

00:00:53.770 --> 00:01:08.800

Lori Saldaña: And Patty, thank you for taking over the introductions. I just thought, since you had done the research, you could just summarize what you sent out, and... Yeah. Oh, and then, Eric, did you get the images I sent of the local infrastructure?

18

00:01:08.800 --> 00:01:10.590

PCPB: Oh, cheer.

19

00:01:10.810 --> 00:01:12.550

Lori Saldaña: So,

20

00:01:12.850 --> 00:01:35.150

Lori Saldaña: again, I don't want to go overly long if people have questions, but I thought it would be good, this morning, Patty, Eric, Kristina, and I were... were kind of going over, think, like, starting broadly from the San Francisco Bay, and work she's done, and then focusing it down to, what we're seeing on the ground here in San Diego right now.

21

00:01:35.920 --> 00:01:36.570

pattyducey-brooks: It's perfect.

22

00:01:37.900 --> 00:01:41.969

pattyducey-brooks: I appreciate you doing that. I... I know it's important to kind of

23

00:01:42.340 --> 00:01:47.900

pattyducey-brooks: Tailor it to the area, even though whatever she says can be valuable.

24

00:01:48.030 --> 00:01:48.680

pattyducey-brooks: Excellent.

25

00:01:48.680 --> 00:02:02.289

Lori Saldaña: And also, just make it clear that this is really the first objective, research-oriented discussion this project is receiving. Everything else has been very much from the perspective of the developers.

26

00:02:03.330 --> 00:02:04.160

pattyducey-brooks: Acclaim.

27

00:02:04.750 --> 00:02:08.539

pattyducey-brooks: I... you hit it right on the nose.

28

00:02:09.139 --> 00:02:13.259

Lori Saldaña: So, I hope, and even if we don't get

29

00:02:13.689 --> 00:02:23.129

Lori Saldaña: Engagement in real time, we can use the transcript, use statements, use video, because it records the video as well?

30

00:02:23.780 --> 00:02:25.349

PCPB: Yes, I've got it on record.

31

00:02:25.350 --> 00:02:34.950

Lori Saldaña: Okay, so, you know, let the media know that if there's some good soundbites, To make available.

32

00:02:34.950 --> 00:02:35.610

pattyducey-brooks: Yeah.

33

00:02:35.720 --> 00:02:50.409

pattyducey-brooks: Well, seeing what you were sharing with us earlier today, it was like, wow, this is really valuable information that we should be sharing with the media, but also with our elected officials, you know, and our government officials, so they're...

34

00:02:50.850 --> 00:02:54.610

pattyducey-brooks: Hopefully getting a real... the real truth about what's going on.

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00:02:55.500 --> 00:03:03.589

Lori Saldaña: And the Monday City Council hearing is a direct docket. I don't know if you've had a chance to look over the background documents for that, but they basically

36

00:03:03.590 --> 00:03:17.039

Lori Saldaña: didn't even send it to a committee. They're just... what I was telling the Nadia from Voice of San Diego, she's doing the legislative side, is the city is just like, we're washing our hands of it.

37

00:03:17.640 --> 00:03:30.290

Lori Saldaña: We don't... I think they realized that too many lawsuits, too many challenges, so they punted to Sacramento to take care of this, and that is just a horrible idea.

38

00:03:33.990 --> 00:03:38.619

MARY BROWN: Yeah, they're abdicating their responsibility to the residents of San Diego.

39

00:03:38.810 --> 00:03:39.180

pattyducey-brooks: Right.

40

00:03:39.180 --> 00:03:54.640

Lori Saldaña: Yeah, no committee hearing on this. No... and the email, the memo, because whenever they do a direct docket, it has to be requested. And so it came from Heidi von Blum, the, you know, city planning director.

41

00:03:54.740 --> 00:03:56.490

Lori Saldaña: And,

42

00:03:56.490 --> 00:03:56.810

PCPB: Hmm...

43

00:03:57.310 --> 00:04:03.300

Lori Saldaña: It's... What does it say? It's just basically a response to the lawsuit.

44

00:04:05.760 --> 00:04:13.429

Lori Saldaña: they realize... They don't want to be caught up in local challenges, so... They're asking the state to...

45

00:04:14.390 --> 00:04:15.539

PCPB: Step in.

46

00:04:16.320 --> 00:04:18.799

Lori Saldaña: And do their, their bidding.

47

00:04:21.310 --> 00:04:25.609

pattyducey-brooks: Well, it's just like it's kicking, you're just kicking around the state, and you're not really dealing with it, and...

48

00:04:26.950 --> 00:04:33.440

Lori Saldaña: Does Kristina have the... Link... Let me text it to her.

49

00:04:36.620 --> 00:04:37.720

PCPB: She's right there.

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00:04:37.720 --> 00:04:38.350

Lori Saldaña: Oh!

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00:04:38.520 --> 00:04:39.520

Lori Saldaña: Welcome!

52

00:04:39.620 --> 00:04:40.709

Lori Saldaña: Very good.

53

00:04:40.860 --> 00:04:45.479

Lori Saldaña: Hello, I was just wondering if we sent you the link with everything else we've been sending you.

54

00:04:45.480 --> 00:04:51.050

Kristina Hill (she, her): Yeah. Thank you. I just had a meeting about this very same thing. I'm in the Bay Area, so...

55

00:04:51.570 --> 00:04:52.230

PCPB: Okay.

56

00:04:52.550 --> 00:05:01.260

Lori Saldaña: So... Well, I'm not sure who the NBC person is online. Thank you, for joining us.

57

00:05:01.370 --> 00:05:11.029

Lori Saldaña: And, Kristina, thank you for being here. Eric, did you want to... oh, where did you go?

58

00:05:11.590 --> 00:05:12.420

PCPB: I'm here.

59

00:05:12.640 --> 00:05:13.590

Lori Saldaña: Okay.

60

00:05:14.390 --> 00:05:20.479

PCPB: Yeah, I expect there'll be a lot of people flooding in now, since we've, we're at the bottom of the hour.

61

00:05:21.000 --> 00:05:30.350

PCPB: Dr. Hill, thanks very much for joining us here. Appreciate, you, on relatively short notice, on this very timely subject.

62

00:05:30.460 --> 00:05:32.650

PCPB: Joining us,

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00:05:32.900 --> 00:05:49.390

PCPB: You're... I'm gonna hand this over to... well, first off, I'm the chairman of the Peninsula Community Planning Board, so that you have a reference, and we're sponsoring this as a community forum and exposure for the media.

64

00:05:49.680 --> 00:05:51.640

PCPB: And it continues...

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00:05:51.880 --> 00:06:05.080

PCPB: Our delving into the impacts on specific, developments on the peninsula and indeed across, you know, San Diego, and it just happened to be serendipitous.

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00:06:05.190 --> 00:06:08.390

PCPB: That, we were able to get ahold of you.

67

00:06:08.500 --> 00:06:25.079

PCPB: Through, you know, Lori's auspices, and we're really looking forward to hearing from you, and your subject matter expertise. I'm gonna hand it, to Patty here, as, she's, got more details for us. Thank you. Patty?

68

00:06:25.790 --> 00:06:36.889

pattyducey-brooks: Well, first of all, I want to thank everyone who's a part of this presentation today. We've got somebody very notable today to share some valuable insights on a local, but also international level.

69

00:06:36.990 --> 00:06:42.829

pattyducey-brooks: Just to give you a little background about myself, too, I'm on... I'm the vice chair of the Uptown Planners Group, where we...

70

00:06:43.120 --> 00:07:02.670

pattyducey-brooks: we butt up against the Midway area and other parts of other coastal communities, and we always believe that what happens in their backyard affects our backyard, so we're not... we believe today more planning groups need to work together to help each other and address these really critical issues that are occurring around our city, county, and state.

71

00:07:02.820 --> 00:07:21.559

pattyducey-brooks: Just to give you guys a quick background on Professor Hill, she's got a really impressive background, and I could go on for hours, because she's got books that have been published, but I'm going to give a quick glimpse at who she is. She is a professor at the University of California, Berkeley.

72

00:07:21.730 --> 00:07:37.779

pattyducey-brooks: She studies urban ecology and hydrology in relationship to physical design and social justice issues. Her primary area of work is adapting urban districts and shore zones to the new challenges associated with climate change, which we're all dealing with.

73

00:07:37.950 --> 00:07:49.410

pattyducey-brooks: She lectures internationally on urban design and ecology. She became a member of the Dutch-American engineering and design team that developed New Orleans

74

00:07:49.410 --> 00:08:03.710

pattyducey-brooks: water management strategies after Hurricane Katrina in 2005. Big deal. She continues to collaborate internationally to understand the potential for designs to help protect coastal communities as sea levels rise.

75

00:08:03.900 --> 00:08:10.159

pattyducey-brooks: And, we're all very honored to have you here today, Professor Harrell, so thank you for taking your time out to be part of this.

76

00:08:10.160 --> 00:08:12.360

Kristina Hill (she, her): Thank you. Thanks for that introduction.

77

00:08:12.630 --> 00:08:19.489

Kristina Hill (she, her): I mean, there's so much we have to learn from what's happening in the rest of the world and places we can visit to see how other people are adapting.

78

00:08:19.740 --> 00:08:22.610

Kristina Hill (she, her): So, we're not alone in these problems.

79

00:08:25.180 --> 00:08:27.480

Kristina Hill (she, her): Shall I go ahead and share some slides?

80

00:08:28.540 --> 00:08:30.600

Lori Saldaña: Yes, please, the time is yours.

81

00:08:30.600 --> 00:08:31.699

Kristina Hill (she, her): Okay, great.

82

00:08:32.049 --> 00:08:36.939

PCPB: And I did receive your backup in case, you need backup on the slide.

83

00:08:37.380 --> 00:08:38.190

Kristina Hill (she, her): Thank you.

84

00:08:38.390 --> 00:08:39.110

Kristina Hill (she, her): Cook.

85

00:08:40.070 --> 00:08:42.649

Kristina Hill (she, her): So let me go to my full screen here.

86

00:08:44.590 --> 00:08:58.020

Kristina Hill (she, her): I'm sure you've seen things like this, where, at high tide, king tides in particular, water comes right up through our maintenance hole covers and floods city streets.

87

00:08:58.410 --> 00:09:06.540

Kristina Hill (she, her): And you can actually see water in the gutter in this image, where it's coming up out of a sewer inlet.

88

00:09:06.670 --> 00:09:20.869

Kristina Hill (she, her): In front of a residential complex about 600 feet up the street, and flowing down the gutter like a stream that has seaweed in it. It's very clearly ocean water that's coming up through the infrastructure.

89

00:09:21.050 --> 00:09:29.899

Kristina Hill (she, her): So I'm going to show some examples of things like that, just to kind of give you a sense that this is really happening, around the country and around the world now.

90

00:09:32.990 --> 00:09:34.550

Kristina Hill (she, her): This is in New Zealand.

91

00:09:34.750 --> 00:09:50.299

Kristina Hill (she, her): And it's an image of a woman who sees spot flooding outside her home. She goes outside to clear leaves out of the storm drain, but she's not aware. I've walked down the street to the left, where it says no exit, and turn street.

92

00:09:50.540 --> 00:09:57.099

Kristina Hill (she, her): And that's the ocean flowing into the street and coming up through the storm drains.

93

00:09:57.340 --> 00:10:02.300

Kristina Hill (she, her): So, if she clears the leaves, it's just gonna speed the rate at which the ocean floods her street.

94

00:10:02.950 --> 00:10:17.579

Kristina Hill (she, her): So we're not prepared for this yet, psychologically, that the infrastructure we've designed to take rainwater away is going to allow stormwater... I mean, going to allow groundwater and seawater to come up into our streets.

95

00:10:18.040 --> 00:10:21.630

Kristina Hill (she, her): And we see this happening now all around the Bay Area at King Tides.

96

00:10:22.620 --> 00:10:25.690

Kristina Hill (she, her): New York City, also seeing this happening.

97

00:10:25.820 --> 00:10:27.749

Kristina Hill (she, her): I'm sure you're seeing it as well.

98

00:10:28.140 --> 00:10:37.609

Kristina Hill (she, her): This is an image that the Dutch made for the City of Rotterdam's water plan from 2009, when they were already on their Water Plan 2.0.

99

00:10:37.710 --> 00:10:44.029

Kristina Hill (she, her): And not a single U.S. city had a water plan for adaptation to flooding.

100

00:10:44.640 --> 00:10:48.740

Kristina Hill (she, her): They're showing flooding coming from four directions.

101

00:10:48.840 --> 00:10:52.490

Kristina Hill (she, her): Local rain, local sea level rise.

102

00:10:52.600 --> 00:11:00.429

Kristina Hill (she, her): Storms that may happen way, hundreds of miles away on a big river, and flow down in the river itself.

103

00:11:00.740 --> 00:11:07.920

Kristina Hill (she, her): and then groundwater rising from below. So they were aware of this, the Dutch had been managing their groundwater for...

104

00:11:08.160 --> 00:11:12.660

Kristina Hill (she, her): about 800 years. That's why windmills were invented.

105

00:11:12.930 --> 00:11:19.449

Kristina Hill (she, her): Originally to pump water out of city areas and down canals.

106

00:11:19.870 --> 00:11:32.799

Kristina Hill (she, her): So they've been doing this for a long time, and they set, for each district of the Netherlands, what the groundwater level should be, and they pump it to that level. It's like all their groundwater is domesticated.

107

00:11:32.800 --> 00:11:40.269

Kristina Hill (she, her): And ours is still so wild, we have no idea where it is, or how high it is, or how it varies, or how our pumping affects it.

108

00:11:40.920 --> 00:11:47.479

Kristina Hill (she, her): So, we're in the wild west of not really knowing where our groundwater is. We've just begun to map it in the Bay Area.

109

00:11:47.640 --> 00:11:49.569

Kristina Hill (she, her): In a detailed way.

110

00:11:50.400 --> 00:11:52.990

Kristina Hill (she, her): And then we're looking at a situation where

111

00:11:53.240 --> 00:11:59.789

Kristina Hill (she, her): Sea level is rising, and I'll show some examples of what that does to groundwater, and what it will continue to do.

112

00:11:59.890 --> 00:12:05.710

Kristina Hill (she, her): But these are the scenarios that the state of California has asked cities to consider.

113

00:12:06.070 --> 00:12:17.600

Kristina Hill (she, her): And I was on the task force that, put out the 2024 state guidance, which is the first time that that guidance included groundwater rise as part of the impacts of sea level rise.

114

00:12:17.910 --> 00:12:21.979

Kristina Hill (she, her): What we're seeing here is... A map that shows

115

00:12:22.100 --> 00:12:29.759

Kristina Hill (she, her): I believe it's 3 feet at a time. Yeah, 3 feet, 6 feet, 9 feet, and 12 feet of sea level rise.

