```
1
00:00:04.840 - -> 00:00:09.520
Right? Why don't we get started?
2
00:00:09.520 --> 00:00:16.870
Uhm? It's 9:01 AM, December 9.
3
00:00:16.870 --> 00:00:21.659
2021 this is the contested case in the
4
00:00:21.659 --> 00:00:24.386
matter of a contested case regarding
5
00:00:24.386 --> 00:00:27.316
the continuation of revocable permits.
6
00:00:27.320 --> 00:00:29.606
RP's for tax map key numbers
7
00:00:33.100 --> 00:00:33.540
211001044 and
8
00:00:46.400 --> 00:00:49.840
050229014001005011012017211002. 002 portion
9
00:00:52.800 --> 00:00:53.450
Smit.
1 0
00:01:17.850 --> 00:01:20.506
OK, I'm sorry I'm going to start over.
1 1
00:01:20.510 --> 00:01:24.630
I had to get Linda Chow set up.
12
00:01:24.630 --> 00:01:29.080
Linda, Are you ready? OK.
1 3
00:01:29.080 --> 00:01:30.772
Alright, thanks everyone,
1 4
00:01:30.772 --> 00:01:34.446
```

```
it is 9:03 AM. December 9, 2021.
15
00:01:34.446 --> 00:01:36.806
This is I'm Suzanne case.
16
00:01:36.810 --> 00:01:38.790
The hearing officer in the matter
1 7
00:01:38.790 --> 00:01:40.834
of a contested case regarding the
1 8
00:01:40.834 --> 00:01:42.282
continuation of local permits
1 9
00:01:42.282 --> 00:01:44.450
arpis for tax map key numbers
20
00:01:46.970 --> 00:01:47.500
211001044 and
21
00:01:58.720 --> 00:01:59.193
5.0229E+32
22
00:01:59.193 --> 00:02:00.139
portion and
23
00:02:02.530 --> 00:02:06.486
21200. 4005007 for water use on the
24
00:02:06.486 --> 00:02:08.658
island of Maui to Alexander and Baldwin,
25
00:02:08.660 --> 00:02:10.908
Inc. A&B and yeah,
26
00:02:10.908 --> 00:02:13.377
East Maui Irrigation Company, LLC.
27
00:02:13.377 --> 00:02:18.468
EMI for the remainder of the 2021 RPS,
```

```
28
00:02:18.468 --> 00:02:21.038
if applicable, and for their
2 9
00:02:21.038 --> 00:02:23.691
continuation through the end of 2022.
30
00:02:23.691 --> 00:02:26.877
We are holding this contested case.
3 1
00:02:26.880 --> 00:02:30.906
Hearing on zoom, we have the.
32
00:02:30.910 --> 00:02:35.392
Parties here and witnesses and the
3 3
00:02:35.392 --> 00:02:37.383
parties designated representatives,
34
00:02:37.383 --> 00:02:40.341
we have a public viewing room
35
00:02:40.341 --> 00:02:43.269
here in the CONEMU building.
36
00:02:43.270 --> 00:02:44.970
Uhm, and for your information,
37
00:02:44.970 --> 00:02:47.490
we had two people there all day yesterday and
38
00:02:47.490 --> 00:02:50.274
I don't think we have anybody so far today,
39
00:02:50.280 --> 00:02:53.488
but anyone is welcome.
4 0
00:02:53.490 --> 00:02:55.912
Uh, we don't see that zoom box
4 1
00:02:55.912 --> 00:02:58.305
```

```
for the other is OK, sorry.
4 2
00:02:58.305 --> 00:03:00.690
Yeah, we're good.
4 3
00:03:00.690 --> 00:03:04.510
And uhm, let's see the the documents
4 4
00:03:04.510 --> 00:03:07.632
are all the exhibits from the trial
4 5
00:03:07.632 --> 00:03:10.446
and the documents in the in this.
4 6
00:03:10.450 --> 00:03:13.205
Proceeding or online I gave
4 7
00:03:13.205 --> 00:03:15.409
you the link yesterday.
4 8
00:03:15.410 --> 00:03:20.408
Uh, we uploaded the audio recording.
4 9
00:03:20.410 --> 00:03:21.190
Uh, yesterday.
5 0
00:03:21.190 --> 00:03:24.472
I think it was up around 6:00 o'clock,
5 1
00:03:24.472 --> 00:03:26.356
maybe a little earlier.
5 2
00:03:26.360 --> 00:03:29.300
And we also uploaded the transcripts.
5 3
00:03:29.300 --> 00:03:32.300
I believe we have uploaded the
5 4
00:03:32.300 --> 00:03:37.009
transcripts from the trial from last year.
```

```
5 5
00:03:37.010 --> 00:03:38.408
Going to have a lunch break.
5 6
00:03:38.410 --> 00:03:40.849
We're going to go from 9 to 4 roughly
5 7
00:03:40.849 --> 00:03:43.199
today will have a lunch break roughly }1
5 8
00:03:43.199 --> 00:03:45.257
to one will try to break every hour or
5 9
00:03:45.257 --> 00:03:47.448
hour and a half when it's the right time.
6 0
00:03:47.450 --> 00:03:50.208
If I'm not breaking, please remind me
6 1
00:03:50.210 --> 00:03:53.306
that it's a good time for a break.
6 2
00:03:53.310 --> 00:03:55.968
Please don't use the chat unless
6 3
00:03:55.968 --> 00:03:57.740
you're having technical difficulties.
6 4
00:03:57.740 --> 00:03:58.440
And uhm,
6 5
00:03:58.440 --> 00:03:58.790
OK,
6 6
00:03:58.790 --> 00:04:01.240
let me ask the parties to introduce
6 7
00:04:01.313 --> 00:04:03.293
themselves and their designated
6 8
00:04:03.293 --> 00:04:06.771
```

```
representatives that are in the room here
6 9
00:04:06.771 --> 00:04:09.767
starting with Alexander and Baldwin in MI.
7 0
00:04:13.410 --> 00:04:15.270
Good morning, Trisha Kogi
7 1
00:04:15.270 --> 00:04:16.665
and David schulmeister.
7 2
00:04:16.670 --> 00:04:19.598
Appearing on behalf of A and B&MI with
7 3
00:04:19.598 --> 00:04:21.668
us today, our client representatives
74
00:04:21.668 --> 00:04:23.969
merits Chang and Tim O'Loughlin.
7 5
00:04:23.970 --> 00:04:26.370
Nicole Yamani from our office is also here.
76
00:04:26.370 --> 00:04:29.044
She will be assisting with the exhibits.
7 7
00:04:29.050 --> 00:04:31.808
Thank you and the county of Maui.
78
00:04:31.810 --> 00:04:34.186
Good Morning Deputy corporation counsel KRB,
7 9
00:04:34.190 - -> 00:04:36.066
on behalf of the County of Maui
80
00:04:36.066 --> 00:04:37.290
Department of Water Supply.
8 1
00:04:37.290 --> 00:04:39.420
I do not have a designated
```

```
82
00:04:39.420 --> 00:04:40.485
client representative today.
83
00:04:40.490 --> 00:04:43.226
OK, thank you and Sierra Club.
84
00:04:43.230 --> 00:04:45.258
Good morning David Franklin Sierra Club.
85
00:04:45.260 --> 00:04:47.864
UM Wayne Tanaka and Lucy and Danae
86
00:04:47.864 --> 00:04:50.607
of the Sierra Club are here today.
8 7
00:04:50.610 --> 00:04:52.658
Great OK so uhm.
8 8
00:04:54.800 --> 00:04:57.626
The rest of the people here we have heavy
89
00:04:57.626 --> 00:05:00.185
Coleman who's a court reporter for AMB MI.
90
00:05:00.190 --> 00:05:01.774
We have the deal on our board room
91
00:05:01.774 --> 00:05:03.298
with just the public viewing room.
92
00:05:03.300 --> 00:05:04.940
We have witnesses a mark,
93
00:05:04.940 --> 00:05:09.266
bought Michael Key to Granton comma.
94
00:05:09.270 --> 00:05:13.800
I think that's and seal how.
95
00:05:13.800 --> 00:05:17.199
```

```
OK, everyone come.
96
00:05:17.200 --> 00:05:20.900
Ready to start? That's one,
97
00:05:20.900 --> 00:05:23.918
well go ahead, sorry I come.
98
00:05:23.918 --> 00:05:27.859
David, I didn't receive a copy of Y 68.
99
00:05:27.860 --> 00:05:29.939
The new exhibit that you had yesterday.
100
00:05:29.940 --> 00:05:34.460
If you could email a copy out, please.
101
00:05:34.460 --> 00:05:36.636
Yeah, I'll do that in the first break.
102
00:05:36.640 --> 00:05:38.320
Thank you. And if I don't,
103
00:05:38.320 --> 00:05:39.930
would you remind me again?
104
00:05:39.930 --> 00:05:42.998
I will thank you.
105
00:05:43.000 --> 00:05:46.424
Uhm, and then my matter is two things.
106
00:05:46.430 - -> 00:05:48.058
Just for the record,
107
00:05:48.058 --> 00:05:50.922
the audio is not available till 7:00
108
00:05:50.922 --> 00:05:53.520
PM last night not six and I would
```

```
109
00:05:53.520 - -> 00:05:55.620
like to renew my request that there
110
00:05:55.690 --> 00:05:57.834
is a lot of confusion in trying to
111
00:05:57.834 --> 00:06:00.127
use the audio because there's no
112
00:06:00.127 --> 00:06:01.815
correspondence between the audio
113
00:06:01.815 --> 00:06:05.015
time and the time that you have
114
00:06:05.015 --> 00:06:06.899
articulated throughout the proceeding.
115
00:06:06.900 --> 00:06:07.764
It also appears,
116
00:06:07.764 --> 00:06:09.492
although I'm not sure about this,
117
00:06:09.500 --> 00:06:11.810
that you folks do not do any
118
00:06:11.810 --> 00:06:12.800
audio during lunch.
119
00:06:12.800 --> 00:06:14.340
Which makes it even more difficult to
120
00:06:14.340 --> 00:06:16.265
do the math to figure out where we are.
121
00:06:16.270 --> 00:06:18.430
So I'd like to repeat that you folks
122
00:06:18.430 --> 00:06:20.695
```

```
when a new witness comes on tell us
123
00:06:20.695 --> 00:06:23.471
where we are in the time for the audio
124
00:06:23.471 --> 00:06:25.546
so that we can appropriately put that
125
00:06:25.546 --> 00:06:26.944
information and track it down with
126
00:06:26.944 --> 00:06:28.446
the findings of vacuum pieces of law.
127
00:06:35.790 --> 00:06:37.094
Yeah, I I don't.
128
00:06:37.094 --> 00:06:39.839
I don't know how to timestamp the audio.
129
00:06:39.840 --> 00:06:42.264
So, uhm, but it's, uh, you know,
130
00:06:42.264 --> 00:06:45.490
this is a standard way of doing it so.
131
00:06:45.490 --> 00:06:47.514
Hold on, this is not the standard way
132
00:06:47.514 --> 00:06:49.569
of doing any contested case hearing.
133
00:06:49.570 - -> 00:06:52.410
None of us have ever had a contested
134
00:06:52.410 --> 00:06:54.870
case hearing like this in our lives.
135
00:06:54.870 --> 00:06:59.397
Fair enough, OK, uh, are we ready to go?
```

```
1 3 6
00:06:59.400 --> 00:07:00.430
I think the next witness,
137
00:07:00.430 --> 00:07:03.388
so just the the witnesses today.
138
00:07:03.390 --> 00:07:04.922
Uhm, are gonna be.
1 3 9
00:07:04.922 --> 00:07:07.610
We're gonna have sealed how starting who
140
00:07:07.610 --> 00:07:10.146
was not not able to start last night.
141
00:07:10.150 --> 00:07:12.320
We were not able to start and
142
00:07:12.320 --> 00:07:14.658
then we will have Aaron stroke.
143
00:07:14.660 --> 00:07:16.718
And then, and both of those are
144
00:07:16.718 --> 00:07:19.044
witnesses for both A&B and Sierra Club.
145
00:07:19.044 --> 00:07:21.966
And then I have Michelle Reynolds
146
00:07:21.966 --> 00:07:24.622
for Sierra Club down. Uhm?
147
00:07:24.622 --> 00:07:27.550
Yeah, that's not understanding.
148
00:07:27.550 --> 00:07:29.580
Turkish air and stroke is
149
00:07:29.580 --> 00:07:31.610
```

going first before see how.
150
00:07:31.610 --> 00:07:34.620
First yes.
151
00:07:34.620 --> 00:07:36.840
That was our understanding 'cause Dr.
152
00:07:36.840 --> 00:07:39.050
Strout is only available today,
153
00:07:39.050 --> 00:07:41.550
so we want to make sure that we complete him.
154
00:07:41.550 --> 00:07:42.112
Whereas Mr.
155
00:07:42.112 --> 00:07:44.700
How, if need be could be available next week.
156
00:07:44.700 --> 00:07:46.610
Good alright with the Conemaugh
157
00:07:46.610 --> 00:07:51.012
everybody OK with that right will do that.
158
00:07:51.012 --> 00:07:53.642
Uhm, OK, any other matters.
159
00:07:53.642 --> 00:07:55.554
Before we get going.
160
00:07:55.560 --> 00:07:58.464
I have Linda Chow saying she'll try to
161
00:07:58.464 --> 00:08:01.080
figure out a way to put a time stamp
162
00:08:01.080 --> 00:08:03.788
on the OR somehow marked the audio.

```
163
00:08:03.790 - -> 00:08:07.918
But for purposes of.
164
00:08:07.920 --> 00:08:08.840
Just I,
165
00:08:08.840 --> 00:08:12.690
I will try to again note the time when we
166
00:08:12.690 --> 00:08:15.508
start a new section in the in the audio.
167
00:08:15.510 --> 00:08:17.950
And uhm.
168
00:08:17.950 --> 00:08:20.342
And Will will will try again to make
169
00:08:20.342 --> 00:08:22.985
sure that the parties come that the
170
00:08:22.985 --> 00:08:24.965
attorneys and the parties introduce
171
00:08:25.035 --> 00:08:27.030
themselves at the beginning of
172
00:08:27.030 --> 00:08:30.420
each section and we start to talk.
173
00:08:30.420 --> 00:08:31.332
Alright everybody?
174
00:08:31.332 --> 00:08:32.700
OK with that.
175
00:08:35.940 --> 00:08:37.690
He lost AMD for a second here.
176
00:08:41.210 - -> 00:08:42.799
```

I assume that's 'cause Mr Schulman St.
177
00:08:42.800 --> 00:08:44.648
Dealing with doctor stroke
178
00:08:44.648 --> 00:08:46.480
and not Trisha, yes.
179
00:08:50.050 --> 00:08:53.116
Got it OK. Alright, let's go ahead.
180
00:08:53.120 --> 00:08:56.700
Then it is, UM.
181
00:08:56.700 --> 00:09:00.633
9:10 AM and we're going to go ahead with
182
00:09:00.640 --> 00:09:06.135
witness Aaron Stroke and the Mr Xu Mr.
183
00:09:06.135 --> 00:09:10.548
Please go ahead. Swear him in.
184
00:09:10.550 --> 00:09:12.886
Doctor, Doctor Stroke these
185
00:09:12.886 --> 00:09:14.638
soundly sweared too.
186
00:09:14.640 --> 00:09:16.524
Tell the truth, the whole truth
187
00:09:16.524 --> 00:09:18.529
and nothing but the truth I do.
188
00:09:18.530 --> 00:09:18.980
Thank you.
189
00:09:22.800 --> 00:09:26.128
Good morning doctor Strout

```
190
00:09:26.130 --> 00:09:27.420
Can everyone hear me alright?
191
00:09:31.200 --> 00:09:34.399
She shaking her head and another reason
192
00:09:34.399 --> 00:09:38.058
why I'm asking is because my computer is.
193
00:09:38.060 --> 00:09:41.690
Acting, you know, halting fashion.
194
00:09:41.690 --> 00:09:44.096
So if someone could acknowledge what
195
00:09:44.100 --> 00:09:47.308
you can hear me, I would appreciate it.
196
00:09:47.310 --> 00:09:49.080
You're breaking up a little bit.
197
00:09:51.150 --> 00:09:52.210
You are a little bit,
198
00:09:52.210 --> 00:09:54.250
but I can hear you.
199
00:09:54.250 --> 00:09:56.086
Do you wanna try exiting and
200
00:09:56.086 --> 00:09:57.310
coming back in rebooting?
201
00:09:59.770 --> 00:10:03.890
Me yeah, meeting back in.
202
00:10:03.890 --> 00:10:05.726
I wonder if you're on Wi-Fi.
203
00:10:05.730 --> 00:10:06.468
```

```
I don't know if you can.
```

204
00:10:06.470 --> 00:10:07.598
Why are you computer?
205
00:10:09.630 --> 00:10:12.186
Can I? Because the computer I'm
206
00:10:12.186 --> 00:10:16.550
using doesn't have a Ethernet port.
207
00:10:16.550 --> 00:10:20.724
Uhm? So I can't. I can't do that.
208
00:10:20.730 --> 00:10:23.550
You want to try closing everything,
209
00:10:23.550 --> 00:10:26.100
rebooting and and opening just
210
00:10:26.100 --> 00:10:28.358
the minimum you need. Yeah,
211
00:10:28.358 --> 00:10:30.102
actually that's all I've got open right now,
212
00:10:30.110 --> 00:10:33.170
but let me try to exit and come back.
213
00:10:33.170 --> 00:10:37.200
And if that doesn't work.
214
00:10:37.200 --> 00:10:40.150
I guess I could do phone audio and
215
00:10:40.150 --> 00:10:41.760
you probably be able to hear me.
216
00:10:41.760 --> 00:10:44.658
Yeah, that should.

```
217
00:10:44.660 - -> 00:10:45.536
Let me write,
218
00:10:45.536 --> 00:10:47.980
so I'm going to leave and come back.
219
00:10:47.980 --> 00:10:48.700
Right now.
220
00:13:07.030 --> 00:13:08.234
So while we're waiting,
221
00:13:08.234 --> 00:13:10.530
I can confirm the audio is posted.
222
00:13:10.530 --> 00:13:13.514
I got confirmation at 6:43 PM last night.
223
00:13:18.600 --> 00:13:20.550
Mine is labeled 7 PM.
224
00:13:25.830 --> 00:13:27.940
Guess the wires are slow.
225
00:13:27.940 --> 00:13:31.704
Hi there. Yes, OK try that.
226
00:13:31.704 --> 00:13:34.302
Can you hear me? OK, yeah,
227
00:13:34.302 --> 00:13:36.438
that's pretty good, right?
228
00:13:36.438 --> 00:13:39.078
Uh, good morning doctor stop.
229
00:13:41.490 --> 00:13:45.150
Morning. Uh. I come.
230
00:13:48.850 --> 00:13:51.325
```

```
My intention calling user witnesses
231
00:13:51.325 --> 00:13:54.319
primarily to meet you available for
232
00:13:54.319 --> 00:13:56.678
cross examination or the materials
233
00:13:56.678 --> 00:13:59.762
that you already testified to at
234
00:13:59.762 --> 00:14:02.539
the November 13th board meeting.
235
00:14:02.540 --> 00:14:05.870
Which include the instream flow
236
00:14:05.870 --> 00:14:07.390
assessment standard placement
237
00:14:07.390 --> 00:14:10.103
summary is dated October 2020, which.
238
00:14:10.103 --> 00:14:13.680
For the record, is exhibit D1.
239
00:14:13.680 --> 00:14:17.640
And also you had a PowerPoint
240
00:14:17.640 --> 00:14:20.150
which is exhibit D2.
241
00:14:20.150 - -> 00:14:23.129
So, so actually what I'd like to begin by.
242
00:14:23.130 --> 00:14:27.094
It's just asking you whether any of
243
00:14:27.094 --> 00:14:32.100
the positions or conclusions or. Uhm?
```

```
244
00:14:32.100 --> 00:14:36.560
Statements contained in those presentations.
245
00:14:36.560 --> 00:14:41.080
Uhm, or as far as you're concerned still.
246
00:14:41.080 --> 00:14:42.904
Accurate still reflect your
247
00:14:42.904 --> 00:14:44.728
testimony and your position.
248
00:14:47.780 --> 00:14:50.118
So we have we being the Commission
249
00:14:50.118 --> 00:14:51.900
on water resource management,
250
00:14:51.900 --> 00:14:54.594
have coordinated with the division of
251
00:14:54.594 --> 00:14:57.290
aquatic resources to better characterize
252
00:14:57.290 --> 00:15:00.908
more streams than what were available
253
00:15:00.908 --> 00:15:04.776
before the land board last year,
254
00:15:04.776 --> 00:15:08.416
we've been working hard at.
255
00:15:08.420 --> 00:15:12.620
Getting to multiple elevations within.
256
00:15:12.620 --> 00:15:15.044
Have as many streams as possible
257
00:15:15.044 --> 00:15:17.330
```

```
in the East Maui region.
258
00:15:17.330 --> 00:15:19.145
So there are there are
259
00:15:19.145 --> 00:15:20.960
additional data that we have.
260
00:15:20.960 --> 00:15:22.946
We have not completely analyzed yet,
261
00:15:22.950 --> 00:15:27.822
but we have been gathering to
262
00:15:27.822 --> 00:15:30.258
refine our recommendations.
263
00:15:30.260 --> 00:15:33.269
OK, so uhm.
264
00:15:33.270 --> 00:15:35.130
And when you say with a
265
00:15:35.130 --> 00:15:36.370
division of aquatic resources,
266
00:15:36.370 --> 00:15:39.838
are there particular particular?
267
00:15:39.840 --> 00:15:41.800
Staff from visual aquatic
268
00:15:41.800 --> 00:15:44.740
resources to to be referring to.
269
00:15:44.740 --> 00:15:47.086
We've been coordinating with SKIPPY how.
270
00:15:49.970 --> 00:15:52.931
OK, and had there been a coordination
```

```
271
00:15:52.931 --> 00:15:55.429
of that nature or some nature
272
00:15:55.430 --> 00:16:00.780
prior to the October 2020?
273
00:16:00.780 - -> 00:16:04.130
Hamstring flow standard assessment summary,
274
00:16:04.130 - -> 00:16:06.370
which hereafter I'm just gonna
275
00:16:06.370 --> 00:16:10.767
refer to as a ifsar ifsa are we.
276
00:16:10.767 --> 00:16:13.962
Been working with SKIPPY for
277
00:16:13.962 --> 00:16:18.510
many years on UM. Toyota.
278
00:16:18.510 --> 00:16:21.846
And stream management throughout the island.
279
00:16:21.850 --> 00:16:27.582
OK, so so just so at this point I understand
280
00:16:27.582 --> 00:16:30.012
you're saying that there's analysis
281
00:16:30.012 --> 00:16:32.691
and discussions underway to refine it.
282
00:16:32.691 --> 00:16:34.726
To refine what was contained
283
00:16:34.726 --> 00:16:36.768
in that at this point,
284
00:16:36.770 --> 00:16:39.625
```

```
have any of the conclusions
285
00:16:39.625 --> 00:16:41.338
or recommendations changed?
286
00:16:41.340 --> 00:16:44.245
We we haven't gotten to the nitty
287
00:16:44.245 --> 00:16:46.897
gritty of utilizing all the data yet,
288
00:16:46.900 --> 00:16:51.030
so I can't say what's changed right.
289
00:16:56.690 --> 00:16:59.529
OK, one thing I wanted to ask
290
00:16:59.529 --> 00:17:01.841
you about and I'm going to try to
291
00:17:01.841 --> 00:17:04.223
do this without putting up the
292
00:17:04.223 --> 00:17:06.540
exhibit because I think that the
293
00:17:06.540 --> 00:17:08.900
everybody's pretty familiar with it.
294
00:17:08.900 --> 00:17:11.690
There's a couple of references
295
00:17:11.690 --> 00:17:14.115
throughout the Ifsar, and again,
296
00:17:14.115 --> 00:17:17.160
for the record when I say ifsar,
297
00:17:17.160 --> 00:17:20.220
I'm referring to exhibit D1.
```

```
298
00:17:20.220 - -> 00:17:24.508
Uhm, about. You know,
299
00:17:24.508 --> 00:17:26.632
closed canopy's and some of the
300
00:17:26.632 --> 00:17:28.551
non petition streamed streams due
301
00:17:28.551 --> 00:17:30.825
to the dominance of non native.
302
00:17:30.830 --> 00:17:32.566
Riparian vegetation, so just.
303
00:17:32.566 --> 00:17:36.226
I wanted to ask you to maybe elaborate
304
00:17:36.226 --> 00:17:39.130
a little bit when you're talking
305
00:17:39.130 --> 00:17:41.990
about non native riparian vegetation.
306
00:17:41.990 --> 00:17:44.740
I mean what elevations are?
307
00:17:44.740 --> 00:17:47.540
Are you referring to?
308
00:17:47.540 --> 00:17:51.668
Uhm, generally speaking, uh.
309
00:17:51.670 --> 00:17:53.764
In certain streams,
310
00:17:53.764 --> 00:17:57.254
from the mouth upwards too.
311
00:17:57.260 --> 00:18:00.046
```

```
You know }12113\mathrm{ hundred feet in elevation,
312
00:18:00.050 --> 00:18:01.865
and that's that's where we've
313
00:18:01.865 --> 00:18:03.680
been focusing our field work.
314
00:18:03.680 --> 00:18:06.500
The riparian vegetation is
315
00:18:06.500 --> 00:18:08.951
dominated by non native species,
316
00:18:08.951 --> 00:18:11.108
such as how Bush, strawberry,
317
00:18:11.108 --> 00:18:11.876
guava,
318
00:18:11.876 --> 00:18:12.644
Java,
319
00:18:12.644 --> 00:18:13.412
plum,
320
00:18:13.412 --> 00:18:14.180
inkberry.
321
00:18:16.860 --> 00:18:21.228
Bamboo, a lot of species that occlude the
322
00:18:21.228 --> 00:18:24.853
stream channel that prevent the growth of
323
00:18:24.853 --> 00:18:28.242
Algy and the primary food source for the
324
00:18:28.242 --> 00:18:31.530
ecosystem and also restrict the movement
```

```
325
00:18:31.530 --> 00:18:34.410
of species upstream and downstream.
326
00:18:34.410 --> 00:18:36.924
OK, and and so the elevation
327
00:18:36.924 --> 00:18:39.380
you mentioned was up to 1100.
328
00:18:39.380 --> 00:18:41.582
The riparian would be include all
329
00:18:41.582 --> 00:18:44.688
the way up to 1100 feet elevation.
330
00:18:44.690 --> 00:18:47.160
Repairing just means along the
331
00:18:47.160 --> 00:18:50.870
stream channel. So, uhm, you or I.
332
00:18:50.870 --> 00:18:54.370
I didn't work on characterizing. Uh.
333
00:18:56.440 --> 00:18:59.020
The vegetation beyond the stream
334
00:18:59.020 --> 00:19:01.990
channel for for field work. OK.
335
00:19:05.290 --> 00:19:05.840
Oh
336
00:19:11.460 --> 00:19:12.780
at the uh.
337
00:19:15.450 --> 00:19:19.902
At the time that I mean of the. I mean,
3 3 8
00:19:19.902 --> 00:19:22.370
```

