# Webinar

**Water Wise Development Coalition Meeting - 7**

Date: November 06, 2024

**00:00:02 --> 00:00:04:** All right, welcome everyone.

**00:00:04 --> 00:00:07:** This is our Water Wise Development Coalition meeting.

**00:00:07 --> 00:00:12:** I'm Marian Epic, Senior Director of Resilience for the Urban

**00:00:12 --> 00:00:16:** Land Institute and I'm excited to have a jam packed

**00:00:16 --> 00:00:17:** session for you today.

**00:00:18 --> 00:00:21:** You and I is hosting this coalition in partnership with

**00:00:21 --> 00:00:25:** the Alliance for Water Efficiency, the Sonoran Institute and the

**00:00:25 --> 00:00:26:** Water Now Alliance.

**00:00:26 --> 00:00:29:** And the whole point is to convene land use and

**00:00:29 --> 00:00:34:** real estate professionals with water professionals and policy makers and

**00:00:34 --> 00:00:38:** decision makers to support water wise built environments.

**00:00:39 --> 00:00:43:** And we have quarterly virtual meetings and you will have

**00:00:43 --> 00:00:44:** a say in upcoming topics.

**00:00:44 --> 00:00:49:** We usually have guest speakers and then group participation towards

**00:00:49 --> 00:00:49:** the end.

**00:00:51 --> 00:00:56:** Today's agenda includes A keynote presentation by Marianne Dickinson on

**00:00:57 --> 00:01:00:** water neutral development and resources.

**00:01:00 --> 00:01:02:** She is now the Director of Land and Water Policy

**00:01:02 --> 00:01:04:** for the Lincoln Institute of Land Policy.

**00:01:05 --> 00:01:07:** Previously, she was the President, CEO of the Alliance for

**00:01:07 --> 00:01:08:** Water Efficiency.

**00:01:08 --> 00:01:11:** So we're very excited to have her speak today.

**00:01:11 --> 00:01:15:** And then she's going to be followed by three case

**00:01:15 --> 00:01:20:** studies from Cambria, CA, Ipswich, MA and Santa Fe, NM.

**00:01:21 --> 00:01:23:** And those speakers are going to be talking about how

**00:01:24 --> 00:01:27:** they've implemented water neutral, neutral development

locally.