116

00:12:30.080 --> 00:12:41.880

Kristina Hill (she, her): So you can see it's a consistent distance. Those red lines are always the same 3-foot distance apart on the vertical axis, but on the horizontal axis, the red lines get closer together.

117

00:12:42.270 --> 00:12:45.110

Kristina Hill (she, her): And that's because the process is accelerating.

118

00:12:45.420 --> 00:12:55.360

Kristina Hill (she, her): So what we do now is great and important, but we'll have to do it again, and again, and again, each time more quickly.

119

00:12:56.100 --> 00:13:00.749

Kristina Hill (she, her): So, anytime someone says, well, we'll build a seawall, or we'll...

120

00:13:00.940 --> 00:13:04.530

Kristina Hill (she, her): you know, do X to try to keep the water out.

121

00:13:04.650 --> 00:13:14.700

Kristina Hill (she, her): We're gonna have to do X bigger and more expensive and quickly, more quickly, each time we do a lift of adaptation.

122

00:13:15.170 --> 00:13:29.379

Kristina Hill (she, her): And that's what has led the Dutch and the Germans and others to start thinking about how do you live with higher water instead of trying to wall it out in ways that are more and more expensive and more and more brittle and dangerous each time we build a wall?

123

00:13:31.270 --> 00:13:32.180

Kristina Hill (she, her): So...

124

00:13:32.460 --> 00:13:44.320

Kristina Hill (she, her): we're really... my first degree is in geology, so I like to try to frame this in a kind of longer-term perspective. We've been in a 10,000-year period of relatively stable sea level

125

00:13:44.730 --> 00:13:52.640

Kristina Hill (she, her): around the world Sea level and groundwater have been relatively stable for the last 8 to 10,000 years.

126

00:13:53.170 --> 00:13:57.339

Kristina Hill (she, her): Now, we're going into a period where it's gonna rise a lot.

127

00:13:57.680 --> 00:13:59.400

Kristina Hill (she, her): And relatively quickly.

128

00:13:59.920 --> 00:14:03.800

Kristina Hill (she, her): And that's not something that we've ever managed cities

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00:14:04.300 --> 00:14:10.079

Kristina Hill (she, her): 4. Cities were invented 5-7,000 years ago, even the tiniest ones.

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00:14:10.210 --> 00:14:27.840

Kristina Hill (she, her): So we've never had cities like what we live in today during a period of rapid sea level and groundwater rise. That's why we're all scratching our heads about what to do. Conventional practices are not going to help us with this problem, like planning to pump and build seawalls, and I'll say more about why.

131

00:14:29.390 --> 00:14:35.829

Kristina Hill (she, her): First of all, I want to say, groundwater, we talk about in California, usually as something we don't have enough of.

132

00:14:36.050 --> 00:14:45.349

Kristina Hill (she, her): That's because when we talk about that kind of groundwater, we're talking about deep groundwater that's used for irrigation for agriculture, or for drinking water.

133

00:14:45.410 --> 00:15:00.319

Kristina Hill (she, her): And that's not the kind of groundwater I'm talking about. I'm talking about the very shallow groundwater that's what you... if you dig down in the sand at the beach, you come to the water, that's usually freshwater making its way, flowing towards the ocean.

134

00:15:00.790 --> 00:15:03.279

Kristina Hill (she, her): And that freshwater comes from rain.

135

00:15:03.710 --> 00:15:10.599

Kristina Hill (she, her): So, rain goes into the soil, and it flows in a shallow way to the ocean.

136

00:15:10.870 --> 00:15:21.129

Kristina Hill (she, her): There's no special rock layer on top that keeps it clean. It's got oil and grease from cars and trucks in it. It's got all the dirt from...

137

00:15:21.360 --> 00:15:30.330

Kristina Hill (she, her): bird feces and animal feces and leaky pipes, and everything is in that water. So we don't think of it as a resource, because we know it's dirty.

138

00:15:30.620 --> 00:15:32.590

Kristina Hill (she, her): And we don't map it.

139

00:15:33.410 --> 00:15:48.030

Kristina Hill (she, her): What it looks like, if you did a close-up view, is, you've got dirt in the ground, and at some point, the... all the little gaps between the dirt particles are filled with water, and that's called the saturated zone.

140

00:15:48.430 --> 00:15:52.290

Kristina Hill (she, her): And the top of the saturated zone is called the water table.

141

00:15:52.860 --> 00:16:04.730

Kristina Hill (she, her): And that rises and falls a lot during our dry season and our wet season in California. Could that water table can go up and down by 10 feet from summer to winter.

142

00:16:05.110 --> 00:16:08.490

Kristina Hill (she, her): So, we're talking about a very dynamic zone.

143

00:16:08.690 --> 00:16:14.830

Kristina Hill (she, her): And in many places, that water table is within 2-3 feet of the surface.

144

00:16:15.020 --> 00:16:31.780

Kristina Hill (she, her): And geologists would say, in that case, when the groundwater is within 3 feet of the surface, that the ground above it, even though it's technically dry, is effectively saturated, because plants are going to pull that groundwater up through those soil particles.

145

00:16:31.800 --> 00:16:38.639

Kristina Hill (she, her): And cause that surface water to be wet. And there's not much room for rain to infiltrate into the soil.

146

00:16:38.670 --> 00:16:48.590

Kristina Hill (she, her): So, all the things we do with rain gardens, all of our efforts to infiltrate rainwater, doesn't really work once the groundwater gets within 2 or 3 feet of the surface.

147

00:16:51.620 --> 00:17:01.109

Kristina Hill (she, her): This is a pretty technical diagram, but what I'm trying to say here is that... and this looks more like the Bay Area than I think it looks like San Diego, but

148

00:17:01.320 --> 00:17:05.170

Kristina Hill (she, her): When our creeks come down to the ocean.

149

00:17:05.910 --> 00:17:22.539

Kristina Hill (she, her): There's usually a highway or some other kind of road with major sewer pipes and infrastructure under it. There's often already a berm or a levee there, and there may already be tide gates. Certainly here in the Bay Area, we have tide gates already in place.

150

00:17:22.930 --> 00:17:26.450

Kristina Hill (she, her): And the problem is that as the sea level rises.

151

00:17:27.040 --> 00:17:37.040

Kristina Hill (she, her): and rises on the surface of these levees, or on the surface of the tide gate, eventually the water is too high to open the tide gate.

152

00:17:37.330 --> 00:17:42.420

Kristina Hill (she, her): At low tide, because low tide is still on the face of the tide gate.

153

00:17:42.890 --> 00:17:52.230

Kristina Hill (she, her): And that's the point where tide gates have to become walls, because you can't open them, or everything has to be elevated. This whole system has to be raised.

154

00:17:52.940 --> 00:17:58.309

Kristina Hill (she, her): And I'll talk about what's happening underground in just a second with the next slide, but...

155

00:17:58.440 --> 00:18:06.990

Kristina Hill (she, her): what I'm trying to explain is that this whole area is actually going to see flooding from below, this area behind these levees and gates.

156

00:18:07.240 --> 00:18:25.139

Kristina Hill (she, her): So let me show you, in a less technical diagram, a cartoon that I made, what it is that we're expecting to see happen. So, this light blue is the freshwater groundwater. There's a sewer pipe under the road. You can see that in the diagram. There's a dry creek bed.

157

00:18:25.390 --> 00:18:30.599

Kristina Hill (she, her): There's a levee, there's a marsh on the bay side of the levee.

158

00:18:30.940 --> 00:18:36.239

Kristina Hill (she, her): There's a parking lot, which has been used as a cap for some old, contaminated soil.

159

00:18:36.920 --> 00:18:41.910

Kristina Hill (she, her): And then this little symbol, it just refers to the water table, the presence of the water table.

160

00:18:42.110 --> 00:18:53.809

Kristina Hill (she, her): And this is the salty groundwater, which actually extends under the land. I'm not showing it extending very far here, but it can extend as far as a half a mile, or even a mile.

161

00:18:54.030 --> 00:18:56.339

Kristina Hill (she, her): Under the land.

162

00:18:56.510 --> 00:19:01.249

Kristina Hill (she, her): The ocean extends into the land under the fresh groundwater.

163

00:19:02.500 --> 00:19:07.529

Kristina Hill (she, her): So as the ocean rises, it's like its toe is under a pillow on the couch.

164

00:19:07.640 --> 00:19:11.159

Kristina Hill (she, her): It's pushing that pillow of the fresh water upwards.

165

00:19:11.540 --> 00:19:17.179

Kristina Hill (she, her): And that starts to go into our sewer pipes, sanitary and storm sewer pipes.

166

00:19:17.400 --> 00:19:22.890

Kristina Hill (she, her): It starts to fill creek beds and add to the amount of water that's in a creek bed.

167

00:19:23.330 --> 00:19:25.440

Kristina Hill (she, her): And it starts to wet.

168

00:19:25.580 --> 00:19:32.869

Kristina Hill (she, her): Contaminants that are currently high and dry, and once they're wet, they can move around, they can become mobilized.

169

00:19:33.310 --> 00:19:44.319

Kristina Hill (she, her): And all of this starts to happen in spite of the levee. The levee has almost no relationship to this. This is all happening 10, 20, 30, 40, 50 feet down.

170

00:19:44.910 --> 00:19:47.389

Kristina Hill (she, her): So, well below the bottom of the levee.

171

00:19:47.890 --> 00:19:59.280

Kristina Hill (she, her): And as the water starts to enter our sewer pipes, those pipes are no longer available to do the job they were designed to do. They can't convey rainwater away from an area of flooding.

172

00:19:59.520 --> 00:20:03.600

Kristina Hill (she, her): They can't take wastewater away from people's homes.

173

00:20:03.700 --> 00:20:05.570

Kristina Hill (she, her): Because they're already full.

174

00:20:05.940 --> 00:20:13.640

Kristina Hill (she, her): So then you see stormwater backup into spot flooding, or larger areas of flooding, and you see basements, or...

175

00:20:13.850 --> 00:20:22.800

Kristina Hill (she, her): Crawl spaces start to fill with sewer water, sanitary sewer water, because they can't... that water can't enter the pipe, it's already full.

176

00:20:23.080 --> 00:20:24.690

Kristina Hill (she, her): So it has a big impact.

177

00:20:25.080 --> 00:20:31.140

Kristina Hill (she, her): From the very beginning on our critical infrastructure that's meant to manage water.

178

00:20:32.310 --> 00:20:39.659

Kristina Hill (she, her): If we build a seawall, or a cut-off wall, it's sometimes called, that can actually cause...

179

00:20:39.900 --> 00:20:46.199

Kristina Hill (she, her): the fresh water to stay fresh for longer. It can actually hold the saltwater, groundwater out.

180

00:20:46.720 --> 00:20:50.739

Kristina Hill (she, her): But it can increase the level of the fresh water on the inside.

181

00:20:51.190 --> 00:20:53.540

Kristina Hill (she, her): And that doesn't help the problem.

182

00:20:53.600 --> 00:21:11.450

Kristina Hill (she, her): So freshwater gets trapped behind it and can be higher, even as the rising salt water can be kept out. So these cut-off walls and seawalls may actually make the problem worse on the inland side. That's brand new science that's come out in the last year.

183

00:21:12.360 --> 00:21:30.669

Kristina Hill (she, her): So, I'm sure you're seeing things like this. This is a street in Alameda where a manhole bubbles up and floods the street. The city of Alameda has actually decided to close this street. It's the first street closure that I know of, a permanent street closure, that's in anticipation of sea level rise.

184

00:21:31.010 --> 00:21:37.819

Kristina Hill (she, her): But this is what cities are going to have to be considering all over the world. When do they start to close a street that floods?

185

00:21:39.730 --> 00:21:51.690

Kristina Hill (she, her): And that's what we're seeing in this additional sea level, so now the sea level's even higher here. The pipe was already flooded, the creek starts to be more flooded, the contaminants start to be more flooded.

186

00:21:52.130 --> 00:22:08.029

Kristina Hill (she, her): And then finally, the street itself is flooded because stormwater is designed to flow to the road and into the stormwater pipe under the road, but that's all full. So the road floods first. Think of the woman in New Zealand who's trying to clean out the drain.

187

00:22:08.360 --> 00:22:16.329

Kristina Hill (she, her): And the floodplain of the creek floods, and the parking lot floods that's supposed to be protecting the contaminants underneath it from flooding.

188

00:22:16.810 --> 00:22:25.250

Kristina Hill (she, her): So, by the time we get to a few feet of sea level rise, or even the kinds of El Nino king tides that we're gonna see this winter.

189

00:22:25.710 --> 00:22:39.680

Kristina Hill (she, her): We're seeing a system that has ceased to function. The infrastructure underground isn't doing its job, creeks are flowing over their banks, and contamination can be mobilized that was stable in the past.

190

00:22:39.880 --> 00:22:45.760

Kristina Hill (she, her): And streets may become impassable, like that street in Alameda that they've decided to close.

191

00:22:47.740 --> 00:22:54.180

Kristina Hill (she, her): I want to show this brief video, that was made by a group called the Geomodelers.

192

00:22:54.540 --> 00:23:03.259

Kristina Hill (she, her): And if it works for me, what it shows is the other hazard that we face here in the Bay Area, which is called liquefaction.

193

00:23:03.390 --> 00:23:10.000

Kristina Hill (she, her): The depth of groundwater in the soil is one of the biggest drivers of liquefaction risk.

194

00:23:10.130 --> 00:23:16.290

Kristina Hill (she, her): So as the groundwater rises with a rising sea level, the risk of liquefaction can increase.

195

00:23:16.390 --> 00:23:18.289

Kristina Hill (she, her): Let me show you what that looks like.

196

00:23:20.930 --> 00:23:24.709

Kristina Hill (she, her): He's using a hammer to show the force of the earthquake.

197

00:23:24.910 --> 00:23:34.509

Kristina Hill (she, her): And the wet sand in the bucket behaves like a liquid when the force of the earthquake strikes the sand. Because it's wet!

198

00:23:34.830 --> 00:23:44.179

Kristina Hill (she, her): So it starts to behave more like a liquid, and it's kind of dramatic to use a school bus as the vehicle that sinks down, but that is in fact, what happened.

199

00:23:44.310 --> 00:23:52.819

Kristina Hill (she, her): vehicles actually sink into liquefied soil, and it happened in Christchurch, New Zealand, in their earthquakes, in the last decade.

200

00:23:53.220 --> 00:23:56.359

Kristina Hill (she, her): Cars and trucks sank directly into the soil.

201

00:23:56.640 --> 00:23:58.600

Kristina Hill (she, her): And this is an example of that.

202

00:23:59.070 --> 00:24:12.800

Kristina Hill (she, her): A car that sank into a sandy soil when the earthquake energy passed through it, and then when the energy passed, the soil re-solidified, and the vehicle had to be, dug out of that sand.