I assume but cricket if I'm wrong that you.

```
3 3 9
00:19:24.460 --> 00:19:27.190
Had access to and reviewed
340
00:19:27.190 --> 00:19:31.150
the staff submittal. Which.
341
00:19:31.150 --> 00:19:35.806
For the record, is exhibit Y 22,
342
00:19:35.806 --> 00:19:39.830
But this was a staff submittal that was.
343
00:19:39.830 --> 00:19:44.360
Published and presented to the board.
344
00:19:44.360 --> 00:19:46.440
For these previous agenda item,
345
00:19:46.440 --> 00:19:48.296
you know that you testified on November 13th.
346
00:19:48.300 --> 00:19:50.813
Did you have a chance to access
347
00:19:50.813 --> 00:19:53.350
and review that submittal prior to
348
00:19:53.350 --> 00:19:56.340
your testimony on November 13th?
349
00:19:56.340 --> 00:19:59.566
I believe I did, I, I mean.
350
00:19:59.566 --> 00:20:01.174
I've read through a lot of
351
00:20:01.174 --> 00:20:02.548
submittals in the last year,
```

```
352
00:20:02.550 - -> 00:20:07.239
and III probably did.
353
00:20:07.240 --> 00:20:08.629
I'll say, well,
354
00:20:08.629 --> 00:20:10.481
do you remember specifically
355
00:20:10.481 --> 00:20:12.435
having been provided comments
356
00:20:12.435 --> 00:20:14.890
from division of aquatic resources
357
00:20:14.890 --> 00:20:17.290
and taxiing comments that were.
358
00:20:17.290 --> 00:20:19.924
Actually set forth in the body
359
00:20:19.924 --> 00:20:21.680
of the signal itself.
360
00:20:21.680 --> 00:20:23.370
I don't remember the specifics.
361
00:20:26.060 --> 00:20:30.873
I is there a? Like a disagreement
362
00:20:30.873 --> 00:20:33.450
or difference of opinion between.
363
00:20:35.490 --> 00:20:37.030
See more staff you know,
364
00:20:37.030 --> 00:20:39.496
sort of stream the stream surface
365
00:20:39.496 --> 00:20:41.612
```

```
water division and division aquatic
366
00:20:41.612 --> 00:20:45.340
resources in terms of. Uhm, the.
367
00:20:47.780 --> 00:20:49.530
You know the the restoration
368
00:20:49.530 --> 00:20:51.850
potential of a non petition streams.
369
00:20:54.300 --> 00:20:56.940
I don't think, uh, there's a
370
00:20:56.940 --> 00:21:01.018
a disagreement, I think, uh.
371
00:21:01.020 --> 00:21:05.329
There might be a. I need to.
372
00:21:07.410 --> 00:21:12.250
Characterize uh?
373
00:21:12.250 --> 00:21:16.756
The potential uh of specific streams
374
00:21:16.756 --> 00:21:19.304
for a reproducing population,
375
00:21:19.304 --> 00:21:22.735
as opposed to just a population
376
00:21:22.735 --> 00:21:26.554
of biota that occupies a habitat.
377
00:21:26.554 --> 00:21:29.690
Uhm? Well, we what we would call
378
00:21:29.690 --> 00:21:32.343
a A a sync population as opposed
```

```
379
00:21:32.343 --> 00:21:34.115
to a source population.
380
00:21:34.120 --> 00:21:35.510
We're still working on that,
381
00:21:35.510 --> 00:21:37.605
and that's partly why we're
382
00:21:37.605 --> 00:21:39.700
doing so much field work.
383
00:21:39.700 --> 00:21:41.405
OK, so so there's additional
384
00:21:41.405 --> 00:21:43.110
field work that's being done.
385
00:21:45.520 --> 00:21:48.076
It's in progress or has taken
386
00:21:48.076 --> 00:21:50.771
place after the field work that
387
00:21:50.771 --> 00:21:53.036
was referenced in the ifsar.
388
00:21:53.040 --> 00:21:59.261
Yes yes lot more work and and but
389
00:21:59.261 --> 00:22:01.427
that hasn't been analyzed to the
390
00:22:01.427 --> 00:22:04.346
point where you can say that any of
391
00:22:04.346 --> 00:22:06.118
the recommendations or conclusions in
392
00:22:06.118 --> 00:22:07.790
```

```
the hips are are going to be changed.
3 9 3
00:22:10.540 --> 00:22:13.132
Now at the time that you
394
00:22:13.132 --> 00:22:14.860
testified on November 13th.
395
00:22:14.860 --> 00:22:19.280
Uh, we had you. Uhm?
396
00:22:19.280 --> 00:22:20.549
Received and reviewed.
397
00:22:20.549 --> 00:22:23.087
The petition to amend the interim
398
00:22:23.087 --> 00:22:26.122
in stream flow standards for the non
399
00:22:26.122 --> 00:22:28.576
petition streams that was filed by
4 0 0
00:22:28.576 --> 00:22:31.338
the Sierra Club and for the record,
4 0 1
00:22:31.338 --> 00:22:34.626
I believe that in this proceeding.
4 0 2
00:22:34.626 --> 00:22:38.650
Is in evidence as exhibit Y50.
4 0 3
00:22:40.790 --> 00:22:43.215
So I believe the petition
4 0 4
00:22:43.215 --> 00:22:45.460
was received in this fall.
4 0 5
00:22:47.920 --> 00:22:50.758
Like September October of this year,
```

```
406
00:22:50.760 --> 00:22:55.860
so after. Last years. Testimony.
407
00:22:58.040 --> 00:23:00.400
Is that what you're asking? Yeah, yeah.
4 0 8
00:23:00.400 --> 00:23:02.920
I mean, I think the meeting that that
4 0 9
00:23:02.985 --> 00:23:05.295
you testified was November the 13th.
4 1 0
00:23:05.300 --> 00:23:08.495
I believe that the exhibit Y50.
4 1 1
00:23:08.495 --> 00:23:11.070
There's also exhibit Y 51,
4 1 2
00:23:11.070 --> 00:23:15.130
which is copies of some emails between
4 1 3
00:23:15.130 --> 00:23:18.224
water Commission staff and the Sierra Club.
4 1 4
00:23:18.230 --> 00:23:20.510
Seems like it puts through
4 1 5
00:23:20.510 --> 00:23:22.334
filing date of the.
416
00:23:22.340 --> 00:23:24.230
Petition around September
417
00:23:24.230 --> 00:23:26.120
29th or thereabouts.
4 1 8
00:23:26.120 --> 00:23:31.307
Uhm, so I believe that at least.
4 1 9
00:23:31.310 --> 00:23:33.770
```

```
The Water Commission had the petition
4 2 0
00:23:33.770 --> 00:23:35.780
had received the petition certainly
4 2 1
00:23:35.780 --> 00:23:37.790
by the beginning of October.
4 2 2
00:23:37.790 - -> 00:23:40.238
So you testified in November 13th.
4 2 3
00:23:40.240 --> 00:23:42.988
So my question is whether you
4 2 4
00:23:42.990 --> 00:23:44.778
had reviewed the petition.
4 2 5
00:23:44.778 --> 00:23:47.460
By the time that you testified
4 2 6
00:23:47.545 --> 00:23:48.880
on November 13th.
427
00:23:51.400 - -> 00:23:53.205
I'm confused, do you mean
428
00:23:53.205 --> 00:23:57.218
November 13th, 2020? Yes.
4 2 9
00:23:57.220 --> 00:24:02.030
Uh, But the petition was received in 2021.
4 3 0
00:24:02.030 - -> 00:24:05.094
OK, I would draw that I was confused.
4 3 1
00:24:05.094 --> 00:24:08.460
I apologize, I'm embarrassed alright so so
4 3 2
00:24:08.460 --> 00:24:11.120
but now you you've reviewed that position,
```

```
4 3 3
00:24:11.120 --> 00:24:13.670
is that right? Yes, OK.
434
00:24:13.670 --> 00:24:16.958
And and part of that petition.
4 3 5
00:24:16.960 --> 00:24:18.808
Surprise here, uhm?
4 3 6
00:24:22.220 --> 00:24:23.879
With regard to the position number one,
4 3 7
00:24:23.880 --> 00:24:27.112
I want to state that I have not
438
00:24:27.112 --> 00:24:29.575
read Y50. And you know we are
4 3 9
00:24:29.575 --> 00:24:31.230
trying to be cautious here.
440
00:24:35.110 --> 00:24:37.980
About discussions about the petition.
4 4 1
00:24:37.980 --> 00:24:40.857
While we were in a contested case.
442
00:24:40.860 --> 00:24:42.252
Come on the RP's.
443
00:24:42.252 --> 00:24:44.929
So I think we can talk about
444
00:24:44.929 --> 00:24:47.399
the process of the petition.
4 4 5
00:24:47.400 --> 00:24:49.568
Yeah, let me do my I want to.
446
00:24:49.570 --> 00:24:50.500
```

```
For the record,
447
00:24:50.500 --> 00:24:53.240
I want to point out there's a Hawaii
448
00:24:53.240 --> 00:24:55.626
Supreme Court decision that about
4 4 9
00:24:55.626 --> 00:24:58.284
the water Commission in which the
4 5 0
00:24:58.284 --> 00:25:00.304
Water Commission hearings Officer
4 5 1
00:25:00.304 --> 00:25:02.424
attempted to preclude testimony
4 5 2
00:25:02.424 --> 00:25:05.555
because of its potential effect on
4 5 3
00:25:05.555 --> 00:25:07.890
a different contested case hearing.
4 5 4
00:25:07.890 --> 00:25:09.486
It was why holy that concern
4 5 5
00:25:09.486 --> 00:25:10.550
was the effect that,
456
00:25:10.550 --> 00:25:13.830
and the question was aimed to Steve Dollar.
4 5 7
00:25:13.830 - -> 00:25:14.866
I believe it's wyola.
4 5 8
00:25:14.866 --> 00:25:17.417
I get why all the cucumis stuck in my mind.
4 5 9
00:25:17.420 --> 00:25:20.524
But I believe it's in right in real
```

```
4 6 0
00:25:20.524 --> 00:25:23.272
Biola and the Supreme Court said
4 6 1
00:25:23.272 --> 00:25:26.456
that you cannot prevent the cross
462
00:25:26.456 --> 00:25:28.824
examination or information just
463
00:25:28.824 --> 00:25:31.684
because you're concerned that it
4 6 4
00:25:31.684 --> 00:25:34.194
might affect a different proceeding.
4 6 5
00:25:34.200 --> 00:25:35.454
We're going to.
466
00:25:35.454 --> 00:25:37.962
So we're going to insist that
4 6 7
00:25:37.962 --> 00:25:40.045
exhibit Y50 be considered.
4 6 8
00:25:40.045 --> 00:25:42.265
You cannot exclude it.
4 6 9
00:25:42.270 --> 00:25:44.136
It is inappropriate to exclude it.
470
00:25:44.140 --> 00:25:45.610
And I just want to have my
4 7 1
00:25:45.610 --> 00:25:47.054
objection in the record right.
4 7 2
00:25:47.054 --> 00:25:48.910
I haven't excluded it,
4 7 3
00:25:48.910 --> 00:25:50.791
```

```
but I haven't read it is what I'm saying
474
00:25:50.791 --> 00:25:52.706
and I'm gonna take a short recess here.
4 7 5
00:27:57.860 --> 00:28:01.379
OK, uh, it's fine. We can go ahead with
4 7 6
00:28:01.379 --> 00:28:03.558
this line of questioning on the petition,
4 7 7
00:28:03.560 --> 00:28:07.210
and it is in the in the record in this case.
478
00:28:17.070 --> 00:28:21.935
Go ahead Mr. Schulmeister and it is 929.
4 7 9
00:28:21.935 --> 00:28:28.210
Right so uhm. OK.
480
00:28:28.210 --> 00:28:29.850
You know at this point.
4 8 1
00:28:29.850 --> 00:28:31.334
You know, I'm just gonna turn back.
482
00:28:31.340 --> 00:28:34.406
I'm going to just go with
4 8 3
00:28:34.406 --> 00:28:36.450
our designation of the.
484
00:28:36.450 --> 00:28:38.050
Testimony that he gave previously,
4 8 5
00:28:38.050 --> 00:28:39.372
including the.
486
00:28:39.372 --> 00:28:43.444
Uhm, do you want two and the
```

```
487
00:28:43.444 --> 00:28:45.736
testimony given at the meeting and
488
00:28:45.740 --> 00:28:47.300
turning over cross examination?
4 8 9
00:28:49.830 --> 00:28:51.475
K County of Maui. First of all,
4 9 0
00:28:51.480 --> 00:28:54.340
do you have any? Question.
4 9 1
00:28:57.010 --> 00:28:58.372
Sorry, didn't realize I had forgotten
492
00:28:58.372 --> 00:29:00.397
to turn my camera back on so we do not
493
00:29:00.397 --> 00:29:01.690
have any questions for this witness.
4 9 4
00:29:01.690 --> 00:29:04.138
Thank you. OK, thanks all right Mr Frankel.
4 9 5
00:29:07.730 --> 00:29:09.530
After stroke, have you discussed
496
00:29:09.530 --> 00:29:11.798
the subject upon which you are
497
00:29:11.798 --> 00:29:13.878
testifying today with anyone? No.
4 9 8
00:29:13.878 --> 00:29:16.686
K. On other, more native species
4 9 9
00:29:16.686 --> 00:29:20.275
in the streams in which stream flow
500
00:29:20.275 --> 00:29:22.880
```

```
has increased in recent years.
501
00:29:22.880 --> 00:29:26.228
We we haven't finalized that analysis,
502
00:29:26.230 --> 00:29:27.258
that's not my question.
503
00:29:27.258 --> 00:29:29.310
Is that if your analysis is complete,
504
00:29:29.310 --> 00:29:31.728
my question is, are there more?
505
00:29:31.730 --> 00:29:34.046
Have you seen more native species
506
00:29:34.046 --> 00:29:37.010
in the streams in which stream flow
507
00:29:37.010 --> 00:29:39.606
is increased in recent years? I.
508
00:29:39.606 --> 00:29:42.168
I haven't looked at the data is
509
00:29:42.168 --> 00:29:44.862
what I'm saying. OK, how about it?
510
00:29:44.862 --> 00:29:45.816
So you haven't.
5 1 1
00:29:45.820 --> 00:29:47.328
You've made observations right?
5 1 2
00:29:47.328 --> 00:29:49.213
And you've written them down.
513
00:29:49.220 --> 00:29:52.970
So we've done intensive biota
```

```
514
00:29:52.970 --> 00:29:56.720
surveys in which we've counted.
5 1 5
00:29:56.720 --> 00:29:57.466
Many species,
516
00:29:57.466 --> 00:30:00.077
and in some cases I'm not involved
517
00:30:00.077 --> 00:30:02.323
with every single survey so.
518
00:30:02.323 --> 00:30:05.947
And and I I have a big spreadsheet,
519
00:30:05.950 --> 00:30:07.990
but none of the data of an analyst,
5 2 0
00:30:07.990 --> 00:30:10.456
so I can't make any conclusions.
5 2 1
00:30:10.460 --> 00:30:13.636
When do you expect it to be analyzed?
522
00:30:13.640 --> 00:30:15.800
I mean.
5 2 3
00:30:15.800 --> 00:30:18.012
I was hoping to go on vacation
524
00:30:18.012 --> 00:30:20.258
this month so maybe next month.
525
00:30:20.260 --> 00:30:22.346
February maybe it's we have a lot
526
00:30:22.346 --> 00:30:24.479
on her plate and I I apologize.
527
00:30:24.480 --> 00:30:25.596
```

```
I know this is very important,
528
00:30:25.600 --> 00:30:27.340
but we also have other petitions
529
00:30:27.340 --> 00:30:28.959
that I'm trying to get to.
530
00:30:28.960 --> 00:30:30.348
I understand, I understand.
531
00:30:30.348 --> 00:30:32.430
I just want a time frame.
532
00:30:32.430 --> 00:30:36.046
So as Mr Show Mr asked you,
533
00:30:36.046 --> 00:30:38.342
you drafted what we call the five
534
00:30:38.342 --> 00:30:41.003
stars and also the instream flow
535
00:30:41.003 --> 00:30:43.840
standard assessment summary, right?
536
00:30:43.840 --> 00:30:44.941
That was yeah,
537
00:30:44.941 --> 00:30:46.776
our our best available information
538
00:30:46.776 --> 00:30:47.910
at the time.
5 3 9
00:30:47.910 --> 00:30:51.195
Understood who helped you with
540
00:30:51.195 --> 00:30:53.938
a particular for these and I
```

```
541
00:30:53.938 --> 00:30:55.723
should step back for clarity.
542
00:30:55.730 --> 00:30:58.178
I'm focusing here on the dozen
543
00:30:58.178 --> 00:31:00.290
huellas streams that are part
544
00:31:00.290 --> 00:31:02.295
of the Sierra Club's petition
5 4 5
00:31:02.295 --> 00:31:05.670
that was filed this year 2021.
546
00:31:05.670 --> 00:31:06.982
Who else helped you?
547
00:31:06.982 --> 00:31:08.622
And I I know that.
548
00:31:08.630 --> 00:31:10.947
So let me take a step back.
549
00:31:10.950 --> 00:31:13.278
I think it's fair to say that a
5 5 0
00:31:13.278 --> 00:31:16.484
good chunk of the isars is copied
551
00:31:16.484 --> 00:31:18.968
and pasted from other I've stars.
552
00:31:18.968 --> 00:31:20.036
Is that true?
553
00:31:20.040 --> 00:31:20.684
Yes,
554
00:31:20.684 --> 00:31:25.018
```

```
the bulk of the structure is the
555
00:31:25.018 --> 00:31:27.358
same from watershed to watershed
556
00:31:27.358 --> 00:31:29.230
or hydrologic into hydrologic,
557
00:31:29.230 --> 00:31:33.178
and our goal is to bring in as much
558
00:31:33.178 --> 00:31:35.189
new information as possible, right?
559
00:31:35.189 --> 00:31:38.730
So my question now is not about the sort of.
560
00:31:38.730 --> 00:31:39.462
Cut and paste.
561
00:31:39.462 --> 00:31:41.170
Copy and paste information that's in there.
562
00:31:41.170 --> 00:31:46.120
The structure, the the sort of outline, etc.
563
00:31:46.120 --> 00:31:49.570
But the information that's different
564
00:31:49.570 --> 00:31:52.010
for these particular hello streams.
565
00:31:52.010 --> 00:31:54.575
Who else helped you draft
566
00:31:54.575 --> 00:31:57.140
the language in your life?
567
00:31:57.140 --> 00:31:59.312
Stars and in the summer, and it's summary?
```

```
568
00:31:59.312 --> 00:32:00.408
Was it just you?
569
00:32:00.410 --> 00:32:03.574
Did anyone else help with the language?
570
00:32:03.580 --> 00:32:07.840
Uhm? I can't remember if we.
571
00:32:10.300 - -> 00:32:12.808
You know, circulated it
572
00:32:12.808 --> 00:32:15.316
around within the staff.
573
00:32:15.320 --> 00:32:20.370
Uhm, I know a lot of the data came from.
5 7 4
00:32:20.370 --> 00:32:23.040
Or some of the data came
5 7 5
00:32:23.040 --> 00:32:25.223
from our few biota service.
576
00:32:25.223 --> 00:32:27.378
We were able to complete
577
00:32:27.378 --> 00:32:30.930
last year with DAR. So.
578
00:32:35.580 --> 00:32:39.395
So OK. Did anyone edit any portion
579
00:32:39.395 --> 00:32:43.465
of the summary or the draft five
580
00:32:43.465 --> 00:32:46.939
stars for these 12 wildest dreams?
581
00:32:46.940 --> 00:32:48.300
```

```
Uh, I can't remember.
582
00:32:48.300 --> 00:32:51.158
I mean, I usually send it to other
58
00:32:51.158 --> 00:32:53.499
staff and they provide some edits.
584
00:32:53.500 --> 00:32:54.922
But you don't recall in this
585
00:32:54.922 --> 00:32:55.870
situation I don't know.
586
00:32:55.870 --> 00:32:58.180
I had worked on like 20 I
587
00:32:58.180 --> 00:33:00.360
if stars last year I don't.
58
00:33:00.360 --> 00:33:02.165
I don't remember specifics like
59
00:33:02.165 --> 00:33:03.910
that and in terms of circulating
590
00:33:03.910 --> 00:33:06.098
it it would only be internal within
591
00:33:06.098 --> 00:33:07.948
the staff of the Commission,
592
00:33:07.950 --> 00:33:11.044
not not outside the staff.
5 9 3
00:33:11.044 --> 00:33:15.028
Usually we send them to Dar.
594
00:33:15.030 --> 00:33:18.518
Yeah, it just depends on and then we
```

```
595
00:33:18.518 --> 00:33:20.862
come seek public comment as much as
596
00:33:20.862 --> 00:33:23.258
possible so we we do circulate it,
597
00:33:23.260 --> 00:33:26.148
we post it online.
598
00:33:26.150 --> 00:33:27.560
But you didn't you didn't.
599
00:33:27.560 --> 00:33:29.294
You didn't attempt to get any
600
00:33:29.294 --> 00:33:31.128
public comment on the prior to
6 0 1
00:33:31.128 --> 00:33:32.668
posting the draft five stars.
602
00:33:32.670 --> 00:33:34.958
There was no public comments elicited, no no.
6 0 3
00:33:34.958 --> 00:33:36.876
The public comments come after we post
604
00:33:36.876 --> 00:33:38.838
'cause they're drafts right now, right?
605
00:33:38.838 --> 00:33:41.610
And you didn't send a a copy for comment
606
00:33:41.681 --> 00:33:44.274
to the chair of the Commission by 2K.
607
00:33:44.274 --> 00:33:44.898
Uhm, OK.
6 0 8
00:33:44.898 --> 00:33:47.854
```

```
I want to start by asking you about
609
00:33:47.854 --> 00:33:50.878
pulling all the streaming it's tributaries.
6 1 0
00:33:50.880 --> 00:33:53.130
You obviously are familiar with that
6 1 1
00:33:53.130 --> 00:33:55.480
that stream and those tributaries.
6 1 2
00:33:55.480 --> 00:33:58.048
Your draft 5 star.
6 1 3
00:33:58.048 --> 00:33:59.635
Uhm, and I again.
614
00:33:59.635 --> 00:34:02.206
So for the record, that's instream
6 1 5
00:34:02.206 --> 00:34:04.818
flow standard assessment report,
6 1 6
00:34:04.820 --> 00:34:05.189
right?
6 1 7
00:34:05.189 --> 00:34:07.772
So your draft types are states there
618
00:34:07.772 --> 00:34:10.684
are no endangered species along lava
619
00:34:10.684 --> 00:34:14.560
stream and its tributaries, doesn't it?
620
00:34:14.560 --> 00:34:18.892
Based on our analysis of EU.
6 2 1
00:34:18.892 --> 00:34:19.294
S.
```

```
6 2 2
00:34:19.294 --> 00:34:20.902
Fish and Wildlife Service
6 2 3
00:34:20.902 --> 00:34:22.431
endangered species data,
6 2 4
00:34:22.431 --> 00:34:23.152
yeah.
6 2 5
00:34:23.152 --> 00:34:27.366
Have you read the October 2019 US
626
00:34:27.366 --> 00:34:28.881
Fish and Wildlife Service report
6 2 7
00:34:28.881 --> 00:34:30.839
on Downs of Flying East Maui?
628
00:34:32.930 --> 00:34:34.480
Not that I know of.
6 2 9
00:34:34.480 --> 00:34:35.880
OK, let me bring it up for you.
6 3 0
00:34:35.880 --> 00:34:40.880
It's exhibit AY dash 41.
6 3 1
00:34:40.880 --> 00:34:41.950
If I can do this?
6 3 2
00:34:50.020 --> 00:34:52.190
Well, you have to share case you
6 3 3
00:34:52.190 --> 00:34:54.210
have to allow screen sharing.
634
00:35:02.260 --> 00:35:04.500
Can you see this report on your screen?
6 3 5
00:35:04.500 --> 00:35:05.640
```

I don't know what you can
636
00:35:05.640 --> 00:35:06.800
see versus what I can see.
637
00:35:06.800 --> 00:35:08.030
Yeah, I can see it.
638
00:35:08.030 --> 00:35:10.396
Have you ever seen this report before?
639
00:35:10.400 --> 00:35:13.120
I don't think so can.
640
00:35:13.120 --> 00:35:16.189
Is there a website I can get it from?
641
00:35:16.190 --> 00:35:17.070
Oh, you know what?
642
00:35:17.070 --> 00:35:18.804
I'll I'll send it to you after
643
00:35:18.804 --> 00:35:20.236
you're done testifying today,
644
00:35:20.240 --> 00:35:22.640
but we're gonna go through this a bit.
645
00:35:22.640 --> 00:35:24.488
It's by the way it's referenced
646
00:35:24.488 --> 00:35:26.634
in the Sierra Club petition that
647
00:35:26.634 --> 00:35:28.749
was filed regarding these streams.
648
00:35:28.750 --> 00:35:30.568
But let me go down to.

```
649
00:35:33.230 - -> 00:35:34.358
Page 6 here.
6 5 0
00:35:36.520 --> 00:35:39.250
So your special Wildlife Service.
6 5 1
00:35:39.250 --> 00:35:41.830
Concluded that the tributaries
652
00:35:41.830 - -> 00:35:44.410
to whole lava stream.
6 5 3
00:35:44.410 --> 00:35:48.430
Represent suitable habitat.
654
00:35:48.430 --> 00:35:53.410
For this and other damselfly species. Uhm?
655
00:35:57.610 --> 00:35:59.380
Let's see here for a second.
656
00:36:03.770 --> 00:36:05.866
So they have you ever heard of the
6 5 7
00:36:05.866 --> 00:36:08.229
and I I'm gonna garble this name?
65
00:36:08.230 --> 00:36:10.446
I'm not a I don't know Latin and
659
00:36:10.446 --> 00:36:12.457
I'm not a biologist but Meg.
6 6 0
00:36:12.460 --> 00:36:17.800
Mega Love green, damselfly species.
6 6 1
00:36:17.800 --> 00:36:21.568
Are you have are you aware of that?
62
00:36:21.570 --> 00:36:27.710
```

