

Webinar

ULI Coastal Forum Fall/Winter 2021

Date: December 07, 2021

00:00:00 --> 00:00:04: Appreciate really good. The staff at Uli doing such a 00:00:04 --> 00:00:07: good job getting this program together for us. 00:00:07 --> 00:00:10: We've got have an excellent program today. 00:00:10 --> 00:00:15: Some excellent panelists and some super moderators to help 00:00:15 --> 00:00:19: see what we can do as a network of interested 00:00:19 --> 00:00:25: people involved in real estate planning finance across the coastal 00:00:25 --> 00:00:27: parts of the United States. 00:00:27 --> 00:00:30: How do we deal with the biggest threat to the 00:00:30 --> 00:00:33: most expensive real estate with sea level rise? 00:00:33 --> 00:00:37: Creeping up into communities and with the increased strength of 00:00:37 --> 00:00:41: storms creating the conditions that will be catastrophic. 00:00:41 --> 00:00:44: As we've seen over the past year, 00:00:44 --> 00:00:47: is that they seem to be getting worse in order 00:00:47 --> 00:00:52: to share the ideas and experiences and to help prepare 00:00:52 --> 00:00:55: for the future that we see is coming. 00:00:55 --> 00:00:58: It takes a village. It takes going across the jurisdictional 00:00:59 --> 00:01:02: lines that might separate programs and plans and trying to. 00:01:02 --> 00:01:07: Addressed throughout that knows no boundaries the the rising Sea 00:01:07 --> 00:01:10: and the storms don't pay attention to the geography of 00:01:10 --> 00:01:11: political grounds, 00:01:11 --> 00:01:15: and we must try to enable that type of cross 00:01:15 --> 00:01:20: jurisdictional coordination as we watch the huge amount of attention 00:01:20 --> 00:01:22: and federal dollars, 00:01:22 --> 00:01:25: that's going to be paid beginning this year and in 00:01:25 --> 00:01:28: the future to resilience activities for climate change.

00:01:28> 00:01:30:	Now is the time to share that experience and to
00:01:30> 00:01:33:	Now is the time to share that experience and to
	give that feedback and to help the government. Understand what works and what doesn't.
00:01:33> 00:01:35:	
00:01:35> 00:01:38:	Add a community level and looking at it from the
00:01:38> 00:01:42:	best practices that we can share and that we can
00:01:42> 00:01:46:	find among ourselves so there's nobody here but us chickens
00:01:46> 00:01:48:	and we have to work on it.
00:01:48> 00:01:51:	So I want to help everybody feel open and free
00:01:51> 00:01:54:	to learn as much as we can and to share
00:01:54> 00:01:56:	it at the end of this session.
00:01:56> 00:01:59:	After the second panel, we will have a half hour
00:01:59> 00:02:01:	of open discussion about the coast of forum and how
00:02:02> 00:02:03:	it could be more useful.
00:02:03> 00:02:07:	Or activities and it could help enable or participate with
00:02:07> 00:02:10:	around the different regions of our coast in order to
00:02:10> 00:02:13:	be more useful than to be helpful.
00:02:13> 00:02:15:	So we want to invite those who are interested to
00:02:15> 00:02:18:	hang on after the second panel question and answer in
00:02:18> 00:02:21:	order to discuss that and see how you could help
00:02:21> 00:02:24:	guide us into the plans that we make for the
00:02:24> 00:02:25:	future.
00.00.05 > 00.00.00.	Malas alas alore of account to a big a faccount that O and Discuss
00:02:25> 00:02:29:	We're already of course, looking toward the San Diego Spring
00:02:25> 00:02:29:	
	Spring
00:02:29> 00:02:32:	Spring meeting we we do plan to have a session for
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00:03:18> 00:03:18:	us,
00:03:18> 00:03:25:	we have since they really about 2017 try to gather.
00:03:25> 00:03:28:	People and just be a place where these ideas can
00:03:28> 00:03:33:	be shared and we're experienced knowledge and links to resources
00:03:33> 00:03:37:	can be shared to help help us learn a network
00:03:37> 00:03:39:	of people around the coast.
00:03:39> 00:03:43:	Uhm? I think the next order of business would be
00:03:44> 00:03:46:	to introduced reuse Taylor,
00:03:46> 00:03:50:	who is the Super moderator we have for the first
00:03:50> 00:03:53:	session that we have a little science,
00:03:53> 00:03:57:	then followed by some excellent panelists to two different panels.
00:03:57> 00:04:00:	Looking at how communities can work together,
00:04:00> 00:04:02:	how they've been successful, what works,
00:04:02> 00:04:05:	and what does it, and and some kind of forecast
00:04:05> 00:04:06:	about what's needed.
00:04:06> 00:04:09:	As we look at the threats that face us and
00:04:10> 00:04:11:	extremely pleased to.
00:04:11> 00:04:17:	How grieves Taylor leave this session with Mr Marcy readers?
00:04:17> 00:04:17:	I'll pass it to you.
00:04:18> 00:04:21:	Thank you Jack and I I really want to emphasize
00:04:21> 00:04:23:	that notion of collaboration,
00:04:23> 00:04:28:	Meiko. CEO Diane Hoskins attended the COP 26 event in
00:04:28> 00:04:29:	Glasgow.
00:04:29> 00:04:32:	Not quite, you know, three weeks ago and radical collaboration
00:04:32> 00:04:34:	was kind of the metric.
00:04:34> 00:04:37:	The mantra of where we need to go quickly around,
00:04:37> 00:04:39:	not just addressing long term climate impacts,
00:04:39> 00:04:42:	but the current climate impacts the Jack you've talked about.
00:04:42> 00:04:45:	And I'm really happy as a Co director of what
00:04:45> 00:04:47:	we call design resilience.
00:04:47> 00:04:48:	Part of our design delivery,
00:04:48> 00:04:52:	but also part of the Gensler Research Institute looking at
00:04:52> 00:04:56:	resilience approaches as it relates to both design.
00:04:56> 00:04:58:	But also current impacts and it was really great to
00:04:58> 00:05:01:	have a chance to get to know Doug Marcie going
00:05:01> 00:05:03:	introduce here because it's the brass tacks.
00:05:03> 00:05:05:	What's the threat? The science?
00:05:05> 00:05:08:	The details that you know our next set of panelists
00:05:08> 00:05:11:	and speakers will be addressing or responding to,

00:05:11> 00:05:14:	but it really takes the brass tacks getting into the
00:05:14> 00:05:16:	details of what are our first steps.
00:05:16> 00:05:18:	What's kind of the balance of what has to be
00:05:18> 00:05:22:	a very long term lifetime multi generational strategy.
00:05:22> 00:05:25:	But again, just you'll see in the in the publication
00:05:25> 00:05:26:	a much longer.
00:05:26> 00:05:29:	Biography but very briefly, Doug Marcy is a coastal hazard
00:05:29> 00:05:33:	specialist at the Noah Office for Coastal Management.
00:05:33> 00:05:34:	Based in on the coast,
00:05:34> 00:05:38:	Charleston, SC. He has been with Noah for 19 years,
00:05:38> 00:05:40:	working on flooding and sea level rise.
00:05:40> 00:05:44:	Geospatial mapping projects, storm surge assessments,
00:05:44> 00:05:49:	and coastal hazards assessment projects contributing to the more disaster
00:05:49> 00:05:53:	resilient communities and frankly preparing us as ULI members for
00:05:53> 00:05:54:	both planning,
00:05:54> 00:05:57:	investing, looking at real estate in its long term value.
00:05:57> 00:05:59:	In this challenging coastal neck of the woods.
00:05:59> 00:06:02:	So with that Doug, it's all yours.
00:06:02> 00:06:04:	Lead on some great insights you'll be sharing.
00:06:06> 00:06:09:	Thank you very much and thank you for having me
00:06:09> 00:06:10:	today.
00:06:10> 00:06:11:	I have quite a few slides here,
00:06:11> 00:06:14:	but I was I I'm privileged to be able to
00:06:14> 00:06:17:	kind of kick off this entire panel.
00:06:17> 00:06:20:	I wasn't sure how sciency to get.
00:06:20> 00:06:22:	I kind of try to keep keep it a little
00:06:22> 00:06:24:	bit light and post some of what what you asked
00:06:24> 00:06:25:	me to do,
00:06:25> 00:06:26:	which is what is the threat?
00:06:26> 00:06:31:	And also how Noah efforts can support community resilience?
00:06:31> 00:06:33:	Kind of where we're going and where we're headed,
00:06:33> 00:06:35:	what we're doing now, and where we're headed next,
00:06:35> 00:06:40:	slide, please. So. America's coasts as we know we have
00:06:40> 00:06:44:	a very thin ribbon of land where we have probably
00:06:44> 00:06:45:	40%
00:06:45> 00:06:47:	of the population on like 10%
00:06:47> 00:06:52:	of the landmass. Trillions of dollars in goods.
00:06:52> 00:06:56:	Million of millions employed trains and wages along the
	coast.
00:06:56> 00:07:00:	Next slide. Our ports as we are realizing now in

00:07:00> 00:07:05:	this crunch of Christmas time and the issues with the
00:07:05> 00:07:07:	supply chain or critical.
00:07:07> 00:07:11:	Uh, in terms of the imports and jobs.
00:07:11> 00:07:16:	Next slide. And as we know from previous disasters,
00:07:16> 00:07:19:	like the ones going on right now with the supply
00:07:19> 00:07:21:	chain in Long Beach and then New Orleans in the
00:07:21> 00:07:24:	past with with Katrina and the port shutdown,
00:07:24> 00:07:27:	it's literally like shutting down the heart to the blood
00:07:27> 00:07:29:	supply to the rest of the country.
00:07:29> 00:07:31:	And the arteries and the Kappel.
00:07:31> 00:07:34:	Aries 'cause all that. All those goods and services feed
00:07:34> 00:07:36:	to the rest of the country so.
00:07:36> 00:07:36:	Whether you like it or not,
00:07:36> 00:07:40:	we're a coastal nation. Even in the heartland.
00:07:40> 00:07:46:	Next slide. Disasters are happening more frequently in their becoming
00:07:46> 00:07:47:	more expensive.
00:07:47> 00:07:51:	This is from our colleagues that and no NCI billion
00:07:51> 00:07:54:	dollar disasters and you can see this has been going
00:07:54> 00:07:54:	up.
00:07:54> 00:07:56:	Uhm, we're not even finished for 2021 yet,
00:07:57> 00:07:58:	and we're already up there,
00:07:58> 00:08:04:	so it is increasing. We're spending more and more money
00:08:04> 00:08:05:	on disaster.
00:08:05> 00:08:11:	Response and recovery next. So let's define resilience.
00:08:11> 00:08:13:	We're going to be talking a lot about that today,
00:08:13> 00:08:15:	as defined by the National Academy of Sciences.
00:08:15> 00:08:17:	The ability to prepare and plan for,
00:08:17> 00:08:21:	absorb, recover from, and more successfully adapt to,
00:08:21> 00:08:26:	adverse events. This really comes down to building back better,
00:08:26> 00:08:30:	being more adaptive as climate is going to change,
00:08:30> 00:08:36:	not relying on just robust solutions such as Gray infrastructure.
00:08:36> 00:08:40:	But an adaptable infrastructure that will allow us to change
00:08:40> 00:08:43:	as as our as we're seeing some of our.
00:08:43> 00:08:46:	Sort of stationary processes become nonstationary,
00:08:46> 00:08:48:	and I'll go into that in a minute.
00:08:48> 00:08:52:	But this is comes down to just being adaptive next.
00:08:54> 00:08:57:	Overcoming barriers. This is what Noah has been trying to
00:08:57> 00:09:02:	do for coastal communities provide at risk communication
	training,
00:09:02> 00:09:04:	provide data and tools for decision makers.

00:09:04> 00:09:08:	Building capacity. To inform action and leadership,
00:09:08> 00:09:11:	and then convening and leveraging partnerships that will go into,
00:09:11> 00:09:14:	I'll tell you some of our partnerships which we are
00:09:14> 00:09:18:	actually have a good partnership with ULI next.
00:09:18> 00:09:20:	A lot of the key actions,
00:09:20> 00:09:22:	key issues we are involved in,
00:09:22> 00:09:24:	and now we're looking at storm surge,
00:09:24> 00:09:26:	sea level rise, high tide flooding,
00:09:26> 00:09:29:	and coastal stormwater impacts, and I'll go through all of
00:09:29> 00:09:32:	those issues now and what we're doing about it and
00:09:32> 00:09:34:	what it's looking like in the future next.
00:09:36> 00:09:39:	Hurricanes. We always want to know are they going to
00:09:39> 00:09:42:	continue at the current frequency and intensity.
00:09:42> 00:09:46:	We know we have experienced catastrophic losses and we
00:09:46> 00:09:47:	know
00:09:47> 00:09:50:	what they're capable of.
00.09.47> 00.09.50.	We're starting to see what looks like more intense hurricanes,
00:09:50> 00:09:54:	and if you see from the latest climate assessment NCA
00:09:54> 00:09:54:	4,
00:09:54> 00:09:56:	the figure on the right,
00:09:56> 00:09:59:	there's more area under the curve under the right on
00:09:59> 00:10:00:	the right side of that.
00:10:00> 00:10:01:	If you're a calculus person,
00:10:01> 00:10:05:	that means there's more energy and more counts.
00:10:05> 00:10:07:	We're seeing more frequency, and obviously there's more.
00:10:08> 00:10:11:	Energy in the system due to that warming oceans and
00:10:11> 00:10:12:	warmer at depth,
00:10:12> 00:10:16:	so we're looking at probably more intense storms in the
00:10:16> 00:10:17:	future next.
00:10:19> 00:10:21:	The Hurricane Center puts out a lot of information.
00:10:21> 00:10:23:	We work closely with them.
00:10:23> 00:10:25:	They have storm surge products,
00:10:25> 00:10:26:	national storm surge hazard maps.
00:10:26> 00:10:28:	You may have looked at,
00:10:28> 00:10:31:	and they also put out a real time forecast of
00:10:31> 00:10:33:	potential storm surge maps.
00:10:33> 00:10:37:	Our office has helped them provide them with the most
00:10:37> 00:10:41:	latest up-to-date elevation information and some of the methodologies we
00:10:41> 00:10:44:	helped work with them on producing those maps,
00:10:44> 00:10:47:	so that's something that's out there and sort of in
	gg

00:10:47> 00:10:49:	the real time water level.
00:10:49> 00:10:51:	Products that you can use next.
00:10:53> 00:10:56:	We also and now look at sea level trends.
00:10:56> 00:11:01:	We operate the national water level Observation Network Series 122
00:11:02> 00:11:02:	gauges,
00:11:02> 00:11:05:	but it's also part of a global network and you
00:11:05> 00:11:08:	can see that we've been monitoring sea level trends over
00:11:08> 00:11:09:	quite a long time,
00:11:09> 00:11:12:	up to like 186 plus years in San Francisco.
00:11:12> 00:11:14:	And you can see that the rates of sea level
00:11:14> 00:11:16:	rise have been increasing.
00:11:16> 00:11:18:	Some places are going down up in the northern parts
00:11:18> 00:11:19:	of the country in the South,
00:11:20> 00:11:22:	and places like Louisiana. There have been increasing on the
00:11:22> 00:11:23:	order of three feet.
00:11:23> 00:11:25:	In the last 100 years,
00:11:25> 00:11:28:	most areas have seen on the order of 100 about
00:11:28> 00:11:30:	a foot over the last 100 years next.
00:11:32> 00:11:34:	And we're also seeing cell C level.
00:11:34> 00:11:38:	Rate increasing this is just an example in Charleston,
00:11:38> 00:11:42:	SC. This is where I'm getting into that nonstationarity.
00:11:42> 00:11:45:	It used to be kind of a withdrawal regression line
00:11:45> 00:11:48:	through all of the trend data and give us a
00:11:48> 00:11:48:	rate,
00:11:48> 00:11:50:	but we've seen that rate increase.
00:11:50> 00:11:53:	We're starting to see more of a quadratic trend,
00:11:53> 00:11:56:	meaning more of a curve and therefore we're following some
00:11:56> 00:11:58:	of the sea level projections which are in themselves curves,
00:11:58> 00:12:02:	and so we're starting to see the rate increase as
00:12:02> 00:12:03:	we go forward next.
00:12:05> 00:12:06:	What we're trying to do now,
00:12:06> 00:12:08:	and we're actually in the process of updating this report.
00:12:08> 00:12:12:	This came from the the fourth national climate assessment were
00:12:12> 00:12:13:	going through an update process.
00:12:13> 00:12:16:	Where are we going to be in the future?
00:12:16> 00:12:19:	Based on some of the greenhouse gas scenarios we're trying
00:12:19> 00:12:22:	to predict where sea level is going to be in
00:12:22> 00:12:23:	the next report,
00:12:23> 00:12:25:	I'll go into and put it at the end.
00:12:25> 00:12:27:	You can see that the average range,

00:12:27> 00:12:31:	their route one at 1.5 meters by 2100,
00:12:31> 00:12:35:	is more likely next. And communities want to know what
00:12:35> 00:12:40:	scenario to use for higher risk tolerance areas work that
00:12:40> 00:12:43:	you can stand to be flooded like open areas.
00:12:43> 00:12:47:	We can probably use a lower scenario for planning,
00:12:47> 00:12:50:	but areas like this is San Francisco Airport.
00:12:50> 00:12:52:	Here you have lower risk tolerance.
00:12:52> 00:12:57:	We're going to have to use a higher scenario based
00:12:57> 00:13:02:	on the criticality and service life of the project next.
00:13:02> 00:13:05:	So selecting this scenario needs to kind of be a
00:13:06> 00:13:08:	an iterative process and constantly updated.
00:13:08> 00:13:10:	This is borrowing from the city of Charleston.
00:13:10> 00:13:14:	You're going to hear from the Resilience Officer today
	looking
00:13:14> 00:13:17:	out at 50 years and looking at a two to
00:13:17> 00:13:18:	three foot range.
00:13:18> 00:13:20:	That kind of follows this intermediate curve,
00:13:20> 00:13:22:	but that's going to be updated every time there's a
00:13:22> 00:13:26:	new science update which follows along with the national climate
00:13:26> 00:13:28:	assessment process of round every five years next.
00:13:31> 00:13:33:	Noah provides a lot of information on sea level rise.
00:13:33> 00:13:35:	I mentioned a couple of them.
00:13:35> 00:13:37:	We have our trends. We have a sea level rise
00:13:37> 00:13:40:	viewer that incorporates the projections in there as well,
00:13:40> 00:13:44:	and a coastal flood exposure map or project that I'm
00:13:44> 00:13:45:	sorry product.
00:13:45> 00:13:48:	Next slide. Going through a lot here,
00:13:48> 00:13:51:	high tide flooding is something that is occurring in a
00:13:51> 00:13:52:	lot of coastal communities.
00:13:52> 00:13:56:	Next slide. This happens in even when it's sunny outside.
00:13:56> 00:13:58:	We do map that and we've been working on counting
00:13:58> 00:14:01:	the number of high tide flood events we're seeing around
00:14:01> 00:14:01:	the country.
00:14:01> 00:14:05:	Places like Charleston, Norfolk, others that are experiencing flooding even
00:14:05> 00:14:06:	during high tides.
00:14:06> 00:14:08:	That rate of flooding has been going up as well.
00:14:08> 00:14:13:	Coming up following that sea level trend next.
00:14:13> 00:14:16:	We have a lot of information about that coastal nation
00:14:16> 00:14:16:	dashboard.
00:14:16> 00:14:21:	For real time information we have high tide Flood bulletin.
00:14:21> 00:14:23:	We have a state of the high tide flood report

00:14:23> 00:14:26:	that comes out annually that looks at where we are.
00:14:26> 00:14:30:	How many high tide flood events we've had and where
00:14:30> 00:14:32:	we're going in the future next.
00:14:32> 00:14:34:	And the issue is for coastal communities,
00:14:34> 00:14:37:	is this impact of increasing water levels at the coast
00:14:37> 00:14:40:	but also extreme rainfall and where they're connected through the
00:14:40> 00:14:41:	storm water system?
00:14:41> 00:14:45:	The storm water systems weren't designed to handle higher water
00:14:45> 00:14:46:	levels going on from salt water,
00:14:46> 00:14:51:	and so it's a combination which we call compound flooding.
00:14:51> 00:14:53:	Olivia flooding in the urban centers.
00:14:53> 00:14:57:	With this compound. Salt water impact causing a lot of
00:14:57> 00:14:58:	issues next.
00:14:58> 00:15:02:	We have a tool out there that we've been developing.
00:15:02> 00:15:05:	Called adapting stormwater management for coastal floods,
00:15:05> 00:15:06:	there's an assessed tool. Part of that.
00:15:06> 00:15:10:	It's pretty interesting. You can pick thresholds and see when
00:15:10> 00:15:14:	you're fresh coats will be exceeded based on the scenario
00:15:14> 00:15:15:	as you pick next.
00:15:15> 00:15:19:	We have just put together a coalition resources page.
00:15:19> 00:15:21:	Uh, put the web address in here.
00:15:21> 00:15:23:	I think it's going to be shared as well.
00:15:23> 00:15:24:	This gives you a lot of information.
00:15:24> 00:15:27:	All the the latest and greatest of the climate science
00:15:27> 00:15:30:	reports I was talking about sea level rise and the
00:15:30> 00:15:32:	tools and data access as well as access to a
00:15:32> 00:15:36:	lot of training and other information next.
00:15:38> 00:15:40:	In addition to that product digital coast,
00:15:40> 00:15:46:	there's another fabulous. A resource called the Climate Resilience Toolkit,
00:15:46> 00:15:49:	which is kind of the same idea as digital coast,
00:15:49> 00:15:52:	and there's a lot of good climate information in there
00:15:52> 00:15:52:	as well next.
00:15:55> 00:15:58:	The idea here is to provide not just the data,
00:15:58> 00:16:00:	but also to be able to download the data.
00:16:00> 00:16:03:	Look at maps that that utilize that information and do
00:16:03> 00:16:07:	some analysts analyzing and learning and also sharing that information.
00:16:07> 00:16:10:	Next and that is done through.
00:16:10> 00:16:12:	Partnerships that I'll mention also,
00:16:12> 00:16:14:	we've been providing a lot of funding.