203

00:24:15.390 --> 00:24:25.799

Kristina Hill (she, her): We have places in the Bay Area where there's a significant amount of contamination. I'm sure you have these sites also. This one happens to be owned by the AstraZeneca company.

204

00:24:26.250 --> 00:24:32.069

Kristina Hill (she, her): And, housing is planned for the top of this site, 4,000 units of housing.

205

00:24:32.510 --> 00:24:39.539

Kristina Hill (she, her): This is what it looks like at a king tide in 2021. You can see that the tide water comes right up to the edge of this site.

206

00:24:40.330 --> 00:24:44.380

Kristina Hill (she, her): Floods these marshes, Coming through this opening.

207

00:24:44.600 --> 00:24:47.140

Kristina Hill (she, her): And causing groundwater to rise also.

208

00:24:47.880 --> 00:24:52.880

Kristina Hill (she, her): So, we looked into the ways that the contaminants on site might move.

209

00:24:53.100 --> 00:25:05.160

Kristina Hill (she, her): This might look a little technical, but we're really just showing, in these little circles here with the whiskers attached to them, we're showing places where the contaminants are known to be present in the groundwater.

210

00:25:05.400 --> 00:25:13.200

Kristina Hill (she, her): And then we show the direction on the surface of the water table that those contaminants could flow in if they're in motion.

211

00:25:13.480 --> 00:25:16.409

Kristina Hill (she, her): As sea level rises and groundwater rises.

212

00:25:16.860 --> 00:25:22.400

Kristina Hill (she, her): So, this is a flow direction. Each of these whiskers is kind of a flow direction.

213

00:25:22.550 --> 00:25:29.370

Kristina Hill (she, her): And these brown lines show sewer pipes, sanitary sewer pipes, to which buildings are attached.

214

00:25:29.790 --> 00:25:42.979

Kristina Hill (she, her): So each time one of these whiskers crosses a sewer line, that's an opportunity for contaminants to enter a sewer line, and then enter a building that's attached to the sewer line, because some chemicals

215

00:25:43.250 --> 00:25:59.640

Kristina Hill (she, her): That are called volatile organic chemicals, or VOCs, and here I'm talking about CVOCs, because those are the most persistent. They don't degrade over a decade. They persist for a long time. Things like toluene and,

216

00:26:00.780 --> 00:26:09.270

Kristina Hill (she, her): various chemicals that have a volatile gas component. So here's the liquid of the chemical floating on the water table.

217

00:26:09.390 --> 00:26:13.910

Kristina Hill (she, her): And here's the gas from the chemical that accompanies the liquid.

218

00:26:14.450 --> 00:26:23.549

Kristina Hill (she, her): If that flows towards a sanitary sewer line, excuse me, the gas and the liquid can enter the sewer line where it's cracked at a joint.

219

00:26:23.860 --> 00:26:29.740

Kristina Hill (she, her): And many of our sewer lines are cracked at joints. This is a fairly typical condition.

220

00:26:30.200 --> 00:26:34.770

Kristina Hill (she, her): And then the gas can travel uphill, into a building.

221

00:26:34.940 --> 00:26:49.229

Kristina Hill (she, her): And it can travel into the building by an old sanitary sewer pipe that's been improperly closed. It's not been sealed properly. It can go into cracks through the floor and enter the indoor air of the building.

222

00:26:49.630 --> 00:26:52.929

Kristina Hill (she, her): It can enter a drain for a shower.

223

00:26:53.180 --> 00:26:56.320

Kristina Hill (she, her): These pee traps are meant to be wet.

224

00:26:56.550 --> 00:27:03.570

Kristina Hill (she, her): And, for example, in the summertime, if a school isn't using its showers, probably more likely a high school than an elementary school, but...

225

00:27:03.680 --> 00:27:09.629

Kristina Hill (she, her): If the school isn't using the showers, the P-trap goes dry, or the sink's also a P-trap.

226

00:27:09.810 --> 00:27:12.929

Kristina Hill (she, her): And then gases can enter through a dry P-trap.

227

00:27:13.430 --> 00:27:19.690

Kristina Hill (she, her): And then one of the most likely ways is that gases can enter at the base of a toilet.

228

00:27:19.890 --> 00:27:23.610

Kristina Hill (she, her): Where a wax or plastic seal is supposed to keep

229

00:27:23.860 --> 00:27:36.079

Kristina Hill (she, her): the air from the sewer pipe from entering the room, but those seals only last about 15 years, so if you don't know the last time your toilet seal was changed, it may well no longer be functioning.

230

00:27:36.430 --> 00:27:38.510

Kristina Hill (she, her): And gases can enter.

231

00:27:38.880 --> 00:27:42.439

Kristina Hill (she, her): Residential buildings, hospitals, schools.

232

00:27:42.580 --> 00:27:55.489

Kristina Hill (she, her): through old toilet seals. And in less well-maintained neighborhoods, apartment buildings, schools and districts that are short on funding, that's more likely to happen.

233

00:27:55.640 --> 00:28:01.589

Kristina Hill (she, her): So we're really talking about higher risk in older buildings and in lower-income areas.

234

00:28:02.360 --> 00:28:05.519

Kristina Hill (she, her): So it's got an environmental justice component to it.

235

00:28:07.510 --> 00:28:21.270

Kristina Hill (she, her): Once those contaminants enter the building, of course, people are exposed to potentially cancer-causing chemicals. And it's an issue for... especially for children, whose organs are still developing, to be exposed to those chemicals

236

00:28:21.410 --> 00:28:29.360

Kristina Hill (she, her): Until... before adulthood, has a greater lifetime cancer risk than for an adult to be exposed to those conditions.

237

00:28:30.680 --> 00:28:49.429

Kristina Hill (she, her): So, I'm comparing two cross-sections here. The one on the bottom is kind of a cross-section that shows current conditions, and now I'm showing a building with a sewer line that goes to the sanitary sewer under the street. So this is the private sewer lateral, this is the public sewer main.

238

00:28:49.950 --> 00:28:55.000

Kristina Hill (she, her): This building has a foundation. That's a pile foundation, it has a basement.

239

00:28:55.290 --> 00:29:01.750

Kristina Hill (she, her): There's contamination in the soil with a parking lot over it, and the fresh groundwater in light blue.

240

00:29:02.220 --> 00:29:03.320

Kristina Hill (she, her): A levy?

241

00:29:03.620 --> 00:29:06.390

Kristina Hill (she, her): And then the salty groundwater in the darker blue.

242

00:29:06.590 --> 00:29:08.770

Kristina Hill (she, her): And what I want you to see is.

243

00:29:09.210 --> 00:29:26.310

Kristina Hill (she, her): What typically happens is that a building owner in a building that's being affected by rising groundwater, you can see here fresh groundwater has risen to the point where it's flooding the sanitary sewer, it's flooding the storm drains on the sides of the street and the gutters.

244

00:29:26.460 --> 00:29:29.199

Kristina Hill (she, her): And the building owner decides to take action.

245

00:29:29.410 --> 00:29:34.410

Kristina Hill (she, her): They put pumps in next to their building. These heavy black lines represent pumps.

246

00:29:34.660 --> 00:29:40.480

Kristina Hill (she, her): And when they pump to protect their own parking garage or basement storage level.

247

00:29:40.690 --> 00:29:47.690

Kristina Hill (she, her): What that does is it brings the saltwater groundwater, which is that darker blue, it brings it upwards.

248

00:29:48.000 --> 00:29:50.080

Kristina Hill (she, her): That's called up-coning.

249

00:29:50.950 --> 00:30:02.849

Kristina Hill (she, her): And when we pump, we bring the saltwater groundwater up quite a bit. It can be pulled upwards by a factor of 1 to 40. So if I pump my groundwater down by a foot.

250

00:30:03.250 --> 00:30:06.439

Kristina Hill (she, her): I could bring the salt water up by 40 feet.

251

00:30:06.810 --> 00:30:13.929

Kristina Hill (she, her): And now, my building foundations are sitting in salty groundwater that they may never have been designed to sit in.

252

00:30:14.210 --> 00:30:28.010

Kristina Hill (she, her): So now I'm gonna think about, oh, there could be structural implications for buildings of trying to protect the building. We could actually cause that to be a building that's more damaged.

253

00:30:28.150 --> 00:30:33.360

Kristina Hill (she, her): By salty groundwater, even as it prevents the flooding of the garage or the basement.

254

00:30:34.320 --> 00:30:49.899

Kristina Hill (she, her): This is an example of a building in real life. This is Oakland. It's an affordable housing development where people are paying, maybe \$2,000 a month for an apartment that would go for \$3,000 on the open market, or \$4,000.

255

00:30:50.090 --> 00:30:56.620

Kristina Hill (she, her): So it's not low income, but it's moderate income, and it's called Coliseum Connections.

256

00:30:56.980 --> 00:31:04.550

Kristina Hill (she, her): It's a housing development in Oakland that flooded in the king tides and heavy rain in 2023, that New Year's Eve storm.

257

00:31:05.170 --> 00:31:15.479

Kristina Hill (she, her): The building was flooded, the residents had to be moved out, they had just moved in a couple months earlier, and they had to be moved out to live at a hotel for months.

258

00:31:16.150 --> 00:31:21.270

Kristina Hill (she, her): The developer sued the city for not managing groundwater and stormwater.

259

00:31:21.860 --> 00:31:29.550

Kristina Hill (she, her): Primarily the stormwater, because the drains didn't do the job of taking the rainwater away, the public drains.

260

00:31:29.780 --> 00:31:32.779

Kristina Hill (she, her): And they didn't work because they were already full of groundwater.

261

00:31:33.700 --> 00:31:35.969

Kristina Hill (she, her): So, the city got sued.

262

00:31:36.430 --> 00:31:48.180

Kristina Hill (she, her): And then the developer stopped paying for the residents to live in the hotel after a few months, and the city took on that financial burden, as well, of paying for people who had been flooded out of a building.

263

00:31:49.080 --> 00:31:55.530

Kristina Hill (she, her): So, it was a big burden for the city, and a big burden for the developer, and everyone's still pointing fingers.

264

00:31:55.830 --> 00:32:07.180

Kristina Hill (she, her): The problem is that this is the governor, at the ribbon cutting for that same building, Coliseum Connections, in 2021, when it began to be under construction.

265

00:32:07.530 --> 00:32:10.139

Kristina Hill (she, her): The problem is that we want housing to be built.

266

00:32:10.350 --> 00:32:24.590

Kristina Hill (she, her): And so we're rushing to build buildings in places that are at risk of flooding, and put people in those buildings who are then at risk of all the impacts of flooding and potential contamination issues.

267

00:32:25.620 --> 00:32:28.140

Kristina Hill (she, her): This is a much more dramatic example.

268

00:32:28.390 --> 00:32:36.120

Kristina Hill (she, her): Where Champlain Towers South, collapsed in Miami a few years ago, in 2022, I believe it was.

269

00:32:36.530 --> 00:32:48.079

Kristina Hill (she, her): And one of the reasons for the collapse, in addition to a design flaw, was that foundation pilings were actually corroded from exposure to salty groundwater. You can see the...

270

00:32:48.180 --> 00:32:51.329

Kristina Hill (she, her): Canals and ocean are not too far away here.

271

00:32:51.750 --> 00:33:04.369

Kristina Hill (she, her): So that building was built in a place where it became saltier over time, and the pilings, the metal rebar inside the concrete pilings of the foundation.

272

00:33:04.710 --> 00:33:08.619

Kristina Hill (she, her): The concrete wasn't thick enough for salt water.

273

00:33:08.750 --> 00:33:13.359

Kristina Hill (she, her): And the ions of salt came through the concrete and corroded the rebar.

274

00:33:13.510 --> 00:33:22.229

Kristina Hill (she, her): And then the rebar expanded, cracked the concrete, and the whole thing accelerated, and by the time the condo building collapsed.

275

00:33:22.390 --> 00:33:25.220

Kristina Hill (she, her): The pilings were quite corroded.

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00:33:25.710 --> 00:33:36.050

Kristina Hill (she, her): So, the City of Miami and Dade County have now put in requirements that buildings over 40 years old are required to have their foundations inspected for corrosion.

277

00:33:36.570 --> 00:33:44.080

Kristina Hill (she, her): And that's gonna have a big impact on property values, and on the impact on condominium owners in the future.

278

00:33:44.370 --> 00:33:53.550

Kristina Hill (she, her): Who feel blindsided because they don't have the resources to pay for repaired foundations in these, excuse me, expensive buildings.

279

00:33:55.190 --> 00:34:14.749

Kristina Hill (she, her): So, I just want to say it's not all doom and gloom. We are looking, and the whole world is looking, the Dutch and the Germans and the Japanese, about how to handle this, but it's not conventional development. What's being proposed in other parts of the world now is development that floats on shared decking.

280

00:34:15.139 --> 00:34:23.399

Kristina Hill (she, her): In this case, the student of mine is showing what happens in a model when he floods it, and, a floating deck

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00:34:23.530 --> 00:34:28.020

Kristina Hill (she, her): Allows prefabricated units to float upwards and not be impacted.

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00:34:28.210 --> 00:34:39.330

Kristina Hill (she, her): This is an image from a competition that we did in the Bay Area in 2018. We showed excavated ponds, artificial ponds, not the bay surface or the ocean.

283

00:34:39.670 --> 00:34:43.210

Kristina Hill (she, her): Artificial ponds where the groundwater is very shallow.

284

00:34:43.670 --> 00:34:46.820

Kristina Hill (she, her): And where conventional buildings will start to fail.

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00:34:47.449 --> 00:34:55.159

Kristina Hill (she, her): We're talking about replacing conventional buildings with floating, prefabricated units that could get to a reasonably high density.

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00:34:55.290 --> 00:34:58.699

Kristina Hill (she, her): Of 50 to 75 units per acre.

287

00:34:59.490 --> 00:35:11.119

Kristina Hill (she, her): Not high density, but medium density. And then buildings next to it that are built on... they're not shown here, but it would have to be very deep pilings down to bedrock.

288

00:35:11.850 --> 00:35:14.699

Kristina Hill (she, her): So we're talking about ways that we could adapt.

289

00:35:14.780 --> 00:35:33.970

Kristina Hill (she, her): This is another example where a large wetland exists, and we would want to maintain that wetland. This is in South Bay, the San Francisco Bay Area, and East Palo Alto would have to start floating parts of its downtown to be able to keep up with a higher and higher water table.

290

00:35:34.840 --> 00:35:37.720

Kristina Hill (she, her): So, no one's quite ready to think about

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00:35:37.840 --> 00:35:41.609

Kristina Hill (she, her): floating buildings yet, but in fact, that's what the Dutch are doing.

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00:35:41.970 --> 00:35:46.989

Kristina Hill (she, her): And the Germans are using tiered development, where they build up the dirt.