I am familiar with this a genius.

```
663
00:36:27.710 --> 00:36:30.280
You know we do reference.
6 6 4
00:36:30.280 --> 00:36:35.398
Or we there is a comprehensive.
6 6 5
00:36:35.400 --> 00:36:39.426
Book that UM has been published
666
00:36:39.426 --> 00:36:42.026
that describes their distribution,
6 6 7
00:36:42.026 --> 00:36:44.956
but it's it's not very.
66
00:36:44.960 --> 00:36:48.290
It's not specific to hydrologic units.
669
00:36:48.290 --> 00:36:49.754
It's kind of like.
6 7 0
00:36:49.754 --> 00:36:51.218
Somewhere in East Maui
6 7 1
00:36:51.218 --> 00:36:52.700
somewhere in West Maui.
6 7 2
00:36:52.700 --> 00:36:53.999
Elevational descriptions but
6 7 3
00:36:53.999 --> 00:36:57.030
and so I do know that there
6 7 4
00:36:57.111 --> 00:36:59.196
are quite a few endangered.
6 7 5
00:37:01.250 --> 00:37:05.790
Magnolia Medical, Eric that genius
```

```
676
00:37:05.790 --> 00:37:07.250
understood we could we could.
6 7 7
00:37:07.250 --> 00:37:11.600
So here is a specific document.
6 7 8
00:37:11.600 --> 00:37:14.655
With specific reference to the
6 7 9
00:37:14.655 --> 00:37:17.140
Hola tributaries that says they
680
00:37:17.140 --> 00:37:19.240
were found to harbor populations
6 8 1
00:37:19.240 --> 00:37:21.620
of this endangered species,
62
00:37:21.620 --> 00:37:25.316
now that you are aware of this information.
6 8 3
00:37:25.320 --> 00:37:27.495
Should that information
64
00:37:27.495 --> 00:37:30.395
affect your conclusion about?
65
00:37:30.400 --> 00:37:32.828
Do you? Weather, water,
68
00:37:32.828 --> 00:37:36.076
any water should be restored to whole
67
00:37:36.076 --> 00:37:38.780
lava stream and its tributaries.
68
00:37:38.780 --> 00:37:42.551
So I would need to know at what elevation
69
00:37:42.551 --> 00:37:44.599
```

```
specifically the species prefers.
690
00:37:44.600 --> 00:37:49.790
And so that might influence our.
6 9 1
00:37:49.790 --> 00:37:51.248
The recommendations are
692
00:37:51.248 --> 00:37:52.220
future recommendations,
6 9 3
00:37:52.220 --> 00:37:54.068
but I want to let me read this
6 9 4
00:37:54.068 --> 00:37:56.029
to you because even that said,
6 9 5
00:37:56.030 --> 00:37:59.705
read this before both of these branches.
696
00:37:59.710 --> 00:38:02.215
This is page 6 of exhibit Y-41.
697
00:38:02.215 --> 00:38:04.240
Both of these branches were
698
00:38:04.240 --> 00:38:06.410
previously surveyed by the author.
699
00:38:06.410 --> 00:38:10.826
In 2008, at their points of diversion on,
700
00:38:10.830 --> 00:38:11.606
the EMI,
701
00:38:11.606 --> 00:38:14.322
did system and both were found to
702
00:38:14.322 --> 00:38:17.222
harbor populations of the native skip.
```

```
703
00:38:17.222 --> 00:38:19.030
The Latin damselfly species,
704
00:38:19.030 --> 00:38:23.027
including the Endangered Species Act, listed.
705
00:38:23.027 --> 00:38:25.538
Megalo gorean pacificum.
706
00:38:25.538 - -> 00:38:28.049
You see that?
707
00:38:28.050 --> 00:38:30.660
So that's a Pacific specific reference
708
00:38:30.660 --> 00:38:32.820
to a specific hydrologic unit,
709
00:38:32.820 --> 00:38:36.579
and not just that a specific place.
7 1 0
00:38:36.580 --> 00:38:40.899
So is this information useful to you?
7 1 1
00:38:40.900 --> 00:38:43.777
Will this information be useful to you
7 1 2
00:38:43.777 --> 00:38:46.272
in deciding whether any water should
713
00:38:46.272 --> 00:38:48.636
be returned to whole lava stream?
714
00:38:48.640 --> 00:38:51.734
Definitely it will be considered if,
7 1 5
00:38:51.734 --> 00:38:54.710
especially if the species.
716
00:38:54.710 --> 00:39:00.820
```

```
Prefers habitat below the diversion. Sure.
717
00:39:00.820 --> 00:39:04.236
Sure, and uhm, just so you know here.
718
00:39:04.240 --> 00:39:07.440
Let's see if I can bring it up.
719
00:39:07.440 --> 00:39:08.030
Uhm?
7 2 0
00:39:10.120 --> 00:39:12.580
This, according to this report,
7 2 1
00:39:12.580 --> 00:39:15.070
two species of Endangered Species Act
722
00:39:15.070 --> 00:39:17.207
listed down blowflies are currently
723
00:39:17.207 --> 00:39:19.655
known to occur in the drainage
724
00:39:19.655 --> 00:39:21.480
of northern Haleakala Volcano.
725
00:39:21.480 --> 00:39:23.856
Skip the name of the species
726
00:39:23.856 --> 00:39:25.440
a formerly widespread species,
727
00:39:25.440 - -> 00:39:28.308
which breeds and stream overflow channels,
728
00:39:28.310 --> 00:39:30.565
and occurs a scattered colonies
729
00:39:30.565 --> 00:39:32.425
and 12 catchment catchments,
```

```
7 3 0
00:39:32.425 --> 00:39:35.455
traversed by the EMI Ditch system.
7 3 1
00:39:35.460 --> 00:39:37.390
Such kind of important information, isn't it?
732
00:39:40.310 --> 00:39:41.618
Is that you know we have
733
00:39:41.618 --> 00:39:42.810
to get this audio says,
7 3 4
00:39:42.810 --> 00:39:44.370
can you give a yes or no verbal?
735
00:39:44.370 - -> 00:39:46.568
Yeah yes, but it's also important to
736
00:39:46.568 --> 00:39:48.299
know what elevation they live at.
737
00:39:48.300 --> 00:39:51.666
Sure, so when you have a
738
00:39:51.666 --> 00:39:55.390
chance to read this. Uh.
739
00:39:58.300 --> 00:39:59.615
Report you'll see that they
740
00:39:59.615 --> 00:40:01.498
went on the trip that I'm sure
741
00:40:01.498 --> 00:40:03.028
you've gone many times up to.
742
00:40:03.030 --> 00:40:04.920
I believe it's my lower ditch
743
00:40:04.920 --> 00:40:06.180
```

```
right around that area.
744
00:40:06.180 --> 00:40:10.466
So, uhm. OK, let's stop this,
745
00:40:10.466 --> 00:40:12.710
but move on to another US
746
00:40:12.795 --> 00:40:14.827
Fish and Wildlife letter.
747
00:40:30.710 --> 00:40:33.270
Uh. Whoops
748
00:40:38.380 --> 00:40:39.470
trans again.
749
00:40:43.480 --> 00:40:46.444
Alright, do you see the corrected
7 5 0
00:40:46.444 --> 00:40:49.270
final impact statement, volume 3?
751
00:40:49.270 --> 00:40:53.852
Yes. Can we go down here? Let me,
752
00:40:53.852 --> 00:40:56.100
I guess I'll just Scroll down like this.
753
00:40:56.100 --> 00:40:58.494
So this is a letter from EU.
754
00:40:58.500 - -> 00:41:00.504
S. Fish and Wildlife
755
00:41:00.504 --> 00:41:02.290
Service dated December 2016.
756
00:41:02.290 --> 00:41:04.250
Have you ever seen this letter before?
```

```
757
00:41:04.250 - -> 00:41:06.560
No, OK, let's go down to.
758
00:41:10.840 --> 00:41:16.408
Oh, let's see. Oh yeah, let's go down page 8.
759
00:41:18.760 --> 00:41:23.305
So let me come, read this off to you.
760
00:41:23.310 - -> 00:41:25.090
The long history of stream
761
00:41:25.090 --> 00:41:27.598
diversions by the by the EMI system
762
00:41:27.598 --> 00:41:29.894
on East Maui has created an array
763
00:41:29.894 --> 00:41:32.110
of impact to trust resources,
764
00:41:32.110 --> 00:41:34.090
including both the native
765
00:41:34.090 --> 00:41:35.575
stream bought biota.
766
00:41:35.580 --> 00:41:37.750
Other species which inhabit the
767
00:41:37.750 --> 00:41:39.920
adjacent upland forests and near
768
00:41:39.995 --> 00:41:42.200
shore marine ecosystems that rely
769
00:41:42.200 --> 00:41:44.405
on streams for nutrient inputs.
7 7 0
00:41:44.410 --> 00:41:46.398
```

```
Several native stream associated
7 7 1
00:41:46.398 --> 00:41:48.883
insect species occurring on East
7 7 2
00:41:48.883 --> 00:41:52.056
Maui water lease areas are now listed
7 7 3
00:41:52.056 --> 00:41:54.150
under the Endangered Species Act,
74
00:41:54.150 --> 00:41:55.671
specifically the damselflies,
7 7 5
00:41:55.671 --> 00:41:58.713
and there's three damselflies listed there.
776
00:41:58.720 --> 00:42:01.520
All three designated as endangered.
7 7 7
00:42:01.520 --> 00:42:03.310
The first mentioned species breeds
7 7 8
00:42:03.310 --> 00:42:05.690
and streams pools and side channels,
7 7 9
00:42:05.690 --> 00:42:07.635
with adults patrolling the margins
7 8 0
00:42:07.635 --> 00:42:10.071
of stream corridor on the stream
7 8 1
00:42:10.071 --> 00:42:11.755
corridor and therefore suffers
7 8 2
00:42:11.755 --> 00:42:14.366
direct impacts from loss of habitat
7 8 3
00:42:14.366 --> 00:42:16.526
linked to diminish stream flows.
```

```
784
00:42:18.810 --> 00:42:20.022
And then there's I'll go to
785
00:42:20.022 --> 00:42:21.370
the end of the paragraph.
78
00:42:21.370 --> 00:42:24.172
Higher rates of diversion will therefore
787
00:42:24.172 --> 00:42:26.941
lead to higher rates of direct
78
00:42:26.941 --> 00:42:30.470
impact to all these listed species.
7 8 9
00:42:30.470 --> 00:42:32.615
Is this information important in
790
00:42:32.615 --> 00:42:35.193
determining whether and how much water
7 9 1
00:42:35.193 --> 00:42:37.395
should flow in seijo lava stream?
792
00:42:39.480 --> 00:42:41.972
Again, I would have to look at
7 9 3
00:42:41.972 --> 00:42:44.282
species by species if they are
794
00:42:44.282 --> 00:42:46.610
impacted at lower elevations or not.
7 9 5
00:42:46.610 --> 00:42:51.700
But you haven't done that yet, no. OK. Now.
796
00:42:54.130 --> 00:42:56.430
This. Ah.
7 9 7
00:43:01.090 --> 00:43:05.170
```

```
And this is not mentioned at all in
798
00:43:05.170 - -> 00:43:08.090
your ISR. Types are correct, correct?
799
00:43:14.340 --> 00:43:17.422
Next, did you come? Consider the
800
00:43:17.422 --> 00:43:19.459
adverse impact of mosquitoes in any of
801
00:43:19.459 --> 00:43:21.467
your draft five stars or the summary.
802
00:43:25.670 --> 00:43:28.410
I can't recall we generally.
803
00:43:28.410 --> 00:43:30.426
I mean, mosquitoes are a big
804
00:43:30.426 --> 00:43:32.177
problem that are affected by
805
00:43:32.177 --> 00:43:33.887
a number of factors including.
806
00:43:33.890 --> 00:43:39.200
Presence of pig wallows and other.
807
00:43:39.200 --> 00:43:42.158
You know predation by other species.
808
00:43:42.160 --> 00:43:46.344
I mean it's it's. A challenging
809
00:43:46.344 --> 00:43:49.908
issue to try and address alright,
810
00:43:49.908 --> 00:43:52.344
so let me go through this again.
```

```
811
00:43:52.350 --> 00:43:55.045
It's a letter from EU S Fish
812
00:43:55.045 --> 00:43:58.790
and Wildlife Service. Uhm?
813
00:43:58.790 --> 00:44:01.994
Let me read this to you from page 10.
814
00:44:02.000 --> 00:44:04.712
Among the major threats,
815
00:44:04.712 --> 00:44:07.942
major threats to the survival in the wild
816
00:44:07.942 --> 00:44:11.101
of the two listed forest bird species is
817
00:44:11.101 --> 00:44:14.227
mortality caused by avian malaria malaria,
818
00:44:14.230 --> 00:44:16.495
which is vectored by the
819
00:44:16.495 --> 00:44:17.854
introduced mosquito Culex.
820
00:44:17.860 --> 00:44:20.366
Again I can't deal with the Latin.
821
00:44:20.370 --> 00:44:22.035
This mosquito species
822
00:44:22.035 --> 00:44:24.255
breeds in stagnant pools,
823
00:44:24.260 --> 00:44:25.868
free from fish,
824
00:44:25.868 --> 00:44:27.476
```

```
in dewatered streambeds,
825
00:44:27.480 --> 00:44:30.552
and is by contrast uncommon along
826
00:44:30.552 --> 00:44:32.600
stream channels with continuous
827
00:44:32.687 --> 00:44:35.367
flow and healthy fish populations.
828
00:44:35.370 --> 00:44:37.738
By converting continuously flowing
829
00:44:37.738 --> 00:44:40.698
streams into nearly dry beds
830
00:44:40.698 --> 00:44:43.389
with scattered small spools,
831
00:44:43.390 --> 00:44:46.030
the current EMI diversions thus
832
00:44:46.030 --> 00:44:48.670
create corridors of habitat by
833
00:44:48.761 --> 00:44:51.486
which Culex mosquitoes can penetrate
834
00:44:51.486 --> 00:44:54.932
uphill more deeply into the native
835
00:44:54.932 --> 00:44:58.082
forest and more readily reach
836
00:44:58.082 --> 00:45:00.602
susceptible native force populations.
837
00:45:00.610 --> 00:45:03.734
This represents a significant.
```

```
838
00:45:03.734 --> 00:45:08.060
Although indirect impact at the proposed
839
00:45:08.060 --> 00:45:11.155
diversions to this set of listed
840
00:45:11.155 --> 00:45:13.560
species now given this information
841
00:45:13.653 --> 00:45:16.747
from EU S Fish and Wildlife Service.
842
00:45:16.750 --> 00:45:18.650
You have not considered this
843
00:45:18.650 --> 00:45:20.170
information in drafting your
844
00:45:20.170 --> 00:45:21.908
life stars or the summary,
845
00:45:21.910 --> 00:45:22.775
correct,
846
00:45:22.775 --> 00:45:23.640
correct?
847
00:45:26.480 --> 00:45:27.548
It is, however,
848
00:45:27.548 --> 00:45:30.050
relevant information, isn't it?
849
00:45:30.050 --> 00:45:34.448
Again, if there are endangered birds,
850
00:45:34.450 --> 00:45:36.058
malca of these diversions,
851
00:45:36.058 --> 00:45:38.068
```

```
we definitely should consider it.
852
00:45:38.070 - -> 00:45:39.360
OK, thank you.
853
00:45:41.970 --> 00:45:43.878
Can't stop sharing.
854
00:45:47.930 --> 00:45:51.110
No one issue that you've noted
855
00:45:51.110 --> 00:45:55.109
along the two hot lava tributaries
856
00:45:55.110 --> 00:45:58.758
are overhanging barriers, right?
857
00:45:58.760 --> 00:46:04.270
Now they form. A.
858
00:46:04.270 --> 00:46:06.510
Restriction to upstream migration.
859
00:46:06.510 --> 00:46:10.006
OK, let's I'm going to bring up a photo
860
00:46:10.006 --> 00:46:12.699
that you've provided in your report.
861
00:46:12.700 --> 00:46:14.338
If I can find that ago.
862
00:46:17.770 --> 00:46:20.040
Ah, keep messing this up.
863
00:46:28.810 --> 00:46:29.760
Try again.
864
00:46:34.770 --> 00:46:35.400
Mara.
```

```
865
00:46:37.710 --> 00:46:40.530
So. Uhm, I believe it's
866
00:46:40.530 --> 00:46:43.350
page 11 of your report.
867
00:46:47.580 - -> 00:46:48.080
No.
868
00:46:50.140 --> 00:46:52.465
Oh Europeans liven up the
869
00:46:52.465 --> 00:46:55.180
PDF that these are the UM.
870
00:46:55.180 --> 00:46:56.806
Overhanging barriers you've
871
00:46:56.806 --> 00:46:59.620
described right. Correct?
872
00:46:59.620 --> 00:47:01.928
Hum. How many diversions
873
00:47:01.928 --> 00:47:04.236
are above these overhangs?
874
00:47:07.450 --> 00:47:09.599
Well, I should say how many dishes?
875
00:47:09.600 --> 00:47:16.119
Uh, to ditch is, UM, better at being.
876
00:47:16.120 --> 00:47:22.150
I mean, while while I knew Hamaker yes.
877
00:47:22.150 --> 00:47:26.504
And so there are. Two stitches below
878
00:47:26.504 --> 00:47:29.730
```

```
these overhanging barriers, correct, yes?
879
00:47:29.730 --> 00:47:35.150
And that that would be laurian haiku, yes.
880
00:47:35.150 --> 00:47:40.259
OK, so it might make sense to ensure there
881
00:47:40.259 --> 00:47:43.376
is at least some water flowing through both
882
00:47:43.376 --> 00:47:46.216
haiku Ditch and Lowry did so that Opeiu,
883
00:47:46.220 --> 00:47:48.480
Alamo and Hope I can at least get as far
884
00:47:48.539 --> 00:47:53.370
as this overhang, right, correct? OK.
885
00:47:53.370 --> 00:47:56.436
So these overhangs are not a justification
886
00:47:56.436 --> 00:47:58.871
for complete diversion by either Lowry
887
00:47:58.871 --> 00:48:02.299
ditch or haiku, ditch, correct? OK.
88
00:48:05.030 --> 00:48:07.640
And have you performed any underwater
889
00:48:07.640 - -> 00:48:10.368
surveys above these overhangs to see if
890
00:48:10.368 --> 00:48:12.503
there are any native fish above them?
891
00:48:12.510 --> 00:48:15.709
Yes, and you haven't found him correct.
```

```
892
00:48:15.710 --> 00:48:18.206
How many surveys did you do?
893
00:48:18.210 --> 00:48:20.218
2. When you say 2 is that one
894
00:48:20.218 --> 00:48:22.090
on each of the tributaries?
895
00:48:25.140 --> 00:48:28.817
Two twice I guess isn't so.
896
00:48:28.817 --> 00:48:32.156
So you did two on each tributary.
897
00:48:32.160 --> 00:48:34.295
One on whole Ave E and one
898
00:48:34.295 --> 00:48:36.260
on a tributary of Whole Ave.
899
00:48:38.860 --> 00:48:41.300
OK, so you did. So I'm and you
900
00:48:41.300 --> 00:48:45.610
did each of those twice, yes?
901
00:48:45.610 --> 00:48:49.048
And how long did you spend in the water?
902
00:48:49.050 --> 00:48:50.643
Couple of hours.
903
00:48:50.643 --> 00:48:53.298
And when did that occur?
904
00:48:53.300 --> 00:48:56.450
I guess my. Well, go ahead.
905
00:48:56.450 --> 00:48:57.620
```

```
2012 and 2017.
906
00:48:59.950 --> 00:49:04.566
2012 2017 Yes, and I guess more specifically,
907
00:49:04.570 --> 00:49:09.346
how long after a big rain event did
908
00:49:09.346 --> 00:49:12.650
you do that in other because right,
9 0 9
00:49:12.650 --> 00:49:14.180
'cause it's a big great event?
910
00:49:14.180 --> 00:49:16.490
Maybe they can get up above.
911
00:49:16.490 --> 00:49:19.172
So how long after big Rain event did did
912
00:49:19.172 --> 00:49:22.159
your surveys take place, right? I can't.
913
00:49:22.159 --> 00:49:25.930
I don't know that popped up my head.
914
00:49:25.930 --> 00:49:28.205
Yep. Whether we should draw a conclusion
915
00:49:28.205 --> 00:49:31.740
from from those two surveys, right?
916
00:49:31.740 --> 00:49:35.700
Definitely freshets can affect recruitment.
917
00:49:35.700 --> 00:49:38.010
Uhm, an absence of evidence
918
00:49:38.010 --> 00:49:40.320
is not evidence of absence.
```

```
919
00:49:40.320 --> 00:49:44.775
Sure, so there could be a Opal up there.
920
00:49:44.775 --> 00:49:47.250
We just don't know yet, correct?
921
00:49:49.470 --> 00:49:52.039
I mean, if they've learned how to
922
00:49:52.039 --> 00:49:54.864
jump across the so the problem with
923
00:49:54.864 --> 00:49:57.336
these two overhangs is that there's
924
00:49:57.411 --> 00:50:00.179
no wetted path naturally over them.
925
00:50:00.179 --> 00:50:04.075
What about when there's a huge, fresh,
926
00:50:04.075 --> 00:50:06.350
yet absolutely enormous rest fresh
927
00:50:06.350 --> 00:50:10.354
at along the sides now, so they they?
928
00:50:10.354 --> 00:50:13.630
Climb up in the margins of
929
00:50:13.752 --> 00:50:16.300
the flow and there's.
930
00:50:16.300 --> 00:50:18.836
It's it's not like they swim up the
931
00:50:18.836 --> 00:50:20.560
waterfall, so there's there's no.
932
00:50:20.560 --> 00:50:22.660
```

```
There's no substrate for them to
933
00:50:22.730 --> 00:50:24.767
climb on the right or left side.
934
00:50:24.770 --> 00:50:26.709
I mean, the photograph is only partial,
935
00:50:26.710 --> 00:50:28.138
but on the right or left side
936
00:50:28.138 --> 00:50:30.350
there's no way, right? OK.
937
00:50:32.430 --> 00:50:37.494
Uhm, no. In reaching the conclusions
938
00:50:37.494 --> 00:50:41.190
that you did in Exhibit D1,
939
00:50:41.190 --> 00:50:43.350
which is your summary and maybe
940
00:50:43.350 --> 00:50:46.076
I can go up to the top here.
941
00:50:46.080 --> 00:50:51.640
I think this is your summary, yeah? Uhm?
942
00:50:51.640 --> 00:50:55.679
You relied on the Hawaii Stream assessment.
943
00:50:55.680 --> 00:50:59.192
Correct? Correct? Now.
944
00:50:59.192 --> 00:51:02.684
Are you familiar with the caveats
945
00:51:02.684 --> 00:51:06.379
that the Hawaii Stream assessment
```

```
946
00:51:06.380 - -> 00:51:11.410
produced in 1990 provides? Generally.
947
00:51:11.410 --> 00:51:14.020
Do you recognize that the assessment
948
00:51:14.020 --> 00:51:17.542
itself says it is a quote of a
949
00:51:17.542 --> 00:51:19.234
general nature is incomplete?
950
00:51:19.240 --> 00:51:23.188
Yes, do you realize that it
951
00:51:23.188 --> 00:51:25.162
specifically cautions quote?
952
00:51:25.170 --> 00:51:28.635
It may well be that some streams
953
00:51:28.635 --> 00:51:31.530
otherwise ranked would qualify as
954
00:51:31.530 --> 00:51:33.789
outstanding if their resources
955
00:51:33.789 --> 00:51:35.388
were sufficiently understood.
956
00:51:35.390 --> 00:51:37.605
The product the process should
957
00:51:37.605 --> 00:51:40.442
not be used to disregard those
958
00:51:40.442 --> 00:51:43.127
streams not ranked as outstanding.
959
00:51:43.130 --> 00:51:44.780
```

```
Yes.
960
00:51:44.780 --> 00:51:45.431
Nevertheless.
961
00:51:45.431 --> 00:51:49.337
You relied on the stream assessments
962
00:51:49.337 - -> 00:51:53.252
report saying that none of the 12 streams
963
00:51:53.252 --> 00:51:57.129
in Halo were outstanding to diminish.
964
00:51:57.130 --> 00:51:59.610
Their quality, didn't you?
965
00:51:59.610 --> 00:52:02.480
Yes, we have to rely on the
966
00:52:02.480 --> 00:52:03.710
best available information.
967
00:52:03.710 --> 00:52:08.180
OK, and this assessment also warns.
968
00:52:08.180 --> 00:52:10.329
A rank of unknown was assigned to
969
00:52:10.329 --> 00:52:12.855
many streams when there is little or
970
00:52:12.855 --> 00:52:14.395
no published information available
971
00:52:14.395 --> 00:52:16.558
upon which to make an assessment.
972
00:52:16.560 --> 00:52:19.536
Streams with missing data should not
```

```
973
00:52:19.536 --> 00:52:22.410
be interpreted as without resources,
974
00:52:22.410 --> 00:52:24.818
but merely as without enough data to
975
00:52:24.818 --> 00:52:27.199
support a rank other than unknown.
976
00:52:27.200 --> 00:52:27.912
You realize.
977
00:52:27.912 --> 00:52:29.760
Assessment says that right, yes,
978
00:52:29.760 --> 00:52:32.700
which is why we're trying to do
979
00:52:32.700 --> 00:52:35.559
follow up information gathered.
980
00:52:35.560 --> 00:52:36.030
Great.
981
00:52:38.610 --> 00:52:41.714
When you drafted the Isars and this summary.
982
00:52:46.250 --> 00:52:47.810
How many people who live?
983
00:52:49.990 --> 00:52:51.838
How many people who live in whole
984
00:52:51.838 --> 00:52:53.700
of the stream had you talked to?
985
00:52:59.800 --> 00:53:02.145
I can't say I've thought my head.
986
00:53:02.150 --> 00:53:04.327
```

```
Have you talked to more since then?
987
00:53:04.330 --> 00:53:06.314
Yes, many more. Yes.
988
00:53:06.314 --> 00:53:10.560
When you drafted the stars and the summary,
989
00:53:10.560 --> 00:53:12.960
how many people who live on
990
00:53:12.960 --> 00:53:15.459
Opiola stream had you talked to?
991
00:53:15.460 --> 00:53:18.798
Nobody. How about since then?
992
00:53:18.798 --> 00:53:21.600
There's there's nobody who lives along, OK.
993
00:53:25.690 --> 00:53:27.834
Have you had you spoken to anyone who
994
00:53:27.834 --> 00:53:29.977
lives on any of the dozens who live
995
00:53:29.977 --> 00:53:31.940
streams for us to truck in water?
996
00:53:31.940 --> 00:53:35.960
When the streams run dry? Yes.
997
00:53:35.960 - -> 00:53:38.024
You had spoken to them before you wrote.
998
00:53:38.030 --> 00:53:39.434
You write stars,
999
00:53:39.434 --> 00:53:42.428
know you've spoken to since, yes.
```

```
1000
00:53:42.428 --> 00:53:45.564
Does that information affect the
1001
00:53:45.564 --> 00:53:46.652
recommendations, conclusions,
1002
00:53:46.652 --> 00:53:49.916
characterizations that you provided in your?
1003
00:53:52.630 --> 00:53:55.756
A summary and I've stars yes.
1004
00:53:58.440 --> 00:54:01.224
In what way? Uhm,
1005
00:54:01.224 --> 00:54:04.068
the need to protect repairing uses.
1006
00:54:04.070 --> 00:54:07.154
That might include agriculture that are
1007
00:54:07.154 --> 00:54:10.839
reliant on their own stream diversions.
1008
00:54:10.840 --> 00:54:13.608
So you now believe more water should be
1009
00:54:13.608 --> 00:54:16.191
restored to these streams than you did
1010
00:54:16.191 --> 00:54:18.979
back in November 2020, correct, yes?
1 0 1 1
00:54:21.710 --> 00:54:23.880
So nobody should be relying.
1012
00:54:23.880 --> 00:54:27.384
Today on that summary and those five stars.
1013
00:54:27.390 --> 00:54:30.030
```

```
Because you have new information correct.
1014
00:54:32.190 --> 00:54:37.146
The summary provides the baseline to start.
1015
00:54:37.150 --> 00:54:39.887
The analysis, but then we are working
1016
00:54:39.887 --> 00:54:41.900
on gathering additional information.
1017
00:54:45.190 --> 00:54:47.605
I understand that, but you've just said
1018
00:54:47.610 --> 00:54:49.528
in talking to people you realize now
1 0 1 9
00:54:49.528 --> 00:54:51.418
what you didn't realize before is that
1020
00:54:51.418 --> 00:54:53.729
more water needs to be in these streams.
1021
00:54:53.730 --> 00:54:55.500
Some of these streams, yes.
1022
00:54:55.500 --> 00:54:58.468
Therefore, given that no one should be
1023
00:54:58.468 --> 00:55:01.189
relying on what's called exhibit D1,
1024
00:55:01.190 --> 00:55:03.254
or the summary correct?
1025
00:55:03.254 --> 00:55:05.318
Relying on the conclusions
1026
00:55:05.318 --> 00:55:06.350
and recommendations.
```

1027
00:55:06.350 - -> 00:55:07.958
Correct, thank you.
1028
00:55:13.630 --> 00:55:16.550
Are the lower portions.
1029
00:55:16.550 --> 00:55:19.068
Oh follow Hulu stream shaded.
1030
00:55:21.080 --> 00:55:25.332
Uh, yes. Yet the Commission called

1031
00:55:25.332 --> 00:55:26.840
for its full restoration, right.
1032
00:55:35.650 --> 00:55:38.002
Hello, hold on I gotta think
1033
00:55:38.002 --> 00:55:40.729
I I thought you said Punaluu

1034
00:55:42.890 --> 00:55:43.570
a man.
1035
00:55:49.950 --> 00:55:52.064
Sorry, where is Paula who hold on?

1036
00:55:52.070 --> 00:55:54.510
I'm I you've changed locations
1037
00:55:54.510 --> 00:55:57.770
on me sorry sorry yeah we were.
1038
00:55:57.770 --> 00:56:00.675
I'm not I've gone beyond the wildest
1039
00:56:00.675 --> 00:56:04.820
dreams for comparison purposes. Pull out.
1040
00:56:04.820 --> 00:56:06.224

```
It would help if I brought up a map.
1041
00:56:09.110 --> 00:56:12.360
Hello hello in can I?
1042
00:56:12.360 --> 00:56:14.208
We're sorry, yeah. Bring up a map.
1043
00:56:16.510 --> 00:56:17.140
K.
1044
00:56:57.710 --> 00:56:59.620
I don't know if I'm going to go too far here.
1045
00:57:01.780 --> 00:57:03.026
And if I scroll and going too
1046
00:57:03.026 --> 00:57:05.448
fast for you, it probably is. Uh.
1047
00:57:11.990 --> 00:57:17.232
Is DC. Yep. So do you,
1048
00:57:17.232 --> 00:57:20.228
do you recall that this is a stream
1049
00:57:20.228 --> 00:57:22.532
that's full restoration, correct?
1050
00:57:22.532 --> 00:57:24.392
And yet it's shaded at
1051
00:57:24.392 --> 00:57:26.265
the bottom right, correct?
1052
00:57:26.265 --> 00:57:31.000
OK, other shaded sections of kopila.
1053
00:57:33.940 --> 00:57:36.759
I have not been active. I have not
```

```
1054
00:57:36.759 --> 00:57:38.824
accessed the entirety of kopila.
1055
00:57:47.430 --> 00:57:51.490
What about white boy? Yes.
1056
00:57:51.490 --> 00:57:54.100
It is shaded sections, yes.
1057
00:57:54.100 - -> 00:57:56.420
What about Marco PP.
1058
00:57:56.420 --> 00:58:00.810
Uhm? Yes, to some extent.
1059
00:58:00.810 --> 00:58:05.390
OK, which streams up?
1060
00:58:05.390 --> 00:58:07.780
Has Colon fully restored that
1061
00:58:07.780 --> 00:58:09.214
have terminal waterfalls?
1062
00:58:15.000 --> 00:58:18.040
None. What about like Camilo?
1063
00:58:21.460 --> 00:58:24.380
OK, yeah, like Camilla.
1064
00:58:24.380 --> 00:58:27.212
OK, and even way comma is
1065
00:58:27.212 --> 00:58:28.658
a 64% based flow stream,
1066
00:58:28.658 --> 00:58:30.610
but it has a terminal test terminal.
1067
00:58:30.610 --> 00:58:32.404
```

```
Waterfalls, right, correct?
1068
00:58:32.404 --> 00:58:35.439
Hello Michael, Michael pee pee.
1069
00:58:35.440 --> 00:58:38.910
Has a small waterfall III.
1070
00:58:38.910 - -> 00:58:40.919
Don't know if it would be characterized
1071
00:58:40.919 --> 00:58:43.070
by DAR as a terminal waterfall,
1072
00:58:43.070 --> 00:58:46.094
but it does have a small waterfall.
1073
00:58:46.100 --> 00:58:47.144
Do you characterize it
1074
00:58:47.144 --> 00:58:48.188
as a terminal waterfall?
1075
00:58:56.380 --> 00:58:58.420
I'd have to look at it
1076
00:58:58.420 --> 00:58:59.970
close more closely, it's.
1077
00:59:02.040 --> 00:59:03.612
It doesn't have the same characteristics
1078
00:59:03.612 --> 00:59:05.696
of what we would normally call it
1079
00:59:05.696 --> 00:59:07.662
terminal waterfall, which is cleaner.
1080
00:59:07.662 --> 00:59:10.702
The fact that stream has a
```

```
1081
00:59:10.702 --> 00:59:13.306
terminal waterfall is not.
1082
00:59:13.310 --> 00:59:16.382
A litmus test or bright line
1083
00:59:16.382 --> 00:59:18.430
in determining whether stream.
1084
00:59:18.430 --> 00:59:20.105
Stream flow should be restored
1085
00:59:20.105 --> 00:59:21.836
to the stream, correct? Correct?
1086
00:59:21.836 --> 00:59:23.651
There are other instream uses
1087
00:59:23.651 --> 00:59:25.839
that must be considered great.
1088
00:59:25.840 --> 00:59:26.400
Thank you.
1089
00:59:30.760 - -> 00:59:33.829
I want to talk to you about Cole Airstream.
1090
00:59:37.270 --> 00:59:39.244
There are two cool air streams in
1091
00:59:39.244 --> 00:59:41.013
the revocable permit area, right?
1092
00:59:41.013 --> 00:59:44.631
Correct? One collect stream is a
1093
00:59:44.631 --> 00:59:49.130
tributary to Punaluu Stream, yes.
1094
00:59:49.130 --> 00:59:52.820
```

```
And that connects Malcov the highway.
1095
00:59:52.820 --> 00:59:55.972
Yep. The reach is Malka that it's called
1096
00:59:55.972 --> 00:59:59.496
cola is amalka the highway correct? K.
1097
00:59:59.496 --> 01:00:04.840
It's found in the Hahnemann new area, yes.
1098
01:00:04.840 --> 01:00:07.252
And the Water Commission set an
1099
01:00:07.252 --> 01:00:09.754
instream flow standard for it, right?
1100
01:00:09.754 --> 01:00:12.824
Yes. No, there's a different
1 1 0 1
01:00:12.824 --> 01:00:16.250
cholest stream in the whoeler.
1102
01:00:16.250 --> 01:00:20.816
Yes, right? It was not part of the
1103
01:00:20.820 --> 01:00:22.644
Water Commission's contested case.
1104
01:00:22.644 --> 01:00:26.150
Hearing. Correct, correct?
1105
01:00:26.150 --> 01:00:27.720
That the collection we're talking
1106
01:00:27.720 --> 01:00:30.032
about right now in the whole area
1107
01:00:30.032 --> 01:00:31.742
ends with a terminal waterfall
```

```
1108
01:00:31.742 --> 01:00:33.420
entering the ocean, right?
1109
01:00:33.420 --> 01:00:34.070
Correct?
1 1 1 0
01:00:36.350 --> 01:00:40.330
Now. The division of Aquatic
1111
01:00:40.330 --> 01:00:43.056
Resources recommended restoration of
1112
01:00:43.056 --> 01:00:46.766
STREAMFLOWS to this collective stream.
1113
01:00:46.770 --> 01:00:50.590
Do you realize that? Correct?
1114
01:00:50.590 --> 01:00:54.188
Do you disagree with the end of
1115
01:00:54.188 --> 01:00:55.730
aquatic resources recommendations?
1116
01:00:55.730 --> 01:00:58.338
Yes, you do, yes.
1117
01:01:02.140 --> 01:01:08.169
In 2017, a number of parties entered into
1118
01:01:08.169 --> 01:01:11.410
the Waimea Watershed Area Agreement.
1119
01:01:11.410 --> 01:01:13.826
Uhm, are you familiar at all with that?
1120
01:01:13.830 --> 01:01:17.330
Yes. OK, and the Water Commission
1121
01:01:17.330 --> 01:01:21.110
```

```
ratified that you know that yes.
1122
01:01:21.110 --> 01:01:22.790
And among the guiding principles,
1123
01:01:22.790 --> 01:01:25.200
the agreement states any diversion
1124
01:01:25.200 --> 01:01:27.610
from extreme must be justified
1125
01:01:27.690 --> 01:01:30.231
with no more water taken than is
1126
01:01:30.231 --> 01:01:32.590
needed for other beneficial uses,
1127
01:01:32.590 --> 01:01:34.865
and even then the health of the
1128
01:01:34.865 --> 01:01:37.548
stream must be preserved at all times.
1129
01:01:37.550 --> 01:01:39.662
All water is not needed at any time
1130
01:01:39.662 --> 01:01:42.072
at any given time, belonging or sorry.
1131
01:01:42.072 --> 01:01:45.589
All water is not needed at any given time.
1132
01:01:45.590 - -> 01:01:48.890
Belong in the stream.
1133
01:01:48.890 --> 01:01:52.418
That sound familiar, yes.
1134
01:01:52.420 --> 01:01:55.660
Do you agree with that principle?
```

```
1135
01:01:55.660 --> 01:01:56.988
He said yes, yes,
1136
01:01:56.988 --> 01:02:00.489
and you apply it to your work in East Maui.
1137
01:02:00.490 --> 01:02:04.826
And what any smelly? What about you smelling?
1138
01:02:04.826 --> 01:02:06.420
Sorry, do you apply that principle
1139
01:02:06.420 --> 01:02:07.950
in your work in East Maui?
1140
01:02:07.950 --> 01:02:08.520
Yes.
1141
01:02:10.530 --> 01:02:14.610
What's what's the definition of waste?
1142
01:02:14.610 --> 01:02:20.324
Water removed out of a source that is
1143
01:02:20.324 --> 01:02:24.044
not utilized. What's the difference
1144
01:02:24.044 --> 01:02:26.284
between system loss and waste?
1145
01:02:26.290 --> 01:02:30.586
A system loss is the UM.
1146
01:02:30.590 --> 01:02:33.260
Incidental loss of water removed from
1147
01:02:33.260 --> 01:02:36.240
a source before it gets utilized,
1148
01:02:36.240 --> 01:02:39.930
```

```
so it's incidental, right? Yeah, OK.
1149
01:02:39.930 --> 01:02:41.642
Now if I take a glass of water
1150
01:02:41.642 --> 01:02:43.746
and I just pour it on the ground.
1151
01:02:43.750 --> 01:02:46.730
Have I wasted the water?
1152
01:02:46.730 --> 01:02:49.466
I mean, are you growing something on this Mr.
1153
01:02:49.470 --> 01:02:52.662
Frankel? You know, we've,
1154
01:02:52.662 --> 01:02:53.758
we've gone pretty extensively
1155
01:02:53.758 --> 01:02:55.040
into the waste argument,
1156
01:02:55.040 --> 01:02:57.728
which was an argument at trial.
1157
01:02:57.730 --> 01:02:59.805
So unless you're covering some
1158
01:02:59.805 --> 01:03:03.230
new ground here. Uhm I am I am.
1159
01:03:03.230 - -> 01:03:05.486
This is foundational to
1160
01:03:05.486 --> 01:03:07.178
understanding his understanding.
1161
01:03:07.180 --> 01:03:09.640
Before I asked my next questions.
```

```
1162
01:03:09.640 --> 01:03:12.800
So again, Doctor Straub I'm.
1163
01:03:12.800 --> 01:03:13.668
I'm not throwing anything,
1164
01:03:13.668 --> 01:03:14.753
just pouring in the ground.
1165
01:03:14.760 --> 01:03:17.248
Haven't wasted the water.
1166
01:03:17.250 --> 01:03:21.275
It would appear to be self right.
1167
01:03:21.280 --> 01:03:28.200
OK, now. I wanna show you exhibit Y1.
1168
01:03:35.090 --> 01:03:38.114
Why one free information is a
1169
01:03:38.114 --> 01:03:41.200
summary of the reports that come.
1170
01:03:44.080 --> 01:03:45.844
EMI and NBA put together in
1171
01:03:45.844 --> 01:03:47.749
terms of how they use water.
1172
01:03:54.350 --> 01:03:59.490
Can you see that yes? Now. Uhm?
1173
01:04:02.450 --> 01:04:05.780
Yesterday we learned from Mark Vaughn.
1174
01:04:05.780 --> 01:04:07.960
That the total capacity,
1175
01:04:07.960 --> 01:04:11.790
```

```
the capacity of all the reservoirs that.
1176
01:04:11.790 --> 01:04:16.158
Uhm, Mahi Pono is using this year.
1177
01:04:16.160 --> 01:04:18.300
And has been using.
1178
01:04:18.300 --> 01:04:20.153
There are nine of them, right?
1179
01:04:20.153 --> 01:04:23.184
She add up all the individual figures.
1180
01:04:23.190 --> 01:04:25.698
Their total capacity is
1181
01:04:25.700 --> 01:04:27.161
350.7 million gallons.
1182
01:04:27.161 --> 01:04:31.260
Is that a figure you've ever heard before?
1183
01:04:31.260 --> 01:04:36.363
No, OK, now I want to go back to.
1184
01:04:36.370 --> 01:04:41.020
Come November 2020.
1185
01:04:41.020 --> 01:04:42.675
And let's assume just for
1186
01:04:42.675 --> 01:04:46.090
the sake of argument that.
1187
01:04:46.090 --> 01:04:48.477
So actually I should explain this chart
1188
01:04:48.477 --> 01:04:50.850
a little more before we go into it.
```

```
1189
01:04:50.850 --> 01:04:53.013
This top line shows how much water
1190
01:04:53.013 --> 01:04:55.236
was diverted from all the East Maui
1191
01:04:55.236 --> 01:04:57.090
streams as measured at Home Depot.
1192
01:04:57.090 --> 01:05:01.880
Uh, the third line is this sort of
1193
01:05:01.880 --> 01:05:03.940
amorphous category that Ambien MI
1194
01:05:03.940 - -> 01:05:06.425
used to describe water put in their
1195
01:05:06.425 --> 01:05:08.982
reservoirs that might be used for Fire
1196
01:05:08.982 --> 01:05:10.822
Protection might evaporate a little
1197
01:05:10.822 --> 01:05:13.041
bit used for dust control, hydroelectric,
1198
01:05:13.041 --> 01:05:15.867
but then at water still used.
1199
01:05:15.870 --> 01:05:16.560
And this water,
1200
01:05:16.560 --> 01:05:18.570
by the way in this category is distinct
1201
01:05:18.570 --> 01:05:20.670
and different from the other categories,
1202
01:05:20.670 - -> 01:05:22.952
```

```
so the other categories are the county's
1203
01:05:22.952 --> 01:05:25.364
Department of water supplies using water,
1204
01:05:25.370 --> 01:05:25.741
the.
1205
01:05:25.741 --> 01:05:28.338
Cooler AG Park my Pono which is
1206
01:05:28.338 --> 01:05:31.090
measured in divided difference I tag,
1207
01:05:31.090 --> 01:05:32.302
but apparently there's some
1208
01:05:32.302 --> 01:05:33.817
additional folks beyond my point
1209
01:05:33.817 --> 01:05:35.450
who are doing some diversified.
1210
01:05:35.450 --> 01:05:36.650
I gets captured there.
1211
01:05:36.650 --> 01:05:38.150
This sort of strange category
1212
01:05:38.150 --> 01:05:39.662
historical industrial uses that we
1213
01:05:39.662 - -> 01:05:41.402
don't need to trouble ourselves with.
1214
01:05:41.410 --> 01:05:43.482
Now we mostly want I want to
1215
01:05:43.482 --> 01:05:45.500
focus on this third category,
```

```
1216
01:05:45.500 - -> 01:05:47.550
reservoir Fire Protection of operation,
1217
01:05:47.550 --> 01:05:50.638
test control, etc. So.
1218
01:05:50.640 --> 01:05:53.392
If you go to November 20, November 2020,
1219
01:05:53.392 --> 01:05:56.347
let's assume on November 1st.
1220
01:05:56.350 --> 01:05:59.200
All the reservoirs were completely empty,
1221
01:05:59.200 - -> 01:06:01.699
right completely empty.
1222
01:06:01.700 --> 01:06:02.426
Now.
1223
01:06:02.426 --> 01:06:05.330
If they had 18.
1224
01:06:07.670 --> 01:06:10.822
. }11\mathrm{ million gallons a day to pot of
1225
01:06:10.822 --> 01:06:13.400
water deposited into these reservoirs.
1226
01:06:16.140 --> 01:06:17.529
In 30 days.
1227
01:06:19.610 --> 01:06:23.770
That would be 540 million gallons of water.
1228
01:06:23.770 --> 01:06:29.775
Which is more? Then the 350. .7 will say
1229
01:06:29.775 --> 01:06:32.570
```

