

## Webinar

## Water Wise Development Coalition Meeting - 6

Date: June 05, 2024

00:00:26> 00:00:26:	Hi, everyone.
00:00:26> 00:00:28:	Thank you so much for joining us today.
00:00:29> 00:00:33:	This is the Watersmart Development Coalition meeting for this quarter.
00:00:33> 00:00:36:	I'm Mariana Big, Senior Director of Resilience for ULI, and
00:00:37> 00:00:39:	we would love it if you all just took a
00:00:39> 00:00:42:	moment to introduce yourself in the chat box, maybe your
00:00:42> 00:00:45:	name, title, organization and where you're calling in from today.
00:00:54> 00:00:58:	For anyone who's new here, the Water Wise Development Coalition
00:00:58> 00:01:01:	is led by you Ally in partnership with the Alliance
00:01:01> 00:01:05:	for Water Efficiency, the Sonoran Institute, and the Water Now
00:01:05> 00:01:05:	Alliance.
00:01:06> 00:01:10:	And we're convening land use and real estate professionals with
00:01:10> 00:01:14:	public sector decision makers to support and advance Watersmart real
00:01:14> 00:01:17:	estate development and supportive policies.
00:01:18> 00:01:21:	We have quarterly virtual meetings that are open to anyone.
00:01:21> 00:01:24:	So if there are others who you think might be
00:01:24> 00:01:27:	interested, please share information about this coalition.
00:01:27> 00:01:30:	You're also welcome to share my contact information with folks
00:01:30> 00:01:32:	and I'm happy to add them to the list.
00:01:32> 00:01:35:	And at the end of each meeting, we have a
00:01:35> 00:01:38:	discussion and you all can help contribute to brainstorming what
00:01:38> 00:01:41:	topics you would like to see coming up in this
00:01:41> 00:01:42:	coalition.

00:01:43> 00:01:46:	Today's agenda is exciting.
00:01:46> 00:01:49:	It's going to be on the topic of water conservation
00:01:49> 00:01:50:	and affordability.
00:01:50> 00:01:54:	We have 3 speakers today, starting with Benji Smith, who's
00:01:55> 00:01:59:	a PhD candidate at the Wharton School, followed by Caroline
00:01:59> 00:02:03:	Koch with the Water Now Alliance, and then finally Joel
00:02:03> 00:02:06:	Benson, who is the planning director and former mayor of
00:02:07> 00:02:08:	Buena Vista Co.
00:02:07> 00:02:00:	And they all have really exciting things to share on
00:02:11> 00:02:14:	this topic of water conservation and affordability.
00:02:14> 00:02:17:	And please stay on the line for the group discussion
00:02:17> 00:02:17:	and updates at the end.
00:02:17> 00:02:19:	We have a lot coming up for you.
00:02:22> 00:02:24:	And with that, I'll turn it over to our first
00:02:24> 00:02:24:	,
00:02:25> 00:02:25:	speaker.
00:02:25> 00:02:25:	Benji.
00:02:33> 00:02:36:	All right.
00:02:36> 00:02:40:	And there we go.
00:02:40> 00:02:44:	So hi, as as Marianne was saying, I'm Benji.
	I'm getting my PhD at the University of Pennsylvania and
00:02:44> 00:02:48:	the Wharton School and I'm presenting one of the topics
00:02:48> 00:02:52:	in my dissertation, which is trying to understand how cities
00:02:52> 00:02:56:	and water departments are affecting, if they're affecting housing markets
00:02:57> 00:02:59:	and how they are affecting housing markets.
00:03:01> 00:03:04:	So I'll jump right into, it was just like a
00:03:04> 00:03:08:	big picture, like what do we know about tap fees?
00:03:09> 00:03:11:	And just to define the nomenclature that I'm using, like
00:03:11> 00:03:15:	tap fees, connection charges, plant investment fees, these things seem
00:03:15> 00:03:17:	to go by different names in every place, but I'm,
00:03:17> 00:03:19:	I'm talking about the same thing.
00:03:20> 00:03:23:	And I, I'd argue that the answer to that question
00:03:23> 00:03:25:	is not very much just like to start off with
00:03:25> 00:03:28:	like, what do we know in the first place?
00:03:29> 00:03:32:	The largest like survey that I could find out there
00:03:32> 00:03:34:	is by the Alliance for Water Efficiency.
00:03:35> 00:03:38:	They surveyed 50 fast growing counties to collect data on
00:03:38> 00:03:41:	what are tap fees across different places.
00:03:41> 00:03:45:	And I have listed here three different sizes that are,
00:03:45> 00:03:49:	you know, we might see come into a, a single
00:03:49> 00:03:53:	family home, you know, they average 2003 thousand \$4000,
	but

00:03:53> 00:03:56:	seemingly with a pretty heavy right tail.
00:03:56> 00:03:59:	So there's, you know, a lot of places where it
00:03:59> 00:04:01:	costs a lot more than that.
00:04:03> 00:04:06:	But to build in some parts of the West, developers
00:04:06> 00:04:07:	must dedicate water rights.
00:04:07> 00:04:09:	These water rights can get quite expensive.
00:04:10> 00:04:13:	So really, you know, my, my research asked the question,
00:04:13> 00:04:15:	as these water fees continue to, to go up, how
00:04:15> 00:04:18:	is this going to affect, how is this going to
00:04:18> 00:04:19:	affect housing markets?
00:04:20> 00:04:24:	So big picture, like what are the economics of tap
00:04:24> 00:04:24:	fees?
00:04:25> 00:04:28:	And to answer that question, I'm going to start off
00:04:29> 00:04:31:	by rebranding them as water impact fees.
00:04:31> 00:04:34:	Because once we talk about impact fees, we have, you
00:04:34> 00:04:37:	know, a framework to think about this where I have
00:04:37> 00:04:41:	here very much a non, non exhaustive list of different
00:04:41> 00:04:44:	types of land use regulations that we might think about.
00:04:45> 00:04:47:	Typically we might think about things like zoning or
	community
00:04:48> 00:04:50:	involvement and the types of projects that get built.
00:04:50> 00:04:53:	You know, one form of a land use regulation is
00:04:53> 00:04:54:	categories, developer exaction.
00:04:54> 00:04:57:	So when a developer wants to to build something, they
00:04:57> 00:05:00:	might have to dedicate land or improve the site.
00:05:00> 00:05:03:	They also might have to pay these these sorts of
00:05:03> 00:05:07:	impact fees and we know that land use regulations have
00:05:07> 00:05:10:	intended consequences and unintended consequences.
00:05:10> 00:05:12:	Not going to hang my hat on which here are
00:05:12> 00:05:15:	intended and which are unintended because I very much think
00:05:15> 00:05:17:	that that is up is up for debate.
00:05:17> 00:05:19:	But to be generous, you know, we might think that
00:05:19> 00:05:22:	land use regulations are going to and impact fees are
00:05:22> 00:05:24:	going to increase the quality of infrastructure.
00:05:24> 00:05:28:	You know, presumably these fees are paying for something, you
00:05:28> 00:05:31:	know, when more Parkland gets dedicated, that's going to increase.
00:05:31> 00:05:34:	Local amenities having impact fees is a way to, you
00:05:34> 00:05:38:	know, fairly put these costs on different sorts of on
00:05:38> 00:05:42:	on different sorts of residents that existing residents don't
	have

00:05:42> 00:05:46:	to pay for the infrastructure for new development.
00:05:47> 00:05:50:	But we also know that there are a lot of
00:05:50> 00:05:54:	other potential things that land use regulations might, might
	affect.
00:05:54> 00:05:57:	They might affect house prices, you know, through some of
00:05:57> 00:06:00:	these channels, you know, if a neighborhood becomes more
	desirable
00:06:00> 00:06:03:	because they're more parks, that might change house prices.
00:06:03> 00:06:06:	But simply increasing the level of the fee without changing
00:06:06> 00:06:10:	the local open amenity might also affect house prices because,
00:06:10> 00:06:13:	you know, there are higher costs for developers.
00:06:14> 00:06:16:	They might have incentives that change the types of homes
00:06:16> 00:06:17:	that get built.
00:06:19> 00:06:22:	Water impact fees we might think could change water use
00:06:22> 00:06:25:	itself and there might be some sort of a spillover
00:06:25> 00:06:29:	where when one jurisdiction changes their fees and the
	structure
00:06:29> 00:06:33:	of their fees, it affects what's happening for for different
00:06:33> 00:06:34:	jurisdictions.
00:06:34> 00:06:37:	And again, this is a non exhausted list of the
00:06:37> 00:06:41:	intended and unintended consequences of of these sorts of, of
00:06:41> 00:06:42:	land use regulations.
00:06:45> 00:06:51:	So zooming out, utilities, local governments, they have various policy
00:06:51> 00:06:54:	tools that they can use to affect water use in
00:06:55> 00:06:56:	new developments.
00:06:57> 00:06:59:	The first one is just going to be, you know,
00:06:59> 00:07:00:	water prices.
00:07:00> 00:07:03:	Everybody has a monthly people who live in utility service
00:07:03> 00:07:07:	areas and are connected to those utilities have monthly water
00:07:07> 00:07:08:	prices that they pay.
00:07:09> 00:07:11:	Those might have increasing block rates.
00:07:12> 00:07:14:	They might just be a constant charge.
00:07:14> 00:07:16:	We know that this is going to affect how much
00:07:16> 00:07:17:	water use actually happens.
00:07:19> 00:07:23:	Local cities can incentivize or or mandate low water use
00:07:23> 00:07:28:	in new homes through landscape codes, system design
	standards.
00:07:29> 00:07:32:	But in particular, what I'm going to be with my
00:07:32> 00:07:35:	dissertation studies is looking at what some folks over at
00:07:35> 00:07:40:	Western Resource Advocates have branded conservation oriented tap fees.

00:07:42> 00:07:45:	I have kind of a a prototypical example of it
00:07:45> 00:07:46:	on the left here.
00:07:46> 00:07:49:	This is what the water impact fee to build a
00:07:49> 00:07:53:	new home in Aurora, Co, the real largest city in
00:07:53> 00:07:56:	the state, one of the fastest growing cities in the
00:07:56> 00:07:59:	state has been since, you know, since 1985.
00:08:00> 00:08:02:	And we can see that, you know, for the 1st
00:08:02> 00:08:05:	15 years of this panel, it didn't matter if you
00:08:05> 00:08:08:	built a 20,000 square foot detached house, you know, on
00:08:08> 00:08:11:	1/2 acre or if you built a 4000 square foot
00:08:11> 00:08:14:	detached house, you know, on 1/10 of an acre, you'd
00:08:14> 00:08:16:	be paying the same amount of fees even though one
00:08:17> 00:08:19:	of those houses might end up using a lot more
00:08:19> 00:08:21:	water than another house.
00:08:22> 00:08:25:	And you know, as these prices have increased over time,
00:08:25> 00:08:28:	this is, you know, introduce this concern that there's going
00:08:28> 00:08:30:	to be some sort of effect of these impact fees
00:08:30> 00:08:33:	on housing affordability if these costs are being passed on
00:08:33> 00:08:34:	to to home buyers.
00:08:35> 00:08:39:	And that's one of the questions that my that my
00:08:39> 00:08:43:	research asks so quickly, just like what is the data
00:08:43> 00:08:47:	that I'm going to use to try to understand the
00:08:47> 00:08:51:	consequences of, of tap fees on housing markets?
00:08:52> 00:08:54:	Start off with where am I studying?
00:08:54> 00:08:57:	I'm studying the 15 counties in the Front Range of
00:08:57> 00:08:57:	Colorado.
00:08:58> 00:09:01:	You can think as far north as Fort Collins, Greeley
00:09:01> 00:09:04:	South or Denver all the way down to Colorado Springs.
00:09:05> 00:09:09:	And I'm going to be using data from county tax
00:09:09> 00:09:10:	assessors offices.
00:09:11> 00:09:13:	So and my study.
00:09:13> 00:09:15:	Is going to be 2000 to 2019 a really rich
00:09:15> 00:09:19:	time if we're trying to understand how new housing
	construction
00:09:19> 00:09:23:	is affected by by water policies because about a half
00:09:23> 00:09:26:	million new housing units get built in this time, we're
00:09:26> 00:09:30:	going to need to know something about water utilities and
00:09:30> 00:09:33:	their service areas and what their tap fees are.
00:09:34> 00:09:36:	So I went about the process of collecting that that
00:09:36> 00:09:37:	data.
00:09:37> 00:09:39:	That was approximately a summer of my life.
00:09:41> 00:09:43:	And then finally, we're going to want to know something

00:09:43> 00:09:44:	about water use.
00:09:45> 00:09:48:	You know, we have this great administrative data from tax
00:09:48> 00:09:51:	assessors offices on what gets built, but we don't have
00:09:51> 00:09:54:	great data across places as to how water intensive housing
00:09:54> 00:09:55:	gets built.
00:09:56> 00:09:58:	So instead I'm, I'm just going to turn to some
00:09:58> 00:10:00:	remotely sensed data, which I'm showing you here on the
00:10:00> 00:10:01:	right.
00:10:01> 00:10:04:	You can clearly see, you know, the parcel lines that
00:10:04> 00:10:08:	I've laid out here showing, you know, individual property
	boundaries.
00:10:08> 00:10:11:	We can see that some houses seem to have a
00:10:11> 00:10:14:	lot more outdoor irrigation than other houses.
00:10:15> 00:10:17:	And in fact, we're able to to quantify that and
00:10:17> 00:10:20:	measure that and turn this into a measure of how
00:10:20> 00:10:23:	much landscape area different properties have.
00:10:27> 00:10:29:	So before I get into, you know, some of the
00:10:29> 00:10:32:	statistics and the insights that I'm able to draw from
00:10:32> 00:10:35:	this data, what are just like some, like some means,
00:10:35> 00:10:37:	you know, just some averages.
00:10:37> 00:10:40:	What are, what are some of the basic things I
00:10:40> 00:10:42:	can, I can tell you guys and you know, I
00:10:42> 00:10:45:	think a first fact that's, that's new is that if
00:10:45> 00:10:48:	you're looking for some of the most expensive water fees
00:10:48> 00:10:50:	in the country, the Front Range of Colorado is, is
00:10:50> 00:10:51:	the place to look.
00:10:52> 00:10:56:	I find that that these fees when you include water
00:10:57> 00:11:01:	dedication requirements averaged \$25,000 by the year 2022.
00:11:03> 00:11:05:	So if this is a quite an expensive place to
00:11:05> 00:11:08:	to build new housing and if we take this and
00:11:08> 00:11:12:	you know, those are nominal dollars, I think everybody these
00:11:12> 00:11:15:	days is more comfortable and familiar with the term inflation.
00:11:16> 00:11:19:	We could compare these nominal dollars to and turn them
00:11:19> 00:11:22:	into real dollars by using this Gray line here that
00:11:22> 00:11:24:	tracks inflation over time.
00:11:24> 00:11:27:	You can see that, you know, these impact fees are
00:11:27> 00:11:29:	going up way faster than inflation.
00:11:29> 00:11:31:	They're going up faster than construction costs.
00:11:31> 00:11:33:	They're even going up faster than house prices.
00:11:38> 00:11:41:	Using the data that I have on irrigated areas and
00:11:41> 00:11:44:	on lot sizes, we can also look how how these
00:11:44> 00:11:47:	have changed over time for for new single family homes.