293

00:35:47.120 --> 00:35:50.729

Kristina Hill (she, her): To be able to be above the water level.

294

00:35:51.030 --> 00:35:55.749

Kristina Hill (she, her): And that's another option, but it's not great for an earthquake zone.

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00:35:56.550 --> 00:36:01.600

Kristina Hill (she, her): Floating, as the Dutch are doing it, is a better strategy for earthquake areas.

296

00:36:02.020 --> 00:36:08.550

Kristina Hill (she, her): Because it separates the buildings from the energy wave of the... Earthquake.

297

00:36:08.720 --> 00:36:21.050

Kristina Hill (she, her): This is an example where we're talking about Dutch-style ponds that are artificial ponds in what are now conventionally developed light industrial or potentially residential areas.

298

00:36:23.020 --> 00:36:29.119

Kristina Hill (she, her): Where the ponds would be in a certain location, this might be, for example, a coastal highway, this white band.

299

00:36:29.690 --> 00:36:37.470

Kristina Hill (she, her): They'd start in one band of ponds, and then over time, we'd have to add additional bands of ponds inland.

300

00:36:37.630 --> 00:36:44.850

Kristina Hill (she, her): And abandon the first bands of ponds after 50, 75, 100, 150 years.

301

00:36:45.030 --> 00:37:03.500

Kristina Hill (she, her): and move to the more inland bands of ponds. But it's a way of adapting in place that still allows you to do manage retreat over periods of 75 and 100 years. The key thing is to be able to create value and conserve value in the next 40 to 50 years.

302

00:37:04.070 --> 00:37:21.309

Kristina Hill (she, her): So that's why we're thinking about not building conventional buildings like the Coliseum Connections building in Oakland, or the Champlain Towers building in Miami, but doing something more like what the Dutch would do that can allow for stable investments and stable housing

303

00:37:21.580 --> 00:37:23.859

Kristina Hill (she, her): For 40 to 50 years at a time.

304

00:37:24.340 --> 00:37:27.850

Kristina Hill (she, her): And then relocation of those assets

305

00:37:28.110 --> 00:37:32.010

Kristina Hill (she, her): To a more inland, new artificial pond.

306

00:37:32.180 --> 00:37:37.450

Kristina Hill (she, her): 50, 75 years after the initial investments were made.

307

00:37:37.780 --> 00:37:45.089

Kristina Hill (she, her): But it requires a big change in how we think about development in coastal areas in California that are flat.

308

00:37:45.540 --> 00:37:58.639

Kristina Hill (she, her): that have high groundwater, and that need some kind of strategy for the future. We can't stop building housing, but we have to find a safe way to do it, where we're not putting people's lives at risk.

309

00:37:58.810 --> 00:37:59.970

Kristina Hill (she, her): Or their health.

310

00:38:00.840 --> 00:38:13.489

Kristina Hill (she, her): So, this, I think, is a more sane way to approach thinking about this problem than to just keep doing conventional buildings in areas that are increasingly unsafe.

311

00:38:15.060 --> 00:38:21.079

Kristina Hill (she, her): So, I'll stop my slides there, and I think that, there are some other slides that people would like to show.

312

00:38:22.600 --> 00:38:26.150

Kristina Hill (she, her): And I'm happy to take questions whenever the moderator thinks that's appropriate.

313

00:38:27.360 --> 00:38:43.559

Lori Saldaña: Thank you so much, Dr. Hill. And what I wanted to do at this point, I have given Eric some images from local, infrastructure. And, of course, the proposal to build housing in the Midway area is

314

00:38:43.730 --> 00:38:48.640

Lori Saldaña: Right now, up for a lot of legislative, twists and turns.

315

00:38:48.740 --> 00:39:05.730

Lori Saldaña: But what I wanted to introduce was what is the current cost, not the future risk, but the current cost of what's happening with our water and wastewater infrastructure. Eric, I... can you go ahead and show the slides, and I can speak?

316

00:39:06.200 --> 00:39:07.269

Lori Saldaña: Is that when...

317

00:39:08.810 --> 00:39:20.770

Lori Saldaña: If you can do it from your end, thank you. That would make it easier. I'm not set up to share. So, can everyone see this, very dense financial report?

318

00:39:20.770 --> 00:39:39.120

Lori Saldaña: Mostly, I want to start from the financial perspective. This is a report that I saw in June when I attended a meeting of the Joint Power Authority for our water and wastewater system regionally. It's the city of San Diego that manages most of the operation construction

319

00:39:39.120 --> 00:39:42.210

Lori Saldaña: and then the discharge from the Point Loma treatment plant.

320

00:39:42.220 --> 00:39:52.439

Lori Saldaña: But this network of collection pipes runs throughout our county, and there are 17 cities that feed into this. So, the highlighted.

321

00:39:52.440 --> 00:40:08.469

PCPB: bands there are representing cost overruns, the cost of the Pure Water program, and specifically, there's a 35% change order in these specific pump areas

322

00:40:08.470 --> 00:40:14.539

PCPB: This is a billion-dollar-plus program, and it's... it's that much higher because

323

00:40:14.620 --> 00:40:19.940

PCPB: There is groundwater that wasn't properly evaluated flooding into.

324

00:40:19.940 --> 00:40:29.909

Lori Saldaña: the pump station construction near Friars and Morena... Friars Road and Morena Boulevard at the mouth of the San Diego River. So if we go to the next slide.

325

00:40:33.490 --> 00:40:48.300

Lori Saldaña: The major infrastructure that's under the Joint Power Authority runs along the San Diego River, and then cuts through the Midway area, along Morena Boulevard, through the Midway area. Thank you for highlighting that.

326

00:40:48.300 --> 00:41:01.360

Lori Saldaña: and then it's delivered to the Point Loma treatment plant down on the Point, Point Loma. We have an exceptional arrangement through the federal government. We do not have to treat our wastewater to secondary limits.

327

00:41:01.390 --> 00:41:19.920

Lori Saldaña: And in part because of a legal agreement between the Sierra Club from decades ago, and we prevailed, I was chair of the Sierra Club at the time, with the agreement of reclaiming water. So water and wastewater in San Diego is extremely complicated, always has been, continues to be.

328

00:41:19.920 --> 00:41:21.780

Lori Saldaña: Next slide, please.

329

00:41:23.380 --> 00:41:42.930

Lori Saldaña: So, the problems with running that infrastructure through these areas where groundwater is not being assessed is things like this, a sinkhole. And this is Morena Boulevard, and when you have a sinkhole, it's not just impacting water and wastewater, even though that was the cause, reportedly.

330

00:41:43.130 --> 00:41:45.790

Lori Saldaña: of this. It was a leaking water main.

331

00:41:45.790 --> 00:42:05.110

Lori Saldaña: But you have all these, vehicles in the background that are from electric, SDG&E, Cox Communications, there are telecommunication lines buried, there's gas lines buried. So, anytime they trench for a project, they add a lot of other, related services that they are burying underground.

332

00:42:05.140 --> 00:42:07.360

Lori Saldaña: Next slide, please.

333

00:42:08.210 --> 00:42:16.059

PCPB: So, this is an example of an emergency order for sewage, repairs in Mission Beach.

334

00:42:16.060 --> 00:42:21.310

Lori Saldaña: Where there is a wastewater connection that is collapsing, and

335

00:42:21.800 --> 00:42:28.449

Lori Saldaña: Again, they're not discussing this, but when I listen into their committee hearings based on work I've done on infrastructure.

336

00:42:28.860 --> 00:42:33.559

Lori Saldaña: Planning in the past, It sounds like there is water pressure from the west for.

337

00:42:33.560 --> 00:42:36.720

PCPB: To the collapse of this buried line.

338

00:42:36.720 --> 00:42:45.270

Lori Saldaña: And it's now an emergency situation where they have to bypass this and have other ways to pump sewage from these homes and businesses through the.

339

00:42:45.270 --> 00:42:46.909

PCPB: Point Loma Treatment Plan.

340

00:42:46.910 --> 00:42:48.740

Lori Saldaña: Next slide, please.

341

00:42:49.250 --> 00:43:02.019

Lori Saldaña: So, anytime there are these emergency repairs, and referring back to Dr. Hill, as she were saying, this is saltwater, standing salt water that is coming up through the storm drains at the end of Mission Boulevard.

342

00:43:02.020 --> 00:43:21.300

Lori Saldaña: Imagine the corrosion. Imagine what is happening. All the streetlights in this area are out. They do not... and the water is getting into, again, the buried electrical system. The homes that are located there in this beautiful beachfront area, surrounded by water on all sides, it's a long, thin strip of

343

00:43:21.300 --> 00:43:25.300

Lori Saldaña: What used to be the barrier sand for the salt marsh behind it.

344

00:43:25.370 --> 00:43:34.480

Lori Saldaña: They are all now having salt water intrude into the foundations of their buildings. Next slide, please.

345

00:43:34.920 --> 00:43:50.769

Lori Saldaña: And this will remind you of what Dr. Hill's show started with. This is storm... or seawater pushing up through the covers of the stormwater system. We need a new term. This is not a storm. This is a clear

346

00:43:50.820 --> 00:43:55.390

Lori Saldaña: Dry evening, but the high tide, 7.4,

347

00:43:55.560 --> 00:44:15.309

Lori Saldaña: overwhelmed the collection system and pushed into the street. The reason it's jetting up instead of... in the last two months I was there, it was flowing, but now it's jetting like a fountain, because the stormwater division of San Diego welded this down, so it wouldn't be pushed up and create

348

00:44:15.310 --> 00:44:21.719

Lori Saldaña: a hazard, because I... I reported it to the council. This is a problem. They're... they're...

349

00:44:23.430 --> 00:44:29.800

Lori Saldaña: It's not a cure. Their response was, okay, we'll just weld it down. Next slide, please.

350

00:44:34.120 --> 00:44:36.370

Lori Saldaña: Oh, are we back? Was that yours? Oh, no.

351

00:44:36.370 --> 00:44:37.430

PCPB: That's it, yeah.

352

00:44:37.690 --> 00:44:39.849

Lori Saldaña: Is that the last one I sent? I thought I had...

353

00:44:39.850 --> 00:44:41.249

PCPB: Oh, wait, I agree.

354

00:44:41.250 --> 00:44:42.660

Lori Saldaña: Construction?

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00:44:43.010 --> 00:44:43.809

PCPB: There you go.

356

00:44:43.810 --> 00:44:50.330

Lori Saldaña: Okay, so just a reminder, San Diego has invested literally billions in

357

00:44:50.330 --> 00:45:10.009

Lori Saldaña: not just the physical construction, operation, and maintenance of water and wastewater, because we're at the end of the pipeline for the Colorado River, so they are working very hard to create a local water supply, and that's what the Pure Water Program is about. But in doing so, they have not been keeping up with the sea level rise and the groundwater

358

00:45:10.480 --> 00:45:25.290

Lori Saldaña: changes, and that's why we've invited Dr. Hill to give us this explainer. Thank you so much for that, because what I'm seeing as somebody who's worked on these issues for decades is San Diego is so focused on.

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00:45:25.410 --> 00:45:26.889

PCPB: just...

360

00:45:27.840 --> 00:45:45.699

Lori Saldaña: delivering this pure water, they're not analyzing the existing infrastructure and the needed infrastructure to maintain this going forward with the changes in sea level around the Morena, San Diego River, Friars Road coastal zone.

361

00:45:45.780 --> 00:45:58.149

Lori Saldaña: So... and of course, they want to add more housing in an area that's already showing signs of these, infiltration and problems. So...

362

00:45:58.450 --> 00:46:09.209

Lori Saldaña: This isn't... you know, we didn't want to talk specifically about the Midway Project, in part because Dr. Hill is up in San Francisco Bay, the largest bay in California.

363

00:46:09.290 --> 00:46:17.600

Lori Saldaña: San Diego Bay and the complex that includes Mission Bay, historically, they have historically been connected at the mouth of the San Diego River.

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00:46:17.600 --> 00:46:29.769

Lori Saldaña: And the fact that we have the second largest bay in California, and now the sea level is coming into these historic areas and reclaiming the places that it, and filling that ground space.

365

00:46:29.810 --> 00:46:35.490

Lori Saldaña: That is why we're so concerned about Midway Project going forward.

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00:46:36.290 --> 00:46:39.530

Lori Saldaña: Because the state legislature is doing these very...

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00:46:39.910 --> 00:46:49.289

Lori Saldaña: quick turnarounds on builds to declare the environmental reports complete. So I'll leave it at that and turn it over to questions.

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00:46:49.450 --> 00:46:51.639

Kristina Hill (she, her): Lori, if I could add, too,

369

00:46:51.640 --> 00:46:52.090

Lori Saldaña: Yes.

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00:46:52.090 --> 00:46:58.970

Kristina Hill (she, her): When two bays were connected, and then are disconnected by roads and fill, the groundwater is all still connected underneath.

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00:46:58.970 --> 00:46:59.420

Lori Saldaña: Yes.

372

00:46:59.810 --> 00:47:02.759

Kristina Hill (she, her): So everything that happens in one bay affects the other bay.

373

00:47:03.490 --> 00:47:10.829

Lori Saldaña: Oh, that's the picture I thought I sent of the water, the Midway drive. Eric and Patty and I were out there

374

00:47:10.830 --> 00:47:25.269

Lori Saldaña: along with the stormwater division people, because just as you showed in New Zealand and San Leandro, the water is coming up and covering the streets. And that's a public safety issue now, not a future public safety concern.

375

00:47:25.270 --> 00:47:29.509

Lori Saldaña: There was a Waymo that came down through the center. They closed

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00:47:29.510 --> 00:47:47.770

Lori Saldaña: it was close to all but one direction. There were cones, there was standing water. We just started Waymo in San Diego, and I don't think anyone programmed a Waymo to respond to standing water, and the algorithms froze, and it pulled over and stopped, and people started honking, and it was just...

377

00:47:47.770 --> 00:47:55.900

Lori Saldaña: It would be comedy, except it could be tragedy, because, you know, people are honking at a car that doesn't know how to think about groundwater.

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00:47:55.900 --> 00:47:56.599

Lori Saldaña: In the spirit.

379

00:47:56.600 --> 00:48:00.649

Kristina Hill (she, her): to start adding stuck Waymos into my cartoons of...

380

00:48:00.650 --> 00:48:05.869

Lori Saldaña: Used reprogrammed algorithms for rising seas.

381

00:48:05.870 --> 00:48:10.279

Kristina Hill (she, her): Yeah, and if there are two quick things I could add I didn't have slides of,

382

00:48:10.430 --> 00:48:16.519

Kristina Hill (she, her): In San Rafael, over the winter, there was flooding from groundwater during the king tides.

383

00:48:16.750 --> 00:48:18.970

Kristina Hill (she, her): And they lost cell service.