**00:01:27 --> 00:01:29:** So we're excited to hear from each of them.

**00:01:29 --> 00:01:31:** And then at the end, we'll have some updates for

**00:01:32 --> 00:01:32:** you.

**00:01:32 --> 00:01:35:** And then we hope to get your input on upcoming

**00:01:35 --> 00:01:35:** meeting topics.

**00:01:38 --> 00:01:41:** And I'm going to turn it over to our first

**00:01:41 --> 00:01:42:** speaker, Marianne Dickinson.

**00:01:46 --> 00:01:49:** Oh, and while while she's getting set up, if everyone

**00:01:49 --> 00:01:52:** could please introduce themselves in the chat box with your

**00:01:52 --> 00:01:55:** name, title, and organization and where you're calling in from,

**00:01:55 --> 00:01:57:** that would be so wonderful to see.

**00:02:00 --> 00:02:02:** Hey, thank you, Marianne very much.

**00:02:02 --> 00:02:04:** It's, it's fun to be on a call with you,

**00:02:04 --> 00:02:06:** Marianne and Marianne together.

**00:02:06 --> 00:02:09:** It's, it's we, we, our names aren't that common.

**00:02:09 --> 00:02:11:** So this is fun and thank you for inviting me.

**00:02:11 --> 00:02:14:** It's, it's great to be here and, and be able

**00:02:14 --> 00:02:16:** to kind of just give a little bit of background

**00:02:16 --> 00:02:19:** on the whole topic of water neutral development and why,

**00:02:19 --> 00:02:22:** why we're even talking about it now and, and giving

**00:02:22 --> 00:02:23:** you some examples of it.

**00:02:24 --> 00:02:27:** So I'll just jump into it right now.

**00:02:29 --> 00:02:32:** So here's here's the basic problem, you know, and, and

**00:02:32 --> 00:02:34:** you all on the call know this many cities in

**00:02:34 --> 00:02:38:** North America are already challenged to meet their customer demands

**00:02:39 --> 00:02:42:** for water and that doesn't that's independent of drought and

**00:02:42 --> 00:02:44:** scarcity and other issues.

**00:02:44 --> 00:02:47:** It's just that their systems may be a capacity they

**00:02:47 --> 00:02:50:** may be struggling to, to provide additional water sources.

**00:02:50 --> 00:02:53:** And, and it's not just in the US, it's Canada

**00:02:53 --> 00:02:53:** as well.

**00:02:55 --> 00:02:58:** And growing population and economic growth is, is part of

**00:02:58 --> 00:02:59:** the driver.

**00:02:59 --> 00:03:01:** There are communities that are growing very quickly.

**00:03:01 --> 00:03:03:** We'll, we'll look at a map of, of where that

**00:03:03 --> 00:03:03:** is.

**00:03:04 --> 00:03:08:** And that does place even more pressure, rapid growth places

**00:03:08 --> 00:03:12:** even more pressure where there is aridity and where water

**00:03:12 --> 00:03:16:** is scarce in in many areas, particularly in the American

**00:03:16 --> 00:03:16:** West.
**00:03:17 --> 00:03:20:** And so as as continued drought and water shortages occur
**00:03:20 --> 00:03:24:** all across the country, water utility residents are beginning to
**00:03:24 --> 00:03:27:** raise the question about, you know, the restrictions that they
**00:03:27 --> 00:03:30:** might be under and why, if they're saving water, why
**00:03:30 --> 00:03:33:** that saved water might be now going to to a
**00:03:33 --> 00:03:34:** development.
**00:03:34 --> 00:03:36:** And, and it's it's creating, you know, a little bit
**00:03:36 --> 00:03:38:** of political backlash in the number of communities.
**00:03:39 --> 00:03:41:** And that's, that's been going on for for decades now.
**00:03:41 --> 00:03:45:** When I first started out in water conservation in Connecticut,
**00:03:45 --> 00:03:47:** that was a big issue in the late 1980s.
**00:03:47 --> 00:03:48:** So this is not something new.
**00:03:48 --> 00:03:50:** This has been around for a while.
**00:03:51 --> 00:03:54:** And then, you know, another point is some communities just
**00:03:54 --> 00:03:56:** can't accommodate growth with their current water supplies.
**00:03:56 --> 00:03:58:** They are going to be stretched and limited.
**00:03:58 --> 00:04:02:** And that can be an infrastructure capacity constraint on drinking
**00:04:02 --> 00:04:06:** water and wastewater treatment as well as just supply availability.
**00:04:06 --> 00:04:09:** And so as drought intensifies, it makes it makes these
**00:04:09 --> 00:04:11:** issues and problems even worse.
**00:04:12 --> 00:04:13:** And so it's getting a fair amount of press.
**00:04:13 --> 00:04:16:** There have been a number of communities that have had
**00:04:16 --> 00:04:18:** to issue water moratoriums against new connections.
**00:04:19 --> 00:04:22:** And here are a couple of examples, you know, from
**00:04:22 --> 00:04:26:** California and Seattle, but it's not just these areas, it
**00:04:26 --> 00:04:31:** sometimes very small communities that aren't on anybody's radar screen
**00:04:31 --> 00:04:32:** go through this.
**00:04:32 --> 00:04:35:** And and that's where my personal experience came in because
**00:04:35 --> 00:04:38:** I was president of our local water district board in
**00:04:38 --> 00:04:40:** that small community in, in Southern California.
**00:04:41 --> 00:04:43:** And we were so impacted by the drought, our, our
**00:04:43 --> 00:04:46:** system couldn't accommodate the rapid growth we were getting in
**00:04:46 --> 00:04:47:** new housing construction.
**00:04:47 --> 00:04:50:** So we had to do a new connection moratorium.
**00:04:50 --> 00:04:53:** And that was a very painful political process.
**00:04:54 --> 00:04:56:** I don't wish that on anybody.
**00:04:56 --> 00:04:59:** So if we can avoid a building moratorium altogether, we

**00:04:59 --> 00:05:02:** need to figure out how we deal with this resource
**00:05:02 --> 00:05:06:** constraint issue, because we're not really growing in the places
**00:05:06 --> 00:05:07:** where we have water.
**00:05:08 --> 00:05:12:** This is a terrific analysis that's put out every number
**00:05:12 --> 00:05:15:** of years or so by the Watersense program at EPA.
**00:05:16 --> 00:05:18:** They take data from the US Geological Survey and the
**00:05:18 --> 00:05:21:** Census Bureau, and they map out where growth is occurring
**00:05:21 --> 00:05:24:** in the United States and compare it to water availability
**00:05:24 --> 00:05:25:** in the United States.
**00:05:26 --> 00:05:29:** So you look at a state like Michigan, 1% growth
**00:05:29 --> 00:05:33:** between the year 2000 and 2020, and Michigan's got plenty
**00:05:33 --> 00:05:34:** of water.
**00:05:34 --> 00:05:37:** And then you look at a state like Nevada, 55%
**00:05:38 --> 00:05:40:** growth between 2000 and 2020.
**00:05:40 --> 00:05:43:** Nevada's in a desert and you know, water is a
**00:05:43 --> 00:05:44:** lot more scarce.
**00:05:44 --> 00:05:47:** So we're growing in places where water scarcity is an
**00:05:47 --> 00:05:51:** issue and where water individual water consumption in terms of
**00:05:51 --> 00:05:55:** GPCD gallons per person per day, where that's actually a
**00:05:55 --> 00:05:56:** high number.
**00:05:57 --> 00:06:00:** And so the color of the state, the lighter the
**00:06:00 --> 00:06:03:** color, the lower the the gowns per person per day
**00:06:03 --> 00:06:06:** and the darker the color, the higher the levels are.
**00:06:06 --> 00:06:09:** So you can see that states that are growing rapidly
**00:06:09 --> 00:06:11:** that are in water scarce regions also have the high
**00:06:11 --> 00:06:13:** highest per capita water use.
**00:06:13 --> 00:06:16:** So we have kind of a problem because people do
**00:06:16 --> 00:06:18:** want to live in these areas, they do want to
**00:06:18 --> 00:06:21:** buy houses, they do want to have available places to
**00:06:21 --> 00:06:24:** live, and that's becoming more and more difficult.
**00:06:25 --> 00:06:28:** And so there's a second problem in addition to the
**00:06:28 --> 00:06:31:** scarcity issue, We've got a problem of the water utility
**00:06:31 --> 00:06:34:** planners and the land use planners not really talking much
**00:06:34 --> 00:06:34:** to each other.
**00:06:35 --> 00:06:38:** They've historically been in separate silos, not really well connected.
**00:06:39 --> 00:06:41:** And comprehensive plans are being done at the local level
**00:06:41 --> 00:06:44:** that often don't take into account the full water resource
**00:06:44 --> 00:06:45:** picture in the communities.
**00:06:46 --> 00:06:49:** And and there really isn't a lot of interchange between
**00:06:49 --> 00:06:51:** water resource planners and land use planners.