00:16:14> 00:16:16:	We're going to be talking about some of the funding
00:16:17> 00:16:19:	today that may be coming through the infrastructure bill,
00:16:19> 00:16:22:	but we've provided a lot of coastal resilience grants.
00:16:22> 00:16:27:	The key themes we were funding or incorporating climate change
00:16:27> 00:16:33:	impacts nature based solutions and natural natural infrastructure next.
00:16:33> 00:16:35:	We work with a lot of partners.
00:16:35> 00:16:38:	We have all kinds of different parts of Noah,
00:16:38> 00:16:39:	know as a huge organization,
00:16:39> 00:16:42:	as you know, but we are working together better than
00:16:42> 00:16:45:	ever in terms of the line office is trying to
00:16:45> 00:16:48:	resolve these these issues when it comes to Community
00:16:48> 00:16:52:	and coastal resilience next. Digital codes is one of those
00:16:52> 00:16:55:	you can see Urban Land Institute as a partner,
00:16:55> 00:16:57:	but as we have a lot of different partners,
00:16:57> 00:17:00:	these organizations have been able to work together a lot
00:17:00> 00:17:02:	more through digital coast than they have in the past.
00:17:02> 00:17:07:	To kind of complement their there.
00:17:07> 00:17:10:	Their missions and we have.
00:17:10> 00:17:12:	We really welcome that 'cause they give us a good
00:17:12> 00:17:15:	feedback on where we need to go with future products
00:17:15> 00:17:15:	and data.
00:17:15> 00:17:15: 00:17:15> 00:17:19:	and data. Next OK, so what's on the horizon?
00:17:15> 00:17:15: 00:17:15> 00:17:19: 00:17:19> 00:17:21:	and data. Next OK, so what's on the horizon? I can wrap up next slide.
00:17:15> 00:17:15: 00:17:15> 00:17:19: 00:17:19> 00:17:21: 00:17:21> 00:17:25:	and data. Next OK, so what's on the horizon? I can wrap up next slide. Just real quick, something that will be infecting everyone is
00:17:15> 00:17:15: 00:17:15> 00:17:19: 00:17:19> 00:17:21: 00:17:21> 00:17:25: 00:17:25> 00:17:28:	and data. Next OK, so what's on the horizon? I can wrap up next slide. Just real quick, something that will be infecting everyone is we're going to be updating our new reference network,
00:17:15> 00:17:15: 00:17:15> 00:17:19: 00:17:19> 00:17:21: 00:17:21> 00:17:25: 00:17:25> 00:17:28: 00:17:29> 00:17:32:	and data. Next OK, so what's on the horizon? I can wrap up next slide. Just real quick, something that will be infecting everyone is we're going to be updating our new reference network, basically going as if you're a vertical datum person from
00:17:15> 00:17:15: 00:17:15> 00:17:19: 00:17:19> 00:17:21: 00:17:21> 00:17:25: 00:17:25> 00:17:28: 00:17:29> 00:17:32: 00:17:32> 00:17:33:	and data. Next OK, so what's on the horizon? I can wrap up next slide. Just real quick, something that will be infecting everyone is we're going to be updating our new reference network, basically going as if you're a vertical datum person from Naby or net,
00:17:15> 00:17:15: 00:17:15> 00:17:19: 00:17:19> 00:17:21: 00:17:21> 00:17:25: 00:17:25> 00:17:28: 00:17:29> 00:17:32: 00:17:32> 00:17:33: 00:17:33> 00:17:36:	and data. Next OK, so what's on the horizon? I can wrap up next slide. Just real quick, something that will be infecting everyone is we're going to be updating our new reference network, basically going as if you're a vertical datum person from Naby or net, a North American vertical datum in 1988 to a new
00:17:15> 00:17:15: 00:17:15> 00:17:19: 00:17:19> 00:17:21: 00:17:21> 00:17:25: 00:17:25> 00:17:28: 00:17:29> 00:17:32: 00:17:32> 00:17:33: 00:17:33> 00:17:36: 00:17:36> 00:17:39:	and data. Next OK, so what's on the horizon? I can wrap up next slide. Just real quick, something that will be infecting everyone is we're going to be updating our new reference network, basically going as if you're a vertical datum person from Naby or net, a North American vertical datum in 1988 to a new data that will be happening by around 2025.
00:17:15> 00:17:15: 00:17:15> 00:17:19: 00:17:19> 00:17:21: 00:17:21> 00:17:25: 00:17:25> 00:17:28: 00:17:29> 00:17:32: 00:17:32> 00:17:33: 00:17:33> 00:17:36: 00:17:36> 00:17:39: 00:17:39> 00:17:42:	and data. Next OK, so what's on the horizon? I can wrap up next slide. Just real quick, something that will be infecting everyone is we're going to be updating our new reference network, basically going as if you're a vertical datum person from Naby or net, a North American vertical datum in 1988 to a new data that will be happening by around 2025. That's going to impact a lot of surveying,
00:17:15> 00:17:15: 00:17:15> 00:17:19: 00:17:19> 00:17:21: 00:17:21> 00:17:25: 00:17:25> 00:17:28: 00:17:29> 00:17:32: 00:17:32> 00:17:33: 00:17:36> 00:17:39: 00:17:39> 00:17:42: 00:17:42> 00:17:44:	and data. Next OK, so what's on the horizon? I can wrap up next slide. Just real quick, something that will be infecting everyone is we're going to be updating our new reference network, basically going as if you're a vertical datum person from Naby or net, a North American vertical datum in 1988 to a new data that will be happening by around 2025. That's going to impact a lot of surveying, but that's going to get us all on the same
00:17:15> 00:17:15: 00:17:15> 00:17:19: 00:17:19> 00:17:21: 00:17:21> 00:17:25: 00:17:25> 00:17:28: 00:17:29> 00:17:32: 00:17:32> 00:17:33: 00:17:33> 00:17:36: 00:17:36> 00:17:39: 00:17:42> 00:17:42: 00:17:44> 00:17:47:	and data. Next OK, so what's on the horizon? I can wrap up next slide. Just real quick, something that will be infecting everyone is we're going to be updating our new reference network, basically going as if you're a vertical datum person from Naby or net, a North American vertical datum in 1988 to a new data that will be happening by around 2025. That's going to impact a lot of surveying, but that's going to get us all on the same page in terms of other places like Hawaii and Alaska
00:17:15> 00:17:15: 00:17:15> 00:17:19: 00:17:19> 00:17:21: 00:17:21> 00:17:25: 00:17:25> 00:17:28: 00:17:29> 00:17:32: 00:17:32> 00:17:33: 00:17:33> 00:17:36: 00:17:36> 00:17:39: 00:17:39> 00:17:42: 00:17:42> 00:17:44: 00:17:44> 00:17:47: 00:17:47> 00:17:50:	and data. Next OK, so what's on the horizon? I can wrap up next slide. Just real quick, something that will be infecting everyone is we're going to be updating our new reference network, basically going as if you're a vertical datum person from Naby or net, a North American vertical datum in 1988 to a new data that will be happening by around 2025. That's going to impact a lot of surveying, but that's going to get us all on the same page in terms of other places like Hawaii and Alaska that are not able to use that same vertical datum.
00:17:15> 00:17:15: 00:17:15> 00:17:19: 00:17:19> 00:17:21: 00:17:21> 00:17:25: 00:17:25> 00:17:28: 00:17:29> 00:17:32: 00:17:32> 00:17:33: 00:17:33> 00:17:36: 00:17:36> 00:17:39: 00:17:39> 00:17:42: 00:17:42> 00:17:44: 00:17:44> 00:17:47: 00:17:47> 00:17:50: 00:17:50> 00:17:52:	and data. Next OK, so what's on the horizon? I can wrap up next slide. Just real quick, something that will be infecting everyone is we're going to be updating our new reference network, basically going as if you're a vertical datum person from Naby or net, a North American vertical datum in 1988 to a new data that will be happening by around 2025. That's going to impact a lot of surveying, but that's going to get us all on the same page in terms of other places like Hawaii and Alaska that are not able to use that same vertical datum. Pacific islands. As well also,
00:17:15> 00:17:15: 00:17:15> 00:17:19: 00:17:19> 00:17:21: 00:17:21> 00:17:25: 00:17:25> 00:17:28: 00:17:29> 00:17:32: 00:17:32> 00:17:33: 00:17:33> 00:17:36: 00:17:36> 00:17:39: 00:17:39> 00:17:42: 00:17:42> 00:17:44: 00:17:44> 00:17:47: 00:17:47> 00:17:50: 00:17:50> 00:17:55:	and data. Next OK, so what's on the horizon? I can wrap up next slide. Just real quick, something that will be infecting everyone is we're going to be updating our new reference network, basically going as if you're a vertical datum person from Naby or net, a North American vertical datum in 1988 to a new data that will be happening by around 2025. That's going to impact a lot of surveying, but that's going to get us all on the same page in terms of other places like Hawaii and Alaska that are not able to use that same vertical datum. Pacific islands. As well also, we're going to be updating the national title data mapping
00:17:15> 00:17:15: 00:17:15> 00:17:19: 00:17:19> 00:17:21: 00:17:21> 00:17:25: 00:17:25> 00:17:28: 00:17:29> 00:17:32: 00:17:32> 00:17:33: 00:17:33> 00:17:36: 00:17:36> 00:17:39: 00:17:39> 00:17:42: 00:17:42> 00:17:44: 00:17:44> 00:17:47: 00:17:47> 00:17:50: 00:17:50> 00:17:55: 00:17:55> 00:17:56:	and data. Next OK, so what's on the horizon? I can wrap up next slide. Just real quick, something that will be infecting everyone is we're going to be updating our new reference network, basically going as if you're a vertical datum person from Naby or net, a North American vertical datum in 1988 to a new data that will be happening by around 2025. That's going to impact a lot of surveying, but that's going to get us all on the same page in terms of other places like Hawaii and Alaska that are not able to use that same vertical datum. Pacific islands. As well also, we're going to be updating the national title data mapping in the same time frame.
00:17:15> 00:17:15: 00:17:15> 00:17:19: 00:17:19> 00:17:21: 00:17:21> 00:17:25: 00:17:25> 00:17:28: 00:17:29> 00:17:32: 00:17:32> 00:17:33: 00:17:33> 00:17:36: 00:17:36> 00:17:39: 00:17:39> 00:17:42: 00:17:42> 00:17:44: 00:17:44> 00:17:47: 00:17:47> 00:17:50: 00:17:50> 00:17:55: 00:17:55> 00:17:56: 00:17:56> 00:17:59:	and data. Next OK, so what's on the horizon? I can wrap up next slide. Just real quick, something that will be infecting everyone is we're going to be updating our new reference network, basically going as if you're a vertical datum person from Naby or net, a North American vertical datum in 1988 to a new data that will be happening by around 2025. That's going to impact a lot of surveying, but that's going to get us all on the same page in terms of other places like Hawaii and Alaska that are not able to use that same vertical datum. Pacific islands. As well also, we're going to be updating the national title data mapping in the same time frame. So mean high water and places where we are building
00:17:15> 00:17:15: 00:17:15> 00:17:19: 00:17:19> 00:17:21: 00:17:21> 00:17:25: 00:17:25> 00:17:28: 00:17:29> 00:17:32: 00:17:32> 00:17:33: 00:17:33> 00:17:36: 00:17:36> 00:17:39: 00:17:39> 00:17:42: 00:17:42> 00:17:44: 00:17:44> 00:17:47: 00:17:47> 00:17:50: 00:17:50> 00:17:55: 00:17:55> 00:17:56: 00:17:56> 00:17:59: 00:17:59> 00:18:02:	and data. Next OK, so what's on the horizon? I can wrap up next slide. Just real quick, something that will be infecting everyone is we're going to be updating our new reference network, basically going as if you're a vertical datum person from Naby or net, a North American vertical datum in 1988 to a new data that will be happening by around 2025. That's going to impact a lot of surveying, but that's going to get us all on the same page in terms of other places like Hawaii and Alaska that are not able to use that same vertical datum. Pacific islands. As well also, we're going to be updating the national title data mapping in the same time frame. So mean high water and places where we are building along with marine construction are going to have to adapt
00:17:15> 00:17:15: 00:17:15> 00:17:19: 00:17:19> 00:17:21: 00:17:21> 00:17:25: 00:17:25> 00:17:28: 00:17:29> 00:17:32: 00:17:32> 00:17:33: 00:17:33> 00:17:36: 00:17:36> 00:17:39: 00:17:39> 00:17:42: 00:17:42> 00:17:44: 00:17:44> 00:17:47: 00:17:47> 00:17:50: 00:17:50> 00:17:55: 00:17:55> 00:17:56: 00:17:56> 00:17:59:	and data. Next OK, so what's on the horizon? I can wrap up next slide. Just real quick, something that will be infecting everyone is we're going to be updating our new reference network, basically going as if you're a vertical datum person from Naby or net, a North American vertical datum in 1988 to a new data that will be happening by around 2025. That's going to impact a lot of surveying, but that's going to get us all on the same page in terms of other places like Hawaii and Alaska that are not able to use that same vertical datum. Pacific islands. As well also, we're going to be updating the national title data mapping in the same time frame. So mean high water and places where we are building

00:18:07> 00:18:10:	because of sea level rise next.
00:18:10> 00:18:13:	As I mentioned, the next climate assessments coming out
	there
00:18:13> 00:18:13:	is a know,
00:18:13> 00:18:16:	a technical report that's being worked on almost finished.
00:18:16> 00:18:19:	Now we're going to have new projections in their updated.
00:18:19> 00:18:23:	We're not going to see as high or extremes we
00:18:23> 00:18:27:	did last time they were going to see some extrapolated
00:18:27> 00:18:29:	trends from 1970 to 2020.
00:18:29> 00:18:33:	Fifty thanks to NASA helping us out on that and
00:18:33> 00:18:37:	some better information on grid extreme water levels expected to
00:18:37> 00:18:38:	be released in 2023,
00:18:38> 00:18:41:	but one of the things I think Jack wanted me
00:18:41> 00:18:42:	to cover is.
00:18:42> 00:18:44:	This is going to be a continual process of better
00:18:44> 00:18:47:	information every time we go through the climate assessment,
00:18:47> 00:18:51:	but the key is to keep your whatever scenarios you're
00:18:51> 00:18:53:	using for planning,
00:18:53> 00:18:56:	updated and flexible enough using multiple different scenarios.
00:18:56> 00:19:00:	Maybe not being prescriptive to one particular paper.
00:19:00> 00:19:02:	We're going through an update process like that with some
00:19:03> 00:19:04:	of the federal regulations as well,
00:19:04> 00:19:09:	because this is going to continuously change and hopefully
	continue
00:19:09> 00:19:13:	to give us better information for planning next.
00:19:13> 00:19:17:	Lastly, we're working on trying to update some projects and
00:19:17> 00:19:19:	provide better information,
00:19:19> 00:19:21:	not just at our tide gauges.
00:19:21> 00:19:23:	We're working on more on grid information,
00:19:23> 00:19:26:	so if you happen to have a location in between
00:19:26> 00:19:28:	are tide gauges you can get information there.
00:19:28> 00:19:32:	Uhm, and also a sort of a coastal data information
00:19:32> 00:19:32:	system.
00:19:32> 00:19:37:	Better information on water level probabilities as well next.
00:19:37> 00:19:38:	I think this might be last.
00:19:38> 00:19:42:	Finally, all of Noah is now engaged in the service
00:19:42> 00:19:44:	delivery framework and model,
00:19:44> 00:19:47:	which is where we want to have continuous user
	engagement
00:19:47> 00:19:48:	in the upfront.

00:19:48 --> 00:19:51: What are the needs before we go and develop a 00:19:51 --> 00:19:53: new model or a new process in a new product? 00:19:53 --> 00:19:56: Get their input up front from folks like you guys 00:19:56 --> 00:19:59: and you lie to the back end is constantly looking 00:19:59 --> 00:20:03: at are we meeting your needs and constantly keeping that 00:20:03 --> 00:20:05: kind of that wheel working? 00:20:05 --> 00:20:07: Next I think that's it. 00:20:07 --> 00:20:09: There's For more information for me. 00:20:09 --> 00:20:10: I hope this was helpful, 00:20:10 --> 00:20:12: and I think we're going to go into some questions. 00:20:14 --> 00:20:14: And again, I want 00:20:14 --> 00:20:20: to emphasize that the. A chat is the means to 00:20:20 --> 00:20:22: ask questions on going. 00:20:22 --> 00:20:24: I failed to mention that verbally, 00:20:24 --> 00:20:26: but did put it in the chat so we'll keep 00:20:26 --> 00:20:27: an eye open. 00:20:27 --> 00:20:30: A number of us to see if there's anyone to 00:20:30 --> 00:20:30: share, 00:20:30 --> 00:20:33: but one of the first questions you know I've got. 00:20:33 --> 00:20:36: Having done some research on the real estate side, 00:20:36 --> 00:20:39: it's really clear that the land owners you know, 00:20:39 --> 00:20:43: the real estate developers, the homeowners really understand this coastal 00:20:43 --> 00:20:43: challenge, 00:20:43 --> 00:20:46: and you know, given what you're seeing on the coast 00:20:46 --> 00:20:48: of North America in particular. Doug, you know? What can they do themselves to assist 00:20:48 --> 00:20:51: 00:20:51 --> 00:20:52: in the big picture? 00:20:52 --> 00:20:54: Not? We'll talk a lot about later, 00:20:54 --> 00:20:56: you know where they might find funding and where they 00:20:56 --> 00:20:57: can get in the big picture. 00:20:57 --> 00:20:59: But if they were to target, 00:20:59 --> 00:21:00: as we've done some research, 00:21:00 --> 00:21:02: they really want to do something both about their property. 00:21:02 --> 00:21:04: But do something that helps the community. 00:21:04 --> 00:21:07: Where would you start? Where would you go to find 00:21:07 --> 00:21:08: information etc. 00:21:08 --> 00:21:11: And then I'll follow up with some of the other 00:21:11 --> 00:21:12: questions coming in. 00:21:12 --> 00:21:12: Sure. 00:21:14 --> 00:21:17: Well, there's a lot of communities that we've seen cities 00:21:17 --> 00:21:21: that have already have already kind of started bite off

00:21:21> 00:21:22:	this issue right?
00:21:22> 00:21:24:	And we've seen, like Miami Beach and the the mayor
00:21:24> 00:21:27:	there run ran on the platform he was going to
00:21:27> 00:21:28:	fix flooding.
00:21:28> 00:21:30:	We've had our mayor and here in Charleston,
00:21:30> 00:21:32:	SC where I am and where Dale is.
00:21:32> 00:21:35:	You know, one of the biggest issues we face is
00:21:35> 00:21:36:	is flooding as well.
00:21:36> 00:21:39:	So real dollars are being spent now on fixing the
00:21:39> 00:21:40:	existing problem,
00:21:40> 00:21:42:	trying to get the water off of the streets.
00:21:42> 00:21:44:	You know the pluvial issue and to.
00:21:44> 00:21:46:	Drains and pumped out, and so there's a lot of
00:21:46> 00:21:48:	money being spent on that,
00:21:48> 00:21:49:	but we're we're realizing we are.
00:21:49> 00:21:53:	We have antiquated systems that were not designed to
	handle
00:21:53> 00:21:54:	rising,
00:21:54> 00:21:58:	especially sea level rise. So we're seeing more effort and
00:21:58> 00:22:03:	input into more sophisticated modeling efforts and more
00.00.00 > 00.00.00.	focused on
00:22:03> 00:22:06:	getting better data on our existing systems.
00:22:06> 00:22:08:	You know which in some cases means going back and
00:22:08> 00:22:09:	repairing things.
00:22:09> 00:22:12:	Uhm, but then trying to build in and look at
00:22:12> 00:22:16:	changing our stormwater plans and things like that in cities
00:22:16> 00:22:18:	too to factor this input in.
00:22:18> 00:22:22:	Some some provisions in there for free board or for
00:22:22> 00:22:26:	increased runoff things like this so we we know that
00:22:26> 00:22:29:	things are changing the past 100 years.
00:22:29> 00:22:31:	Of record is not going to be the next 100
00:22:31> 00:22:32:	years.
00:22:32> 00:22:34:	The trend within the past is not going to be
00:22:34> 00:22:34:	the same,
00:22:34> 00:22:37:	so we need to build build that into design and
00:22:37> 00:22:39:	start to change our regulations now.
00:22:39> 00:22:40:	So I think that's that's the main thing.
00:22:40> 00:22:43:	And then the guidance. You know there's a lot of
00:22:43> 00:22:45:	uncertainty when it comes to sea level rise and and
00:22:45> 00:22:48:	particularly when you get into river in flooding.
00:22:48> 00:22:50:	There's even probably more uncertainty.
00:22:50> 00:22:54:	Not not. Waiting on better information may not be the

00:22:54> 00:22:57:	only you know you should try to plan based on
00:22:57> 00:22:58:	your risk tolerance,
00:22:58> 00:23:01:	but also build in some some some you know if
00:23:02> 00:23:04:	you want to call it like a factor of safety
00:23:05> 00:23:05:	in there,
00:23:05> 00:23:07:	right? 'cause we know things are going to change in
00:23:07> 00:23:07:	the future,
00:23:07> 00:23:10:	we do it a lot with with engineering structures like
00:23:10> 00:23:13:	bridges we build a factor of safety and 'cause it
00:23:13> 00:23:14:	cannot fail.
00:23:14> 00:23:15:	We just need to start doing that.
00:23:15> 00:23:17:	'cause you know things are definitely changing.
00:23:17> 00:23:19:	Great yes say two quick questions.
00:23:19> 00:23:23:	How does Noah consider or evaluate groundwater impacts in the
00:23:23> 00:23:24:	SLR context?
00:23:25> 00:23:27:	That's a that's a tricky one.
00:23:27> 00:23:31:	No one is certainly not an expert in groundwater hydrology.
00:23:31> 00:23:33:	We we probably refer to our USGS colleagues mostly on
00:23:34> 00:23:34:	that.
00:23:34> 00:23:35:	There are a lot of.
00:23:35> 00:23:39:	Places like in Miami and Southern Florida where you have,
00:23:39> 00:23:42:	you know limestone substrate and so with fresh water right
00:23:42> 00:23:45:	there at the surface basically sitting on top of saltwater
00:23:45> 00:23:49:	as you have saltwater intrusion that the water level water
00:23:49> 00:23:50:	table is going to rise.
00:23:50> 00:23:52:	And that's going to basically cause more areas to be
00:23:52> 00:23:53:	wet all the time.
00:23:53> 00:23:57:	Kind of like they already are in the Everglades.
00:23:57> 00:23:59:	So that is a factor and a lot of areas
00:23:59> 00:24:02:	on the coast rely on drinking water from from groundwater
00:24:03> 00:24:06:	wells and increasing sea level rise is going to start
00:24:06> 00:24:10:	encroaching on that. Freshwater lens as that it moves inland
00:24:10> 00:24:12:	and that's going to start an impact.
00:24:12> 00:24:14:	That and that has to do with you know,
00:24:14> 00:24:18:	already having some withdrawal using,
00:24:18> 00:24:19:	you know, the cone of depression kind of thing around
00:24:19> 00:24:20:	these areas.
00:24:20> 00:24:22:	It's going to draw in more salt water.
00:24:24> 00:24:27:	Another question, how would a local government or
	developer give
00:24:27> 00:24:30:	Noah feedback on what it needs for resilience planning?

00:24:34 --> 00:24:38: I think we are. We are trying to gather information 00:24:38 --> 00:24:43: from stakeholders right now about some of our future climate 00:24:43 --> 00:24:44: timescale products. 00:24:44 --> 00:24:47: And we're trying to engage all of the different sectors, 00:24:47 --> 00:24:51: and so there isn't even Realty. 00:24:51 --> 00:24:54: And you know, planning. So any kind of we're going 00:24:54 --> 00:24:58: to be having some workshops and anything like. 00:24:58 --> 00:25:01: When we're working with Digital Coast partners, 00:25:01 --> 00:25:02: what we're hoping to get his feedback on. 00:25:02 --> 00:25:05: Hey, these are the kinds of tools we need. 00:25:05 --> 00:25:07: This is what we want you. 00:25:07 --> 00:25:09: We want Noah to provide or these are the groups 00:25:10 --> 00:25:11: we need you guys to work with, 00:25:11 --> 00:25:15: so that's where we're constantly trying to miss that whole 00:25:15 --> 00:25:16: service delivery model. 00:25:16 --> 00:25:19: You know, check in with our customers more than we 00:25:19 --> 00:25:21: have in the past where we would just decide, 00:25:21 --> 00:25:23: OK, we're going to do this product because it, 00:25:23 --> 00:25:25: you know it meets our needs, 00:25:25 --> 00:25:27: so we are also serving a lot of the other 00:25:27 --> 00:25:29: federal agencies. 00:25:29 --> 00:25:32: As a science agency, Noah provides information to the other 00:25:32 --> 00:25:36: agencies which make important decisions and things like like DOT 00:25:36 --> 00:25:37: and the core of engineers, 00:25:37 --> 00:25:40: GSA and others who are constantly working with right now 00:25:40 --> 00:25:42: and some of the federal standards. So speaking as a citizen of the Gulf Coast along 00:25:43 --> 00:25:45: 00:25:45 --> 00:25:46: Texas, 00:25:46 --> 00:25:48: your your insights and valuable thank you Doug, 00:25:48 --> 00:25:51: as we wrap up a couple of quick things with 00:25:51 --> 00:25:51: the recordings, 00:25:51 --> 00:25:54: the slide deck that Doug shared of Noah. 00:25:54 --> 00:25:56: Next steps will be also shared. 00:25:56 --> 00:25:58: Also Augie has put in the chat a number of 00:25:59 --> 00:26:02: the really amazing resources that that Doug had talked about 00:26:02 --> 00:26:05: in terms of some of the Noah recent releases. 00:26:05 --> 00:26:09: And with that, again, thank you Doug and again back 00:26:09 --> 00:26:13: to the main conversation going to be introducing Alan Kratz 00:26:13 --> 00:26:13: to. 00:26:13 --> 00:26:15: Kick off the next panel I believe.

That's a great. That's a great question.

00:24:32 --> 00:24:34:

00:26:15> 00:26:17:	And with that thanks everyone.
00:26:17> 00:26:20:	Look forward to the remaining time together.
00:26:20> 00:26:20:	So
00:26:20> 00:26:24:	thank you very much, Reeves and.
00:26:24> 00:26:28:	That was really great and welcome to panel one,
00:26:28> 00:26:31:	preparing communities for federal resilience funding.
00:26:31> 00:26:34:	My name is Alan Kratz and I help communities secure
00:26:34> 00:26:36:	funding for climate resilience,
00:26:36> 00:26:39:	planning and implementation, and the three questions that you see
00:26:39> 00:26:41:	on this screen and that screen.
00:26:41> 00:26:44:	Here are the ones that are going to be the
00:26:44> 00:26:46:	focus of our four panelists.
00:26:46> 00:26:49:	Josh source. Lack of the Global Resilience Institute.
00:26:49> 00:26:54:	Jonathan Altenburg, executive director of by national initiative that encompasses.
00:26:54> 00:26:57:	The length of the Saint Lawrence River to the Great
00:26:57> 00:26:57:	Lakes.
00:26:57> 00:27:02:	Julie Wormser, who heads the Resilient Mystic Collaborative 21 towns
00:27:02> 00:27:05:	on the Mystic River in Greater Boston and Jim Finch,
00:27:05> 00:27:08:	the director of finance for the coastal town of Branford,
00:27:08> 00:27:12:	CT, on the Long Island Sound and it might work
00:27:12> 00:27:15:	along the Atlantic Coast from Maine to New Jersey.
00:27:15> 00:27:17:	I'm now helping my communities.
00:27:17> 00:27:21:	My clients qualify for funding from the resilience provisions in
00:27:21> 00:27:24:	the infrastructure bill that the President.
00:27:24> 00:27:26:	Time 2 1/2 weeks ago.
00:27:26> 00:27:29:	It really does offer opportunities for climate resilience funding,
00:27:29> 00:27:33:	primarily from three federal entities,
00:27:33> 00:27:36:	the EPA, US DOT and the Department of Energy.
00:27:36> 00:27:39:	So here is a one minute summary.
00:27:39> 00:27:43:	The Act directs EPA to fund resilience of wastewater
00.07.40	treatment
00:27:43> 00:27:44:	facilities.
00:27:44> 00:27:48:	It also provides grants of \$75,000 to nonprofits to hire.
00:27:48> 00:27:53:	Yes, that's the word circuit riders to provide technical assistance
00:27:53> 00:27:55:	to small wastewater works.
00:27:55> 00:27:59:	USDOT will provide grants for community resilience and evacuation routes
00:27:59> 00:28:01:	for coastal highway adaptation.
00:28:01> 00:28:03:	There will be grants for strengthening,

00:28:03> 00:28:09:	stabilizing, hardening, elevating, relocating, vulnerable highways and as mitigation,
00:28:09> 00:28:14:	healthy streets grants will enable communities to deploy porous pavement
00:28:14> 00:28:16:	and expand pre cover.
00:28:16> 00:28:20:	The law supports Co benefits reducing flood risk along highways
00:28:20> 00:28:24:	by increasing the health of adjacent marches and reducing greenhouse
00:28:24> 00:28:29:	gas emissions by funding electric recharging and low emission buses.
00:28:29> 00:28:32:	Energy Department will provide funding to states to establish revolving
00:28:32> 00:28:34:	loan funds for loans and grants for energy audits and
00:28:34> 00:28:35:	in the same vein,
00:28:35> 00:28:39:	the department will fund training for certification to support energy
00:28:39> 00:28:41:	audits and energy efficient buildings.
00:28:41> 00:28:43:	So how do we as practitioners,
00:28:43> 00:28:47:	policymakers, public officials, and communities address these questions as a
00:28:47> 00:28:49:	lead into our panelists views?
00:28:49> 00:28:51:	Here's what I've been advising.
00:28:51> 00:28:56:	My clients number one assess community needs and document those
00:28:56> 00:28:59:	number 2 review the law if.
00:28:59> 00:29:02:	Keyword searchable, the text is easily researched.
00:29:02> 00:29:06:	Talked to public officials to see how specific community needs
00:29:06> 00:29:09:	align with the funds and the programs that they're going
00:29:09> 00:29:10:	to be responsible for enhancing,
00:29:10> 00:29:14:	administering, and establishing. So all of our panelists I know
00:29:14> 00:29:15:	start with number one,
00:29:15> 00:29:18:	'cause we're going to start with our first panelist,
00:29:18> 00:29:21:	Josh Slack Josh. We're eager to hear commute for your
00:29:21> 00:29:22:	5 minute presentation.
00:29:24> 00:29:27:	Thank you Alan and thanks to you life for inviting
00:29:27> 00:29:28:	me today.
00:29:28> 00:29:31:	I'm going to talk about resilience from the macro level
00:29:31> 00:29:35:	and then my excellent Co panelists are going to give
00:29:35> 00:29:37:	you some more details on the efforts.
00:29:37> 00:29:40:	David talliand a lat also (1) 1 1 1
	Doug talked a lot about the data and you know
00:29:40> 00:29:43: 00:29:43> 00:29:45:	Doug talked a lot about the data and you know how it shows that climate threats and vulnerabilities are. Are, you know, facing us right now.

