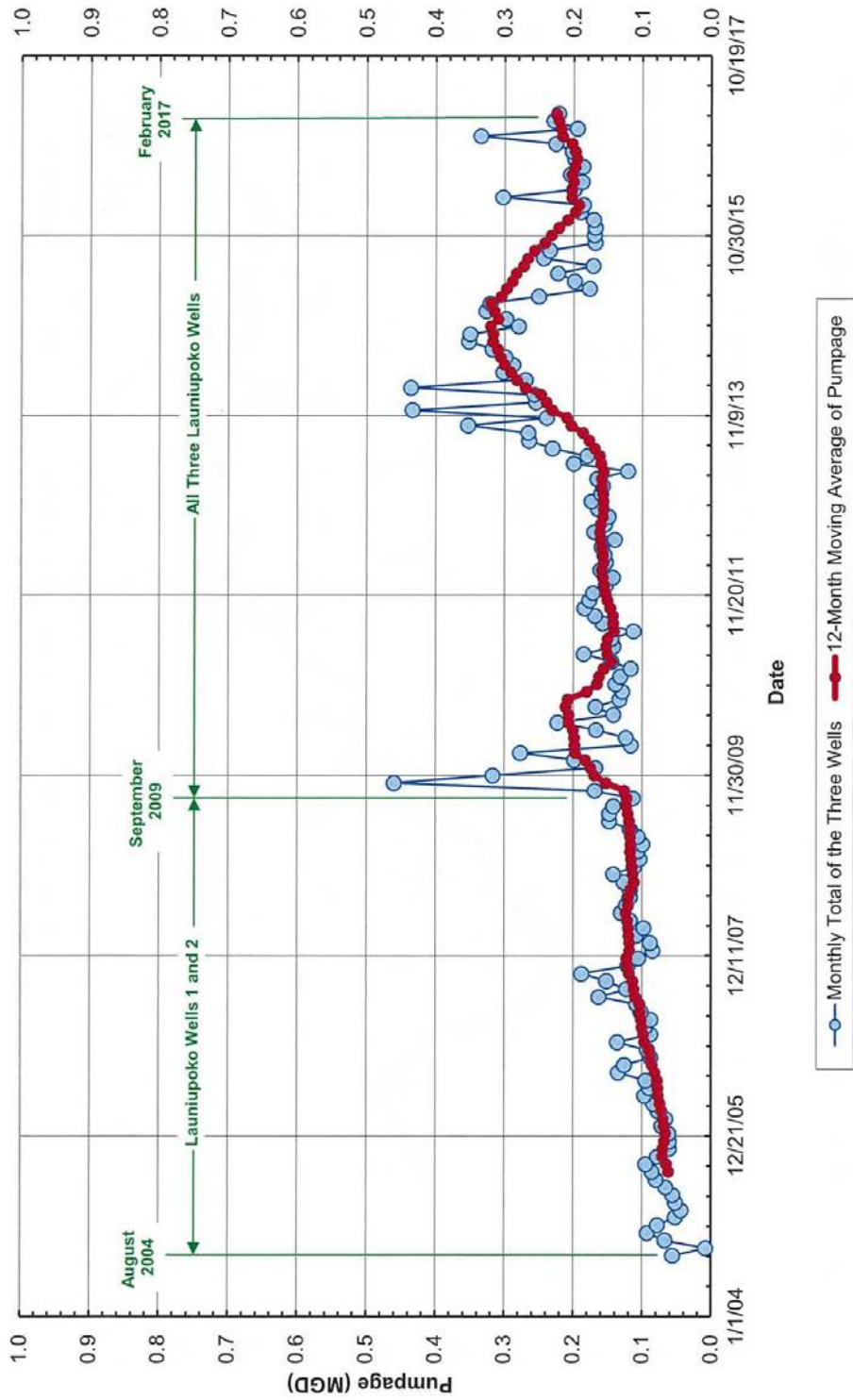
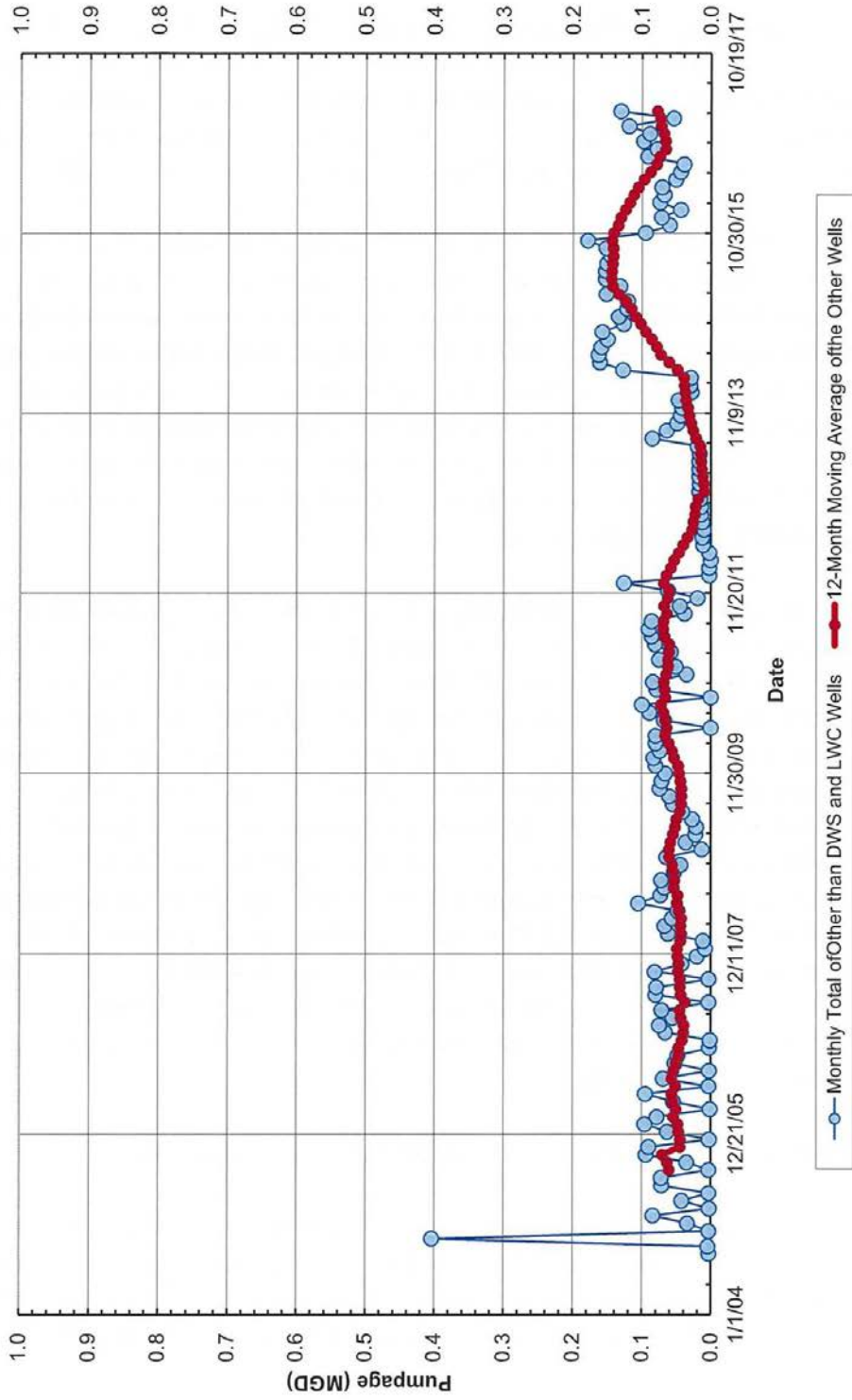