**00:06:51 --> 00:06:54:** That's changing now and we'll talk more about the water
**00:06:54 --> 00:06:57:** and planning network later that is attempting to to deal
**00:06:57 --> 00:06:59:** with that at the American Planning Association.
**00:07:00 --> 00:07:03:** And, and it comes from sort of a traditional background
**00:07:03 --> 00:07:04:** attitude.
**00:07:04 --> 00:07:06:** You know, water utility managers feel that they have a
**00:07:06 --> 00:07:09:** duty to serve, to provide water that the community asks
**00:07:09 --> 00:07:09:** for.
**00:07:09 --> 00:07:12:** They don't really have shouldn't have any say and, and
**00:07:12 --> 00:07:14:** how that water should be planned for.
**00:07:14 --> 00:07:16:** They don't want to get involved in what they have
**00:07:16 --> 00:07:19:** called social engineering, but the land use planners don't really
**00:07:19 --> 00:07:23:** realize that if they don't actually coordinate with their utilities,
**00:07:23 --> 00:07:26:** they may be designing development densities that wouldn't be supported
**00:07:26 --> 00:07:28:** by the existing infrastructure.
**00:07:28 --> 00:07:30:** So they do need to have conversations.
**00:07:30 --> 00:07:33:** And you know, we are working now on this disconnect
**00:07:33 --> 00:07:37:** and it's, it's very obvious because we've done a little
**00:07:37 --> 00:07:40:** bit of research to, to take a look at where
**00:07:40 --> 00:07:44:** it's actually occurring, where, where the disconnect is occurring.
**00:07:44 --> 00:07:48:** So the Lincoln Institute of Land Policy, which is the
**00:07:48 --> 00:07:51:** organization I now work for, hired the Alliance for Water
**00:07:51 --> 00:07:54:** Efficiency at one point to do a study on looking
**00:07:54 --> 00:07:57:** at where, what the state experiences were in requiring the
**00:07:57 --> 00:08:01:** water professionals and the land use professionals to talk to
**00:08:01 --> 00:08:02:** each other.
**00:08:02 --> 00:08:06:** And what we found was, was kind of remarkable and,
**00:08:06 --> 00:08:07:** and sad actually.
**00:08:08 --> 00:08:11:** Only 9 states require that water utilities incorporate their land
**00:08:11 --> 00:08:14:** use, land use planning for the communities into their own
**00:08:14 --> 00:08:15:** water plans.
**00:08:15 --> 00:08:18:** There are different ways that they do it, but there
**00:08:18 --> 00:08:21:** are only 9 states that actually say that out loud
**00:08:21 --> 00:08:22:** in, in their legal requirements.
**00:08:23 --> 00:08:27:** 10 states require that community land use plans incorporate water
**00:08:27 --> 00:08:30:** utility plans or water quantity or water quality concerns.
**00:08:31 --> 00:08:34:** So that's a little better, but it's, it's that's from
**00:08:34 --> 00:08:37:** the other side looking in that the land use plans
**00:08:37 --> 00:08:40:** must take a look at what the utility plans currently

**00:08:40 --> 00:08:40:** say.
**00:08:41 --> 00:08:45:** Three states, and only three states provide by statute or
**00:08:45 --> 00:08:49:** regulation funding or technical assistance to help support and improve
**00:08:49 --> 00:08:53:** the coordination between water utilities and land use planners.
**00:08:53 --> 00:08:55:** And Colorado's a real star in in that area, but
**00:08:55 --> 00:08:57:** California and Maryland do it as well.
**00:09:00 --> 00:09:03:** There are 10 states, but five of them expressly mention
**00:09:03 --> 00:09:07:** water supply in the statutes or regulations to specify the
**00:09:07 --> 00:09:09:** required content of land use plans.
**00:09:10 --> 00:09:12:** So in other words, it does the, does the, the
**00:09:12 --> 00:09:15:** master plan require a land use element for water?
**00:09:16 --> 00:09:19:** And you know, is that something that is, is required
**00:09:19 --> 00:09:20:** across the board?
**00:09:21 --> 00:09:24:** And so it's, that's again, not a, a very large
**00:09:24 --> 00:09:28:** number of states that are doing any work in this
**00:09:28 --> 00:09:28:** area.
**00:09:28 --> 00:09:32:** And only 6 states require that water utilities coordinate directly
**00:09:32 --> 00:09:35:** with the land use planners and their communities and specify
**00:09:35 --> 00:09:37:** that they must have ongoing conversations.
**00:09:37 --> 00:09:39:** And there are the six states that require that.
**00:09:40 --> 00:09:43:** So there's a detailed study that's available from the Lincoln
**00:09:43 --> 00:09:46:** Institute and you'll get the presentation from Marianne and, and
**00:09:46 --> 00:09:49:** these links will be active in the, in the PDF,
**00:09:49 --> 00:09:51:** but you can download the full report and you can
**00:09:51 --> 00:09:54:** also get more information from the Lincoln Institute on a
**00:09:54 --> 00:09:56:** lot of these land use issues.
**00:09:57 --> 00:09:59:** So water neutral development.
**00:09:59 --> 00:10:01:** What, what, what is this all about?
**00:10:02 --> 00:10:05:** And, and as I was contemplating the target on my
**00:10:05 --> 00:10:08:** back from my water board experience of, of doing it,
**00:10:08 --> 00:10:12:** a single family home moratorium, we, I thought about water
**00:10:12 --> 00:10:15:** offsets because I was familiar with the town of Cambria.
**00:10:16 --> 00:10:19:** And you'll hear from Cambria in this presentation who had
**00:10:19 --> 00:10:22:** started doing water offsets because they didn't have enough water
**00:10:22 --> 00:10:24:** even for single family homes.
**00:10:24 --> 00:10:26:** So we got to thinking that maybe this is a
**00:10:26 --> 00:10:29:** topic that we should be exploring a lot further because
**00:10:30 --> 00:10:33:** a water offset can allow growth within a community without