00:29:45> 00:29:48:	So let's start there and Noah and the other federal
00:29:48> 00:29:51:	science agencies as well as a growing number of private
00:29:51> 00:29:55:	entities and academic institutions have developed and are
	developing some
00:29:55> 00:29:58:	amazing tools. But the point I want to make today
00:29:58> 00:30:01:	is that you need to use this information in a
00:30:01> 00:30:03:	coordinated and comprehensive way.
00:30:03> 00:30:07:	Next slide, please. Now I love Venice food art.
00:30:07> 00:30:10:	Architecture history I try to go in the late fall
00:30:10> 00:30:13:	when it's a little less crowded and maybe even catch
00:30:13> 00:30:14:	the end of the Benali.
00:30:14> 00:30:17:	But whenever you go, you always face the risk of
00:30:17> 00:30:20:	flooding in the streets from high tides.
00:30:20> 00:30:23:	What the Venetians call Aqua alta.
00:30:23> 00:30:26:	About 30 years ago they decided that they were going
00:30:26> 00:30:30:	to build a massive title gate called the Mosaic Barrier
00:30:30> 00:30:33:	and it's almost done and the gates can be closed
00:30:33> 00:30:36:	when the threat is the highest and protect the title
00:30:36> 00:30:38:	level in the Venetian.
00:30:38> 00:30:42:	Lagoon and reopened after the threat passes to facilitate
	marinetraffic
00:30:42> 00:30:46:	and the natural flushing action that is critical to the
00:30:46> 00:30:47:	ecosystem.
00:30:47> 00:30:51:	What Moset won't address is sea level rise.
00:30:51> 00:30:53:	This was not the problem they were concerned with when
00:30:53> 00:30:54:	they planned the project,
00:30:54> 00:30:57:	but it will be something they face in the future.
00:30:57> 00:31:02:	So so sometimes you need to address problems incrementally.
00:31:02> 00:31:06:	Understand that, but you also must think comprehensively or
	you
00:31:06> 00:31:09:	may find the solution you've developed and spend a lot
00:31:09> 00:31:13:	of money on becomes obsolete and you have to start
00:31:13> 00:31:17:	all over again. Next, slide a little closer to home.
00:31:17> 00:31:19:	South Florida, it's pretty flat.
00:31:19> 00:31:23:	It's pretty low lying, so the concentration of human and
00:31:23> 00:31:25:	financial risk is very high now.
00:31:25> 00:31:28:	Just in case you don't think this is relevant to
00:31:28> 00:31:28:	you,
00:31:28> 00:31:31:	I would point out that the National Flood Insurance program
00:31:31> 00:31:33:	that FEMA runs covers much of this risk.
00:31:33> 00:31:37:	And unlike traditional insurance, this program is backed by
	the

00:31:37> 00:31:39:	full faith and credit of the United States,
00:31:39> 00:31:42:	which is a fancy way of saying taxpayers like you
00:31:42> 00:31:43:	and me.
00:31:43> 00:31:46:	So last year, along with some colleagues from Florida Atlantic
00:31:46> 00:31:47:	University,
00:31:47> 00:31:49:	we looked at the risk and the state and local
00:31:50> 00:31:53:	governance issues that affect that risk in South Florida and
00:31:53> 00:31:56:	one of the things we found is the risk is
00:31:56> 00:31:58:	starting to be priced by the market.
00:31:58> 00:32:01:	We're not there yet, but we are starting to see
00:32:01> 00:32:01:	that,
00:32:01> 00:32:05:	but also that it's shared across the public and private
00:32:05> 00:32:05:	sectors.
00:32:05> 00:32:08:	And finally that land use is really a major driver
00:32:08> 00:32:09:	of that risk.
00:32:09> 00:32:12:	And since land used is controlled at the local level
00:32:12> 00:32:12:	in EU.
00:32:12> 00:32:14:	S new models of governments.
00:32:14> 00:32:17:	Governance and cooperation are needed to develop a solution comprehensive
00:32:18> 00:32:18:	solution.
00:32:18> 00:32:21:	Next slide, let me move West a little bit in
00:32:21> 00:32:24:	the Gulf Coast into a beautiful scenic area known as
00:32:24> 00:32:28:	Lower Alabama and what I want to talk about is
00:32:28> 00:32:31:	that little dot, just inland of the barrier island called
00:32:31> 00:32:34:	Perdido Beach and the Obama administration.
00:32:34> 00:32:36:	We put a task force of state,
00:32:36> 00:32:39:	local tribal leaders together to help us think about these
00:32:39> 00:32:40:	issues.
00:32:40> 00:32:42:	Lots of high profile stuff but we had smaller community
00:32:43> 00:32:43:	as well.
00:32:43> 00:32:44:	One was the mayor of Perdido.
00:32:44> 00:32:48:	Beach and she represented about 500 residents and the first
00:32:48> 00:32:50:	thing Mayor Parker told us was they don't know what
00:32:50> 00:32:53:	they don't know and they didn't have the staff to
00:32:53> 00:32:56:	figure it out. So not everywhere is New York City,
00:32:56> 00:32:59:	Miami, Venice. Lot of Perdido Beach is in the coastal
00:32:59> 00:32:59:	zone.
00:32:59> 00:33:02:	We have to make these programs work for them.
00:33:02> 00:33:05:	Next slide. So I've used up,
00:33:05> 00:33:07:	I think four of my 5 minutes,

00:33:07> 00:33:09:	so let me let me leave you with a couple
00:33:09> 00:33:10:	of thoughts.
00:33:10> 00:33:14:	First, make sure that your risk analysis and planning or
00:33:14> 00:33:18:	comprehensive Venice had all the players at the table,
00:33:18> 00:33:20:	but they were only looking at part of the risk
00:33:20> 00:33:21:	in South Florida.
00:33:21> 00:33:24:	The communities understand the comprehensive risk,
00:33:24> 00:33:27:	but the various players tend to make important land use
00:33:28> 00:33:31:	decisions independently of others in the same watershed.
00:33:31> 00:33:36:	Second, federal programs. Complicated and they were generally not designed
00:33:36> 00:33:38:	to work with other federal programs,
00:33:39> 00:33:41:	but in many cases they can staff and the agencies
00:33:41> 00:33:43:	may not know how to do it.
00:33:43> 00:33:45:	But there are folks who can help you.
00:33:45> 00:33:48:	So review the tools that Doug discussed and the new
00:33:48> 00:33:52:	technical assistance and the infrastructure bill that Alan talked about,
00:33:52> 00:33:56:	talked to other communities, participate in groups like this like
00:33:56> 00:33:57:	the UI Coastal Forum,
00:33:57> 00:34:01:	share information and advice with your with your friends and
00:34:01> 00:34:01:	neighbors.
00:34:01> 00:34:03:	There is help out there,
00:34:03> 00:34:05:	but sometimes you gotta dig.
00:34:05> 00:34:09:	And third, remember that these risks are shared across the
00:34:09> 00:34:10:	public and private sectors.
00:34:10> 00:34:14:	So if you engage early on and you engage broadly,
00:34:14> 00:34:17:	that broader coalition is going to have more opportunity to
00:34:17> 00:34:18:	build solutions.
00:34:18> 00:34:19:	So let me end it there.
00:34:19> 00:34:23:	I added some more recent online resources that you'll be
00:34:23> 00:34:26:	able to see in the in the copy of the
00:34:26> 00:34:28:	presentation you get.
00:34:28> 00:34:29:	And with that I'll throw it back to Alan.
00:34:29> 00:34:32:	Thanks so much, Josh, and thanks for staying within the
00:34:32> 00:34:32:	five minutes.
00:34:32> 00:34:35:	Then yes, let's go now to a much.
00:34:35> 00:34:38:	Really wide swath of territory up to the Great Lakes
00:34:38> 00:34:40:	and the Saint Lawrence with John go ahead.
00:34:44> 00:34:45:	Good
00:34:45> 00:34:48:	afternoon, my name is John Altenburg and I'm here on
00:34:48> 00:34:52:	behalf of the Great Lakes in Saint Lawrence Cities Initiative,

00:34:52> 00:34:56:	both as a as the leader of the organization.
00:34:56> 00:34:59:	Today I'm going to discuss our organization's approach,
00:34:59> 00:35:01:	climate resilience over the past year,
00:35:01> 00:35:06:	including efforts through our Mayor's Advisory Council on coastal resilience
00:35:06> 00:35:08:	and other programs.
00:35:08> 00:35:10:	We could move to the next slide.
00:35:13> 00:35:17:	Our organization is made up of about 135 US and
00:35:17> 00:35:22:	Canadian mayors working to advance protection,
00:35:22> 00:35:25:	restoration of the Great Lakes and Saint Lawrence River.
00:35:25> 00:35:28:	Currently, we're focusing heavily on COVID relief,
00:35:28> 00:35:34:	but also water equity, water infrastructure funding and coastal resilience.
00:35:34> 00:35:40:	Next slide, please. Really have to understand the problem.
00:35:40> 00:35:43:	It's not just an issue of what's happening on our
00:35:43> 00:35:44:	coastlines,
00:35:44> 00:35:47:	this is on the East and West Coast on our
00:35:47> 00:35:47:	oceans.
00:35:47> 00:35:49:	But it's also our lakes,
00:35:49> 00:35:53:	our our water levels in the Great Lakes and Saint
00:35:53> 00:35:57:	Lawrence River basin are naturally variable and cyclical when it
	WHOTE
00:35:57> 00:35:59:	comes to highs and lows.
00:35:57> 00:35:59: 00:35:59> 00:36:05:	
	comes to highs and lows.
00:35:59> 00:36:05:	comes to highs and lows. But over the last couple decades we've seen climate change
00:35:59> 00:36:05: 00:36:05> 00:36:07:	comes to highs and lows. But over the last couple decades we've seen climate change exacerbates these. Fluctuations. Reaching high record levels of water over the
00:35:59> 00:36:05: 00:36:05> 00:36:07: 00:36:07> 00:36:13:	comes to highs and lows. But over the last couple decades we've seen climate change exacerbates these. Fluctuations. Reaching high record levels of water over the last
00:35:59> 00:36:05: 00:36:05> 00:36:07: 00:36:07> 00:36:13: 00:36:13> 00:36:15: 00:36:15> 00:36:17: 00:36:17> 00:36:23:	comes to highs and lows. But over the last couple decades we've seen climate change exacerbates these. Fluctuations. Reaching high record levels of water over the last few years. But we've also seen low water levels. This is caused considerable damage and also the results of
00:35:59> 00:36:05: 00:36:05> 00:36:07: 00:36:07> 00:36:13: 00:36:13> 00:36:15: 00:36:15> 00:36:17:	comes to highs and lows. But over the last couple decades we've seen climate change exacerbates these. Fluctuations. Reaching high record levels of water over the last few years. But we've also seen low water levels.
00:35:59> 00:36:05: 00:36:05> 00:36:07: 00:36:07> 00:36:13: 00:36:13> 00:36:15: 00:36:15> 00:36:17: 00:36:17> 00:36:23:	comes to highs and lows. But over the last couple decades we've seen climate change exacerbates these. Fluctuations. Reaching high record levels of water over the last few years. But we've also seen low water levels. This is caused considerable damage and also the results of significant severe storm storm actions have caused great
00:35:59> 00:36:05: 00:36:05> 00:36:07: 00:36:07> 00:36:13: 00:36:13> 00:36:15: 00:36:15> 00:36:17: 00:36:17> 00:36:23: 00:36:23> 00:36:31:	comes to highs and lows. But over the last couple decades we've seen climate change exacerbates these. Fluctuations. Reaching high record levels of water over the last few years. But we've also seen low water levels. This is caused considerable damage and also the results of significant severe storm storm actions have caused great erosion across
00:35:59> 00:36:05: 00:36:05> 00:36:07: 00:36:07> 00:36:13: 00:36:13> 00:36:15: 00:36:15> 00:36:17: 00:36:17> 00:36:23: 00:36:23> 00:36:31:	comes to highs and lows. But over the last couple decades we've seen climate change exacerbates these. Fluctuations. Reaching high record levels of water over the last few years. But we've also seen low water levels. This is caused considerable damage and also the results of significant severe storm storm actions have caused great erosion across our lakes.
00:35:59> 00:36:05: 00:36:05> 00:36:07: 00:36:07> 00:36:13: 00:36:13> 00:36:15: 00:36:15> 00:36:17: 00:36:17> 00:36:23: 00:36:23> 00:36:31: 00:36:31> 00:36:32: 00:36:32> 00:36:37:	comes to highs and lows. But over the last couple decades we've seen climate change exacerbates these. Fluctuations. Reaching high record levels of water over the last few years. But we've also seen low water levels. This is caused considerable damage and also the results of significant severe storm storm actions have caused great erosion across our lakes. In our lakefronts and great flooding events,
00:35:59> 00:36:05: 00:36:05> 00:36:07: 00:36:07> 00:36:13: 00:36:13> 00:36:15: 00:36:15> 00:36:17: 00:36:17> 00:36:23: 00:36:23> 00:36:31: 00:36:31> 00:36:32: 00:36:32> 00:36:37: 00:36:37> 00:36:39:	comes to highs and lows. But over the last couple decades we've seen climate change exacerbates these. Fluctuations. Reaching high record levels of water over the last few years. But we've also seen low water levels. This is caused considerable damage and also the results of significant severe storm storm actions have caused great erosion across our lakes. In our lakefronts and great flooding events, erosion flooding threatens public and private. Properties critical infrastructure, shoreline, habitat and
00:35:59> 00:36:05: 00:36:05> 00:36:07: 00:36:07> 00:36:13: 00:36:13> 00:36:15: 00:36:15> 00:36:17: 00:36:17> 00:36:23: 00:36:23> 00:36:31: 00:36:31> 00:36:32: 00:36:32> 00:36:37: 00:36:37> 00:36:39: 00:36:39> 00:36:47:	comes to highs and lows. But over the last couple decades we've seen climate change exacerbates these. Fluctuations. Reaching high record levels of water over the last few years. But we've also seen low water levels. This is caused considerable damage and also the results of significant severe storm storm actions have caused great erosion across our lakes. In our lakefronts and great flooding events, erosion flooding threatens public and private. Properties critical infrastructure, shoreline, habitat and recreation and tourism potential.
00:35:59> 00:36:05: 00:36:05> 00:36:07: 00:36:07> 00:36:13: 00:36:13> 00:36:15: 00:36:15> 00:36:17: 00:36:17> 00:36:23: 00:36:23> 00:36:31: 00:36:31> 00:36:32: 00:36:32> 00:36:37: 00:36:37> 00:36:39: 00:36:39> 00:36:47:	comes to highs and lows. But over the last couple decades we've seen climate change exacerbates these. Fluctuations. Reaching high record levels of water over the last few years. But we've also seen low water levels. This is caused considerable damage and also the results of significant severe storm storm actions have caused great erosion across our lakes. In our lakefronts and great flooding events, erosion flooding threatens public and private. Properties critical infrastructure, shoreline, habitat and recreation and tourism potential. One example of the infrastructure is one of our cities,
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00:35:59> 00:36:05: 00:36:05> 00:36:07: 00:36:07> 00:36:13: 00:36:13> 00:36:15: 00:36:15> 00:36:17: 00:36:17> 00:36:23: 00:36:23> 00:36:31: 00:36:31> 00:36:32: 00:36:32> 00:36:37: 00:36:37> 00:36:39: 00:36:39> 00:36:47: 00:36:51> 00:36:55: 00:36:55> 00:37:01:	comes to highs and lows. But over the last couple decades we've seen climate change exacerbates these. Fluctuations. Reaching high record levels of water over the last few years. But we've also seen low water levels. This is caused considerable damage and also the results of significant severe storm storm actions have caused great erosion across our lakes. In our lakefronts and great flooding events, erosion flooding threatens public and private. Properties critical infrastructure, shoreline, habitat and recreation and tourism potential. One example of the infrastructure is one of our cities, the cities of Zion in Illinois has an intake tank for water that not only provides water for their community,
00:35:59> 00:36:05: 00:36:05> 00:36:07: 00:36:07> 00:36:13: 00:36:13> 00:36:15: 00:36:15> 00:36:17: 00:36:17> 00:36:23: 00:36:23> 00:36:31: 00:36:31> 00:36:32: 00:36:32> 00:36:37: 00:36:37> 00:36:39: 00:36:39> 00:36:47: 00:36:51> 00:36:55: 00:36:55> 00:37:01: 00:37:01> 00:37:05:	comes to highs and lows. But over the last couple decades we've seen climate change exacerbates these. Fluctuations. Reaching high record levels of water over the last few years. But we've also seen low water levels. This is caused considerable damage and also the results of significant severe storm storm actions have caused great erosion across our lakes. In our lakefronts and great flooding events, erosion flooding threatens public and private. Properties critical infrastructure, shoreline, habitat and recreation and tourism potential. One example of the infrastructure is one of our cities, the cities of Zion in Illinois has an intake tank for water that not only provides water for their community, but also to the former Zion nuclear power plants that

00:37:14> 00:37:18: 00:37:19> 00:37:19:	of losing water pressure for that community and for that facility.
00:37:19> 00:37:19:	So these are really severe issues that are affecting our
00:37:23> 00:37:27:	communities in the Great Lakes and Saint Lawrence rivers.
00:37:27> 00:37:31:	Because of our concerns that we've heard from our members
00:37:31> 00:37:33:	of our communities,
00:37:33> 00:37:38:	we conducted a study about a year ago.
00:37:38> 00:37:41:	With over 300 communities around the Great Lakes and Saint
00:37:41> 00:37:42:	Lawrence,
00:37:42> 00:37:46:	both in EU S and in Canada to identify the
00:37:46> 00:37:52:	issues around climate change and the issue of of shoreline
00:37:52> 00:37:53:	resilience,
00:37:53> 00:37:58:	our preliminary findings show that kulkyne communities anticipate.
00:37:58> 00:38:02:	That there will be a huge financial needs over the
00:38:02> 00:38:07:	next five to 10 years that will impact these communities.
00:38:07> 00:38:12:	Based on the responsiveness of over 300 survey participants,
00:38:12> 00:38:15:	we found that we are expecting over \$2 billion in
00:38:16> 00:38:20:	damages that have to be addressed over the next five
00:38:20> 00:38:20:	years.
00:38:20> 00:38:25:	That's 1.95 billion in EU S and about .26 billion
00:38:26> 00:38:27:	in Canada.
00:38:27> 00:38:30:	Now this is only. Public sector properties.
00:38:30> 00:38:33:	You could triple that when you start looking at private
00:38:34> 00:38:37:	properties is what our estimates are the major issues,
00:38:37> 00:38:42:	especially in recognizing that there are many communities that weren't
00:38:42> 00:38:44:	represented in this need.
00:38:44> 00:38:49:	Are all around resilience challenges that will likely persist way
00:38:49> 00:38:52:	beyond this five year time frame.
00:38:52> 00:38:56:	We also found that funding for mitigation projects and planning
00:38:56> 00:39:01:	are highly are high priorities for our responding communities.
00:39:01> 00:39:06:	Wherever existing funding opportunities at this point do not meet
00:39:06> 00:39:12:	the need for these communities and specifically non federal matching
00:39:12> 00:39:14:	is a significant problem.
00:39:14> 00:39:20:	For our communities we have first hand information on these
00:39:20> 00:39:20:	issues.
00:39:20> 00:39:24:	Uh and most and powerful advocates of her federal funding
00:39:24> 00:39:28:	that would really driving towards that financial need.

00:39:28> 00:39:31:	And we've seen some of that result coming out with
00:39:31> 00:39:33:	the most recent infrastructure bill,
00:39:33> 00:39:35:	where we're dealing with some of these issues,
00:39:35> 00:39:37:	but it's still not going to be close to enough
00:39:37> 00:39:41:	to deal with the coastal resilience issues that we're seeing
00:39:41> 00:39:42:	across the lakes.
00:39:42> 00:39:43:	Go to the next slide.
00:39:45> 00:39:47:	So yes, it's going to be there at the end
00:39:47> 00:39:48:	of the five minutes.
00:39:48> 00:39:51:	I'm just going to say this is great and your
00:39:51> 00:39:53:	slide and this can be and the deck or he
00:39:53> 00:39:56:	will make this available to everybody.
00:39:56> 00:40:01:	You've really identified the huge issue of underrepresented unmet needs
00:40:01> 00:40:05:	and will go from 300 communities to 21 much larger
00:40:05> 00:40:07:	river to a smaller one with Julie,
00:40:07> 00:40:10:	so Julie, could you take us to the Mystic River
00:40:10> 00:40:12:	outside of Boston please.
00:40:12> 00:40:13:	Thanks John.
00:40:13> 00:40:14:	Yep, thank you.
00:40:18> 00:40:21:	We share my screen. Yep.
00:40:30> 00:40:31:	Thank you very much for having me.
00:40:33> 00:40:35:	I work for a nonprofit.
00:40:35> 00:40:38:	I'm one of those circuit riders you we heard about
00:40:38> 00:40:41:	briefly and this is what it looks like to actually
00:40:41> 00:40:42:	have.
00:40:42> 00:40:48:	Nonprofits and municipalities work together on regional climate resilience.
00:40:48> 00:40:51:	So we have a major governance challenge that you may
00:40:51> 00:40:52:	not all have,
00:40:52> 00:40:56:	which is basically Massachusetts does not have functioning counties.
00:40:56> 00:40:59:	So our watershed is about the size of Brooklyn,
00:40:59> 00:41:02:	NY or Amsterdam, about the same number of people,
00:41:02> 00:41:06:	but instead of one city or even one borough,
00:41:06> 00:41:10:	we have 21 municipalities, each with their own budgets and
00:41:10> 00:41:14:	cultures and politics and zoning ordinances,
00:41:14> 00:41:19:	which makes it very challenging to tackle a collective action
00:41:19> 00:41:20:	challenge.
00:41:20> 00:41:23:	We came together for years ago to form the Resilient
00:41:23> 00:41:24:	Mystic Collaborative.
00:41:24> 00:41:28:	This is not regulatory. This is fully voluntary.
00:41:28> 00:41:32:	This covers virtually the entire watershed and to date we