00:11:49> 00:11:52:	And we can pretty clearly see that the amount of
00:11:52> 00:11:55:	irrigated landscaping going in for the median new house is
00:11:55> 00:11:57:	going down over time.
00:11:57> 00:12:00:	There's some real caveats to this, to this figure, but
00:12:00> 00:12:03:	I, I, I, the, the data is, you know, strongly
00:12:03> 00:12:07:	suggestive that for whatever reason, be them regulations, things that
00:12:07> 00:12:10:	are happening on either the demand side, you know, consumer
00:12:11> 00:12:14:	preferences for irrigated lawns, or the supply side, the cost
00:12:14> 00:12:18:	of providing them there is, you know, something is happening
00:12:18> 00:12:21:	that's causing single family housing to be built on smaller
00:12:21> 00:12:23:	lots and with less landscaping.
00:12:25> 00:12:30:	And finally, these conservation oriented tap fees, you know these
00:12:30> 00:12:33:	tap fees that incentivize less water use for new housing,
00:12:33> 00:12:37:	these are becoming more common over time as I track
00:12:37> 00:12:41:	them, they've increased from about 30% of new construction happened
00:12:41> 00:12:45:	underneath one of these these sorts of fees and that
00:12:45> 00:12:48:	number has increased to about 60% by the year 2019.
00:12:52> 00:12:54:	So I'm going to skip over the methodology because I'm
00:12:55> 00:12:57:	guessing nobody really wants to see that, but I'm happy
00:12:57> 00:12:59:	to answer questions on it if anybody has any.
00:13:01> 00:13:02:	As far as you know, the topic we're here to
00:13:02> 00:13:05:	talk about today, which is, you know, equity and affordability.
00:13:06> 00:13:08:	And the one of the main results of my research
00:13:08> 00:13:11:	is that when you increase water fees by a dollar,
00:13:11> 00:13:13:	you increase house prices by a dollar.
00:13:14> 00:13:17:	And before we say, hey, that's like the most obvious
00:13:17> 00:13:19:	result in the world, I, I actually think it's not
00:13:19> 00:13:21:	a particularly obvious result.
00:13:21> 00:13:23:	You know, if some places make it more expensive to
00:13:23> 00:13:26:	build there, you know, becomes more expensive to build in
00:13:26> 00:13:29:	jurisdiction aid, then development might simply shift over to a
00:13:29> 00:13:30:	jurisdiction B.
00:13:31> 00:13:33:	And that's going to mean that land markets are going
00:13:33> 00:13:35:	to be able to intermediate these changes in fees.
00:13:36> 00:13:39:	There is, you know, market power where, you know, large
00:13:39> 00:13:42:	developers might choose to eat some of these fees in
00:13:42> 00:13:43:	order to sell more houses.
00:13:43> 00:13:45:	So I, I think this is a non obvious, but
00:13:45> 00:13:46:	a consequential result.

00:13:48> 00:13:51:	And it's worth saying that this is a result that
00:13:51> 00:13:54:	I find for, for new houses, but but I also
00:13:54> 00:13:56:	find for existing homes.
00:13:56> 00:13:59:	So if you make it a dollar more expensive to
00:13:59> 00:14:03:	build, you know, somebody's house in Aurora, then it's that
00:14:03> 00:14:05:	their house price is going to go up by a
00:14:06> 00:14:06:	dollar.
00:14:06> 00:14:08:	You can think of this as, you know, there's an
00:14:08> 00:14:09:	opportunity cost to these fees.
00:14:09> 00:14:13:	It's become more expensive to build that person's home to
00:14:13> 00:14:14:	replace that person's home.
00:14:14> 00:14:17:	So the market is is going to cause those sorts
00:14:17> 00:14:19:	of homes to become more expensive.
00:14:23> 00:14:26:	I also find that these conservation oriented tap fees, this
00:14:26> 00:14:28:	is less relevant to what we're talking about today, but
00:14:28> 00:14:30:	I think it's to a larger point.
00:14:31> 00:14:34:	You know, these programs which incentivize low water use among
00:14:34> 00:14:36:	new homes, I find that they they are successful in
00:14:36> 00:14:38:	what they're they're trying to do.
00:14:39> 00:14:42:	They caused their new development to have smaller irrigated
	areas
00:14:42> 00:14:44:	and say hello to my cat.
00:14:42> 00:14:44: 00:14:44> 00:14:45:	and say hello to my cat.  He's very friendly.
00:14:44> 00:14:45:	He's very friendly.
00:14:44> 00:14:45: 00:14:45> 00:14:47:	He's very friendly. He really only says hello during Zoom calls.
00:14:44> 00:14:45: 00:14:45> 00:14:47: 00:14:49> 00:14:52:	He's very friendly.  He really only says hello during Zoom calls.  I find that these fees cause development to happen on
00:14:44> 00:14:45: 00:14:45> 00:14:47: 00:14:49> 00:14:52: 00:14:52> 00:14:56:	He's very friendly.  He really only says hello during Zoom calls.  I find that these fees cause development to happen on smaller lots, that it causes new development to be more
00:14:44> 00:14:45: 00:14:45> 00:14:47: 00:14:49> 00:14:52: 00:14:52> 00:14:56: 00:14:56> 00:14:59:	He's very friendly.  He really only says hello during Zoom calls.  I find that these fees cause development to happen on smaller lots, that it causes new development to be more likely to be in fill and that indeed there is
00:14:44> 00:14:45: 00:14:45> 00:14:47: 00:14:49> 00:14:52: 00:14:52> 00:14:56: 00:14:56> 00:14:59: 00:14:59> 00:15:01:	He's very friendly.  He really only says hello during Zoom calls.  I find that these fees cause development to happen on smaller lots, that it causes new development to be more likely to be in fill and that indeed there is some sort of a spillover effect.
00:14:44> 00:14:45: 00:14:45> 00:14:47: 00:14:49> 00:14:52: 00:14:52> 00:14:56: 00:14:56> 00:14:59: 00:14:59> 00:15:01: 00:15:04> 00:15:07:	He's very friendly.  He really only says hello during Zoom calls.  I find that these fees cause development to happen on smaller lots, that it causes new development to be more likely to be in fill and that indeed there is some sort of a spillover effect.  And just to generalize here, this is suggestive that, you
00:14:44> 00:14:45: 00:14:45> 00:14:47: 00:14:49> 00:14:52: 00:14:52> 00:14:56: 00:14:56> 00:14:59: 00:14:59> 00:15:01: 00:15:04> 00:15:07: 00:15:07> 00:15:10:	He's very friendly.  He really only says hello during Zoom calls.  I find that these fees cause development to happen on smaller lots, that it causes new development to be more likely to be in fill and that indeed there is some sort of a spillover effect.  And just to generalize here, this is suggestive that, you know, water policies are affecting both the pattern of urban
00:14:44> 00:14:45: 00:14:45> 00:14:47: 00:14:49> 00:14:52: 00:14:52> 00:14:56: 00:14:56> 00:14:59: 00:14:59> 00:15:01: 00:15:04> 00:15:07: 00:15:07> 00:15:10: 00:15:10> 00:15:13:	He's very friendly.  He really only says hello during Zoom calls.  I find that these fees cause development to happen on smaller lots, that it causes new development to be more likely to be in fill and that indeed there is some sort of a spillover effect.  And just to generalize here, this is suggestive that, you know, water policies are affecting both the pattern of urban form and, and urbanizing places and the cost of urban
00:14:44> 00:14:45: 00:14:45> 00:14:47: 00:14:49> 00:14:52: 00:14:52> 00:14:56: 00:14:56> 00:14:59: 00:14:59> 00:15:01: 00:15:04> 00:15:07: 00:15:10> 00:15:10: 00:15:10> 00:15:13:	He's very friendly.  He really only says hello during Zoom calls.  I find that these fees cause development to happen on smaller lots, that it causes new development to be more likely to be in fill and that indeed there is some sort of a spillover effect.  And just to generalize here, this is suggestive that, you know, water policies are affecting both the pattern of urban form and, and urbanizing places and the cost of urban living, which I think runs counter to a lot of
00:14:44> 00:14:45: 00:14:45> 00:14:47: 00:14:49> 00:14:52: 00:14:52> 00:14:56: 00:14:56> 00:14:59: 00:14:59> 00:15:01: 00:15:04> 00:15:07: 00:15:10> 00:15:10: 00:15:10> 00:15:13: 00:15:13> 00:15:15:	He's very friendly.  He really only says hello during Zoom calls.  I find that these fees cause development to happen on smaller lots, that it causes new development to be more likely to be in fill and that indeed there is some sort of a spillover effect.  And just to generalize here, this is suggestive that, you know, water policies are affecting both the pattern of urban form and, and urbanizing places and the cost of urban living, which I think runs counter to a lot of the intuition that's out there that, you know, water utilities
00:14:44> 00:14:45: 00:14:45> 00:14:47: 00:14:49> 00:14:52: 00:14:52> 00:14:56: 00:14:56> 00:14:59: 00:14:59> 00:15:01: 00:15:04> 00:15:07: 00:15:10> 00:15:10: 00:15:10> 00:15:13: 00:15:13> 00:15:15: 00:15:16> 00:15:22:	He's very friendly.  He really only says hello during Zoom calls.  I find that these fees cause development to happen on smaller lots, that it causes new development to be more likely to be in fill and that indeed there is some sort of a spillover effect.  And just to generalize here, this is suggestive that, you know, water policies are affecting both the pattern of urban form and, and urbanizing places and the cost of urban living, which I think runs counter to a lot of the intuition that's out there that, you know, water utilities don't particularly play a role in, in land use regulations
00:14:44> 00:14:45: 00:14:45> 00:14:47: 00:14:49> 00:14:52: 00:14:52> 00:14:56: 00:14:56> 00:14:59: 00:14:59> 00:15:01: 00:15:04> 00:15:07: 00:15:10> 00:15:10: 00:15:10> 00:15:13: 00:15:13> 00:15:15: 00:15:16> 00:15:22: 00:15:22> 00:15:24:	He's very friendly.  He really only says hello during Zoom calls.  I find that these fees cause development to happen on smaller lots, that it causes new development to be more likely to be in fill and that indeed there is some sort of a spillover effect.  And just to generalize here, this is suggestive that, you know, water policies are affecting both the pattern of urban form and, and urbanizing places and the cost of urban living, which I think runs counter to a lot of the intuition that's out there that, you know, water utilities don't particularly play a role in, in land use regulations and, and what gets built.
00:14:44> 00:14:45: 00:14:45> 00:14:47: 00:14:49> 00:14:52: 00:14:52> 00:14:56: 00:14:56> 00:14:59: 00:14:59> 00:15:01: 00:15:04> 00:15:07: 00:15:10> 00:15:10: 00:15:10> 00:15:13: 00:15:13> 00:15:15: 00:15:14> 00:15:15: 00:15:15> 00:15:15: 00:15:14> 00:15:22: 00:15:24> 00:15:27:	He's very friendly.  He really only says hello during Zoom calls.  I find that these fees cause development to happen on smaller lots, that it causes new development to be more likely to be in fill and that indeed there is some sort of a spillover effect.  And just to generalize here, this is suggestive that, you know, water policies are affecting both the pattern of urban form and, and urbanizing places and the cost of urban living, which I think runs counter to a lot of the intuition that's out there that, you know, water utilities don't particularly play a role in, in land use regulations and, and what gets built.  I think one of the lessons of my research is
00:14:44> 00:14:45: 00:14:45> 00:14:47: 00:14:49> 00:14:52: 00:14:52> 00:14:56: 00:14:56> 00:14:59: 00:14:59> 00:15:01: 00:15:04> 00:15:07: 00:15:10> 00:15:10: 00:15:10> 00:15:13: 00:15:13> 00:15:15: 00:15:14> 00:15:15: 00:15:15> 00:15:22: 00:15:24> 00:15:27: 00:15:27> 00:15:30:	He's very friendly.  He really only says hello during Zoom calls.  I find that these fees cause development to happen on smaller lots, that it causes new development to be more likely to be in fill and that indeed there is some sort of a spillover effect.  And just to generalize here, this is suggestive that, you know, water policies are affecting both the pattern of urban form and, and urbanizing places and the cost of urban living, which I think runs counter to a lot of the intuition that's out there that, you know, water utilities don't particularly play a role in, in land use regulations and, and what gets built.  I think one of the lessons of my research is that they, they actually, you know, and, and Colorado in
00:14:44> 00:14:45: 00:14:45> 00:14:47: 00:14:49> 00:14:52: 00:14:52> 00:14:56: 00:14:56> 00:14:59: 00:14:59> 00:15:01: 00:15:04> 00:15:07: 00:15:10> 00:15:10: 00:15:10> 00:15:13: 00:15:13> 00:15:15: 00:15:14> 00:15:15: 00:15:15> 00:15:22: 00:15:24> 00:15:27: 00:15:27> 00:15:30: 00:15:30> 00:15:34:	He's very friendly.  He really only says hello during Zoom calls.  I find that these fees cause development to happen on smaller lots, that it causes new development to be more likely to be in fill and that indeed there is some sort of a spillover effect.  And just to generalize here, this is suggestive that, you know, water policies are affecting both the pattern of urban form and, and urbanizing places and the cost of urban living, which I think runs counter to a lot of the intuition that's out there that, you know, water utilities don't particularly play a role in, in land use regulations and, and what gets built.  I think one of the lessons of my research is that they, they actually, you know, and, and Colorado in particular, it seems like they are, and as water becomes
00:14:44> 00:14:45: 00:14:45> 00:14:47: 00:14:49> 00:14:56: 00:14:52> 00:14:56: 00:14:56> 00:14:59: 00:14:59> 00:15:01: 00:15:04> 00:15:07: 00:15:10> 00:15:10: 00:15:10> 00:15:13: 00:15:16> 00:15:19: 00:15:22> 00:15:22: 00:15:24> 00:15:30: 00:15:30> 00:15:34: 00:15:34> 00:15:37:	He's very friendly.  He really only says hello during Zoom calls.  I find that these fees cause development to happen on smaller lots, that it causes new development to be more likely to be in fill and that indeed there is some sort of a spillover effect.  And just to generalize here, this is suggestive that, you know, water policies are affecting both the pattern of urban form and, and urbanizing places and the cost of urban living, which I think runs counter to a lot of the intuition that's out there that, you know, water utilities don't particularly play a role in, in land use regulations and, and what gets built.  I think one of the lessons of my research is that they, they actually, you know, and, and Colorado in particular, it seems like they are, and as water becomes more scarce and water utilities start to have more programs
00:14:44> 00:14:45: 00:14:45> 00:14:47: 00:14:49> 00:14:52: 00:14:52> 00:14:56: 00:14:56> 00:14:59: 00:14:59> 00:15:01: 00:15:04> 00:15:07: 00:15:07> 00:15:10: 00:15:10> 00:15:13: 00:15:13> 00:15:15: 00:15:14> 00:15:22: 00:15:22> 00:15:24: 00:15:24> 00:15:30: 00:15:30> 00:15:34: 00:15:34> 00:15:41:	He's very friendly.  He really only says hello during Zoom calls.  I find that these fees cause development to happen on smaller lots, that it causes new development to be more likely to be in fill and that indeed there is some sort of a spillover effect.  And just to generalize here, this is suggestive that, you know, water policies are affecting both the pattern of urban form and, and urbanizing places and the cost of urban living, which I think runs counter to a lot of the intuition that's out there that, you know, water utilities don't particularly play a role in, in land use regulations and, and what gets built.  I think one of the lessons of my research is that they, they actually, you know, and, and Colorado in particular, it seems like they are, and as water becomes more scarce and water utilities start to have more programs that affect new development, this is something that we can