**00:10:33 --> 00:10:36:** meaning that the system wide water consumption has to increase.

**00:10:36 --> 00:10:40:** It can stay flat and level across the service area

**00:10:40 --> 00:10:43:** of the water utility or the water supply service area

**00:10:43 --> 00:10:47:** because the offset from the development is it's it basically

**00:10:47 --> 00:10:49:** taking care of that new water use.

**00:10:50 --> 00:10:52:** And so it can be a combination of improved on

**00:10:52 --> 00:10:55:** site water efficiency, which reduces the amount of new water

**00:10:56 --> 00:10:59:** demand that would occur, and then off site water efficiency,

**00:10:59 --> 00:11:01:** which could provide additional offset credits.

**00:11:02 --> 00:11:05:** And by doing this, you can reduce or completely eliminate

**00:11:06 --> 00:11:10:** the impact of new development on the water supply constraints

**00:11:10 --> 00:11:11:** in a community.

**00:11:11 --> 00:11:15:** And most importantly, can help, you know, avoid building moratoriums

**00:11:15 --> 00:11:19:** and avoid the economic dislocations that come from building moratoriums

**00:11:19 --> 00:11:22:** where you're in a resource constrained area.

**00:11:23 --> 00:11:26:** So at the Alliance, we came up with a project

**00:11:26 --> 00:11:27:** that we called Netblue.

**00:11:27 --> 00:11:30:** We did get some funding from it for for it

**00:11:30 --> 00:11:32:** from the Sherman Foundation in New York.

**00:11:32 --> 00:11:35:** And it was a three-year project to take a look

**00:11:35 --> 00:11:37:** at where offsets currently existed.

**00:11:37 --> 00:11:40:** And so we looked at Santa Fe, you'll hear from

**00:11:40 --> 00:11:40:** them today.

**00:11:40 --> 00:11:42:** And we looked at Cambria and we looked at a

**00:11:43 --> 00:11:46:** number of other communities across the country and we wanted

**00:11:46 --> 00:11:48:** to come up with a, a tool, an, an ordinance

**00:11:48 --> 00:11:51:** tool that that could be used, It could be customized

**00:11:51 --> 00:11:54:** at the local level and an offset strategy that could

**00:11:54 --> 00:11:57:** help people calculate what those offsets could be composed of.

**00:11:58 --> 00:11:59:** And we have partners in this.

**00:11:59 --> 00:12:02:** In addition to the Alliance for Water Efficiency, we had

**00:12:02 --> 00:12:04:** the Environmental Law Institute, who did a lot of the

**00:12:04 --> 00:12:07:** legal work in constructing the ordinance and the Research and

**00:12:07 --> 00:12:09:** River Network who helped us a lot with the outreach.

**00:12:10 --> 00:12:13:** And we worked with seven different partner cities in the

**00:12:13 --> 00:12:15:** United States to vet the approach.

**00:12:15 --> 00:12:17:** It got some attention, as you can see from National

**00:12:17 --> 00:12:21:** Geographic, because this was something that we we hadn't been

**00:12:21 --> 00:12:22:** seeing on a national basis.

**00:12:22 --> 00:12:25:** We've been seeing offsets for air quality and for wetlands

**00:12:25 --> 00:12:29:** mitigation, but not for direct drinking water itself.

**00:12:30 --> 00:12:32:** So here were the partner communities that we worked with.

**00:12:34 --> 00:12:38:** Bozeman, San Francisco, Albuquerque and Austin were sort of western

**00:12:38 --> 00:12:40:** area states that we work with.

**00:12:40 --> 00:12:43:** But on the East Coast we and central part of

**00:12:43 --> 00:12:46:** the country, we work with Madison, WI, Acton, MA and

**00:12:46 --> 00:12:48:** Cobb County in Georgia.

**00:12:48 --> 00:12:53:** And we wanted very different communities, different hydrological characteristics, different

**00:12:53 --> 00:12:57:** legal constraints, different growth patterns so that we could show

**00:12:57 --> 00:12:59:** them what we were doing and have them give us

**00:12:59 --> 00:13:02:** some feedback on what they thought might work for them.

**00:13:03 --> 00:13:05:** And so we were very grateful to the partner communities

**00:13:05 --> 00:13:07:** for their help in that.

**00:13:07 --> 00:13:09:** And so at the end of the three-year.

**00:13:09 --> 00:13:10:** We launched the program.

**00:13:10 --> 00:13:13:** We called it Net Blue because we didn't think calling

**00:13:13 --> 00:13:16:** it Net 0 was such a good idea because Net

**00:13:16 --> 00:13:19:** 0 implies you might be off grid and we didn't

**00:13:19 --> 00:13:21:** want anybody to be off grid where there was a

**00:13:21 --> 00:13:23:** available water and sewer.

**00:13:23 --> 00:13:26:** We wanted connections, but we still wanted to manage the

**00:13:26 --> 00:13:28:** demand from those new connections.

**00:13:29 --> 00:13:31:** And so we decided to call it the Netblue program.

**00:13:31 --> 00:13:34:** And so there's a part of the Alliance for Water

**00:13:34 --> 00:13:37:** Efficiency website that talks all about the Netblue program and

**00:13:37 --> 00:13:40:** explains that the toolkit itself has seven different pieces in

**00:13:40 --> 00:13:40:** it.

**00:13:41 --> 00:13:44:** And you can request a toolkit from AWE.

**00:13:44 --> 00:13:45:** It's all free of charge.

**00:13:45 --> 00:13:48:** There's no cost connected with any of this, and with

**00:13:48 --> 00:13:51:** the tool kit, you'll get a model ordinance worksheet and

**00:13:51 --> 00:13:53:** I'll show you how that works.

**00:13:53 --> 00:13:56:** There's a user guide that goes along with it and

**00:13:56 --> 00:13:58:** helps explain what kinds of options to choose from.

**00:13:59 --> 00:14:01:** Then we give you 3 different examples of how the

**00:14:01 --> 00:14:02:** ordinance can be applied.
**00:14:03 --> 00:14:07:** Then we give you a offset methodology workbook, which is
**00:14:07 --> 00:14:10:** an Excel workbook spreadsheet and I'll show you some snapshots
**00:14:10 --> 00:14:13:** of that and then a user guide that shows you
**00:14:13 --> 00:14:17:** how to calculate those offsets and then three different offset
**00:14:17 --> 00:14:20:** examples that match the ordinate examples from #3 above.
**00:14:20 --> 00:14:23:** So we show you how that that all works in
**00:14:24 --> 00:14:29:** specific examples, you know, single communities or, you know, county
**00:14:29 --> 00:14:30:** applications or.
**00:14:31 --> 00:14:33:** And, and so we designed it so it can be
**00:14:33 --> 00:14:36:** applied to whatever the land use options are that are
**00:14:36 --> 00:14:36:** available.
**00:14:37 --> 00:14:40:** And then lastly, there are outreach materials that are available
**00:14:40 --> 00:14:44:** to help with, with the public discussions with the developer
**00:14:44 --> 00:14:46:** conversations and, and all of all of this in the
**00:14:46 --> 00:14:48:** toolkit is available free of charge.
**00:14:49 --> 00:14:51:** So real quickly, I just wanted to walk you through
**00:14:51 --> 00:14:54:** the pieces of the, the toolkit since again, this is
**00:14:54 --> 00:14:56:** completely free to anybody who wants to use it.
**00:14:57 --> 00:15:01:** The, the model ordinance is not a cookie cutter ordinance.
**00:15:01 --> 00:15:03:** It's actually a worksheet where you choose the kinds of
**00:15:03 --> 00:15:06:** options that are important for your community.
**00:15:07 --> 00:15:09:** So it, it deals with a variety of, of settings
**00:15:09 --> 00:15:13:** like the what, what legal constraints you might have in
**00:15:13 --> 00:15:16:** your community, what your governing structure is and, and what
**00:15:16 --> 00:15:19:** the entities are and what kind of enabling laws that
**00:15:19 --> 00:15:22:** you might have or need at the local level.
**00:15:23 --> 00:15:25:** And we know that there will be a number of
**00:15:25 --> 00:15:28:** people who will use this ordinance tool, not just lawyers,
**00:15:28 --> 00:15:30:** but developers might want to take a look at it.
**00:15:30 --> 00:15:32:** You know, planners are obviously going to take a look
**00:15:32 --> 00:15:34:** at it and and citizens will take a look at
**00:15:34 --> 00:15:34:** it as well.
**00:15:35 --> 00:15:37:** And so the tool can be used in as part
**00:15:37 --> 00:15:40:** of your outreach program because it really kind of explains
**00:15:40 --> 00:15:43:** why you would want to add this particular element to
**00:15:43 --> 00:15:44:** your ordinance.
**00:15:44 --> 00:15:48:** And it asks a series of questions because it's intended
**00:15:48 --> 00:15:51:** to help a community identify and think about what kinds