351 million gallon capacity. Much more.
1230
01:06:34.720 --> 01:06:39.364
And then in the next month they used even
1231
01:06:39.364 --> 01:06:42.470
more water and then January even more.
1232
01:06:42.470 --> 01:06:45.564
February even less, but still a lot.
1233
01:06:45.570 --> 01:06:48.048
And in March 18th these are all
1234
01:06:48.048 --> 01:06:52.080
what they're getting are. Uhm?
1235
01:06:52.080 --> 01:06:54.635
Significantly more water than the
1236
01:06:54.635 --> 01:06:57.190
capacity of all these reservoirs.
1237
01:06:57.190 --> 01:06:59.800
Now they say this water is being used, but.
1238
01:07:02.250 --> 01:07:04.734
Do you have any idea where that water goes?
1239
01:07:08.100 --> 01:07:10.879
It would probably be site specific I'm.
1240
01:07:10.880 --> 01:07:14.970
I don't know their farm system. K.
1241
01:07:17.980 --> 01:07:21.795
If water from the dozen hello streams.
1242
01:07:21.800 --> 01:07:25.478
With the status quo, I FSS.

```
1243
01:07:25.480 --> 01:07:27.850
He's not actually being used.
1244
01:07:27.850 --> 01:07:29.754
Should that water be flowing in the streams?
1245
01:07:34.750 --> 01:07:37.900
If the Commission decides that its waste.
1246
01:07:41.750 - -> 01:07:44.750
Well, if it's not being used.
1247
01:07:44.750 --> 01:07:46.916
And I believe that's pretty consistent
1248
01:07:46.916 --> 01:07:48.770
with your definition of waste.
1249
01:07:48.770 --> 01:07:49.690
It's not being used.
1250
01:07:49.690 --> 01:07:50.610
Should it be going?
1 2 5 1
01:07:50.610 --> 01:07:52.848
Should it be in the streams?
1252
01:07:52.850 --> 01:07:55.394
So if water is being discharged
1253
01:07:55.394 --> 01:07:58.106
into a dry Gulch, that is.
1254
01:07:58.106 --> 01:08:00.646
Should be in another Gulch,
1255
01:08:00.650 --> 01:08:02.546
then yes, that would be waste.
1256
01:08:02.550 - -> 01:08:06.876
```

```
But this water is remaining in reservoirs.
1257
01:08:06.880 --> 01:08:08.728
I mean, that's that's a decision
1258
01:08:08.728 --> 01:08:10.310
for the Commission to make.
1259
01:08:10.310 --> 01:08:12.788
I I don't deal with that,
1260
01:08:12.790 --> 01:08:13.900
except it's not, you know,
1261
01:08:13.900 --> 01:08:15.430
remaining in these reservoirs because,
1262
01:08:15.430 --> 01:08:18.006
at least as we've talked about the capacity
1263
01:08:18.006 --> 01:08:21.219
to 50 million gallons and in a single month.
1264
01:08:21.220 --> 01:08:22.705
More than 500 million gallons
1265
01:08:22.705 --> 01:08:24.190
is going to these reservoirs.
1266
01:08:24.190 --> 01:08:25.618
That water is going somewhere right?
1267
01:08:25.620 - -> 01:08:27.240
'cause the capacity is capacity,
1268
01:08:27.240 --> 01:08:29.310
either it's seeping into the ground,
1269
01:08:29.310 --> 01:08:30.603
or it's evaporating,
```

```
1270
01:08:30.603 --> 01:08:33.620
or something else is happening to it.
1271
01:08:33.620 --> 01:08:36.609
But if they haven't documented its use.
1272
01:08:36.610 --> 01:08:38.835
How can that be characterized
1 2 7 3
01:08:38.835 --> 01:08:40.615
as anything but waste?
1274
01:08:40.620 --> 01:08:44.225
Again, that's not from me to decide.
1275
01:08:44.230 --> 01:08:45.898
Well, how about when you make
1276
01:08:45.898 --> 01:08:47.318
your staff recommendation in terms
1277
01:08:47.318 --> 01:08:48.878
of the five stars you've looked?
1278
01:08:48.880 --> 01:08:50.014
You've talked about?
1279
01:08:50.014 --> 01:08:50.770
Offstream uses.
1280
01:08:50.770 --> 01:08:51.730
You do analyze waste.
1281
01:08:51.730 --> 01:08:53.584
When you do that, don't you?
1282
01:08:53.584 --> 01:08:58.806
We look at the actual use of a demand by
1283
01:08:58.806 --> 01:09:02.626
```

```
agriculture and other industrial needs,
1284
01:09:02.630 --> 01:09:05.960
and that's what we have done.
1285
01:09:05.960 --> 01:09:09.137
Do you know if this category is actual use?
1286
01:09:09.140 - -> 01:09:10.700
I can't tell my head,
1287
01:09:10.700 --> 01:09:12.220
I don't.
1288
01:09:12.220 --> 01:09:14.294
Recall what you know.
1 2 8 9
01:09:14.294 --> 01:09:16.510
What we did was we ran IW Reds,
1290
01:09:16.510 --> 01:09:18.595
which is our integrated water
1291
01:09:18.595 --> 01:09:20.263
resource decision support tool.
1292
01:09:20.270 --> 01:09:22.442
Which models irrigation needs
1293
01:09:22.442 --> 01:09:24.614
for different drought scenarios
1294
01:09:24.614 --> 01:09:26.970
for various crops and soils.
1295
01:09:26.970 --> 01:09:29.562
And we have estimated the actual
1296
01:09:29.562 --> 01:09:31.762
irrigation demand for a variety
```

```
1297
01:09:31.762 --> 01:09:34.527
of crops for a variety of parcels
1298
01:09:34.530 --> 01:09:38.780
in the AG lands owned by A&B, so.
1299
01:09:38.780 --> 01:09:42.430
In that sense, we've estimated.
1300
01:09:42.430 - -> 01:09:44.806
How much water is necessary to
1301
01:09:44.806 --> 01:09:45.994
grow various crops?
1302
01:09:46.000 - -> 01:09:48.430
So that's how we estimated demand,
1303
01:09:48.430 --> 01:09:49.024
I understand,
1304
01:09:49.024 --> 01:09:51.103
but I'm not talking about this category,
1305
01:09:51.110 --> 01:09:52.565
which is down here talking
1306
01:09:52.565 --> 01:09:53.438
about diversified tags.
1307
01:09:53.440 --> 01:09:55.610
I'm talking about this category.
1308
01:09:55.610 --> 01:09:56.640
But if you don't know,
1309
01:09:56.640 --> 01:09:58.424
you don't know, let me ask you this.
1310
01:10:00.920 --> 01:10:03.880
```

```
If more water was returned.
1311
01:10:03.880 --> 01:10:07.360
To all or some of these dozen huellas
1312
01:10:07.360 --> 01:10:10.590
streams that have the status quo is.
1313
01:10:10.590 --> 01:10:13.690
Would there be some recreational
1314
01:10:13.690 --> 01:10:15.500
biological benefits? Yes.
1315
01:10:17.730 --> 01:10:21.946
And is there a golfer in central Maui, more
1316
01:10:21.946 --> 01:10:25.260
analogous cup or calendar, would you say?
1317
01:10:28.380 --> 01:10:32.680
I. Only anecdotally know this because I'm
1318
01:10:32.680 --> 01:10:35.042
not the groundwater person who analyzes
1319
01:10:35.042 --> 01:10:37.184
the geology of the Central Valley,
1320
01:10:37.190 --> 01:10:39.745
but I, I believe it's fairly Sandy,
1321
01:10:39.750 --> 01:10:44.670
so probably more like a collender.
1322
01:10:44.670 --> 01:10:46.497
So it's just. It's not stored there
1323
01:10:46.497 --> 01:10:49.396
like in a reservoir, it's more.
```

```
1324
01:10:49.396 --> 01:10:54.126
More likey as it were. I mean,
1325
01:10:54.126 --> 01:10:56.815
there's definitely still groundwater. Sure.
1326
01:10:56.815 --> 01:11:01.735
Sure, I'm just the soils are much sandier.
1327
01:11:01.740 --> 01:11:03.978
You want to talk about the
1328
01:11:03.978 --> 01:11:06.050
timing of the five stars.
1329
01:11:06.050 --> 01:11:07.418
When did you complete the draft?
1330
01:11:07.420 --> 01:11:08.090
Five stars.
1331
01:11:11.370 --> 01:11:12.170
May
1332
01:11:15.480 --> 01:11:17.470
2020. I think somewhere in
1333
01:11:17.470 --> 01:11:20.540
that give or take a month.
1334
01:11:20.540 --> 01:11:23.634
Isn't it more accurate to say they
1335
01:11:23.634 --> 01:11:25.833
were completed after the trial
1336
01:11:25.833 --> 01:11:28.185
that was held in August 2020?
1337
01:11:28.190 --> 01:11:29.758
```

```
They were well when you say complete,
1338
01:11:29.760 --> 01:11:30.840
there's still not complete.
1339
01:11:30.840 --> 01:11:32.190
There's still a draft form.
1340
01:11:32.190 --> 01:11:33.334
We're still making edits.
1341
01:11:33.334 --> 01:11:34.478
We're still adding data,
1342
01:11:34.480 --> 01:11:36.435
so there they won't be
1343
01:11:36.435 --> 01:11:37.999
complete for quite awhile.
1344
01:11:38.000 --> 01:11:41.280
The first initial pass through.
1345
01:11:41.280 --> 01:11:43.268
So the first initial pass through those
1346
01:11:43.268 --> 01:11:45.477
posted on your website that was provided
1347
01:11:45.477 --> 01:11:47.433
to the border land natural resources
1348
01:11:47.487 --> 01:11:49.167
at its meeting in November 2020,
1349
01:11:49.170 --> 01:11:52.200
when when were those that
1350
01:11:52.200 --> 01:11:54.624
draft that iteration completed?
```

1351
01:11:54.630 - -> 01:11:56.670
I don't know whenever.

1352
01:11:56.670 --> 01:11:58.710
They were posted approximately
1353
01:11:58.710 --> 01:12:00.170
with that one October 2020.
1354
01:12:00.170 --> 01:12:02.168
Makes sense after the trial but
1355
01:12:02.168 --> 01:12:04.464
before the board and not resources
1356
01:12:04.464 --> 01:12:06.256
met sounds roughly accurate,
1357
01:12:06.260 --> 01:12:09.536
but $I$ don't do the posting online

1358
01:12:09.540 --> 01:12:11.070
who told you to prepare this.
1359
01:12:11.070 - -> 01:12:15.750
These eyesores and the summary. Uhm?

1360
01:12:15.750 --> 01:12:21.668
Yeah, as we states back to 2017, 2018,
1361
01:12:21.668 --> 01:12:25.820
as we were analyzing or coming up with.
1362
01:12:25.820 --> 01:12:29.558
R. Rough framework for developing in

1363
01:12:29.558 --> 01:12:33.960
stream flow stands for the entire state.
1364
01:12:33.960 --> 01:12:36.756

```
It was clear that even then,
1365
01:12:36.760 --> 01:12:38.704
that additional instrument clusters
1366
01:12:38.704 --> 01:12:42.640
would be necessary for the East Maui streams.
1367
01:12:42.640 --> 01:12:46.201
Uhm? Hi, you know.
1368
01:12:46.201 --> 01:12:49.820
That's so we're working across the state.
1369
01:12:49.820 --> 01:12:51.728
We have high priorities on Kawaii,
1370
01:12:51.730 --> 01:12:53.794
Molokai, Big Island.
1371
01:12:53.794 --> 01:12:55.170
So it's.
1372
01:12:55.170 --> 01:12:57.852
I mean, I can't tell you when or who
1373
01:12:57.860 --> 01:12:59.552
you can't tell me at all who I mean.
1374
01:12:59.560 --> 01:13:01.506
Was it your decision to prepare these
1375
01:13:01.506 --> 01:13:03.490
I've stars, or did somebody tell you?
1376
01:13:03.490 --> 01:13:06.829
Can you do this by certain date?
1377
01:13:06.830 --> 01:13:09.518
No, there's never been a deadline.
```

```
1378
01:13:09.520 --> 01:13:10.870
There's never been.
1379
01:13:14.990 --> 01:13:18.108
We work as fast as we can, but you know, I.
1380
01:13:18.108 --> 01:13:20.742
I don't think there was a single
1381
01:13:20.742 --> 01:13:25.130
person who said do this. OK.
1382
01:13:25.130 --> 01:13:27.643
Were they intended to provide the border
1383
01:13:27.643 --> 01:13:29.551
land natural resources key information
1384
01:13:29.551 --> 01:13:31.843
before its November 2020 decision to
1385
01:13:31.843 --> 01:13:33.700
continue their allocable permits.
1386
01:13:33.700 --> 01:13:37.444
No, they were really intended to start the
1387
01:13:37.444 --> 01:13:41.120
process of gathering field work too than.
1388
01:13:41.120 --> 01:13:44.900
Work on establishing IFC for these strings.
1389
01:13:44.900 --> 01:13:48.020
I mean the problem with 2020 is that we had
1390
01:13:48.095 --> 01:13:50.999
limited availability for field work and.
1391
01:13:51.000 --> 01:13:53.597
```

```
Now we specially the beginning of 2020.
1392
01:13:53.600 --> 01:13:55.640
We're really focused on some
1393
01:13:55.640 --> 01:13:58.564
other areas of the state, so.
1394
01:13:58.564 --> 01:14:03.110
I understand, I understand. So.
1395
01:14:06.390 --> 01:14:08.430
Well, talk about your summary.
1396
01:14:08.430 --> 01:14:10.870
I've started again, uhm?
1397
01:14:13.320 --> 01:14:14.204
That summary.
1398
01:14:14.204 --> 01:14:17.298
Is based on the draft five stars,
1399
01:14:17.300 --> 01:14:20.363
which are being refined as we said, right?
1400
01:14:20.363 --> 01:14:24.878
So the recommendation in there.
1401
01:14:24.880 --> 01:14:27.844
Is it is also?
1402
01:14:27.844 --> 01:14:30.808
A draft basically correct.
1403
01:14:30.810 --> 01:14:32.670
Has the Water Commission
1404
01:14:32.670 --> 01:14:34.995
voted to approve the summary?
```

```
1405
01:14:35.000 --> 01:14:37.334
I've never heard of the Water
1406
01:14:37.334 --> 01:14:39.660
Commission doing an action like that.
1407
01:14:39.660 --> 01:14:43.324
OK, so the summary is basically it's not
1408
01:14:43.324 --> 01:14:45.856
really the Commission's some Reaper say
1409
01:14:45.856 --> 01:14:48.280
it's the Commission Staffs draft summary,
1410
01:14:48.280 --> 01:14:50.488
right, correct? OK.
1411
01:14:55.080 --> 01:15:00.297
Uhm? You have agreed now that that summary
1412
01:15:00.297 --> 01:15:03.540
should not be relied upon to justify
1413
01:15:03.540 --> 01:15:07.070
not having more water in these streams,
1414
01:15:07.070 --> 01:15:10.345
because it's based on incomplete
1415
01:15:10.345 --> 01:15:12.164
information which and you've received
1416
01:15:12.164 --> 01:15:13.783
more information since then, right?
1417
01:15:13.783 --> 01:15:17.407
So that summary was good as of the
1418
01:15:17.407 --> 01:15:20.786
```

```
draft publication online, but you know
1419
01:15:20.786 --> 01:15:23.110
we were 14 months removed from that,
1420
01:15:23.110 --> 01:15:25.042
so we've gathered substantial.
1421
01:15:25.042 --> 01:15:29.195
You know, a lot more information to
1422
01:15:29.195 --> 01:15:33.600
refine our recommendations. OK, and uhm,
1423
01:15:33.600 --> 01:15:39.683
there's this one sentence that is.
1424
01:15:39.683 --> 01:15:45.040
In your. Uhm?
1425
01:15:45.040 --> 01:15:49.410
Report see if I can find it.
1426
01:15:49.410 --> 01:15:51.408
Uhm, it's a pretty. It's a.
1427
01:15:51.410 --> 01:15:56.240
It's a statement that has been used.
1428
01:15:56.240 --> 01:15:59.880
I'd say significantly up and it is.
1429
01:15:59.880 --> 01:16:01.147
Let's see if I can find it.
1430
01:16:04.170 --> 01:16:09.560
Thus. This is exhibit D1, page 15,
1431
01:16:09.560 --> 01:16:11.064
and maybe I'll bring it up for you.
```

```
1432
01:16:27.340 --> 01:16:30.290
OK, can you see that? Paige uhm.
1433
01:16:32.820 --> 01:16:34.348
Where is the page 15 of your summary?
1434
01:16:34.350 --> 01:16:36.580
Can you see that yeah.
1435
01:16:36.580 --> 01:16:38.806
Last, the non petition stream support
1436
01:16:38.806 --> 01:16:41.980
limited to not to know recruitment or
1437
01:16:41.980 --> 01:16:43.735
reproduction and existing diversions
1438
01:16:43.735 --> 01:16:46.165
have minimal impact on the life
1439
01:16:46.165 --> 01:16:48.180
history of native aquatic biota.
1440
01:16:48.180 --> 01:16:51.636
Do you still stand by that statement or a
1441
01:16:51.636 --> 01:16:54.660
statement that you feel needs to be refined?
1442
01:16:54.660 --> 01:16:56.207
I think it needs to be refined.
1443
01:16:56.210 --> 01:16:58.436
I also want to put in the
1444
01:16:58.436 --> 01:17:01.360
caveat that it was based on.
1445
01:17:01.360 --> 01:17:04.594
```

```
Only a few surveys that we were,
1446
01:17:04.600 --> 01:17:09.016
we had concluded by the time that this
1447
01:17:09.020 --> 01:17:11.588
these this data was put together.
1448
01:17:13.600 --> 01:17:17.134
As well as the Lowery and
1449
01:17:17.134 --> 01:17:20.500
haiku dishes were not in use.
1450
01:17:20.500 --> 01:17:21.750
In the last four years,
1451
01:17:21.750 --> 01:17:24.970
so you know, we've been.
1452
01:17:24.970 --> 01:17:26.754
Working on the assumption
1453
01:17:26.754 --> 01:17:28.538
that there would be.
1454
01:17:28.540 --> 01:17:30.157
Restored flow temporarily.
1455
01:17:30.157 --> 01:17:33.930
At least two gather that bio data.
1456
01:17:36.190 --> 01:17:38.171
OK, and you know that that there's
1457
01:17:38.171 --> 01:17:39.466
some still, even though those
1458
01:17:39.466 --> 01:17:40.676
dishes are not gathering water,
```

```
1459
01:17:40.680 - -> 01:17:42.375
there's still some diversion structures
1460
01:17:42.375 --> 01:17:44.070
that are actually blocking the
1461
01:17:44.123 --> 01:17:45.818
stream from having continuous flow.
1462
01:17:45.820 --> 01:17:47.572
You understand that, right?
1463
01:17:47.572 --> 01:17:49.028
Yeah, OK, so.
1464
01:17:49.028 --> 01:17:53.100
Let me see if I can summarize this.
1465
01:17:53.100 --> 01:17:56.299
You've talked to people that live along
1466
01:17:56.299 --> 01:17:59.410
streams since this summary was produced.
1467
01:17:59.410 --> 01:18:01.828
You now have information about at
1468
01:18:01.828 --> 01:18:03.440
least the endangered damselfly.
1469
01:18:03.440 --> 01:18:05.260
You have some more information
1470
01:18:05.260 --> 01:18:05.988
about mosquitoes.
1471
01:18:05.990 --> 01:18:09.959
You've seen the effect of stream restoration,
1472
01:18:09.960 --> 01:18:12.308
```

```
and given all that,
1473
01:18:12.310 --> 01:18:14.640
because you have that information,
1474
01:18:14.640 --> 01:18:17.280
the recommendation conclusions in the
1475
01:18:17.280 --> 01:18:21.040
summary should not be relied upon anymore.
1476
01:18:21.040 --> 01:18:23.320
Right moving forward, correct.
1477
01:18:23.320 --> 01:18:24.460
Thank you.
1478
01:18:24.460 --> 01:18:27.470
Now I want to go to UM.
1479
01:18:29.510 --> 01:18:35.010
Stupid. D2 which is your PowerPoint.
1480
01:18:57.330 --> 01:19:00.650
Do you recognize this? Yes.
1481
01:19:00.650 --> 01:19:05.347
Uhm, so you know there's one thing.
1482
01:19:05.350 --> 01:19:07.566
That annoys me as much as wasting water,
1483
01:19:07.570 --> 01:19:09.720
and that's the passive voice.
1484
01:19:09.720 --> 01:19:12.180
You say here at the bottom.
1485
01:19:12.180 --> 01:19:14.994
Assumed water would be available from
```

```
1486
01:19:14.994 --> 01:19:17.719
non petition streams to meet Nons.
1487
01:19:17.720 --> 01:19:19.415
Non instream uses.
1488
01:19:19.415 --> 01:19:24.250
When you use the word assumed who assumed
1489
01:19:24.250 --> 01:19:27.785
the Commission, how do you know that?
1490
01:19:27.790 --> 01:19:31.417
Because is this is this are you drawing that?
1491
01:19:31.420 --> 01:19:32.808
Are you speculating that
1492
01:19:32.808 --> 01:19:34.196
they made that assumption?
1493
01:19:34.200 --> 01:19:35.964
Or do you know that your
1494
01:19:35.964 --> 01:19:37.490
personal knowledge of that fact?
1495
01:19:37.490 --> 01:19:39.919
I have personal knowledge of that fact.
1496
01:19:39.920 --> 01:19:41.726
Did you help write the decision?
1497
01:19:41.730 --> 01:19:44.988
No. So how could you?
1498
01:19:44.988 --> 01:19:47.400
Did you vote in the decision?
1499
01:19:47.400 --> 01:19:48.380
```

```
Absolutely not.
1500
01:19:48.380 --> 01:19:50.830
Did you participate in the
1501
01:19:50.830 --> 01:19:53.080
deliberations in the decision?
1502
01:19:53.080 --> 01:19:56.878
I answered questions from the Commission.
1503
01:19:56.880 --> 01:19:58.995
Did anyone in the Commission
1504
01:19:58.995 --> 01:20:01.622
ask you at anytime about the
1505
01:20:01.622 --> 01:20:03.346
ecological or recreational value
1506
01:20:03.346 --> 01:20:06.939
of any of the non petition streams?
1507
01:20:06.940 --> 01:20:08.610
No.
1508
01:20:08.610 --> 01:20:10.250
With any evidence whatsoever
1509
01:20:10.250 --> 01:20:12.300
provided to the Commission regarding
1510
01:20:12.300 --> 01:20:14.332
the biological recreational value
1 5 1 1
01:20:14.332 --> 01:20:16.880
regarding non petition streams, no.
1 5 1 2
01:20:19.050 --> 01:20:22.778
Does it make sense to allocate stream water?
```

```
1513
01:20:22.780 - -> 01:20:25.180
Denon in stream uses before
1514
01:20:25.180 --> 01:20:27.580
you assess the streams value.
1515
01:20:27.580 --> 01:20:31.100
We weren't allocating what I was asked was
1516
01:20:31.100 --> 01:20:35.099
how much water is available from the system,
1517
01:20:35.100 --> 01:20:38.010
which includes non petition streams both
1518
01:20:38.010 --> 01:20:41.359
within and outside of the license area.
1519
01:20:41.360 --> 01:20:43.997
So you assumed that it would be OK to
1 5 2 0
01:20:43.997 --> 01:20:46.905
take all the water from the non petition
1521
01:20:46.905 --> 01:20:49.207
streams prior to assessing their
1522
01:20:49.207 --> 01:20:52.048
ecological or recreational value, right?
1523
01:20:52.048 --> 01:20:55.933
I did not assume. I did not.
1524
01:20:55.933 --> 01:20:58.688
That was a Commission decision.
1525
01:20:58.690 --> 01:21:02.398
So you're saying the Commission acted
1526
01:21:02.400 --> 01:21:06.096
```

```
to approve the use of non instream use,
1527
01:21:06.100 --> 01:21:10.890
non approved non instream uses?
1528
01:21:10.890 --> 01:21:14.914
Even though it had no information before it.
1529
01:21:14.920 --> 01:21:16.392
Regarding the biological and
1530
01:21:16.392 --> 01:21:18.600
recreational value of the streams from
1531
01:21:18.657 --> 01:21:20.469
which that water was coming from,
1532
01:21:20.470 --> 01:21:23.390
I believe the Commission question
1533
01:21:23.390 --> 01:21:27.339
was how much is available from the
1534
01:21:27.339 --> 01:21:29.187
rest of the system.
1535
01:21:29.190 --> 01:21:33.408
That isn't included in this decision.
1536
01:21:33.410 --> 01:21:36.399
And whether it was intentional or not.
1537
01:21:36.400 --> 01:21:39.320
The effect of the Water Commission's
1538
01:21:39.320 --> 01:21:44.560
decision decision. Was too. Ascentia Lee.
1539
01:21:44.560 --> 01:21:50.489
Allow all the water from the non.
```

```
1540
01:21:50.490 --> 01:21:54.978
Petition streams to be diverted for.
1541
01:21:54.980 --> 01:21:57.840
Non instream uses right?
1542
01:21:57.840 --> 01:21:59.469
Correct, thank you.
1543
01:22:01.610 --> 01:22:02.120
Uhm?
1544
01:22:05.500 --> 01:22:08.830
If let's say another 22 streams.
1545
01:22:08.830 --> 01:22:11.850
Are quote more important than
1546
01:22:11.850 --> 01:22:14.266
these dozen hello streams?
1547
01:22:14.270 --> 01:22:16.652
Does that make these dozen hello
1548
01:22:16.652 --> 01:22:17.843
streams entirely worthless?
1549
01:22:17.850 --> 01:22:22.550
No. OK. Thank you uhm?
1550
01:22:27.370 --> 01:22:30.040
I have no further questions.
1551
01:22:30.040 --> 01:22:31.570
Hey, let's take 5 minute break.
1552
01:22:40.700 --> 01:22:42.788
And Mr. Frank, can you stop
1553
01:22:42.788 --> 01:22:44.770
```

```
sharing your screen? Sorry, sorry.
1 5 5 4
01:29:37.060 --> 01:29:37.850
Stop.
1555
01:31:08.430 --> 01:31:10.580
OK, I think we're back.
1556
01:31:10.580 --> 01:31:14.045
We can get started again. Mr.
1557
01:31:14.045 --> 01:31:17.675
Schulmeister, do you have further questions?
1558
01:31:17.680 --> 01:31:22.040
I have no further questions. OK.
1 5 5 9
01:31:22.040 --> 01:31:27.089
Uh, I think, uh, sorry, uhm, let's see.
1560
01:31:27.090 --> 01:31:28.098
Uhm, Connie Maui.
1561
01:31:28.098 --> 01:31:30.114
Do you have any further questions?
1562
01:31:30.120 --> 01:31:31.569
We have no questions for this witness.
1563
01:31:31.570 --> 01:31:34.394
Thank you. OK, I think we're done then.
1564
01:31:34.400 --> 01:31:35.980
Thank you very much.
1565
01:31:35.980 --> 01:31:37.955
Doctor stroke for your time.
1566
01:31:37.960 --> 01:31:41.754
I hope you get a vacation this month.
```

```
1567
01:31:41.754 --> 01:31:44.839
And we appreciate you your
1568
01:31:44.839 --> 01:31:47.250
time this morning and.
1569
01:31:47.250 --> 01:31:50.370
You can stay in the zoom room if you want
1570
01:31:50.452 --> 01:31:53.728
to just turn off your video and your audio,
1571
01:31:53.730 --> 01:31:57.510
but otherwise it's OK, I'll leave.
1572
01:31:57.510 --> 01:32:01.000
Alright thank you bye bye.
1573
01:32:01.000 --> 01:32:05.070
OK, next we are going to seal how who is
1574
01:32:05.173 --> 01:32:09.037
a witness for both NB and Sierra Club.
1575
01:32:09.040 --> 01:32:12.466
So we'll ask our Deputy Attorney
1576
01:32:12.466 --> 01:32:15.190
general to swear you in.
1577
01:32:15.190 --> 01:32:15.760
Stay home.
1578
01:32:18.290 --> 01:32:21.670
I'm ready. OK, hang on I gotta.
1579
01:32:23.980 --> 01:32:26.292
There you go. Mr,
1580
01:32:26.292 --> 01:32:29.100
```

```
how do you solemnly swear to tell the truth?
1581
01:32:29.100 --> 01:32:31.540
The whole truth and nothing but the truth?
1582
01:32:31.540 --> 01:32:37.438
I do thank you so thank you, uh Mr Kogi.
1583
01:32:37.440 --> 01:32:41.059
Thank you good morning Mr Hal morning,
1584
01:32:41.060 --> 01:32:43.452
could you please state your full name for
1585
01:32:43.452 --> 01:32:47.320
the record seal Walter? How the third?
1586
01:32:47.320 --> 01:32:52.160
And sorry, let me say 10:34 AM.
1587
01:32:52.160 --> 01:32:56.468
Thank you and your last name is spelled Howe,
1588
01:32:56.468 --> 01:32:58.500
correct, that is correct.
1589
01:32:58.500 --> 01:33:02.124
And first name CEIL yes. OK, great,
1590
01:33:02.124 --> 01:33:06.209
thank you and could you give us your title?
1 5 9 1
01:33:06.210 --> 01:33:09.816
I am the CEO and managing
1592
01:33:09.816 --> 01:33:12.220
partner of Mahi panel.
1593
01:33:12.220 --> 01:33:13.504
Thank you Mr.
```

```
1594
01:33:13.504 --> 01:33:16.072
How you had submitted 2 declarations
1595
01:33:16.072 --> 01:33:18.780
in connection with this contested
1596
01:33:18.780 --> 01:33:22.074
case hearing correct that is correct.
1597
01:33:22.080 --> 01:33:24.501
And at this time do you have any changes
1598
01:33:24.501 --> 01:33:26.841
that need to be made to the testimony
1599
01:33:26.841 --> 01:33:28.899
that's given in those declarations?
1600
01:33:28.900 --> 01:33:32.154
I do not. OK, great, thank you.
1601
01:33:32.154 --> 01:33:35.738
I will tender the witness to whoever is next.
1602
01:33:35.740 --> 01:33:37.808
Hey Connie, in Maui.
1603
01:33:37.810 --> 01:33:39.136
Thank you, I have no questions
1604
01:33:39.136 --> 01:33:40.509
for this witness at this time.
1605
01:33:40.510 --> 01:33:43.170
Thank you Sierra Club.
1606
01:33:43.170 --> 01:33:47.140
Sure, uh, Mr? How come?
1607
01:33:47.140 --> 01:33:49.660
```

```
Is did you get in law school?
1608
01:33:49.660 --> 01:33:51.606
No, Sir.
1609
01:33:51.606 --> 01:33:53.190
OK, uhm,
1610
01:33:53.190 --> 01:33:57.460
is there a lawyer representing you today?
1611
01:33:57.460 --> 01:33:57.930
Uh,
1612
01:33:57.930 --> 01:34:01.064
we have our Co counsel who's representing
1613
01:34:01.064 --> 01:34:04.200
me when you say company is that EMI
1614
01:34:04.277 --> 01:34:08.540
or is it my pony up MI and Mahi Pono.
1615
01:34:08.540 --> 01:34:08.832
Well,
1616
01:34:08.832 --> 01:34:10.876
when the bills come to the bills,
1617
01:34:10.880 --> 01:34:13.400
go to EMI and he might send half
1618
01:34:13.400 --> 01:34:15.360
the building malipo know or is
1619
01:34:15.360 --> 01:34:17.712
this the cage firm send the bill
1620
01:34:17.712 --> 01:34:20.090
directly to Mahiko know comes to
```

```
1621
01:34:20.090 --> 01:34:22.925
EMI and we pay our portion and
1622
01:34:22.925 --> 01:34:25.098
additionally I have Tim O'Loughlin
1623
01:34:25.098 --> 01:34:28.260
who's Mahi Pono's Co counsel online.
1624
01:34:28.260 --> 01:34:31.468
OK, so in fact.
1625
01:34:31.468 --> 01:34:34.225
Uhm, the cage firm does not
1626
01:34:34.225 --> 01:34:35.789
actually represent my opponent.
1627
01:34:35.790 --> 01:34:37.029
They represent EMI,
1628
01:34:37.029 --> 01:34:41.970
of which my Pono is 1/2 owner, correct?
1629
01:34:41.970 --> 01:34:44.022
This was already decided,
1630
01:34:44.022 --> 01:34:45.692
not really today,
1631
01:34:45.692 --> 01:34:49.544
so let's let's skip this line,
1632
01:34:49.550 --> 01:34:49.925
Mr.
1633
01:34:49.925 --> 01:34:50.300
Frankel.
1634
01:34:52.480 --> 01:34:55.637
```