Figure 7. Total Pumpage by All Other Wells in the Launiupoko Aquifer from January 2004 through February 2017



use to account for this variability. The total pumpage by the three LWC wells shown previously on Figure 5 showed a number of months with substantially greater than average pumpage. These occurred when there was a shortage of surface water supply for the non-potable LIC system for which the short fall was met by delivering well water into the LIC system. On Figure 8, the amounts delivered supplement the LIC system and the remainder delivered to the LWC system are shown for the January 2012 through February 2017 period. In the future, supplemental supply for the LIC system will be provided by an irrigation well now under construction (and discussed subsequently). When the supplemental supply to LIC is removed, the new use by the LWC system has far less variability (Figure 9). This depiction suggests that a maximum month factor of 1.25 times average and maximum day factor of 1.35 times average are reasonable to use for the LWC system. Applying the 1.35 factor to the ultimate average supply requirement means that the LWC wells need to be able to provide 0.93 MGD through a sustained period of maximum use.

Installed Pump Capacities. The capacities of the pumps in LWC's Wells 1, 2, and 3 are 350, 100, and 500 gallons per minute (GPM), respectively. If all three were run continuously, it would amount to a production of 1.368 MGD. With the largest well out of service (Well 3), a commonly applied industry standard to define a potable water system's "safe" capacity, the combined capacity of Wells 1 and 2 is 0.65 MGD. As such, the installed pump capacities do not meet the industry standard for available pump capacity to provide the ultimately required maximum day use of 0.93 MGD. By this standard, a fourth well of a minimum capacity of 0.28 MGD (194 GPM) would be required. It should be noted here that this design criterion does not account for the salinity limitations on the well capacities. These are discussed subsequently.

Pumpage Data as Reported to the CWRM. Figure 5 presented previously showed the monthly average and moving 12-month moving average (12-MAV) pumpage of LWC's three wells. The monthly maximum was 0.46 MGD and the maximum of the 12-MAV was 0.30 MGD. Figures 10, 11, and 12 present this information for LWC's three wells individually. Maximum usage of the three wells is tabulated below. As there is no evidence that there is an interference effect among the wells, this record demonstrates that their collective long-term yield is at least 0.4 MGD and that their capacity to provide supply in a maximum use month is at least 0.6 MGD.

LWC Well No.	Maximum Month (MGD)	Maximum of 12-MAV (MGD)
1	0.184	0.130
2	0.104	0.043
3	0.330	0.215
Totals for All Three	0.618	0.388

Figure 9. Amount of Pumpage by the Three Launiupoko Wells Delivered into the LWC System from January 2012 to February 2017

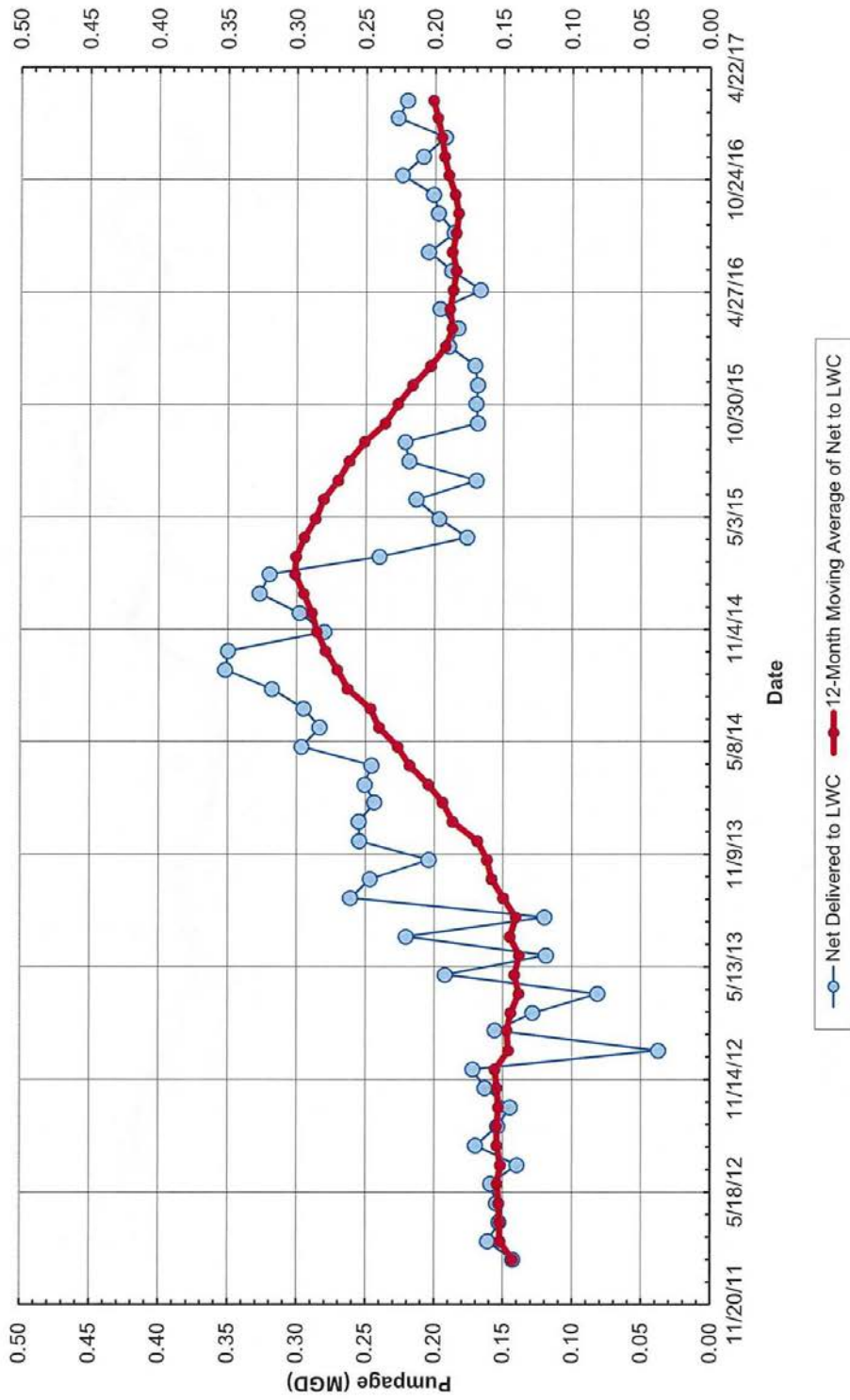
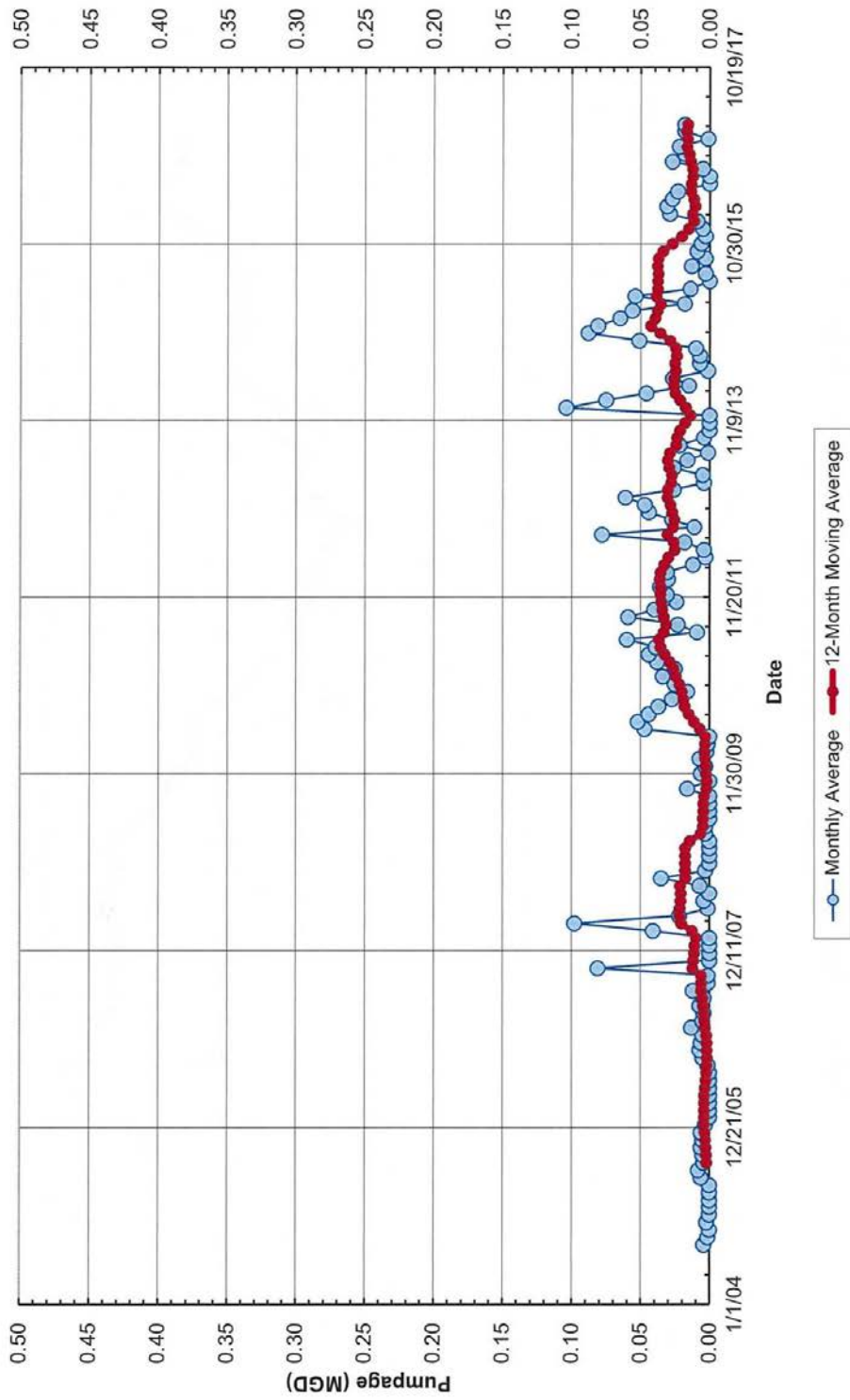