**00:15:51 --> 00:15:54:** of tools they need to address the critical issues in
**00:15:54 --> 00:15:55:** their own communities.
**00:15:56 --> 00:16:01:** So the ordinance has the following kinds of sections and
**00:16:01 --> 00:16:05:** their standard legal sections that are are addressed in every
**00:16:05 --> 00:16:09:** ordinance that's adopted at the local level.
**00:16:09 --> 00:16:13:** So you make sure that you withstand lawsuits because you
**00:16:13 --> 00:16:16:** have all the legal pieces that are necessary to justify
**00:16:16 --> 00:16:17:** its passage.
**00:16:17 --> 00:16:21:** So establishing a legal basis, you know what the ordinance
**00:16:21 --> 00:16:24:** conditions are, how it's going to be enforced, how the,
**00:16:24 --> 00:16:27:** the, the actual offset is going to be applied.
**00:16:27 --> 00:16:28:** There are different ways.
**00:16:28 --> 00:16:31:** It can be an offset credit bank, it can be
**00:16:31 --> 00:16:33:** an in lieu fee, it can be an administrative fee.
**00:16:33 --> 00:16:37:** It can be other types of modifications where the the
**00:16:37 --> 00:16:40:** developer and the utility work together to get the the
**00:16:40 --> 00:16:44:** offset implemented and then how it's going to be administered
**00:16:44 --> 00:16:48:** in terms of appeals, severability, effective date, etcetera.
**00:16:48 --> 00:16:51:** So all of those sections are in the ordinance and
**00:16:51 --> 00:16:54:** when you open it up, this is the purpose section.
**00:16:54 --> 00:16:57:** You can see that there are a number of different
**00:16:57 --> 00:17:00:** options here and you can check the ones that apply
**00:17:00 --> 00:17:00:** to you.
**00:17:01 --> 00:17:04:** Maybe you know, all of them will, maybe maybe all
**00:17:04 --> 00:17:07:** of them will, but you check which ones you want.
**00:17:07 --> 00:17:10:** Then when you get to the end, here's the last
**00:17:10 --> 00:17:13:** page, the effective date section, there's a little button that
**00:17:13 --> 00:17:15:** says press me or our programmer had a sense of
**00:17:15 --> 00:17:16:** humor, right?
**00:17:17 --> 00:17:18:** So it says press me.
**00:17:18 --> 00:17:20:** And when you press it, you get then a Word
**00:17:20 --> 00:17:24:** document that has everything you've checked formatted in a way
**00:17:24 --> 00:17:26:** that you can then, you know, send around for, for
**00:17:26 --> 00:17:27:** public review.
**00:17:28 --> 00:17:31:** So it's, it's really a, a worksheet tool for creating
**00:17:31 --> 00:17:33:** your own local ordinance.
**00:17:34 --> 00:17:37:** The offset methodology workbook is an Excel workbook that is
**00:17:37 --> 00:17:39:** on the same sort of principle.
**00:17:39 --> 00:17:41:** It, it gives you options for how you can construct
**00:17:41 --> 00:17:44:** an offset and gives you ideas for what the offset