384

00:48:19.280 --> 00:48:25.359

Kristina Hill (she, her): Because, AT&T had a facility that was at ground level, and that was flooded.

385

00:48:25.500 --> 00:48:30.889

Kristina Hill (she, her): So, that was an unexpected connection from the flooding to cause a loss of cell service.

386

00:48:31.150 --> 00:48:36.929

Kristina Hill (she, her): Other people have seen corrosion affecting, cable networks that are in underground.

387

00:48:37.160 --> 00:48:39.250

Kristina Hill (she, her): Conveyance systems.

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00:48:39.400 --> 00:48:42.740

Kristina Hill (she, her): And then in Honolulu, they're seeing,

389

00:48:43.200 --> 00:48:57.929

Kristina Hill (she, her): Sinking holes created by, separated water supply lines, even new water supply lines, because what's happening is tidal water is pulling the fines out of the backfills under the pipes.

390

00:48:58.530 --> 00:49:05.700

Kristina Hill (she, her): Rising and falling every day with the tides. It's pulling the fines out. The pipes then settle and separate.

391

00:49:05.960 --> 00:49:17.810

Kristina Hill (she, her): So you can get sinkholes and geysers and flooding in the street, even with new water lines. So it's actually the water company in Hawaii that's paying for research on groundwater and its impacts on infrastructure.

392

00:49:19.540 --> 00:49:20.160

Kristina Hill (she, her): Thank you.

393

00:49:20.160 --> 00:49:32.030

Lori Saldaña: everywhere. Yes, thank you, and I'm sure we'll have more examples as people ask questions that will come to mind. So, Eric, do you want me to call on the folks with hands up, and...

394

00:49:33.520 --> 00:49:34.960

PCPB: Yeah, sure, go right ahead.

395

00:49:35.130 --> 00:49:44.119

Lori Saldaña: All right, so Margaret, thank you for joining us and organizing so many people to come out to events in recent weeks. Go ahead, do you have a question for...

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00:49:44.300 --> 00:49:51.429

Margaret Virissimo: I'm really appreciative of this meeting, because I learned so much today, not only locally, but

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00:49:51.430 --> 00:50:08.089

Margaret Virissimo: worldwide, the crisis we're getting into, which is the climate action, and I can see just locally that this water situation is growing every year, little by little, but my thing is more on thoughts, what I'm thinking.

398

00:50:08.450 --> 00:50:33.410

Margaret Virissimo: And my thoughts, Midway Rising seems to be, like, a low-lying area with shallow groundwater. My thoughts are, are the city officials here focusing too narrowly on the ocean flooding while overlooking groundwater that could rise from below, especially in the Midway area, just in meetings that I've attended? Also, what happens when

399

00:50:33.410 --> 00:50:34.940

Margaret Virissimo: level rises.

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00:50:34.940 --> 00:50:38.449

Margaret Virissimo: Rising groundwater and heavy rainfall

401

00:50:38.450 --> 00:50:47.630

Margaret Virissimo: And actually, our issue here locally in San Diego is the San Diego River. When all that starts to flood together at the same time.

402

00:50:47.930 --> 00:51:04.480

Margaret Virissimo: I don't see that that has been a combined scenario that has been studied yet. When all those... the sea level, the rising groundwater, the heavy rainfall, and the San Diego River floods at once, that could be a huge problem for Midway that I haven't seen studied.

403

00:51:04.820 --> 00:51:16.330

Margaret Virissimo: Another thing that I've seen, too, was, you know, these buildings that they plan to build, like NAVOR and Midway Rising, seem to be, hopefully, they'll remain in place for 75 to 100 years.

404

00:51:17.240 --> 00:51:24.750

Margaret Virissimo: Are these projects designed for the conditions expected through climate action throughout their entire lifespan?

405

00:51:25.000 --> 00:51:39.199

Margaret Virissimo: I don't see talks about that when these congressmen are pushing these bills. I don't see that they're talking about the lifespan of these projects, with these rising groundwater issues that we're seeing today.

406

00:51:39.420 --> 00:51:52.310

Margaret Virissimo: And then just one more thing, you know, the salt water. We're surrounded by saltwater here in San Diego. Not so much, you know, an area... in other areas of the world, and I was thinking the saltwater intrusion

407

00:51:52.560 --> 00:52:14.119

Margaret Virissimo: accelerates corrosion of foundation, sewer lines, water pipes, electrical systems, and everything that they're putting underground in current infrastructures. I see that being a huge issue with Midway Rising because of the marshlands and the ground... the rising groundwaters with this project.

408

00:52:14.120 --> 00:52:21.469

Margaret Virissimo: I haven't seen any discussion on the saltwater intrusion accelerating the corrosion of these foundations.

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00:52:21.500 --> 00:52:24.110

Margaret Virissimo: And then lastly, if the project depends on.

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00:52:24.110 --> 00:52:28.489

Lori Saldaña: Oh, wait, wait! We're gonna... you're at 3 questions, and I'm trying to keep up with that.

411

00:52:28.490 --> 00:52:39.939

Margaret Virissimo: I'm just trying to see which one for Ms. Hill she thinks would be the most important. This is my last thought. If the project depends on pumps and drainage and systems.

412

00:52:39.940 --> 00:52:55.509

Margaret Virissimo: and other mechanical protections, what happens during a power failure? Earthquake, major storm, equipment breakdown? Those are my thoughts. I don't know which ones are most important, but they all relatively go hand in hand. Thank you for being here today.

413

00:52:56.000 --> 00:52:59.270

Lori Saldaña: Kristina, did you keep up with those? You want me to review the...

414

00:52:59.270 --> 00:53:06.969

Kristina Hill (she, her): I think I kept up, but to me, of those things, what's most important is, if pumping is planned as part of a development.

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00:53:07.110 --> 00:53:16.489

Kristina Hill (she, her): it's actually going to create a positive feedback loop where, you know, it's actually negative. It will cause the saltier... the groundwater to be saltier.

416

00:53:16.950 --> 00:53:23.840

Kristina Hill (she, her): And if the groundwater is saltier, then the pumps corrode faster, the pipes corrode faster, the foundations corrode faster.

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00:53:24.370 --> 00:53:29.430

Kristina Hill (she, her): So, people have to really plan for being in a saltwater environment.

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00:53:29.590 --> 00:53:45.369

Kristina Hill (she, her): And that's more expensive. It requires pre-planning, putting in sacrificial metals along the pipes and along the foundation pilings, and it's a complicated process. We're not used to building in a salty groundwater environment.

419

00:53:45.660 --> 00:53:49.629

Kristina Hill (she, her): With our conventional development approaches, and pumping makes it worse.

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00:53:49.980 --> 00:53:54.420

Kristina Hill (she, her): Pumping also pulls any contaminants in the groundwater towards the building.

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00:53:55.060 --> 00:53:56.890

Kristina Hill (she, her): And towards its sewer lines.

422

00:53:57.120 --> 00:53:59.880

Kristina Hill (she, her): So if there's a risk that there are contaminants.

423

00:54:00.330 --> 00:54:05.599

Kristina Hill (she, her): In the groundwater of the bay, then that just makes the risk for people living in that building.

424

00:54:05.860 --> 00:54:06.560

Lori Saldaña: Tours.

425

00:54:07.160 --> 00:54:08.269

Kristina Hill (she, her): Something is happening.

426

00:54:08.830 --> 00:54:32.190

Lori Saldaña: Related to that, the convention center downtown San Diego spends over a million dollars a year on pumping groundwater, and then has to send it to the Point Loma treatment plant to be discharged offshore, because it is contaminated from everything, and we have a huge military presence, so one of the questions Margaret had about the... what's called the NAVR project.

427

00:54:32.350 --> 00:54:47.119

Lori Saldaña: Some of those questions we don't have answers to, because it's under federal statutes versus... and environmental reviews versus state. So, those are great questions, and we need to raise them to people that can investigate them.

428

00:54:47.120 --> 00:54:53.180

Kristina Hill (she, her): And if I could just add one last thing about pumping, in the Bay Area, we're seeing that where there were former wetlands.

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00:54:53.280 --> 00:54:58.340

Kristina Hill (she, her): When we pump on those areas that are filled over former wetlands, the land sinks.

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00:54:58.930 --> 00:54:59.370

Lori Saldaña: the blue.

431

00:54:59.370 --> 00:55:08.919

Kristina Hill (she, her): That's how the Lower Ninth Ward of New Orleans got to be lower. Five to eight feet lower. That's how the central part of San Jose got to be lower.

432

00:55:09.060 --> 00:55:16.549

Kristina Hill (she, her): Pumping. So when you pump groundwater, those old organic soils collapse, and there's no way to fluff them back up again.

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00:55:17.420 --> 00:55:19.230

Lori Saldaña: Central Valley, California.

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00:55:19.470 --> 00:55:26.419

Kristina Hill (she, her): Yeah, so that's a really big deal for those probably former wetland areas of San Diego.

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00:55:27.230 --> 00:55:28.030

Lori Saldaña: Patty.

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00:55:28.850 --> 00:55:34.750

pattyducey-brooks: Dr. Kill, again, you're... I'm profoundly amazed by what you know and your knowledge.

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00:55:34.880 --> 00:55:37.719

pattyducey-brooks: How are you been able to get

438

00:55:37.980 --> 00:55:53.169

pattyducey-brooks: people that work on sewer systems and create the infrastructures accepting this information today, because I believe it takes a specialist like yourself, with years of knowledge, that really understands the dynamics of what our world is experiencing.

439

00:55:54.050 --> 00:56:07.119

Kristina Hill (she, her): Well, there are sewer engineers and sewer system leaders who are thinking about this. Honolulu is a good example of where they're starting to pay for research and then implement it.

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00:56:07.480 --> 00:56:10.470

Kristina Hill (she, her): They have some skin in the game when they pay for the research.

441

00:56:10.970 --> 00:56:28.750

Kristina Hill (she, her): And then, of course, here in the Bay Area, we are trying to persuade and starting to win. We're persuading the City of Richmond and the City of East Palo Alto to put VOC monitors in their sanitary sewer pipes near contaminated sites.

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00:56:28.860 --> 00:56:31.049

Kristina Hill (she, her): So that we can get early warning.

443

00:56:31.220 --> 00:56:36.700

Kristina Hill (she, her): When poison gases are being released into the city's sanitary sewers.

444

00:56:37.230 --> 00:56:45.430

Kristina Hill (she, her): So those are things that are already beginning to happen, but it's a lot. It's a lot to wrap your head around the way that we've built cities in the past.

445

00:56:45.550 --> 00:56:53.860

Kristina Hill (she, her): And how different it is, the way we'll need to build them in the future. I feel for the folks who are in charge and just want to do what they've done before.

446

00:56:54.140 --> 00:57:01.740

Kristina Hill (she, her): And I think of us right now as in the filling the cracks in the bathtub phase of adaptation to sea level rise.

447

00:57:02.040 --> 00:57:06.209

Kristina Hill (she, her): But we're not ready yet for what it's going to take beyond 2050.

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00:57:07.290 --> 00:57:23.480

pattyducey-brooks: And I'm just gonna ask another question, just because, as Eric knows, we did have a person from the stormwater Division that was talking to us, and she was a pretty high-ranking person, and she said, I am worried about what's going to be happening, because it's happening so fast, and it's putting so much demands on us.

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00:57:23.590 --> 00:57:33.409

pattyducey-brooks: How do we get this information to those people so that they become more aware and are part of the proactive process instead of reacting when we can't fix it?

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00:57:33.870 --> 00:57:51.130

Kristina Hill (she, her): I think that there are people in all sewer agencies who know, and they're worried, but they're being told by political appointees, or, you know, former state senate staffers who run these agencies. They're being told not to say anything, because they don't want to scare people.

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00:57:51.480 --> 00:57:52.929

Kristina Hill (she, her): About the cost.

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00:57:53.150 --> 00:57:55.269

Kristina Hill (she, her): I know this is true in the Bay Area.

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00:57:56.030 --> 00:58:08.100

Kristina Hill (she, her): So, I think that if there's a coalition of people who say, we want to advocate for this, and you provide cover for those agencies to talk to the public about the real financial and physical risks.

454

00:58:08.220 --> 00:58:09.850

Kristina Hill (she, her): That would be really helpful.

455

00:58:10.580 --> 00:58:28.390

Lori Saldaña: And Dr. Hill, if we could work with you, there are experts, Mark Merrifield and others at Scripps, but they tend to do what I call pure research versus applied and sort of activist research. There's various reasons why I think that happens in San Diego more than other places.

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00:58:28.390 --> 00:58:43.999

Lori Saldaña: But maybe we can form a working group, Patty, and follow up and see if we can engage some of our local researchers on some of these proactive things. I think the VOC monitors would be, would be an excellent approach to take to this.

457

00:58:44.190 --> 00:58:46.780

Lori Saldaña: So, thank you, great questions.

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00:58:46.940 --> 00:58:48.840

Lori Saldaña: Eric.

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00:58:49.400 --> 00:58:54.149

PCPB: Yeah, I have, like, 1500 questions, but, I'll...

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00:58:54.390 --> 00:59:05.410

PCPB: You know, because we've seen... everything that you showed us in your slides, we've seen. And I know that doesn't surprise you whatsoever.

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00:59:05.680 --> 00:59:15.190

PCPB: We're on marshlands, we have seawater inundation, we have, you know, the king tides, you know, bubbling with the seawater bubbling up through our streets.

462

00:59:15.420 --> 00:59:18.449

PCPB: As, as Lori showed on, on her slides.

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00:59:19.040 --> 00:59:25.579

PCPB: There's tactical questions about...

464

00:59:26.110 --> 00:59:35.830

PCPB: And we've got some of the largest sewer lines that are vitreous clay and old running right through the area in which, you know, we're concerned about.

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00:59:35.920 --> 00:59:47.099

PCPB: And we're having sinkholes emerge, you know, in areas where, as you... as you said, in Honolulu, the fines are getting swept out by the groundwater and the...

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00:59:47.290 --> 00:59:59.690

PCPB: sewage lines, you know, collapse because of it in one way or another. So we're obviously very, very concerned about that, because it passes right through the heart of our community. But I guess the, you know, the strategic question is.

467

01:00:01.170 --> 01:00:05.539

PCPB: How do we... Get this on people's scope.

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01:00:06.010 --> 01:00:12.349

PCPB: On their scan, because clearly, No one is looking at...

469

01:00:12.990 --> 01:00:22.369

PCPB: the... how serious this problem is from a structural issue, from an environmental issue, from a future issue.

470

01:00:22.970 --> 01:00:31.220

PCPB: how do we get this on their scope? How do they get them to start considering these issues? Because it's not part of the conversation right now.

471

01:00:31.980 --> 01:00:39.310

Kristina Hill (she, her): Well, one thing that I've seen is people are talking now about, how do the costs of building in the wrong place

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01:00:39.490 --> 01:00:42.990

Kristina Hill (she, her): By private developers, get transferred to the public.