Mr. How over the past two years,
1635
01:34:55.640 --> 01:34:59.447
how many days have you spent working in Maui?
1636
01:34:59.450 --> 01:35:01.310
Oh, that's a good question.
1637
01:35:01.310 --> 01:35:02.870
During COVID I was limited,
1638
01:35:02.870 --> 01:35:05.198
but prior to that $I$ was there every
1639
01:35:05.198 --> 01:35:07.720
two weeks to 10 days for three or four
1640
01:35:07.720 --> 01:35:10.732
days and of recent I'm there almost

1641
01:35:10.732 --> 01:35:14.509
once a month for three or four days.
1642
01:35:14.510 --> 01:35:17.030
Recently, more often than that.
1643
01:35:17.030 --> 01:35:20.726
So I just want to go for 20.
1644
01:35:20.730 --> 01:35:24.180
20 and 2021 how many days?
1645
01:35:24.180 --> 01:35:25.850
Have you spent working on
1646
01:35:25.850 --> 01:35:28.010
Maui over the last two years?
1647
01:35:28.010 --> 01:35:30.242
I I couldn't give you a good daily estimate,

```
1648
01:35:30.250 --> 01:35:31.294
Mr. Frankel.
1649
01:35:31.294 --> 01:35:34.426
It's it's more than it's more
1650
01:35:34.426 --> 01:35:37.459
than 30 and less than 100.
1651
01:35:37.460 --> 01:35:37.710
OK.
1652
01:35:44.000 --> 01:35:45.770
How much experience did you
1653
01:35:45.770 --> 01:35:47.540
have farming in Hawaii prior
1654
01:35:47.603 --> 01:35:49.118
to working for my *****?
1655
01:35:49.120 --> 01:35:50.420
Farming in Hawaii none.
1656
01:35:56.000 --> 01:35:57.695
How much do other farmers
1657
01:35:57.695 --> 01:35:59.910
in the state pay for water?
1658
01:35:59.910 --> 01:36:01.866
Uh, I I can't answer that.
1659
01:36:01.870 --> 01:36:04.096
I don't know the personal businesses of
1660
01:36:04.096 --> 01:36:06.248
other farmers in the state of Hawaii.
1661
01:36:06.250 --> 01:36:07.852
```

```
You've never done any research to
1662
01:36:07.852 --> 01:36:09.320
find out what your competitors
1663
01:36:09.320 --> 01:36:10.680
are paying for water.
1664
01:36:10.680 --> 01:36:12.306
Uhm, no, we haven't done any
1665
01:36:12.306 --> 01:36:13.760
research of what our competitors
1666
01:36:13.760 --> 01:36:15.930
and we don't view them as our
1667
01:36:15.930 --> 01:36:17.550
competitors or paying for water.
1668
01:36:20.770 --> 01:36:24.510
How much does it cost, uhm?
1 6 6 9
01:36:24.510 --> 01:36:26.994
My pointer for the water gets
1670
01:36:26.994 --> 01:36:31.030
now well on an annualized basis.
1 6 7 1
01:36:31.030 --> 01:36:33.375
We have a water budget
1672
01:36:33.375 --> 01:36:35.720
of seven to $10 million.
1673
01:36:35.720 --> 01:36:37.988
A portion of that is West Maui,
1674
01:36:37.990 --> 01:36:39.790
so I would I would subtract
```

```
1675
01:36:39.790 --> 01:36:41.863
about 20 to 25% from that.
1676
01:36:41.863 --> 01:36:43.427
In addition to that,
1677
01:36:43.430 --> 01:36:46.310
we have our legal fees,
1678
01:36:46.310 --> 01:36:49.365
which are quite substantial that
1679
01:36:49.365 --> 01:36:52.420
are only occurring because of.
1680
01:36:52.420 --> 01:36:53.636
Reviewing our water and
1681
01:36:53.636 --> 01:36:55.156
challenges to our water side,
1682
01:36:55.160 --> 01:36:57.884
add that in addition we make
1683
01:36:57.884 --> 01:37:00.590
last year just on infield.
1684
01:37:00.590 --> 01:37:02.288
Uhm, irrigation improvements.
1685
01:37:02.288 --> 01:37:05.118
So new irrigation system technology.
1686
01:37:05.120 --> 01:37:09.588
We have about 7 to $9 million
1687
01:37:09.588 --> 01:37:11.820
depending what we have in inventory
1688
01:37:11.895 --> 01:37:14.292
```

```
that we've invested in 2021 K.
1689
01:37:14.292 --> 01:37:17.460
So I'm not interested in the legal fees.
1690
01:37:17.460 --> 01:37:19.578
I'm not interested in the infrastructure.
1691
01:37:19.580 --> 01:37:21.470
I'm interested in how much you're paying
1692
01:37:21.470 --> 01:37:23.435
for the water that's delivered to you
1693
01:37:23.435 --> 01:37:25.340
folks in central Mali from East now.
1694
01:37:25.340 --> 01:37:28.420
And it sounds like it may be between
1695
01:37:28.420 --> 01:37:30.780
approximately 6 and $8 million.
1696
01:37:30.780 --> 01:37:32.430
That's correct, OK?
1697
01:37:34.610 --> 01:37:37.782
And dumb. As a percentage of
1698
01:37:37.782 --> 01:37:38.980
your operating budget, how?
1699
01:37:38.980 --> 01:37:40.960
What percentage of that is is?
1700
01:37:40.960 --> 01:37:43.123
Is this $68 million for the again
1701
01:37:43.123 --> 01:37:45.258
the fields in central Mali that
```

```
1702
01:37:45.258 --> 01:37:47.538
irrigated from the east East Maui?
1703
01:37:49.750 --> 01:37:54.304
Streams, uh, that that's pretty close
1704
01:37:54.304 --> 01:37:58.211
to estimate somewhere between 18 and
1705
01:37:58.211 --> 01:38:00.400
30% of our operating budget annually,
1706
01:38:00.400 --> 01:38:03.165
depending on there's a variety of factors.
1707
01:38:03.170 --> 01:38:06.428
How much it rains, how much we have to,
1708
01:38:06.430 --> 01:38:08.300
you know, you know currently,
1709
01:38:08.300 --> 01:38:09.716
right now we're spending a lot
1710
01:38:09.716 --> 01:38:11.220
of money cleaning up the debris,
1711
01:38:11.220 --> 01:38:13.425
so there's just a variety of factors
1712
01:38:13.425 --> 01:38:15.389
that factor into that understood.
1713
01:38:15.390 --> 01:38:18.198
You gotta pay people.
1714
01:38:18.200 --> 01:38:19.840
Yeah, by your plans etc.
1715
01:38:19.840 - -> 01:38:20.734
```

```
But that's.
1716
01:38:20.734 --> 01:38:23.664
Part between 18 and 30% of your
1717
01:38:23.664 --> 01:38:25.746
operating budget is spent on one.
1718
01:38:25.750 --> 01:38:28.254
Approximately correct OK currently
1719
01:38:28.254 --> 01:38:32.010
and that will increase as the
1720
01:38:32.111 --> 01:38:35.339
planted acres increase and as the
1721
01:38:35.340 --> 01:38:36.600
age of the trees to increase,
1722
01:38:36.600 --> 01:38:39.006
so there will be a more
1723
01:38:39.006 --> 01:38:40.209
regular irrigation cycle.
1724
01:38:40.210 --> 01:38:42.218
And you have less employees at that .2.
1725
01:38:42.220 --> 01:38:43.428
Probably know we'll have
1726
01:38:43.428 --> 01:38:44.938
more employees at that point,
1727
01:38:44.940 --> 01:38:46.210
but then the percentage wouldn't
1728
01:38:46.210 --> 01:38:47.572
necessarily grow, would it?
```

```
1729
01:38:47.572 --> 01:38:50.128
Well, that's that's to be estimated.
1730
01:38:50.130 --> 01:38:52.466
We you know that that would be speculating.
1731
01:38:52.470 --> 01:38:54.575
I'm not going to speculate, right.
1732
01:38:54.575 --> 01:38:57.900
How many acres of trees?
1733
01:38:57.900 --> 01:39:02.679
Tree crops have you been have you planted?
1734
01:39:02.679 --> 01:39:07.450
That will not bear fruit until after 2022.
1735
01:39:07.450 --> 01:39:08.371
Uh, the majority.
1736
01:39:08.371 --> 01:39:09.906
While we'll have one field
1737
01:39:09.906 --> 01:39:11.704
actually that fields in West Maui
1738
01:39:11.704 --> 01:39:13.114
that will harvest this year,
1739
01:39:13.120 --> 01:39:14.856
so the majority of the rest of
1740
01:39:14.856 --> 01:39:16.469
the fields will not bear fruit
1741
01:39:16.469 --> 01:39:18.480
until 2023 and beyond and what.
1742
01:39:18.480 --> 01:39:20.310
```

```
How many acres is that?
1743
01:39:20.310 --> 01:39:23.478
That's probably close to by then,
1744
01:39:23.480 --> 01:39:25.520
probably 7 to 8000 acres.
1745
01:39:29.880 --> 01:39:31.640
How much have you spent planting these trees?
1746
01:39:31.640 --> 01:39:34.174
Again, my questions are focused on not.
1747
01:39:34.180 --> 01:39:35.844
I don't know when I want to ask
1748
01:39:35.844 --> 01:39:37.330
about West Nile, be specific.
1749
01:39:37.330 --> 01:39:40.954
So my question here is for the fields that
1750
01:39:40.954 --> 01:39:44.500
are irrigated with East Maui stream water,
1751
01:39:44.500 --> 01:39:48.847
how much have you spent planting these
1 7 5 2
01:39:48.847 --> 01:39:51.700
approximately 6000 acres of trees?
1753
01:39:51.700 --> 01:39:54.742
Uh, you know, in in excess of $30 million.
1754
01:39:59.710 --> 01:40:01.957
And you have no guarantee that you're
1755
01:40:01.957 --> 01:40:03.939
going to receive any water from
```

```
1756
01:40:03.939 - -> 01:40:05.977
the revocable permit area in 2023.
1757
01:40:05.977 --> 01:40:09.203
Do you know we do not? OK.
1758
01:40:09.203 --> 01:40:11.615
Nevertheless, you've spent $30
1759
01:40:11.615 --> 01:40:14.044
million planting these trees.
1760
01:40:14.044 --> 01:40:15.260
That's correct.
1761
01:40:17.880 --> 01:40:21.226
I want to turn to your declaration.
1762
01:40:21.230 --> 01:40:23.975
And if you well, I guess they will help
1763
01:40:23.975 --> 01:40:26.543
you if I bring it up on the screen.
1764
01:40:26.550 --> 01:40:28.080
See if I can do this.
1765
01:40:31.710 --> 01:40:34.502
Is this your declaration?
1766
01:40:34.502 --> 01:40:36.596
Recognize that yes.
1767
01:40:36.600 --> 01:40:39.174
OK, see if we can pull this up kids.
1768
01:40:39.180 --> 01:40:42.910
Let's go to paragraph seven.
1769
01:40:42.910 --> 01:40:45.335
```

```
You talked about the 9000
1770
01:40:45.335 --> 01:40:47.275
acres of pasture land.
1771
01:40:47.280 --> 01:40:48.810
You're not irrigating those 9000
1772
01:40:48.810 --> 01:40:50.663
acres of pasture land, right?
1773
01:40:50.663 --> 01:40:51.909
Not currently.
1774
01:40:54.290 --> 01:40:55.520
Paragraph 12.
1775
01:40:58.360 --> 01:40:59.314
You still have.
1776
01:40:59.314 --> 01:41:01.540
My opponent has been able to reduce
1777
01:41:01.612 --> 01:41:04.030
its overall water diversions by 24.4%.
1778
01:41:04.030 --> 01:41:07.658
You see that, yes, can you tell me
1779
01:41:07.658 --> 01:41:09.793
how you derive that calculation?
1780
01:41:09.800 --> 01:41:13.342
Well, we just base that calculation on
1781
01:41:13.342 --> 01:41:16.368
some historical numbers and real data that
1782
01:41:16.368 --> 01:41:18.630
we collect from our irrigation systems.
```

```
1783
01:41:18.630 --> 01:41:20.565
We have digital meters on
1784
01:41:20.565 --> 01:41:21.726
every new installation,
1785
01:41:21.730 --> 01:41:24.835
and so we had some projections and
1786
01:41:24.835 --> 01:41:26.845
then so based on those projections,
1787
01:41:26.850 --> 01:41:28.353
and this is kind of some of the what.
1788
01:41:28.360 --> 01:41:30.928
The information is telling us well I
1789
01:41:30.928 --> 01:41:33.440
I need you to be a lot more specific.
1790
01:41:33.440 --> 01:41:37.320
Uhm, whoops. You shouldn't have done that.
1791
01:41:40.310 --> 01:41:45.910
Oh, and stop sharing for a second.
1792
01:41:45.910 --> 01:41:48.045
My question, I want specifically
1793
01:41:48.045 --> 01:41:50.790
this is a very specific figure.
1794
01:41:50.790 --> 01:41:53.589
24.4% now I can bring up the table that
1795
01:41:53.589 --> 01:41:55.878
you've produced that shows your water
1796
01:41:55.878 --> 01:41:58.410
```

```
use over the past almost two years.
1797
01:41:58.410 --> 01:41:59.706
If you'd like, I could bring that up,
1798
01:41:59.710 --> 01:42:01.654
but I want to know precisely
1799
01:42:01.654 --> 01:42:03.760
how this figure was calculated.
1800
01:42:03.760 --> 01:42:06.136
Which month did you look at?
1801
01:42:06.140 --> 01:42:08.204
What numbers did you use and would it
1802
01:42:08.204 --> 01:42:10.564
help if I bring up your exhibit Y dash?
1803
01:42:12.810 --> 01:42:16.410
Sorry X 13, sure. OK.
1804
01:42:18.780 --> 01:42:20.588
So let's see if I can do this.
1805
01:42:45.370 --> 01:42:47.326
OK, So what did you use?
1806
01:42:47.330 --> 01:42:49.592
What information from this table did
1807
01:42:49.592 --> 01:42:52.254
you use to declare you've reduced
1808
01:42:52.254 --> 01:42:54.630
overall dead versions by 24.4%?
1809
01:42:57.480 --> 01:43:01.008
Well, Mr Frankel on this, there's no really.
```

```
1810
01:43:04.530 --> 01:43:05.400
Are you frozen?
1811
01:43:11.570 --> 01:43:14.270
We had crop models using the
1812
01:43:14.270 --> 01:43:16.002
estimated crop coefficients, right?
1813
01:43:16.002 --> 01:43:19.058
Mr Hope can you start that over you?
1814
01:43:19.060 --> 01:43:22.028
You froze for a second there, so I I'm sorry.
1815
01:43:24.160 --> 01:43:25.030
Should start from the beginning.
1816
01:43:25.030 --> 01:43:26.100
We didn't hurt the last
1817
01:43:26.100 --> 01:43:26.956
thing like Mr Frankel.
1818
01:43:26.960 --> 01:43:30.328
This this chart, whatever.
1819
01:43:30.330 --> 01:43:32.210
Oh, OK, I I apologize,
1820
01:43:32.210 --> 01:43:36.098
uhm this chart does not have any specific
1821
01:43:36.098 --> 01:43:38.748
information related to that calculation.
1822
01:43:38.750 --> 01:43:40.550
We we model everything on
1823
01:43:40.550 --> 01:43:42.350
```

a field by field basis.
1824
01:43:42.350 --> 01:43:44.206
And So what we've seen so far in

1825
01:43:44.206 --> 01:43:45.919
our plant that citrus and coffee
1826
01:43:45.919 --> 01:43:47.707
crops has been a reduction from
1827
01:43:47.768 --> 01:43:49.469
what we had modeled and that is
1828
01:43:49.469 --> 01:43:53.170
based on the use of weed mat wiscon,
1829
01:43:53.170 --> 01:43:54.525
which is a irrigation technology
1830
01:43:54.525 --> 01:43:56.462
that we turn on and off the
1831
01:43:56.462 --> 01:43:57.767
fields and stuff like that.

1832
01:43:57.770 --> 01:44:00.724
So we monitor those on specific fields.

1833
01:44:00.730 --> 01:44:04.118
And so it's it's a not really
1834
01:44:04.118 --> 01:44:06.839 relevant to this chart here,

1835
01:44:06.840 --> 01:44:08.625
so it's this is a macro chart
1836
01:44:08.625 --> 01:44:10.414
and we look at things that

```
1837
01:44:10.414 --> 01:44:12.322
micro micro levels on the farm.
1838
01:44:12.330 --> 01:44:13.770
Well, except Mr.
1839
01:44:13.770 --> 01:44:16.170
How your declaration specifically talks
1840
01:44:16.170 --> 01:44:19.022
about the overall water diversions
1841
01:44:19.022 --> 01:44:21.987
and the overall water diversions
1842
01:44:21.987 --> 01:44:25.330
are all reflected in this column.
1843
01:44:25.330 --> 01:44:27.868
These are the overall water diversions,
1844
01:44:27.870 --> 01:44:29.830
so I want you to tell me if
1845
01:44:29.830 --> 01:44:31.289
you're not talking about.
1846
01:44:31.290 --> 01:44:33.030
If your declaration is inaccurate,
1847
01:44:33.030 --> 01:44:34.530
I'd like to know that.
1848
01:44:34.530 --> 01:44:38.232
But you say the overall water
1849
01:44:38.232 --> 01:44:40.377
diversions decreased by 24.4%,
1850
01:44:40.377 --> 01:44:42.386
```

```
and I'd like to know how you
1851
01:44:42.386 --> 01:44:44.170
came up with that number,
1852
01:44:44.170 --> 01:44:46.558
not regarding how much you're irrigating,
1 8 5 3
01:44:46.560 --> 01:44:51.016
but how much you reduced in water diversions.
1854
01:44:51.020 --> 01:44:51.410
Well,
1855
01:44:51.410 --> 01:44:53.750
in my declaration I was referring
1856
01:44:53.750 --> 01:44:55.720
to how we irrigate,
1857
01:44:55.720 --> 01:44:57.634
so there was a misunderstanding of
1858
01:44:57.634 --> 01:44:59.830
how that has been characterized.
1859
01:44:59.830 --> 01:45:00.380
Sure.
1860
01:45:34.630 --> 01:45:38.610
So here's your declaration.
1861
01:45:38.610 - -> 01:45:43.208
And the words you use. Taken as a whole,
1862
01:45:43.208 --> 01:45:46.205
these circumstances allowed my point to
1863
01:45:46.205 --> 01:45:48.575
reduce to reduce not projected reduction.
```

```
1864
01:45:48.580 --> 01:45:54.052
It's allowed them to allow it to reduce its
1865
01:45:54.052 --> 01:45:58.692
overall overall water diversions by 24.4%.
1866
01:45:58.692 --> 01:46:01.460
Can you tell me?
1867
01:46:01.460 --> 01:46:05.312
How you came up with this 24.4% figure?
1868
01:46:05.312 --> 01:46:07.988
Mr. Frankel, as I stated before,
1869
01:46:07.990 - -> 01:46:10.881
that's my explanation and I can't provide
1870
01:46:10.881 --> 01:46:13.256
any further information for you at this
1871
01:46:13.256 --> 01:46:15.749
time other than the way we evaluated it.
1872
01:46:15.750 --> 01:46:19.080
You use the word we who came up with
1873
01:46:19.080 --> 01:46:21.286
this 24.4% figure you or someone else.
1874
01:46:21.290 --> 01:46:23.408
The variety of my myself and
1875
01:46:23.408 --> 01:46:25.630
staff members of at Mahi Pono,
1876
01:46:25.630 --> 01:46:27.028
which staff members.
1877
01:46:27.028 --> 01:46:29.358
```

```
There's a large variety of
1878
01:46:29.358 --> 01:46:31.328
people included in that Mark,
1879
01:46:31.330 --> 01:46:34.235
fought other members of the
1880
01:46:34.235 --> 01:46:37.140
irrigation crew grant Andrew Crawford.
1881
01:46:37.140 --> 01:46:39.312
David Radke Raphiel Tara Shannon there
1882
01:46:39.312 --> 01:46:41.682
there's a lot of people that are
1883
01:46:41.682 --> 01:46:44.130
part of the staff at my hip on oh,
1884
01:46:44.130 --> 01:46:46.020
I understand you have a large staff.
1885
01:46:46.020 --> 01:46:47.624
That's not my question.
1886
01:46:47.624 --> 01:46:51.480
My question is who came up with this number?
1887
01:46:51.480 --> 01:46:53.472
I provided you the names of
1888
01:46:53.472 --> 01:46:54.800
everybody who contributed Mr.
1889
01:46:54.800 --> 01:46:56.928
Frankel to this number.
1890
01:46:56.928 --> 01:46:59.686
Yes, he had eight people working on
```

```
1891
01:46:59.686 --> 01:47:02.140
a on a mathematical calculation.
1892
01:47:02.140 --> 01:47:03.412
That's objection,
1893
01:47:03.412 --> 01:47:04.048
argumentative.
1894
01:47:08.040 --> 01:47:10.784
What's the baseline figure you're using to?
1895
01:47:10.790 --> 01:47:13.198
You know when you say there's a reduction.
1896
01:47:13.200 --> 01:47:15.230
Generally you start with a.
1897
01:47:15.230 --> 01:47:16.415
There's a delta.
1898
01:47:16.415 --> 01:47:18.785
This kind of basic math math.
1899
01:47:18.790 --> 01:47:20.130
You start with a number.
1900
01:47:20.130 --> 01:47:22.722
You look at the change and that's how you
1901
01:47:22.722 --> 01:47:26.300
collect the come up with 24.4% difference.
1902
01:47:26.300 --> 01:47:29.200
What was the baseline number?
1903
01:47:29.200 --> 01:47:32.154
The baseline number again is numbers we
1904
01:47:32.154 --> 01:47:35.151
```

```
calculated on the estimated crop water use
1905
01:47:35.151 --> 01:47:37.650
for every week we come up with that number,
1906
01:47:37.650 --> 01:47:40.330
we base it towards our orders so it's,
1907
01:47:40.330 --> 01:47:41.900
you know we have coffee.
1908
01:47:41.900 --> 01:47:43.172
We have potatoes,
1909
01:47:43.172 --> 01:47:44.868
we have row crops.
1 9 1 0
01:47:44.870 --> 01:47:45.854
We have citrus,
1 9 1 1
01:47:45.854 --> 01:47:47.822
we have citrus at different ages,
1912
01:47:47.830 --> 01:47:49.690
so it's a variety of different
1913
01:47:49.690 --> 01:47:51.569
baselines that contribute to the number.
1914
01:47:51.570 --> 01:47:52.998
But this says total.
1915
01:47:52.998 --> 01:47:54.783
This is overall water diversion.
1916
01:47:54.790 --> 01:47:57.070
It doesn't talk about water use.
1917
01:47:57.070 --> 01:47:58.542
It talks about diversion.
```

```
1918
01:47:58.542 --> 01:48:01.641
So you have to have had a number
1919
01:48:01.641 --> 01:48:03.661
of baseline number from which
1920
01:48:03.661 --> 01:48:05.438
this 24% figure was calculated.
1921
01:48:05.438 --> 01:48:07.490
What was that baseline number and
1922
01:48:07.556 --> 01:48:09.668
where did you where did it come from?
1923
01:48:09.670 - -> 01:48:11.680
I can't tell you the specific
1924
01:48:11.680 --> 01:48:12.350
baseline number.
1925
01:48:12.350 --> 01:48:13.382
I'm sorry,
1926
01:48:13.382 --> 01:48:13.898
alright.
1927
01:48:16.970 --> 01:48:20.961
Uhm? You've said that the
1928
01:48:20.961 --> 01:48:22.524
diversions were reduced.
1929
01:48:22.524 --> 01:48:25.563
How physically were they reduced? How?
1930
01:48:25.563 --> 01:48:28.161
What, what mechanisms were employed to
1 9 3 1
01:48:28.161 --> 01:48:31.084
```

```
reduce the amount of water diverted, Mr.
1932
01:48:31.084 --> 01:48:32.728
Franco? I'm not in the operations
1933
01:48:32.728 --> 01:48:34.859
in MI and don't spend time out
1934
01:48:34.859 --> 01:48:36.414
there with the field staff,
1935
01:48:36.420 --> 01:48:38.373
so you would have to ask somebody
1936
01:48:38.373 --> 01:48:40.090
else to answer that question.
1937
01:48:40.090 --> 01:48:47.090
K. Uhm? In your exhibit X14.
1938
01:48:47.090 --> 01:48:48.974
Which I have to bring up
1939
01:48:48.974 --> 01:48:50.230
here with this aside.
1940
01:49:16.370 --> 01:49:19.514
This is a chart that you've referred to
1941
01:49:19.514 --> 01:49:23.960
your declaration right. Uh, yes. Uhm?
1942
01:49:26.330 - -> 01:49:29.290
The first column talks about the
1943
01:49:29.290 --> 01:49:31.140
water requirements for each crop.
1944
01:49:31.140 --> 01:49:34.185
You see that. Yeah, can you zoom?
```

```
1945
01:49:34.190 - -> 01:49:37.025
I have a hard time seeing each column, sure,
1946
01:49:37.025 --> 01:49:40.000
although it's not critical at this point,
1947
01:49:40.000 --> 01:49:44.602
but I will. Uhm where is this?
1948
01:49:44.602 --> 01:49:47.380
Where did this information come from?
1949
01:49:47.380 --> 01:49:49.340
Well, this information was calculated.
1950
01:49:49.340 --> 01:49:52.609
We we use a engine engineering design
1 9 5 1
01:49:52.609 --> 01:49:55.544
firm of certified civil engineers,
1952
01:49:55.544 --> 01:49:58.624
agriculture engineers who are also
1953
01:49:58.624 --> 01:50:01.239
certified irrigation technicians.
1954
01:50:01.240 --> 01:50:02.275
So they collaborate.
1955
01:50:02.275 --> 01:50:03.655
A variety of data.
1956
01:50:03.660 --> 01:50:06.090
They they collaborate,
1957
01:50:06.090 --> 01:50:08.154
some environmental data,
1958
01:50:08.154 --> 01:50:10.906
```

```
some kolfage crop coefficients,
1 9 5 9
01:50:10.910 --> 01:50:12.962
some water evapotranspiration rates
1960
01:50:12.962 --> 01:50:16.040
collected for the state of Hawaii.
1961
01:50:16.040 --> 01:50:18.688
Then we design in.
1962
01:50:18.688 --> 01:50:20.802
A the number of trees or whatever
1963
01:50:20.802 --> 01:50:22.010
crop we're going to use,
1964
01:50:22.010 --> 01:50:24.050
they multiply their cropping coefficient,
1965
01:50:24.050 --> 01:50:26.978
and then we come up with.
1966
01:50:26.980 --> 01:50:28.550
I you know an irrigation
1967
01:50:28.550 --> 01:50:29.806
design that's based on,
1968
01:50:29.810 --> 01:50:30.454
you know,
1969
01:50:30.454 --> 01:50:32.708
they calculate the annual water use per
1970
01:50:32.708 --> 01:50:35.266
month and then we come back to this number.
1971
01:50:35.270 --> 01:50:37.280
This number also includes a little
```

```
1972
01:50:37.280 - -> 01:50:39.568
bit of over irrigation 'cause it was
1973
01:50:39.568 --> 01:50:41.626
assumed that at times will be using,
1974
01:50:41.630 --> 01:50:43.016
well water that are high in
1975
01:50:43.016 --> 01:50:44.679
chlorides and so you have to build
1976
01:50:44.679 --> 01:50:46.059
in a leaching factor to this.
1977
01:50:46.060 --> 01:50:48.720
So it this number was derived based
1 9 7 8
01:50:48.720 --> 01:50:51.048
on industry standards used by third
1979
01:50:51.048 --> 01:50:52.540
party professionals and that's
1980
01:50:52.540 --> 01:50:55.200
how we came up with these numbers.
1981
01:50:55.200 --> 01:50:55.535
OK,
1982
01:50:55.535 --> 01:50:57.880
even though it says gallon per acre
1983
01:50:57.880 --> 01:51:00.548
per day water requirement from EIS.
1984
01:51:00.550 --> 01:51:03.119
So these numbers are not from the
1985
01:51:03.119 --> 01:51:05.030
```

```
ISP's were separately calculated.
1986
01:51:05.030 --> 01:51:05.459
Well,
1987
01:51:05.459 --> 01:51:07.175
these numbers were calculated
1988
01:51:07.175 --> 01:51:09.890
and inputted into the EIS through
1989
01:51:09.890 --> 01:51:12.038
our design teams I see OK,
1990
01:51:12.040 --> 01:51:13.531
so tell me about this team that
1 9 9 1
01:51:13.531 --> 01:51:14.899
came up with these numbers.
1992
01:51:14.900 --> 01:51:16.895
These third party people, whoever they who?
1993
01:51:16.900 --> 01:51:17.798
Is it?
1994
01:51:17.798 --> 01:51:20.492
They work for a company called
1995
01:51:20.492 --> 01:51:22.919
Bennett Bennett and Pacific Pipe.
1996
01:51:22.920 --> 01:51:25.420
They've been in the irrigation
1997
01:51:25.420 --> 01:51:27.420
design and installation business
1998
01:51:27.420 --> 01:51:30.544
for a 90 years and they have
```

```
1999
01:51:30.544 --> 01:51:32.338
expertise operating worldwide,
2000
01:51:32.340 --> 01:51:34.986
and so they're the ones that
2001
01:51:34.986 --> 01:51:37.198
calculated these numbers for us.
2002
01:51:37.198 --> 01:51:39.418
How long is Bennett Bennett?
2003
01:51:39.420 --> 01:51:40.270
Is that the right name?
2004
01:51:40.270 --> 01:51:42.230
Bennett Bennett and Pacific
2005
01:51:42.230 --> 01:51:44.190
Pipe operated in Hawaii.
2006
01:51:44.190 --> 01:51:46.334
Pacific Pipe is off by I couldn't tell
2007
01:51:46.334 --> 01:51:48.423
you how long they have been it and
2008
01:51:48.423 --> 01:51:50.460
then it came with us when we came in,
2009
01:51:50.460 --> 01:51:52.815
they've been in there since 2018
2010
01:51:52.815 --> 01:51:55.365
when we began our due diligence.
2011
01:51:55.370 --> 01:51:55.820
OK.
2012
01:52:08.020 --> 01:52:12.458
```