00:15:47> 00:15:50:	the questions that I have, although I, I think that
00:15:50> 00:15:53:	they're really interesting and open things up to some, some
00:15:53> 00:15:56:	questions if, if any folks have any questions at this
00:15:56> 00:15:57:	point.
00:15:58> 00:16:01:	I I do, I'm sorry, I tried to find where
00:16:01> 00:16:02:	I can raise my hand.
00:16:02> 00:16:03:	I'm Patrick Watson.
00:16:03> 00:16:04:	I'm with the Southern Nevada Water Authority.
00:16:05> 00:16:08:	So the tap fee, does that, is that just a
00:16:08> 00:16:12:	connection charge to existing infrastructure or do does the utility
00:16:12> 00:16:17:	bring the infrastructure there or does the developer have to
00:16:17> 00:16:20:	build, put the infrastructure in and then tap into the
00:16:20> 00:16:21:	line?
00:16:22> 00:16:22:	Yeah.
00:16:22> 00:16:25:	So these are just the fees for that the developer
00:16:25> 00:16:28:	is paying to the water utility or to the city.
00:16:29> 00:16:32:	I'm not including anything about what the developer actually has
00:16:32> 00:16:34:	to pay, but what the developer pays in order to
00:16:34> 00:16:36:	build the infrastructure necessary.
00:16:37> 00:16:39:	Yeah, I'm, I'm, not including any of that.
00:16:39> 00:16:42:	I hope that answers your question because every, every place
00:16:42> 00:16:45:	I I'm sure you're familiar runs these tap fees a
00:16:45> 00:16:46:	little bit differently.
00:16:47> 00:16:49:	So I think that's an an answer for my data
00:16:49> 00:16:53:	on average, although I'm sure there's some some differences across
00:16:53> 00:16:53:	places.
00:17:04> 00:17:05:	Great presentation, Benji.
00:17:05> 00:17:06:	Thank you.
00:17:07> 00:17:09:	You can stop sharing your screen and then we can
00:17:09> 00:17:10:	also kind of see each other.
00:17:10> 00:17:13:	We have a few more minutes for questions for Benji
00:17:13> 00:17:16:	if anyone has any other questions for Benji.
00:17:25> 00:17:26:	Yeah, this is Kevin.
00:17:27> 00:17:29:	If we have a few minutes, I'd like to see
00:17:29> 00:17:32:	his questions that he had that he flipped through unless
00:17:32> 00:17:33:	there are other questions.
00:17:38> 00:17:40:	I can do a quick little share here of yeah,
00:17:41> 00:17:43:	of my of my main questions that I that I
00:17:43> 00:17:46:	have, which is I guess first of all, it's just

00:17:46> 00:17:48:	simply the results of my research.
00:17:48> 00:17:49:	Is this a good or a bad thing?
00:17:50> 00:17:53:	Are these sorts of conservation oriented tap fees and more
00:17:53> 00:17:57:	generally utilities getting in the game of regulating land use?
00:17:57> 00:17:58:	Is this, is this a good policy tool?
00:18:00> 00:18:03:	If we step back and, and ask, ask an economist
00:18:03> 00:18:06:	such as myself, we would tell you that, you know,
00:18:06> 00:18:10:	efficiency is going to look like development paying for its
00:18:10> 00:18:10:	own costs.
00:18:10> 00:18:13:	So places that have higher water use paying higher fees
00:18:13> 00:18:16:	because it costs more for the utility to connect them
00:18:16> 00:18:18:	to the public water system.
00:18:18> 00:18:21:	Would that be bigger pipes buying more water rights, you
00:18:21> 00:18:24:	know, having to go through more demand management practices?
00:18:26> 00:18:28:	You know, and I would put that under the bucket
00:18:28> 00:18:29:	of, of internalities.
00:18:29> 00:18:32:	So this is something that the utility faces themselves, but
00:18:32> 00:18:36:	it's worth acknowledging that there are externalities to water use
00:18:37> 00:18:38:	from a legal perspective.
00:18:38> 00:18:40:	I'll caveat that I'm not a lawyer.
00:18:40> 00:18:42:	My understanding is that you're allowed to legally price these
00:18:42> 00:18:43:	internalities.
00:18:43> 00:18:47:	But externalities, I, I think it's a little bit dicier,
00:18:47> 00:18:49:	You know, pulling water out of a local rivers is
00:18:49> 00:18:51:	going to harm local water quality.
00:18:51> 00:18:53:	It may harm local farming.
00:18:53> 00:18:56:	So it's going to have some sort of negative externalities,
00:18:56> 00:18:57:	but it also has positive externalities.
00:18:58> 00:19:03:	We know that having irrigated landscaping increases local
00.10.00> 00.13.00.	house prices,
00:19:03> 00:19:07:	you know, that is giving people wealth fundamentally.
00:19:07> 00:19:10:	And we also know that it can do things like
00:19:10> 00:19:11:	mitigate heat islands.
00:19:11> 00:19:14:	So I think in general, my, my answer to whether
00:19:14> 00:19:17:	or not these types of tools are a good thing
00:19:17> 00:19:19:	or, or a bad thing is that it, it depends
00:19:19> 00:19:23:	on the circumstance, But you know, charging high water users
00:19:23> 00:19:26:	for their, for their high water use seems to be
00:19:26> 00:19:27:	like a good thing to me.
00:19:30> 00:19:32:	In terms of like kind of, it seems to me
	or mic imic or, it doding to mo

00:19:32> 00:19:35:	what's, where's the most relevant policy question today is that
00:19:35> 00:19:38:	it's, you know, it's banning turf for, for new housing
00:19:38> 00:19:38:	units.
00:19:40> 00:19:42:	And I, I think that this, this might be a
00:19:42> 00:19:42:	good tool.
00:19:42> 00:19:46:	It might be a bad tool, especially if it's happening
00:19:46> 00:19:49:	and it's being paired with lower fees for, for new,
00:19:49> 00:19:52:	for new construction, then this might be a tool that
00:19:52> 00:19:54:	helps with housing affordability.
00:19:56> 00:19:59:	That's, you know, because my, my results suggests that the,
00:19:59> 00:20:02:	the pass through effect of these, these impact fees is
00:20:02> 00:20:02:	symmetric.
00:20:02> 00:20:04:	So, you know, when impact fees go up, it causes
00:20:05> 00:20:06:	house prices to go up, but when they go down,
00:20:07> 00:20:08:	it causes house prices to go down.
00:20:09> 00:20:12:	And the last thing is just, again, I'm not a
00:20:12> 00:20:14:	lawyer, but I, I follow along these sorts of things
00:20:14> 00:20:17:	that, you know, there's a Supreme Court case this year
00:20:17> 00:20:21:	that has some pretty serious ramifications for developer exaction, exactions
00:20:21> 00:20:24:	centered in California, because California is some of the most
00:20:24> 00:20:26:	burdensome impact fees in the country.
00:20:27> 00:20:29:	But as I've shown you guys here today, Colorado also
00:20:29> 00:20:31:	has some quite burdensome impact fees.
00:20:32> 00:20:34:	So I have to wonder whether or not any of
00:20:34> 00:20:36:	these sorts of things are are going to end up
00:20:36> 00:20:38:	being thought about in the legal system and.
00:20:43> 00:20:48:	We have another question, Benji, in the chat box Mike:
00:20:48> 00:20:51:	is asking are water fees paid upfront and in full
00:20:52> 00:20:54:	or are they part of the mortgage?
00:20:54> 00:20:58:	If they're paid in full upfront, then the \$1.00 increase
00:20:58> 00:21:01:	in home price over a 30 year mortgage would actually
00:21:01> 00:21:04:	be, you know, point OO \$0.02 per dollar increase per
00:21:05> 00:21:05:	month.
00:21:07> 00:21:09:	I think tap fees are normally paid upfront by the
00:21:09> 00:21:09:	developer, right?
00:21:10> 00:21:10:	Yeah.
00:21:10> 00:21:13:	So I should have clarified that, yes, these tap fees
00:21:13> 00:21:16:	are, are paid at the time that a building permit
00:21:16> 00:21:16:	is issued.
00:21:17> 00:21:20:	You know, these sort of water dedication sometimes

happens at 00:21:20 --> 00:21:23: the time of subdivision, but before the unit gets built 00:21:23 --> 00:21:25: is the, is the answer to your question. 00:21:25 --> 00:21:28: And you know, you're, you're right that it's, you know, 00:21:28 --> 00:21:31: a \$1.00 is relatively small once you amortize it over 00:21:31 --> 00:21:31: over 30 years. 00:21:32 --> 00:21:35: But you know, these, these sorts of fees definitely they, 00:21:36 --> 00:21:36: they add up. 00:21:36 --> 00:21:36: Great. 00:21:39 --> 00:21:40: Good questions. 00:21:42 --> 00:21:45: And I just encourage everyone to please put your questions, 00:21:45 --> 00:21:47: if you'd like to, anytime in the chat box to 00:21:48 --> 00:21:50: everyone so that the speakers can see them as well. 00:21:51 --> 00:21:52: If you just put them to me, I might not 00:21:52 --> 00:21:53: see them. 00:21:53 --> 00:21:55: So make sure that your questions are going to everybody. 00:21:57 --> 00:21:58: I have one more question, if we have time, Marianne. 00:21:59 --> 00:21:59: Yeah, go ahead. 00:22:00 --> 00:22:04: I was curious if you saw any differences across like 00:22:04 --> 00:22:10: what type of water development utility like communities are developing 00:22:10 --> 00:22:13: in order to meet their expected new demand? 00:22:13 --> 00:22:17: And if you saw sort of differences around what types 00:22:17 --> 00:22:21: of water supplies they're building, enhancing, developing in order to 00:22:21 --> 00:22:23: meet the new demand. 00:22:23 --> 00:22:26: And if that had any difference about what was higher 00:22:26 --> 00:22:28: or lower, anything in that? 00:22:28 --> 00:22:29: I'd be curious. 00:22:29 --> 00:22:31: Yeah, so great question. 00:22:31 --> 00:22:35: Something that I am really interested in, but fundamental it 00:22:35 --> 00:22:39: fundamentally it seems to me that most water utilities tend 00:22:39 --> 00:22:43: to hold the information on their water portfolios not being 00:22:43 --> 00:22:47: the world's most open information for I'm sure a variety 00:22:47 --> 00:22:47: of reasons. 00:22:48 --> 00:22:50: So unfortunately, I don't have great data on that question, 00:22:50 --> 00:22:52: although I'm super interested in it.

00:22:48 --> 00:22:50: So unfortunately, I don't have great data on that question, although I'm super interested in it.
00:22:52 --> 00:22:55: And if anybody knows anywhere that that sort of data is systematically collected on the what different, what a cross section of cities, different water portfolios looks like, it's Al think it's an unopened an unanswered question out there in the literature at this point.

00:23:13> 00:23:13:	Excellent.
00:23:14> 00:23:15:	Thank you so much, Benji.
00:23:15> 00:23:16:	And Benji will stay on the line.
00:23:16> 00:23:19:	So if you have further follow up questions for him,
00:23:19> 00:23:20:	please put them in the chat box.
00:23:20> 00:23:22:	I'm already seeing some come up.
00:23:22> 00:23:26:	Benji, if you don't mind responding, but we're going to
00:23:26> 00:23:28:	head on to our next speaker, Carolyn.
00:23:36> 00:23:37:	Thank you.
00:23:37> 00:23:38:	Thanks Benji.
00:23:38> 00:23:40:	That was super interesting.
00:23:41> 00:23:44:	Some questions on my own, but hi everyone.
00:23:44> 00:23:46:	Thanks so much for having me.
00:23:46> 00:23:50:	I'm Caroline Cook, the the water policy director for Water
00:23:50> 00:23:50:	Now Alliance.
00:23:52> 00:23:55:	And yeah, looking forward to this conversation today.
00:23:57> 00:24:01:	Quickly, for those who are not familiar with our organization,
00:24:01> 00:24:05:	Water Now is a nonprofit network for local water decision
00:24:05> 00:24:11:	makers like yourselves who are advancing sustainable, affordable, equitable and
00:24:11> 00:24:15:	climate resilient water solutions across that the one water spectrum.
00:24:17> 00:24:20:	So just to put into context here a little bit,
00:24:20> 00:24:22:	sustainable is a term that has many meanings.
00:24:23> 00:24:27:	So I'll note for Water Now, it means providing safe,
00:24:27> 00:24:32:	healthy, and affordable water services for people while preserving the
00:24:32> 00:24:37:	integrity of water resources and the environment for future generations.
00:24:39> 00:24:43:	So equity is also a term that can mean different
00:24:43> 00:24:44:	things for different groups.
00:24:45> 00:24:50:	For Water Now, it means universal access to secure, affordable,
00:24:50> 00:24:55:	safe and healthy drinking water and wastewater and stormwater management
00:24:55> 00:24:56:	services.
00:24:57> 00:25:00:	So hopefully that tells you a little bit more about
00:25:00> 00:25:04:	water now, but in this context, we also think a
00:25:04> 00:25:07:	lot about what equitable water infrastructure means.
00:25:09> 00:25:13:	So for US, distributed water solutions are a big part
00:25:13> 00:25:13:	of this.
00:25:14> 00:25:17:	And these are the things that can provide climate resilience
00:25:17> 00:25:23:	and affordability while supplementing and extending those

	certifalized systems and
00:25:23> 00:25:27:	addressing a wide range of drinking water, wastewater and storm
00:25:27> 00:25:28:	water challenges.
00:25:29> 00:25:34:	So these programs allow cities, towns and utilities like yours
00:25:34> 00:25:38:	to pay for and subsidized these decentralized solutions
	across many
00:25:39> 00:25:42:	properties that they don't own, but are then still key
00:25:43> 00:25:47:	to sustainable water management for those communities.
00:25:48> 00:25:52:	And because they are by their nature distributed across the
00:25:53> 00:25:58:	community, these localized strategies offer ways for water managers to
00:25:58> 00:26:04:	locate the needed water infrastructure improvements in neighborhoods and communities
00:26:04> 00:26:10:	that have previously disproportionately borne the impacts of challenges like
00:26:10> 00:26:16:	combined sewer overflows, storm water pollution, flooding and drought.
00:26:16> 00:26:19:	As well as those that are most in need of
00:26:19> 00:26:23:	the Co benefits that these localized solutions can provide.
00:26:24> 00:26:28:	Like that urban greening that we talked about reducing urban
00:26:28> 00:26:33:	heat island that Benji mentioned creating permanent green jobs.
00:26:34> 00:26:39:	So in other words, these distributed infrastructure really is equitable
00:26:39> 00:26:44:	infrastructure because it can help ensure adjust allocation of costs
00:26:44> 00:26:47:	and benefits among water utility stakeholders.
00:26:48> 00:26:50:	But what am I talking about?
00:26:50> 00:26:52:	What are what are these distributed solutions?
00:26:53> 00:26:55:	So really these are the strategies that are going to
00:26:56> 00:26:57:	be located at or near the point of use.
00:26:58> 00:27:00:	And hopefully these will be familiar to you.
00:27:00> 00:27:07:	Things like bioswales, permeable pavement, green roofs and rain gardens,
00:27:08> 00:27:13:	water wise lawns, which we'll we'll talk more about in
00:27:13> 00:27:18:	a little bit and probably our top of mind for
00:27:18> 00:27:25:	you all, leak detection devices, indoor water efficient appliances as
00:27:25> 00:27:29:	well as lead service line replacements.
00:27:29> 00:27:33:	So again, these are all under that umbrella of distributed
00:27:33> 00:27:39:	infrastructure because they are on property decentralized throughout the community,
00:27:39> 00:27:44:	usually on on private property, but sometimes on a public

centralized systems and

00:27:44> 00:27:48:	property not otherwise eyened or centralled by utility
00:27:50> 00:27:54:	property not otherwise owned or controlled by utility.  So one of the key equity benefits of these distributed
00:27:54> 00:27:57:	strategies is that they help keep water affordable.
00:27:59> 00:28:03:	So installing water use efficiency measures as Benji was talking
00:28:03> 00:28:06:	about can help keep homeowners bills down.
00:28:07> 00:28:10:	It can also reduce lawn maintenance since drought tolerant landscape
00:28:10> 00:28:13:	require less mowing, which can also lead to a cost
00:28:13> 00:28:14:	savings.
00:28:15> 00:28:20:	These distributed strategies are often cheaper than conventional options which
00:28:20> 00:28:22:	can help keep utility costs down.
00:28:22> 00:28:28:	You probably have experienced that conservation is your cheapest force
00:28:28> 00:28:32:	of supply, the lower water use or on site stormwater
00:28:32> 00:28:33:	management or both.
00:28:33> 00:28:38:	Benefits of these distributed strategies also help keep
	developer costs
00:28:38> 00:28:42:	down as we've seen again from from Bendy's look at
00:28:42> 00:28:46:	those conservation oriented tap fees and then we can also
00:28:46> 00:28:49:	lower on site stormwater management costs.
00:28:54> 00:28:57:	And then affordability is not the only benefit of having
00:28:57> 00:29:01:	of investing in these equitable distributed infrastructure strategies.
00:29:02> 00:29:06:	There are also additional Co benefits, a few of which
00:29:06> 00:29:10:	we highlighted here that could accrue to the development community.
00:29:12> 00:29:16:	So for example, water efficient fixtures and landscaping reduces water
00:29:16> 00:29:21:	consumption, which then again translates into lower utility bills and
00:29:21> 00:29:25:	those cost saving aspects can make homes more attractive to
00:29:25> 00:29:26:	buyers.
00:29:26> 00:29:31:	Having these measures in place can also increase property value
00:29:31> 00:29:35:	and that homes that are more environmentally friendly and cost
00:29:35> 00:29:39:	effective in the long run may also be more marketable
00:29:39> 00:29:43:	as that the aspect is more becoming more popular with
00:29:43> 00:29:44:	home buyers.
00:29:45> 00:29:48:	And then this can also lead to a higher ROI
00:29:48> 00:29:53:	for developers, keeping those costs down and increasing demand.