473

01:00:43.280 --> 01:00:43.990

Lori Saldaña: Thank you.

474

01:00:44.740 --> 01:00:48.830

Kristina Hill (she, her): And that's something that people seem to care about. Are they going to be saddled?

475

01:00:49.000 --> 01:00:52.959

Kristina Hill (she, her): With additional taxes to try to

476

01:00:53.510 --> 01:00:57.090

Kristina Hill (she, her): Fix a problem that should never have been created in the first place.

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01:00:58.920 --> 01:01:06.809

PCPB: How... so the quantification of that is obviously kind of the next... because that's an important point, and we've been...

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01:01:07.140 --> 01:01:10.000

PCPB: Dancing around the edges of that, because...

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01:01:10.080 --> 01:01:28.390

PCPB: quantifying, that... the size of that, and it's obviously, it's massive. Has anyone done any work that we could potentially, you know, grab ahold of and say, hey, even in order of magnitude terms, right, what's the cost of

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01:01:29.240 --> 01:01:34.260

PCPB: the building failing like it did in Miami, because of,

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01:01:34.790 --> 01:01:37.099

PCPB: I don't want to say inappropriately, but...

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01:01:37.370 --> 01:01:48.949

PCPB: The design wasn't designed for what the problem became, lack of foresight, or what have you. Has someone done some of that work so that we can elevate it for the public to see?

483

01:01:49.800 --> 01:01:55.889

Kristina Hill (she, her): I don't know anybody who has assessed the dramatic scenario of building collapses.

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01:01:56.100 --> 01:02:00.889

Kristina Hill (she, her): But there certainly are people looking at the loss of capacity in sewer systems.

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01:02:02.870 --> 01:02:06.830

Kristina Hill (she, her): One of your faculty at San Diego State, Hathan Devani.

486

01:02:07.550 --> 01:02:12.460

Kristina Hill (she, her): Is one of the people in the country who's looking at sanitary sewer systems the most.

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01:02:12.710 --> 01:02:14.610

Lori Saldaña: Can you read that name again, please?

488

01:02:14.610 --> 01:02:16.210

Kristina Hill (she, her): His name is Hassan.

489

01:02:16.600 --> 01:02:20.859

Kristina Hill (she, her): And his last name is Devani, D-A-V-A-N-I.

490

01:02:21.630 --> 01:02:27.800

Kristina Hill (she, her): And he's one of my colleagues who I would have the most confidence in to look at sanitary sewer impacts.

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01:02:28.090 --> 01:02:29.990

Kristina Hill (she, her): And what the costs could be.

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01:02:31.440 --> 01:02:46.669

Lori Saldaña: And if I could just follow up and say, this is why I started with a financial document. Because what it comes down to is when you're talking to decision makers, elected officials, and the staff that carry out their choices, their votes.

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01:02:46.670 --> 01:02:55.539

Lori Saldaña: In San Diego, we have an estimated... I've heard anywhere from \$5 to \$9 billion of deferred stormwater maintenance.

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01:02:55.750 --> 01:03:08.299

Lori Saldaña: And if we are making that situation worse, if we are transfer... if we're losing capacity of the wastewater treatment, as you mentioned, because of infiltration and inflow from the groundwater.

495

01:03:08.320 --> 01:03:28.129

Lori Saldaña: That's what's going to resonate with them. And so, when I go to these Joint Power Authority meetings, I speak in dollars and cents, because if there's one thing I've learned being a long-time environmental advocate and a Sierra Club volunteer and all that, they will ignore you until you bring in, what will this cost you?

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01:03:28.130 --> 01:03:39.019

Lori Saldaña: And not only what will it cost you now, how will you tell future constituents, you are paying higher rates for water, for electricity, for all of this, because we made mistakes.

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01:03:39.230 --> 01:03:39.840

Kristina Hill (she, her): Yep.

498

01:03:39.840 --> 01:03:41.460

Lori Saldaña: earlier. And so.

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01:03:41.460 --> 01:03:48.480

Kristina Hill (she, her): It's interesting, in states like Virginia, if you own a home that falls into the... Bay.

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01:03:48.750 --> 01:03:51.500

Kristina Hill (she, her): Not only do you lose the value of your home.

501

01:03:51.670 --> 01:03:56.800

Kristina Hill (she, her): But you have to pay to remove the damaged structure that fell into the bay.

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01:03:57.160 --> 01:03:58.380

Kristina Hill (she, her): That's the law.

503

01:03:58.970 --> 01:04:04.419

Kristina Hill (she, her): So if there was some, you know, restriction, developers would be a lot more hesitant.

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01:04:04.600 --> 01:04:07.550

Kristina Hill (she, her): If it was clear that they would have to pay.

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01:04:07.770 --> 01:04:16.240

Kristina Hill (she, her): For lost capacity in a sewer system, or to remove a damaged structure, or a structure that can't be inhabited, that's been rented.

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01:04:17.530 --> 01:04:34.740

Lori Saldaña: And I'm grateful that you brought the Coliseum project to our attention, because that's a classic example, a cautionary tale for our local electives and our state electives. Here's what's happening. Again, it's not a future scenario, it is right now. And the fact that Gavin Newsom.

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01:04:34.850 --> 01:04:50.050

Lori Saldaña: who is probably running for president, signed off on that project, I took note of that photo, because that is not the kind of photo and outcome you want of a project, on your portfolio going forward.

508

01:04:50.770 --> 01:04:51.640

Lori Saldaña: Patty.

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01:04:53.090 --> 01:05:00.259

pattyducey-brooks: I wanted to bring up the fact that California, or the state of California, actually, the San Diego area is a very high tourist industry.

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01:05:00.710 --> 01:05:18.530

pattyducey-brooks: seeing on a regular basis, coming from the County of San Diego, on the poor water quality of the coastal areas, which is actually... it shouldn't be in the water, it's too dangerous, and initially it was focused on Coronado and Imperial Beach, but it's moving forward further north.

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01:05:18.620 --> 01:05:19.420

Kristina Hill (she, her): Dang.

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01:05:19.420 --> 01:05:35.900

pattyducey-brooks: I'm worried that we're not even paying any attention to that, and I know all the other media get the same information that I do. Why aren't we paying attention to that? And it may only be associated with Imperial Beach, but I'm of the impression it's also affiliated with what's going on at the sewer plant in Point Loma.

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01:05:36.890 --> 01:05:39.730

pattyducey-brooks: So would you... would you agree with that? That's a reality?

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01:05:40.010 --> 01:05:58.170

Kristina Hill (she, her): I think that's possible. I had never looked at the flow directions, the, you know, longshore transport directions for bacteria from the Point Loma treatment plant, but I certainly think it's possible. I also think it's important to remember that with climate change, San Diego may become more vulnerable to Pacific hurricanes.

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01:05:59.410 --> 01:06:10.899

Kristina Hill (she, her): And that would be a whole other source of intense rain and storm surge that is not something people expect today, but is something that probably people should be thinking about.

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01:06:12.760 --> 01:06:23.809

Lori Saldaña: Yes, and all the contaminants and all the debris, and we saw that at Choyas Creek, and we're still... the city is still struggling from the litigation and related... and damage related to that.

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01:06:23.910 --> 01:06:33.299

Lori Saldaña: So, and Patty, again, that's something that I've definitely worked on, and one of my greatest frustrations, one reason I'm working so hard on this.

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01:06:33.300 --> 01:06:51.049

Lori Saldaña: was... I was a plaintiff in the federal lawsuit over that binational treatment plant. I let... we let them know this was... would not work. You cannot hook up two completely different wastewater collection systems, haven't succeed. I've been out over the outfall with an oceanographer sampling the water. It's...

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01:06:51.400 --> 01:07:06.550

Lori Saldaña: we'll get into that if you're interested, but I advise the City Council of Coronado 30 years ago, it is not a matter of if, it's when you are going to be facing this in front of your hotel, and that time has arrived.

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01:07:06.960 --> 01:07:07.680

pattyducey-brooks: Anna.

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01:07:07.680 --> 01:07:09.040

Lori Saldaña: Tom.

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01:07:09.450 --> 01:07:15.059

Tom Mullaney: Yes, I do have a question. Will there be a transcript or a video available of this meeting?

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01:07:15.690 --> 01:07:17.079

PCPB: Yeah, I got you, Tom.

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01:07:17.270 --> 01:07:18.639

Tom Mullaney: Okay, good, thank you.

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01:07:19.080 --> 01:07:25.370

Lori Saldaña: And we would like people to make use and share it, and... with your network, and encourage,

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01:07:25.800 --> 01:07:34.570

Lori Saldaña: And, Dr. Hill, I just want to make sure you're aware... I mean, you're fine with us, this is not any proprietary... what you shared is okay.

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01:07:35.010 --> 01:07:40.519

Kristina Hill (she, her): I get in all kinds of trouble all the time for telling what's coming with this stuff, so I'm used to it.

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01:07:41.040 --> 01:07:50.529

Lori Saldaña: So, joined the club. I, you know, I've tried to bring in the connections between what happened in the Tijuana River Valley

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01:07:50.530 --> 01:08:03.480

Lori Saldaña: and the likely scenario of Midway, and I was literally shouted down at a public event back in 2022, that people could not wrap their brains around what we're seeing in the coastal areas

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01:08:03.660 --> 01:08:10.729

Lori Saldaña: what does one have to do with the other? So, I think encouraging people to think regionally, think in terms of the

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01:08:10.730 --> 01:08:24.370

Lori Saldaña: you know, the coastal effect throughout this entire coastline. They shut down the train line, the rail line, during the high tide last week as a preemptive measure

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01:08:24.370 --> 01:08:33.770

Lori Saldaña: Because our infrastructure is literally sliding into the sea, and critical infrastructure in places. So we're here now. It's not...

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01:08:33.770 --> 01:08:40.919

Lori Saldaña: a future concern. I'm not sure who is next, Eric or Patty, which one of you What a go.

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01:08:40.920 --> 01:08:41.890

PCPB: That is next.

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01:08:42.229 --> 01:08:42.859

Lori Saldaña: Okay.

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01:08:43.439 --> 01:08:48.799

pattyducey-brooks: I'm gonna go back to any other studies that are done by these cities in these

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01:08:48.969 --> 01:08:55.550

pattyducey-brooks: Countries that have actually seen benefits of working together and planning accordingly.

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01:08:55.560 --> 01:09:14.630

pattyducey-brooks: I think our problem today is we don't have people who aren't forward thinkers, they're more reactionary, and we're... that's where we're trying to come from, and I think the coalition is a smart move. But anything that you can provide in terms of studies that are done in... whether it's Japan or other international countries that...

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01:09:14.830 --> 01:09:21.409

pattyducey-brooks: work together to actually overcome these obstacles, and great successes came out of it. I think they would benefit us.

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01:09:22.040 --> 01:09:30.710

Kristina Hill (she, her): Well, I think looking at Rotterdam as an example, would make sense. They've, announced that they're climate-proofing the city.

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01:09:31.060 --> 01:09:41.780

Kristina Hill (she, her): And of course, they can't climate-proof the city, but they're investing in resilience and adaptation because they want to receive more foreign direct investment.

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01:09:42.220 --> 01:09:47.150

Kristina Hill (she, her): So they're positioning the city to be a place to receive corporate headquarters and...

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01:09:47.380 --> 01:09:52.060

Kristina Hill (she, her): Be a place to invest in in the future by saying, look, we're dealing with our climate risks.

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01:09:53.330 --> 01:09:53.960

Kristina Hill (she, her): And...

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01:09:53.960 --> 01:09:54.330

Lori Saldaña: Easy.

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01:09:54.330 --> 01:10:03.649

Kristina Hill (she, her): Given the influence of the Navy in San Diego, the U.S. military is also very interested in a kind of a philosophy of climate readiness, mission readiness.

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01:10:05.050 --> 01:10:11.680

Kristina Hill (she, her): So I would think that the corporate argument and the military argument might convene for you all in positive ways.

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01:10:12.000 --> 01:10:14.740

Kristina Hill (she, her): But I would look at the City of Rotterdam's water plan.

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01:10:15.440 --> 01:10:16.000

PCPB: Okay.

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01:10:17.820 --> 01:10:29.879

Lori Saldaña: I just want to say that this is what the developers are saying. We want certainty. This is why they're trying to push through the exemptions to CEQA, because they want certainty.

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01:10:29.880 --> 01:10:32.859

Kristina Hill (she, her): What they really need is certainty for a 40-year period.

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01:10:32.860 --> 01:10:33.210

Lori Saldaña: Yes.

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01:10:33.210 --> 01:10:37.610

Kristina Hill (she, her): not certainty forever. So they should be designing something that would be...

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01:10:37.880 --> 01:10:45.199

Kristina Hill (she, her): Have value for 40 years, and then maybe continue to have value in another location, if there are components that can be relocated.

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01:10:45.440 --> 01:10:56.969

Lori Saldaña: But this is a business model of quarterly thinking, of quarterly profits. They're not thinking generationally, and that's what we need to... that's what elected officials are supposed to do, to think long-term.

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01:10:56.970 --> 01:11:07.919

Lori Saldaña: And it's a challenge, because we have term limits, and people don't think long-term. They think in terms of, where's my next campaign contribution for the next office I'm going to seek come from?

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01:11:07.920 --> 01:11:11.180

Lori Saldaña: And that's a real hazard for... for us.

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01:11:12.000 --> 01:11:12.370

PCPB: Good.

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01:11:12.370 --> 01:11:13.529

Lori Saldaña: Go ahead, Eric.

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01:11:14.270 --> 01:11:21.749

PCPB: Yeah, so Rory was showing pictures... Of, our pure water.

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01:11:22.000 --> 01:11:29.780

PCPB: So our water recovery system, purification system, that now gets dumped back into the, into the water supply.

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01:11:31.700 --> 01:11:32.860

PCPB: Freshwater supply.

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01:11:33.140 --> 01:11:37.029

PCPB: how concerned do we have to be

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01:11:37.220 --> 01:11:42.610

PCPB: About salt water infiltration back into what's mouth.

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01:11:42.890 --> 01:11:44.350

PCPB: Freshwater...

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01:11:44.350 --> 01:11:45.310

Kristina Hill (she, her): systems.

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01:11:46.470 --> 01:11:52.310

PCPB: Has anyone seen any of that? Or is that something we should be concerned about?

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01:11:52.310 --> 01:11:53.060

Kristina Hill (she, her): written in places...

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01:11:53.060 --> 01:11:53.590

PCPB: Sit.

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01:11:53.760 --> 01:11:58.420

Kristina Hill (she, her): It's happened in places where the water pressure gets turned off, and then turned on again.

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01:11:59.650 --> 01:12:06.669

Kristina Hill (she, her): But ideally, with drinking water pipes, you never turn off the water pressure, and if you do, then you flush the pipes.