00.44.22 > 00.44.26.	have been able to accure OF million in mublic and
00:41:32> 00:41:36:	have been able to secure \$5 million in public and
00:41:37> 00:41:37:	and.
00:41:37> 00:41:42:	Philanthropic funding or regional climate resilience.
00:41:42> 00:41:47:	Our theory of change is basically overcoming a governance barrier.
00:41:47> 00:41:51:	We only look at those projects to make changes on
00:41:51> 00:41:55:	the ground that individual municipalities cannot do themselves were data
00:41:56> 00:41:57:	driven or action oriented.
00:41:57> 00:42:01:	We're optimistic we support each other and we are a
00:42:01> 00:42:06:	learning community where we try intelligent failure and try again.
00:42:06> 00:42:09:	If it doesn't work. So we're not afraid to try
00:42:09> 00:42:10:	new things.
00:42:10> 00:42:15:	Are we have a steering committee predominantly made up of
00:42:15> 00:42:17:	municipal leaders,
00:42:17> 00:42:20:	engineers, senior engineer senior planners,
00:42:20> 00:42:24:	but our work really takes place in working groups for
00:42:24> 00:42:25:	these specific projects.
00:42:25> 00:42:29:	Coastal resilience is in our lower watershed flood,
00:42:29> 00:42:34:	stormwater, flood resilience in our upper watershed and advocacy and
00:42:34> 00:42:36:	social resilience throughout.
00:42:34> 00:42:36: 00:42:36> 00:42:39:	social resilience throughout. So I want to give you just a specific specific
	<u> </u>
00:42:36> 00:42:39:	So I want to give you just a specific specific
00:42:36> 00:42:39: 00:42:39> 00:42:41:	So I want to give you just a specific specific example of how we go from.
00:42:36> 00:42:39: 00:42:39> 00:42:41: 00:42:41> 00:42:45:	So I want to give you just a specific specific example of how we go from. A theory of change like we should manage climate at
00:42:36> 00:42:39: 00:42:39> 00:42:41: 00:42:41> 00:42:45: 00:42:45> 00:42:49:	So I want to give you just a specific specific example of how we go from. A theory of change like we should manage climate at a watershed level to actually being in the UM.
00:42:36> 00:42:39: 00:42:39> 00:42:41: 00:42:41> 00:42:45: 00:42:45> 00:42:49: 00:42:49> 00:42:52:	So I want to give you just a specific specific example of how we go from. A theory of change like we should manage climate at a watershed level to actually being in the UM. Position of getting 10s of millions of dollars in federal
00:42:36> 00:42:39: 00:42:39> 00:42:41: 00:42:41> 00:42:45: 00:42:45> 00:42:49: 00:42:49> 00:42:52: 00:42:52> 00:42:54:	So I want to give you just a specific specific example of how we go from. A theory of change like we should manage climate at a watershed level to actually being in the UM. Position of getting 10s of millions of dollars in federal funding over the next few years.
00:42:36> 00:42:39: 00:42:39> 00:42:41: 00:42:41> 00:42:45: 00:42:45> 00:42:49: 00:42:49> 00:42:52: 00:42:52> 00:42:54: 00:42:56> 00:43:01:	So I want to give you just a specific specific example of how we go from. A theory of change like we should manage climate at a watershed level to actually being in the UM. Position of getting 10s of millions of dollars in federal funding over the next few years. So one of our first goals was to manage stormwater flooding with when extreme precipitation hits old stormwater
00:42:36> 00:42:39: 00:42:39> 00:42:41: 00:42:41> 00:42:45: 00:42:45> 00:42:49: 00:42:49> 00:42:52: 00:42:52> 00:42:54: 00:42:56> 00:43:01: 00:43:01> 00:43:08:	So I want to give you just a specific specific example of how we go from. A theory of change like we should manage climate at a watershed level to actually being in the UM. Position of getting 10s of millions of dollars in federal funding over the next few years. So one of our first goals was to manage stormwater flooding with when extreme precipitation hits old stormwater infrastructure.
00:42:36> 00:42:39: 00:42:39> 00:42:41: 00:42:41> 00:42:45: 00:42:45> 00:42:49: 00:42:49> 00:42:52: 00:42:52> 00:42:54: 00:42:56> 00:43:01: 00:43:01> 00:43:08:	So I want to give you just a specific specific example of how we go from. A theory of change like we should manage climate at a watershed level to actually being in the UM. Position of getting 10s of millions of dollars in federal funding over the next few years. So one of our first goals was to manage stormwater flooding with when extreme precipitation hits old stormwater infrastructure. Because we have Cambridge in our watershed, they had done \$1,000,000 very sophisticated hydro
00:42:36> 00:42:39: 00:42:39> 00:42:41: 00:42:41> 00:42:45: 00:42:45> 00:42:49: 00:42:49> 00:42:52: 00:42:52> 00:42:54: 00:42:56> 00:43:01: 00:43:01> 00:43:08: 00:43:01> 00:43:11: 00:43:11> 00:43:17:	So I want to give you just a specific specific example of how we go from. A theory of change like we should manage climate at a watershed level to actually being in the UM. Position of getting 10s of millions of dollars in federal funding over the next few years. So one of our first goals was to manage stormwater flooding with when extreme precipitation hits old stormwater infrastructure. Because we have Cambridge in our watershed, they had done \$1,000,000 very sophisticated hydro hydrologic model just
00:42:36> 00:42:39: 00:42:39> 00:42:41: 00:42:41> 00:42:45: 00:42:45> 00:42:49: 00:42:49> 00:42:52: 00:42:52> 00:42:54: 00:42:56> 00:43:01: 00:43:01> 00:43:08: 00:43:11> 00:43:11: 00:43:11> 00:43:20:	So I want to give you just a specific specific example of how we go from. A theory of change like we should manage climate at a watershed level to actually being in the UM. Position of getting 10s of millions of dollars in federal funding over the next few years. So one of our first goals was to manage stormwater flooding with when extreme precipitation hits old stormwater infrastructure. Because we have Cambridge in our watershed, they had done \$1,000,000 very sophisticated hydro hydrologic model just to look at their own blood challenges.
00:42:36> 00:42:39: 00:42:39> 00:42:41: 00:42:41> 00:42:45: 00:42:45> 00:42:49: 00:42:49> 00:42:52: 00:42:52> 00:42:54: 00:42:56> 00:43:01: 00:43:01> 00:43:08: 00:43:11> 00:43:17: 00:43:17> 00:43:20: 00:43:20> 00:43:23:	So I want to give you just a specific specific example of how we go from. A theory of change like we should manage climate at a watershed level to actually being in the UM. Position of getting 10s of millions of dollars in federal funding over the next few years. So one of our first goals was to manage stormwater flooding with when extreme precipitation hits old stormwater infrastructure. Because we have Cambridge in our watershed, they had done \$1,000,000 very sophisticated hydro hydrologic model just to look at their own blood challenges. But then they gave that model to the rest of the watershed who then both added their stormwater
00:42:36> 00:42:39: 00:42:39> 00:42:41: 00:42:41> 00:42:45: 00:42:45> 00:42:49: 00:42:49> 00:42:52: 00:42:52> 00:42:54: 00:42:56> 00:43:01: 00:43:01> 00:43:11: 00:43:11> 00:43:17: 00:43:17> 00:43:20: 00:43:20> 00:43:23: 00:43:23> 00:43:28:	So I want to give you just a specific specific example of how we go from. A theory of change like we should manage climate at a watershed level to actually being in the UM. Position of getting 10s of millions of dollars in federal funding over the next few years. So one of our first goals was to manage stormwater flooding with when extreme precipitation hits old stormwater infrastructure. Because we have Cambridge in our watershed, they had done \$1,000,000 very sophisticated hydro hydrologic model just to look at their own blood challenges. But then they gave that model to the rest of the watershed who then both added their stormwater systems and
00:42:36> 00:42:39: 00:42:39> 00:42:41: 00:42:41> 00:42:45: 00:42:45> 00:42:49: 00:42:49> 00:42:52: 00:42:52> 00:42:54: 00:42:56> 00:43:01: 00:43:01> 00:43:11: 00:43:11> 00:43:17: 00:43:20> 00:43:20: 00:43:23> 00:43:28:	So I want to give you just a specific specific example of how we go from. A theory of change like we should manage climate at a watershed level to actually being in the UM. Position of getting 10s of millions of dollars in federal funding over the next few years. So one of our first goals was to manage stormwater flooding with when extreme precipitation hits old stormwater infrastructure. Because we have Cambridge in our watershed, they had done \$1,000,000 very sophisticated hydro hydrologic model just to look at their own blood challenges. But then they gave that model to the rest of the watershed who then both added their stormwater systems and did some ground truthing.
00:42:36> 00:42:39: 00:42:39> 00:42:41: 00:42:41> 00:42:45: 00:42:45> 00:42:49: 00:42:49> 00:42:52: 00:42:52> 00:42:54: 00:42:56> 00:43:01: 00:43:01> 00:43:11: 00:43:11> 00:43:17: 00:43:20> 00:43:20: 00:43:23> 00:43:28: 00:43:28> 00:43:29: 00:43:29> 00:43:32:	So I want to give you just a specific specific example of how we go from. A theory of change like we should manage climate at a watershed level to actually being in the UM. Position of getting 10s of millions of dollars in federal funding over the next few years. So one of our first goals was to manage stormwater flooding with when extreme precipitation hits old stormwater infrastructure. Because we have Cambridge in our watershed, they had done \$1,000,000 very sophisticated hydro hydrologic model just to look at their own blood challenges. But then they gave that model to the rest of the watershed who then both added their stormwater systems and did some ground truthing. We now have a watershed wide model.

00:43:39> 00:43:39:	the ground?
00:43:39> 00:43:43:	So our first thought was let's create more stormwater
	wetlands.
00:43:43> 00:43:48:	We've found almost 500 candidates and we are funding the
00:43:49> 00:43:53:	first three to then start storing water upstream.
00:43:53> 00:43:55:	The second goal was coastal flooding.
00:43:55> 00:43:59:	Boston made the mistake of filling in its coastal marshes
00:43:59> 00:44:03:	not very much and building a lot of expensive stuff
00:44:03> 00:44:04:	on top of it.
00:44:04> 00:44:09:	So within 50 years we will flood regularly.
00:44:09> 00:44:15:	These Gray areas contain much of the the critical infrastructure
00:44:15> 00:44:18:	for Greater Boston and will flood,
00:44:18> 00:44:22:	on average more than every other year.
00:44:22> 00:44:25:	What we found, however, by working together,
00:44:25> 00:44:27:	is that there were some key,
00:44:27> 00:44:33:	much less expensive flood pathways where if blocked.
00:44:33> 00:44:38:	We could go from this kind of extensive saltwater flooding.
00:44:38> 00:44:42:	In a 1% storm 50 years from now to blocking
00:44:42> 00:44:43:	this mush,
00:44:43> 00:44:46:	uh, and that's, uh, that's less than a half a
00:44:46> 00:44:47:	billion dollars of investment.
00:44:47> 00:44:51:	Probably quite a bit less than a half million dollars
00:44:51> 00:44:51:	investment.
00:44:51> 00:44:53:	And given this is a major metropolitan region.
00:44:56> 00:45:00:	So where we went from establishing ourselves three years ago?
00:45:00> 00:45:05:	To gaining the money needed to do initial data gathering
00:45:05> 00:45:06:	and goal setting,
00:45:06> 00:45:09:	we now have about a half a billion dollars of
00:45:10> 00:45:14:	shovel worthy regional projects of highest priority to to tap
00:45:14> 00:45:19:	infrastructure and hopefully build back better funding over the next
00:45:19> 00:45:22:	several years. So we know what we want to tackle
00:45:22> 00:45:25:	this year and will be applying for funding will be
00:45:25> 00:45:30:	applying for state funding to develop additional projects that are
00:45:30> 00:45:34:	not quite shovel ready. But we've already gained the local
00:45:34> 00:45:36:	support to move these projects forward.
00:45:36> 00:45:39:	Because of this collaborative.
00:45:40> 00:45:45:	Thanks, that's a great example of Interlocal cooperation and really
00:45:45> 00:45:47:	timing yourself.
00:45:47> 00:45:49:	Getting ready for all the influx of funding,

00:45:49> 00:45:50:	I'm going to turn now.
00:45:50> 00:45:53:	Thanks so much. It'll turn out that Jim Finch,
00:45:53> 00:45:56:	who will take it very local in Branford,
00:45:56> 00:46:00:	CT, who's done some very innovative work and financing
00.40.00> 00.40.00.	resilience
00:46:00> 00:46:01:	in his community.
00:46:01> 00:46:03:	So Jim, it's your
00:46:03> 00:46:04:	OK. OK, thank you Alan.
00:46:04> 00:46:07:	I appreciate that I'm going to be telling a little
00:46:07> 00:46:09:	bit of a story about the town of Branford in
00:46:09> 00:46:11:	the next 6 to 7 minutes.
00:46:11> 00:46:14:	So I want to cover Branford experience in setting up
00:46:14> 00:46:16:	a coastal resiliency fund.
00:46:16> 00:46:19:	I want to talk about our legislative efforts and I
00:46:19> 00:46:22:	want to talk about how this funding could be used
00:46:22> 00:46:25:	in the future to leverage grants and also be used
00:46:25> 00:46:29:	to leverage any legislative initiatives in Connecticut which would involve
00:46:29> 00:46:32:	using non property tax revenues and I do have a
00:46:32> 00:46:36:	model which I'll try to get you through the presentation.
00:46:36> 00:46:38:	So, so why Branford as Allen pointed out we are
00:46:39> 00:46:40:	located in Long Island Sound.
00:46:40> 00:46:46:	We're about 28,000 people. We us being a coastal community,
00:46:46> 00:46:50:	we certainly have our exposure with rising sea level in
00:46:50> 00:46:52:	terms of how it impacts the town,
00:46:52> 00:46:56:	roads, infrastructure, etc. This was a fact that was not
00:46:56> 00:47:01:	lost on our plan of conservation and development who incorporated
00:47:01> 00:47:03:	a number of studies,
00:47:03> 00:47:05:	but they came out with what I would consider at
00:47:06> 00:47:06:	first glance.
00:47:06> 00:47:10:	It very provocative statement in which they said that the
00:47:10> 00:47:13:	scope of the issues associated with sea level rise.
00:47:13> 00:47:16:	Is so extensive and expensive that it will be difficult
00:47:16> 00:47:20:	if not impossible for the town of Branford to address
00:47:20> 00:47:23:	them all so we could advance to the next slide.
00:47:23> 00:47:25:	And that's the quote that I was talking about.
00:47:25> 00:47:28:	It has an element of gloom and doom to that,
00:47:28> 00:47:31:	so please advance to the next slide.
00:47:31> 00:47:33:	So I asked, are we depressed yet?
00:47:33> 00:47:36:	And I don't think it was the intent of the
00:47:36> 00:47:39:	conservation development folks to depress us.

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00:47:39> 00:47:42:	I think it really was sort of a call to
00:47:42> 00:47:46:	action on the part of local leaders to try to
00:47:46> 00:47:50:	come up with creative ways to address the situation.
00:47:50> 00:47:53:	So we go the next slide.
00:47:53> 00:47:54:	I love this quote from Arthur Ashe,
00:47:54> 00:47:58:	because while I don't believe Arthur Ashe was necessarily talking
00:47:58> 00:48:00:	about sea level rise and climate issues,
00:48:00> 00:48:05:	I think it provides a good philosophical underpinning for the
00:48:05> 00:48:06:	approach to take,
00:48:06> 00:48:08:	and I couldn't help but think during Doug slide on
00:48:08> 00:48:11:	coastal inundacion that it has some of the elements that
00:48:11> 00:48:13:	he pointed to get started.
00:48:13> 00:48:16:	Access data visualized, communicate and take action so we could
00:48:16> 00:48:17:	go to the next slide.
00:48:20> 00:48:23:	So as we begin thinking about brainstorming about ideas,
00:48:23> 00:48:24:	one of the thoughts and again,
00:48:24> 00:48:27:	I'm a finance person, so I'm kind of looking at
00:48:27> 00:48:29:	it through the lens of a finance director.
00:48:29> 00:48:32:	Is what if we towns and cities could establish a
00:48:32> 00:48:32:	fund,
00:48:32> 00:48:36:	invest the assets similar to a pension plan to provide
00:48:36> 00:48:40:	an additional funding source to combat the future liabilities
	associated
00:48:41> 00:48:42:	with climate change,
00:48:42> 00:48:44:	and I think that's an important way to frame it
00:48:44> 00:48:47:	when you're when you're making a pitch to financial quotes,
00:48:47> 00:48:50:	especially appropriating bodies, is it real?
00:48:50> 00:48:52:	Well, we're really doing is we're funding a liability,
00:48:52> 00:48:56:	and in doing so not kicking that liability down the
00:48:56> 00:48:59:	road and being faithful to future generations.
00:48:59> 00:49:03:	Next slide, please. So before you can invest money like
00:49:03> 00:49:04:	a pension fund,
00:49:04> 00:49:05:	you have to save it first.
00:49:05> 00:49:08:	You have to say before you invest in.
00:49:08> 00:49:12:	Fortunately, Branford has a financial culture where we're very good
00:49:12> 00:49:15:	at funding are what we don't deem as liabilities are
00:49:15> 00:49:15:	pensions.
00:49:15> 00:49:20:	Other post employment benefits. We run self insurance funds so.
00:49:20> 00:49:24:	In early 2019 that bought a financing RTM took \$1,000,000

00:49:24> 00:49:28:	from reserves and created a coastal resiliency fund.
00:49:28> 00:49:31:	Next slide please. Now, as I said,
00:49:31> 00:49:34:	we were looking to invest that money so that money
00:49:34> 00:49:37:	can grow and match future liabilities.
00:49:37> 00:49:39:	However, we did not have the ability to do so
00:49:40> 00:49:43:	because Connecticut law needed to change for us to create
00:49:43> 00:49:46:	climate change and coastal resiliency funds.
00:49:46> 00:49:49:	And so we worked very hard myself,
00:49:49> 00:49:52:	the first selectman. Our state delegation.
00:49:52> 00:49:55:	So we we basically wrote a law that was proposed
00:49:56> 00:49:59:	up in Hartford and it was signed into law by
00:49:59> 00:50:01:	Governor Lamont in 2019.
00:50:01> 00:50:05:	And that law is go to the next slide is
00:50:05> 00:50:05:	PA 1977.
00:50:05> 00:50:08:	I'm not going to read every item there,
00:50:08> 00:50:10:	but some of the important takes away is.
00:50:10> 00:50:13:	It does recognize that climate change is a long term
00:50:13> 00:50:13:	liability.
00:50:13> 00:50:16:	We should invest today for that future.
00:50:16> 00:50:18:	It provides another tool in addition to grants,
00:50:18> 00:50:21:	bonds pay as you go on low return sinking funds
00:50:21> 00:50:23:	that allows you to invest up to 50%
00:50:23> 00:50:26:	in equities, which based on a 2017 study by the
00:50:26> 00:50:28:	Vanguard group showed that 50%
00:50:28> 00:50:32:	stock and bond portfolio on average can earn an 8.4%.
00:50:32> 00:50:34:	And will return not a bad return when you're trying
00:50:35> 00:50:38:	to combat the liabilities associated with climate change.
00:50:38> 00:50:41:	And it's also very important is when when folks like
00:50:41> 00:50:45:	Branford issues debt as a state or other entities.
00:50:45> 00:50:50:	The bond rating agencies are applying different standards to their
00:50:50> 00:50:53:	towns and their issuers called ESG environmental,
00:50:53> 00:50:58:	social and governance and setting up a coastal resiliency fund
00:50:58> 00:51:03:	is actually something that they look favorably upon in terms
00:51:03> 00:51:04:	of their ESG.
00:51:04> 00:51:06:	A review of the town of Bradford,
00:51:06> 00:51:07:	so we go to the next slide.
00:51:10> 00:51:13:	So this past legislative session,
00:51:13> 00:51:15:	there was a Bill 6441 which did a lot of
00:51:16> 00:51:16:	good things.
00:51:16> 00:51:20:	Most of them passed, but one part that didn't pass
00:51:20> 00:51:24:	was to have a real estate conveyance fee that could

00:51:24> 00:51:28:	be used to support and fund climate change initiatives.
00:51:28> 00:51:31:	So the question then that we asked ourselves in Branford,
00:51:31> 00:51:33:	is there a way we could look at the real
00:51:33> 00:51:37:	estate conveyance we could look at our existing coastal resiliency
00:51:37> 00:51:38:	fund and what other tools?
00:51:38> 00:51:43:	We have available to leverage federal resiliency funds,
00:51:43> 00:51:46:	so we go to the next slide.
00:51:46> 00:51:48:	So I'm not going to read all of this,
00:51:48> 00:51:50:	but this is here for a resource.
00:51:50> 00:51:53:	This kind of tells you the how the Coastal Resiliency
00:51:53> 00:51:56:	Fund would would receive the dollars from the real estate
00:51:56> 00:51:57:	conveyance fee.
00:51:57> 00:52:01:	The different bend points in terms of how that tax
00:52:01> 00:52:04:	would be applied and how those funds could be used.
00:52:04> 00:52:07:	As I said, they could be used to deposit at
00:52:07> 00:52:09:	coastal Resiliency Fund next slide.
00:52:11> 00:52:14:	And one of the key components of that is that
00:52:14> 00:52:18:	it could also be used these dollars from a convenience
00:52:18> 00:52:22:	fee into the Coastal Resiliency Fund to finance projects with
00:52:22> 00:52:24:	debt. So in other words,
00:52:24> 00:52:27:	the dollars coming in from those resources could be used
00:52:27> 00:52:30:	to pay principal and interest on municipal borrowing,
00:52:30> 00:52:32:	so that that's the leveraging piece,
00:52:32> 00:52:37:	which is, which is very important so.
00:52:37> 00:52:38:	So we'll go to the next slide,
00:52:38> 00:52:41:	please. And this this is.
00:52:41> 00:52:42:	This is a key thing.
00:52:42> 00:52:44:	This kind of gives you an idea of how this
00:52:44> 00:52:45:	would work,
00:52:45> 00:52:47:	so this is a hypothetical project.
00:52:47> 00:52:51:	\$17 million project getting a 65%
00:52:51> 00:52:55:	FEMA funding. And essentially I used 65%
00:52:56> 00:53:00:	because we're looking at this that that we could have
00:53:00> 00:53:02:	roughly ineligible costs,
00:53:02> 00:53:05:	and then that would be 5 million 950.
00:53:05> 00:53:07:	We borrow it 200 quarter percent.
00:53:07> 00:53:10:	I'm using estimated revenues from the convenience fees.
00:53:10> 00:53:11:	And when you kind of play that out,
00:53:11> 00:53:14:	you can see we have our beginning balance in the
00:53:14> 00:53:15:	Coastal Resiliency Fund.
00:53:15> 00:53:18:	We have our general fund contributions to conveyance fee,

the bond proceeds, the long and short of it. 00:53:20 --> 00:53:21: You look at the error. 00:53:21 --> 00:53:24: We're doing a \$17 million project without any additional tax 00:53:25 --> 00:53:27: revenue and the ending balance. 00:53:27 --> 00:53:29: You can see the assets in the fund are growing, 00:53:29 --> 00:53:31: so we go to the last slide. 00:53:31 --> 00:53:36: Next two slides, please. Any one more? 00:53:36 --> 00:53:38: Trying to catch up on time and so so so 00:53:38 --> 00:53:42: there's a lot of stuff in terms of the attachments 00:53:42 --> 00:53:42: and links. 00:53:42 --> 00:53:45: but I think there's two quotes I think really embodies 00:53:45 --> 00:53:48: some of the philosophy you see them there as society 00:53:48 --> 00:53:49: grows great when it's older. 00:53:49 --> 00:53:52: Citizens plant trees under whose shade they know they'll never sit in, 00:53:52 --> 00:53:52: 00:53:52 --> 00:53:55: or planting the seeds for the future in our coastal 00:53:55 --> 00:53:55: resiliency fund. 00:53:55 --> 00:53:58: And then the other is a creation of 1000 forests, 00:53:58 --> 00:54:01: isn't 18 corn today's mighty oak is just yesterday is 00:54:01 --> 00:54:02: not that held its ground. 00:54:02 --> 00:54:04: The best time to plant a tree is 20 years 00:54:04 --> 00:54:04: ago, 00:54:04 --> 00:54:06: the second best time is now. 00:54:06 --> 00:54:10: And with that, there's some link to additional resources, 00:54:10 --> 00:54:13: and I'll await the questions. 00:54:13 --> 00:54:16: Thanks, Jim. This is very fascinating. 00:54:16 --> 00:54:18: This is really great. I appreciate the detail. 00:54:18 --> 00:54:22: Let's actually start with a really challenging question. 00:54:22 --> 00:54:25: You mentioned that. That real estate conveyance fee was taken 00:54:26 --> 00:54:28: out of the bill at the last moment. 00:54:28 --> 00:54:30: I think you've said that that was in part because 00:54:30 --> 00:54:33: they were made in large part because of the real 00:54:33 --> 00:54:35: estate community and in Connecticut. 00:54:35 --> 00:54:37: So throwing this question to 00:54:37 --> 00:54:38: all of the panelists. 00:54:39 --> 00:54:40: If this is a good idea, 00:54:40 --> 00:54:45: how does that sort of opposition get overcome? 00:54:45 --> 00:54:47: Jim up, throw it back you first, 00:54:47 --> 00:54:49: I mean, do you have any sense of how you 00:54:49 --> 00:54:51: might overcome this in the next legislature? 00:54:51 --> 00:54:53: And I mentioned this because I talked to a member

00:53:18 --> 00:53:20:

00:54:53> 00:54:55:	of City Council and another large city who's also a
00:54:55> 00:54:55:	realtor.
00:54:55> 00:54:58:	She said, you know, the incremental cost of this is
00:54:58> 00:55:00:	really nothing on a conveyance.
00:55:00> 00:55:02:	It really ought to be an easy lift for a
00:55:02> 00:55:03:	purchase of a home,
00:55:03> 00:55:06:	especially for new. They're investing and in resilience.
00:55:06> 00:55:08:	So what's your next step in getting us through?
00:55:09> 00:55:11:	Well, I'm not. I'm not an expert on politics,
00:55:11> 00:55:13:	but I think that you build a coalition.
00:55:13> 00:55:16:	We have groups like ULI.
00:55:16> 00:55:20:	The Sierra Club, Connecticut Conference municipalities a whole host of
00:55:20> 00:55:21:	different groups.
00:55:21> 00:55:24:	I think we need to start early and we started
00:55:24> 00:55:26:	need to engage the real estate community.
00:55:26> 00:55:30:	There were other bills that involved resiliency financing in the
00:55:30> 00:55:31:	last session,
00:55:31> 00:55:35:	some of which were actually supported by the Connecticut Association
00:55:35> 00:55:36:	or Realtors.
00:55:36> 00:55:40:	So I think early engagement is important early in the
00:55:40> 00:55:44:	process and and maybe we can show them some things
00:55:44> 00:55:46:	like the model you just saw.
00:55:46> 00:55:49:	And maybe can create a compelling narrative to allow them
00:55:49> 00:55:51:	to kind of get behind this if they,
00:55:51> 00:55:53:	and if they see it in a long term interest,
00:55:53> 00:55:56:	then I think you know that that's a good approach
00:55:56> 00:55:56:	to take,
00:55:56> 00:55:59:	but I think absent some aggressive engagement,
00:55:59> 00:55:59:	I think it's going to be.
00:55:59> 00:56:02:	It's going to be a another barrier.
00:56:02> 00:56:03:	Julie
00:56:03> 00:56:06:	or John or Josh. Give any comments to add to
00:56:06> 00:56:06:	that.
00:56:06> 00:56:08:	Thinking of your own local efforts.
00:56:09> 00:56:11:	I, I mean, I think that's a good approach.
00:56:11> 00:56:12:	I think we have to.
00:56:12> 00:56:13:	You have to build the coalition.
00:56:13> 00:56:17:	You have to make it clear to the political leadership
00:56:17> 00:56:19:	that you know there's a benefit to this,
00:56:19> 00:56:23:	and there aren't downsides to them politically,