Figure 11. Monthly and Moving 12-Month Average of Pumpage by LWC Well No. 2 from August 2004 through February 2017



Available Pumped Water Salinity Data. LWC tracks the salinity of the water pumped by its wells with measurements of conductivity. Figures 13, 14, and 15 depict these conductivity measurements in relation to the pumpage amount on the day of the conductivity measurements for all three LWC wells. There is obviously a lot of the conductivity measurements that do not correlate with the reported pumpage amount on the same day. On Figures 16, 17, and 18, these measurement outliers have been removed to improve the correlation between pumpage and conductivity. Despite the obvious limitations of the data, there are several valid conclusions that can be drawn from these plots:

- Limitations imposed by salinity increases in response to pumping must be used as the basis of establishing the safe yield of LWC's wells.
- The steepness of the linear correlation lines on Figures 16, 17, and 18 is a direct indication of each well's salinity sensitivity to the pumpage amount. Clearly, the salinity response in Well No. 3 to an increase in pumpage is quite modest whereas the response in Well No. 2 is substantial.
- On the basis of these salinity correlations with pumpage amounts, the recommended long term and maximum day safe yields of LWC's three wells are as follows:

Recommended Safe Yield		
Well Number	Long-Term Average (MGD)	Maximum Day / Peak Season (MGD)
1	0.20	0.25
2	0.10	0.12
3	0.50	0.70
Totals for All Three	0.80	1.07

Equivalent Pumped Water Chloride Levels. In Hawaii, chloride levels are more commonly used to evaluate salinity levels in well water. To get an idea of chloride levels of LWC's three wells, samples were collected from each of the three wells on April 18, 2017 and analyzed for specific conductance and chlorides in the TNWRE office. Results of each sample and the derived linear correlation between specific conductance and chlorides are listed below. Their relationship to pumpage are shown on Figures 19, 20, and 21.