00:29:54> 00:29:59:	And then these environmentally friendly, sustainable practices can also help
00:29:59> 00:30:04:	positively impact developers reputation in the community, also helping to
00:30:04> 00:30:05:	increase demand.
00:30:06> 00:30:11:	And then in the water use efficiency context, particularly in
00:30:11> 00:30:17:	Colorado, these indoor and outdoor efficiency strategies can also make
00:30:17> 00:30:21:	it easier to comply with regulations like Colorado's ban on
00:30:21> 00:30:26:	non pictural turf and other regulatory requirements.
00:30:27> 00:30:32:	So we thought we'd share an example of these equity
00:30:32> 00:30:37:	and affordability benefits from Westminster.
00:30:37> 00:30:40:	So just a quick note that I've adapted these slides
00:30:40> 00:30:43:	from another presentation we did with Drew Beckwith, like with
00:30:43> 00:30:44:	the City a little while back.
00:30:44> 00:30:48:	So if folks from Westminster are in the audience, please
00:30:48> 00:30:51:	feel free to add in any details that I I
00:30:51> 00:30:51:	might miss.
00:30:54> 00:30:57:	So Westminster implements a number of water use efficiency and
00:30:57> 00:31:00:	assistance programs as you can see on the slide.
00:31:01> 00:31:04:	So for today I'm gonna focus in on their multi
00:31:04> 00:31:09:	family fixture replacements and those lawn replacement programs.
00:31:13> 00:31:17:	For the multi fixture replacement program, the city in partnership
00:31:18> 00:31:22:	with the Mile High Youth Corps directly installs efficient fixtures
00:31:22> 00:31:25:	and affordable housing developments.
00:31:26> 00:31:30:	So in one of these developments, in its first year
00:31:30> 00:31:36:	at the Orchard Crossing affordable housing property, the Mile High
00:31:36> 00:31:42:	Youth Corps replaced 83 toilets, 20 kitchen aerators, 84 bathroom
00:31:42> 00:31:47:	aerators, and eight shower heads across 72 residential units.
00:31:48> 00:31:52:	And these are all EPA Water Sense certified models that
00:31:52> 00:31:56:	use at least 20% less water than the current industry
00:31:56> 00:31:59:	standard at the same or better level of service.
00:32:00> 00:32:03:	So again, these numbers are from a little while ago,
00:32:03> 00:32:05:	so there may be some updates since then, but jobs
00:32:06> 00:32:07:	are our point in time.
00:32:07> 00:32:13:	Example in terms of cost, the replacements totaled \$30,000 which
00:32:13> 00:32:16:	saw a return within six months.

00:32:16> 00:32:21:	And then after a year, the property owner saved \$65,000
00:32:21> 00:32:25:	on their water bills and saw a 40% decrease in
00:32:25> 00:32:26:	water use.
00:32:26> 00:32:31:	So relatively low hanging fruit there on the replacements and
00:32:31> 00:32:35:	the investment and the return on that for the lawn
00:32:35> 00:32:40:	replacement side Water Now and Western resource advocates have been
00:32:40> 00:32:45:	working with Westminster to evaluate the potential for expanding their
00:32:45> 00:32:50:	programs to assess and replace non functional turf throughout the
00:32:50> 00:32:50:	city.
00:32:51> 00:32:54:	So as part of this work, the project team did
00:32:54> 00:32:59:	an analysis of the irrigated turf in Westminster to identify
00:32:59> 00:33:03:	the potential areas of replacement, which are these green areas
00:33:04> 00:33:04:	here.
00:33:06> 00:33:11:	The team then identified the parcel types and estimated the
00:33:11> 00:33:16:	irrigated turf grass areas for those land use categories.
00:33:16> 00:33:20:	And you can see the mix here on the slide,
00:33:20> 00:33:25:	lots of residential and then CII being the next largest
00:33:25> 00:33:26:	category.
00:33:27> 00:33:31:	So we then did a scenario planning for both high
00:33:31> 00:33:36:	and low replacement scenarios, then found that the city could
00:33:36> 00:33:40:	potentially save 7 to 22% of its annual water use
00:33:40> 00:33:45:	by replacing the identified irrigated turf areas with water wise
00:33:45> 00:33:46: 00:33:47> 00:33:52:	landscaping.
00:33:52> 00:33:56:	So an benefit cost analysis also showed that the cost per acre foot of water saved is 84 to 86%
00:33:56> 00:34:03:	cheaper than buying what Westminster's traditional water
00:34:03> 00:34:08:	supplies which were compared to the CBT shares which is quite a big
00:34:08> 00:34:09:	avoided cost.
00:34:10> 00:34:13:	And our analysis also showed that the city could offer
00:34:14> 00:34:17:	rebates of \$1.50 to \$2.00 per square foot to property
00:34:17> 00:34:21:	owners, and the program would still be economical for both
00:34:21> 00:34:26:	the city and those private property owners receiving the
	incentives.
00:34:27> 00:34:30:	So we're gonna be publishing a full case study on
00:34:30> 00:34:35:	this turf analysis in Westminster, So stay tuned for that.
00:34:35> 00:34:39:	And we'll also be sharing a template tool for conducting
00:34:39> 00:34:43:	a similar benefit cost analysis, so you can see how
00:34:43> 00:34:47:	these programs would be stocking up in your community and

00:34:47> 00:34:50:	doing that avoided cost analysis.
00:34:53> 00:34:57:	So for Westminster's example, we see a few key takeaways
00:34:58> 00:34:59:	and lessons.
00:35:00> 00:35:04:	The water use efficiency measures and those affordable
	housing developments
00:35:04> 00:35:07:	really did provide significant water and cost savings.
00:35:08> 00:35:13:	Those cost savings can help support more affordable
	housing developments.
00:35:13> 00:35:18:	If you're saving, you know, \$65,000 for development, that
00:35:18> 00:35:19:	can
00:35:21> 00:35:25:	add up over time.
00:35:25> 00:35:29:	We also see that replacing non functional turf with water
00.33.23> 00.33.29.	wise landscape also results in significant water and cost savings
00:35:29> 00:35:34:	and that those incentives to install those drought tolerant
	lawns
00:35:34> 00:35:38:	really does benefit both the property owners and the water
00:35:38> 00:35:39:	systems.
00:35:41> 00:35:43:	There's some good takeaways there.
00:35:44> 00:35:47:	And then just to close out for my presentation today,
00:35:47> 00:35:49:	I'm happy to answer any questions.
00:35:50> 00:35:54:	I want to highlight a few resources in our Tapentry
00:35:54> 00:35:59:	Resilience Toolkit that Water Now has developed to support
00.33.34> 00.33.33.	adoption
00:35:59> 00:36:02:	·
	adoption
00:35:59> 00:36:02:	adoption of these distributed infrastructure strategies.
00:35:59> 00:36:02: 00:36:04> 00:36:08:	adoption of these distributed infrastructure strategies. So these include our Water Equity and Climate Resilience for
00:35:59> 00:36:02: 00:36:04> 00:36:08: 00:36:08> 00:36:09:	adoption of these distributed infrastructure strategies. So these include our Water Equity and Climate Resilience for Frontline Communities module.
00:35:59> 00:36:02: 00:36:04> 00:36:08: 00:36:08> 00:36:09: 00:36:10> 00:36:13:	adoption of these distributed infrastructure strategies. So these include our Water Equity and Climate Resilience for Frontline Communities module. This toolkit module is designed to help leaders at all levels within drinking water, wastewater, and stormwater
00:35:59> 00:36:02: 00:36:04> 00:36:08: 00:36:08> 00:36:09: 00:36:10> 00:36:13: 00:36:13> 00:36:18:	adoption of these distributed infrastructure strategies. So these include our Water Equity and Climate Resilience for Frontline Communities module. This toolkit module is designed to help leaders at all levels within drinking water, wastewater, and stormwater utilities, as well
00:35:59> 00:36:02: 00:36:04> 00:36:08: 00:36:08> 00:36:09: 00:36:10> 00:36:13: 00:36:13> 00:36:18:	adoption of these distributed infrastructure strategies. So these include our Water Equity and Climate Resilience for Frontline Communities module. This toolkit module is designed to help leaders at all levels within drinking water, wastewater, and stormwater utilities, as well as public works departments to navigate the climate
00:35:59> 00:36:02: 00:36:04> 00:36:08: 00:36:08> 00:36:09: 00:36:10> 00:36:13: 00:36:13> 00:36:18: 00:36:18> 00:36:22:	adoption of these distributed infrastructure strategies. So these include our Water Equity and Climate Resilience for Frontline Communities module. This toolkit module is designed to help leaders at all levels within drinking water, wastewater, and stormwater utilities, as well as public works departments to navigate the climate challenges that
00:35:59> 00:36:02: 00:36:04> 00:36:08: 00:36:08> 00:36:09: 00:36:10> 00:36:13: 00:36:13> 00:36:18:  00:36:18> 00:36:22:	adoption of these distributed infrastructure strategies. So these include our Water Equity and Climate Resilience for Frontline Communities module. This toolkit module is designed to help leaders at all levels within drinking water, wastewater, and stormwater utilities, as well as public works departments to navigate the climate challenges that they're facing.
00:35:59> 00:36:02: 00:36:04> 00:36:08: 00:36:08> 00:36:09: 00:36:10> 00:36:13: 00:36:13> 00:36:18:  00:36:18> 00:36:22:  00:36:22> 00:36:23: 00:36:24> 00:36:27:	adoption of these distributed infrastructure strategies. So these include our Water Equity and Climate Resilience for Frontline Communities module. This toolkit module is designed to help leaders at all levels within drinking water, wastewater, and stormwater utilities, as well as public works departments to navigate the climate challenges that they're facing. So within this part of the toolkit, you'll find a
00:35:59> 00:36:02: 00:36:04> 00:36:08: 00:36:08> 00:36:09: 00:36:10> 00:36:13: 00:36:13> 00:36:18:  00:36:18> 00:36:22:  00:36:22> 00:36:23: 00:36:24> 00:36:27: 00:36:27> 00:36:31:	adoption of these distributed infrastructure strategies. So these include our Water Equity and Climate Resilience for Frontline Communities module. This toolkit module is designed to help leaders at all levels within drinking water, wastewater, and stormwater utilities, as well as public works departments to navigate the climate challenges that they're facing. So within this part of the toolkit, you'll find a set of resources that are really curated to address the pressing needs of communities at the forefront of these
00:35:59> 00:36:02: 00:36:04> 00:36:08: 00:36:08> 00:36:09: 00:36:10> 00:36:13: 00:36:13> 00:36:18:  00:36:18> 00:36:22:  00:36:22> 00:36:23: 00:36:24> 00:36:27: 00:36:27> 00:36:31: 00:36:31> 00:36:35:	adoption of these distributed infrastructure strategies. So these include our Water Equity and Climate Resilience for Frontline Communities module. This toolkit module is designed to help leaders at all levels within drinking water, wastewater, and stormwater utilities, as well as public works departments to navigate the climate challenges that they're facing. So within this part of the toolkit, you'll find a set of resources that are really curated to address the pressing needs of communities at the forefront of these climate
00:35:59> 00:36:02: 00:36:04> 00:36:08: 00:36:08> 00:36:09: 00:36:10> 00:36:13: 00:36:13> 00:36:18:  00:36:18> 00:36:22:  00:36:22> 00:36:23: 00:36:24> 00:36:27: 00:36:27> 00:36:31: 00:36:31> 00:36:35:	adoption of these distributed infrastructure strategies. So these include our Water Equity and Climate Resilience for Frontline Communities module. This toolkit module is designed to help leaders at all levels within drinking water, wastewater, and stormwater utilities, as well as public works departments to navigate the climate challenges that they're facing. So within this part of the toolkit, you'll find a set of resources that are really curated to address the pressing needs of communities at the forefront of these climate challenges so that you can still provide clean, safe, healthy,
00:35:59> 00:36:02: 00:36:04> 00:36:09: 00:36:10> 00:36:13: 00:36:13> 00:36:18:  00:36:18> 00:36:22:  00:36:22> 00:36:23: 00:36:24> 00:36:27: 00:36:31> 00:36:31: 00:36:35> 00:36:39: 00:36:39> 00:36:43:	adoption of these distributed infrastructure strategies. So these include our Water Equity and Climate Resilience for Frontline Communities module. This toolkit module is designed to help leaders at all levels within drinking water, wastewater, and stormwater utilities, as well as public works departments to navigate the climate challenges that they're facing. So within this part of the toolkit, you'll find a set of resources that are really curated to address the pressing needs of communities at the forefront of these climate challenges so that you can still provide clean, safe, healthy, and reliable water for everyone in your community.
00:35:59> 00:36:02: 00:36:04> 00:36:09: 00:36:10> 00:36:13: 00:36:13> 00:36:18:  00:36:18> 00:36:22:  00:36:22> 00:36:23: 00:36:24> 00:36:27: 00:36:31> 00:36:35:  00:36:35> 00:36:39: 00:36:39> 00:36:43: 00:36:44> 00:36:48:	of these distributed infrastructure strategies.  So these include our Water Equity and Climate Resilience for Frontline Communities module.  This toolkit module is designed to help leaders at all levels within drinking water, wastewater, and stormwater utilities, as well as public works departments to navigate the climate challenges that they're facing.  So within this part of the toolkit, you'll find a set of resources that are really curated to address the pressing needs of communities at the forefront of these climate challenges so that you can still provide clean, safe, healthy, and reliable water for everyone in your community.  So just to highlight one of these curated resources is
00:35:59> 00:36:02: 00:36:04> 00:36:08: 00:36:08> 00:36:09: 00:36:10> 00:36:13: 00:36:13> 00:36:18:  00:36:18> 00:36:22:  00:36:22> 00:36:23: 00:36:24> 00:36:27: 00:36:27> 00:36:31: 00:36:35> 00:36:35:  00:36:35> 00:36:43: 00:36:44> 00:36:48: 00:36:48> 00:36:52:	of these distributed infrastructure strategies.  So these include our Water Equity and Climate Resilience for Frontline Communities module.  This toolkit module is designed to help leaders at all levels within drinking water, wastewater, and stormwater utilities, as well as public works departments to navigate the climate challenges that they're facing.  So within this part of the toolkit, you'll find a set of resources that are really curated to address the pressing needs of communities at the forefront of these climate challenges so that you can still provide clean, safe, healthy, and reliable water for everyone in your community.  So just to highlight one of these curated resources is a guide to developing a direct install program like we