00:56:23> 00:56:25:	and that's generally how you get stuff through.
00:56:25> 00:56:29:	Usually things get held up either because they don't
	understand
00:56:29> 00:56:33:	it or because somebody feels that they are disadvantaged by
00:56:33> 00:56:33:	it.
00:56:33> 00:56:37:	And you have to kind of understand the politics around
00:56:37> 00:56:39:	it because it makes sense.
00:56:40> 00:56:41:	And went up to our questions in the chat.
00:56:41> 00:56:43:	Maybe we can see it.
00:56:43> 00:56:45:	Is this model Jimmy you're talking about?
00:56:45> 00:56:47:	Seems to look at just economic benefits.
00:56:47> 00:56:50:	And yet there are potential Co benefits that could be
00:56:50> 00:56:52:	calculated to better public health outcomes,
00:56:52> 00:56:57:	lower commuting times. So perhaps that's also a step forward
00:56:57> 00:57:01:	in the creating a constituency of advocates for this sort
00:57:01> 00:57:02:	of thing.
00:57:02> 00:57:05:	Want to turn to Julie?
00:57:05> 00:57:08:	Could you talk Julie a little bit more about the
00:57:08> 00:57:08:	UM,
00:57:08> 00:57:12:	is it necessary to have a standing regional coalition in
00:57:12> 00:57:14:	order to do regional climate projects?
00:57:14> 00:57:14:	I'm interested in the puts and takes of assembling a
00:57:18> 00:57:10:	coalition as you did.
00:57:20> 00:57:22:	Can you run you got you're not
00:57:22> 00:57:22:	good? I
00:57:24> 00:57:28:	think it's very easy to have a coalition that doesn't
00:57:28> 00:57:29:	do very well,
00:57:29> 00:57:33:	but I would say a high functioning coalition is essential
00:57:33> 00:57:35:	for doing these cross boundary.
00:57:35> 00:57:41:	Efforts that require trust and collaboration and mutual benefit.
00:57:41> 00:57:44:	One of the things we did when we set up
00:57:44> 00:57:48:	the resilient Mr Collaborative is we first went to thought
00:57:48> 00:57:51:	leaders in each of the lead communities in the watershed
00:57:51> 00:57:55:	and said what can't you do within your own boundaries?
00:57:55> 00:57:58:	•
00:57:58> 00:58:00:	And how can a collaborative nonprofit help?
	And they said we got enough training.
00:58:00> 00:58:04:	We've got enough planning. We want to do stuff on
00:58:04> 00:58:06:	the ground and we have no staff.
00:58:06> 00:58:09:	To help us work with their neighbors might as well
00:58:09> 00:58:10:	be there be Dragons.
00:58:10> 00:58:13:	So the way we work is it's really municipal lead
00:58:13> 00:58:18:	and I would say that if municipalities were organized

effectively 00:58:18 --> 00:58:22: it would overcome real estate lobbying because I think municipalities do have that centrist moral authority. 00:58:22 --> 00:58:25: 00:58:25 --> 00:58:29: Uhm, but having municipalities work together long term with staff 00:58:29 --> 00:58:31: to take the effort off their plates. 00:58:31 --> 00:58:33: So it's really about decision making, 00:58:33 --> 00:58:35: not worker bees. It's very, 00:58:35 --> 00:58:39: very effective. And it does get the mayor's very easily 00:58:39 --> 00:58:40: engaged in in our efforts. 00:58:42 --> 00:58:43: John open per give her. 00:58:43 --> 00:58:47: We've heard Julie talk about the technical assistance and how 00:58:47 --> 00:58:48: sometimes it's hard, 00:58:48 --> 00:58:52: especially for smoking entities to even get the wherewithal to 00:58:52 --> 00:58:55: put together a grant proposal to get funding. 00:58:55 --> 00:58:57: What's been your experience and how does that relate to 00:58:57 --> 00:59:00: what we're looking at in terms of the federal funding 00:59:00 --> 00:59:01: that's coming forward? 00:59:01 --> 00:59:03: What advice do you have in a practice for? 00:59:03 --> 00:59:07: For the practical aspect of qualifying and getting application in? 00:59:08 --> 00:59:12: Of the cities that we we we interviewed with on 00:59:12 --> 00:59:12: the research. 00:59:12 --> 00:59:16: we saw a big difference between smaller and medium sized 00:59:16 --> 00:59:17: cities and large cities. 00:59:17 --> 00:59:21: When it comes to capabilities to even engage with federal 00:59:21 --> 00:59:24: government to try to receive funding, 00:59:24 --> 00:59:26: they just don't have the resources. 00:59:26 --> 00:59:27: They don't have the people, 00:59:27 --> 00:59:29: they don't have the understanding of the situation, 00:59:29 --> 00:59:33: so getting back to what we were talking about about 00:59:33 --> 00:59:35: collaboration between communities, 00:59:35 --> 00:59:37: that's what we're trying to do, 00:59:37 --> 00:59:41: which is to. Uh, have each community work with each 00:59:41 --> 00:59:45: other to go after funding jointly and finding joint solutions 00:59:45 --> 00:59:49: to be able to even apply for this funding, 00:59:49 --> 00:59:53: let alone having an understanding of how to engage and 00:59:53 --> 00:59:59: actually take this funding and develop solutions so collaborations is 00:59:59 --> 01:00:01: going to be extremely important. 01:00:03 --> 01:00:05: And just turning to you.

01:00:05> 01:00:07:	Thank you John. Turning to you.
01:00:07> 01:00:11:	What's the sort of a model for the coastal communities
01:00:11> 01:00:17:	could adopt to effectively plan and implement resilience
01:00:17> 01:00:20:	project? Is there some sort of especially good model that you
01:00:20> 01:00:21:	would advocate?
01:00:22> 01:00:25:	Thanks, Alan, you know there's there's no silver bullet in
01:00:25> 01:00:26:	this.
01:00:26> 01:00:28:	I think you know I always get calls from folks
01:00:28> 01:00:30:	who were like what's the,
01:00:30> 01:00:31:	you know? What's the model?
01:00:31> 01:00:34:	What's the the one size fits all approach?
01:00:34> 01:00:36:	For this and then there are a lot of folks
01:00:36> 01:00:37:	out there trying to sell that.
01:00:37> 01:00:40:	But what we find is each community is different.
01:00:40> 01:00:43:	You know, some states or Dillon rule States and
7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	municipalities
01:00:44> 01:00:45:	don't have control,
01:00:45> 01:00:46:	they have to go to the state to get it.
01:00:46> 01:00:49:	Some states are home rule States and they have more
01:00:49> 01:00:50:	control.
01:00:50> 01:00:52:	It really depends on where you are.
01:00:52> 01:00:57:	Some have a robust business economy where they will
	invest
01:00:57> 01:00:58:	in it,
01:00:58> 01:01:01:	and that's the difference. Is you really have to look
01:01:01> 01:01:04:	at your own situation and kind of build something.
01:01:04> 01:01:07:	That's unique to your problem.
01:01:07> 01:01:09:	If I I wish I had the perfect answer,
01:01:09> 01:01:11:	'cause I could probably sell that all over town.
01:01:12> 01:01:16:	Well, I think the lesson here is we're all building
01:01:16> 01:01:19:	our our individual answers through enter through our own
01:01:19> 01:01:24:	particular community needs and also collaborating as Julian and others
01:01:24> 01:01:26:	have pointed out in this call,
01:01:26> 01:01:29:	and I think it's really important as we think of
01:01:29> 01:01:29:	resilience.
01:01:29> 01:01:32:	So we saw a definition on the screen earlier and
01:01:32> 01:01:33:	I like the one.
01:01:33> 01:01:36:	I hope that Kevin Bush is going to use it
01:01:36> 01:01:39:	in panel number two because I've heard him use this
01:01:39> 01:01:42:	definition on the sandy beach of Staten Island at the
01:01:42> 01:01:46:	inauguration of a HUD. Fronted resilience Project and Kevin

Bush 01:01:46 --> 01:01:49: said resilience is the immune system of the community, 01:01:49 --> 01:01:51: and I think that's really important, 01:01:51 --> 01:01:55: and I think it's important as we look at the 01:01:55 --> 01:01:57: environmental justice. 01:01:57 --> 01:02:00: The equity issue Jim, you mentioned this as part of 01:02:00 --> 01:02:03: something that Wall Street is looking about and he, 01:02:03 --> 01:02:07: SG or Julie, what are you finding in the way 01:02:07 --> 01:02:12: of the challenge of making sure that the frontline communities 01:02:12 --> 01:02:13: or engaged? 01:02:13 --> 01:02:15: As you look at the water line. 01:02:17 --> 01:02:17: 01:02:17 --> 01:02:22: it's a dramatically different process to engage frontline communities. When we did, a vulnerability assessment of our coastal 01:02:22 --> 01:02:26: communities, 01:02:26 --> 01:02:30: we spent fully half of it on surveys in people's 01:02:30 --> 01:02:31: first languages. 01:02:31 --> 01:02:33: For those folks who are very low income and at 01:02:34 --> 01:02:35: risk of losing everything. 01:02:35 --> 01:02:39: And we wouldn't have gotten the kind of insights regard 01:02:39 --> 01:02:43: had we done that through public workshops where only really 01:02:43 --> 01:02:44: resilient people, 01:02:44 --> 01:02:46: often who are paid to be there, 01:02:46 --> 01:02:49: give us insights. I don't have the insight of somebody 01:02:49 --> 01:02:52: who's really living on the edge because I don't. 01:02:52 --> 01:02:54: So, uhm, particulare 01:02:54 --> 01:02:58: insight that you can you share a particular insight. 01:02:58 --> 01:02:58: There was a real 01:02:58 --> 01:03:03: absolutely, so we worked with infrastructure facilities to look 01:03:03 --> 01:03:07: what how they would fall apart if Boston got a 01:03:07 --> 01:03:08: Superstorm Sandy. 01:03:08 --> 01:03:11: And there were things like losing our harbor tunnels, 01:03:11 --> 01:03:13: losing the subway, losing the grid, 01:03:13 --> 01:03:16: you know they were sort of things you'd expect. 01:03:16 --> 01:03:18: But for very low income people, 01:03:18 --> 01:03:22: we then asked them if these infrastructure facilities fell apart. 01:03:22 --> 01:03:23: What would happen to your lives? 01:03:23 --> 01:03:27: And they said. When we can't get to work because 01:03:27 --> 01:03:30: we are essential workers who have to be at work 01:03:30 --> 01:03:32: to live to to get paid,

01:03:32> 01:03:36:	our lives fall apart so fast so we need buses
01:03:36> 01:03:39:	to run and subways to be plowed right away.
01:03:39> 01:03:42:	They also don't have the funds to have a wife
01:03:43> 01:03:44:	Wi-Fi at home,
01:03:44> 01:03:47:	so they totally rely on their cell phones for Internet
01:03:47> 01:03:47:	access.
01:03:47> 01:03:50:	So thinking about how can we keep the grid up?
01:03:50> 01:03:51:	How can we get keep cell phones up,
01:03:51> 01:03:55:	particularly cell service off, particularly in low income?
01:03:55> 01:03:59:	Neighborhoods and how can we help people get to work?
01:03:59> 01:04:02:	Those didn't show up in our infrastructure assessment.
01:04:02> 01:04:04:	Alan, if I can jump in for one second,
01:04:04> 01:04:08:	but the value of infrastructure is different to different people
01:04:08> 01:04:11:	and this is something that we really have to kind
01:04:11> 01:04:12:	of look at,
01:04:12> 01:04:15:	and I think that the administration needs to look at
01:04:15> 01:04:16:	this in how they look at that.
01:04:16> 01:04:21:	Their Justice 40 initiative. Because when you accrue value
	too
01:04:21> 01:04:23:	low income and minority populations,
01:04:23> 01:04:25:	it's not just you know,
01:04:25> 01:04:29:	the the power plant serves everybody but.
01:04:29> 01:04:31:	You know, rich people can go stay in a hotel
01:04:31> 01:04:34:	or go to their other house or other things poor
01:04:34> 01:04:36:	people if the power's out.
01:04:36> 01:04:37:	If the water is out.
01:04:37> 01:04:39:	If the cell service is out,
01:04:39> 01:04:40:	they can't get to work.
01:04:40> 01:04:44:	They can't feed their families and their cold and so
01:04:45> 01:04:46:	those are important.
01:04:46> 01:04:49:	They are more important to different people and we have
01:04:49> 01:04:50:	to look at that value.
01:04:52> 01:04:53:	Go ahead Julie,
01:04:53> 01:04:56:	and that's where just looking at financial benefit.
01:04:56> 01:04:59:	Cost analysis is really backwards because you're not necessarily.
01:04:59> 01:05:02:	You don't have as much total.
01:05:02> 01:05:04:	Money at risk, but you have a higher percentage of
01:05:05> 01:05:06:	people's livelihoods at risk.
01:05:07> 01:05:10:	I appreciate those comments. I was in a call yesterday
01:05:10> 01:05:13:	where someone said the challenge for us in our field
01:05:13> 01:05:16:	is that we not lovingly and importantly,
01:05:16> 01:05:20:	create new infrastructure. That's a barrier for frontline

communities. 01:05:20 --> 01:05:22: so I think on that note, 01:05:22 --> 01:05:25: I'm going to call this panel to a conclusion. 01:05:25 --> 01:05:28: Thank you all, and now I'm going to turn it 01:05:28 --> 01:05:30: over to Miss Honeycutt, 01:05:30 --> 01:05:32: who's going to be the moderator. 01:05:32 --> 01:05:35: Our next panel. She's from the office of Science and 01:05:35 --> 01:05:36: Technology policies, 01:05:36 --> 01:05:40: so here we go. Maria. 01:05:42 --> 01:05:43: Alright, 01:05:43 --> 01:05:47: good afternoon. I'm trying to in my zoom challenged environment. 01:05:47 --> 01:05:49: See if I'm actually showing up. 01:05:49 --> 01:05:51: OK good. You are, yeah, 01:05:51 --> 01:05:54: the White House film has some extra layers of security 01:05:54 --> 01:05:56: on zoom so you never quite know if it's it'll 01:05:56 --> 01:05:57: work when you need it. 01:05:57 --> 01:06:01: So thank you, Alan. Alright, 01:06:01 --> 01:06:05: so good afternoon again. Let me echo others in welcome, 01:06:05 --> 01:06:10: being a glad to be participating in this ULI Coastal 01:06:10 --> 01:06:10: forum, 01:06:10 --> 01:06:13: Allen said on Doctor Maria Honeycutt. 01:06:13 --> 01:06:16: I am the assistant Director for Resilience Science and technology 01:06:16 --> 01:06:19: at the White House Office of Science and Technology Policy. 01:06:19 --> 01:06:21: It's a lot of work OSTPA, 01:06:21 --> 01:06:25: and again, I'm really grateful for the opportunity to come 01:06:25 --> 01:06:26: and participate in lead. 01:06:26 --> 01:06:31: This second panel, federal opportunities for coastal resilience. 01:06:31 --> 01:06:34: I see my job here as being twofold. 01:06:34 --> 01:06:37: First, to help us hear from 4 great speakers and 01:06:37 --> 01:06:40: engage in what I hope will be a lively Q&A, 01:06:40 --> 01:06:45: but also wearing my OTP hat to listen to, 01:06:45 --> 01:06:49: learn to take back perspectives to my day job. 01:06:49 --> 01:06:52: I think Josh just threw one out there for me 01:06:52 --> 01:06:53: to take back to, 01:06:53 --> 01:06:56: so I I will say a little bit more about

 01:06:56 --> 01:06:57:
 that job in a moment,

 01:06:57 --> 01:07:00:
 but I really see this as as two rolls than

 01:07:00 --> 01:07:02:
 I am serving in today.

 01:07:02 --> 01:07:04:
 Our lineup are as you can see from the slide

 01:07:04 --> 01:07:05:
 that is on the screen.

01:07:05> 01:07:08:	We will lead off with Kevin Bush who is the
01:07:08> 01:07:11:	Deputy assistant secretary for grant programs at HUD.
01:07:11> 01:07:12:	He will be followed by Dale Morris,
01:07:12> 01:07:15:	who is the chief Resilience officer with the City of
01:07:15> 01:07:15:	Charleston,
01:07:15> 01:07:19:	SC. Then we will turn to.
01:07:19> 01:07:22:	Excuse me, Steven Bingler, who is the founder and CEO
01:07:22> 01:07:23:	of Concordia and batting cleanup,
01:07:23> 01:07:27:	will be Dan preset, the executive director for the
	Environmental
01:07:27> 01:07:29:	and Energy Study Institute.
01:07:29> 01:07:32:	So before I turn the mic over to Kevin,
01:07:32> 01:07:35:	I wanted to just let you know a little bit
01:07:35> 01:07:37:	about what that day job is and hopefully you will
01:07:37> 01:07:39:	come away understanding why.
01:07:39> 01:07:42:	I truly believe that's like this are so vitally important
01:07:42> 01:07:45:	in bringing together diverse perspectives,
01:07:45> 01:07:48:	diverse sectors that need to be at the table to
01:07:48> 01:07:50:	contribute towards national resilience.
01:07:50> 01:07:54:	So in that day job I am responsible for providing
01:07:54> 01:07:57:	leadership and providing subject matter expertise.
01:07:57> 01:08:01:	An application of science, technology and innovation,
01:08:01> 01:08:03:	whether it be federal or otherwise.
01:08:03> 01:08:06:	To help build community resilience to a wide array of
01:08:06> 01:08:10:	acute shocks and chronic stress is so including natural hazards.
01:08:10> 01:08:12:	Many of the things that we are talking about here
01:08:12> 01:08:12:	today,
01:08:12> 01:08:17:	flooding and wind and earthquakes and and the others but
01:08:17> 01:08:19:	also to man-made threats,
01:08:19> 01:08:21:	whether they be accidents. Or deliberate acts,
01:08:21> 01:08:24:	and so that's a really diverse set of things to
01:08:24> 01:08:27:	have to think about building resilience against.
01:08:27> 01:08:30:	And I I will readily admit it's not easy.
01:08:30> 01:08:33:	But I it's important and I think one of the
01:08:34> 01:08:38:	greatest lessons that I took from the pandemic was this
01:08:38> 01:08:42:	extent to which we recognize that shocks and stresses don't.
01:08:42> 01:08:45:	They are courteous, they don't hit us one at a
01:08:45> 01:08:45:	time,
01:08:45> 01:08:48:	and so part of our role is scientists just to
01:08:48> 01:08:50:	try to help people,
01:08:50> 01:08:54:	communities understand that there are these concurrent and
	cascading incidents

01:08:54> 01:08:55:	and we need we.
01:08:55> 01:08:59:	We might make different decisions with that type of
	perspective
01:08:59> 01:09:00:	and the other is that many.
01:09:00> 01:09:04:	Of those resources, whether they be physical or financial or
01:09:05> 01:09:05:	social,
01:09:05> 01:09:08:	there are those resources are vulnerable to more than one
01:09:08> 01:09:09:	set of shocks and stresses.
01:09:09> 01:09:11:	And again, Josh, I think hit on this that you
01:09:11> 01:09:14:	can't just plan for the title flooding which you have
01:09:14> 01:09:15:	to look for sea level rise to.
01:09:15> 01:09:17:	Well, you need to plan for flooding,
01:09:17> 01:09:21:	but also the biggest employer in your community shutting down
01:09:21> 01:09:23:	because of for whatever reason so.
01:09:23> 01:09:26:	Part of our, again, our role and my role is
01:09:26> 01:09:27:	resilience.
01:09:27> 01:09:30:	Assistant director is to try and help understand and tease
01:09:30> 01:09:33:	out some of those commonalities and independencies,
01:09:33> 01:09:36:	so that we are providing information for people to prioritize
01:09:36> 01:09:37:	those resources.
01:09:37> 01:09:41:	Those assets that are most vulnerable and most important terms
01:09:41> 01:09:43:	of building community resilience.
01:09:43> 01:09:46:	So while a lot of my day today is deep
01:09:46> 01:09:50:	in the weeds of bureaucratic things like coordinating and
	crossing
01:09:50> 01:09:51:	policy and plans,
01:09:51> 01:09:54:	I really love to get down into putting where the
01:09:54> 01:09:58:	rubber meets the road trying to bring in infuse actionable
01:09:58> 01:10:01:	science into decision making in a variety of levels.
01:10:01> 01:10:04:	Really though, locally whether that be an individual,
01:10:04> 01:10:10:	family, household, or community, because resilience is is rod in
01:10:10> 01:10:11:	my view is.
01:10:11> 01:10:13:	I'm not necessarily done by employer.
01:10:13> 01:10:16:	But Brazilian is not a top down federal mandate.
01:10:16> 01:10:18:	It truly is a grassroots effort.
01:10:18> 01:10:20:	It has to be from the bottom up.
01:10:20> 01:10:22:	That's not to say that the federal government doesn't have
01:10:22> 01:10:22:	a role,
01:10:22> 01:10:25:	and I think that's where we we are transitioning here
01:10:25> 01:10:27:	to this particular panel.

01:10:27> 01:10:28:	There are things that we can provide,
01:10:28> 01:10:30:	whether that is actionable science.
01:10:30> 01:10:32:	So I think some of the things that you heard
01:10:32> 01:10:32:	from Doug Marcie,
01:10:32> 01:10:36:	some of that is grants funding expertise,
01:10:36> 01:10:39:	technical assistance. We have a role to facilitate here,
01:10:39> 01:10:42:	and sometimes we do it well.
01:10:42> 01:10:43:	And there are places we can do better,
01:10:43> 01:10:46:	and I'm really. Eager to hear from our four panelists
01:10:46> 01:10:49:	today on what they had seen and what opportunities we
01:10:49> 01:10:50:	we can take to do better.
01:10:50> 01:10:53:	So with that, I'll let the UI staff transition over
01:10:53> 01:10:56:	to Kevin and remind you to keep your eye on
01:10:56> 01:10:59:	the chat and both look for the resources that are
01:10:59> 01:11:02:	being provided as well as feeding information to help support
01:11:02> 01:11:03:	the Q&A.
01:11:03> 01:11:04:	So thanks, Kevin. If you're there,
01:11:04> 01:11:05:	take it away.
01:11:05> 01:11:09:	Great thanks, Maria. And good afternoon everybody.
01:11:09> 01:11:11:	Thank you to the Urban Land Institute.
01:11:11> 01:11:13:	Of course, for hosting this important conversation and my
	fellow
01:11:14> 01:11:14:	panelists.
01:11:14> 01:11:17:	Excited to hear what you have to say and Maria,
01:11:17> 01:11:19:	I want to pick up where you left off.
01:11:19> 01:11:22:	I really appreciated your your opening remarks.
01:11:22> 01:11:25:	You know around the different shocks and stresses or acute
01:11:25> 01:11:27:	events and underlying wonder abilities.
01:11:27> 01:11:29:	However, you want to frame it.
01:11:29> 01:11:31:	You know when the administration came into office,
01:11:31> 01:11:35:	the president was very clear that we had for overlapping
01:11:35> 01:11:38:	crises to deal with climate change COVID.
01:11:38> 01:11:43:	The resulting economic crisis and then the racial and economic
01:11:43> 01:11:45:	inequality that those three crises.
01:11:45> 01:11:49:	Laid bare and they've also these responding to these crises
01:11:49> 01:11:52:	have really presented an opportunity,
01:11:52> 01:11:56:	an incredible opportunity for our communities to build more resilient,
01:11:56> 01:12:00:	equitable and inclusive futures. And at HUD we also hope
01:12:00> 01:12:01:	with quality,
01:12:01> 01:12:05:	affordable homes for all we've already seen some inspiring
	examples

01:12:05> 01:12:09:	of resilience and adaptation projects across Hudson portfolio of grantees
01:12:09> 01:12:11:	from hurricane resilient.
01:12:11> 01:12:16:	Affordable housing in Louisiana to stormwater management parks in California.
01:12:16> 01:12:21:	And even multi use place structures that provide flood protection
01:12:21> 01:12:23:	in New York City.
01:12:23> 01:12:26:	Next slide please. So I want to talk today a
01:12:26> 01:12:30:	little bit about some HUD programs that support coastal resilience
01:12:30> 01:12:32:	and adaptation projects.
01:12:32> 01:12:36:	Our Community development block grants for disaster recovery and mitigation
01:12:36> 01:12:39:	are great example of how HUD funding can support local
01:12:39> 01:12:40:	climate action.
01:12:40> 01:12:44:	CDBG der is arguably one of the world's largest climate
01:12:44> 01:12:49:	adaptation programs focused exclusively on low and moderate income populations
01:12:49> 01:12:53:	through CDBG are we spend billions of dollars every year
01:12:53> 01:12:58:	helping low income communities. Recover from and and build resilience
01:12:58> 01:13:01:	to the most devastating disasters.
01:13:01> 01:13:05:	The portfolio right now stands at about \$72 billion of
01:13:05> 01:13:07:	active grants under management,
01:13:07> 01:13:11:	creating real outcomes for people across the country and thanks
01:13:11> 01:13:16:	to CDBG meant we've been transforming traditional disaster recovery by
01:13:16> 01:13:18:	investing in adaptation and resilience,
01:13:18> 01:13:24:	planning, assisting vulnerable communities to mitigate the impacts of natural
01:13:24> 01:13:26:	disasters before they strike.
01:13:26> 01:13:30:	Couple of examples on the next slide after Hurricane Katrina,
01:13:30> 01:13:33:	the city of Gulfport, Ms invested in the restoration and
01:13:33> 01:13:36:	hardening and facilities at the airport to build resilience to
01:13:36> 01:13:39:	future storms and in this investment allowed the port to
01:13:39> 01:13:42:	continue operating. During Hurricane Ida,
01:13:42> 01:13:46:	one of the most rewarding things for me having been
01:13:46> 01:13:46:	here,
01:13:46> 01:13:51:	was getting sent several YouTube videos after Hurricane idea of
01:13:51> 01:13:54:	DAR funded housing and infrastructure.
01:13:54> 01:13:59:	Literally weathering another. And I think the our ability to