Figure 14. Pumpage and Conductivity Data for LWC Well No. 2

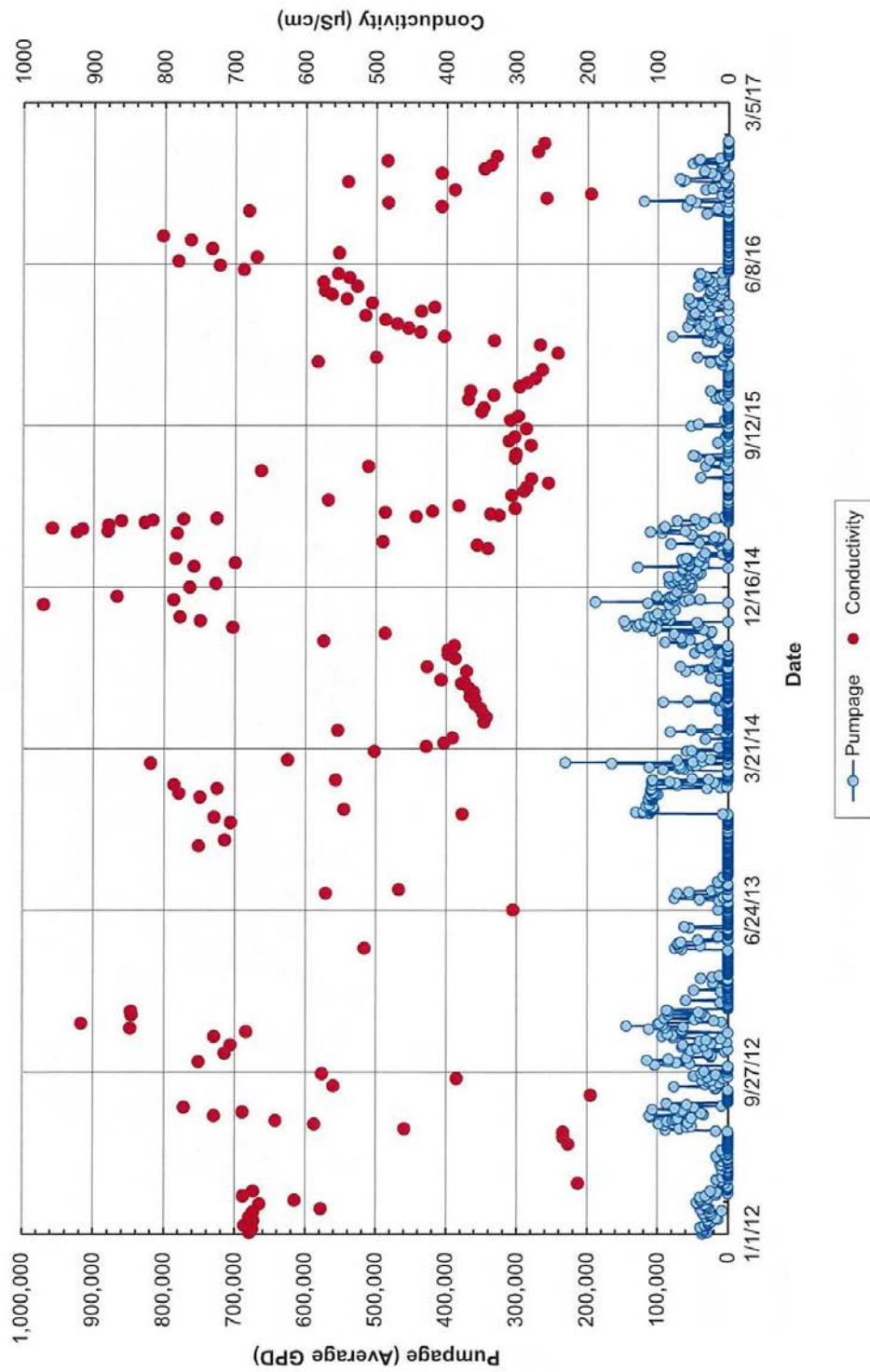


Figure 16. Linear Correlation Between Pumpage and Conductivity for LWC Well No. 1

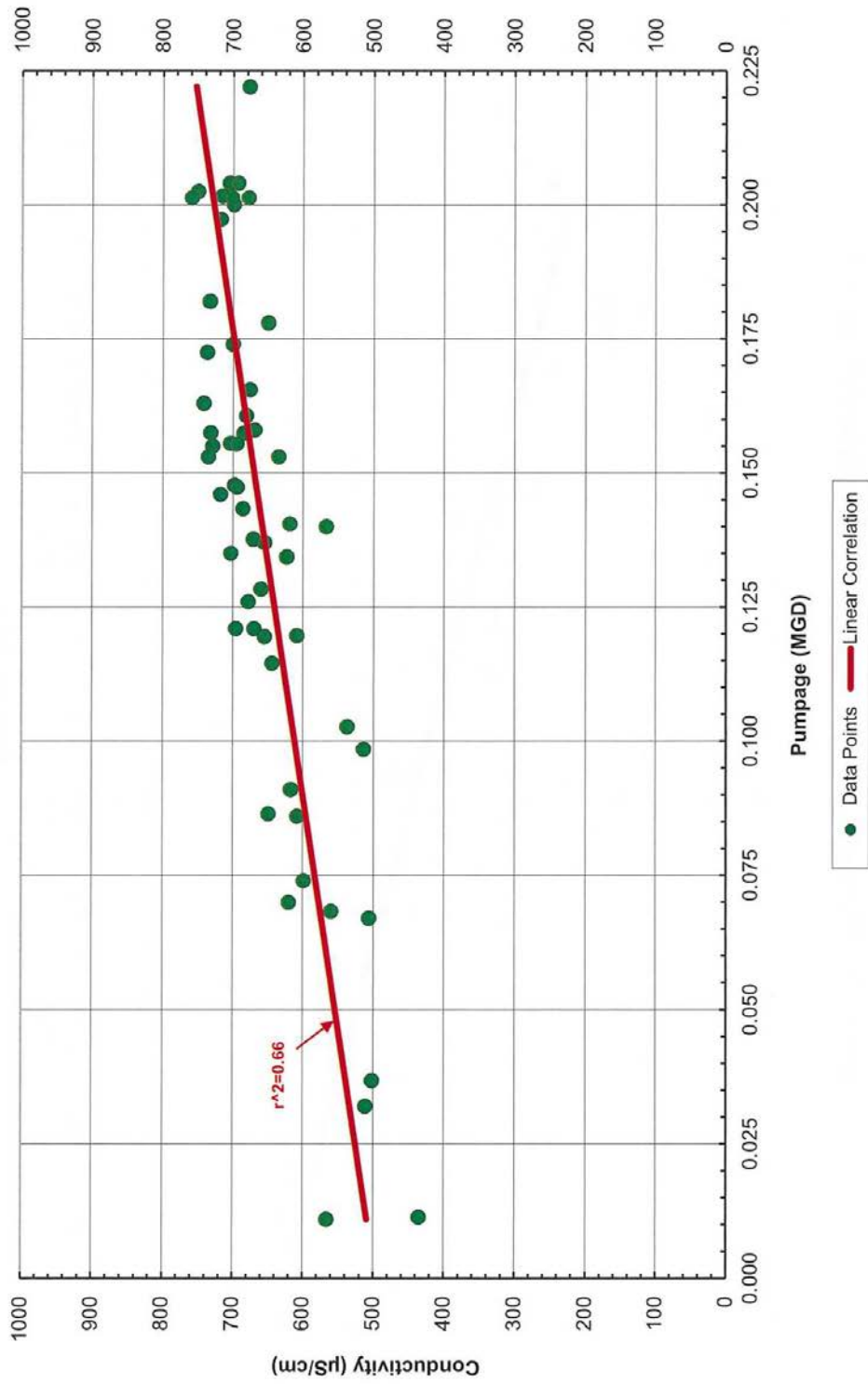


Figure 18. Linear Correlation Between Pumpage and Conductivity for LWC Well No. 3