No. Without my portal greed to limit.

```
2013
01:52:12.460 --> 01:52:14.958
Agreed to a limit of 2500 gallons
2014
01:52:14.958 --> 01:52:17.471
per acre per day of stream water
2015
01:52:17.471 --> 01:52:19.699
in its navajas stipulation.
2016
01:52:19.700 --> 01:52:23.336
Didn't we never have a final agreement,
2017
01:52:23.340 --> 01:52:23.970
unfortunately?
2018
01:52:23.970 --> 01:52:28.380
So the we don't have an agreement.
2019
01:52:28.380 --> 01:52:29.888
It's currently under appeal,
2020
01:52:29.888 --> 01:52:32.150
so there's not a formal agreement.
2021
01:52:32.150 --> 01:52:34.726
Well, my point is sign an agreement
2022
01:52:34.726 --> 01:52:37.486
in which it agreed to limit itself
2023
01:52:37.486 --> 01:52:39.578
to 2500 gallons per acre per day.
2024
01:52:39.580 --> 01:52:41.602
Correct object to this line of
2025
01:52:41.602 --> 01:52:44.046
questioning to the extent that this is
```

```
2026
01:52:44.046 --> 01:52:45.761
talking about a settlement agreement
2027
01:52:45.761 --> 01:52:47.840
that is entirely not relevant,
2028
01:52:47.840 --> 01:52:49.365
Judge Crabtree determined that this
2029
01:52:49.365 --> 01:52:51.205
was not relevant and refused to
2030
01:52:51.205 --> 01:52:52.795
allow this information in the trial.
2031
01:52:52.800 --> 01:52:54.991
So I would argue that it is
2032
01:52:54.991 --> 01:52:56.350
also not relevant here.
2033
01:52:56.350 --> 01:52:58.779
Yep, it was covered in the trial.
2034
01:52:58.780 --> 01:52:59.972
No, it was not.
2035
01:52:59.972 --> 01:53:01.462
You cannot exclude this is
2036
01:53:01.462 --> 01:53:02.829
absolutely directly relevant.
2037
01:53:02.830 --> 01:53:03.928
In fact, Mr.
2038
01:53:03.928 --> 01:53:06.124
Caughey raises the issue in her
2039
01:53:06.124 --> 01:53:08.697
```

```
reply brief by asserting that well.
2040
01:53:10.810 --> 01:53:13.246
You can't, she actually talks about
2041
01:53:13.246 --> 01:53:16.439
the use of water now by a hot water.
2042
01:53:16.440 --> 01:53:17.505
You cannot they.
2043
01:53:17.505 --> 01:53:20.350
They cannot talk about the use of now.
2044
01:53:20.350 --> 01:53:22.120
They have water in the reply
2045
01:53:22.120 --> 01:53:23.790
and not let us cross.
2046
01:53:23.790 --> 01:53:28.908
Examine my pono's CEO or CEO.
2047
01:53:28.910 --> 01:53:31.850
Regarding the agreement it entered into.
2048
01:53:31.850 --> 01:53:34.378
You cannot lie believe.
2049
01:53:34.380 --> 01:53:36.634
I believe our reply stated my exact
2050
01:53:36.634 --> 01:53:38.614
argument that this is a settlement
2051
01:53:38.614 --> 01:53:40.194
agreement that is not relevant
2052
01:53:40.194 --> 01:53:42.473
and to the extent that we address
```

```
2053
01:53:42.473 --> 01:53:44.530
an argument that is raised by the
2054
01:53:44.530 --> 01:53:46.410
Sierra Club that does not in any way
2055
01:53:46.466 --> 01:53:48.266
shape or form make this relevant.
2056
01:53:48.270 --> 01:53:50.060
It's totally relevant because it
2057
01:53:50.060 --> 01:53:52.459
talks about how much water they use.
2058
01:53:52.460 --> 01:53:55.200
If they're willing to use 2500 gallons
2059
01:53:55.200 --> 01:53:57.965
per acre per day using Navajo Water,
2060
01:53:57.970 --> 01:53:59.596
there's no way they can't do
2061
01:53:59.596 --> 01:54:01.490
that for East Maui Stream water,
2062
01:54:01.490 --> 01:54:02.918
it's totally relevant.
2063
01:54:08.840 --> 01:54:11.268
Write a short recess.
2064
01:56:02.190 --> 01:56:05.326
OK, uh. We're not going to talk
2065
01:56:05.326 --> 01:56:07.970
about the settlement in the Via Ha.
2066
01:56:07.970 --> 01:56:09.770
```

```
You can talk about the decision,
2067
01:56:09.770 --> 01:56:11.098
but not the settlement.
2068
01:56:11.098 --> 01:56:13.090
What's the basis on your ruling?
2069
01:56:13.090 --> 01:56:19.760
Because settlement agreement is. Is UM?
2070
01:56:19.760 --> 01:56:23.504
Has all kinds of provisions in it that.
2071
01:56:23.510 --> 01:56:25.844
Number #1 is a is a
2072
01:56:25.844 --> 01:56:27.400
discussion among the parties.
2073
01:56:27.400 --> 01:56:29.560
It was not any official.
2074
01:56:29.560 --> 01:56:31.318
Uhm, decision and number two has
2075
01:56:31.318 --> 01:56:33.255
all kinds of other things that
2076
01:56:33.255 --> 01:56:35.020
that factor into that decision.
2077
01:56:35.020 - -> 01:56:37.832
So settlement agreements generally
2078
01:56:37.832 --> 01:56:41.360
are not to be used as evidence.
2079
01:56:41.360 --> 01:56:42.692
The rules of evidence do not
```

```
2080
01:56:42.692 --> 01:56:43.860
apply in a contested case.
2081
01:56:43.860 --> 01:56:46.920
Hearing this agreement while the Water
2082
01:56:46.920 --> 01:56:50.339
Commission did not sign it is in
2083
01:56:50.339 --> 01:56:52.919
agreement that Mahi Pono entered into,
2084
01:56:52.920 --> 01:56:55.105
in which it voluntarily said
2085
01:56:55.105 --> 01:56:57.565
it would limit itself to 2500
2086
01:56:57.565 --> 01:56:58.940
gallons per acre per day.
2087
01:56:58.940 --> 01:57:01.328
It was not. Any final agreement?
2088
01:57:01.330 --> 01:57:02.020
It doesn't matter.
2089
01:57:02.020 --> 01:57:03.400
It doesn't matter if the Water
2090
01:57:03.400 --> 01:57:04.250
Commission didn't sign it.
2091
01:57:04.250 --> 01:57:06.446
This is what my PO is willing to do.
2092
01:57:06.450 --> 01:57:07.674
That's what's relevant.
2093
01:57:07.674 --> 01:57:09.714
```

They were willing to limit

```
2094
01:57:09.714 --> 01:57:12.006
themselves for you to say that's
2095
01:57:12.006 --> 01:57:13.418
not relevant is ridiculous.
2096
01:57:13.420 --> 01:57:14.020
Thank you.
2097
01:57:19.910 --> 01:57:20.830
Please continue.
2098
01:57:23.400 --> 01:57:27.680
So. While Hippona agreed to limit.
2099
01:57:27.680 --> 01:57:30.970
Its use of water from West Maui,
2100
01:57:30.970 --> 01:57:37.340
Navajo sources to $2000 per acre per day.
2101
01:57:37.340 --> 01:57:38.928
Mr Franklin, Mr Frankel.
2102
01:57:38.928 --> 01:57:41.959
We said we are not going to hear
2103
01:57:41.960 --> 01:57:44.525
discussions about a settlement agreement
2104
01:57:44.525 --> 01:57:46.845
in that that was never finalized
2105
01:57:46.845 --> 01:57:49.530
in a in a in a different matter.
2106
01:57:49.530 --> 01:57:52.437
You can use the decision in the hot if
```

```
2107
01:57:52.437 - -> 01:57:54.733
you want but not the settlement agreement.
2108
01:57:54.740 --> 01:57:55.900
Well, the settlement agreements
2109
01:57:55.900 --> 01:57:56.770
already in evidence.
2110
01:57:59.590 --> 01:58:00.950
So it's already in there.
2111
01:58:00.950 --> 01:58:02.885
We're going to site to it or find it
2112
01:58:02.885 --> 01:58:05.086
in fact and will site to it on appeal.
2113
01:58:05.090 --> 01:58:06.595
Let's turn to paragraph 20
2114
01:58:06.595 --> 01:58:08.110
of your declaration, Mr. Hal.
2115
01:58:40.920 --> 01:58:44.750
You see paragraph 20 there I do.
2116
01:58:44.750 --> 01:58:46.577
Do you have any idea how much water you
2117
01:58:46.577 --> 01:58:48.357
guys are using daily for dust control?
2118
01:58:50.400 --> 01:58:52.440
Can you repeat that question?
2119
01:58:52.440 --> 01:58:54.762
Do you have any idea how much water you
2120
01:58:54.762 --> 01:58:56.968
```

```
folks are using daily for dust control?
2121
01:58:56.970 --> 01:58:58.638
Using as I as I stated,
2122
01:58:58.640 --> 01:59:00.242
you'd have to speak with one of the guys.
2123
01:59:00.250 --> 01:59:01.710
It's on the operational teams.
2124
01:59:01.710 --> 01:59:03.670
I'm not directly involved in
2125
01:59:03.670 --> 01:59:05.630
the day to day operations.
2126
01:59:05.630 --> 01:59:07.544
Do you know how much water
2127
01:59:07.544 --> 01:59:09.244
the fire department needs in
2128
01:59:09.244 --> 01:59:10.668
reservoirs to fight fires?
2129
01:59:10.670 --> 01:59:12.810
That is a conversation that
2130
01:59:12.810 --> 01:59:14.950
happens between Mark and Shannon,
2131
01:59:14.950 --> 01:59:16.725
the operation team and data
2132
01:59:16.725 --> 01:59:18.145
request of the county.
2133
01:59:18.150 --> 01:59:19.554
I am aware I have seen
```

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2134
01:59:19.554 - -> 01:59:20.490
the schedules of there.
2135
01:59:20.490 --> 01:59:23.490
Use rates, but I don't know the official
2136
01:59:23.490 --> 01:59:26.298
requirement of what they need in reservoirs.
2137
01:59:26.300 --> 01:59:28.643
Is paragraph F.
2138
01:59:28.643 --> 01:59:31.767
Subparagraph of paragraph 20.
2139
01:59:31.770 --> 01:59:34.280
You say there's a cushion.
2140
01:59:34.280 --> 01:59:35.925
Is the cushion you describe
2141
01:59:35.925 --> 01:59:38.140
the same thing as a buffer?
2142
01:59:38.140 --> 01:59:40.330
You could characterize that the same.
2143
01:59:40.330 --> 01:59:40.773
Yes,
2144
01:59:40.773 --> 01:59:43.874
thank you going down to paragraph 21.
2145
01:59:47.150 --> 01:59:48.956
You say that water is only diverted
2146
01:59:48.956 --> 01:59:51.133
when the water can be used on the farm
2147
01:59:51.133 --> 01:59:54.740
```

```
for gation, right? That's correct.
2148
01:59:54.740 --> 01:59:56.070
So when it's not needed to water
2149
01:59:56.070 --> 01:59:57.460
stage in the streams, right?
2150
01:59:57.460 --> 02:00:00.062
That is our intention, yes?
2151
02:00:00.062 --> 02:00:03.430
OK, in paragraph 19.
2152
02:00:03.430 --> 02:00:04.690
Sorry, going up,
2153
02:00:04.690 - -> 02:00:07.210
you say prudent manage dictates a
2154
02:00:07.210 --> 02:00:09.107
conservative use of groundwater
2155
02:00:09.107 --> 02:00:10.975
resources given these factors.
2156
02:00:10.980 --> 02:00:12.865
This prudent management also dictated
2157
02:00:12.865 --> 02:00:14.750
conservative use of stream water.
2158
02:00:16.770 - -> 02:00:19.170
Uh, I, I don't think my statement has
2159
02:00:19.170 --> 02:00:21.128
anything to do with stream water,
2160
02:00:21.130 --> 02:00:24.058
so I'm asking you, does prudent
```

```
2161
02:00:24.058 - -> 02:00:26.010
management dictate a conservative
2162
02:00:26.087 --> 02:00:28.640
use of streamline yes or no? Yes.
2163
02:00:36.150 --> 02:00:38.800
Going down to paragraph 29.
2164
02:00:42.040 --> 02:00:44.080
You talk about direct
2165
02:00:44.080 --> 02:00:45.610
flow irrigation emitters.
2166
02:00:45.610 --> 02:00:47.045
You're in the process of
2167
02:00:47.045 --> 02:00:47.906
installing these emitters.
2168
02:00:47.910 --> 02:00:50.472
What percentage of crops are currently
2169
02:00:50.472 --> 02:00:54.020
relying on a direct flow irrigation emitter?
2170
02:00:54.020 --> 02:00:56.618
I would say other than some
2171
02:00:56.618 --> 02:00:59.339
of our row crops over 90%,
2172
02:00:59.340 --> 02:01:01.678
but if you include your real crops.
2173
02:01:01.680 --> 02:01:03.930
Uh, my eye, the row crop varies from time
2174
02:01:03.930 --> 02:01:06.575
```

```
to time of what we have undercut coloration.
2175
02:01:06.580 --> 02:01:08.896
Sometimes it uses sprinklers to germinate.
2176
02:01:08.900 --> 02:01:10.764
It then switches over to a direct admit
2177
02:01:10.764 --> 02:01:12.647
are so it's kind of a combination,
2178
02:01:12.650 --> 02:01:16.280
so I would still stay with
2179
02:01:16.280 --> 02:01:18.700
my number over 90%.
2180
02:01:18.700 --> 02:01:21.199
What percentage of your crops have the
2181
02:01:21.199 --> 02:01:23.983
weed mats on that's in installation?
2182
02:01:23.983 --> 02:01:27.409
I would say we're approaching somewhere
2183
02:01:27.409 --> 02:01:30.695
between 20 to 30% as we install.
2184
02:01:30.695 --> 02:01:33.870
It's a very labor intensive
2185
02:01:33.870 - -> 02:01:36.170
and expensive process.
2186
02:01:36.170 --> 02:01:38.495
We have the materials for
2187
02:01:38.495 --> 02:01:41.016
70 or 80% on island.
```

```
2188
02:01:41.016 --> 02:01:43.831
It's just a very tedious
2189
02:01:43.831 --> 02:01:45.520
and time-consuming process.
2190
02:01:45.520 --> 02:01:47.076
Now, according to Mark,
2191
02:01:47.076 --> 02:01:49.914
what the combined capacity of all the
2192
02:01:49.914 --> 02:01:51.654
my opponents reservoirs currently
2193
02:01:51.654 --> 02:01:53.917
being used is 350.7 million gallons.
2194
02:01:53.917 --> 02:01:55.831
Do you have any information to
2195
02:01:55.831 --> 02:01:58.430
contradict that? Does that sound right?
2196
02:01:58.430 --> 02:01:59.394
Uh, you know I,
2197
02:01:59.394 --> 02:02:01.190
I couldn't tell you exactly other there.
2198
02:02:01.190 --> 02:02:03.602
There are some control parameters put
2199
02:02:03.602 --> 02:02:06.338
in by Department of Dan and safety,
2200
02:02:06.340 --> 02:02:08.140
so I think you're talking about
2201
02:02:08.140 --> 02:02:09.040
```

```
the theoretical capacity.
2202
02:02:09.040 --> 02:02:09.525
However,
2203
02:02:09.525 --> 02:02:12.920
I think the actual capacity has been
2204
02:02:12.920 --> 02:02:14.975
altered due to some maintenance
2205
02:02:14.975 --> 02:02:17.345
safety issues and stuff and such,
2206
02:02:17.350 --> 02:02:19.331
so the water capacity is probably less
2207
02:02:19.331 --> 02:02:22.186
than 3 to 50 million gallons could be.
2208
02:02:22.186 --> 02:02:24.814
OK, I want to look at.
2209
02:02:27.870 --> 02:02:33.796
Uhm? Exhibit what is what exhibit is it now?
2210
02:02:45.720 --> 02:02:49.444
Go to Y1. Which is a summary.
2211
02:03:00.990 --> 02:03:04.378
OK can you see this? Some cable I can?
2212
02:03:04.378 --> 02:03:08.192
Yes, so this is a table that shows
2213
02:03:08.192 --> 02:03:11.020
all of the quarterly reports that
2214
02:03:11.020 --> 02:03:14.199
Ambien MI have submitted for the past.
```

```
2215
02:03:14.200 --> 02:03:16.808
Yes, seven quarters. Now.
2216
02:03:19.300 --> 02:03:22.462
Let's go back to November 2020.
2217
02:03:22.462 --> 02:03:25.234
OK, Yep, and let's just assume
2218
02:03:25.234 --> 02:03:27.850
for the sake of argument.
2219
02:03:27.850 --> 02:03:29.446
That all your reservoirs are empty.
2220
02:03:29.450 --> 02:03:31.855
Heaven has never heard that
2221
02:03:31.855 --> 02:03:34.260
all your reservoirs are empty.
2222
02:03:34.260 --> 02:03:36.780
Not since I've been on the farm,
2223
02:03:36.780 --> 02:03:37.222
but nevertheless,
2224
02:03:37.222 --> 02:03:38.990
let's for the sake of argument and for
2225
02:03:39.029 --> 02:03:40.408
the benefit of doubt for you folks.
2226
02:03:40.410 --> 02:03:43.338
Let's assume that on November 1st.
2227
02:03:43.340 --> 02:03:48.050
2020 These UM reservoirs were empty.
2228
02:03:48.050 --> 02:03:53.300
```

```
Now there was 18.11 million gallons of water.
2229
02:03:53.300 --> 02:03:56.888
Per day entering into these reservoirs.
2230
02:03:56.890 --> 02:04:00.796
Now, if you multiply that by 30.
2231
02:04:00.800 - -> 02:04:04.234
OK, 30 days in a month N31 I think,
2232
02:04:04.234 --> 02:04:06.450
but let's say maybe I can't keep track.
2233
02:04:06.450 --> 02:04:08.871
But let's say that 30 days to make the
2234
02:04:08.871 --> 02:04:12.100
math easier and you multiply 18 by 30,
2235
02:04:12.100 --> 02:04:16.068
get 540 million gallons.
2236
02:04:16.070 --> 02:04:18.670
That sounds about right.
2237
02:04:18.670 --> 02:04:20.890
I'll take your word for it.
2238
02:04:20.890 --> 02:04:22.470
8 * 3 is 24,
2239
02:04:22.470 --> 02:04:24.180
so you carry the two,
2240
02:04:24.180 --> 02:04:26.060
two and one so.
2241
02:04:29.030 --> 02:04:32.171
I said 2 + 3 is to get 540 million gallons.
```

```
2242
02:04:32.171 --> 02:04:37.280
So in the month of November 2020.
2243
02:04:37.280 --> 02:04:40.031
You would have 540 million gallons of
2244
02:04:40.031 --> 02:04:42.440
water deposited into these reservoirs,
2245
02:04:42.440 --> 02:04:44.498
which appeared to have a capacity
2246
02:04:44.498 --> 02:04:46.784
of less than 350 million gallons.
2247
02:04:46.784 --> 02:04:50.485
So it's 5:40 and 3:50. That's five
2248
02:04:50.485 --> 02:04:53.350
forty significantly more than 350.
2249
02:04:53.350 --> 02:04:57.118
Where is all that water going?
2250
02:04:57.120 --> 02:04:58.125
But Mr. Franco,
2251
02:04:58.125 --> 02:05:01.170
I believe that water is going to recharge,
2252
02:05:01.170 --> 02:05:02.400
and I know everybody has a
2253
02:05:02.400 --> 02:05:03.220
different definition of this,
2254
02:05:03.220 --> 02:05:06.364
but we rely on EU S Geological Study
2255
02:05:08.440 --> 02:05:10.660
```

```
2014, 5168. That was conducted
2256
02:05:10.660 --> 02:05:12.880
that was conducted, I believe,
2257
02:05:12.880 --> 02:05:17.016
in the 2000 through 2008 or ten period,
2258
02:05:17.020 - -> 02:05:19.939
and that it states that those aquifers
2259
02:05:19.939 --> 02:05:23.128
rely on reservoir recharge in that area
2260
02:05:23.128 --> 02:05:25.448
to sustain the groundwater yields.
2261
02:05:25.450 --> 02:05:27.720
And it helps maintain additionally.
2262
02:05:27.720 --> 02:05:30.880
The salinity level, so it's not as brackish.
2263
02:05:30.880 --> 02:05:33.218
We have records that show that the
2264
02:05:33.218 --> 02:05:35.157
water gets really brackish when
2265
02:05:35.157 --> 02:05:37.299
you begin to enter into longer,
2266
02:05:37.300 --> 02:05:39.145
sustained pumping areas.
2267
02:05:39.145 --> 02:05:42.835
Understood, so let's go to so.
2268
02:05:42.840 --> 02:05:46.256
So by the end of November 2020,
```

```
2269
02:05:46.260 --> 02:05:48.125
these reservoirs are completely full
2270
02:05:48.125 --> 02:05:50.789
based on all the pumping in November.
2271
02:05:50.790 --> 02:05:53.974
So then we get to December and we're
2272
02:05:53.974 --> 02:05:56.303
pumping another 19.91 million gallons
2273
02:05:56.303 --> 02:05:59.369
every day into reservoirs that are
2274
02:05:59.369 --> 02:06:02.190
theoretically full or are draining at an
2275
02:06:02.190 --> 02:06:04.466
incredible rate into the ground, right?
2276
02:06:04.466 --> 02:06:06.467
That's a lot of water, so in this.
2277
02:06:06.467 --> 02:06:09.402
Month alone if if if the if the
2278
02:06:09.402 --> 02:06:12.222
reservoirs are already full by the
2279
02:06:12.222 --> 02:06:15.622
end of November in December you're
2280
02:06:15.622 --> 02:06:18.158
pumping in another approximately
2281
02:06:18.160 --> 02:06:19.760
600 million gallons into these
2282
02:06:19.760 --> 02:06:21.360
```

```
reservoirs where the 600 million
2283
02:06:21.412 --> 02:06:23.190
gallons in the course of the month.
2284
02:06:23.190 --> 02:06:24.430
Where is that water going?
2285
02:06:24.430 - -> 02:06:26.090
It's going all down.
2286
02:06:26.090 --> 02:06:28.165
It's draining into the aquifer.
2287
02:06:28.170 --> 02:06:30.060
I I couldn't tell you where it all goes Mr.
2288
02:06:30.060 --> 02:06:30.443
Frankel.
2289
02:06:30.443 --> 02:06:34.180
And then you get to January of 2021,
2290
02:06:34.180 - -> 02:06:36.830
another 21.3 million gallons to
2291
02:06:36.830 --> 02:06:38.830
every single day into reservoirs,
2292
02:06:38.830 --> 02:06:41.180
which by now certainly should
2293
02:06:41.180 - -> 02:06:43.060
be overflowing capacity unless
2294
02:06:43.060 --> 02:06:45.204
they're draining like a calendar
2295
02:06:45.204 --> 02:06:47.610
that I drained my spaghetti into.
```

```
2296
02:06:47.610 --> 02:06:50.190
Those reservoirs are draining fast,
2297
02:06:50.190 --> 02:06:52.480
aren't they?
2298
02:06:52.480 --> 02:06:56.128
You're gonna object to counsel's testimony.
2299
02:06:59.790 --> 02:07:02.202
Yeah, uh, can you just stick
2300
02:07:02.202 --> 02:07:03.770
to your questions, right?
2301
02:07:03.770 --> 02:07:05.210
Those those reservoirs are
2302
02:07:05.210 --> 02:07:07.102
draining really fast, aren't they?
2303
02:07:07.102 --> 02:07:08.726
Mr, That's your statement.
2304
02:07:08.730 - -> 02:07:11.277
Mr Frank will not mine and I'm asking you.
2305
02:07:11.280 --> 02:07:13.890
Aren't they draining really quickly
2306
02:07:13.890 --> 02:07:15.630
with the information you provided?
2307
02:07:15.630 --> 02:07:18.414
I can't make that determination and you
2308
02:07:18.414 --> 02:07:19.828
don't know where this so you don't.
2309
02:07:19.830 - -> 02:07:22.110
```

```
You don't know where this
2310
02:07:22.110 --> 02:07:23.934
unused water goes do.
2311
02:07:23.940 --> 02:07:26.610
Excuse me you don't know
2312
02:07:26.610 --> 02:07:29.280
where this unused water goes.
2313
02:07:29.280 --> 02:07:30.456
As I stated before,
2314
02:07:30.456 --> 02:07:32.220
it goes to recharge of the
2315
02:07:32.289 --> 02:07:33.569
groundwater aquifer.
2316
02:07:33.570 --> 02:07:36.335
Because you have personal knowledge of that.
2317
02:07:36.340 --> 02:07:37.172
I don't.
2318
02:07:37.172 --> 02:07:41.470
I was relying on a study that I've reviewed.
2319
02:07:41.470 --> 02:07:42.559
No further questions.
2320
02:07:46.080 --> 02:07:47.420
Could you stop screen
2321
02:07:47.420 --> 02:07:49.190
share please? Yep, sorry.
2322
02:07:52.670 --> 02:07:57.010
Right Mr Caughey. Is it a should?
```

```
2323
02:07:57.010 --> 02:07:59.709
Is it a good time for a break or would
2324
02:07:59.709 --> 02:08:03.129
like a little bit, yeah. OK, thank you.
2325
02:16:16.790 --> 02:16:19.409
Michael Kido, I think you have your audio on.
2326
02:16:27.020 --> 02:16:28.280
If you could put it on mute,
2327
02:16:28.280 --> 02:16:29.148
that would be helpful.
2328
02:16:31.990 --> 02:16:34.158
OK, see. Thank you.
2329
02:16:36.510 --> 02:16:41.118
Uhm? Right, we're just waiting for Mr.
2330
02:16:41.120 --> 02:16:43.460
Franklin. Then we'll get going again,
2331
02:16:43.460 --> 02:16:47.428
alright, forget it all. OK, uhm. So.
2332
02:16:47.428 --> 02:16:52.200
Just to touch base on the schedule here.
2333
02:16:52.200 --> 02:16:53.352
Well, first of all,
2334
02:16:53.352 --> 02:16:55.558
back on the tape, it's 1118.
2335
02:16:55.558 --> 02:16:59.226
Uhm will be finishing with Mr Hal.
2336
02:16:59.230 --> 02:17:01.379
```

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We have one other person Michelle Reynolds,
2337
02:17:01.380 --> 02:17:04.326
scheduled for today. So Mr Frankel,
2338
02:17:04.330 --> 02:17:06.950
I think this would be a good time to work
2339
02:17:07.022 --> 02:17:09.647
in some of your witnesses this afternoon.
2340
02:17:09.650 --> 02:17:12.947
So, uhm, so doctor Oz is available.
2341
02:17:12.950 --> 02:17:15.130
1:30 that was the time
2342
02:17:15.130 --> 02:17:17.920
that I let the child know.
2343
02:17:17.920 --> 02:17:19.915
Lucian has a site visit at one,
2344
02:17:19.920 --> 02:17:23.014
so she's not going to be available.
2345
02:17:23.020 --> 02:17:25.460
Uh, I don't think any of our mean
2346
02:17:25.460 --> 02:17:27.469
the county actually goes next,
2347
02:17:27.470 --> 02:17:29.390
but the county is not providing
2348
02:17:29.390 --> 02:17:30.670
their witness till Tuesday,
2349
02:17:30.670 --> 02:17:31.454
so it's not really.
```

```
2350
02:17:31.454 --> 02:17:32.630
We're not going to take any
2351
02:17:32.676 --> 02:17:33.930
of our witnesses out of order.
2352
02:17:45.490 --> 02:17:47.978
What about Merlin stop?
2353
02:17:47.980 --> 02:17:51.109
Uh, she I think she said she's
2354
02:17:51.109 --> 02:17:53.329
available on Tuesday the 14th.
2355
02:17:53.330 --> 02:17:57.146
You never got back to me this afternoon.
2356
02:17:57.150 --> 02:17:58.998
Excuse me, can you find out if
2357
02:17:58.998 --> 02:18:00.370
she's available this afternoon?
2358
02:18:02.710 --> 02:18:05.640
Uhm? This year, are you listening?
2359
02:18:05.640 --> 02:18:06.756
Can you send her a text?
2360
02:18:10.990 --> 02:18:13.456
Uhm, I can, but you know,
2361
02:18:13.460 --> 02:18:14.905
lots of people have power
2362
02:18:14.905 --> 02:18:16.350
out in Internet out here.
2363
02:18:16.350 --> 02:18:18.850
```

```
Still, they haven't fixed everything,
2364
02:18:18.850 --> 02:18:20.610
so hopefully she'll get it.
2365
02:18:20.610 --> 02:18:22.394
No guarantees, thank you.
2366
02:18:22.394 --> 02:18:24.178
Hopefully should have Internet.
2367
02:18:24.180 --> 02:18:25.320
Thank you for checking.
2368
02:18:28.040 --> 02:18:30.940
OK, uh, let's continue with
2369
02:18:30.940 --> 02:18:34.320
Mr how misogi you are up.
2370
02:18:36.860 --> 02:18:40.524
Thank you. Hi Mr Howe,
2371
02:18:40.524 --> 02:18:42.396
good morning again morning.
2372
02:18:42.400 --> 02:18:44.856
I just have a couple of areas that
2373
02:18:44.856 --> 02:18:47.500
I want to cover with you that
2374
02:18:47.500 --> 02:18:49.450
were addressed by Mr Frankel.
2375
02:18:49.450 --> 02:18:52.620
So, uhm, their first is.
2376
02:18:52.620 --> 02:18:56.708
You had, Mr. Franco had asked you
```

```
2377
02:18:56.708 --> 02:18:59.980
about UM exhibit export team,
2378
02:18:59.980 --> 02:19:03.280
which was a table of.
2379
02:19:03.280 --> 02:19:06.794
Mahi Pono is water requirements by crop.
2380
02:19:06.800 --> 02:19:09.296
Do you remember him asking you about that?
2381
02:19:09.300 --> 02:19:14.210
I do. OK, and you had mentioned
2382
02:19:14.210 --> 02:19:15.590
crop coefficients.
2383
02:19:15.590 --> 02:19:18.857
Can you tell us what a crop coefficient is?
2384
02:19:18.860 --> 02:19:22.856
So crop coefficient is the measurement
2385
02:19:22.856 --> 02:19:26.332
they use to differentiate the base
2386
02:19:26.332 --> 02:19:28.362
of apple transpiration rate for
2387
02:19:28.362 --> 02:19:30.250
each different types of crops.
2388
02:19:30.250 --> 02:19:31.606
So for example,
2389
02:19:31.606 --> 02:19:34.318
everybody is familiar with sugar cane,
2390
02:19:34.320 --> 02:19:38.877
```