**00:17:44 --> 00:17:45:** could be composed of.

**00:17:46 --> 00:17:49:** And there are many different ways to construct an offset.

**00:17:49 --> 00:17:53:** There are water conservation, water efficiency strategies that are listed

**00:17:53 --> 00:17:54:** in the, in the Excel file.

**00:17:54 --> 00:17:59:** There's a rainwater harvesting calculator, a stormwater capture calculator, if

**00:17:59 --> 00:18:02:** you want to use stormwater as, as part of your

**00:18:02 --> 00:18:03:** irrigation offset.

**00:18:03 --> 00:18:06:** And then there are other ways to create custom offsets

**00:18:06 --> 00:18:09:** and the, the tool that you do that as well.

**00:18:09 --> 00:18:12:** And then there's a worksheet that indicates, well, here are

**00:18:12 --> 00:18:15:** the ones I've selected and does it equal what I'm

**00:18:15 --> 00:18:17:** required to provide in terms of an offset.

**00:18:17 --> 00:18:19:** And then there are supplemental sheets.

**00:18:19 --> 00:18:22:** You know, you can find out if your community actually

**00:18:22 --> 00:18:24:** still has inefficient toilets that need to be replaced.

**00:18:24 --> 00:18:28:** And so we give you information that's that's fairly current

**00:18:28 --> 00:18:33:** about inefficient toilet stock that's available and, and what the

**00:18:33 --> 00:18:36:** housing data shows that bass and have bass are for

**00:18:36 --> 00:18:38:** the housing stock in your community.

**00:18:40 --> 00:18:43:** So here's here's what the offset strategy looks like.

**00:18:43 --> 00:18:46:** And you can see that in the column here where

**00:18:46 --> 00:18:47:** it says offset strategy.

**00:18:48 --> 00:18:50:** There's a list of all kinds of options that can

**00:18:50 --> 00:18:51:** be chosen.

**00:18:51 --> 00:18:54:** And we give you the actual samples.

**00:18:55 --> 00:18:59:** Example savings user can specify additional savings or or change

**00:18:59 --> 00:19:03:** the savings number if they wish and it gives a

**00:19:03 --> 00:19:07:** useful life for what the offset would be and ask

**00:19:07 --> 00:19:10:** you do you want to include it in your table

**00:19:10 --> 00:19:10:** or not.

**00:19:11 --> 00:19:14:** And in this particular example, what they're trying to offset

**00:19:14 --> 00:19:17:** is 500,000 gallons per year in that development, which is

**00:19:17 --> 00:19:19:** a projected new potable water demand.

**00:19:20 --> 00:19:22:** And so they have to come up with offsets to

**00:19:22 --> 00:19:25:** the equivalent for that if it's a 1 to 1

**00:19:25 --> 00:19:26:** offset requirement.

**00:19:27 --> 00:19:31:** So here's, here's the selected offsets table that shows that

**00:19:31 --> 00:19:34:** they they met their 100% of, of reaching that.

**00:19:34 --> 00:19:36:** And here were the options that they chose.

**00:19:36 --> 00:19:39:** And again, a lot of it was toilet replacements because

**00:19:39 --> 00:19:41:** those are fairly straightforward to do.

**00:19:42 --> 00:19:46:** Appliance retrofits are are pretty predictable, but there's also rainwater

**00:19:46 --> 00:19:49:** harvesting in there as well and a couple of of

**00:19:50 --> 00:19:50:** CI options.

**00:19:51 --> 00:19:53:** So this shows you how the the offsets table is

**00:19:53 --> 00:19:57:** is constructed and then this is what you would provide

**00:19:57 --> 00:19:59:** to the local land use entity to show that 100%

**00:19:59 --> 00:20:02:** of your projected new water use would offset.

**00:20:03 --> 00:20:07:** So here's an example from the Parker County Council where

**00:20:07 --> 00:20:10:** we made-up a community named for Parker County.

**00:20:10 --> 00:20:13:** And this is an example of a county government that

**00:20:13 --> 00:20:17:** that has an anticipated surface water shortage and is worried

**00:20:17 --> 00:20:20:** about future future demand and and inability to supply that.

**00:20:20 --> 00:20:23:** So they were going to require offsets of all site

**00:20:23 --> 00:20:27:** plan approval requests and compliance proof had to be required

**00:20:27 --> 00:20:31:** 90 days after the application would be approved but before

**00:20:31 --> 00:20:34:** you would get your certificate of occupancy and there would

**00:20:34 --> 00:20:37:** be monitoring required to validate those savings.