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01:12:06.820 --> 01:12:07.420

Lori Saldaña: Right.

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01:12:07.420 --> 01:12:15.830

Kristina Hill (she, her): Very carefully afterwards so that people don't get mud coming out their faucet, which is a real low point for consumer confidence.

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01:12:15.850 --> 01:12:29.840

Kristina Hill (she, her): Yeah. So, ideally that's not going to be a problem, but it could make the system more expensive if there are a lot of linear feet of pipe that need to be protected from increasingly salty groundwater using things like

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01:12:30.180 --> 01:12:34.870

Kristina Hill (she, her): Rods of zinc that add expense to the pipe system.

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01:12:35.020 --> 01:12:38.210

Kristina Hill (she, her): And they need to be maintained more often, because if they...

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01:12:38.210 --> 01:12:38.840

Lori Saldaña: Yes.

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01:12:38.840 --> 01:12:44.449

Kristina Hill (she, her): operate like the pipes in Honolulu, then of course you can get a geyser or a sinkhole.

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01:12:45.130 --> 01:13:00.490

Lori Saldaña: And we've had all that in recent times. And, so, related to that, I'm glad you asked this question. I'm working with some investigative journalists. I'm kind of keeping it... they want it to be an exclusive. There are,

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01:13:00.990 --> 01:13:09.910

Lori Saldaña: some new technical advisory committees related to inflow and infiltration of our water wastewater system. They are closed to the public.

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01:13:10.380 --> 01:13:26.469

Lori Saldaña: They're... even though we pay through... as ratepayers, or we support these agencies that are supposed to be maintaining and building and expanding this water system, these technical advisory committees do not allow members of the public to go and listen to what they're discussing.

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01:13:26.470 --> 01:13:31.329

Lori Saldaña: And I am worried that it's because some of this information is

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01:13:31.330 --> 01:13:39.220

Lori Saldaña: How do we manage this inflow infiltration into not just the sanitary sewer system, but into our repurified

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01:13:39.490 --> 01:13:50.329

Lori Saldaña: water lines. So, just as an FYI, that is something that's being looked at in another news agency here in San Diego.

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01:13:50.500 --> 01:13:58.050

Kristina Hill (she, her): And I'll tell you, I go to conferences in Europe where they show a slide that shows how much infiltration happens in U.S.

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01:13:58.240 --> 01:14:03.449

Kristina Hill (she, her): Sanitary sewer systems, or how much leakage happens from our drinking water systems.

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01:14:04.210 --> 01:14:10.210

Kristina Hill (she, her): And everyone laughs, and they use it as a way to loosen up the audience, to talk about European issues.

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01:14:11.510 --> 01:14:24.949

Lori Saldaña: And when I was on a binational infrastructure board, the problem was evaporation. There's still a lot of open transference canals, and how much water is lost to evaporation, especially along, you know, in the southwest, along the border.

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01:14:24.950 --> 01:14:36.170

Lori Saldaña: So... so, yeah, we just... we've come through, as you started your program, your presentation, saying, we're coming through an era of remarkably stable

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01:14:36.280 --> 01:14:43.790

Lori Saldaña: weather and water availability, and we built up these massive systems, assuming that would go on forever. And...

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01:14:44.160 --> 01:14:48.100

Lori Saldaña: No, the climate has other plans for us.

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01:14:48.100 --> 01:14:56.400

Kristina Hill (she, her): The thing that strikes me about it is, if you knew that you were at the end of an 8,000-year stable period, and you're in the last 20, 30 years.

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01:14:56.830 --> 01:14:59.809

Kristina Hill (she, her): of climate stability, what would you do?

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01:15:00.070 --> 01:15:08.160

Kristina Hill (she, her): Business as usual, or pilot projects about what the next 100, 200 years is gonna be like? I'd be doing pilot projects.

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01:15:08.620 --> 01:15:09.160

pattyducey-brooks: Yep.

596

01:15:09.160 --> 01:15:11.470

Kristina Hill (she, her): That's what the Dutch are doing. They don't plan to move.

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01:15:12.530 --> 01:15:13.980

Lori Saldaña: Right? Right.

598

01:15:15.430 --> 01:15:22.410

Lori Saldaña: Do we have other questions? I thought we had an NBC person in, but maybe they're just listening.

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01:15:22.660 --> 01:15:31.400

Lori Saldaña: I don't know if they're still online. We, And... So...

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01:15:31.520 --> 01:15:44.380

Lori Saldaña: You know, we welcome your questions, because ideally, we are going to be bringing this forward to elected officials, to the Joint Power Agency.

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01:15:44.380 --> 01:15:54.090

Lori Saldaña: Let me, let me say, when I pointed out the 35% cost overruns for those two, pump

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01:15:54.120 --> 01:16:02.430

Lori Saldaña: Projects, and the staff report was there were some, underground anomalies.

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01:16:02.430 --> 01:16:03.130

Kristina Hill (she, her): Hmm.

604

01:16:03.340 --> 01:16:14.530

Lori Saldaña: That's what they told these elected officials for the outlying cities that are paying in the share of the cost to maintain these systems. And I knew that the underground anomalies was

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01:16:15.840 --> 01:16:17.520

Lori Saldaña: So I spoke.

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01:16:17.520 --> 01:16:18.320

PCPB: Now for the.

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01:16:18.320 --> 01:16:24.410

Lori Saldaña: staff, and I said, what they're not telling you, the City of San Diego staff person is not telling you the full story.

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01:16:24.520 --> 01:16:25.449

Lori Saldaña: that this is...

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01:16:25.450 --> 01:16:27.100

PCPB: flooding. This is...

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01:16:27.100 --> 01:16:29.769

Lori Saldaña: A groundwater problem, not a...

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01:16:29.770 --> 01:16:34.039

PCPB: You know, whatever groundwater anomaly means,

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01:16:34.040 --> 01:16:46.900

Lori Saldaña: And the chair of the Joint Power Agency called the staff person forward to basically say, you know, is this an accurate statement? And they didn't want to come up and go on the record.

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01:16:47.170 --> 01:16:50.819

Lori Saldaña: They stayed in their seat instead of go up and speak into the microphone.

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01:16:51.080 --> 01:17:00.010

Lori Saldaña: And the chair had to encourage them to come up and speak on the record into the recorded testimony. So, that's why I want more...

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01:17:00.180 --> 01:17:13.469

Lori Saldaña: people to be aware of the risk we all face. It's not just an economic risk. It is an existential risk for our sanitary and water systems. And...

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01:17:13.550 --> 01:17:29.190

Lori Saldaña: We need more people informed and aware, that's why we're recording this to share, and so Eric, thank you so much for your expertise in getting all this, in a format that we have a transcript and recordings, and we can put this out in other places.

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01:17:29.190 --> 01:17:30.570

PCPB: Absolutely, yeah.

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01:17:31.170 --> 01:17:34.320

PCPB: of... Dr. Hill, what?

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01:17:34.610 --> 01:17:37.920

PCPB: One other thing that came to my mind is the...

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01:17:38.090 --> 01:17:42.510

PCPB: The project that we're all kind of focused on right now,

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01:17:42.850 --> 01:17:47.839

PCPB: Is their solution for beating, you know, the...

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01:17:48.220 --> 01:17:52.750

PCPB: The groundwater, seawater infiltration, the rise, is...

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01:17:52.990 --> 01:17:56.420

PCPB: Literally to pile more dirt up.

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01:17:56.920 --> 01:17:57.660

PCPB: Right?

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01:17:57.770 --> 01:18:02.569

PCPB: Make it higher, it won't flood, it'll be fine.

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01:18:02.840 --> 01:18:06.330

PCPB: Yet we, you know, the engineers in the audience here know that

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01:18:06.420 --> 01:18:11.250

PCPB: That trade space is... of course, that soil compresses.

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01:18:11.320 --> 01:18:30.850

PCPB: And the more water you get in it, the more compressibility. We're... the site is a half mile away from a fault line. Liquifaction is an issue. The site is actually built on the old river course of the San Diego River, a top landfill that's probably World War II landfill with toxic components.

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01:18:31.210 --> 01:18:33.559

PCPB: So they want to build on top of that.

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01:18:33.890 --> 01:18:39.489

PCPB: With groundwater, excuse me, seawater infiltration and inundation.

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01:18:40.020 --> 01:18:51.800

PCPB: Is there... should we be more concerned about the compressibility of the soils, as that water comes in? Is the forecast important?

632

01:18:51.840 --> 01:19:00.660

PCPB: Because, yeah, they may pile up 2 meters of dirt, and that's good if you have steady-state groundwater, but if you're

633

01:19:00.720 --> 01:19:07.760

PCPB: Expecting 2 meters of seawater, you know, sea level rise by 2100.

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01:19:07.830 --> 01:19:15.299

PCPB: Now you have to account for, more water and more compressibility. Is that part of the calculations?

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01:19:15.300 --> 01:19:23.419

Kristina Hill (she, her): What I would keep in mind is, when they talk about elevating a development, they're really talking about elevating the finished floor elevation.

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01:19:23.720 --> 01:19:26.379

Kristina Hill (she, her): Like, the level at which you walk into the building.

637

01:19:26.950 --> 01:19:28.319

Kristina Hill (she, her): It's gonna be higher.

638

01:19:28.730 --> 01:19:32.560

Kristina Hill (she, her): But all the pipes that serve the building are still down in the ground.

639

01:19:32.740 --> 01:19:33.260

PCPB: Yeah.

640

01:19:33.260 --> 01:19:37.519

Kristina Hill (she, her): All the streets that get you to the building are still at risk of flooding.

641

01:19:37.830 --> 01:19:38.530

PCPB: So...

642

01:19:38.850 --> 01:19:50.260

Kristina Hill (she, her): Raising the building is kind of treating the building like, you know, some kind of special little princess, but in fact, all the rest of the building, its foundations, its lower levels...

643

01:19:50.520 --> 01:19:53.439

Kristina Hill (she, her): And all the pipes that serve it are still at risk.

644

01:19:54.100 --> 01:19:54.890

PCPB: Yep.

645

01:19:55.280 --> 01:20:10.060

Lori Saldaña: We saw that at Midway, Eric. Remember the people in the second floor looking out their window at us down on the flooded sidewalk? They raised the elevation of those buildings. This is new housing in the last 5 years. They raised the elevation, but the water was coming up.

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01:20:10.280 --> 01:20:11.370

Lori Saldaña: Over the sidewalk.

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01:20:11.370 --> 01:20:12.289

PCPB: Through the doorways.

648

01:20:12.460 --> 01:20:19.369

Lori Saldaña: Up toward... it was creeping up towards their angled... you know, like you say, they look at the level as the entry.

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01:20:19.390 --> 01:20:38.299

Lori Saldaña: And there were literally people looking out the window at us as we were talking to the stormwater staff, and we joked with them and said, you didn't think you were going to have waterfront property, did you? But yeah, you're absolutely right. Every building is interconnected with multi-layers of infrastructure, otherwise they don't function.

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01:20:38.300 --> 01:20:40.000

Lori Saldaña: I mean, they're not...

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01:20:40.290 --> 01:20:50.490

Lori Saldaña: So, that's the other thing we absolutely have to impart on our council. And Monday, when they do this hearing on, the...

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01:20:50.850 --> 01:20:54.139

Lori Saldaña: This convoluted hearing, without any committee.

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01:20:54.350 --> 01:21:01.230

Lori Saldaña: Before it, we really do need people to say, you are kicking the can down the road for the state to deal with.

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01:21:02.230 --> 01:21:07.970

Lori Saldaña: And ultimately, it's the citizens in San Diego who are going to have to pay the price for your bad decision-making.

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01:21:07.970 --> 01:21:12.760

Kristina Hill (she, her): I mean, I would frame it as, it's already so expensive to live in cities in California

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01:21:13.410 --> 01:21:19.750

Kristina Hill (she, her): To have to add all these costs could make it unbearable for taxpayers to live in California.

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01:21:21.670 --> 01:21:24.400

Lori Saldaña: We have a housing,

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01:21:24.680 --> 01:21:31.349

Lori Saldaña: We have a lot of people with second homes in San Diego. They're not lived in on a consistent basis. They...

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01:21:31.500 --> 01:21:50.309

Lori Saldaña: come and visit us from time to time. So, we have a lot of new building going on, but a lot of vacancies, because people buy as an investment. They see San Diego as, you know, a

place to go for vacation. Or we also have a lot of short-term vacation rentals. So, we have people treating housing like a commodity.

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01:21:50.310 --> 01:21:58.209

Lori Saldaña: As opposed to a sustainable long-term investment for the people that are living in those spaces.

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01:21:58.650 --> 01:22:05.280

Kristina Hill (she, her): And I can see how a single-family home is a different kind of investment than a multi-family or multi-story building.

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01:22:05.840 --> 01:22:09.759

Kristina Hill (she, her): Story building is a very difficult thing to deal with if it fails.

663

01:22:11.040 --> 01:22:12.879

Lori Saldaña: And that's what they're proposing building here.

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01:22:13.040 --> 01:22:14.380

Lori Saldaña: Towers.

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01:22:14.380 --> 01:22:15.170

PCPB: stories.

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01:22:15.880 --> 01:22:19.240

Lori Saldaña: And, yeah.

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01:22:20.040 --> 01:22:36.640

Lori Saldaña: I know we've gone over the hour. Eric, you actually gave us a 90-minute window, that's what I'm saying, if people still have questions, or comments even, you know, Tom, you have worked on land use and planning and the problems that follow on so many projects.

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01:22:36.640 --> 01:22:43.560

Lori Saldaña: You have a great background, and I hope you've learned some new things from the conversation today.

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01:22:43.560 --> 01:22:54.420

Lori Saldaña: Not sure who else is on here. Margaret, thank you again for organizing and educating people and activating people to show up and testify.

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01:22:54.440 --> 01:23:02.980

Lori Saldaña: Because it's gonna take all of those... those things to make a change in the mindset of people that are...

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01:23:03.030 --> 01:23:09.110

Lori Saldaña: You know, really being... More motivated by...

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01:23:10.130 --> 01:23:16.649

Lori Saldaña: Oh gosh, I don't know where to begin. By their campaign contributors, then...
Common sense.

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01:23:17.530 --> 01:23:18.360

PCPB: That is...

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01:23:18.630 --> 01:23:20.720

pattyducey-brooks: I would just like to ask,

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01:23:20.950 --> 01:23:23.320

pattyducey-brooks: Professor Hill, can we keep you involved.

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01:23:25.890 --> 01:23:28.700

PCPB: Involve you in the process.

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01:23:29.090 --> 01:23:30.860

pattyducey-brooks: coalition. I've been in public coalition.

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01:23:31.350 --> 01:23:32.080

PCPB: Thank you.

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01:23:33.120 --> 01:23:33.860

PCPB: It was...