I believe it has a crop coefficient of 1.1.

```
2391
02:19:38.877 --> 02:19:41.662
Everybody had also is additionally
2392
02:19:41.662 --> 02:19:43.890
familiar with Mac nuts,
2393
02:19:43.890 --> 02:19:46.830
and depending on the elevation it has
2394
02:19:46.830 --> 02:19:49.296
their crop coefficient from point 82.95,
2395
02:19:49.296 --> 02:19:52.278
and so you take that crop coefficient
2396
02:19:52.278 --> 02:19:54.887
and multiply that times the base
2397
02:19:54.887 --> 02:19:56.982
evapor transpiration rate to come
2398
02:19:56.982 --> 02:20:00.060
up with your daily crop water
2399
02:20:00.060 --> 02:20:03.710
needs for that specific crop.
2400
02:20:03.710 --> 02:20:07.182
So when you see the base Eve
2401
02:20:07.182 --> 02:20:08.670
Apple transpiration rate,
2402
02:20:08.670 --> 02:20:10.632
are you talking about a like
2403
02:20:10.632 --> 02:20:13.430
a reference crop? Correct?
```

```
2404
02:20:13.430 - -> 02:20:14.669
OK, so uhm.
2405
02:20:14.669 --> 02:20:18.870
In that case of from a hippos calculation,
2406
02:20:18.870 --> 02:20:20.742
it was at the alfalfa that
2407
02:20:20.742 --> 02:20:21.990
was the reference group.
2408
02:20:21.990 --> 02:20:22.584
It's alfalfa,
2409
02:20:22.584 --> 02:20:24.366
and also there's a grass crop
2410
02:20:24.366 --> 02:20:26.227
that the state of Hawaii uses.
2411
02:20:26.230 --> 02:20:29.320
So we used a combination thereof
2412
02:20:29.320 --> 02:20:31.564
because alfalfa has a deeper
2413
02:20:31.564 --> 02:20:34.150
root system then the grass crop,
2414
02:20:34.150 --> 02:20:36.446
and so citrus trees and other permanent
2415
02:20:36.446 --> 02:20:38.747
type crops have a deeper root system,
2416
02:20:38.750 --> 02:20:41.004
so we chose to use the combination
2417
02:20:41.004 --> 02:20:41.970
```

```
of the two.
2418
02:20:41.970 --> 02:20:43.972
So we made sure we had an
2419
02:20:43.972 --> 02:20:45.595
accurate measurement and just not
2420
02:20:45.595 --> 02:20:46.657
a surface measurement.
2421
02:20:46.660 --> 02:20:50.668
OK, and you had mentioned evapotranspiration.
2422
02:20:50.670 --> 02:20:53.494
Can you just tell us what that is?
2423
02:20:53.500 --> 02:20:53.930
Well,
2424
02:20:53.930 --> 02:20:57.370
I'm not a soil scientist or an agronomist,
2425
02:20:57.370 --> 02:21:00.177
but it it's it's a measurement of
2426
02:21:00.177 --> 02:21:03.257
the amount of water a Livia a plant
2427
02:21:03.260 --> 02:21:06.160
transpires during a certain period
2428
02:21:06.160 --> 02:21:10.080
of time during the day or month,
2429
02:21:10.080 --> 02:21:11.870
or whatever.
2430
02:21:11.870 --> 02:21:12.331
OK,
```

```
2431
02:21:12.331 --> 02:21:15.097
so when you're trying to come
2432
02:21:15.100 --> 02:21:16.830
when you irrigate your crops,
2433
02:21:16.830 --> 02:21:19.190
are you trying to replace amount of the
2434
02:21:19.190 --> 02:21:21.888
amount of water that has evap or transpired?
2435
02:21:21.890 --> 02:21:23.810
Yes.
2436
02:21:23.810 --> 02:21:24.194
OK,
2437
02:21:24.194 --> 02:21:25.730
so that's the general,
2438
02:21:25.730 --> 02:21:26.345
UM?
2439
02:21:26.345 --> 02:21:28.805
I guess association between
2440
02:21:28.805 --> 02:21:30.650
evapotranspiration and determining
2441
02:21:30.650 --> 02:21:33.710
irrigation needs correct and there there
2442
02:21:33.710 --> 02:21:36.332
are other factors such as rainfall,
2443
02:21:36.340 --> 02:21:37.756
wind temperature,
2444
02:21:37.756 --> 02:21:38.464
```

```
location,
2445
02:21:38.464 --> 02:21:41.296
soil water holding capacity.
2446
02:21:41.300 --> 02:21:43.802
There's there's a variety of other
2447
02:21:43.802 --> 02:21:45.890
things that contribute to this.
2448
02:21:45.890 --> 02:21:47.918
So the amount of applied water
2449
02:21:47.918 --> 02:21:50.420
needed for a crop up state in
2450
02:21:50.420 --> 02:21:52.574
Hawaii may be different than the
2451
02:21:52.574 --> 02:21:54.767
amount of applied water needed for
2452
02:21:54.767 --> 02:21:57.118
that same crop stay in Florida.
2453
02:21:57.118 --> 02:22:01.440
That would be correct. OK.
2454
02:22:01.440 --> 02:22:02.794
Now, Mr.
2455
02:22:02.794 --> 02:22:06.434
Frankel was asking you about I'm
2456
02:22:06.434 --> 02:22:08.314
going to pull up an exhibit, Mickey,
2457
02:22:08.314 --> 02:22:11.125
if you could pull up exhibit X13,
```

```
2458
02:22:11.125 --> 02:22:11.810
please.
2459
02:22:27.210 --> 02:22:28.356
Great, thank you.
2460
02:22:28.356 --> 02:22:30.648
Do you remember Mr Franco asking
2461
02:22:30.648 --> 02:22:34.040
you about this exhibit? I do.
2462
02:22:34.040 --> 02:22:38.944
OK, and Mr Frankel was asking you about.
2463
02:22:38.950 --> 02:22:43.210
Water diversion amounts in the November
2464
02:22:43.210 --> 02:22:46.910
2 0 2 0 ~ D e c e m b e r ~ 2 0 2 0 ~ J a n u a r y ~ 2 0 2 1 ~ t i m e f r a m e .
2465
02:22:46.910 --> 02:22:49.490
Do you recall that I do?
2466
02:22:49.490 --> 02:22:53.396
OK, in your declaration you talk
2467
02:22:53.396 --> 02:22:56.000
about some operational changes
2468
02:22:56.106 --> 02:22:59.081
that were made in June of 2021.
2469
02:22:59.081 --> 02:23:02.209
Do you recall that part of your declaration?
2470
02:23:02.210 --> 02:23:06.615
I do? OK, and would you say
2471
02:23:06.615 --> 02:23:08.907
```

```
that these operational changes
2472
02:23:08.907 --> 02:23:11.812
that were made in June 2021?
2473
02:23:11.812 --> 02:23:14.802
Did that make Mahi pono's water
2474
02:23:14.802 --> 02:23:17.690
use more or less efficient more?
2475
02:23:19.910 --> 02:23:23.960
So the water diversion amounts.
2476
02:23:26.410 --> 02:23:31.716
From before June 2021, well,
2477
02:23:31.716 --> 02:23:33.594
let me ask it this way.
2478
02:23:33.600 --> 02:23:37.149
What is a more accurate reflection of
2479
02:23:37.149 --> 02:23:39.920
the efficiency of makimono's water?
2480
02:23:39.920 --> 02:23:43.670
Use the diversion numbers before June
2481
02:23:43.670 --> 02:23:48.370
2021 or the numbers from June 2021 on.
2482
02:23:48.370 --> 02:23:50.220
I would say the numbers
2483
02:23:50.220 --> 02:23:54.520
June 2021 on as the farm.
2484
02:23:54.520 --> 02:23:57.684
Gain some size and planted acres increase.
```

```
2485
02:23:57.690 - -> 02:24:01.620
We've been able to run water 24 hours a day,
2486
02:24:01.620 --> 02:24:03.630
so when we complete an
2487
02:24:03.630 --> 02:24:05.640
irrigation cycle on a field,
2488
02:24:05.640 --> 02:24:07.200
that water goes directly to the
2489
02:24:07.200 --> 02:24:08.869
next field and the next field,
2490
02:24:08.870 --> 02:24:11.530
and then we can cycle back around
2491
02:24:11.530 --> 02:24:14.915
and so we don't have to deal with the
2492
02:24:14.915 --> 02:24:17.337
reactionary time on a system designed
2493
02:24:17.337 --> 02:24:19.975
to divert }165\mathrm{ million MGD and we're
2494
02:24:19.975 --> 02:24:22.399
operating at a small fraction of that.
2495
02:24:22.400 --> 02:24:25.768
So as time increases in our planting acres.
2496
02:24:25.770 --> 02:24:28.510
Increase in water demands increase.
2497
02:24:28.510 --> 02:24:31.291
We hope not to put hardly any water in
2498
02:24:31.291 --> 02:24:34.014
```

```
the reservoirs and it'll be all diverted
2499
02:24:34.014 --> 02:24:37.120
to to the fields and manage that way.
2500
02:24:37.120 --> 02:24:39.752
But it takes time to get to a
2501
02:24:39.752 --> 02:24:41.561
certain critical mass where it
2502
02:24:41.561 --> 02:24:43.709
allows you to operate that way.
2503
02:24:43.710 --> 02:24:44.289
Additionally,
2504
02:24:44.289 --> 02:24:47.184
sometimes there's a few fields
2505
02:24:47.184 --> 02:24:50.149
that the reservoir actually serves
2506
02:24:50.149 --> 02:24:52.098
as the pressurization unit,
2507
02:24:52.098 --> 02:24:53.646
so we don't use any energy.
2508
02:24:53.650 --> 02:24:55.110
The water enters the reservoir,
2509
02:24:55.110 --> 02:24:56.046
it has an elevation.
2510
02:24:56.046 --> 02:24:57.450
And then it flows down and
2511
02:24:57.504 --> 02:24:58.849
served four or five fields.
```

```
2512
02:24:58.850 --> 02:25:00.103
So there are going to be sometimes
2513
02:25:00.103 --> 02:25:01.433
in the future where we need to
2514
02:25:01.433 --> 02:25:02.368
put water in the reservoirs.
2515
02:25:02.370 --> 02:25:04.485
But it's it's going to be a pass through,
2516
02:25:04.490 --> 02:25:08.010
but it takes us a certain critical mass.
2517
02:25:08.010 --> 02:25:10.746
Taken a system and re using it for
2518
02:25:10.746 --> 02:25:13.164
a completely different use than it
2519
02:25:13.164 --> 02:25:15.654
was engineered for in the beginning
2520
02:25:15.727 --> 02:25:17.967
over 100 years ago and so it's
2521
02:25:17.967 --> 02:25:20.414
taken us some time to learn that.
2522
02:25:20.414 --> 02:25:22.269
Get that and get these.
2523
02:25:22.270 --> 02:25:24.100
The trees and fields installed.
2524
02:25:24.100 --> 02:25:26.508
It's about a 20 month process from the
2525
02:25:26.508 --> 02:25:29.047
```

```
day we decide we're going to plant.
2526
02:25:29.050 --> 02:25:31.578
Be certain field by the time we get
2527
02:25:31.578 --> 02:25:33.653
the trees purchased or propagated,
2528
02:25:33.653 --> 02:25:36.058
grown and nursery to size.
2529
02:25:36.060 --> 02:25:38.080
Perch design the irrigation system.
2530
02:25:38.080 --> 02:25:41.188
Purchase it, get all the NRCS permits,
2531
02:25:41.190 --> 02:25:43.470
and do that so it's just not something
2532
02:25:43.470 --> 02:25:45.798
that happens within a short period of time.
2533
02:25:45.800 --> 02:25:47.660
So now that we're in progress,
2534
02:25:47.660 --> 02:25:51.615
we should see improvements in these areas,
2535
02:25:51.620 --> 02:25:53.320
and I I will say,
2536
02:25:53.320 --> 02:25:56.729
Mahi Pono is committed to being transparent,
2537
02:25:56.730 --> 02:25:58.380
and we're only going to divert
2538
02:25:58.380 --> 02:25:59.480
the water we need.
```

```
2539
02:25:59.480 - -> 02:26:01.867
And I think this chart shows a
2540
02:26:01.867 --> 02:26:03.700
commitment to continuous improvement.
2541
02:26:03.700 --> 02:26:05.744
And we understand that we need to
2542
02:26:05.744 --> 02:26:08.190
do our part to continually improve.
2543
02:26:10.270 --> 02:26:11.700
Thank you Nikki. You can
2544
02:26:11.700 --> 02:26:12.844
stop sharing your screen.
2545
02:26:16.200 --> 02:26:18.069
Thank you, I have no further questions.
2546
02:26:21.160 --> 02:26:23.379
Now we counted. I have no questions
2547
02:26:23.379 --> 02:26:27.270
for this witness, thank you right up.
2548
02:26:27.270 --> 02:26:30.378
Mr Frankel anything more. Yes please.
2549
02:26:34.100 --> 02:26:36.228
So these you talked about you just
2550
02:26:36.228 --> 02:26:38.003
talked about this operational changes
2551
02:26:38.003 --> 02:26:40.800
that occurs in 2021 on June. Uhm,
2552
02:26:40.800 --> 02:26:44.329
```

and in the future you're hardly going to use.
2553
02:26:44.330 --> 02:26:46.110
A water in the reservoir,
2554
02:26:46.110 --> 02:26:48.838
I mean the with that caveat you noted,

```
2555
```

02:26:48.840 --> 02:26:52.215
when do you think this is going to occur?
2556
02:26:52.220 --> 02:26:55.090
We will. I can't tell you specifically,
2557
02:26:55.090 --> 02:26:57.938
but overtime, hopefully by the end of and
2558
02:26:57.938 --> 02:27:00.916
it depends on a lot of things on hydrology,
2559
02:27:00.920 --> 02:27:03.538
what the inflow is if we have
2560
02:27:03.538 --> 02:27:05.739
enough water to meet demand.
2561
02:27:05.740 --> 02:27:07.492
If not, we may have to put well
2562
02:27:07.492 --> 02:27:08.777
water in reservoirs at times
2563
02:27:08.777 --> 02:27:10.618
so we can build up a supply.
2564
02:27:10.620 --> 02:27:12.671
So it's a question $I$ can't give
2565
02:27:12.671 --> 02:27:14.930
you a specific answer other than we

```
2566
02:27:14.930 --> 02:27:17.500
will work towards it and we will
2567
02:27:17.500 --> 02:27:19.180
openly and transparently report.
2568
02:27:19.180 --> 02:27:20.810
Have we've been doing so.
2569
02:27:20.810 --> 02:27:23.827
And as we make. Progress towards that.
2570
02:27:23.830 --> 02:27:25.670
Well, so but well,
2571
02:27:25.670 --> 02:27:28.430
are you talking months or years?
2572
02:27:28.430 --> 02:27:29.670
I couldn't tell you I.
2573
02:27:29.670 --> 02:27:30.930
I mean, it's going to be years.
2574
02:27:30.930 --> 02:27:31.944
It's not going to happen in
2575
02:27:31.944 --> 02:27:32.930
a short order or months,
2576
02:27:32.930 --> 02:27:35.474
but we will continue to endeavor
2577
02:27:35.474 --> 02:27:36.746
to make improvements.
2578
02:27:36.750 --> 02:27:39.522
As we've shown since June and will
2579
02:27:39.522 --> 02:27:41.830
```

```
continue to our best efforts.
2580
02:27:41.830 --> 02:27:43.214
And why is that?
2581
02:27:43.214 --> 02:27:45.290
Because the farm is growing and
2582
02:27:45.368 --> 02:27:47.278
the crop water requirements are
2583
02:27:47.278 --> 02:27:50.371
growing and so we can use the water
2584
02:27:50.371 --> 02:27:52.947
efficiently and get more into a sweet
2585
02:27:52.950 --> 02:27:55.110
spot on how the system operates.
2586
02:27:55.110 --> 02:27:57.438
The system was designed }100\mathrm{ years
2587
02:27:57.438 --> 02:27:59.700
ago for large volumes of water.
2588
02:27:59.700 --> 02:28:02.885
When we want to get into these
2589
02:28:02.885 --> 02:28:03.795
infinitesimal adjustments,
2590
02:28:03.800 - -> 02:28:06.880
it's very hard to make those in there
2591
02:28:06.880 --> 02:28:09.337
1224 hours away before you see him on farm.
2592
02:28:09.340 --> 02:28:11.662
It's very precise the adjustments and
```

```
2593
02:28:11.662 --> 02:28:14.772
then we have the county relying on us
2594
02:28:14.772 --> 02:28:17.300
and some other users relying on us.
2595
02:28:17.300 --> 02:28:19.732
So it's it's a very fine increment and
2596
02:28:19.732 --> 02:28:22.409
it would be irresponsible for us to say,
2597
02:28:22.410 --> 02:28:23.580
yeah, we can do it tomorrow,
2598
02:28:23.580 --> 02:28:24.956
or we can do it in six months.
2599
02:28:24.960 --> 02:28:27.480
It's going to take years to get it just
2600
02:28:27.480 --> 02:28:29.756
right and we need to get the farm up.
2601
02:28:29.760 --> 02:28:32.292
To maturity and get a balanced
2602
02:28:32.292 --> 02:28:34.860
point of operating to make these
2603
02:28:34.860 --> 02:28:37.639
decisions based on a spot in time
2604
02:28:37.640 --> 02:28:40.838
when the whole thing's been changed.
2605
02:28:40.840 --> 02:28:43.240
From how it's operated for over a century,
2606
02:28:43.240 - -> 02:28:44.995
```

```
and to say we're going to do it tomorrow,
2607
02:28:45.000 --> 02:28:45.780
I would.
2608
02:28:45.780 --> 02:28:48.120
We had irresponsible statement by myself,
2609
02:28:48.120 --> 02:28:48.742
I understand,
2610
02:28:48.742 --> 02:28:50.919
but you seem to suggest when Mr
2611
02:28:50.919 --> 02:28:52.819
Caughey asked you that the time
2612
02:28:52.819 --> 02:28:55.035
frame for hardly putting any water in
2613
02:28:55.035 --> 02:28:57.226
reservoirs was going to be pretty soon.
2614
02:28:57.230 --> 02:28:59.174
And now you're suggesting it's going
2615
02:28:59.174 --> 02:29:01.185
to be several years away, right?
2616
02:29:01.185 --> 02:29:03.375
Well, pretty soon in the farm.
2617
02:29:03.380 --> 02:29:06.540
Mr Frankel, it's it's a 10 or }12\mathrm{ year cycle.
2618
02:29:06.540 --> 02:29:08.550
So pretty soon a couple years
2619
02:29:08.550 --> 02:29:10.800
is pretty quick in my estimate.
```

```
2620
02:29:10.800 - -> 02:29:12.508
Thank you now again.
2621
02:29:14.690 --> 02:29:16.985
So you are hoping to use the water more
2622
02:29:16.985 --> 02:29:20.534
efficiently than you have been, correct? Uh,
2623
02:29:20.534 --> 02:29:24.086
not that we've just begun using the water.
2624
02:29:24.090 --> 02:29:26.034
So we believe we are using
2625
02:29:26.034 --> 02:29:27.330
the water very efficiently.
2626
02:29:27.330 --> 02:29:28.950
Well, Mr Caughey presented that.
2627
02:29:28.950 --> 02:29:30.564
You've been using it far more
2628
02:29:30.564 --> 02:29:32.210
efficiently since June then you agreed.
2629
02:29:32.210 --> 02:29:34.070
So is that not true?
2630
02:29:34.070 --> 02:29:35.810
No, that that's a true statement,
2631
02:29:35.810 --> 02:29:38.522
and it's just based on there's more acres
2632
02:29:38.522 --> 02:29:41.565
and so we have irrigation needs that
2633
02:29:41.565 --> 02:29:43.930
```

```
continually operate around the clock.
2634
02:29:43.930 --> 02:29:46.126
So you, you're operating more efficiently
2635
02:29:46.126 --> 02:29:48.819
now than you were prior to June, correct?
2636
02:29:48.819 --> 02:29:49.686
That's correct, yes.
2637
02:29:49.686 --> 02:29:52.100
So you are not using the water as
2638
02:29:52.100 --> 02:29:53.900
efficiently prior to June, correct?
2639
02:29:53.900 --> 02:29:56.650
I wouldn't say as efficiently
2640
02:29:56.650 --> 02:29:58.850
is is a characterization.
2641
02:29:58.850 --> 02:30:00.446
I still believe we were using
2642
02:30:00.446 --> 02:30:01.510
the water efficiently before.
2643
02:30:01.510 --> 02:30:02.650
Well, if it's more efficiently
2644
02:30:02.650 - -> 02:30:04.380
now than it was less efficiently.
2645
02:30:04.380 --> 02:30:06.138
Before, let's not play word games.
2646
02:30:06.140 --> 02:30:07.752
Mr Ho, Mr Frankel.
```

```
2647
02:30:07.752 --> 02:30:10.170
We're going to keep this civil.
2648
02:30:10.170 --> 02:30:13.830
Thank you. So Mr. Hal.
2649
02:30:13.830 --> 02:30:15.588
You are using water less efficiently
2650
02:30:15.588 --> 02:30:17.590
than you are now prior to June,
2651
02:30:17.590 --> 02:30:18.031
correct?
2652
02:30:18.031 --> 02:30:21.118
No, the system is operating more efficiently
2653
02:30:21.118 --> 02:30:24.459
now due to greater lengths of irrigation,
2654
02:30:24.460 --> 02:30:26.090
which means it was operating
2655
02:30:26.090 --> 02:30:27.720
less efficiently prior to June,
2656
02:30:27.720 --> 02:30:28.177
right?
2657
02:30:28.177 --> 02:30:29.548
Frank will come.
2658
02:30:33.180 --> 02:30:35.763
You know you see him to say it a
2659
02:30:35.763 --> 02:30:37.697
different way because I'm pretty,
2660
02:30:37.700 --> 02:30:40.838
```

I'm pretty clear what he's saying.

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2661
```

02:30:40.840 --> 02:30:42.835
He doesn't want to admit the obvious,
2662
02:30:42.840 --> 02:30:44.535
which is obvious.
2663
02:30:44.535 --> 02:30:47.925
The system was using water less
2664
02:30:47.925 --> 02:30:50.547
efficiently then prior to June 2021
2665
02:30:50.547 --> 02:30:52.269
then you're asserting it's using now,
2666
02:30:52.270 --> 02:30:53.782
correct? I I'm gonna ask Mr
2667
02:30:53.782 --> 02:30:55.719
how to say it one more time.
2668
02:30:55.720 --> 02:30:56.989
And then we're going to be done with that.
2669
02:30:59.060 --> 02:31:02.764
Prior to June we did not have enough
2670
02:31:02.764 --> 02:31:05.934
acres planted to operate the delivery
2671
02:31:05.934 --> 02:31:09.156
system as efficiently as we could.
2672
02:31:09.160 --> 02:31:12.248
We did not have 24 hour irrigation cycles,
2673
02:31:12.250 --> 02:31:14.426
so when we finished one field we couldn't

```
2674
02:31:14.426 --> 02:31:16.920
move it right to the next field currently.
2675
02:31:16.920 --> 02:31:19.116
Now as the farm has grown
2676
02:31:19.116 --> 02:31:20.214
planting tab increased.
2677
02:31:20.220 --> 02:31:23.660
We have the ability to use the farm,
2678
02:31:23.660 --> 02:31:26.120
the water continuously on the farm,
2679
02:31:26.120 --> 02:31:29.282
reducing the need to make diversions
2680
02:31:29.282 --> 02:31:31.404
to reservoirs so you no longer
2681
02:31:31.404 --> 02:31:33.752
need to have as much water in the
2682
02:31:33.752 --> 02:31:35.798
reservoirs as you were having before,
2683
02:31:35.800 --> 02:31:39.308
correct before June 2021.
2684
02:31:39.310 --> 02:31:42.836
Uh, correct, and that's a good thing, right?
2685
02:31:42.836 --> 02:31:45.366
That could be your determination.
2686
02:31:45.370 --> 02:31:46.880
I'm asking for your opinion.
2687
02:31:46.880 --> 02:31:49.480
```

Is that a good thing to have less

```
2688
02:31:49.480 --> 02:31:51.658
water going to those reservoirs?
2689
02:31:51.660 --> 02:31:53.535
Uh, that's dependent upon hydraulic
2690
02:31:53.535 --> 02:31:56.106
conditions and you know a lot of
2691
02:31:56.106 --> 02:31:57.996
other factors that factor in that.
2692
02:31:58.000 --> 02:31:59.320
So I'm not in position to
2693
02:31:59.320 --> 02:31:59.980
make that statement.
2694
02:31:59.980 --> 02:32:01.745
Well, you've said you're putting
2695
02:32:01.745 --> 02:32:03.800
less water in the reservoirs now.
2696
02:32:03.800 --> 02:32:06.400
Is that a bad thing?
2697
02:32:06.400 --> 02:32:09.900
I know it's Jackson asked and answered.
2698
02:32:09.900 --> 02:32:13.309
So having less water going into the
2699
02:32:13.309 --> 02:32:15.440
reservoirs is actually a good thing,
2700
02:32:15.440 --> 02:32:15.798
right?
```

```
2701
02:32:15.798 --> 02:32:17.946
He did answer action asked and
2702
02:32:17.946 --> 02:32:19.869
answered and answered that already.
2703
02:32:23.220 --> 02:32:25.170
There's going to be a different
2704
02:32:25.170 --> 02:32:26.145
a different question.
2705
02:32:26.150 --> 02:32:28.046
Thank you. Did not answer the
2706
02:32:28.046 --> 02:32:29.670
question here is Officer case.
2707
02:32:29.670 --> 02:32:31.350
He needs to answer the question.
2708
02:32:31.350 --> 02:32:33.010
You can't prevent me from
2709
02:32:33.010 --> 02:32:34.338
cross examining a witness.
2710
02:32:34.340 --> 02:32:35.880
He can be re directed by Mr.
2711
02:32:35.880 --> 02:32:38.575
Cogley later ask the question one more
2712
02:32:38.575 --> 02:32:42.376
time and he can answer it one more time.
2713
02:32:42.380 --> 02:32:47.140
So. It is a good thing.
2714
02:32:47.140 --> 02:32:50.080
```

```
From my hip owners perspective and
2715
02:32:50.080 --> 02:32:52.040
from the environment perspective
2716
02:32:52.116 --> 02:32:54.881
that there is less water going into
2717
02:32:54.881 --> 02:32:57.164
the reservoirs now than there was
2718
02:32:57.164 --> 02:33:00.980
prior to June 20, 2021, correct?
2719
02:33:00.980 --> 02:33:02.316
As I stated before,
2720
02:33:02.316 --> 02:33:04.320
the farm has become more efficient
2721
02:33:04.385 --> 02:33:06.723
in our use of water because the
2722
02:33:06.723 --> 02:33:08.310
planting has increased and we're
2723
02:33:08.310 --> 02:33:10.390
able to use to use the water too
2724
02:33:10.390 --> 02:33:12.780
in 24 hour irrigation cycles.
2725
02:33:12.780 - -> 02:33:13.732
Six days a week,
2726
02:33:13.732 --> 02:33:15.861
so we have less of a need to
2727
02:33:15.861 --> 02:33:17.745
put the water in the reservoir,
```

```
2728
02:33:17.750 - -> 02:33:19.766
and I'm asking you to characterize that.
2729
02:33:19.770 --> 02:33:21.709
Is that a good thing or not?
2730
02:33:21.710 --> 02:33:23.480
You have not answered that question.
2731
02:33:23.480 --> 02:33:25.080
Is that a good thing?
2732
02:33:25.080 --> 02:33:27.150
Operationally, that's a good thing.
2733
02:33:27.150 - -> 02:33:29.950
Thank you. How about for the environment?
2734
02:33:29.950 --> 02:33:31.480
Is that a good thing?
2735
02:33:31.480 --> 02:33:33.650
I'm not a scientist and I cannot
2736
02:33:33.650 --> 02:33:35.130
provide that answer alright.
2737
02:33:37.670 --> 02:33:39.546
And you don't know when this critical
2738
02:33:39.546 --> 02:33:41.875
mass is going to be achieved or have
2739
02:33:41.875 --> 02:33:43.345
you already achieved the critical
2740
02:33:43.404 --> 02:33:45.138
mass we are working towards that.
2741
02:33:45.140 --> 02:33:47.876
```

```
But as the crops mature their crop water
2742
02:33:47.876 --> 02:33:49.628
requirements will increase as well.
2743
02:33:49.630 --> 02:33:51.478
So it'll take a period of
2744
02:33:51.478 --> 02:33:53.270
time to get things mature,
2745
02:33:53.270 --> 02:33:55.070
get all of our plantings in,
2746
02:33:55.070 --> 02:33:57.212
get off all of our infrastructure
2747
02:33:57.212 --> 02:33:59.004
improvements in so this will
2748
02:33:59.004 --> 02:34:00.774
take a long time to achieve.
2749
02:34:00.780 --> 02:34:04.604
No did my hippo use the Ferris model?
2750
02:34:04.610 --> 02:34:05.780
I don't understand.
2751
02:34:05.780 --> 02:34:07.730
I'm not familiar with that.
2752
02:34:07.730 --> 02:34:10.684
OK, let me bring up this exhibit.
2753
02:34:10.690 --> 02:34:12.738
It's your folks exhibit.
2754
02:34:24.220 --> 02:34:27.781
This is exhibit X24 R shoot can
```