01:13:59> 01:14:04:	bake in resilience and adaptation to recovery is tremendously important
01:14:04> 01:14:08:	in shown just in the repeat disasters that have hit
01:14:08> 01:14:12:	many of our communities in Galveston TX.
01:14:12> 01:14:16:	CDBG Dr is helping fund new flood resilient affordable housing,
01:14:16> 01:14:19:	and there's a few more details on the screen there.
01:14:19> 01:14:21:	I know we're past for pressed for time,
01:14:21> 01:14:23:	so I'll just move to the next slide.
01:14:23> 01:14:28:	We also support climate resilience and adaptation through some of
01:14:28> 01:14:30:	our non disaster related programs.
01:14:30> 01:14:33:	So I talked a little bit about Dar.
01:14:33> 01:14:36:	That program is actually built on the back of an
01:14:36> 01:14:41:	annual program called CDBG and the Section 108 Loan Guarantee
01:14:41> 01:14:46:	Program allows grantees to leverage their annual CDBG grant at
01:14:46> 01:14:47:	a 5 to one ratio,
01:14:47> 01:14:51:	enabling them to pursue larger scale resilient.
01:14:51> 01:14:56:	Structure projects and we've recently released some new materials.
01:14:56> 01:14:59:	You can find them at at HUD Gov slash climate
01:14:59> 01:15:04:	that helps communities figure out how to use these block
01:15:04> 01:15:08:	very flexible block grant funds that they receive from us
01:15:09> 01:15:11:	to invest in climate action,
01:15:11> 01:15:15:	specifically in low income communities and Slide 5.
01:15:15> 01:15:20:	Provide a little bit more detail on that.
01:15:20> 01:15:23:	The resources are really anchored around what we're calling a
01:15:23> 01:15:24:	climate resilience toolkit,
01:15:24> 01:15:28:	which helps grantees and community leaders learn about actions they
01:15:28> 01:15:30:	can take to build resilience to natural hazards,
01:15:30> 01:15:32:	like coastal storms and flooding.
01:15:32> 01:15:36:	We're in the process of creating more detailed implementation guides
01:15:36> 01:15:39:	that will offer step by step instructions on how to
01:15:39> 01:15:43:	use HUD funding to undertake specific climate resilience actions like
01:15:43> 01:15:46:	nature based solutions and cool roofs,
01:15:46> 01:15:49:	programs, and even low income homeowner retrofit.
01:15:49> 01:15:56:	Programs we're publishing a citizen participation and equitable engagement toolkit

01:15:56> 01:15:56:	as well,
01:15:56> 01:16:00:	to help grantees effectively and meaningfully engage citizens
	and communities
01:16:01> 01:16:02:	throughout the life of their grant.
01:16:02> 01:16:06:	We think this kind of intentional community engagement is
04.40.00 > 04.40.07.	critical
01:16:06> 01:16:07:	to advancing equity,
01:16:07> 01:16:12:	particularly for historically underserved communities.
01:16:12> 01:16:16:	Yeah, and in closing you know I want to come,
01:16:16> 01:16:20:	you know, briefly highlight that this isn't it.
01:16:20> 01:16:23:	We we have even more resources coming our way.
01:16:23> 01:16:27:	We recently received another \$5 billion for the CDBG.
01:16:27> 01:16:30:	Our program for disasters in 2020 and 2021,
01:16:31> 01:16:33:	and the President's build back.
01:16:33> 01:16:36:	Better plan includes a number of significant investments.
01:16:36> 01:16:40:	Recognizing that housing is an important part of infrastructure across
01:16:40> 01:16:41:	the country,
01:16:41> 01:16:43:	so we're thrilled to partner.
01:16:43> 01:16:47:	Uh, with communities across the country to think creatively about
01:16:47> 01:16:49:	how to build equitable climate,
01:16:49> 01:16:53:	resilience in big cities, small towns were all in tribal
01:16:53> 01:16:57:	areas in every corner of America and that website I
01:16:57> 01:16:58:	mentioned earlier,
01:16:58> 01:17:05:	hud.gov/climate. Showcases and summarizes Hud's first climate and environmental justice
01:17:05> 01:17:06:	strategy,
01:17:06> 01:17:09:	which lays out a series of actions that the department
01:17:09> 01:17:10:	is taking across every office,
01:17:10> 01:17:12:	not just the one I work in,
01:17:12> 01:17:15:	to deliver on the President's commitment to climate action.
01:17:15> 01:17:18:	So thank you for your partnership and look forward to
01:17:18> 01:17:20:	hearing from other panelists.
01:17:22> 01:17:26:	Kevin, thank you. We're going to turn right straightaway into
01:17:26> 01:17:29:	Dale to take us to Charleston perspective.
01:17:33> 01:17:37:	Great, thank you everyone. Thank you again for putting this
01:17:37> 01:17:38:	on.
01:17:38> 01:17:41:	It's a wonderful exposition here and we're all trying to
01:17:41> 01:17:43:	work together to improve the communities we live in.
01:17:43> 01:17:46:	So thank you for all your efforts and thanks for
01:17:46> 01:17:47:	your again for hosting this.
01:17:47> 01:17:49:	I'm Dale Morris the new CRO for the city of
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04.47.50 > 04.47.50.	Charleston
01:17:50> 01:17:50: 01:17:50> 01:17:52:	Charleston, but I've worked around the US over the last 15
01:17:52> 01:17:54:	
01:17:54> 01:17:57:	or 20 years with a lot of cities.
	Looking at these sort of flood risk hazards and challenges.
01:17:57> 01:18:00:	And how do we adapt to those going forward?
01:18:00> 01:18:03:	Fortunately not, I know most of the people on this
01:18:03> 01:18:04:	panel or in this call.
01:18:04> 01:18:07:	Presenting today, and it's just a wonderful group to be
01:18:07> 01:18:08:	part of something,
01:18:08> 01:18:10:	probably a little bit of context here for Charleston,
01:18:10> 01:18:12:	then that is a sort of a request to to
01:18:12> 01:18:14:	Maria and the rest of the folks in the federal
01:18:14> 01:18:17:	government and pushing the federal government to ponder.
01:18:17> 01:18:20:	So here's, you know, that's the City of Charleston.
01:18:20> 01:18:22:	It's on the coast of South Carolina.
01:18:22> 01:18:25:	It's got fairly serious water problems and we have them
01:18:25> 01:18:25:	all.
01:18:25> 01:18:28:	We have surged, we have tidal wave river Rhein risk.
01:18:28> 01:18:29:	We have stormwater risk, groundwater,
01:18:29> 01:18:32:	wins and then compound risks when those things occur together.
01:18:32> 01:18:34:	Steve over eyes is not going to make that.
01:18:34> 01:18:36:	Any better so we have to prepare for it and
01:18:36> 01:18:39:	the city is doing its best with its limited resources
01:18:39> 01:18:41:	to manage these flood rates.
01:18:41> 01:18:43:	And again this is just it's essential for us to
01:18:43> 01:18:45:	be able to stay here going forward.
01:18:45> 01:18:48:	So a lot of these risks there and the city
01:18:48> 01:18:50:	you know is across a number of these islands that
01:18:51> 01:18:52:	you see in this map.
01:18:52> 01:18:55:	Next slide please. And the most important part of the
01:18:55> 01:18:55:	city,
01:18:55> 01:19:00:	perhaps men, economic base and historical foundation or historical basis,
01:19:00> 01:19:02:	the peninsula of Charleston. For those of you who've been
01:19:02> 01:19:02:	here,
01:19:02> 01:19:04:	
01:19:02> 01:19:04:	you know what this is? This is the heart. Charles thinks the medical district is
01:19:07> 01:19:09:	the College of Charleston Citadel. The Part of Charleston and the largest historic district in
01:19:09> 01:19:12:	The Port of Charleston and the largest historic district in
01:19:12> 01:19:13:	the nation,
01:19:13> 01:19:14:	and we have a surge risk.

01:19:14 --> 01:19:17: And were, you know, quite wonderful were quite pleased that 01:19:17 --> 01:19:19: the army core engineers tied up a coastal storm. 01:19:19 --> 01:19:22: Risk management study for us to quantify risk and help 01:19:22 --> 01:19:23: us to mitigate that, 01:19:23 --> 01:19:26: and I'm part of a larger group of of cities 01:19:26 --> 01:19:29: that are talking together about how you know what are 01:19:29 --> 01:19:32: we doing with in these CSRM projects with the army 01:19:32 --> 01:19:35: core engineers trying to compare notes. 01:19:35 --> 01:19:37: And maybe make suggestions on how we improve them. 01:19:37 --> 01:19:40: I see some other cities online here and what we 01:19:40 --> 01:19:43: want to note is you know there's policy sclerosis here 01:19:43 --> 01:19:46: you know we're handicapped in some ways to do the 01:19:47 --> 01:19:50: best. The best things we can to optimize and make 01:19:50 --> 01:19:53: the most efficient investments across our flood risks. 01:19:53 --> 01:19:56: You know, there's information about there just in Charleston. 01:19:56 --> 01:19:58: And in nor folk in Miami you know the number 01:19:58 --> 01:20:01: of team ties or nuisance flooding that we used to 01:20:01 --> 01:20:01: have. 01:20:01 --> 01:20:03: You know that we used to be by for 10A 01:20:03 --> 01:20:03: 01:20:03 --> 01:20:05: If three a year. And you know, 01:20:05 --> 01:20:08: two years ago in Charleston it was 89 and this 01:20:08 --> 01:20:10: is repeated elsewhere. 01:20:10 --> 01:20:14: So while we're at the Charleston CSRM project is focusing 01:20:14 --> 01:20:15: only on served. 01:20:15 --> 01:20:18: and we're thankful that we need to find a better 01:20:18 --> 01:20:22: way with our federal partners to make investments that will 01:20:22 --> 01:20:26: optimize those investments across the various flood risks. 01:20:26 --> 01:20:28: And we are unable to do that right now. 01:20:28 --> 01:20:32: Next light please. So here's quantifier for your fears. 01:20:32 --> 01:20:33: The peninsula of Charleston, you know, 01:20:33 --> 01:20:35: the deeper orange. This is our. 01:20:35 --> 01:20:37: This is our category three storm surge. 01:20:37 --> 01:20:39: You can see the entire peninsula is underwater, 01:20:39 --> 01:20:42: so we need to manage this surge risk. 01:20:42 --> 01:20:46: Obviously next slide please. And you know the army core 01:20:46 --> 01:20:49: engineers is working with us. 01:20:49 --> 01:20:50: You know we're doing our best to get some. 01:20:50 --> 01:20:53: You know, multiple storm water or some groundwater management benefits 01:20:53 --> 01:20:54: in here. 01:20:54 --> 01:20:57: But you know the CSR project because it focuses solely

01:20:57 --> 01:20:58: on surge. 01:20:58 --> 01:21:00: We are unable to do that. 01:21:00 --> 01:21:04: Still, the cost benefit of this project has a 10.2 01:21:04 --> 01:21:08: to one cost benefit ratio or benefit cost ratio. 01:21:08 --> 01:21:10: It's the highest in the nation of its time. 01:21:10 --> 01:21:12: It shows you what kind of surgery is here, 01:21:12 --> 01:21:14: so we're thankful for this effort. 01:21:14 --> 01:21:16: But we also know very clearly that. 01:21:16 --> 01:21:18: This structure, if the Army court was, 01:21:18 --> 01:21:21: was allowed to consider that it could help us manage 01:21:21 --> 01:21:22: tides. 01:21:22 --> 01:21:25: and he could also help us manage stormwater if we 01:21:25 --> 01:21:29: build the internal pumps right and create more stormwater storage 01:21:29 --> 01:21:31: places within that next slide, 01:21:31 --> 01:21:35: please. So here you can see this is the European 01:21:35 --> 01:21:37: Hurricane Hugo storm surge in blue. 01:21:37 --> 01:21:40: Here it shows you what it looked like and with 01:21:40 --> 01:21:42: this wall in place on on the slide on the 01:21:42 --> 01:21:44: right you can see how much of historic area gets 01:21:44 --> 01:21:46: protected. So this thing will work, 01:21:46 --> 01:21:48: but it is only working against one risk. 01:21:48 --> 01:21:52: Next slide please. And you know this project. 01:21:52 --> 01:21:55: It is the number one recommended project for a by 01:21:55 --> 01:21:58: the armored core engineers for the entire S Atlantic Division, 01:21:58 --> 01:22:01: which goes from North Carolina to lead to Mississippi. 01:22:01 --> 01:22:03: So we feel very good we're going to get funded 01:22:03 --> 01:22:03: for this, 01:22:03 --> 01:22:06: but we know we're leaving something on the table and 01:22:06 --> 01:22:07: this is not to criticize. 01:22:07 --> 01:22:10: The armor engineer is this is to criticize this cratic 01:22:10 --> 01:22:12: federal policy that needs to be updated. 01:22:12 --> 01:22:13: So there's a challenge for you. 01:22:13 --> 01:22:16: Maria next slide, please. So again, 01:22:16 --> 01:22:18: we have these challenges. We want to work. 01:22:18 --> 01:22:20: We want to do the best we can. 01:22:20 --> 01:22:23: There are multiple risks we have. 01:22:23 --> 01:22:24: There are compound fighters we have. 01:22:24 --> 01:22:27: We are designing a structure that is not looking at 01:22:27 --> 01:22:30: some of the Seahawks sea level rise curves and the 01:22:30 --> 01:22:33: stormwater curves that we know are coming at us. 01:22:33 --> 01:22:34: That, Doug, you know, showed at the beginning.

01:22:34> 01:22:37:	We are unable to use those and we think that
01:22:37> 01:22:40:	is an inefficient use of resources and again rock criticizing
01:22:40> 01:22:41:	the core.
01:22:41> 01:22:42:	But we can do better.
01:22:42> 01:22:44:	We want to do that and one final thing.
01:22:44> 01:22:47:	Just leave it at this natural nature based features.
01:22:47> 01:22:50:	These are wonderful things. We know how they work for
01:22:50> 01:22:51:	various types of.
01:22:51> 01:22:53:	Flood risk they don't work well for all of them.
01:22:53> 01:22:56:	They work well very well for some of them.
01:22:56> 01:23:00:	Right now. The federal policy is really shortsighted regarding the
01:23:00> 01:23:04:	quantification of ecosystem services and then the social and environment
01:23:04> 01:23:08:	environmental benefits that they could add to projects so we
01:23:08> 01:23:11:	could make a 10.2 BCR project get up to 15.
01:23:11> 01:23:14:	Probably if we were able to quantify those benefits we
01:23:14> 01:23:17:	meeting the project team with your armor engineers.
01:23:17> 01:23:19:	They are not able to do that right now.
01:23:19> 01:23:21:	We have the science we need to change.
01:23:21> 01:23:24:	These BSA policies I'm talking to hide him.
01:23:24> 01:23:27:	I'm talking to FEMA. I'm talking to EPA and everyone
01:23:27> 01:23:29:	else we need centralized those policy.
01:23:29> 01:23:32:	Get a standard quantification of benefits from ecosystem services or
01:23:33> 01:23:36:	nature based features and then enable them to be applied
01:23:36> 01:23:39:	across the portfolio of projects at the federal government.
01:23:39> 01:23:42:	Manages on flood risk and I'll leave it at that.
01:23:42> 01:23:42:	Thank you.
01:23:44> 01:23:46:	Alright, thank you very much,
01:23:46> 01:23:49:	Dale. We're going to keep plugging along.
01:23:49> 01:23:51:	We're going to turn it over to Stephen and keep
01:23:51> 01:23:53:	it keeping an eye on time,
01:23:53> 01:23:54:	so take it away, Steven.
01:24:01> 01:24:01:	Steven, you're on mute.
01:24:15> 01:24:16:	Still on me to see them.
01:24:19> 01:24:20:	Can you hear me now?
01:24:21> 01:24:22:	Yes, that's great. Thank you.
01:24:22> 01:24:22:	OK,
01:24:23> 01:24:27:	sorry. Hello, I'm truly grateful for the opportunity to talk
01:24:27> 01:24:29:	with her about it today,
01:24:29> 01:24:31:	about two climate change planning strategies.
01:24:31> 01:24:35:	The first strategy is to build up better resilience to
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01:24:35> 01:24:39:	extreme weather conditions and the second is to look at
01:24:39> 01:24:42:	managed retreat and resettlement.
01:24:42> 01:24:45:	By now we are all aware of all the climate
01:24:45> 01:24:47:	changes that are happening.
01:24:47> 01:24:50:	And the vertical bar is where we are now.
01:24:50> 01:24:53:	So on the left is the blue arrow that shows
01:24:53> 01:24:56:	what everybody already knows is the path that we've taken,
01:24:56> 01:24:59:	and then the steep red bar on the right is
01:24:59> 01:25:03:	obviously where we're headed for the next eight years.
01:25:03> 01:25:07:	So my own experience in climate change planning started after
01:25:07> 01:25:11:	Hurricane Katrina and where we did the recovery plan for
01:25:11> 01:25:12:	the city.
01:25:12> 01:25:17:	That process included about 9000 residents participation,
01:25:17> 01:25:20:	64% of whom were African Americans.
01:25:20> 01:25:23:	But New Orleans is only one of many of the
01:25:23> 01:25:26:	Gulf Coast communities that are facing these challenges,
01:25:26> 01:25:30:	like the loss of a football field of land every
01:25:30> 01:25:31:	100 minutes.
01:25:31> 01:25:34:	This is a map of what the landmass of South
01:25:34> 01:25:36:	Louisiana looked like in 1967.
01:25:36> 01:25:40:	And this is what the landmass will look like in
01:25:40> 01:25:40:	2067.
01:25:40> 01:25:44:	Assuming only two feet of sea level rise.
01:25:44> 01:25:47:	Thankfully, you always is now fortified by a \$14 billion
01:25:47> 01:25:51:	federal investment in post Katrina levee upgrades,
01:25:51> 01:25:53:	but the rest of the coast is still very,
01:25:53> 01:25:59:	very vulnerable. So in this recent project called Safe that
01:25:59> 01:26:02:	was funded by NDRC Grant from EU.
01:26:02> 01:26:05:	S. Department of Housing and Urban Development's Challenge was to
01:26:06> 01:26:10:	replicate the New Orleans Community Center planning process across six
01:26:10> 01:26:11:	coastal parishes.
01:26:11> 01:26:13:	To be sure that everybody had a seat at the
01:26:13> 01:26:14:	table,
01:26:14> 01:26:18:	we have 71 community meetings that included more than 2800
01:26:18> 01:26:19:	local residents.
01:26:19> 01:26:22:	There are series of hands-on planning meetings,
01:26:22> 01:26:26:	presidents works to work together to develop strategies and identify
01:26:26> 01:26:30:	a total of 11 projects that could make their communities

01:26:30> 01:26:32:	more resilient to floods and storm surges.
01:26:32> 01:26:36:	The total cost of those eleven projects will be about
01:26:36> 01:26:37:	\$93 million.
01:26:37> 01:26:42:	The second climate change strategy is resettlement.
01:26:42> 01:26:44:	And as you can see from the photos at the
01:26:44> 01:26:45:	bottom of this slide,
01:26:45> 01:26:49:	virtually every homeowner's first choice is to hunker down and
01:26:49> 01:26:51:	protect their homeland.
01:26:51> 01:26:55:	These homes are actually in Plaquemines Parish in South Louisiana.
01:26:55> 01:27:00:	But many coastal residents have already started to migrate northward.
01:27:00> 01:27:03:	The last time our country faced these kinds of climate
01:27:03> 01:27:06:	migrations was during the Dust Bowl in the 1930s,
01:27:06> 01:27:09:	where 7000 people died. Too many people were left homeless
01:27:09> 01:27:14:	and the whole nation's food production economy was seriously threatened.
01:27:14> 01:27:17:	This map shows the footprint of the Dust Bowl compared
01:27:17> 01:27:18:	to the footprint,
01:27:18> 01:27:22:	the Hurricanes inland flooding, earthquakes and droughts that have been
01:27:22> 01:27:26:	forecast over the next 80 years due to catastrophic impacts
01:27:26> 01:27:27:	of climate change.
01:27:27> 01:27:31:	A large number of these communities are located within 100
01:27:31> 01:27:34:	miles of the coastline with the quality of light that
01:27:34> 01:27:37:	would continue to be challenged by postal and flooding.
01:27:37> 01:27:40:	One strategy that could prove to be successful is to
01:27:40> 01:27:44:	move forward now with comprehensive climate change planning for cities
01:27:44> 01:27:46:	and towns located on higher ground,
01:27:46> 01:27:49:	let's say 100 to 200 miles inland.
01:27:49> 01:27:52:	In fact, our firm is currently implementing a new comprehensive
01:27:52> 01:27:53:	plan for the town of Andalusia,
01:27:53> 01:27:57:	Alabama, where new zoning and land use regulations will provide
01:27:57> 01:28:00:	for higher commercial and residential densities.
01:28:00> 01:28:04:	The plan also targets more than 28 historic downtown buildings
01:28:04> 01:28:04:	for public,
01:28:04> 01:28:07:	private tax credit funded renovations,
01:28:07> 01:28:12:	expanded infrastructure for parks and transportation projects
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	will also add
01:28:12> 01:28:15:	to the quality of life of the Andalusian community.
01:28:15> 01:28:19:	The planning now for increasing housing densities will allow the
01:28:19> 01:28:23:	town to expand its population with minimal minimal disruption going
01:28:23> 01:28:23:	forward.
01:28:23> 01:28:27:	And finally, a new report called see changes that that
01:28:27> 01:28:28:	that we we were,
01:28:28> 01:28:31:	we directed is now available as a guide for the
01:28:31> 01:28:35:	robust and equity centered planning solutions that would be needed
01:28:35> 01:28:39:	to support local government and elected officials in making all
01:28:39> 01:28:42:	of this possible. The board is developed by an international
01:28:42> 01:28:46:	team of climate change planners with a lot of valuable
01:28:46> 01:28:47:	input from local stakeholders.
01:28:47> 01:28:52:	Ending with a set of five community centered planning principles
01:28:52> 01:28:55:	that can determine any project success or failure.
01:28:55> 01:29:01:	The challenge is real. Professional and Equity center planning is
01:29:01> 01:29:02:	always a good idea,
01:29:02> 01:29:07:	especially when we can do it ahead of time.
01:29:07> 01:29:09:	And that time is now.
01:29:09> 01:29:11:	So let's roll.
01:29:15> 01:29:18:	Alright, thank you Stephen very much.
01:29:18> 01:29:20:	We're going to turn it now to our last speaker,
01:29:20> 01:29:21:	Dan. Please take it away.
01:29:22> 01:29:25:	Great, thank you so much Maria and thanks to my
01:29:25> 01:29:28:	Co panelists and ULI and especially Jack,
01:29:28> 01:29:31:	Leah, Emily and Augie. For all the thought leadership leading
01:29:31> 01:29:33:	up to today and all the logistics support and the
01:29:33> 01:29:35:	rest of the organizers of the Coastal Forum.
01:29:35> 01:29:38:	Next slide please in 2019.
01:29:38> 01:29:42:	In 2020, ESI organized 16 congressional briefings to help educate
01:29:42> 01:29:46:	policymakers about coastal resilience challenges by highlighting solutions from around
01:29:47> 01:29:47:	the country.
01:29:47> 01:29:50:	We featured 42 practitioner scientists,
01:29:50> 01:29:52:	community leaders and other experts.
01:29:52> 01:29:56:	Stakeholders, including representatives from federal agencies.