00:37:00> 00:37:04:	in rebate programs because they can't afford the upfront costs
00:37:04> 00:37:09:	of installing those water efficient appliances or replacing their lawns.
00:37:10> 00:37:14:	So a direct install program can be a good solution
00:37:14> 00:37:14:	for that.
00:37:15> 00:37:18:	But there are some questions and and things to think
00:37:18> 00:37:21:	through and creating those types of programs.
00:37:21> 00:37:24:	So this resource and I'll put the link in the
00:37:24> 00:37:27:	chat to this is a step by step guide of
00:37:27> 00:37:29:	how to set those programs up.
00:37:30> 00:37:34:	And the another resource to highlight for today is the
00:37:34> 00:37:39:	tool kit section on ways to address affordability challenges within
00:37:39> 00:37:42:	with distributed infrastructure.
00:37:42> 00:37:47:	As we've been talking about, this section then provides some
00:37:47> 00:37:52:	strategies to help avoid shut offs by keeping homeowners bills
00:37:52> 00:37:59:	down through implementation and installation of water sufficiency conservation and
00:37:59> 00:38:04:	green infrastructure on those private properties to help keep their
00:38:04> 00:38:05:	bills low.
00:38:06> 00:38:11:	And we've got some examples of successful affordability programs in
00:38:11> 00:38:15:	Aurora, Philadelphia, Cleveland, as well as a few others.
00:38:15> 00:38:18:	So we'll put the link in the chat to that
00:38:19> 00:38:21:	part of the tool kit as well.
00:38:22> 00:38:24:	But for now, that's it from me.
00:38:25> 00:38:26:	Thanks again to everyone.
00:38:27> 00:38:30:	Great to be here and I'm happy to you answer
00:38:30> 00:38:31:	any questions.
00:38:34> 00:38:35:	Thank you, Caroline.
00:38:35> 00:38:36:	I'd love to just open it up.
00:38:36> 00:38:39:	Anyone's welcome to unmute or use the chat box?
00:38:39> 00:38:41:	Ask some questions.
00:38:57> 00:38:59:	I'm not hearing any.
00:39:00> 00:39:01:	Oops.
00:39:01> 00:39:03:	I think you did such a good job explaining everything,
00:39:03> 00:39:05:	Caroline, that no one has any questions.
00:39:05> 00:39:07:	I'm sure that's what it is.
00:39:08> 00:39:13:	I guess maybe I would be curious to see maybe
00:39:13> 00:39:18:	just hands or thumbs up from the group in the
00:39:18> 00:39:24:	the OR in the chat if these distributed strategies are

00:39:24 --> 00:39:31: a key part of your water infrastructure demand management programs. 00:39:32 --> 00:39:34: It's a question that we often ask folks. 00:39:34 --> 00:39:38: So be curious for this group if that if these 00:39:38 --> 00:39:41: are things that they're working on implementing. 00:39:43 --> 00:39:45: Yeah, if people can use their reactions to just raise their hand, or you can turn on your video and 00:39:45 --> 00:39:47: 00:39:47 --> 00:39:48: just raise your hand. 00:39:48 --> 00:39:51: Just let us know if you're using these strategies. 00:39:56 --> 00:39:57: I know some of you are. 00:39:57 --> 00:40:01: So yes, thank you. 00:40:06 --> 00:40:06: Excellent. 00:40:06 --> 00:40:07: Well, thanks. 00:40:07 --> 00:40:08: Thanks again everyone. 00:40:08 --> 00:40:10: I'm going to put those links in the in the 00:40:10 --> 00:40:10: chat. 00:40:11 --> 00:40:11: Thank you, Caroline. 00:40:11 --> 00:40:13: I see a couple other hands. 00:40:14 --> 00:40:15: Excellent. 00:40:16 --> 00:40:17: Thank you. 00:40:17 --> 00:40:19: OK, So we're going to go on to our final 00:40:19 --> 00:40:22: speaker, but if you have any questions for Caroline or 00:40:22 --> 00:40:24: Benji, please put them in the chat box and they 00:40:24 --> 00:40:25: can respond. 00:40:26 --> 00:40:26: All right. 00:40:26 --> 00:40:31: Our final speaker is Joel Benson with Buena Vista. Hi. 00:40:37 --> 00:40:37: 00:40:37 --> 00:40:38: Thank you very much. 00:40:38 --> 00:40:43: Let me just get my slideshow going here. 00:40:48 --> 00:40:49: Yeah, thank you all very much. 00:40:49 --> 00:40:53: I appreciate the opportunity to talk with you all. 00:40:54 --> 00:40:56: For those of you I see some of you are 00:40:56 --> 00:40:57: not in Colorado. 00:40:58 --> 00:41:03: So Buena Vista, we're about two hours or so southwest 00:41:03 --> 00:41:05: of Denver. 00:41:05 --> 00:41:05: We're in the mountains. 00:41:06 --> 00:41:10: We have a population of 2900 people and there's this 00:41:10 --> 00:41:15: picture is not from our town, but it's from Summit 00:41:15 --> 00:41:16: County nearby. 00:41:18 --> 00:41:21: And we're a little unique in, in that we own 00:41:21 --> 00:41:26: our own water and we produce our own water through 00:41:26 --> 00:41:28: our distribution system as well.

00:41:28 --> 00:41:31: And so all of our work we own and operate 00:41:31 --> 00:41:35: everything within within the town's water. 00:41:35 --> 00:41:36: And we don't really work. 00:41:36 --> 00:41:39: We work with some folk, some other like neighboring water 00:41:39 --> 00:41:40: Conservancy districts. 00:41:43 --> 00:41:48: But with that said too, we also know exactly how 00:41:48 --> 00:41:52: much water we have and it's not a it's not 00:41:52 --> 00:41:54: a lot of water. 00:41:55 --> 00:42:00: We also have tremendous growth and growth pressures. 00:42:00 --> 00:42:04: And so pretty quickly doing a little math, we can 00:42:04 --> 00:42:07: see that if we're not careful, we'll run out of 00:42:07 --> 00:42:09: water really soon, right? 00:42:09 --> 00:42:13: So within the next a few years. 00:42:13 --> 00:42:16: So we created a water allocation policy. 00:42:16 --> 00:42:18: And I'm just going to talk you kind of through 00:42:18 --> 00:42:19: what what that is. 00:42:19 --> 00:42:21: It's been developing over the last couple years. 00:42:22 --> 00:42:25: We just updated it really in March. 00:42:25 --> 00:42:28: But we've got some other ideas coming forward. 00:42:28 --> 00:42:31: And part of it is recognizing that we're not going 00:42:31 --> 00:42:35: to be able to build ourselves out of kind of 00:42:35 --> 00:42:38: a attainable housing, affordable housing issue. 00:42:39 --> 00:42:40: And can we use water? 00:42:41 --> 00:42:43: I mean, we can only build so many houses. 00:42:43 --> 00:42:46: So how can water, the use of water help that 00:42:47 --> 00:42:52: affordability as opposed to just letting developers come and build 00:42:52 --> 00:42:54: these \$1,000,000 homes? 00:42:55 --> 00:42:59: So, so why a water allocation policy? 00:42:59 --> 00:43:03: So, you know, we've recognized we've got this dual issue, 00:43:03 --> 00:43:07: both a limited water supply and a housing diversity shortage. 00:43:07 --> 00:43:11: And when I say limited water supply, like we have 00:43:11 --> 00:43:15: enough water for about 350 additional homes in town. 00:43:15 --> 00:43:16: That's it. 00:43:16 --> 00:43:23: So, and you know, the median, I guess the housing 00:43:23 --> 00:43:30: price was maybe \$450,000 last year, which is a lot. 00:43:30 --> 00:43:34: It's it's very difficult to find a house, one house 00:43:34 --> 00:43:36: just we just had a bidding award for a 25 00:43:37 --> 00:43:40: foot wide lot of house built on that for sold 00:43:40 --> 00:43:41: for \$1.8 million. 00:43:41 --> 00:43:42: So it's pretty expensive. 00:43:45 --> 00:43:48: We need housing sooner than later.

00:43:48> 00:43:52:	And so our policies hoping to encourage building sooner.
00:43:53> 00:43:56:	We don't want to give away the water and just
00:43:56> 00:44:00:	give people with with lots in town this this idea
00:44:00> 00:44:04:	that they can buy water or secure their water and
00:44:04> 00:44:06:	then for a lot, but never build on it.
00:44:07> 00:44:09:	And so trying to deter kind of this hedging on,
00:44:09> 00:44:12:	on water supply behavior that some people might do.
00:44:14> 00:44:17:	We want to get water to people when it's needed.
00:44:19> 00:44:23:	As long as we have infrastructure capacity, I guess this
00:44:23> 00:44:26:	is supply, but it it deals with the capacity of
00:44:26> 00:44:29:	our water treatment facility and also wells.
00:44:29> 00:44:32:	If we if we build a well or a secondary
00:44:32> 00:44:36:	well in town, we want to create some sort of
00:44:36> 00:44:42:	a balance of diversity projects for housing, commercial nonprofit organizations,
00:44:42> 00:44:44:	etcetera, schools.
00:44:45> 00:44:48:	And we're trying to be aware of the people come
00:44:48> 00:44:51:	in and build a big project as well as the
00:44:51> 00:44:54:	people who might have a minor subdivision or one lot
00:44:54> 00:44:58:	or accessory dwelling units or something for long and new
00:44:58> 00:44:59:	residents.
00:45:00> 00:45:03:	And we need some sort of flexibility because things change
00:45:03> 00:45:03:	over time.
00:45:03> 00:45:07:	So, so it all comes back to the context of
00:45:07> 00:45:08:	the community.
00:45:09> 00:45:12:	What's really important for our town is the values.
00:45:12> 00:45:15:	We have a community vision and everything drives toward that,
00:45:15> 00:45:17:	more so even than the comprehensive plan.
00:45:17> 00:45:21:	This is preluding to the comprehensive plan and looking at
00:45:21> 00:45:23:	the values and our vision.
00:45:23> 00:45:26:	We know water is limited.
00:45:26> 00:45:29:	It's a public good in our, in our opinion, even
00:45:29> 00:45:30:	though it's commodified.
00:45:31> 00:45:33:	We've got tremendous housing stress.
00:45:33> 00:45:35:	So there's a workforce housing issue.
00:45:36> 00:45:40:	We've got some areas in town that are ripe for
00:45:40> 00:45:41:	infill.
00:45:41> 00:45:44:	There's already infrastructure there, streets, roads, sidewalks, etcetera.
00:45:45> 00:45:48:	And so maintenance of of those are easier because they
00:45:48> 00:45:51:	already exist instead of building new ones.
00:45:51> 00:45:55:	And wherever we need new staff and there's already already

00:45:55 --> 00:45:59: the system in place, the infrastructure system. 00:46:02 --> 00:46:05: So we also have economic desires. 00:46:05 --> 00:46:07: What do we, what do people want? 00:46:07 --> 00:46:10: But then what is the town community need? 00:46:10 --> 00:46:14: So we're trying to balance all of these as well 00:46:14 --> 00:46:18: as maintain a sense of community within the within the 00:46:18 --> 00:46:19: town. 00:46:21 --> 00:46:26: So our assumptions going into creating these, I have to 00:46:26 --> 00:46:30: apologize at my slideshow is very plain. 00:46:30 --> 00:46:34: I don't have the fancy pictures and graphs and stuff, 00:46:34 --> 00:46:36: but it's easier to see and easier to make so 00:46:37 --> 00:46:40: I don't lose my mind trying to create something really 00:46:40 --> 00:46:42: cool like the previous two presenters. 00:46:42 --> 00:46:47: So anyway, the assumptions going into creating this water allocation 00:46:47 --> 00:46:51: policy, one is we're not going to build our way 00:46:51 --> 00:46:53: out of our housing issue. 00:46:54 --> 00:46:55: The more we build. 00:46:55 --> 00:46:58: And if we continue to build, we're going to increase 00:46:58 --> 00:46:59: the demand for the water anyway. 00:46:59 --> 00:47:01: We only have so much of that. 00:47:02 --> 00:47:06: We're also assuming that we're going to take a look 00:47:06 --> 00:47:10: at our dry air peak demand and we average that 00:47:10 --> 00:47:15: across all users at this point because that's our sophistication 00:47:15 --> 00:47:16: level. 00:47:17 --> 00:47:19: But we're not using like average numbers. 00:47:19 --> 00:47:24: We're using the, the dry year peak demand is our 00:47:24 --> 00:47:28: as our kind of base for how much water we 00:47:28 --> 00:47:32: can provide to people right now. 00:47:32 --> 00:47:35: We're using any kind of conservation tools. 00:47:35 --> 00:47:37: We're counting that as bonus water. 00:47:37 --> 00:47:41: We don't have the trend lines in place right now 00:47:41 --> 00:47:45: to show that any kind of, you know, getting rid 00:47:45 --> 00:47:49: of certain elements of turf or adding low, you know, 00:47:49 --> 00:47:53: low flow shower heads, etcetera is going to change or 00:47:54 --> 00:47:55: changes our our demand. 00:47:56 --> 00:47:59: We need a few more years of doing any kind 00:47:59 --> 00:48:04: of conservation measures to have enough security that we can 00:48:04 --> 00:48:07: count that as water that we can then give up 00:48:07 --> 00:48:09: to additional growth. 00:48:10 --> 00:48:14: We have some senior water rights in our water portfolio,

00110111 7 001101101	
00:48:16> 00:48:18:	So it gets back to that average year.
00:48:18> 00:48:21:	If there's a risk of a call being made on
00:48:21> 00:48:25:	our water supply, we don't count that in our portfolio
00:48:25> 00:48:27:	until some conditions change.
00:48:29> 00:48:31:	We've got a couple of water rights going through water
00:48:31> 00:48:32:	court.
00:48:32> 00:48:34:	We're not counting that until we know how much water
00:48:34> 00:48:35:	that is.
00:48:37> 00:48:41:	And again, we're not assuming, let's just build, they'll build
00:48:41> 00:48:45:	and give building permits for places until we have the
00:48:45> 00:48:49:	production and distribution system in place to actually handle that.
00:48:50> 00:48:52:	And and those are happening side by side.
00:48:53> 00:48:56:	So how our water policy works.
00:48:56> 00:49:00:	So first we have, we've set aside water for certain
00:49:00> 00:49:02:	categories of development.
00:49:03> 00:49:08:	We've got a geographic section of infill.
00:49:08> 00:49:13:	So again, where infrastructure already exists, we have some emergency
00:49:13> 00:49:17:	backup supply if there's a fire or something that interrupts
00:49:17> 00:49:19:	some of our production capacity.
00:49:20> 00:49:24:	We've set aside a certain amount of water, water supply
00:49:24> 00:49:27:	for workforce or affordable housing.
00:49:27> 00:49:30:	And there's some definitions for each of these.
00:49:30> 00:49:35:	We've set aside some for economic development or public nonprofit
00:49:35> 00:49:35:	use.
00:49:37> 00:49:40:	And then we have general development, which would be kind
00:49:40> 00:49:44:	of market rate housing and then small per smaller projects
00:49:44> 00:49:47:	that might be like an Adu at on someone's house
00:49:47> 00:49:48:	or something.
00:49:52> 00:49:56:	We at we do have a fee, a water dedication
00:49:56> 00:49:56:	fee.
00:49:56> 00:50:00:	So when you file for a building permit or a
00:50:00> 00:50:06:	public improvement agreement at a larger subdivision, then you, you
00:50:06> 00:50:09:	have to pay us to secure the use of that
00:50:09> 00:50:12:	water and what that fee is.
00:50:12> 00:50:16:	I know Benji's had a, you know, really great presentation
00:50:16> 00:50:16:	on that.
00:50:17> 00:50:18:	For us.
00:50:18> 00:50:22:	We have to have that fee because we don't, our