```
2755
02:34:27.781 --> 02:34:31.027
you can you see exhibit X24?
2756
02:34:31.030 --> 02:34:33.697
Uh, yes, if that's what you're sharing
2757
02:34:33.697 --> 02:34:37.129
is the this is developed by Holly Ferris.
2758
02:34:37.130 --> 02:34:38.610
Do you see that?
2759
02:34:38.610 --> 02:34:40.438
Yeah, now did you take data from
2760
02:34:40.438 --> 02:34:42.420
this report or did you actually use
2761
02:34:42.420 --> 02:34:44.328
the software and model he developed?
2762
02:34:44.330 --> 02:34:46.730
Well, I I am familiar with the software,
2763
02:34:46.730 --> 02:34:49.075
it was hard to open and I
2764
02:34:49.075 --> 02:34:50.990
know our design engineers.
2765
02:34:50.990 --> 02:34:52.616
I think they either conferred with
2766
02:34:52.616 --> 02:34:54.770
them or you know they use this data.
2767
02:34:54.770 --> 02:34:56.492
But the model had they had some
2768
02:34:56.492 --> 02:34:57.730
```

```
technical problems with the model.
2769
02:34:57.730 --> 02:34:59.529
It didn't quite operate all the time,
2770
02:34:59.530 --> 02:35:01.000
but I know they've they.
2771
02:35:01.000 --> 02:35:02.554
Had access to it and opened
2772
02:35:02.554 --> 02:35:04.348
it in and use some of it,
2773
02:35:04.350 --> 02:35:06.374
but I'm not sure you'd have to speak
2774
02:35:06.374 --> 02:35:08.014
with them of what portions they
2775
02:35:08.014 --> 02:35:09.790
use or they didn't use all right
2776
02:35:12.140 --> 02:35:18.068
now. Uhm, you talked about using both the,
2777
02:35:18.070 --> 02:35:21.444
uh, data from that old alfalfa report,
2778
02:35:21.450 --> 02:35:23.289
you know, by the way, one that alfalfa
2779
02:35:23.289 --> 02:35:25.446
report was written I, I don't know.
2780
02:35:25.446 --> 02:35:27.351
I was not involved in in the
2781
02:35:27.351 --> 02:35:29.236
middle of those technical details.
```

```
2782
02:35:29.240 - -> 02:35:31.207
OK, but you also said you looked
2783
02:35:31.207 --> 02:35:33.586
at that and you look at some data
2784
02:35:33.586 --> 02:35:35.440
from graphs at the state uses.
2785
02:35:35.440 --> 02:35:37.841
Right, that's what you testified to some
2786
02:35:37.841 --> 02:35:39.778
state data regarding grass is right.
2787
02:35:39.780 --> 02:35:41.784
I think that was related to
2788
02:35:41.784 --> 02:35:42.786
the fairest model.
2789
02:35:42.790 --> 02:35:44.407
OK, well the state data is that
2790
02:35:44.407 --> 02:35:46.189
come from the part of agriculture.
2791
02:35:46.190 --> 02:35:47.460
Uh, I couldn't tell you.
2792
02:35:47.460 --> 02:35:49.148
I don't know where they gathered their data.
2793
02:35:49.150 --> 02:35:52.035
I'm not a technical expert on that, OK,
2794
02:35:52.035 --> 02:35:54.795
and if you folks collected any data on
2795
02:35:54.795 --> 02:35:57.446
```

```
salinity of the wells you've been pumping,
2796
02:35:57.450 --> 02:35:59.565
we have some recent data and we do have
2797
02:35:59.565 --> 02:36:01.786
some historical data that we've reviewed.
2798
02:36:01.790 --> 02:36:04.158
Yes, have you provided any of that recent
2799
02:36:04.158 --> 02:36:07.045
data to the Board of Latin Natural Resources?
2800
02:36:07.050 --> 02:36:09.640
The Department of Natural Resources?
2801
02:36:09.640 --> 02:36:13.888
I'm I'm unaware if we've shared that or not.
2802
02:36:13.890 --> 02:36:18.210
Thank you, no further questions. Right?
2803
02:36:18.210 --> 02:36:20.177
Anybody else are we done with Mr.
2804
02:36:20.180 --> 02:36:23.380
Hunt? I have no further questions.
2805
02:36:23.380 --> 02:36:25.640
I have no questions.
2806
02:36:25.640 - -> 02:36:27.900
OK thank you alright.
2807
02:36:27.900 --> 02:36:29.970
Thank you Mrs Caison staff II.
2808
02:36:29.970 --> 02:36:32.028
Appreciate everyone's time very much Mr.
```

```
2809
02:36:32.030 - -> 02:36:36.335
How appreciate your time and your patience.
2810
02:36:36.340 --> 02:36:40.000
Alright, it is a 1140.
2811
02:36:40.000 --> 02:36:43.852
So we have we have one witness scheduled uhm.
2812
02:36:43.860 --> 02:36:46.380
Michelle Reynolds is she?
2813
02:36:46.380 --> 02:36:49.279
She not available until 1:30,
2814
02:36:49.279 --> 02:36:50.416
is that correct?
2815
02:36:50.416 --> 02:36:53.080
Correct Doctor Ellis is available at 1:30,
2816
02:36:53.080 --> 02:36:53.501
right?
2817
02:36:53.501 --> 02:36:55.606
Did we find out about?
2818
02:36:58.720 --> 02:36:59.920
Let me check my messages.
2819
02:36:59.920 --> 02:37:02.388
I don't think so.
2820
02:37:02.390 --> 02:37:04.721
How long do you think Lucy and
2821
02:37:04.721 --> 02:37:06.040
Denise testimony will run?
2822
02:37:08.060 --> 02:37:09.446
```

```
Their cross examining,
2823
02:37:09.446 --> 02:37:14.660
she submitted her testimony OK so Andy.
2824
02:37:14.660 --> 02:37:16.908
Less than 30 minutes.
2825
02:37:16.910 --> 02:37:18.782
Do you want to try to do her
2826
02:37:18.782 --> 02:37:20.125
now before lunch before she
2827
02:37:20.125 --> 02:37:22.015
has to go on her site visit?
2828
02:37:22.020 --> 02:37:23.226
I think that would be helpful.
2829
02:37:29.650 --> 02:37:31.442
We see and you need time to prepare
2830
02:37:31.442 --> 02:37:33.607
or you Are you ready to testify today?
2831
02:37:37.350 --> 02:37:39.366
I am not ready to testify today.
2832
02:37:39.370 --> 02:37:41.510
I'm still in my pajamas.
2833
02:37:41.510 --> 02:37:43.926
I've just came on as a scribe as
2834
02:37:43.926 --> 02:37:46.842
I was asked to be today because we
2835
02:37:46.842 --> 02:37:49.763
can't get her a video recording,
```

```
2836
02:37:49.763 --> 02:37:53.369
so I'm trying to take notes.
2837
02:37:53.370 --> 02:37:55.645
That's been my only preparation
2838
02:37:55.645 --> 02:37:57.030
for today. Thank you.
2839
02:38:00.760 --> 02:38:03.357
Uh, OK, so we're waiting to hear
2840
02:38:03.357 --> 02:38:04.824
about another witness weekend.
2841
02:38:04.824 --> 02:38:06.948
She's in town. She won't be
2842
02:38:06.948 --> 02:38:09.319
back in town till after three.
2843
02:38:12.010 --> 02:38:15.433
OK. So that means we only have
2844
02:38:15.433 --> 02:38:17.490
Michelle Reynolds available today.
2845
02:38:17.490 --> 02:38:19.430
Is that correct? Correct?
2846
02:38:22.890 --> 02:38:25.170
Anybody else have any witness
2847
02:38:25.170 --> 02:38:28.230
available? What about my kiddo?
2848
02:38:28.230 --> 02:38:31.590
He's going to go after. Skippy
2849
02:38:42.920 --> 02:38:44.954
```

```
Tony can you get your witness
2850
02:38:44.954 --> 02:38:46.310
available today at all?
2851
02:38:50.530 --> 02:38:52.280
Who are you talking to?
2852
02:38:52.280 - -> 02:38:56.710
County, Caleb I know my witness
2853
02:38:56.710 --> 02:38:58.380
is not available today, right?
2854
02:39:05.110 --> 02:39:07.468
Alright, then, I guess we are
2855
02:39:07.468 --> 02:39:10.618
going to take a break until 1:30.
2856
02:39:10.620 --> 02:39:12.306
And we will only hear from
2857
02:39:12.306 --> 02:39:13.149
Michelle Reynolds today.
2858
02:39:13.150 --> 02:39:15.904
But I do want to ask everyone to make
2859
02:39:15.904 --> 02:39:18.405
sure your witnesses are available and
2860
02:39:18.405 --> 02:39:20.948
can adjust their times as necessary
2861
02:39:20.948 --> 02:39:23.982
so that we can get through this just
2862
02:39:23.982 --> 02:39:27.260
quickly as possible. Preferably.
```

```
2863
02:39:27.260 --> 02:39:31.118
In not three days next week.
2864
02:39:31.120 --> 02:39:32.530
I think we'll finish on Tuesday.
2865
02:39:37.180 --> 02:39:40.250
Right so we it is now, UM.
2866
02:39:42.300 --> 02:39:46.464
1141 and we will take a break until 1:30.
2867
02:39:46.464 --> 02:39:48.040
Everybody OK with that,
2868
02:39:48.040 --> 02:39:49.608
so I have a question about the audio.
2869
02:39:49.610 --> 02:39:51.826
Do you guys turn off the audio clock
2870
02:39:51.826 --> 02:39:53.796
during lunch or does it keep running?
2871
02:39:56.690 --> 02:39:59.300
I turn, I pause the audio
2872
02:39:59.300 --> 02:40:02.340
recording that I have during lunch.
2873
02:40:02.340 --> 02:40:04.584
So the time is going to we're not,
2874
02:40:04.584 --> 02:40:05.844
so there were no law.
2875
02:40:05.850 --> 02:40:08.216
Not only would have we never been
2876
02:40:08.220 --> 02:40:09.560
```

```
in conjunction with the clock,
2877
02:40:09.560 --> 02:40:10.766
we're going to be for them.
2878
02:40:10.770 --> 02:40:12.366
You know, I think it's a it's
2879
02:40:12.366 --> 02:40:14.038
a math thing we can calculate.
2880
02:40:14.040 --> 02:40:16.100
We can help you do that if you need help,
2881
02:40:16.100 --> 02:40:18.380
I would love that when we go back at 1:30.
2882
02:40:18.380 --> 02:40:19.136
If you could tell me where
2883
02:40:19.136 --> 02:40:19.860
we are in the audio,
2884
02:40:19.860 --> 02:40:21.570
they'll be wonderful or I can't
2885
02:40:21.570 --> 02:40:23.909
tell you where they are in the audio
2886
02:40:23.909 --> 02:40:25.619
until the audio tape is downloaded
2887
02:40:25.678 --> 02:40:27.298
and then uploaded at the end.
2888
02:40:27.300 --> 02:40:29.586
But we will be tracking it.
2889
02:40:29.590 --> 02:40:32.190
And do our best to give you the
```

```
2890
02:40:32.190 - -> 02:40:34.790
calculation so that you can make that
2891
02:40:34.790 --> 02:40:37.458
adjustment that we can provide you a
2892
02:40:37.458 --> 02:40:39.985
approximate times on the from the audio.
2893
02:40:39.990 --> 02:40:42.190
That'd be great, thank you.
2894
02:40:42.190 --> 02:40:43.822
OK thanks everyone where
2895
02:40:43.822 --> 02:40:45.710
I'm breaking till 1:30.
2896
02:40:45.710 --> 02:40:47.030
Thank you.
2897
02:41:02.960 --> 02:41:03.500
Tina
2898
02:41:07.800 --> 02:41:09.168
yes very good.
2899
02:41:12.140 --> 02:41:13.750
I thought you were talking to somebody.
2900
02:41:26.510 --> 02:41:28.718
OK, we're we're. We're recording again.
2901
02:41:33.650 --> 02:41:36.930
And I'll just make sure everybody is here.
2902
02:41:36.930 --> 02:41:44.430
Uhm? It's 1:31 PM on my recording we have.
2903
02:41:44.430 --> 02:41:47.448
```

A couple uhm so Michelle Reynolds.

```
2904
02:41:47.450 --> 02:41:51.190
Are you able to turn your. Device.
2905
02:41:55.780 --> 02:41:59.580
Yeah, great. You're on mute,
2906
02:41:59.580 --> 02:42:00.380
so we don't hear you,
2907
02:42:00.380 --> 02:42:01.436
but that that's great.
2908
02:42:01.436 --> 02:42:02.756
This is the right direction.
2909
02:42:02.760 --> 02:42:04.376
OK, uhm, everybody else.
2910
02:42:04.376 --> 02:42:06.800
If you wouldn't mind just turning
2911
02:42:06.877 --> 02:42:09.317
on your video for a short bit here,
2912
02:42:09.320 --> 02:42:11.390
just so we all know who's in the room.
2913
02:42:14.090 --> 02:42:22.918
K. Here it is smart. Wow, we Nicole.
2914
02:42:22.920 --> 02:42:26.985
KCL, how are you here and my key to are
2915
02:42:26.985 --> 02:42:28.948
you here and hitting Coleman? Are you here?
2916
02:42:33.900 --> 02:42:36.060
OK, it might take you heady.
```

```
2917
02:42:36.060 - -> 02:42:38.436
Thank you. What about Seal house?
2918
02:42:38.440 --> 02:42:43.910
He's still. In the meeting. You know?
2919
02:42:46.400 --> 02:42:48.008
Can you guys can turn back off things?
2920
02:42:57.250 --> 02:42:58.794
Driver administrative manager addressed.
2921
02:42:58.794 --> 02:43:01.110
Before we begin with Doctor Reynolds.
2922
02:43:01.110 --> 02:43:02.356
Yeah, I just want to confirm if
2923
02:43:02.356 --> 02:43:03.800
she'll how is in the meeting or not.
2924
02:43:07.360 --> 02:43:12.076
Anybody know? Spell checking with him.
2925
02:43:12.080 --> 02:43:14.678
I think it's OK to proceed.
2926
02:43:14.680 --> 02:43:16.723
OK, how about if I put him in the
2927
02:43:16.723 --> 02:43:18.597
waiting room and then if he wants to
2928
02:43:18.597 --> 02:43:21.416
come back in you can let let us know.
2929
02:43:21.420 --> 02:43:23.268
OK. Great thanks.
2930
02:43:25.770 --> 02:43:27.492
```

But if somebody wants to send him

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2931
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02:43:27.492 --> 02:43:29.470
an oh **** saying we're doing that.
2932
02:43:52.100 --> 02:43:54.389
I can let him back in anytime.
2933
02:43:54.390 --> 02:43:57.750
Uhm, OK? OK, uh, yeah Mr.
2934
02:43:57.750 --> 02:44:00.210
Frankly, you had an administrative matter.
2935
02:44:00.210 --> 02:44:02.880
Yep, given your concern over time
2936
02:44:02.880 --> 02:44:05.612
and given the testimony we got
2937
02:44:05.612 --> 02:44:07.787
from Doctor struck this morning,
2938
02:44:07.790 --> 02:44:09.646
the Sierra Club is not going to call
2939
02:44:09.646 --> 02:44:11.195
Skippy how, as a witness on Monday
2940
02:44:11.195 --> 02:44:12.989
and will let him know that he can
2941
02:44:12.989 --> 02:44:14.508
do work in the field rather than
2942
02:44:14.566 --> 02:44:16.150
coming to the hearing on Monday.
2943
02:44:16.150 --> 02:44:17.480
So does that mean you're not going

```
2944
02:44:17.480 --> 02:44:18.780
to call him at all, correct?
2945
02:44:18.780 --> 02:44:20.760
We don't need to, OK?
2946
02:44:26.180 --> 02:44:30.240
Right, I'm sure it helps everyone.
2947
02:44:30.240 --> 02:44:33.840
And I will. I will email everybody to.
2948
02:44:33.840 --> 02:44:35.694
We currently have Tony Linder from
2949
02:44:35.694 --> 02:44:37.799
the county going in the afternoon,
2950
02:44:37.800 --> 02:44:39.858
but I will see if he's available
2951
02:44:39.858 --> 02:44:41.384
in the morning since Mr.
2952
02:44:41.384 --> 02:44:42.968
House not going we can squeeze
2953
02:44:42.968 --> 02:44:44.439
enough people in the morning.
2954
02:44:44.440 --> 02:44:46.547
I think I would like to believe,
2955
02:44:46.550 --> 02:44:48.008
but maybe if he could be
2956
02:44:48.008 --> 02:44:49.350
flexible that'd be great, OK?
2957
02:44:55.760 --> 02:44:59.216
```

```
OK, so then uh so Monday morning we
2958
02:44:59.216 --> 02:45:02.527
would have kaleo Manuel Scott frats.
2959
02:45:02.530 --> 02:45:04.390
And Tony Linder.
2960
02:45:04.390 --> 02:45:08.190
Maikido could go before like a mic,
2961
02:45:08.190 --> 02:45:10.290
key to and then Tony Lindner.
2962
02:45:10.290 --> 02:45:12.705
So would Lucy and Danae and learn,
2963
02:45:12.710 --> 02:45:14.610
and Scott potentially be
2964
02:45:14.610 --> 02:45:16.510
available Monday afternoon Lucy.
2965
02:45:16.510 --> 02:45:18.226
And yes, I believe that Linscott
2966
02:45:18.226 --> 02:45:19.850
only available on the Tuesday,
2967
02:45:19.850 --> 02:45:21.830
but I will follow up with her on that.
2968
02:45:21.830 - -> 02:45:23.580
That was my understanding, OK?
2969
02:45:27.060 --> 02:45:29.308
Any other administrative matters.
2970
02:45:33.480 --> 02:45:39.688
OK, hearing none. Uhm? Right again we are.
```

```
2971
02:45:42.260 --> 02:45:47.390
It's December nine 1:35 PM.
2972
02:45:47.390 --> 02:45:50.246
Uh, and we have this afternoon only.
2973
02:45:50.250 --> 02:45:51.818
Michelle Reynolds to hear.
2974
02:45:51.818 --> 02:45:55.180
And that is a witness of Sierra Club.
2975
02:45:55.180 --> 02:45:59.246
So C. Would you like Linda Chow?
2976
02:45:59.246 --> 02:46:02.270
Would you like to please swear her in?
2977
02:46:02.270 --> 02:46:05.282
Sure. Mr. Reynolds,
2978
02:46:05.282 --> 02:46:07.730
do you solemnly swear to tell the truth,
2979
02:46:07.730 --> 02:46:10.418
the whole truth and nothing but the truth?
2980
02:46:10.420 --> 02:46:13.920
We do thank you.
2981
02:46:13.920 --> 02:46:15.705
Doctor Reynolds are the statements
2982
02:46:15.705 --> 02:46:17.849
made in your declaration true and
2983
02:46:17.849 --> 02:46:19.949
accurate to the best of your knowledge.
2984
02:46:19.950 --> 02:46:22.708
```

```
Yes, and just your 25 years of
2985
02:46:22.708 --> 02:46:25.869
work as a wildlife biologist.
2986
02:46:25.870 --> 02:46:28.480
What state was that in?
2987
02:46:28.480 --> 02:46:34.748
Boy, thank you. We offer circle offers.
2988
02:46:34.748 --> 02:46:36.103
Michelle Dr.
2989
02:46:36.103 --> 02:46:39.018
Michelle Reynolds for cross examination.
2990
02:46:39.020 --> 02:46:39.800
You have her statement.
2991
02:46:39.800 --> 02:46:40.190
Thank you.
2992
02:46:47.280 --> 02:46:50.408
OK, Alexander Baldwin EMI.
2993
02:46:50.410 --> 02:46:53.830
Thank you, good afternoon Doctor Reynolds.
2994
02:46:53.830 --> 02:46:55.250
My name is Trisha cocky.
2995
02:46:55.250 --> 02:46:57.235
I represent A and B&MI
2996
02:46:57.235 --> 02:46:59.884
can you hear me OK yes.
2997
02:46:59.884 --> 02:47:05.196
OK, are you still employed by the USGS?
```

```
2998
02:47:05.200 - -> 02:47:07.635
No, I'm no longer employed
2999
02:47:07.635 --> 02:47:10.070
by department of issues here.
3000
02:47:10.070 --> 02:47:13.118
And when did your employment with
3001
02:47:13.118 --> 02:47:16.560
the Department of Interior stop? 2019
3002
02:47:21.650 --> 02:47:24.394
uh, at the time that you were working
3003
02:47:24.394 --> 02:47:26.918
for the Department of Interior,
3004
02:47:26.920 --> 02:47:29.464
you stated that you were working in Hawaii,
3005
02:47:29.470 --> 02:47:33.780
correct? Yes, uh, what part?
3006
02:47:33.780 --> 02:47:35.348
What part of Hawaii were you working in?
3007
02:47:37.640 --> 02:47:39.800
All the way up and down the archipelago.
3008
02:47:39.800 --> 02:47:41.114
Actually from curious.
3009
02:47:41.114 --> 02:47:43.742
All to all the main islands.
3010
02:47:49.830 --> 02:47:51.380
Were you located on the
3011
02:47:51.380 --> 02:47:52.930
```

Big Island at the time?
3012
02:47:52.930 --> 02:47:55.260
The office was on the Big Island, yes.

3013
02:48:00.460 --> 02:48:02.756
As part of your work for USGS,
3014
02:48:02.760 --> 02:48:05.510
did you study or analyze
3015
02:48:05.510 --> 02:48:07.710
the East Maui watershed?
3016
02:48:07.710 --> 02:48:10.926
I did forestburg surveys on the
3017
02:48:10.926 --> 02:48:13.070
eastern slopes of Haleakala.

3018
02:48:16.280 --> 02:48:17.140
And when was that?
3019
02:48:20.390 --> 02:48:25.040
In the 90 s and it's late at 2004.

3020
02:48:29.800 --> 02:48:32.600
Are you currently employed? Yes.
3021
02:48:34.850 --> 02:48:37.190
And who are you employed with?
3022
02:48:37.190 --> 02:48:38.480
I'm self employed.
3023
02:48:40.490 --> 02:48:42.890
Doing what kind of work?
3024
02:48:42.890 --> 02:48:48.150
I do detector dog biological surveys.

```
3025
02:48:50.890 --> 02:48:51.880
Animal care
3026
02:48:55.560 --> 02:48:57.054
is that very different work than
3027
02:48:57.054 --> 02:48:58.719
what you were doing for the USGS.
3028
02:49:01.200 --> 02:49:02.070
Yes.
3029
02:49:06.360 --> 02:49:08.886
And how long have you been
3030
02:49:08.886 --> 02:49:10.339
self employed? Out of here.
3031
02:49:14.700 --> 02:49:16.482
Were you retained by the Sierra
3032
02:49:16.482 --> 02:49:18.689
Club to testify in this proceeding?
3033
02:49:18.690 --> 02:49:20.622
Which I would, were you retained
3034
02:49:20.622 --> 02:49:22.733
by the Sierra Club to testify
3035
02:49:22.733 --> 02:49:24.430
in this proceeding, retained?
3036
02:49:24.430 --> 02:49:26.670
Where does that mean?
3037
02:49:26.670 --> 02:49:28.692
Are you being paid to testify
3038
02:49:28.692 --> 02:49:29.703
```

```
in this proceeding?
3039
02:49:29.710 --> 02:49:31.279
No, I volunteered.
3040
02:49:33.720 --> 02:49:36.540
So you're, UM, testifying pro bono,
3041
02:49:36.540 --> 02:49:39.604
then, is that correct?
3042
02:49:39.604 --> 02:49:41.921
Yes. And can you,
3043
02:49:41.921 --> 02:49:45.023
are you a Sierra Club member?
3044
02:49:45.030 --> 02:49:46.458
I have been in the past.
3045
02:49:46.460 --> 02:49:50.128
My membership is not active right now.
3046
02:49:50.130 --> 02:49:52.104
Do you recall when with the when
3047
02:49:52.104 --> 02:49:54.553
was the last time that you were an
3048
02:49:54.553 --> 02:49:56.470
active member of the Sierra Club?
3049
02:49:56.470 --> 02:49:59.206
It's probably been 15 years longer.
3050
02:50:01.370 --> 02:50:04.799
Do you do other work for the Sierra Club?
3051
02:50:04.800 --> 02:50:08.598
No, I've never done work for the Sierra Club.
```

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3052
02:50:08.600 --> 02:50:11.301
How is it that you, uh, came about
3053
02:50:11.301 --> 02:50:13.383
to be involved in this proceeding?
3054
02:50:15.440 --> 02:50:18.962
I was asked to speak about
3055
02:50:18.962 --> 02:50:22.242
my experience working on the
3056
02:50:22.242 --> 02:50:24.934
eastern slopes of Haleakala,
3057
02:50:24.940 --> 02:50:28.380
particularly my bird expertise.
3058
02:50:28.380 --> 02:50:29.850
And who was it that asked you?
3059
02:50:32.070 --> 02:50:36.058
David Frankel David Frankel.
3060
02:50:36.060 --> 02:50:40.410
And when was that? No.
3061
02:50:40.410 --> 02:50:42.940
You got a couple weeks ago, OK?
3062
02:50:53.020 --> 02:50:55.988
So in your declaration,
3063
02:50:55.988 --> 02:50:59.410
you stated that you had the opportunity to
3064
02:50:59.410 --> 02:51:01.993
spend time in the upper elevation forests
3065
02:51:01.993 --> 02:51:05.290
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of East Maui while conducting bird surveys
3066
02:51:05.290 --> 02:51:08.433
Is this the surveys that you conducted
3067
02:51:08.433 --> 02:51:11.560
on the eastern slopes of Haleakala?
3068
02:51:11.560 --> 02:51:14.680
Yes, they were in white boy.
3069
02:51:14.680 --> 02:51:18.159
I worked in one of the and
3070
02:51:18.159 --> 02:51:20.250
also Haleakala National Park.
3071
02:51:22.330 --> 02:51:24.857
So besides the time that you spent
3072
02:51:24.857 --> 02:51:26.520
conducting these bird surveys,
3073
02:51:26.520 --> 02:51:29.024
did you spend any more time in the
3074
02:51:29.024 --> 02:51:31.038
upper elevation forests of East Maui?
3075
02:51:34.910 --> 02:51:38.738
As a private citizen.
3076
02:51:38.740 --> 02:51:41.393
Did you do any kind of studies
3077
02:51:41.393 --> 02:51:43.613
or investigation to prepare for
3078
02:51:43.613 --> 02:51:46.108
your testimony in this proceeding?
```

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3079
02:51:50.960 --> 02:51:56.448
No, but I'm fairly current on the literature.
3080
02:51:56.450 --> 02:52:00.200
At the first bird declines.
3081
02:52:00.200 --> 02:52:02.135
She didn't do any field work on your own,
3082
02:52:02.140 --> 02:52:07.900
correct? No, not in the last 10 years.
3083
02:52:07.900 --> 02:52:12.139
OK, uhm. I want to ask you about your
3084
02:52:12.139 --> 02:52:15.268
statements regarding the damselflies.
3085
02:52:15.270 --> 02:52:19.410
Sure, so uhm.
3086
02:52:19.410 --> 02:52:23.712
You cite some publications regarding the
3087
02:52:23.712 --> 02:52:26.546
damselflies other than those publications,
3088
02:52:26.546 --> 02:52:30.820
is there any basis for your statements?
3089
02:52:30.820 --> 02:52:36.610
Basis for my statements. Uhm, I.
3090
02:52:36.610 --> 02:52:39.518
Basically describes the habitat
3091
02:52:39.518 --> 02:52:43.880
that is used by the endangered
3092
02:52:44.007 --> 02:52:47.998
```

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species that could be using the
3093
02:52:47.998 --> 02:52:51.754
streams of the eastern slopes of
3094
02:52:51.754 --> 02:52:54.196
polyacrylate or your statements based
3095
02:52:54.196 --> 02:52:56.920
on the publications that you cited.
3096
02:52:56.920 --> 02:53:00.034
Yes, did you conduct any field
3097
02:53:00.034 --> 02:53:03.154
work to support your statements
3098
02:53:03.154 --> 02:53:05.977
regarding the damselflies?
3099
02:53:05.980 --> 02:53:07.774
Really, there's no one really doing
3100
02:53:07.774 --> 02:53:09.710
field work on the damselflies,
3101
02:53:09.710 --> 02:53:11.480
and that part of Maui.
3102
02:53:11.480 --> 02:53:14.990
They're pretty understudied.
3103
02:53:14.990 --> 02:53:17.048
Their distribution is not well known.
3104
02:53:20.360 --> 02:53:22.060
I have no further questions, thank you.
3105
02:53:26.570 --> 02:53:29.012
Tony Maui, I have no questions
```

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3106
02:53:29.012 --> 02:53:31.076
for this witness. Just Franco.
3107
02:53:31.076 --> 02:53:32.748
Thank you, no questions.
3108
02:53:32.750 --> 02:53:34.678
Thank you Doctor Reynolds.
3109
02:53:34.680 --> 02:53:36.528
Thank you, thank you very much
3110
02:53:36.528 --> 02:53:38.660
for your time and availability.
3111
02:53:38.660 --> 02:53:41.364
Uh, you're welcome to stay if you want,
3112
02:53:41.370 --> 02:53:43.418
uh, just turn off your video and audio,
3113
02:53:43.420 --> 02:53:44.878
but I think we're wrapping up for the day.
3114
02:53:44.880 --> 02:53:46.848
Is that correct, everyone?
3115
02:53:49.020 --> 02:53:52.626
Hey. Alright, thank you, thank you.
3116
02:53:52.630 --> 02:53:55.115
So we are going to reconvene at
3117
02:53:55.115 --> 02:53:58.294
9:00 AM on Monday with our revised
3118
02:53:58.294 --> 02:54:01.014
witness list and just to confirm
3119
02:54:01.014 --> 02:54:03.828
```

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that's going to be a little.
3120
02:54:03.828 --> 02:54:07.790
Manuel had threats. Mike Quito.
3121
02:54:07.790 --> 02:54:11.290
And then Tony Lindner in the morning.
3122
02:54:11.290 - -> 02:54:15.040
And hopefully, Lucy and Danae.
3123
02:54:15.040 --> 02:54:16.680
And possible possible open linscott
3124
02:54:16.680 --> 02:54:19.380
to see if she can make it as well.
3125
02:54:19.380 --> 02:54:23.750
Lee Lynn Scott. OK.
3126
02:54:23.750 --> 02:54:29.110
That let's see it is 1:43 PM.
3127
02:54:29.110 --> 02:54:30.478
144 December 9 and we are
3128
02:54:30.478 --> 02:54:31.650
wrapping up for the day.
3129
02:54:31.650 --> 02:54:34.366
Thank you all very much on that
3130
02:54:34.366 --> 02:54:37.292
thing chair so I will be emailing
3131
02:54:37.292 --> 02:54:39.229
you a everybody's spreadsheet of
3132
02:54:39.229 --> 02:54:41.887
the approximate timings on the audio
```

3133
02:54:41.887 --> 02:54:44.228
file for the witnesses for today.
3134
02:54:44.230 --> 02:54:48.550
Thank you. Thank you. Thanks everyone.
3135
02:54:48.550 --> 02:54:52.000
Thank you thanks bye bye.