01:29:56> 01:29:57:	And as we went along,
01:29:57> 01:29:59:	we realized that the solutions and the experiences of the
01:29:59> 01:30:03:	communities we featured were extraordinary and very special and that
01:30:03> 01:30:04:	made us ask ourselves a few questions,
01:30:04> 01:30:08:	notably how to ensure more people like you all.
01:30:08> 01:30:11:	Today I hear more about what our panelists had to
01:30:11> 01:30:11:	say,
01:30:11> 01:30:14:	and also how to ensure that policy makers heard what
01:30:14> 01:30:15:	our panelists have to say.
01:30:15> 01:30:18:	Even if they weren't in our briefing audience on any
01:30:18> 01:30:19:	given day.
01:30:19> 01:30:22:	Next slide, please. So we went through every presentation and
01:30:22> 01:30:27:	identified all the findings and recommendations discussed during the series,
01:30:27> 01:30:30:	and we published a report based on these recommendations and
01:30:30> 01:30:33:	we came up with 30 specific federal policy recommendations for
01:30:33> 01:30:34:	coastal resilience.
01:30:34> 01:30:35:	And when you read the report,
01:30:35> 01:30:39:	I hope you will. You will notice how the recommendations
01:30:39> 01:30:42:	are organized with our policymaking audience in mind.
01:30:42> 01:30:46:	Next slide please. And so for today I'd like to
01:30:46> 01:30:50:	focus on a couple of the recommendations,
01:30:50> 01:30:53:	and there's really no way to overestimate or overemphasize the
01:30:53> 01:30:55:	importance of these case studies.
01:30:55> 01:30:58:	The strength of the entire effort was really derived by
01:30:58> 01:31:00:	the solutions and the experiences of our 42 panelists,
01:31:00> 01:31:03:	and the stories of the coastal communities they told,
01:31:03> 01:31:06:	and so each of the 30 federal policy recommendations we
01:31:06> 01:31:09:	came up with is specifically illustrated by a case study
01:31:09> 01:31:12:	featured during a briefing and the first set of the
01:31:12> 01:31:15:	recommendations, I want to focus on today.
01:31:15> 01:31:19:	Deals with the question how can federal agencies help communities
01:31:19> 01:31:23:	access resources for coastal resilience and climate adaptation.
01:31:23> 01:31:26:	It turns out that there are many federal resources available.
01:31:26> 01:31:27:	We've heard about many of them today,
01:31:27> 01:31:29:	but a lot of complicated,
01:31:29> 01:31:31:	some there are expensive to access,

01:31:31> 01:31:35:	some are otherwise out of reach for different reasons,
01:31:35> 01:31:38:	and so we identified a few policy recommendations to help
01:31:39> 01:31:43:	provide resources for training and technical assistance which are really
01:31:43> 01:31:45:	essential along with the financial resources.
01:31:45> 01:31:49:	To ensure meaningful community engagement at every step of the
01:31:49> 01:31:52:	way and the case study that I'll mention is one
01:31:52> 01:31:54:	that Stephen just mentioned,
01:31:54> 01:31:59:	consider the Louisiana Strategic adaptations for Future Environment initiative LA
01:31:59> 01:31:59:	safe.
01:31:59> 01:32:03:	It's a model for investing resources in training local leaders.
01:32:03> 01:32:07:	It's a community centered adaptation planning effort that relies on
01:32:07> 01:32:10:	local graduates from the lead the Coast program.
01:32:10> 01:32:13:	These graduates are then called on to organize and facilitate
01:32:13> 01:32:16:	meetings and other forms of information sharing designed to boost
01:32:16> 01:32:18:	meaningful community engagement and buy in,
01:32:18> 01:32:22:	and what that means is that it uses federal resources
01:32:22> 01:32:25:	and it helps mean that local resilience and adaptation planning
01:32:25> 01:32:27:	and project decisions,
01:32:27> 01:32:29:	including those that come from the federal government are truly
01:32:27> 01:32:29: 01:32:30> 01:32:31:	
	truly
01:32:30> 01:32:31: 01:32:31> 01:32:33: 01:32:33> 01:32:35:	truly based in the affected communities. And it all starts with training, empowering. Local leaders. Next slide,
01:32:30> 01:32:31: 01:32:31> 01:32:33: 01:32:33> 01:32:35: 01:32:35> 01:32:38:	truly based in the affected communities. And it all starts with training, empowering. Local leaders. Next slide, please. And the second set of recommendations I want to
01:32:30> 01:32:31: 01:32:31> 01:32:33: 01:32:33> 01:32:35: 01:32:35> 01:32:38: 01:32:38> 01:32:42:	truly based in the affected communities. And it all starts with training, empowering. Local leaders. Next slide,
01:32:30> 01:32:31: 01:32:31> 01:32:33: 01:32:33> 01:32:35: 01:32:35> 01:32:38:	truly based in the affected communities. And it all starts with training, empowering. Local leaders. Next slide, please. And the second set of recommendations I want to cover deals with the question how can federal agencies
01:32:30> 01:32:31: 01:32:31> 01:32:33: 01:32:33> 01:32:35: 01:32:35> 01:32:38: 01:32:38> 01:32:42:	truly based in the affected communities. And it all starts with training, empowering. Local leaders. Next slide, please. And the second set of recommendations I want to cover deals with the question how can federal agencies ensure that the available resources are actually accessible for the
01:32:30> 01:32:31: 01:32:31> 01:32:33: 01:32:33> 01:32:35: 01:32:35> 01:32:38: 01:32:38> 01:32:42: 01:32:42> 01:32:46:	truly based in the affected communities. And it all starts with training, empowering. Local leaders. Next slide, please. And the second set of recommendations I want to cover deals with the question how can federal agencies ensure that the available resources are actually accessible for the communities
01:32:30> 01:32:31: 01:32:31> 01:32:33: 01:32:33> 01:32:35: 01:32:35> 01:32:38: 01:32:38> 01:32:42: 01:32:42> 01:32:46: 01:32:46> 01:32:48: 01:32:48> 01:32:52:	based in the affected communities. And it all starts with training, empowering. Local leaders. Next slide, please. And the second set of recommendations I want to cover deals with the question how can federal agencies ensure that the available resources are actually accessible for the communities having resources available is great, but will communities and the ordinary people in local government actually be able to put these resources to maximum use
01:32:30> 01:32:31: 01:32:31> 01:32:33: 01:32:33> 01:32:35: 01:32:35> 01:32:38: 01:32:38> 01:32:42: 01:32:42> 01:32:46: 01:32:46> 01:32:48: 01:32:48> 01:32:52: 01:32:52> 01:32:55: 01:32:55> 01:32:56:	truly based in the affected communities. And it all starts with training, empowering. Local leaders. Next slide, please. And the second set of recommendations I want to cover deals with the question how can federal agencies ensure that the available resources are actually accessible for the communities having resources available is great, but will communities and the ordinary people in local government
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01:32:30> 01:32:31: 01:32:31> 01:32:33: 01:32:33> 01:32:35: 01:32:35> 01:32:38: 01:32:38> 01:32:42: 01:32:42> 01:32:46: 01:32:46> 01:32:48: 01:32:48> 01:32:52: 01:32:52> 01:32:55: 01:32:55> 01:32:56:	truly based in the affected communities. And it all starts with training, empowering. Local leaders. Next slide, please. And the second set of recommendations I want to cover deals with the question how can federal agencies ensure that the available resources are actually accessible for the communities having resources available is great, but will communities and the ordinary people in local government actually be able to put these resources to maximum use as intended?
01:32:30> 01:32:31: 01:32:31> 01:32:33: 01:32:33> 01:32:35: 01:32:35> 01:32:38: 01:32:38> 01:32:42: 01:32:42> 01:32:46: 01:32:46> 01:32:48: 01:32:48> 01:32:52: 01:32:52> 01:32:55: 01:32:55> 01:32:56: 01:32:56> 01:32:58:	truly based in the affected communities. And it all starts with training, empowering. Local leaders. Next slide, please. And the second set of recommendations I want to cover deals with the question how can federal agencies ensure that the available resources are actually accessible for the communities having resources available is great, but will communities and the ordinary people in local government actually be able to put these resources to maximum use as intended? One way to do that would be to encourage greater acknowledgement of cultural heritage and community

01:33:07> 01:33:11:	Or being sure culturally important sites and aspects of history
01:33:11> 01:33:14:	are part of vulnerability assessments and projects.
01:33:14> 01:33:17:	It's also related to the idea of making sure climate
01:33:17> 01:33:21:	data itself is understandable and useful to those who have
01:33:21> 01:33:21:	to do this,
01:33:21> 01:33:23:	and for example, I wanted to point to the case
01:33:23> 01:33:25:	study of the Island Institute in Maine.
01:33:25> 01:33:27:	They do both of these things very,
01:33:27> 01:33:30:	very well. What they did was they compiled publicly available
01:33:30> 01:33:34:	climate data into story maps to describe climate impacts and
01:33:34> 01:33:38:	help coastal communities envision their future and what it would
01:33:38> 01:33:40:	mean for their way of life.
01:33:40> 01:33:43:	What that did is, it helped make critical information more
01:33:43> 01:33:44:	accessible and more localized.
01:33:44> 01:33:48:	And that meant it was more relatable and more identifiable
01:33:48> 01:33:52:	to the people and that lead to better decisions.
01:33:52> 01:33:55:	So my last slide is just a brief conclusion.
01:33:55> 01:33:58:	UM, and I just wanted to thank everyone again today,
01:33:58> 01:34:01:	and you can move ahead on thank you very much.
01:34:01> 01:34:04:	I look forward to the rest of the discussion.
01:34:04> 01:34:07:	Here's my contact information. I hope everyone will feel free
01:34:07> 01:34:09:	to be in touch with me or my colleague Anna
01:34:09> 01:34:10:	begin and any questions.
01:34:10> 01:34:13:	And thanks again for the opportunity to share work at
01:34:13> 01:34:14:	this really great event.
01:34:14> 01:34:14:	Thanks, Maria.
01:34:16> 01:34:20:	Fantastic Dan, I'm going to let you catch your breath,
01:34:20> 01:34:21:	but while your content is fresh,
01:34:21> 01:34:24:	I'm actually going to go to you first.
01:34:24> 01:34:28:	We do have time for about 17 minutes or so
01:34:28> 01:34:28:	for Q&A,
01:34:28> 01:34:31:	and so like I said,
01:34:31> 01:34:33:	I'm going to start with you Dan as you went
01:34:33> 01:34:34:	through this effort.
01:34:34> 01:34:38:	I know you shared a subset of the recommendations with
01:34:38> 01:34:40:	us as you look across the full suite.
01:34:40> 01:34:44:	Are there any that policy recommendations?
01:34:44> 01:34:47:	And it's presumably aimed principally at federal agencies?
01:34:47> 01:34:50:	Are there? Any that really struck you as cost effective
01:34:50> 01:34:53:	in terms of delivering resilience and adaptation benefits over the

01:34:54> 01:34:54:	near term.
01:34:54> 01:34:56:	Some of these are really big and media are going
01:34:56> 01:34:57:	to take a while.
01:34:57> 01:35:00:	Were there any of that really struck you as as
01:35:00> 01:35:01:	immediate and near term?
01:35:01> 01:35:02:	Yeah, I think
01:35:02> 01:35:03:	generally,
01:35:03> 01:35:06:	UM. A lot of the recommendations we uncovered were just
01:35:06> 01:35:09:	different ways of doing things that were already doing and
01:35:09> 01:35:11:	a lot of what I what I mean by things
01:35:11> 01:35:12:	or things that we've actually been hearing about
01:35:12> 01:35:15:	today. So, for instance, allowing
01:35:15> 01:35:18:	investments in nature based solutions is a good idea.
01:35:18> 01:35:22:	Nature based solutions deliver mitigation and adaptation benefits at ESI
01:35:22> 01:35:24:	called them double whammies.
01:35:24> 01:35:27:	And if we can make our money go twice as
01:35:27> 01:35:31:	far by making these investments within existing federal programs,
01:35:31> 01:35:32:	to me that feels like a cost effective
01:35:32> 01:35:35:	change that we should be making.
01:35:35> 01:35:37:	Dale mentioned that another thing that they mentioned was a
01:35:37> 01:35:37:	change in how
01:35:37> 01:35:40:	we evaluate benefits and costs.
01:35:40> 01:35:43:	Those are those don't require any additional resources,
01:35:43> 01:35:47:	it's just a different mindset and so with better thinking
01:35:47> 01:35:50:	by thinking ahead to make sure to making sure that
01:35:50> 01:35:52:	the investments we're making are
01:35:52> 01:35:53:	designed to withstand
01:35:53> 01:35:54:	future climate impacts, not past
01:35:54> 01:35:57:	climate impacts. The Stevens earlier point is another,
01:35:57> 01:35:59:	I think. Good example of how to make what we're
01:35:59> 01:36:01:	already doing more cost effective
01:36:01> 01:36:03:	and we could do that pretty quickly if we wanted
01:36:03> 01:36:03:	to.
01:36:05> 01:36:07:	Fantastic what I may do is let's give the other
01:36:07> 01:36:10:	panelists a chance to chime in if they want to
01:36:10> 01:36:11:	amplify some of what Dan said.
01:36:11> 01:36:13:	I saw Dale nodding vigorously,
01:36:13> 01:36:16:	so maybe Dale this would be a good place for
01:36:16> 01:36:17:	you to return to your point on this.
01:36:20> 01:36:21:	You're on mute.

01:36:24> 01:36:26:	My apologies, you would think after year and half I
01:36:26> 01:36:27:	would know better,
01:36:27> 01:36:30:	but so you would think you know over the over
01:36:30> 01:36:34:	the last number of years the science of ecosystem services
01:36:34> 01:36:39:	and the economics of ecosystem services for improved
	tremendously.
01:36:39> 01:36:43:	So we're learning more. We're able to quantify more.
01:36:43> 01:36:48:	It makes no sense whatsoever for money that's coming from
01:36:48> 01:36:49:	the federal.
01:36:49> 01:36:52:	Invent from the federal treasury and federal taxpayers to enable
01:36:52> 01:36:53:	cities,
01:36:53> 01:36:57:	localities, counties. Or whatever reduced their flood hazards,
01:36:57> 01:37:00:	their flood risk, or adapt better to sea level rise.
01:37:00> 01:37:05:	It makes no sense whatsoever to prevent the inclusion of
01:37:05> 01:37:07:	those benefits in projects,
01:37:07> 01:37:12:	and because we cannot count them in in the BCA,
01:37:12> 01:37:17:	they don't get thought through in project planning,
01:37:17> 01:37:21:	thus they never get optimized in project design,
01:37:21> 01:37:23:	which leans. We never build that.
01:37:23> 01:37:26:	So we are leaving a lot.
01:37:26> 01:37:31:	Table because we are preventing the planners from looking
	at
01:37:31> 01:37:32:	these things to say,
01:37:32> 01:37:35:	hey wait, how can we include these and once we
01:37:35> 01:37:38:	start doing more of these we will learn more about
01:37:35> 01:37:38: 01:37:38> 01:37:39:	start doing more of these we will learn more about them.
01:37:35> 01:37:38: 01:37:38> 01:37:39: 01:37:39> 01:37:42:	start doing more of these we will learn more about them. And one final thing. There is a tremendous benefit.
01:37:35> 01:37:38: 01:37:38> 01:37:39: 01:37:39> 01:37:42: 01:37:42> 01:37:45:	start doing more of these we will learn more about them. And one final thing. There is a tremendous benefit. Possible benefit here from blue from blue carbon.
01:37:35> 01:37:38: 01:37:38> 01:37:39: 01:37:39> 01:37:42: 01:37:42> 01:37:45: 01:37:45> 01:37:48:	start doing more of these we will learn more about them. And one final thing. There is a tremendous benefit. Possible benefit here from blue from blue carbon. So we have a climate adaptation need in the country
01:37:35> 01:37:38: 01:37:38> 01:37:39: 01:37:39> 01:37:42: 01:37:42> 01:37:45: 01:37:45> 01:37:48: 01:37:49> 01:37:50:	start doing more of these we will learn more about them. And one final thing. There is a tremendous benefit. Possible benefit here from blue from blue carbon. So we have a climate adaptation need in the country around around the globe.
01:37:35> 01:37:38: 01:37:38> 01:37:39: 01:37:39> 01:37:42: 01:37:42> 01:37:45: 01:37:45> 01:37:48: 01:37:49> 01:37:50: 01:37:50> 01:37:52:	start doing more of these we will learn more about them. And one final thing. There is a tremendous benefit. Possible benefit here from blue from blue carbon. So we have a climate adaptation need in the country around around the globe. How do we capture carbon?
01:37:35> 01:37:38: 01:37:38> 01:37:39: 01:37:39> 01:37:42: 01:37:42> 01:37:45: 01:37:45> 01:37:48: 01:37:49> 01:37:50: 01:37:50> 01:37:52: 01:37:52> 01:37:54:	start doing more of these we will learn more about them. And one final thing. There is a tremendous benefit. Possible benefit here from blue from blue carbon. So we have a climate adaptation need in the country around around the globe. How do we capture carbon? Can we do things with it?
01:37:35> 01:37:38: 01:37:38> 01:37:39: 01:37:39> 01:37:42: 01:37:42> 01:37:45: 01:37:45> 01:37:48: 01:37:49> 01:37:50: 01:37:50> 01:37:52: 01:37:52> 01:37:54: 01:37:54> 01:37:57:	start doing more of these we will learn more about them. And one final thing. There is a tremendous benefit. Possible benefit here from blue from blue carbon. So we have a climate adaptation need in the country around around the globe. How do we capture carbon? Can we do things with it? We know that Marsha is in Sawgrass and mangroves.
01:37:35> 01:37:38: 01:37:38> 01:37:39: 01:37:39> 01:37:42: 01:37:42> 01:37:45: 01:37:45> 01:37:48: 01:37:49> 01:37:50: 01:37:50> 01:37:52: 01:37:52> 01:37:54: 01:37:54> 01:37:57: 01:37:57> 01:37:59:	start doing more of these we will learn more about them. And one final thing. There is a tremendous benefit. Possible benefit here from blue from blue carbon. So we have a climate adaptation need in the country around around the globe. How do we capture carbon? Can we do things with it?
01:37:35> 01:37:38: 01:37:38> 01:37:39: 01:37:39> 01:37:42: 01:37:42> 01:37:45: 01:37:45> 01:37:48: 01:37:49> 01:37:50: 01:37:50> 01:37:52: 01:37:52> 01:37:54: 01:37:54> 01:37:57: 01:37:57> 01:37:59: 01:37:59> 01:38:03:	start doing more of these we will learn more about them. And one final thing. There is a tremendous benefit. Possible benefit here from blue from blue carbon. So we have a climate adaptation need in the country around around the globe. How do we capture carbon? Can we do things with it? We know that Marsha is in Sawgrass and mangroves. And and other natural features, they can capture carbon. We are learning more and more
01:37:35> 01:37:38: 01:37:38> 01:37:39: 01:37:39> 01:37:42: 01:37:42> 01:37:45: 01:37:45> 01:37:48: 01:37:49> 01:37:50: 01:37:50> 01:37:52: 01:37:52> 01:37:54: 01:37:54> 01:37:57: 01:37:57> 01:37:59: 01:37:59> 01:38:03: 01:38:03> 01:38:06:	start doing more of these we will learn more about them. And one final thing. There is a tremendous benefit. Possible benefit here from blue from blue carbon. So we have a climate adaptation need in the country around around the globe. How do we capture carbon? Can we do things with it? We know that Marsha is in Sawgrass and mangroves. And and other natural features, they can capture carbon. We are learning more and more and more about how to optimize that capture and if
01:37:35> 01:37:38: 01:37:38> 01:37:39: 01:37:39> 01:37:42: 01:37:42> 01:37:45: 01:37:45> 01:37:48: 01:37:49> 01:37:50: 01:37:50> 01:37:52: 01:37:52> 01:37:54: 01:37:54> 01:37:57: 01:37:57> 01:37:59: 01:37:59> 01:38:03: 01:38:03> 01:38:06: 01:38:06> 01:38:10:	start doing more of these we will learn more about them. And one final thing. There is a tremendous benefit. Possible benefit here from blue from blue carbon. So we have a climate adaptation need in the country around around the globe. How do we capture carbon? Can we do things with it? We know that Marsha is in Sawgrass and mangroves. And and other natural features, they can capture carbon. We are learning more and more and more about how to optimize that capture and if we can create some form of a national carbon market,
01:37:35> 01:37:38: 01:37:38> 01:37:39: 01:37:39> 01:37:42: 01:37:42> 01:37:45: 01:37:45> 01:37:48: 01:37:49> 01:37:50: 01:37:50> 01:37:52: 01:37:52> 01:37:54: 01:37:54> 01:37:57: 01:37:57> 01:37:59: 01:37:59> 01:38:03: 01:38:03> 01:38:06: 01:38:06> 01:38:10: 01:38:10> 01:38:14:	start doing more of these we will learn more about them. And one final thing. There is a tremendous benefit. Possible benefit here from blue from blue carbon. So we have a climate adaptation need in the country around around the globe. How do we capture carbon? Can we do things with it? We know that Marsha is in Sawgrass and mangroves. And and other natural features, they can capture carbon. We are learning more and more and more about how to optimize that capture and if we can create some form of a national carbon market, we will then unlock resources to enable communities to do
01:37:35> 01:37:38: 01:37:38> 01:37:39: 01:37:39> 01:37:42: 01:37:42> 01:37:45: 01:37:45> 01:37:48: 01:37:49> 01:37:50: 01:37:50> 01:37:52: 01:37:52> 01:37:54: 01:37:54> 01:37:57: 01:37:57> 01:37:59: 01:37:59> 01:38:03: 01:38:03> 01:38:06: 01:38:10> 01:38:10: 01:38:14> 01:38:15:	start doing more of these we will learn more about them. And one final thing. There is a tremendous benefit. Possible benefit here from blue from blue carbon. So we have a climate adaptation need in the country around around the globe. How do we capture carbon? Can we do things with it? We know that Marsha is in Sawgrass and mangroves. And and other natural features, they can capture carbon. We are learning more and more and more about how to optimize that capture and if we can create some form of a national carbon market,
01:37:35> 01:37:38: 01:37:38> 01:37:39: 01:37:39> 01:37:42: 01:37:42> 01:37:45: 01:37:45> 01:37:48: 01:37:49> 01:37:50: 01:37:50> 01:37:52: 01:37:52> 01:37:54: 01:37:54> 01:37:57: 01:37:57> 01:37:59: 01:37:59> 01:38:03: 01:38:03> 01:38:06: 01:38:10> 01:38:14: 01:38:14> 01:38:15: 01:38:15> 01:38:18:	start doing more of these we will learn more about them. And one final thing. There is a tremendous benefit. Possible benefit here from blue from blue carbon. So we have a climate adaptation need in the country around around the globe. How do we capture carbon? Can we do things with it? We know that Marsha is in Sawgrass and mangroves. And and other natural features, they can capture carbon. We are learning more and more and more about how to optimize that capture and if we can create some form of a national carbon market, we will then unlock resources to enable communities to do more projects. Whether for flood risk or ecosystem restoration.
01:37:35> 01:37:38: 01:37:38> 01:37:39: 01:37:39> 01:37:42: 01:37:42> 01:37:45: 01:37:45> 01:37:48: 01:37:49> 01:37:50: 01:37:50> 01:37:52: 01:37:52> 01:37:54: 01:37:54> 01:37:57: 01:37:57> 01:37:59: 01:37:59> 01:38:03: 01:38:03> 01:38:06: 01:38:10> 01:38:10: 01:38:14> 01:38:15:	start doing more of these we will learn more about them. And one final thing. There is a tremendous benefit. Possible benefit here from blue from blue carbon. So we have a climate adaptation need in the country around around the globe. How do we capture carbon? Can we do things with it? We know that Marsha is in Sawgrass and mangroves. And and other natural features, they can capture carbon. We are learning more and more and more about how to optimize that capture and if we can create some form of a national carbon market, we will then unlock resources to enable communities to do more projects.