**00:20:37 --> 00:20:40:** They chose an offset amount of 100%, which is 1

**00:20:40 --> 00:20:41:** to 1.

**00:20:41 --> 00:20:43:** You can choose 50% point 5 to 1 or you

**00:20:44 --> 00:20:47:** can choose 200 percent 2:00 to 1:00 depending upon how

**00:20:47 --> 00:20:49:** serious your resource constraint is.

**00:20:50 --> 00:20:53:** They decided not to do an in lieu fee option,

**00:20:53 --> 00:20:56:** but to actually require that the the offset be implemented.

**00:20:57 --> 00:21:00:** So here were the offsets that were chosen that the

**00:21:00 --> 00:21:03:** new beer brewery was the applicant and they had a

**00:21:04 --> 00:21:07:** projected new annual water demand of of 1.75 million gallons

**00:21:07 --> 00:21:08:** a year.

**00:21:08 --> 00:21:12:** And so with a wide required offset amount of 100%,

**00:21:12 --> 00:21:15:** the offset has to equal 1.7 million gallons a year.

**00:21:16 --> 00:21:19:** So the offset strategy that's in this example would be

**00:21:19 --> 00:21:23:** on site rainwater harvesting project to flush toilets on in

**00:21:23 --> 00:21:27:** within the building itself and single family toilet replacements off

**00:21:27 --> 00:21:27:** site.

**00:21:29 --> 00:21:32:** And so the offset amount would be 100% of the

**00:21:32 --> 00:21:36:** toilet flushing with rainwater on site and then off site

**00:21:36 --> 00:21:37:** replacements.

**00:21:37 --> 00:21:41:** And then that would yield 330,000 excess gallons per year

**00:21:41 --> 00:21:45:** to be used as off site credit and would involve

**00:21:45 --> 00:21:48:** 129 single family toilet replacements.
**00:21:48 --> 00:21:52:** So that would be the offset that would allow that
**00:21:52 --> 00:21:55:** brewery to move forward on a on 100% offset requirement.
**00:21:56 --> 00:21:59:** So that's just an example just to show you how
**00:21:59 --> 00:22:00:** that might work.
**00:22:00 --> 00:22:04:** It's completely customizable for the community and the outreach materials
**00:22:04 --> 00:22:07:** that are available from the Alliance for Water Efficiency talk
**00:22:07 --> 00:22:09:** about how it's customizable.
**00:22:09 --> 00:22:13:** They're frequently asked questions and materials answer all of that.
**00:22:14 --> 00:22:15:** The outreach items are all online.
**00:22:15 --> 00:22:19:** You can download those, but the request for the toolkit
**00:22:19 --> 00:22:23:** you just write EWE and the simple e-mail is www.net
**00:22:23 --> 00:22:26:** dash blue dot org and that takes you to a
**00:22:26 --> 00:22:30:** place where you fill in that you would like the
**00:22:30 --> 00:22:33:** material sent to you and then it's sent to you.
**00:22:34 --> 00:22:37:** And the reason you don't download it directly is that
**00:22:37 --> 00:22:39:** those materials will be updated.
**00:22:39 --> 00:22:41:** I mean, at this point we probably need to update
**00:22:41 --> 00:22:46:** anyway the the efficient inefficient toilet estimator, because there has
**00:22:46 --> 00:22:48:** been, you know, activity since this was launched.
**00:22:49 --> 00:22:52:** And so everybody who gets a tool kit will automatically
**00:22:52 --> 00:22:54:** get any updates that are done on Netblue.
**00:22:54 --> 00:22:56:** And so that was the reason to set it up
**00:22:56 --> 00:22:59:** this way so that we had a record of who
**00:22:59 --> 00:23:02:** got the tool kit and who is actually actively using
**00:23:02 --> 00:23:02:** it.
**00:23:03 --> 00:23:06:** So I just want to conclude with just giving a
**00:23:06 --> 00:23:09:** promotion for the Water and Planning network.
**00:23:10 --> 00:23:12:** Bill Sesnick and I Co chair that it's a free
**00:23:12 --> 00:23:16:** network of water and land use professionals that was initially
**00:23:16 --> 00:23:19:** created by the American Planning Association, but we've been working
**00:23:19 --> 00:23:22:** with lots of other organizations since then.
**00:23:22 --> 00:23:24:** You don't have to be an APA member or a
**00:23:24 --> 00:23:26:** member of any organization to join it.
**00:23:26 --> 00:23:28:** You just send us an e-mail and you're part of
**00:23:28 --> 00:23:28:** the group.
**00:23:29 --> 00:23:32:** We have about 550 network members in the US and
**00:23:32 --> 00:23:32:** Canada.