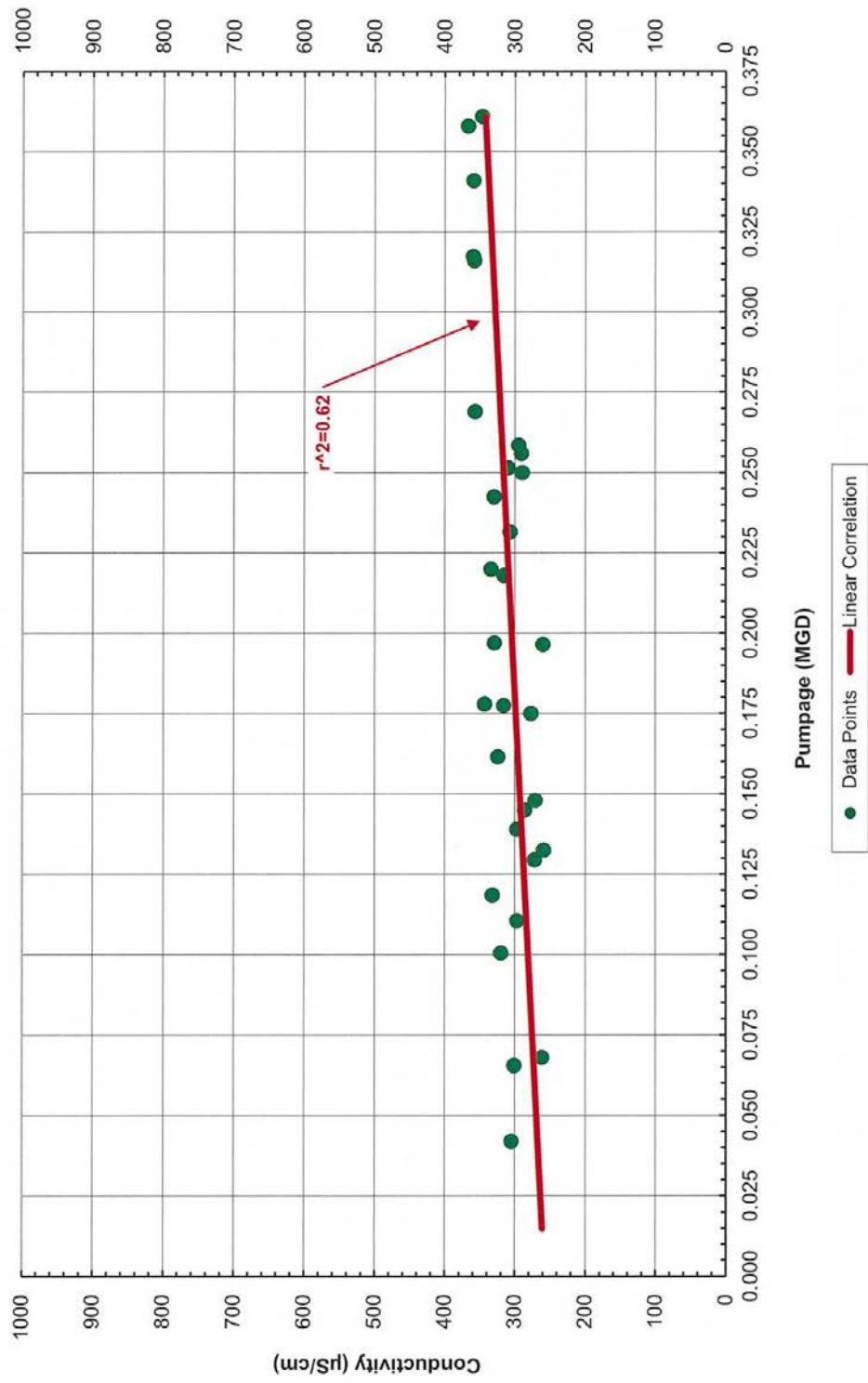
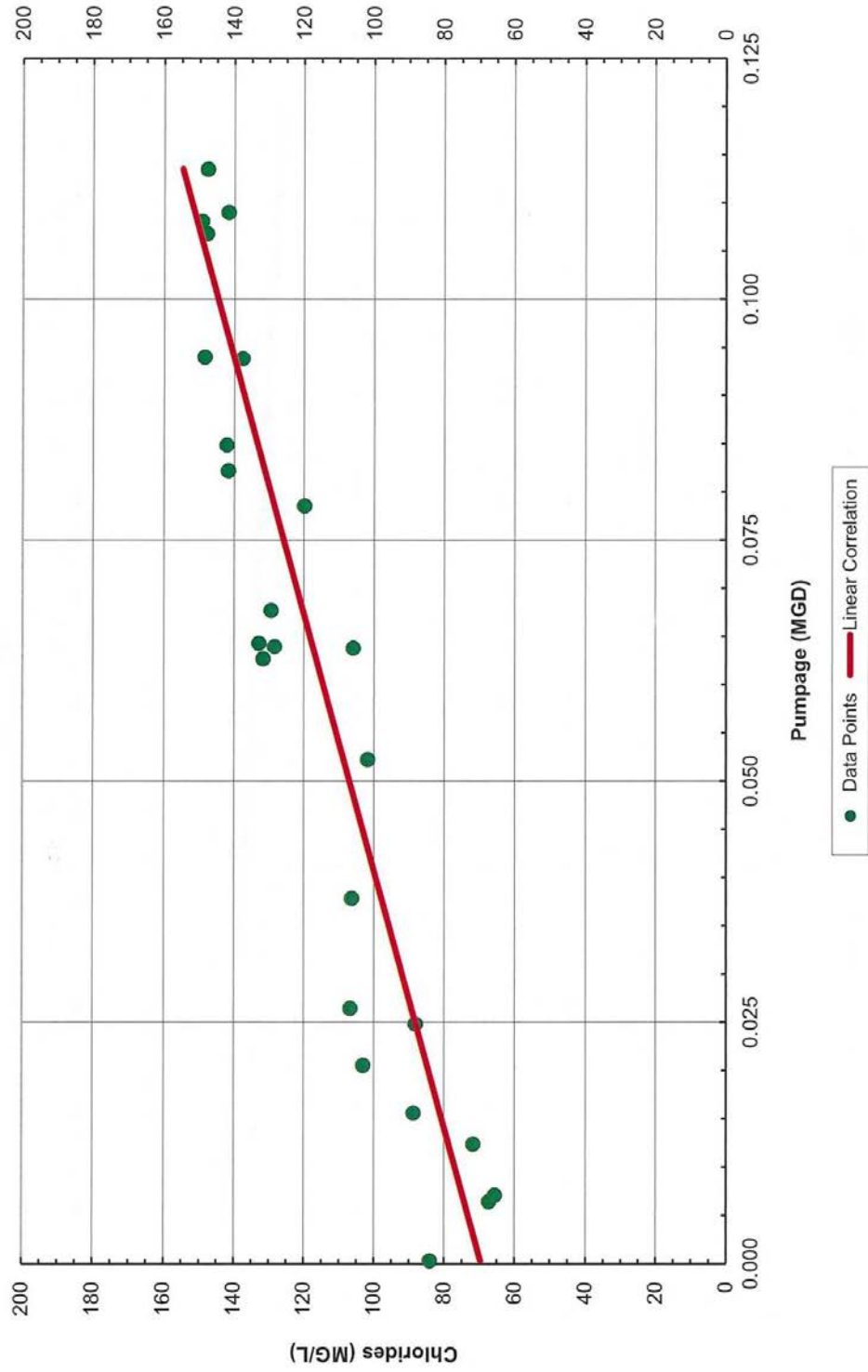


Figure 20. Linear Correlation Between Pumpage and Equivalent Chlorides for LWC Well No. 2



April 18, 2017 Sample Results

LWC Well Number	Specific Conductance (μS/cm at 25°C)	Chlorides (MG/L)
1	860	168
2	673	121
3	239	39

Linear Correlation: $CI = 0.2044 (SC) - 11.41$ ($r^2 = 0.995$)

Where: CI = chlorides in MG/L

SC = specific conductance in μS/cm at 25°C

Summary Conclusions Regarding the Adequacy of LWC’s Potable Supply

1. Based on the long-term potable supply requirements and adding 10 percent for unmetered use and losses, the required average and peak seasonal safe yield of LWC’s wells need to be 0.69 and 1.04 MGD, respectively. Further, this supply capacity should be met with the largest well pump out of service, a commonly applied and reasonable design standard for potable water systems.
2. The USGS studies of groundwater recharge (Engott and Vana, 2007) and model simulations of groundwater pumpage (Gingerich and Engott, 2012) both suggest that the long term yield for wells in or above the LWC’s service area should be sufficient to provide the LWC’s ultimate supply requirements.
3. Actual well performance, for which salinity response sets the limit on safe pumping amounts, establish that at least one more well will be required to meet LWC’s long term potable supply requirement. The tally shown on Table 4 shows that the additional capacity in a new well (or wells) must be capable of a long-term safe yield of at least 0.39 MGD and a peak seasonal use of 0.67 MGD.