**00:48:14 --> 00:48:16:** but we have some that are not.

00:50:22> 00:50:27:	budget's so small, we cannot, we don't have to have
00:50:27> 00:50:30:	money to go secure the water or have any kind
00:50:31> 00:50:31:	of storage.
00:50:31> 00:50:34:	You know, we have to buy water storage rights, that
00:50:34> 00:50:35:	kind of thing.
00:50:35> 00:50:38:	So, so we need that for additional growth.
00:50:38> 00:50:41:	It's just, and, and we're using it, you know, we've
00:50:41> 00:50:44:	bought additional water already through this fee.
00:50:45> 00:50:47:	The particular category.
00:50:47> 00:50:50:	So I'm building a house and it's right, you know,
00:50:50> 00:50:54:	Boys and Girls Club is building a, a property, developing
00:50:54> 00:50:55:	a, a property.
00:50:55> 00:50:59:	And we say, OK, the the planning department, the trustees
00:50:59> 00:51:02:	say, yeah, that comes out of this particular bucket assuming
00:51:02> 00:51:04:	there's a credible commitment.
00:51:04> 00:51:07:	So we don't just say, yeah, you developer, you tell
00:51:07> 00:51:11:	us that it's a workforce housing, OK, here's water from
00:51:11> 00:51:12:	this bucket.
00:51:12> 00:51:16:	Like there needs to be some sort of credible commitment
00:51:16> 00:51:21:	attached to that for major subdivision you build and you
00:51:21> 00:51:25:	have 10 years to, to develop that and build out
00:51:25> 00:51:30:	that property for your major subdivision to make sure you
00:51:30> 00:51:31:	have that water.
00:51:32> 00:51:33:	You don't have to pay again.
00:51:33> 00:51:35:	But after 10 years, if you haven't used it, we
00:51:35> 00:51:37:	we can release that water to another development.
00:51:37> 00:51:42:	So that encourages at least a faster pace of development
00:51:42> 00:51:47:	since we need housing now, not 25 years down the
00:51:47> 00:51:47:	line.
00:51:50> 00:51:54:	And also for these major subdivisions as an incentive, it's
00:51:54> 00:51:58:	a disincentive for them, but it's incentive to to use
00:51:58> 00:52:01:	that water and to build sooner is that we have
00:52:01> 00:52:04:	a maintenance fee that kicks in after five years.
00:52:05> 00:52:07:	So every unit of water you haven't used after five
00:52:07> 00:52:10:	years and you have to pay an annual nominal maintenance
00:52:11> 00:52:11:	fee.
00:52:11> 00:52:14:	But it's at least encourages people to to build sooner.
00:52:17> 00:52:22:	So some of our lessons with doing this one is
00:52:22> 00:52:28:	planting and water is difficult to coordinate together.
00:52:28> 00:52:34:	They're different paradigms of, of water, public good, private
	good
00:52:34> 00:52:35:	commodities.

00:52:36> 00:52:39:	We have some opinions that say, oh, it'll, it'll rain
00:52:39> 00:52:42:	again, there's not a problem with water.
00:52:42> 00:52:45:	And then others we can't count on conservation as a
00:52:46> 00:52:46:	secure source.
00:52:47> 00:52:48:	So somewhere in between people lie.
00:52:49> 00:52:54:	And so it creates lots of discussions and it's sometimes
00:52:54> 00:52:59:	difficult to coordinate the various paradigms around staff.
00:52:59> 00:53:00:	And then it was in the public.
00:53:04> 00:53:07:	So we also have to adjust some of our ability
00:53:07> 00:53:09:	to pull from various categories.
00:53:10> 00:53:13:	Remember this is like a it's from a economic development
00:53:13> 00:53:17:	category or general category or affordable category.
00:53:17> 00:53:19:	So we need to add some sticks and carrots to
00:53:19> 00:53:23:	to this approach which we're in which we're doing.
00:53:24> 00:53:26:	It hasn't been tested too much yet.
00:53:26> 00:53:31:	We have one big development going in and 5051% of
00:53:31> 00:53:36:	their project is affordable because of this program that we
00:53:36> 00:53:37:	have.
00:53:38> 00:53:42:	They could easily pull from another category, but they recognize
00:53:42> 00:53:45:	this as an option and so they're pulling from that
00:53:45> 00:53:47:	workforce category.
00:53:50> 00:53:53:	We also need to, you know, continue to just build
00:53:53> 00:53:57:	some incentivizing some of the zoning options to to build
00:53:57> 00:53:59:	in more creativity for for builders.
00:54:01> 00:54:05:	There's also a, you know, this asymmetry of information where
00:54:06> 00:54:07:	the government's an open book.
00:54:07> 00:54:10:	Here's how much it costs to build and to take
00:54:10> 00:54:11:	care of things.
00:54:11> 00:54:13:	Here's how much water we have, here's the water rights
00:54:14> 00:54:15:	that we have, etcetera.
00:54:15> 00:54:18:	And it's the private industry.
00:54:18> 00:54:21:	Some people are very forthcoming and what they can do
00:54:21> 00:54:25:	and afford and help helping out the town and others
00:54:25> 00:54:29:	are not, you know, they keep their things close to
00:54:29> 00:54:29:	the vast.
00:54:29> 00:54:33:	So we don't know how much town is contributing and
00:54:33> 00:54:36:	how much they people could contribute.
00:54:36> 00:54:41:	So, so that's a difficulty and it builds, you know,
00:54:41> 00:54:45:	we have, we get a lot of promises and sometimes
00:54:45> 00:54:49:	people do what they say and sometimes they don't.
00:54:49> 00:54:52:	So we have to build in this credible commitment with

00:54:52 --> 00:54:52: that. 00:54:52 --> 00:54:56: So the other lesson, I guess thing that we've done 00:54:56 --> 00:55:01: is we've educated the public ad nauseam on all this 00:55:01 --> 00:55:01: stuff. 00:55:01 --> 00:55:05: So people are aware of what, how much water we 00:55:05 --> 00:55:10: have, the process, the planning, how much water is coming 00:55:10 --> 00:55:13: online and when etcetera, etcetera. 00:55:13 --> 00:55:15: So a lot of you know, open and an open 00:55:16 --> 00:55:19: book kind of mentality related to our water. 00:55:19 --> 00:55:24: So and that's it. 00:55:24 --> 00:55:28: That's those are the, the slides I have again, it's 00:55:28 --> 00:55:31: a, it's a, a work in progress. 00:55:31 --> 00:55:35: This water allocation policy, what it seeks to do is 00:55:35 --> 00:55:40: encourage certain types of building that we need now also 00:55:40 --> 00:55:45: living room for free market kinds of approach, especially when 00:55:45 --> 00:55:49: we only have, you know, very limited supply water that 00:55:49 --> 00:55:54: we can count on for residences absent new growth trends, 00:55:54 --> 00:55:59: etcetera, for conservation measures and stuff like that. 00:55:59 --> 00:56:04: So so with that, that's those are my that's my 00:56:04 --> 00:56:06: presentation. 00:56:06 --> 00:56:07: Any questions y'all? 00:56:08 --> 00:56:09: Thank you so much. 00:56:09 --> 00:56:11: Joel, we have a question from Patrick. 00:56:12 --> 00:56:14: Patrick, do you want to unmute and just ask? 00:56:16 --> 00:56:16: Sure. 00:56:17 --> 00:56:20: Yeah, whoop. 00:56:20 --> 00:56:20: All right. 00:56:20 --> 00:56:21: Can you hear me? 00:56:21 --> 00:56:22: Oh, sorry. 00:56:24 --> 00:56:24: Yeah. 00:56:24 --> 00:56:28: Joel, do you guys require developers, if you know if 00:56:28 --> 00:56:31: they're going to build, to put in or install water 00:56:31 --> 00:56:33: efficiency measures? 00:56:33 --> 00:56:37: Like you could start with fixtures and then, you know, 00:56:37 --> 00:56:41: indoor and outdoor irrigation, that type of thing and require 00:56:41 --> 00:56:43: water efficiency measures. 00:56:44 --> 00:56:45: Sure. 00:56:45 --> 00:56:49: You know, we've got some outdoor irrigation, There's some maximum 00:56:50 --> 00:56:54: landscape, there are landscaping requirements, but there's a Max of

00:56:55 --> 00:56:58: like turf and a Max of high efficiency or excuse 00:56:58 --> 00:57:03: me, high water use and encouraging drip irrigation, things like 00:57:03 --> 00:57:03: that. 00:57:03 --> 00:57:08: Through our might and God, we are creating a conservation 00:57:08 --> 00:57:11: plan right now that is in the final stages of 00:57:11 --> 00:57:16: its creation and then municipal code will follow with that. 00:57:16 --> 00:57:20: But there's not any mandates at this point. 00:57:22 --> 00:57:25: One of the things that we've done here and, and 00:57:25 --> 00:57:30: I'm sure you have service rules, you know, for rules 00:57:30 --> 00:57:33: for being connected to the system, right? 00:57:34 --> 00:57:39: And we, we use those extensively with development and a 00:57:39 --> 00:57:44: lot of things to, to make sure that people are 00:57:44 --> 00:57:48: using the water in the best way possible. 00:57:49 --> 00:57:52: And so I'm not, I don't know if you guys 00:57:52 --> 00:57:56: have considered that, but they're very powerful tools here. 00:57:56 --> 00:57:59: They're they'll they'll supersede a a code. 00:58:00 --> 00:58:01: And where are you, Patrick? 00:58:01 --> 00:58:05: I'm in Southern Nevada, I'm in Las Vegas area, so 00:58:05 --> 00:58:09: you know, and, and if you'd like to discuss that, 00:58:10 --> 00:58:12: I'm, I'm, I'm happy to do that. 00:58:12 --> 00:58:16: But service rules for us are are really powerful tools. 00:58:18 --> 00:58:18: Thank you. 00:58:25 --> 00:58:26: Joel, I have a question. 00:58:26 --> 00:58:28: Well, I have actually 2 questions. 00:58:28 --> 00:58:30: The 1st is you said you have a 10 year 00:58:30 --> 00:58:32: limit on the essentially on the water guarantee. 00:58:33 --> 00:58:35: Do you expedite entitlements? 00:58:35 --> 00:58:38: Are there issues with entitlements, things like that, that might 00:58:38 --> 00:58:39: cut into that 10 year limit? 00:58:40 --> 00:58:44: So it's 10 years from public improvement agreement, so from 00:58:45 --> 00:58:46: the final plat execution. 00:58:46 --> 00:58:50: So that's all the entitlements, everything's all all done and 00:58:50 --> 00:58:51: signed off. 00:58:53 --> 00:58:56: And at that point, that's when you're, yeah, you have 00:58:57 --> 00:58:58: that water guarantee. 00:58:58 --> 00:58:58: So. 00:58:59 --> 00:59:02: So that's a it should all be taken care of 00:59:02 --> 00:59:04: at that point, aside from building permits. 00:59:06 --> 00:59:06: Great. 00:59:06 --> 00:59:10: And then are you seeing an uptick in workforce or 00:59:10 --> 00:59:14: affordable housing since implementing this or it it didn't?

00:59:15> 00:59:17:	From your slides it it didn't seem like that was
00:59:17> 00:59:19:	necessarily the case, but I'd love to hear more.
00:59:20> 00:59:20:	Yeah.
00:59:20> 00:59:23:	So I mean, if, if I were to do a,
00:59:23> 00:59:27:	a strict like we did this and and then this
00:59:27> 00:59:31:	happened and there's a connection, then yes.
00:59:31> 00:59:34:	But I cannot put any kind of causal relationship on
00:59:34> 00:59:37:	it because at the same time there are a lot
00:59:37> 00:59:38:	of other initiatives.
00:59:38> 00:59:47:	So we have some significant, significant affordability projects coming to
00:59:48> 00:59:49:	the town.
00:59:49> 00:59:53:	One of them is tied to this, this particular water
00:59:53> 00:59:55:	allocation policy.
00:59:55> 00:59:59:	One of them is tied to our water dedication fee
00:59:59> 01:00:00:	in terms of.
01:00:03> 01:00:06:	Having to pay for more, you know, the dedicated water
01:00:06> 01:00:07:	for the landscaped areas.
01:00:07> 01:00:11:	And so there's a great reduction in the landscaping and
01:00:11> 01:00:14:	an increase in zeroscaping for it because of that to,
01:00:14> 01:00:17:	to avoid paying that water, which is great.
01:00:19> 01:00:23:	But you know, I can't say there's a causal relationship
01:00:23> 01:00:26:	that we we did this and therefore these projects.
01:00:26> 01:00:30:	1 is, like I said, about 51%, and it's tied
01:00:30> 01:00:34:	to this part, tied to this agreement or the policy
01:00:34> 01:00:37:	in part just because he's a really good guy and
01:00:37> 01:00:40:	he wants to do the right thing.
01:00:46> 01:00:46:	That's great.
01:00:46> 01:00:48:	And Stacey, do you want to unmute?
01:00:48> 01:00:50:	I know your questions for Caroline, but I think we
01:00:50> 01:00:52:	can open up questions to any of the speakers at
01:00:52> 01:00:52:	this point.
01:00:54> 01:00:54:	Sure.
01:00:54> 01:00:56:	Sorry my headphone was messed up.
01:00:57> 01:00:57:	Sure.
01:00:57> 01:01:00:	I just was kind of had taken a snip of
01:01:00> 01:01:05:	the orchard crop crossing property and had was thinking about
01:01:05> 01:01:09:	the significant water savings that you had received.
01:01:09> 01:01:12:	And I was curious if you had data on what
01:01:12> 01:01:15:	type of toilets they had before you did the upgrade
01:01:15> 01:01:18:	to the HE and when they moved to the HE.