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01:23:34.050 --> 01:23:35.790

pattyducey-brooks: Strengths and weaknesses and helping.

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01:23:36.420 --> 01:23:37.989

PCPB: Support each other, like you're up.

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01:23:38.860 --> 01:23:44.479

Kristina Hill (she, her): Patty, your mic seems to be cutting in and out a little bit. Yeah. Was that just for me or everybody?

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01:23:44.480 --> 01:23:49.190

Lori Saldaña: No, you were cutting out. Oh, are we losing... now you're... try again, Patty.

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01:23:50.160 --> 01:23:50.820

pattyducey-brooks: you know?

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01:23:52.570 --> 01:24:05.969

pattyducey-brooks: Can you hear me? Yeah. I said, well, basically, I'm asking if you could stay involved with those, and can we help create the idea in identifying how that coalition could operate, because I've worked in coalitions before, and they can be great, or they can be failure.

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01:24:05.970 --> 01:24:11.460

Kristina Hill (she, her): Yeah, I'd be happy to. I can tell you what we've done in the Bay Area to try to get attention to this issue.

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01:24:11.600 --> 01:24:20.700

Kristina Hill (she, her): And what's worked and what hasn't. And then there's a whole network of scientists who are concerned about this, who are from prestigious research organizations.

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01:24:21.050 --> 01:24:24.120

Kristina Hill (she, her): And they would be happy to testify.

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01:24:24.480 --> 01:24:26.140

pattyducey-brooks: This would be great. That's what we need.

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01:24:26.140 --> 01:24:26.840

PCPB: Excellent.

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01:24:28.910 --> 01:24:43.650

PCPB: As we're... as we're winding up here, before I lose everyone, just from a, housekeeping perspective here, this was being recorded, I will have a transcript, I will...

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01:24:43.910 --> 01:24:58.120

PCPB: It'll go onto YouTube, I think is the destination once I get everything processed. It'll take probably a day. But I'll post that link in our, the PCPB, so it's PCPB.net.

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01:24:58.430 --> 01:25:18.219

PCPB: I'll post the link up there when we get it processed, so that it'll be openly available to everyone, and if I figure out how to disseminate that link out to everyone, I'll do that as well, okay? So you don't have to go fishing, but I intend to publish it, make it publicly available for everyone to use, refer to both the transcript and

694

01:25:19.610 --> 01:25:20.490

PCPB: Okay.

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01:25:20.750 --> 01:25:21.300

Kristina Hill (she, her): Great.

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01:25:22.220 --> 01:25:24.829

pattyducey-brooks: for doing that. We appreciate you.

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01:25:25.200 --> 01:25:41.030

Lori Saldaña: And just a couple things. I realize people have been texting me, they couldn't join the call, but they had some thoughts. One was a reporter saying, is this part of an effort to stop Midway Rising? There's a lot of official backing for it at this point. They're pulling out all the stops.

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01:25:41.030 --> 01:25:47.299

Lori Saldaña: And I think, you know, the Peninsula Community Planning Group and others have said, we don't want to stop

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01:25:47.300 --> 01:25:56.850

Lori Saldaña: development, we want it to be the right kind of development that doesn't create a hazard and lose, you know, put people and property at risk.

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01:25:56.850 --> 01:26:08.079

Lori Saldaña: And that's a tough message to get across, because they just see us as stopping, hard stop, versus, no, we want safe development for this that's appropriate to this area.

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01:26:08.080 --> 01:26:10.339

PCPB: So, I'm sure...

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01:26:10.340 --> 01:26:13.259

Lori Saldaña: Dr. Hill, you've heard that's in the Bay Area, too, yes?

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01:26:13.260 --> 01:26:17.579

PCPB: And, you know, the governor likes to talk about the California model.

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01:26:17.650 --> 01:26:26.720

Kristina Hill (she, her): for climate and for adaptation, and the California model should be about technological innovation, That makes housing safe.

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01:26:27.050 --> 01:26:27.820

PCPB: For adaptation.

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01:26:27.820 --> 01:26:30.249

Kristina Hill (she, her): in place, and for new development.

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01:26:30.750 --> 01:26:35.130

Kristina Hill (she, her): And we can do that if we just look at existing Dutch construction.

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01:26:36.400 --> 01:26:41.890

Kristina Hill (she, her): So I'm very pro-housing. I used to be the director of our real estate development program.

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01:26:42.120 --> 01:26:48.739

Kristina Hill (she, her): On campus, and there's nothing anti-housing about this, it's just that we need it to be safe.

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01:26:48.910 --> 01:26:55.120

Kristina Hill (she, her): Otherwise, we're putting vulnerable people in harm's way, and considering what a, you know.

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01:26:55.270 --> 01:27:00.680

Kristina Hill (she, her): Burden, it could be for everybody in a community to have to pay for a mistake like that.

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01:27:01.970 --> 01:27:21.229

Lori Saldaña: And as you said, it's about environmental justice and socioeconomic groups who often... we claim we're building affordable housing. What that means is people with the least ability to come back from a devastating flood or loss of housing and belongings and pets and everything else are the ones most in harm's way.

713

01:27:21.230 --> 01:27:31.049

Lori Saldaña: So, let me think... see if there was any other comment. Oh, a friend says, the Navy has known about this and planning for it for decades. Developers don't care because it's not their problem.

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01:27:31.750 --> 01:27:32.690

Lori Saldaña: So...

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01:27:32.830 --> 01:27:44.490

Lori Saldaña: And I know, having worked on, Veterans and Military Affairs Committee, that climate change is a priority for Department of Defense. They see it as a national security issue.

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01:27:45.430 --> 01:27:51.299

Lori Saldaña: So... but it is very hard to get them on board on some of these,

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01:27:51.960 --> 01:27:58.009

Lori Saldaña: Development plans that are not in their purview, not in their property.

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01:27:58.010 --> 01:28:07.930

Kristina Hill (she, her): One thing they've talked about at the Navy base in Norfolk, Virginia, is mission readiness, and can their sailors and staff get to the base

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01:28:08.060 --> 01:28:09.720

Kristina Hill (she, her): If roads are flooded.

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01:28:09.870 --> 01:28:11.170

Lori Saldaña: Exactly.

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01:28:11.190 --> 01:28:13.520

Kristina Hill (she, her): Which is why... so...

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01:28:13.650 --> 01:28:23.940

Lori Saldaña: One of the law... it's not a lawsuit yet, but it's a long, lengthy request for traffic flow information from a law firm. It is...

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01:28:23.940 --> 01:28:36.450

Lori Saldaña: Probably one of the reasons the city is giving up their local review and kicking it to the state, because this law firm is very experienced and very successful in similar land use challenges.

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01:28:36.450 --> 01:28:54.140

Lori Saldaña: And... and the clients specifically are focused on traffic flow, congestion, mobility issues around this area, which is, again, a nexus of a lot of freeways and roads and military property.

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01:28:54.140 --> 01:29:08.049

Kristina Hill (she, her): consider the flooding impact on that traffic mobility question, that would make it a lot more complicated. We've done that in the Bay Area. There have been studies here of how flooding will, cancel all the interstates and the roads that feed the interstates.

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01:29:08.050 --> 01:29:19.140

Lori Saldaña: And the flooding, we can share that some of the maps, they show parts of the freeway underwater. They've... they... and then there's the Waymos. What are they gonna do? I keep laughing about that. Scott, yes?

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01:29:19.770 --> 01:29:23.610

Scott Case: Yeah, hey, IT?

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01:29:23.760 --> 01:29:37.370

Scott Case: We all understand these impacts from mission readiness, about getting people where they need to be, as opposed to being able to do your mission and everything else. I get all that, but I think someone mentioned it before. Where's the pressure point to actually change

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01:29:37.600 --> 01:29:39.939

Scott Case: People who have to make decisions.

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01:29:40.070 --> 01:29:42.599

Scott Case: where's the pressure point there? Because with...

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01:29:42.780 --> 01:29:45.560

Scott Case: We'll just say at the local level with term limits.

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01:29:46.510 --> 01:30:05.209

Scott Case: they... they're then and they're gone. And then the next administration can come in and point the finger at, oh, that was a really bad stadium deal, that was a bad convention center deal, that was a bad, you know, to use San Diego examples. And then with the developers, they only have a certain number of... amount of liability

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01:30:05.280 --> 01:30:13.099

Scott Case: under construction defect laws, so they're long and gone, you know, once the issues start showing up, okay? And so.

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01:30:13.100 --> 01:30:27.460

Scott Case: This... you're right, the government does have the responsibility for the long-term safety of our... of our community and the constituents. But coming in and trying to, say,

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01:30:27.690 --> 01:30:34.179

Scott Case: say, hey, the city's job to do the adequate SEIR that the court has rejected twice now.

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01:30:34.600 --> 01:30:48.950

Scott Case: And having considered a lot of these things, having that just be whitewashed away, even at the state level, is so wrong. So I'm just trying to think, where's the pressure point, where's the accountability? And I think it can maybe only come through the...

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01:30:49.050 --> 01:30:59.539

Scott Case: The public and the media to put pressure, but the whole governance structure and accountability seems to be working against the public good here.

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01:31:01.500 --> 01:31:09.190

Kristina Hill (she, her): Yeah, I mean, it seems like in the past, it's been either the development community or the environmental community rewards elected officials.

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01:31:09.320 --> 01:31:10.610

Kristina Hill (she, her): with support.

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01:31:11.250 --> 01:31:21.509

Kristina Hill (she, her): But in this case, maybe it's the taxpayer angle that could reward elected officials with support, or remove that support, if they do things that...

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01:31:21.880 --> 01:31:23.810

PCPB: Aren't, you know, up.

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01:31:23.810 --> 01:31:26.200

Kristina Hill (she, her): That don't conserve value.

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01:31:26.510 --> 01:31:31.439

Kristina Hill (she, her): For the next 10, 20 years, and that could place an enormous burden on public systems.

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01:31:32.400 --> 01:31:33.210

Lori Saldaña: It would be very...

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01:31:33.420 --> 01:31:41.149

Scott Case: Yeah, just like, where do we bring the pressure, and what would actually, you know, actually force a change of behavior by our elected leaders?

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01:31:41.660 --> 01:31:44.639

Scott Case: Developers are only doing what the government allows them to go do.

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01:31:45.400 --> 01:31:53.710

PCPB: Right, but Citizens Against Invisible Taxation, or something like that, I mean, people... some group that could say, this is not...

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01:31:54.000 --> 01:31:55.400

PCPB: Sustainable.

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01:31:55.420 --> 01:31:59.499

Kristina Hill (she, her): unsustainable urban growth is something I think people are worried about.

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01:32:01.560 --> 01:32:08.309

PCPB: So, there's a saying, you know, you can't improve what you don't measure, and San Diego has not been measuring groundwater.

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01:32:08.530 --> 01:32:16.680

Lori Saldaña: And I think it's for a reason, in part because it would be pretty devastating to this project in particular, and a lot of other.

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01:32:17.440 --> 01:32:28.850

Lori Saldaña: programs and proposals that they're bringing forward. So, I think we need to push for an evaluation, you know, which we've started doing, and this is... will help. And really.

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01:32:28.980 --> 01:32:30.300

Lori Saldaña: nowhere...

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01:32:30.780 --> 01:32:49.290

Lori Saldaña: what the situation is under this ground that they want to build on, because no one's done that. Aside from people being paid, and let me just emphasize, this is the only public discussion that has not been sponsored by people paid by the developers and the private interests to promote this.

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01:32:49.550 --> 01:33:06.750

Lori Saldaña: Every other meeting, including the one with the senator 10 days ago, has been... the presentation has come from people with vested economic interests in building that development, as opposed to us, you know, what is the safe way to build in this area?

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01:33:06.790 --> 01:33:21.899

Lori Saldaña: So, when this is put out on YouTube and in other places, I think that really needs to be emphasized. That the people who are participating, asking these questions, presenting this information, none of us have a financial

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01:33:21.900 --> 01:33:33.879

Lori Saldaña: association with the development group that is promoting this. And we're not opposed to it, per se, we're opposed to going forward without

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01:33:33.880 --> 01:33:47.099

Lori Saldaña: adequate studies of what's happening with the existing infrastructure in this area. That's already clearly being overwhelmed by the high tide, without any storms, without any rainfall.

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01:33:47.100 --> 01:33:54.030

Lori Saldaña: They are shutting down major streets to, to traffic, so...

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01:33:54.230 --> 01:34:12.799

Lori Saldaña: I think we need to shift the message from, we don't want this project, as the person asked about, to, we want a project that is sustainable and ongoing and safe for the people who are living, working, and going to entertainment events at the venue they want to create.

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01:34:13.470 --> 01:34:17.770

Kristina Hill (she, her): And can be a model for how we can do development like this for the next 20, 40 years.

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01:34:18.240 --> 01:34:18.970

PCPB: Yep.

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01:34:19.350 --> 01:34:34.650

Lori Saldaña: you know, San Diego likes to pride itself on it being innovative, we have, you know, a great biotech community, we have a great university, many, several great universities. So let's ask for, you know, brainstorm

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01:34:34.670 --> 01:34:44.400

Lori Saldaña: That's why we're saying, who can we turn to in the academic world, and research that's looking at these, and get them involved with this?

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01:34:44.800 --> 01:34:54.019

Kristina Hill (she, her): Great. Well, I'm happy to give you the names of the people that I work with. You could get a panel together on Zoom in, you know, just a few days, because these people are all concerned about this problem.

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01:34:55.410 --> 01:34:56.540

Lori Saldaña: That's excellent.

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01:34:56.540 --> 01:34:57.809

pattyducey-brooks: That is excellent.

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01:34:59.610 --> 01:35:04.390

Lori Saldaña: It'll... thank you so much. I think we do need to wrap up.

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01:35:04.400 --> 01:35:22.240

Lori Saldaña: Eric, thank you for pulling this together. Dr. Hill, thank you for giving us the basic information, and everyone who participated, and Patty, thank you for promoting this and getting media involved. Even if they didn't come to this, I know that they got the word that this

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01:35:22.650 --> 01:35:28.969

Lori Saldaña: something that we are investigating. So, thanks to everyone for being part of this.

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01:35:30.800 --> 01:35:32.149

PCPB: Thanks very much, Dr. Hill.

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01:35:32.960 --> 01:35:36.900

Lori Saldaña: And, I wish everyone a great weekend.

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01:35:38.160 --> 01:35:39.269

Lori Saldaña: Avoid the heat.

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01:35:41.200 --> 01:35:46.429

Lori Saldaña: It's gonna be a hot one. So, alright. Take care. Thanks again.

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01:35:46.870 --> 01:35:50.400

Lori Saldaña: I think we'll wrap up on that note. All right, take care, everybody.

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01:35:50.400 --> 01:35:51.280

pattyducey-brooks: Bye-bye.