ADEQUACY OF THE NON-POTABLE SUPPLY

Based on the tabulation in Table 2 presented previously, the ultimate build-out of the three 201H projects (with Makila Kai using non-potable water) and the existing Makila agricultural subdivisions will require an average delivered supply of 1.906 MGD. Adding a 10 percent allowance for unmetered use and leakage losses translates to an average production of non-potable sources of 2.10 MGD.

Present and Future Sources of Supply for the LIC System

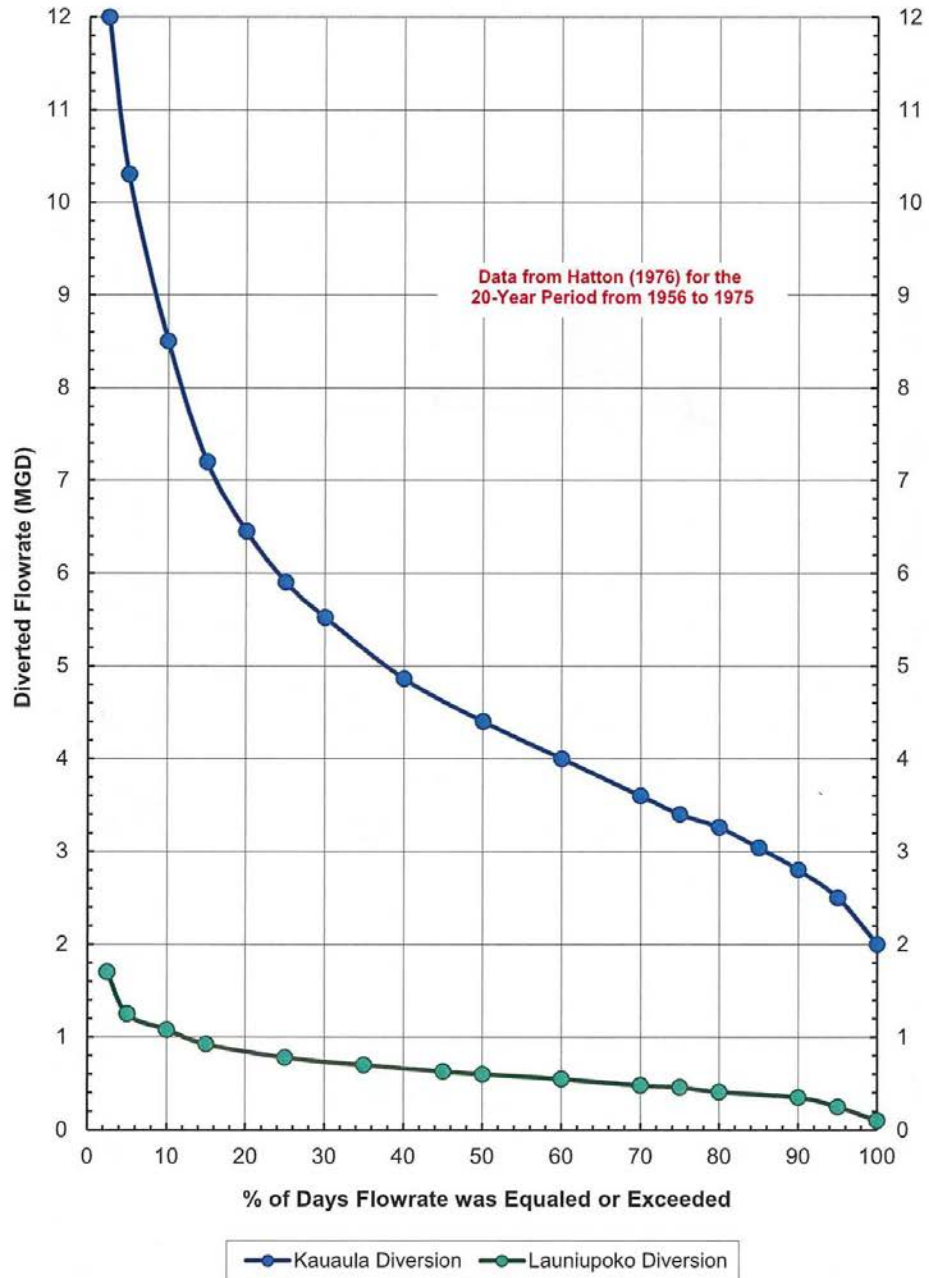
Historic Information on LIC's Present Sources of Supply. To date, the sources of supply for the LIC system have been the former plantations diversion systems from the Kauaula and Launiupoko Streams. These deliver surface water to be Kauaula and Launiupoko Reservoirs shown on Figure 22. Hatton (1976) provides data on the plantation's diversions by these two systems for the 1956 through 1975 period. Average diversion rates over this period were 5.22 MGD for the Kauaula System and 0.78 MGD by the Launiupoko System, the latter being the smallest of the plantation's eight diversion systems. Figure 23 depicts the duration-discharge characteristics of the daily flows of these two diversion systems over the 20-year, 1956 to 1975 period. Base flows at the Kauaula diversion are substantially augmented by the discharge from a horizontal development tunnel at 2920-foot elevation far back in the valley (Well No. 5236-01 known as Tunnel 16). Stearns and MacDonald (1942, page 213) put the flow from the tunnel at 2.0 MGD. There is also a horizontal development tunnel further back in the valley from the Launiupoko Stream diversion (Well No. 5136-01 known as Tunnel 15). However, its contribution to stream flow is relatively insignificant (0.10 MGD based on Stearns and MacDonald 1943:213).

Present Use of the Launiupoko Diversion System. Present use of the relatively small Launiupoko diversion is essentially unchanged from the plantation's former use. Water is diverted from Launiupoko Stream at 1280-foot elevation and flows by gravity into the Launiupoko Reservoir at 889-foot elevation. The diverted flow is measured just above the Reservoir. Over the 6-year January 2011 to December 2016 period depicted on Figure 24, the diverted amount as reported to the CWRM has averaged 0.45 MGD, about 58 percent of the average amount for the 20-year plantation period from 1956 through 1975.

Present Use of the Kauaula Diversion System. The Kauaula diversion system is depicted schematically on Figure 25. As described below, it includes substantial deliveries to other users prior to reaching the LIC system:

- Water is diverted from Kauaula Stream at a low head dam at 1529-foot elevation across the stream.
- The diverted water travels about 0.8 miles in the Kauaula Tunnel to the forebay of a hydropower plant. LIC's reported diversion shown on Figure 21 is the measurement by a Parshall Flume at the forebay. These data are available hourly. On Figure 26, the hourly data for 2011 through 2016 have been converted to daily amounts and a frequency analysis of these daily amounts has been performed. The striking difference between LIC's rates of diversion in comparison to those of the plantation in the 1956 to 1975 period is at the low end of the flowrate where LIC's diversion has been significantly less. It is not clear whether this is a real difference or a measuring deficiency by LIC.