01:01:23 --> 01:01:26: I don't know that off the top and I but 01:01:26 --> 01:01:29: let me I can always ask Drew with the city 01:01:29 --> 01:01:32: and we can follow up with you on that to 01:01:32 --> 01:01:34: get that that information. 01:01:34 --> 01:01:35: I'm sure he has it. 01:01:35 --> 01:01:37: Yeah, it would be, I mean it's, you know, not 01:01:37 --> 01:01:40: critical, but it's just really interesting because it, it is 01:01:41 --> 01:01:42: such a significant savings. 01:01:42 --> 01:01:44: It would be nice to share that and to be 01:01:44 --> 01:01:45: able to. 01:01:45 --> 01:01:47: I know that's the first question that people will ask 01:01:47 --> 01:01:47: 01:01:49 --> 01:01:50: Yeah, fair enough. 01:01:50 --> 01:01:52: We can we can definitely follow up with you, Stacy. 01:01:53 --> 01:01:58: I think the City of Westminster was also pleasantly surprised 01:01:58 --> 01:02:00: about the the results. 01:02:00 --> 01:02:03: So yeah, we can, we can follow up with you 01:02:03 --> 01:02:04: on that for sure. 01:02:05 --> 01:02:05: Fantastic. 01:02:05 --> 01:02:05: Thank you. 01:02:16 --> 01:02:19: I know we have a couple of developers on the 01:02:19 --> 01:02:23: line, Gautami with Howard Hughes and Jacob Atalla with KB 01:02:23 --> 01:02:23: Home. 01:02:23 --> 01:02:27: I'm wondering how as developers, how are you seeing these 01:02:27 --> 01:02:32: policies, especially related to tap fees for conservation or requirements 01:02:32 --> 01:02:35: a Southern Nevada water authority has or you know your 01:02:35 --> 01:02:39: view of water allocation policies, Although there are only a 01:02:39 --> 01:02:42: few places I think they are increasing in use. 01:02:43 --> 01:02:44: I'm wondering if you guys can unmute and just talk 01:02:44 --> 01:02:46: a little bit about that from your perspective. 01:02:51 --> 01:02:51: Sure. 01:02:51 --> 01:02:52: Hi, everyone. 01:02:52 --> 01:02:53: Can you hear me OK? 01:02:55 --> 01:02:56: It's a little hard. 01:02:58 --> 01:03:02: Yeah, my computer is not feeling very well today. 01:03:02 --> 01:03:02: So I got. 01:03:04 --> 01:03:07: But I was, I was mentioning in, in the, in 01:03:07 --> 01:03:10: the chat and you know, compliments to Patrick and his 01:03:10 --> 01:03:10: team. 01:03:11 --> 01:03:15: We are in the Southern Nevada Water District.

Was it a 1.28 or was it less?

01:01:18 --> 01:01:21:

01:03:15> 01:03:18:	Our community is called Summerlin in Nevada.
01:03:18> 01:03:21:	And I think one of the questions was about impact
01:03:22> 01:03:22:	on home sales.
01:03:23> 01:03:26:	And I, you know, I wanted to wanted to share
01:03:26> 01:03:30:	that we have, we have seen, you know, whether it's
01:03:30> 01:03:33:	correlated or not at the end of the day, we've
01:03:33> 01:03:38:	seen, you know, Summerland really outperform in our in home
01:03:38> 01:03:39:	sales and lot sales.
01:03:40> 01:03:42:	So I'd like to believe, I'd like to believe it's
01:03:42> 01:03:43:	correlated on this call.
01:03:43> 01:03:45:	But you know, that is that is yet to be
01:03:45> 01:03:46:	established.
01:03:46> 01:03:49:	However, we are, you know, really great fans of the
01:03:49> 01:03:51:	program and advocate and talk about it not just in
01:03:51> 01:03:54:	our Summerlin community, but other parts of the country as
01:03:54> 01:03:55:	well.
01:03:55> 01:03:58:	To say that, yeah, we it's not just in places
01:03:58> 01:04:01:	like this that we we have to conserve water.
01:04:01> 01:04:04:	We can take those ideas and implement them as well
01:04:04> 01:04:04:	as well.
01:04:12> 01:04:13:	Patrick, I saw that you're off mute.
01:04:14> 01:04:14:	Any, any.
01:04:14> 01:04:15:	Yeah.
01:04:15> 01:04:18:	You know, I, I would just add that, you know,
01:04:18> 01:04:22:	Summerlin, you know, they had in the beginning, you know,
01:04:22> 01:04:26:	they were using turf quite extensively and now they're removing
01:04:26> 01:04:30:	most of that and putting in blended landscapes where they're
01:04:30> 01:04:35:	blending natives, native plant species with, you know, with regular
01:04:35> 01:04:37:	plantings with drip irrigated.
01:04:37> 01:04:40:	But it, it, it looks stunning, It's beautiful.
01:04:40> 01:04:45:	And, and it hasn't really impacted anybody's ability or,
01:04:45> 01:04:49:	you know, their decision making process to buy homes in
01:04:49> 01:04:50:	Summerlin.
01:04:52> 01:04:52:	Great.
01:04:53> 01:04:54:	Thank you for that, Patrick.
01:04:54> 01:04:56:	And if I could extend that a little bit more.
01:04:57> 01:05:01:	Currently we're planning our community in in Arizona called
	Terra
01:05:01> 01:05:02:	Vallas.
01:05:03> 01:05:06:	And you know we're taking some of these lessons learned

01:05:06> 01:05:11:	even before regulations or requirements exist because we know these
01:05:11> 01:05:15:	are proven methods that work especially in the in this
01:05:15> 01:05:15:	region.
01:05:16> 01:05:18:	So we're we are hoping we can take it a
01:05:18> 01:05:20:	step forward even before the regulation is in place.
01:05:24> 01:05:24:	Excellent.
01:05:24> 01:05:25:	That's wonderful.
01:05:25> 01:05:28:	And that'll save you from having to replace anything later,
01:05:28> 01:05:29:	hopefully.
01:05:30> 01:05:31:	Wonderful.
01:05:31> 01:05:32:	Thank you, Gautami.
01:05:32> 01:05:32:	Problem.
01:05:35> 01:05:36:	Is anyone else having?
01:05:37> 01:05:37:	Go ahead.
01:05:38> 01:05:38:	Go ahead, Clint.
01:05:39> 01:05:42:	Yeah, so I worked for a home builder in in
01:05:42> 01:05:43:	Salt Lake City.
01:05:46> 01:05:49:	We do about 1200 homes a year and we landscape
01:05:49> 01:05:51:	maybe about 809 hundred a year.
01:05:52> 01:05:54:	And just to give you kind of the how we've
01:05:54> 01:05:58:	dealt with things last few years, it's about five years
01:05:58> 01:06:01:	ago we and I apologize, I'm not on camera 'cause
01:06:01> 01:06:02:	I'm driving.
01:06:02> 01:06:04:	So trying to be safe.
01:06:04> 01:06:09:	But we, we started the, one of the water Conservancy
01:06:09> 01:06:14:	districts here has a program that they started and kind
01:06:14> 01:06:18:	of became a statewide thing called Local Scaping.
01:06:22> 01:06:29:	And it's more, it's focused on, yes, use less water.
01:06:29> 01:06:32:	And they've found, as we've done it, that it uses
01:06:32> 01:06:36:	about 1/3 of the water of a typical traditional landscape,
01:06:36> 01:06:39:	which, you know, for builders around here has just been
01:06:40> 01:06:43:	grass everywhere except for a few feet next to the
01:06:43> 01:06:44:	foundation of the home.
01:06:46> 01:06:51:	And so we keep to no more than 30% of
01:06:51> 01:06:58:	the landscapable area of the lot being turf grass.
01:06:59> 01:07:02:	And, you know, certain restrictions, nothing skinnier than 8 feet,
01:07:02> 01:07:05:	only drip lines and planting beds, stuff like that.
01:07:06> 01:07:09:	And so we created the the program for us and
01:07:09> 01:07:13:	other builders in the state through the water districts to
01:07:13> 01:07:17:	follow these regulations upfront in the construction of the home.

01:07:18> 01:07:21:	And they would help with the with a rebate of
01:07:21> 01:07:25:	the additional cost because it it costs more it it
01:07:25> 01:07:28:	is more cost to maintain later to do more grass,
01:07:28> 01:07:30:	but it's cheaper upfront.
01:07:31> 01:07:36:	So it may be averaged about 12 hundred 1500 bucks
01:07:36> 01:07:40:	a home, but the water districts over the last few
01:07:40> 01:07:44:	years have gone to the cities and pushed a new
01:07:45> 01:07:51:	construction ordinance with the cities to require all these things
01:07:51> 01:07:53:	on new construction.
01:07:54> 01:07:56:	But they now that they've done that in a lot
01:07:56> 01:07:59:	of cities, they now say, well, we won't give you
01:07:59> 01:07:59:	a rebate for it.
01:08:00> 01:08:03:	And as you know, they're restricted in who they can
01:08:03> 01:08:04:	sell water to in the future.
01:08:04> 01:08:07:	They say those who don't pass this ordinance will be
01:08:08> 01:08:11:	low on the priority list as kind of their threat,
01:08:11> 01:08:12:	I would say in a way.
01:08:13> 01:08:16:	So now they're, they've come to us and abruptly said,
01:08:17> 01:08:19:	well, now that it's an ordinance and you have to
01:08:20> 01:08:23:	do it, even though none of these cities are really
01:08:23> 01:08:26:	enforcing it because they don't have the capacity to go
01:08:26> 01:08:29:	and inspect every single home and check all these things.
01:08:32> 01:08:35:	And so now they're pulling that rebate back like was
01:08:35> 01:08:36:	shown before in the study.
01:08:37> 01:08:40:	That just means we have to pass the cost on
01:08:40> 01:08:44:	to homeowners and make the homes just less affordable, which
01:08:44> 01:08:47:	has become such a huge issue in our state after
01:08:47> 01:08:48:	our governor.
01:08:48> 01:08:52:	It's issue #1 So we're trying to work together with
01:08:52> 01:08:57:	them because we had a good relationship to say, hey,
01:08:57> 01:08:58:	let's work together.
01:08:58> 01:08:59:	We want to save water.
01:08:59> 01:09:03:	You want to save water, Let's still work on this
01:09:03> 01:09:06:	together instead of you trying to enforce this on hundreds
01:09:06> 01:09:10:	of homes all over the place that you're sending people
01:09:10> 01:09:14:	to go inspect and teach people all of these requirements
01:09:14> 01:09:15:	of how to do it.
01:09:15> 01:09:17:	We'll do it, but help us with the cost.
01:09:17> 01:09:20:	And we're getting a lot of pushback there.
01:09:20> 01:09:23:	I'm, you know, that's just the experience we're having right

01:09:23> 01:09:23:	now.
01:09:23> 01:09:28:	I don't know if it's anything similar happening in other
01:09:28> 01:09:31:	states or if there's even if this has been a
01:09:31> 01:09:34:	similar tactic by water districts.
01:09:34> 01:09:38:	There's some places where we don't have a water
	Conservancy
01:09:38> 01:09:43:	district, but we have a Improvement District that we deal
01:09:43> 01:09:46:	with and we can say we will follow these same
01:09:46> 01:09:50:	rules, water wise landscaping rules and we'll, we will use
01:09:51> 01:09:52:	X amount less water.
01:09:53> 01:09:56:	So don't make us buy as much water rights.
01:09:56> 01:09:59:	And, and they've agreed to that.
01:09:59> 01:10:02:	So instead of it being a process of people going
01:10:02> 01:10:06:	inspecting and give us a rebate on the back end,
01:10:06> 01:10:07:	we follow the rules.
01:10:07> 01:10:11:	They drive through the neighborhood and they see that we
01:10:11> 01:10:14:	are and we just buy less water, which is about
01:10:14> 01:10:18:	equivalent to what the rebates had been per home to
01:10:18> 01:10:21:	keep those costs that we can, you know, keep the
01:10:21> 01:10:24:	cost of the house lower for the home buyers, which
01:10:24> 01:10:27:	is in my, you know, my experience.
01:10:27> 01:10:30:	So way easier, doesn't require as much overhead of people
01:10:30> 01:10:34:	going and dealing with inspecting and checking things and
01:10:34> 01:10:35:	gets the same results.
01:10:37> 01:10:40:	But anyway, so I just thought I'd share as a
01:10:40> 01:10:44:	builder an experience we're kind of going through how we've
01:10:44> 01:10:47:	done things, but and how we're trying to remedy the
01:10:47> 01:10:49:	situation we're in right now.
01:10:52> 01:10:53:	That's really helpful to note.
01:10:54> 01:10:55:	Does anyone want to respond to that?
01:10:55> 01:10:57:	I'm wondering if other people are having the same
	experience.
01:10:58> 01:11:01:	And what you're saying, Clint, I think is primarily a
01:11:01> 01:11:04:	problem because maybe your hold time is so short and
01:11:04> 01:11:07:	you get a lot of savings from longer hold periods
01:11:07> 01:11:09:	with the water savings on landscaping.
01:11:10> 01:11:10:	Yeah.
01:11:10> 01:11:14:	Over the last five years, 40 years are on an
01:11:14> 01:11:19:	annual basis, what we've done over the last few years
01:11:19> 01:11:23:	saves about 100 million gallons a year right now.
01:11:25> 01:11:28:	So and, and the water districts can see that they
01:11:28> 01:11:31:	have the data of the meters of these homes compared

01:11:31> 01:11:35:	to homes built even in those same neighborhoods earlier than
01:11:35> 01:11:36:	five years ago.
01:11:36> 01:11:40:	So they see the savings, the real effect that it's
01:11:40> 01:11:41:	having.
01:11:42> 01:11:45:	But I just, I guess we're just getting a little
01:11:45> 01:11:49:	frustrated of the manner of how they're trying to change
01:11:49> 01:11:52:	our relationship and working together on it to where now
01:11:52> 01:11:54:	to make things affordable.
01:11:54> 01:11:56:	If we're not getting help on it, we're just saying
01:11:56> 01:11:59:	we won't landscape the home and let the homeowner landscape
01:12:00> 01:12:02:	it and drop the price of their home so they
01:12:02> 01:12:03:	can afford to buy it upfront.
01:12:04> 01:12:07:	But then we know and they know that if the
01:12:07> 01:12:11:	homeowner landscapes it themselves, they are not going to do
01:12:11> 01:12:14:	nearly as good a job and nobody's going to enforce.
01:12:14> 01:12:16:	Nobody wants to go fine all these homeowners as if
01:12:17> 01:12:18:	they don't follow these new.
01:12:18> 01:12:18:	Rules.
01:12:20> 01:12:23:	And so they're not going to get the water savings
01:12:23> 01:12:27:	result that they get that's from us doing the landscaping
01:12:27> 01:12:31:	upfront as people who are experienced in the design, experienced
01:12:31> 01:12:33:	in the ways and our contractors know how to do
01:12:33> 01:12:36:	it the right way to to have real water savings.
01:12:38> 01:12:39:	You have really good points.
01:12:39> 01:12:42:	I saw some some people unmute.
01:12:42> 01:12:42:	I don't know.
01:12:42> 01:12:44:	Patrick, did you want to say anything?
01:12:45> 01:12:49:	Well, as the water authority, you know, we used to,
01:12:49> 01:12:54:	we didn't get involved in, in development quite honestly.
01:12:55> 01:12:58:	You know, with our, like our member agencies, a developer
01:12:58> 01:13:01:	would come in and go, we're going to build this,
01:13:01> 01:13:03:	this building or this many homes.
01:13:04> 01:13:08:	Here's a connection fee, you know, and how many, how
01:13:08> 01:13:10:	much water do you need?
01:13:10> 01:13:13:	And now that's pretty much changed.
01:13:13> 01:13:16:	We've decided that we need to be involved.
01:13:16> 01:13:18:	We need to be letting developers know.
01:13:18> 01:13:22:	So for example, commercial development, we, we have a moratorium

01:13:22> 01:13:25:	on evaporative cooling in commercial buildings.
01:13:25> 01:13:28:	And, and the commercial developers at first went, hey, you're
01:13:28> 01:13:30:	just, you're going to ruin my business.
01:13:30> 01:13:34:	But, but they realize that where they're doing business and
01:13:34> 01:13:38:	that's in the middle of the Mojave Desert in Nevada.
01:13:38> 01:13:42:	And so they understand that and they've embraced that.
01:13:42> 01:13:46:	And, and so have home builders, you know, no front.
01:13:46> 01:13:48:	We don't have turf in front yards.
01:13:48> 01:13:49:	We don't have turf in backyards.
01:13:50> 01:13:54:	We've also limited the size of swimming pools to a
01:13:54> 01:13:59:	certain square footage and we're not trying to eliminate the
01:13:59> 01:14:05:	pool business, but they understand where they're building pools.
01:14:05> 01:14:07:	And so that's kind of the message.
01:14:07> 01:14:10:	And I think you're going to start to see utilities
01:14:10> 01:14:14:	get more and more involved in development if they're going
01:14:14> 01:14:17:	to be required to supply water to these to these
01:14:17> 01:14:21:	homes or these businesses, you know, are you bringing in
01:14:21> 01:14:24:	the right businesses into your water situation?
01:14:25> 01:14:28:	You know, if you're you're going to bring in a,
01:14:28> 01:14:31:	a bottling plant into a, you know, a drought stricken
01:14:32> 01:14:35:	area, maybe that's not the best business to have, you
01:14:35> 01:14:38:	know, so those are start, those are questions the utility
01:14:38> 01:14:40:	is going to start to ask.
01:14:40> 01:14:42:	And I think they're starting to do that.
01:14:42> 01:14:42:	And we're seeing it.
01:14:43> 01:14:45:	We certainly we're seeing it here in Southern Nevada and
01:14:46> 01:14:48:	it looks like it's happening in other places as well.
01:14:52> 01:14:53:	Thank you.
01:14:53> 01:14:55:	Yeah, Jenna, you have your hand raised.
01:14:55> 01:14:57:	Yeah, I think you Jenna Shimon E Municipal Water District,
01:14:57> 01:14:59:	which is in Southern California.
01:14:59> 01:15:02:	So California has a what's called the model of water
01:15:02> 01:15:05:	efficient landscape ordinance and it applies to new and retrofitted
01:15:05> 01:15:07:	landscapes over I think 2500 square feet.
01:15:07> 01:15:09:	So what we see a lot with new development is,
01:15:10> 01:15:12:	you know, the developer puts in the front yard, leaves
01:15:12> 01:15:15:	the backyard bare, depending on, you know, the economics of
01:15:15> 01:15:16:	the of the area.
01:15:16> 01:15:19:	But typically homeowners don't contact us to see what those
01:15:19> 01:15:22:	requirements are or probably don't look it up themselves.