01:38:24> 01:38:27:	policy to the challenges we have now.
01:38:27> 01:38:29:	And we know that's not easy,
01:38:29> 01:38:31:	but we think it's essential that we struggle with it
01:38:31> 01:38:33:	and we hope that the the DIS administration of future
01:38:33> 01:38:35:	medical administrations will.
01:38:36> 01:38:39:	Maria, could I just reinforce with Dan and indelible?
01:38:39> 01:38:43:	Said because I think what we're hitting on around here
01:38:43> 01:38:46:	is is the difference between a linear,
01:38:46> 01:38:50:	sequential way of thinking about planning and a more complex
01:38:50> 01:38:53:	adaptive systems space of thinking about planning,
01:38:53> 01:38:55:	and I think that's what's missing.
01:38:55> 01:38:58:	And I realized that set of 30,000 foot level kind
01:38:58> 01:38:59:	of looking at the whole situation.
01:38:59> 01:39:03:	But I think the way we approach planning for it
01:39:03> 01:39:06:	in in climate change situations needs to meet.
01:39:06> 01:39:10:	More ecological. And more holistic and more systemic.
01:39:10> 01:39:12:	And then we can get the where the you know,
01:39:12> 01:39:15:	the the great synergy that comes when all of these
01:39:15> 01:39:16:	pieces come together.
01:39:19> 01:39:24:	Thank you Steven. I'm currently taking notes.
01:39:24> 01:39:27:	Let me turn to Kevin and I'm going to give
01:39:27> 01:39:30:	you Kevin a question that has come in for the
01:39:30> 01:39:33:	field because I think it is a nice bridge to
01:39:33> 01:39:35:	this and and recognizing you represent hood.
01:39:35> 01:39:38:	But there are other sides at the table that probably
01:39:38> 01:39:40:	need to answer this as well,
01:39:40> 01:39:42:	but the question I think come in was who can
01:39:42> 01:39:45:	set the policy to make sure that the resilient dollars
01:39:45> 01:39:48:	that were about to spend in the next 10 years
01:39:48> 01:39:51:	and how did which has a pretty big chunk of
01:39:51> 01:39:53:	that portfolio with and without disasters?
01:39:53> 01:39:55:	How can we assure that?
01:39:55> 01:39:58:	That money that's being spent is using the forecast about
01:39:58> 01:40:02:	the threats and houses that we're going to face over
01:40:02> 01:40:03:	the life of the projects,
01:40:03> 01:40:07:	particularly around flood risk. Maybe if you could comment a
01:40:07> 01:40:09:	little bit about what you see about the role of
01:40:09> 01:40:12:	the federal government and setting some of these policies and
01:40:12> 01:40:15:	and ingesting that science around,
01:40:15> 01:40:18:	making sure things last as long as intended,
01:40:18> 01:40:18:	yeah,

01:40:18 --> 01:40:19: absolutely. And before 01:40:19 --> 01:40:22: doing that just to go back to the past discussion, 01:40:22 --> 01:40:25: I couldn't agree with the folks more about the need 01:40:25 --> 01:40:25: for. 01:40:25 --> 01:40:29: Nature based solutions and that the the dual purpose is 01:40:29 --> 01:40:32: that those sorts of projects can provide. 01:40:32 --> 01:40:34: You know I mentioned, I think. 01:40:34 --> 01:40:37: I mentioned earlier a high funded project in New York 01:40:37 --> 01:40:40: that's actually having a grand opening. 01:40:40 --> 01:40:43: I think next week at Battery Park. 01:40:43 --> 01:40:44: If you looked at it, 01:40:44 --> 01:40:47: you would see a playground. 01:40:47 --> 01:40:49: And if you look at engineering drawings of it, 01:40:49 --> 01:40:52: you would see it a piece of flood infrastructure. 01:40:52 --> 01:40:56: So I think those sorts of projects that provide a, 01:40:56 --> 01:40:58: you know, a benefit 365 days a year to the 01:40:58 --> 01:41:01: Community and not just the one day a year when 01:41:01 --> 01:41:03: it needs to for flooding are great. 01:41:03 --> 01:41:06: And the good news is we actually don't require a 01:41:06 --> 01:41:10: benefit cost analysis for CDBG der so CDBG Dr is 01:41:10 --> 01:41:12: a great source of funding for 01:41:12 --> 01:41:13: those types of projects 01:41:14 --> 01:41:17: to do your question Maria. 01:41:17 --> 01:41:20: Uhm, you know? Couple things are ongoing and I'm going 01:41:20 --> 01:41:23: to go back to one of the panelists, 01:41:23 --> 01:41:25: uh. From the last panel, 01:41:25 --> 01:41:27: actually Josh sauce like I believe I'm going to put 01:41:27 --> 01:41:29: into this to him and he'll text me if I 01:41:29 --> 01:41:29: get it wrong. 01:41:29 --> 01:41:32: But many years ago he told me, you know, as a as a policymaking person here you 01:41:32 --> 01:41:36: 01:41:36 --> 01:41:40: can think of something as your role is either informing 01:41:40 --> 01:41:44: incentivizing or mandating a positive outcome and I think that's 01:41:44 --> 01:41:46: really useful within that lens. 01:41:46 --> 01:41:48: Going to go back to the HUD climate plan you 01:41:48 --> 01:41:50: can see where we've we've laid out, 01:41:50 --> 01:41:53: what we're going to do over the next couple years 01:41:53 --> 01:41:56: to support more climate action at the local level. 01:41:56 --> 01:41:58: We have informing, you know, 01:41:58 --> 01:42:00: we've got a set of resources that we've already started 01:42:01 --> 01:42:03: to put out and will continue to put out on

01:42:03> 01:42:06:	how you can use our flexible funds to support climate
01:42:06> 01:42:09:	action, both on the resilience and the mitigation side.
01:42:09> 01:42:14:	We have incentivizing we already have some programs like the
01:42:14> 01:42:18:	FHA Multifamily Fund provides a mortgage insurance premium.
01:42:18> 01:42:22:	If you take more sustainable behavior and how you design
01:42:22> 01:42:25:	your buildings and then we also have mandate and this
01:42:25> 01:42:26:	is where HUD is.
01:42:26> 01:42:30:	Seriously, working my office of Energy and Environment Team is
01:42:30> 01:42:33:	is working their number one priority is is to get
01:42:33> 01:42:35:	out two rules and one of which is the federal
01:42:35> 01:42:39:	Flood risk management standard, which I'm sure everybody on this
01:42:39> 01:42:40:	phone knows about.
01:42:40> 01:42:42:	But is that requirement at looking at if you're if
01:42:42> 01:42:44:	you're investing federal dollars,
01:42:44> 01:42:47:	we want to make sure that that investment is is
01:42:47> 01:42:50:	built to laugh and not putting people in harm's way
01:42:50> 01:42:50:	either.
01:42:50> 01:42:53:	So we're, you know, we're working across that spectrum,
01:42:53> 01:42:56:	of informing, incentivizing and mandating to get.
01:42:56> 01:43:01:	More accounts. Right,
01:43:01> 01:43:06:	thank you Kevin. Maybe we will turn to.
01:43:09> 01:43:12:	Dale, let's go with Dale next because although you have
01:43:12> 01:43:12:	chimed in,
01:43:12> 01:43:15:	I didn't get to ask you something specific on your
01:43:15> 01:43:16:	on your topic,
01:43:16> 01:43:20:	I think. Oh wait, maybe I'm I'm gonna self edit
01:43:21> 01:43:25:	right now because you did answer that question and took
01:43:25> 01:43:27:	to talk turn sorry.
01:43:27> 01:43:30:	East of Diet Coke. This afternoon I'm gonna actually turn
01:43:30> 01:43:32:	it over to Steven and ask,
01:43:32> 01:43:34:	you know, Steven, you talked.
01:43:34> 01:43:37:	I know I mentioned at the beginning and others have
01:43:37> 01:43:41:	touched on how important the engagement piece and communities are
01:43:41> 01:43:44:	to to have the the right voices at the table.
01:43:44> 01:43:46:	It's it's clearly important to the effectiveness of the long
01:43:46> 01:43:46:	run.
01:43:46> 01:43:50:	Do you have any suggestions for where you have seen
01:43:50> 01:43:54:	or there are opportunities for local governments?

01:43:54> 01:43:58:	Elected officials? You know, the kinds of the folks that
01:43:58> 01:43:58:	are.
01:43:58> 01:44:01:	Financial actors and communities are there ways of effectively bringing
01:44:01> 01:44:03:	these folks to the table that you have seen in
01:44:03> 01:44:06:	your experience as you look across these different efforts.
01:44:07> 01:44:10:	Yeah, as I think that that's what I was referring
01:44:10> 01:44:13:	referencing earlier about a systems approach is that I think
01:44:13> 01:44:15:	that's the only way to do it.
01:44:15> 01:44:19:	Or two planning processes for New Orleans after Hurricane Katrina
01:44:19> 01:44:21:	that took place before the third plane process,
01:44:21> 01:44:24:	which we which we led.
01:44:24> 01:44:27:	The first one was by the mayor,
01:44:27> 01:44:29:	and the mayor had his way of doing it.
01:44:29> 01:44:33:	And then that the community rejected that plan.
01:44:33> 01:44:36:	The second one was done by the City Council and
01:44:36> 01:44:38:	the City Council at its only only one way of
01:44:38> 01:44:39:	doing it,
01:44:39> 01:44:43:	and the and the community rejected that plan as well.
01:44:43> 01:44:45:	The third plan was called the reason it was called
01:44:46> 01:44:49:	the Unified New Orleans plan was because it took the
01:44:49> 01:44:52:	best of the first two plants and added the community
01:44:52> 01:44:55:	into the equation. So I think this notion of it.
01:44:55> 01:44:59:	That's why I'm pushing really hard for this more systemic
01:44:59> 01:45:00:	way of thinking.
01:45:00> 01:45:02:	It's not just nature based,
01:45:02> 01:45:05:	it's really thinking the way nature thinks,
01:45:05> 01:45:07:	because nature is a complex adaptive system,
01:45:07> 01:45:12:	and in nature all of those little pieces and all
01:45:12> 01:45:13:	of those little.
01:45:13> 01:45:17:	Microbes come together and in a way that's commute that
01:45:17> 01:45:20:	that's a metaphor for community engagement,
01:45:20> 01:45:23:	and also let's face it,
01:45:23> 01:45:24:	it's called democracy.
01:45:28> 01:45:31:	Dan or Dale, do you have anything that you would
01:45:31> 01:45:33:	want to add in terms of some of best practice
01:45:33> 01:45:34:	for forgetting?
01:45:34> 01:45:37:	Making sure that the voices need to be in the
01:45:37> 01:45:39:	decision or are part of those conversations?
01:45:39> 01:45:39:	Well,
01:45:39> 01:45:41:	I'd like to offer something of one of the things

01:45:43 --> 01:45:44: briefings was something that one of our Louisiana panelists said to me or 01:45:44 --> 01:45:47: said during the briefing and he said they asked for 01:45:47 --> 01:45:50: 01:45:50 --> 01:45:53: my opinion before the decision was made, 01:45:53 --> 01:45:54: rather than asking 01:45:54 --> 01:45:55: my opinion about 01:45:55 --> 01:45:58: the decision and that I think about that all the 01:45:58 --> 01:45:58: time. 01:45:58 --> 01:46:00: It's just the timing issue, 01:46:00 --> 01:46:02: it's it's. It's being intentional, 01:46:02 --> 01:46:06: it's engaging and it's not treating a community as you 01:46:06 --> 01:46:07: 01:46:07 --> 01:46:09: something to work around. It's treating the community of. 01:46:09 --> 01:46:10: And when they work through and 01:46:10 --> 01:46:12: he was a faith leader, 01:46:12 --> 01:46:12: he 01:46:12 --> 01:46:13: was from South Louisiana 01:46:14 --> 01:46:14: 01:46:14 --> 01:46:15: he was an important part of the 01:46:15 --> 01:46:18: project success. And I just think about that all the 01:46:18 --> 01:46:18: time. 01:46:18 --> 01:46:20: That was a. It's a really simple insight that is 01:46:20 --> 01:46:22: actually pretty profound. 01:46:22 --> 01:46:28: Issue is trust. Do we trust the community right to 01:46:28 --> 01:46:31: actually make these decisions? 01:46:31 --> 01:46:33: Do we believe in democracy? 01:46:33 --> 01:46:36: Do we believe that all of us are smarter than 01:46:36 --> 01:46:37: any of us? 01:46:37 --> 01:46:39: And if in fact we do? 01:46:39 --> 01:46:43: Then we can engage the community in an authentic and 01:46:43 --> 01:46:45: honest and productive way. 01:46:45 --> 01:46:49: But the community knows better when things start coming down 01:46:49 --> 01:46:52: from the top and the decisions have already been made. 01:46:52 --> 01:46:54: And then in that case, 01:46:54 --> 01:46:56: community engagement kind of goes. 01:46:56 --> 01:47:00: Crazy right? It goes awry. 01:47:00 --> 01:47:05: So the most important thing is honesty and integrity in 01:47:05 --> 01:47:06: the process. 01:47:06 --> 01:47:09: And and a genuine kind of confidence and trust. 01:47:09 --> 01:47:12: And this thing that we call democracy.

that really stuck with me over the course of our

01:45:41 --> 01:45:43:

01:47:14> 01:47:16:	I was struck by oh let me just offer that
01:47:16> 01:47:19:	you know with Dan mentioned this this idea of a
01:47:19> 01:47:22:	faith leader was one of the people that gave him
01:47:22> 01:47:25:	this. This inside a lot of the the voice is
01:47:25> 01:47:28:	needing to be at the table and building that trust
01:47:28> 01:47:31:	are are not necessarily the federal government,
01:47:31> 01:47:33:	right? We we know that there are these trusted intermediaries
01:47:33> 01:47:34:	that are active in communities.
01:47:34> 01:47:38:	You all know who they are in your municipality,
01:47:38> 01:47:42:	right? And we have studs are often well intentioned but
01:47:42> 01:47:44:	don't always have the.
01:47:44> 01:47:46:	The understanding and the ability to to know that wow,
01:47:46> 01:47:49:	we really need to bring in the Chamber of Commerce
01:47:49> 01:47:51:	or we really need to bring in this.
01:47:51> 01:47:53:	You know non profit over here because they are the
01:47:53> 01:47:55:	ones that show up on the very bad day and
01:47:55> 01:47:57:	they need to have a say in terms of what
01:47:57> 01:47:59:	we do on the not bad days.
01:47:59> 01:48:01:	So let me let me give it to Dale and
01:48:01> 01:48:04:	then I'm gonna have a related question that I wanted
01:48:04> 01:48:06:	to post a cabin that's in this vein.
01:48:08> 01:48:12:	So thank you Maria. So I've been involved with something
01:48:12> 01:48:16:	called the Dutch dialogues like Co directed those around in
01:48:16> 01:48:19:	various cities around the US and they are driven by
01:48:19> 01:48:25:	a stakeholder and community information engagement effort
	to try to
01:48:25> 01:48:28:	explain to people what the risks are,
01:48:28> 01:48:32:	what the hazards are, what opportunities are there to solve
01:48:32> 01:48:33:	those hazards,
01:48:33> 01:48:36:	what their potential cost or complexity might be?
01:48:36> 01:48:38:	What are the tradeoffs or the externality,
01:48:38> 01:48:41:	so to speak and act in those terms?
01:48:41> 01:48:45:	And these are lengthy processes and they take a year
01:48:45> 01:48:45:	to do,
01:48:45> 01:48:47:	but at the end of the at the end of
01:48:47> 01:48:48:	the process,
01:48:48> 01:48:51:	what has happened in in most of the communities that
01:48:51> 01:48:54:	we've done that is now there is a vision that
01:48:54> 01:48:56:	that folks can get behind,
01:48:56> 01:48:59:	and now it's been democratized or socialized with with the
01:49:00> 01:49:00:	community.

01:49:00> 01:49:03:	And then they start to push the decision makers and
01:49:03> 01:49:06:	the federal authorities who are involved with this.
01:49:06> 01:49:07:	To say this is what we want.
01:49:07> 01:49:08:	And how do we get it?
01:49:08> 01:49:10:	And it's just an information thing.
01:49:10> 01:49:14:	These projects are complex. Flood risk management.
01:49:14> 01:49:19:	Flood risk mitigation across an urban landscape is really complex
01:49:20> 01:49:23:	and you need to enable the citizens.
01:49:23> 01:49:25:	These are the people that are you're going to help
01:49:25> 01:49:26:	or the people that are going to help pay for
01:49:26> 01:49:27:	it.
01:49:27> 01:49:29:	You need to enable them to understand this and so
01:49:29> 01:49:33:	if we can improve the planning processes in advance of
01:49:33> 01:49:36:	you know what kind of alternatives are we actually going
01:49:36> 01:49:38:	to pursue and a design process.
01:49:38> 01:49:39:	I think that's a wonderful,
01:49:39> 01:49:43:	wonderful improvement so. Well,
01:49:43> 01:49:46:	great, now I'm going to turn to Kevin to speak
01:49:46> 01:49:48:	on behalf of his programs.
01:49:48> 01:49:51:	You know, we've heard reference to Dutch dialogues and some
01:49:51> 01:49:54:	other best practices and and opportunities that where things have
01:49:54> 01:49:56:	been working well and what happens when they don't premiere
01:49:56> 01:50:01:	perspective. Kevin, are there some specific ways that non governmental
01:50:01> 01:50:04:	interests who are usually among you,
01:50:04> 01:50:06:	know the governments are usually invited to the table?
01:50:06> 01:50:09:	But do you have any recommendations on how to bring
01:50:09> 01:50:12:	more of the NGO and private community to the table?
01:50:12> 01:50:15:	Particularly around the context of your program.
01:50:15> 01:50:16:	Yeah, and and I
01:50:16> 01:50:19:	you know, even backing up a little bit to your
01:50:19> 01:50:20:	question today like I do,
01:50:20> 01:50:27:	having having LED neighborhood meetings in other jobs with residents.
01:50:27> 01:50:30:	One of the things that I'm always struck by in
01:50:30> 01:50:34:	conversations around climate resilience is usually you go into a
01:50:34> 01:50:38:	community and you're not usually engaging them about a gradual
01:50:38> 01:50:40:	shift. However, in many communities,

01:50:40> 01:50:43:	right? It's like some theoretical risk to many folks,
01:50:43> 01:50:46:	so there was a neighborhood in a community that I
01:50:46> 01:50:48:	worked in where you know.
01:50:48> 01:50:53:	Highest risk of flooding of anywhere in this Community hands
01:50:53> 01:50:53:	down,
01:50:53> 01:50:56:	right? If a hurricane came to this community,
01:50:56> 01:50:58:	they would be the ones affected,
01:50:58> 01:51:01:	but hurricane hadn't come yet and this is a community
01:51:01> 01:51:03:	that had been asking for new parks,
01:51:03> 01:51:05:	new playground streetlights, better trash pickup,
01:51:05> 01:51:08:	that sort of thing, and so you know,
01:51:08> 01:51:12:	I think. That's an important recognition of this.
01:51:12> 01:51:14:	This field that we all work in is,
01:51:14> 01:51:19:	you know, when you're going to meet with residents and
01:51:19> 01:51:20:	you know,
01:51:20> 01:51:23:	even if you think you're going to talk about.
01:51:23> 01:51:27:	Something I need that they that you've determined that they
01:51:27> 01:51:28:	have.
01:51:28> 01:51:31:	They also have their own needs that they have been
01:51:31> 01:51:33:	asking to be met for awhile,
01:51:33> 01:51:37:	which I think is why these projects that meet multiple
01:51:37> 01:51:41:	needs these projects that often include nature based features are
01:51:37> 01:51:41: 01:51:41> 01:51:42:	
	are
01:51:41> 01:51:42:	are so important.
01:51:41> 01:51:42: 01:51:42> 01:51:46:	are so important. Because if you can design a project with the community that meets their other needs as well as the one that you've used science and data and engineering to
01:51:41> 01:51:42: 01:51:42> 01:51:46: 01:51:46> 01:51:49: 01:51:49> 01:51:54:	are so important. Because if you can design a project with the community that meets their other needs as well as the one that you've used science and data and engineering to determine.
01:51:41> 01:51:42: 01:51:42> 01:51:46: 01:51:46> 01:51:49:	are so important. Because if you can design a project with the community that meets their other needs as well as the one that you've used science and data and engineering to
01:51:41> 01:51:42: 01:51:42> 01:51:46: 01:51:46> 01:51:49: 01:51:49> 01:51:54:	are so important. Because if you can design a project with the community that meets their other needs as well as the one that you've used science and data and engineering to determine. And then you're ultimately going to get better engagement
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01:51:41> 01:51:42: 01:51:42> 01:51:46: 01:51:46> 01:51:49: 01:51:49> 01:51:54: 01:51:54> 01:51:56: 01:51:56> 01:51:58: 01:51:58> 01:52:00:	are so important. Because if you can design a project with the community that meets their other needs as well as the one that you've used science and data and engineering to determine. And then you're ultimately going to get better engagement because you're meeting them where they're at, and I think that's really important.
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01:51:41> 01:51:42: 01:51:42> 01:51:46: 01:51:46> 01:51:49: 01:51:49> 01:51:54: 01:51:54> 01:51:56: 01:51:58> 01:51:58: 01:51:58> 01:52:00: 01:52:00> 01:52:04: 01:52:04> 01:52:07: 01:52:07> 01:52:09: 01:52:11> 01:52:15: 01:52:15> 01:52:16: 01:52:16> 01:52:18:	so important. Because if you can design a project with the community that meets their other needs as well as the one that you've used science and data and engineering to determine. And then you're ultimately going to get better engagement because you're meeting them where they're at, and I think that's really important. One of the things that we've been trying to do in our disaster programs is. A little bit of context for folks on Cdr. It's not a permanent program, it's existed for 28 years on the backs of supplemental appropriations, so there's no standing authorization. Which means that there's no standing program requirements

01:52:27> 01:52:32:	So what we're hoping to do with this current round
01:52:32> 01:52:36:	of funding that we have is is respond to the
01:52:36> 01:52:37:	President.
01:52:37> 01:52:41:	Direction on executive orders around better serving
01.02.01 > 01.02.41.	underserved communities and
01:52:41> 01:52:42:	equity.
01:52:42> 01:52:45:	Also on acting on climate.
01:52:45> 01:52:46:	So it's not out yet.
01:52:46> 01:52:47:	We hope to have it out soon,
01:52:47> 01:52:50:	but you know, we're trying to use the authorities that
01:52:50> 01:52:53:	we have to push the folks that spend our money
01:52:53> 01:52:54:	to have deeper,
01:52:54> 01:52:59:	more meaningful community engagement. That's the
01.32.34> 01.32.33.	mandate side on the
01:52:59> 01:53:00:	informed side,
01:53:00> 01:53:01:	you know I referenced it earlier.
01:53:01> 01:53:04:	I believe in passing, but we've been working with our
01:53:04> 01:53:07:	colleagues in the office of Fair Housing and Equal
01.00.04 > 01.00.07.	Opportunity.
01:53:07> 01:53:13:	To develop a UM citizen engagement toolkit for our grantees,
01:53:13> 01:53:14:	and it, you know, it may sound trite,
01:53:14> 01:53:17:	but you know the folks that we partner with.
01:53:17> 01:53:22:	Our grantees are cities or states that just experienced a
01:53:22> 01:53:23:	major disaster,
01:53:23> 01:53:27:	and you know, in some cases they they themselves might
01:53:27> 01:53:30:	be dealing with damage at home or going to work
01:53:30> 01:53:34:	in a in a moldy building that needs repair itself.
01:53:34> 01:53:38:	So you know, the the government that's charged with
01:53:38> 01:53:40:	responding to the communities.
01:53:40> 01:53:42:	Is also responding to the disaster itself,
01:53:42> 01:53:44:	and I think that's an important aspect that we're trying
01:53:44> 01:53:45:	to to meet.
01:53:45> 01:53:51:	That said, the CDBG der team manages a portfolio of
01:53:51> 01:53:52:	\$72 billion,
01:53:52> 01:53:55:	and it has a staff about 60.
01:53:55> 01:53:58:	So we're we're also not,
01:53:58> 01:54:02:	you know, really. Set up to have these deep relationships,
01:54:02> 01:54:05:	so we're trying to do everything we can,
01:54:05> 01:54:08:	both with the the requirements in the program and the
01:54:08> 01:54:11:	technical assistance resources that we make available to
VII.UT.UU 7 VII.UT.III.	equip our
01:54:11> 01:54:14:	state and local government partners to have this type of
01:54:14> 01:54:15:	meaningful engagement.
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01:54:17 --> 01:54:21:
                          well that is a fantastic note to end on.
01:54:21 --> 01:54:23:
                          Thank you, I know we have more questions and I
01:54:23 --> 01:54:25:
                          think we we had time to but I know as
01:54:25 --> 01:54:27:
                          I said I've I've taken some notes here.
01:54:27 --> 01:54:30:
                          This benefit costing is just challenge.
01:54:32 --> 01:54:35:
                          But again, I'd like to thank Stephen and Dan Dale
01:54:35 --> 01:54:39:
                          and Kevin for your participation and input today and turn
01:54:40 --> 01:54:43:
                          the con back over to ULI to close this out.
01:54:43 --> 01:54:45:
                          Alright, thank you very much Maria,
01:54:45 --> 01:54:46:
                          and thank you all the panelists.
01:54:46 --> 01:54:48:
                          We are staying over. I don't know if any of
01:54:48 --> 01:54:51:
                          the panelists can stay over to maybe answer a few
01:54:51 --> 01:54:51:
                          more questions,
01:54:51 --> 01:54:54:
                          but from now until 3:30 we are going to have
01:54:54 --> 01:54:58:
                          an open session to discuss the Coastal forum and how
01:54:58 --> 01:55:01:
                          it might be more helpful and the future between the
01:55:01 --> 01:55:04:
                          two sessions. We try to have every spring and every
01:55:04 --> 01:55:05:
                          fall,
01:55:05 --> 01:55:08:
                          but before we open that officially and if we can
01:55:08 --> 01:55:11:
                          answer any additional questions and the panelists can stay
                          on
01:55:11 --> 01:55:13:
                          now thank you very much.
01:55:13 --> 01:55:14:
                          I think the staff is.
01:55:14 --> 01:55:19:
                          Help put together an extremely beneficial program fitting so
                          much
01:55:19 --> 01:55:21:
                          information in such a such type.
01:55:21 --> 01:55:26:
                          A tight time frame. It's very difficult really appreciate each
01:55:26 --> 01:55:30:
                          panelist and the moderators for being able to synthesize the
01:55:30 --> 01:55:34:
                          core information that points that need to be shared and
01:55:34 --> 01:55:38:
                          raised as many questions as we have answers for because
01:55:38 --> 01:55:42:
                          we're here to try to figure out how and in
01:55:42 --> 01:55:45:
                          the short time we have before it's here.
01:55:45 --> 01:55:47:
                          And because in some places it is here for the
01:55:47 --> 01:55:49:
                          lowest lying communities,
01:55:49 --> 01:55:51:
                          sea level rise chases us away from the coast.
01:55:51 --> 01:55:54:
                          And how do we plan to deal with that from
01:55:54 --> 01:55:56:
                          where we are to where we might need to be
01:55:56 --> 01:55:57:
                          in 100 years?
01:55:57 --> 01:56:00:
                          So again thanks everyone for that.
01:56:00 --> 01:56:04:
                          If there is anyone who could stay and certainly appreciate
01:56:04 --> 01:56:08:
                          your thoughts on how we go forward with the coastal
01:56:08 --> 01:56:08:
                          form.
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01:54:17 --> 01:54:17:

Alright,

01:56:08> 01:56:13:	but wanted to encourage you to stay abreast even if
01:56:13> 01:56:15:	you're not a member of EU Li.
01:56:15> 01:56:18:	We try to make the coastal form open to more
01:56:18> 01:56:21:	of an audience than just the ULI members.
01:56:21> 01:56:23:	So certainly spread the word.
01:56:23> 01:56:28:	Let's increase the network and therefore increase the shared knowledge
01:56:28> 01:56:31:	that we happy are happy to to share as best
01:56:31> 01:56:32:	we can.
01:56:32> 01:56:35:	Some of the questions that we may not have had
01:56:35> 01:56:38:	time to get to really dealt with the OMB or
01:56:38> 01:56:43:	the other other federal policies that might kind of overarched
01:56:43> 01:56:45:	some of the legislation, or some of the way that
01:56:45> 01:56:46:	grants work.
01:56:46> 01:56:50:	You know what are the things that communities need in
01:56:50> 01:56:54:	order to have that community wide planning enabled?
01:56:54> 01:56:56:	You know, is there something already there that we can
01:56:57> 01:56:57:	use?
01:56:57> 01:56:58:	How do we get feedback?

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