Figure 23. Duration-Discharge of the Kauaula and Launiupoko Stream Diversions in the Plantation Period



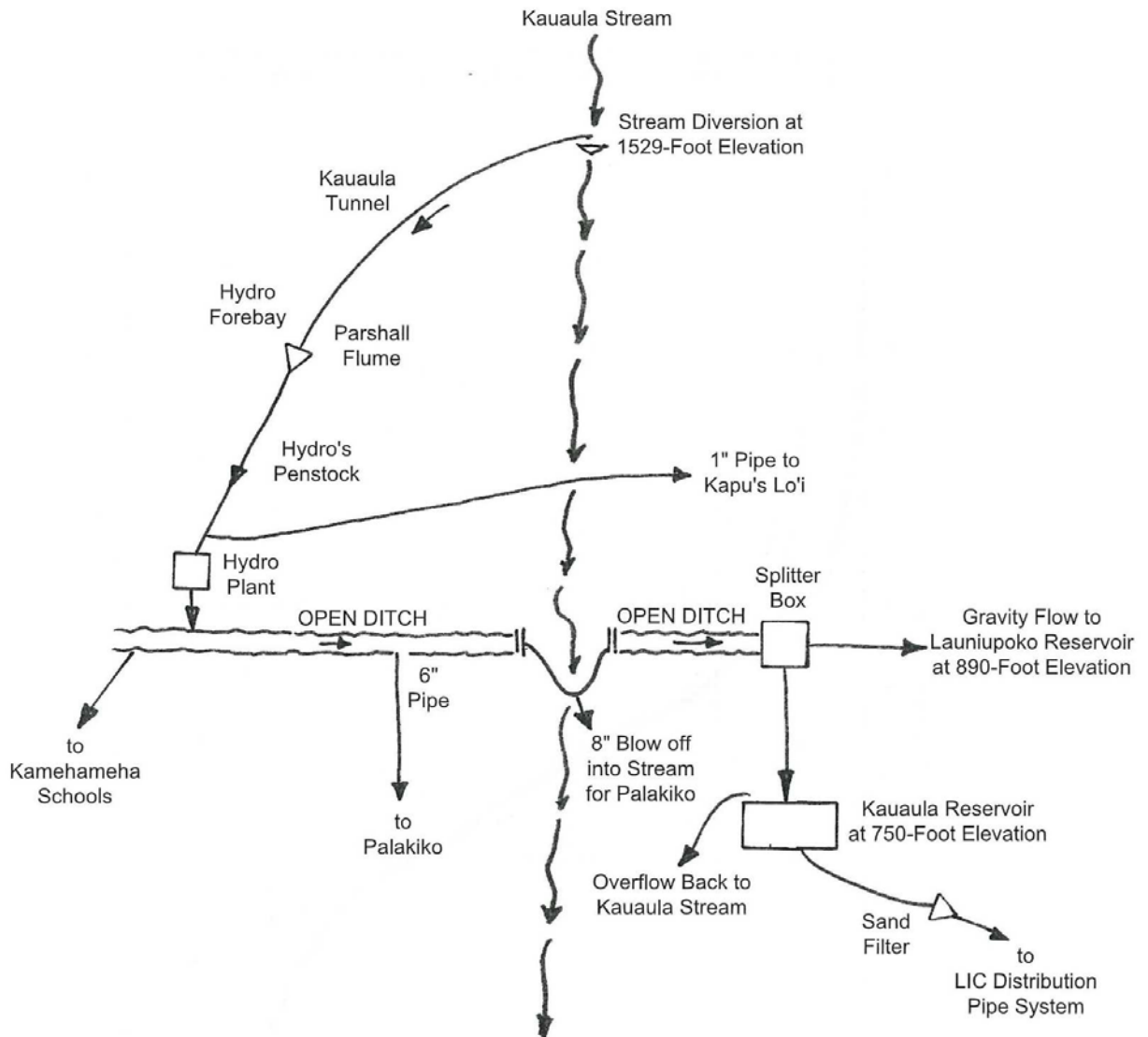


Figure 25
Schematic of the
Kauaula Stream Diversion System

- Water drops down a penstock, runs through the hydro plant, and is then discharged into an open ditch. Some of the water in the ditch goes north to Kamehameha Schools. Some water is also tapped off the penstock (pressure greater than 200 psi at the point of connection) and runs in a 1-inch pipeline to continuously feed the Kapu Lo'i. There is also a pipeline that goes downslope to Palakiko on the north side of Kauaula Stream.
- The remaining water crosses from north to south across Kauaula Stream in a pipe as an inverted siphon. At the bottom of the siphon is an 8-inch blowoff. Water is discharged continuously from the blowoff into the stream at about 1.0 MGD for use by Palakiko downstream.
- Remaining water on the south side of the stream discharges from the inverted siphon into an open ditch. A splitter box directs water in either or both of two directions: by gravity further south to the Launiupoko Reservoir to augment the supply for upper elevation LIC customers; and/or downslope into the Kauaula Reservoir.

Based on the diversions to other users described above and depicted on Figure 25, more than 1.0 MGD and possibly as much as 1.5 MGD of the water diverted into the Kauaula system is not available for use by the LIC system. As a result, there have been periods of shortfalls of supply (shown previously on Figure 8) that have been augmented, at least in part, by the LWC's drinking water wells.

Additional Source of Supply. To augment the supply of water from the Kauaula and Launiupoko Stream diversions, LIC is in the process of constructing a non-potable well. It is located just below LIC's Makila Reservoir (Well No. 5139-01 on Figure 2). As of April 25, 2017, the pilot borehole had been drilled and an initial open borehole pump test had been completed. Based on these results, it appears that the completed well will be able to provide at least 0.5 MGD and possibly more on an as-needed, supplemental supply basis.

Metered Use of the LIC System from January 2011 to December 2016

Metered use data of the LIC system are available as monthly amounts. On Figure 27, these monthly amounts are converted to averages for the month and moving annual averages for the January 2011 through December 2016 period. The monthly average reached a 1.13 MGD peak in October 2015 and the moving annual average at the end of 2016 was 0.95 MGD. For this same pattern of use at full build-out, the annual average non-potable supply requirement of 1.9 MGD may result in a peak monthly use of about 2.3 MGD.

Hypothetical Construct to Assess the Adequacy of Supply

There are two aspects of evaluating the adequacy of the LIC system's sources of supply that set it apart from a drinking water system. One is that the amount of supply from LIC's two surface water systems is weather dependent. The second is that when the available supply is less in an extended dry period, irrigation use can be scaled back. In fact, service to LIC customers is specified as on an as-available basis. With these two aspects in mind, a hypothetical construct is offered to illustrate the potential supply availability at full build-out of the Makila agricultural subdivisions and the three 201H residential projects. Figure 28 is a depiction using the 2011 to 2016 reported amounts of both stream diversions, less 1.25 MGD as water taken from the Launiupoko diversion for the other users prior to reaching the LIC system, and with the addition of 0.5 MGD from the LIC-1 well now under construction. Based on this hypothetical construct, the projected full build-out non-potable supply requirement would be met most of the time but there would be periods of a shortfall. During those periods, an option would be to use the standby well pumping capacity of LWC system to provide most, if not all, of the shortfall.