01:15:23> 01:15:25:	And so, you know, they're putting wall to wall turf
01:15:25> 01:15:29:	in with poorly designed irrigation systems with sprinklers
	against houses
01:15:29> 01:15:30:	and fence lines.
01:15:30> 01:15:32:	And, you know, so you've got a lot of problems
01:15:32> 01:15:34:	with that, but also we have budget water budget based
01:15:34> 01:15:34:	rates.
01:15:34> 01:15:37:	And so, you know, it's once the customer puts in
01:15:37> 01:15:39:	all of that and gets a couple months worth of
01:15:39> 01:15:41:	high summer bill, then they call us and now we
01:15:41> 01:15:44:	find out about what is, you know, potentially additional water
01:15:44> 01:15:46:	supply demand that we need to, you know, account for.
01:15:47> 01:15:49:	So it's kind of a a good system and a
01:15:49> 01:15:50:	bad one.
01:15:50> 01:15:53:	You know, some water agencies are good about having a
01:15:53> 01:15:56:	easier path to, you know, fill out the the paperwork
01:15:56> 01:15:57:	for the M lilo.
01:15:58> 01:16:00:	Others, you know, want you to do either city or
01:16:00> 01:16:03:	water supplier once you do the full thing, as if
01:16:03> 01:16:05:	you're a brand new developer or, or, you know, commercial
01:16:05> 01:16:06:	developer.
01:16:06> 01:16:09:	And so it, you know, isn't the best system.
01:16:09> 01:16:10:	And so we see a lot of problems around that.
01:16:10> 01:16:13:	And so I just wanted to mention that for California.
01:16:18> 01:16:18:	Thank you.
01:16:18> 01:16:21:	Jenna, I'm wondering if, if I know there's a bunch
01:16:21> 01:16:25:	of utilities and municipalities on the line, are you seeing
01:16:25> 01:16:29:	this trend in reducing rebates and just replacing them with
01:16:29> 01:16:33:	ordinances and how is that affecting implementation?
01:16:36> 01:16:39:	Chairman, real quick, we actually adopted our own non functional
01:16:39> 01:16:41:	turf ban ahead of the state of California adopting theirs.
01:16:42> 01:16:45:	And with that, we increased our our dollar amount
	contribution
01:16:45> 01:16:48:	with the intent though as the, you know, our admin
01:16:48> 01:16:50:	code, you know, once it's been in place for a
01:16:50> 01:16:53:	couple of years, but also as the state, which has
01:16:53> 01:16:57:	different trigger points for different property types, as those trigger
01:16:57> 01:17:01:	points hit, we'll probably start reducing the amount similar to
01:17:01> 01:17:02:	what Southern Nevada did.
01:17:02> 01:17:04:	You know, after a couple years you should know and
01:17:04> 01:17:05:	have done the right thing ahead of time.
	- · ·

01:17:06 --> 01:17:07: So that's kind of our take. 01:17:07 --> 01:17:09: And we did see a slight uptick, not as much 01:17:09 --> 01:17:11: as we would have liked with larger landscapes. 01:17:11 --> 01:17:16: Though thank you. 01:17:17 --> 01:17:19: Any other comments or questions? 01:17:23 --> 01:17:25: Marianne, I just want to note that I I put 01:17:25 --> 01:17:29: the response to Stacy's question about Westminster in the chat 01:17:29 --> 01:17:30: just so she y'all see that. 01:17:31 --> 01:17:32: Thank you, Caroline. 01:17:34 --> 01:17:35: Excellent. 01:17:35 --> 01:17:35: Just to. 01:17:37 --> 01:17:41: I'm just going to keep going here with this. 01:17:44 --> 01:17:47: I'm just wondering, So what we've been doing with the 01:17:47 --> 01:17:51: past few meetings is we're putting together a few resource 01:17:51 --> 01:17:53: lists that I can share in the chat here. 01:17:54 --> 01:17:57: But I also was wondering if we want to create 01:17:57 --> 01:18:01: a resource list related to water conservation and affordability as 01:18:01 --> 01:18:04: well, if people would find that helpful. 01:18:05 --> 01:18:07: And I'll, I'm going to turn it over quickly to 01:18:08 --> 01:18:11: Lisa Hans with the Alliance for Water Efficiency to talk 01:18:11 --> 01:18:13: about the Next Generation Water Summit. And then I can put those resource lists in the 01:18:13 --> 01:18:16: 01:18:16 --> 01:18:16: chat. 01:18:16 --> 01:18:19: And just a quick note, these are a shared resource 01:18:19 --> 01:18:19: list. 01:18:19 --> 01:18:22: So if you want to add anything, we would love 01:18:22 --> 01:18:25: that the whole coalition has access to this list. 01:18:25 --> 01:18:29: So we're really using as sort of like a compilation 01:18:29 --> 01:18:30: for the Coalition. 01:18:31 --> 01:18:33: So let me just put those in the chat and 01:18:33 --> 01:18:34: I'll turn it over to Lisa really quickly. Wonderful. 01:18:35 --> 01:18:35: 01:18:35 --> 01:18:36: Thanks, Marianne. 01:18:36 --> 01:18:41: Yeah, I will give a few examples of some upcoming 01:18:41 --> 01:18:46: conferences that are related to this topic and related topics. 01:18:46 --> 01:18:50: So the most immediate next one, actually, I don't know 01:18:50 --> 01:18:53: how many people are going to be there is the 01:18:53 --> 01:18:58: AWWA Conservation or not conservation, the AWWA annual event ACE. 01:18:58 --> 01:19:01: So if you're happening to be in the Southern California 01:19:01 --> 01:19:03: area, whether you're going to be at ACE or not,

01:19:03> 01:19:06:	we're having a water conservation social division.
01:19:06> 01:19:08:	So if you want to come hang out with us
01:19:08> 01:19:10:	in the evening, there's a link to register.
01:19:10> 01:19:12:	The Next Generation Water Summit is the next one that's
01:19:12> 01:19:14:	in the middle of June.
01:19:14> 01:19:15:	I won't be able to attend this year.
01:19:15> 01:19:18:	I'm so bummed, but my boss, Ron Burke, CEO of
01:19:18> 01:19:20:	Alliance for Water Efficiency will be there.
01:19:20> 01:19:21:	That's a really great one.
01:19:21> 01:19:24:	They do a lot of really nice overlap in terms
01:19:24> 01:19:28:	of kind of development and and redevelopment and land use.
01:19:28> 01:19:31:	So there's a lot of really great topics related to
01:19:31> 01:19:31:	that.
01:19:31> 01:19:34:	And they offer both an in person and hybrid option.
01:19:34> 01:19:37:	And so if you can only join remotely, there's still
01:19:37> 01:19:39:	a lot of great content to come from that one.
01:19:39> 01:19:42:	So I threw that link in there for that next
01:19:43> 01:19:43:	one.
01:19:44> 01:19:47:	And then the next one that I'm aware of is
01:19:47> 01:19:52:	our organization's annual event, the Water Conservation Symposium that's in
01:19:52> 01:19:54:	Chicago in August.
01:19:54> 01:19:55:	That's the next link.
01:19:55> 01:19:58:	And then for folks that are in the Colorado world
01:19:58> 01:20:02:	is the Colorado Water Wise Water Conservation Symposium, which is
01:20:02> 01:20:04:	at the beginning of September this year.
01:20:07> 01:20:08:	And if anybody knows of anything else, feel free to
01:20:08> 01:20:09:	throw it in the chat.
01:20:09> 01:20:10:	But otherwise, I'll turn it back to you, Marian.
01:20:11> 01:20:12:	Thank you so much.
01:20:12> 01:20:15:	Lisa and I put those resource lists in the chat
01:20:15> 01:20:16:	box as well.
01:20:16> 01:20:19:	The first one is landscape resources.
01:20:20> 01:20:23:	We started compiling these resource lists after our meetings on
01:20:23> 01:20:25:	those topics because people were putting so many links in
01:20:25> 01:20:27:	the chat box and we wanted to make sure they
01:20:27> 01:20:29:	were all in one place and that everyone in the
01:20:29> 01:20:31:	coalition had access to them.
01:20:31> 01:20:34:	And then the second one is for state and local
01:20:34> 01:20:35:	water wise policies.
01:20:35> 01:20:38:	So again, please click on those links and add to

01:20:38> 01:20:40:	them, add to the list so that this can be
01:20:40> 01:20:42:	a a living resource for the coalition.
01:20:43> 01:20:46:	And if you have resources related to water conservation and
01:20:46> 01:20:49:	affordability, we'd love to create another resource list for that
01:20:49> 01:20:49:	as well.
01:20:52> 01:21:00:	OK, let me keep going one second upcoming programming.
01:21:00> 01:21:04:	Our next topic is going to be on water neutral
01:21:04> 01:21:08:	developments, and we have a list of other topics here
01:21:08> 01:21:08:	as well.
01:21:09> 01:21:12:	If you or anyone you know would like to have
01:21:12> 01:21:15:	a certain topic come up in this coalition or you
01:21:15> 01:21:19:	want to share your expertise in a specific area, please
01:21:20> 01:21:23:	either put that in the chat box, unmute, or e-mail
01:21:23> 01:21:23:	me.
01:21:24> 01:21:26:	We would love to have, you know, people in the
01:21:26> 01:21:28:	coalition contributing to this content.
01:21:28> 01:21:33:	So after water neutral development, we're thinking about talking about
01:21:33> 01:21:38:	water and land use forecasting, data-driven planning that
	incorporates water
01:21:38> 01:21:42:	to right size taps and water infrastructure, then talking about
01:21:42> 01:21:45:	water reuse, the one water approach, and then maybe the
01:21:45> 01:21:49:	Colorado Water Wise Guide book on best practices.
01:21:49> 01:21:51:	You know, the later we go, the the more likely
01:21:51> 01:21:53:	these topics may change.
01:21:53> 01:21:55:	But we'd love to hear from you in terms of
01:21:55> 01:21:57:	what you want to hear about and discuss.
01:22:00> 01:22:02:	I'll keep going, but please put in your thoughts and
01:22:02> 01:22:04:	comments in the chat box.
01:22:07> 01:22:11:	I also want to mention that our upcoming You and
01:22:11> 01:22:14:	I fall meeting is in Las Vegas on October 28th
01:22:15> 01:22:18:	through 30th and we have a forum the first day
01:22:18> 01:22:19:	on October 28th.
01:22:20> 01:22:23:	It's 8:00 AM to 3:00 PM and it'll only be
01:22:23> 01:22:26:	on the subject of water and water smart development.
01:22:26> 01:22:28:	We're really excited about this.
01:22:29> 01:22:31:	We are going to have people from all over the
01:22:31> 01:22:32:	country presenting.
01:22:33> 01:22:36:	We're going to showcase some amazing tours, including the Venetian
01:22:37> 01:22:38:	and the Bellagio.
01:22:38> 01:22:39:	It's going to be really special.

```
01:22:39 --> 01:22:42:
                          So we hope you guys join us for this.
01:22:43 --> 01:22:46:
                          If you're going to come to fall meeting anyway, this
01:22:46 --> 01:22:48:
                          is a a great event to tack on to your
01:22:48 --> 01:22:49:
                          agenda.
01:22:52 --> 01:22:53:
                          I and that's it.
01:22:53 --> 01:22:55:
                          Here's my e-mail address.
01:22:55 --> 01:22:56:
                          We'd love to hear from you.
01:22:57 --> 01:23:00:
                          A quick note that I will be going on maternity
01:23:00 --> 01:23:02:
                          leave starting late June.
01:23:02 --> 01:23:04:
                          So if you don't hear from me right away for
01:23:05 --> 01:23:07:
                          three months, that's the reason why.
01:23:07 --> 01:23:09:
                          But I assure you that I will be in touch
01:23:09 --> 01:23:10:
                          as soon as I can.
01:23:11 --> 01:23:13:
                          And we just want to thank you so much for
01:23:13 --> 01:23:15:
                          joining us today and being part of this programming.
01:23:20 --> 01:23:20:
                          Thank you, guys.
01:23:20 --> 01:23:25:
                          Thank you and a huge thank you to our speakers
01:23:25 --> 01:23:25:
                          today.
01:23:26 --> 01:23:27:
                          Benji, Caroline and Joel.
01:23:27 --> 01:23:28:
                          You guys are amazing.
01:23:29 --> 01:23:31:
                          And if people want to follow up with questions, you
01:23:31 --> 01:23:33:
                          can direct those to me and I can connect you
01:23:33 --> 01:23:35:
                          to the speakers as well.
01:23:37 --> 01:23:38:
                          Thank you, Marianne.
01:23:38 --> 01:23:39:
                          Thanks, Leeville.
01:23:40 --> 01:23:40:
                          Thank you.
01:23:42 --> 01:23:44:
                          Marianne, did you want to stay on or do you
01:23:44 --> 01:23:45:
                          feel like we're good on next steps?
01:23:46 --> 01:23:47:
                          I think we're good on next steps.
01:23:47 --> 01:23:49:
                          Beautiful, but unless you have any questions.
01:23:49 --> 01:23:50:
                          Here let me start with this.
01:23:51 --> 01:23:51:
                          Nope, I'm all good.
```

This video transcript has been machine-generated, so it may not be accurate. It is for personal use only. Reproduction or use without written permission is prohibited. If you have a correction or for permission inquiries, please contact [email protected].