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17) Olowalu Water Company (received January 2, 2018)

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December 29, 2017

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Commission on Water Resource Management
State of Hawaii
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

2017 JAN -2 PM 3: 48
COMMISSION ON WATER RESOURCE MANAGEMENT

Re: ***Instream Flow Standard Assessment Report for
Olowalu; Hydrologic Unit 6005, Island of Maui***

Dear Mr. Pearson:

This letter provides comments on behalf of Olowalu Water Company, Inc. ("OWC"), a public utility, regarding the above referenced Instream Flow Standard Assessment Report ("IFSAR") for Olowalu, dated August, 2017 (Draft PR-2017-02). OWC understands that the IFSAR is being prepared to provide an inventory of the best available information for the Olowalu Hydrologic Unit. The draft IFSAR has been made available to the public as part of a public fact gathering process. OWC appreciates the opportunity to provide the following comments on the draft IFSAR as part of this fact gathering process.

1. Hawaii Stream Assessment, page 39. We recommend that this section be updated to reflect that the Olowalu Stream upper diversion is no longer functional and that stream flow is no longer diverted at this location. This has resulted in the re-establishment of stream flow to approximately 1.5 mile of the stream located between the upper diversion and the lower reservoir return, allowing for re-establishment of natural resources and habitat along a portion of stream that was previously dry during normal rainfall periods. In addition, flows from the lower diversion can be regulated to maintain only the amount necessary for non-potable water needs while allowing the remaining flows to stay in the stream. This is contrary to pre-September 2016 when 100% of the normal stream flow was diverted by the upper diversion (with excess water being returned at the lower reservoir return). The new conditions have resulted in stream flows being increased to nearly 50% of the length of the stream.
2. Outdoor Recreational Activities, Section 5.0, page 44. This section includes the following sentence: *"However both tourists and local residents are often seen recreating along the lower reaches of Olowalu Stream and there is a hiking trail that follows the stream up the valley, although access to this trail is not easy."*

As noted in the report, the lands within the Conservation District for the most part are state owned. These lands are managed as State forest reserves and are also managed as part of the West Maui Mountain Watershed Partnership. This statement regarding the existence of a hiking trail does not appear accurate and its inclusion in a state issued report could lead residents or tourists to believe there is open public trail in Olowalu Valley. We suggest contacting the Forestry Division as to the appropriateness of including this statement in the report. Also, while the Olowalu Cultural Reserve extends from the Ocean to the State Forest Reserves, there are no existing improved trails along the stream in its lower reaches.

3. Irrigation Systems, Section 11.0, page 63. The only statement of this section which refers to Olowalu states: “*The Olowalu Water Company supplies potable and non-potable water to customers in the Olowalu hydrologic unit.*” We suggest adding additional information at the end of the last paragraph which clarifies that OWC is regulated by the Public Utility Commission (PUC) and that its source for drinking water/domestic needs is a groundwater well and that the source for non-potable/irrigation water system is Olowalu Stream. The stream water is not used for domestic consumption. Currently, OWC contracts with West Maui Land Company, Inc. (‘WML’) to manage the system which consists of approximately 57 potable service connections and 44 non-potable/agricultural connections.
4. Table 12-2, Tax map key parcels with associated Land Commission Awards, pages 68-69. Table 12-2 is intended to identify tax map key parcels and associated Land Commission Awards and Grants. The table was presented as an attempt to identify the potential for future appurtenant rights claims within Olowalu. The table appears to have relied on outdated information. The table lists Pioneer Mill as the owner of a number of the Parcels, however, Pioneer Mill has not owned land in Olowalu since 1998 when it sold its Olowalu lands to Olowalu Elua Associates, LLC. Also, many of the listed TMKs no longer exist as there was a consolidation and re-subdivision of parcels in the early 2000s which resulted in a reconfiguration as well as a renumbering of the TMKs. In order to provide best available information, the ownership as well as listing of appropriate TMK numbers should be updated.
5. Quote from Handy, et al., page 71. The quote from Handy, et al., which is intending to provide a limited regional description of the area is actually describing the area east of Maliko in northeast Maui.
6. Pre-European Contact Agriculture, page 72. The quote towards the end of this paragraph refers to Launiupoko, not Olowalu. Also, the statement that Launiupoko probably

supported wetland taro only in the middle reaches of the valley seems to contradict the information presented on Figure 12-4 which depicts irrigated wetlands in the lower reaches of Launiupoko Stream.

7. Water Leaving Olowalu Stream, pages 77-80. OWC recently submitted a stream diversion work permit application to CWRM related to the Lower Olowalu Diversion, this application is posted on CRWM's website. OWC also has recently provided updated estimates of stream diversion flows from the Lower Olowalu Diversion. The changes to stream flow diversions and instream flows which resulted from the September 2016 storm are significant. We recognize that the permit is still pending before CWRM, however, if approved, the updated information on the instream flows, diversion rates and design of the structure would be important information to include in the ISFAR. Tables 13-1 and 13-2 also should be updated to reflect current diversion rates as well as accurate information on use. Lastly, the TMK listed for the lower diversion is no longer applicable; the new TMK is 4-8-003: 108.
8. Utilization of Important Agricultural Lands, page 84. The second to last sentence states that "Nearly 8 percent of Olowalu is designated agricultural land (Table 13-4)." This sentence would be more accurate if it specified that "Nearly 8 percent of Olowalu is designated as prime agricultural lands or other important agricultural lands by ALISH." Also, the previous sentence is referring to incentives for Important Agricultural Lands (IAL's). The incentives related to IALs stems from changes to HRS Chapter 205 and are separate and distinct from the ALISH system. There are no IAL designated lands in Olowalu. If the intent is to include information on the IAL designations and programs, then this would be better treated as a separate paragraph or subsection.
9. Diverted Water from Olowalu Stream, page 87. Updated information on current diversion rates, post September 2016, have been transmitted to CWRM and it would seem important to include these updated figures since it reflects a significant reduction in diverted streamflow compared to the pre-September 2016 conditions.
10. Irrigation Needs of the Olowalu Service Area, page 88. It is unclear on how the existing acreages for "commercial agriculture" were derived. It is apparent that the estimated acreage does not include a significant area currently used for cattle grazing (estimated at over 300 acres), which includes water needs for cattle consumption as well as irrigated pastures.

Nearly all of the existing privately owned parcels in Olowalu are designated Agricultural by the State Land Use Commission and County Zoning. Thus, it is unclear how it was determined that there are "69 homestead or non-agricultural lots".

Jeffrey T. Pearson, P.E.
Re: ISFAR for Olowalu
Page 4
December 29, 2017

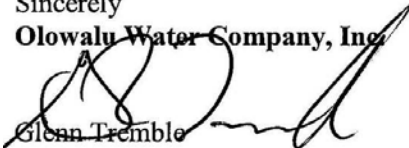
At present, average daily metered use from the non-potable system amounts to approximately 281,000 gpd (based on 6 months between May and October 2017). However, it is noted that many of the parcels that are currently in use as cattle pasture could be converted to more intensive agricultural uses in the future. In addition, many of the existing parcels contain vacant lands that could be converted to agricultural use in the future.

Based on aerial photographs it appears that Maui Cultural Lands have established 12 loi vs. 9 as reported on page 88.

If you have any questions, need any further information or would like to inspect the site, please feel free to contact me at 808-877-4202 or via email at glenn@westmauland.com.

Sincerely

~~Olowalu Water Company, Inc~~



Glenn Tremble
Secretary/Treasurer