**00:23:33 --> 00:23:35:** We do bimonthly newsletters, regular updates.
**00:23:35 --> 00:23:38:** We have a webinar next Friday on the issues on
**00:23:38 --> 00:23:40:** maintaining green infrastructure.
**00:23:41 --> 00:23:43:** So please sign up and we'd love to have you
**00:23:43 --> 00:23:43:** join that.
**00:23:44 --> 00:23:46:** And all you have to do is e-mail water at
**00:23:46 --> 00:23:49:** planning.org and then you'll get an e-mail from me saying
**00:23:49 --> 00:23:49:** welcome.
**00:23:51 --> 00:23:53:** So we'd love to have you be part of this
**00:23:53 --> 00:23:56:** because I think the work that the Urban Land Institute
**00:23:56 --> 00:23:58:** is doing as well as a lot of the other
**00:23:58 --> 00:24:02:** organizations is, is helping to promote a better connection between
**00:24:02 --> 00:24:06:** land use planners and water resource planners, because that's been
**00:24:06 --> 00:24:08:** lacking for, for way too long.
**00:24:10 --> 00:24:13:** So here's my contact information, my my new e-mail.
**00:24:13 --> 00:24:16:** And thank you, Marianne for inviting me.
**00:24:17 --> 00:24:18:** Thank you so much, Marianne.
**00:24:18 --> 00:24:19:** This is so exciting to hear.
**00:24:19 --> 00:24:22:** And I just want to say Netblue was a real
**00:24:22 --> 00:24:25:** inspiration to you and I when we set about working
**00:24:25 --> 00:24:26:** on our Water Wise initiative.
**00:24:26 --> 00:24:28:** So thank you for all the work that you've done
**00:24:28 --> 00:24:29:** in this space.
**00:24:30 --> 00:24:34:** It does seem like Netblue is more municipality focused so.
**00:24:34 --> 00:24:35:** County.
**00:24:35 --> 00:24:36:** That's why I gave the county example.
**00:24:36 --> 00:24:37:** It can be.
**00:24:38 --> 00:24:39:** Totally.
**00:24:39 --> 00:24:42:** So I just wanted to pitch to the group that
**00:24:42 --> 00:24:45:** if you're in the private sector and also want some
**00:24:45 --> 00:24:48:** guidance in order to meet those types of rules and
**00:24:48 --> 00:24:52:** regulations that are coming down the Pike from municipalities and
**00:24:52 --> 00:24:53:** counties and states.
**00:24:54 --> 00:24:56:** I'm putting in the chat box the link to our
**00:24:56 --> 00:24:57:** Water Wise report.
**00:24:57 --> 00:25:00:** And this is all about providing guidance to more private
**00:25:00 --> 00:25:03:** sector people to how to implement this stuff into your
**00:25:03 --> 00:25:03:** projects.
**00:25:04 --> 00:25:08:** We do want to have questions and answers for each
**00:25:08 --> 00:25:08:** speaker.

**00:25:08 --> 00:25:12:** But since Marianne had a longer presentation, if you don't
**00:25:12 --> 00:25:16:** mind putting your questions for her in the chat box,
**00:25:16 --> 00:25:18:** Marianne, do you mind responding?
**00:25:18 --> 00:25:19:** To That's fine, we're happy to do that.
**00:25:20 --> 00:25:22:** And then maybe we'll have time at the end for
**00:25:22 --> 00:25:23:** a group Q&A.
**00:25:24 --> 00:25:25:** OK, great.
**00:25:25 --> 00:25:28:** Dana has a question already in the chat box.
**00:25:28 --> 00:25:29:** Marianne, if you want to take a.
**00:25:29 --> 00:25:29:** Look at that.
**00:25:29 --> 00:25:30:** OK, take a look.
**00:25:31 --> 00:25:32:** OK, great.
**00:25:32 --> 00:25:36:** Our next speaker is Tristan Reaper from Cambria, CA.
**00:25:38 --> 00:25:39:** Good afternoon.
**00:25:39 --> 00:25:40:** Thank you all for having me.
**00:25:40 --> 00:25:46:** Let me share my screen here and you guys all
**00:25:46 --> 00:25:48:** see that.
**00:25:49 --> 00:25:50:** All right, that's great.
**00:25:52 --> 00:25:52:** Good afternoon.
**00:25:52 --> 00:25:53:** I'm Tristan Reaper.
**00:25:53 --> 00:25:56:** I'm the program manager for the Utilities and Engineering department
**00:25:56 --> 00:25:59:** at the Cambria Community Services District, and I manage, among
**00:25:59 --> 00:26:01:** other things, the water conservation program.
**00:26:02 --> 00:26:05:** So a little bit of background on us, We are
**00:26:05 --> 00:26:11:** located in the Central Coast of California, about midway between
**00:26:11 --> 00:26:14:** Los Angeles and San Francisco.
**00:26:15 --> 00:26:17:** I put this in here just to illustrate how we're
**00:26:17 --> 00:26:19:** kind of kind of off on our own a little
**00:26:19 --> 00:26:19:** bit.
**00:26:19 --> 00:26:23:** We're not the opportunity to intertie to the larger system
**00:26:24 --> 00:26:27:** water system in San Lucifer County is somewhat limited.
**00:26:29 --> 00:26:31:** We experience a Mediterranean climate.
**00:26:31 --> 00:26:36:** We got a relatively brief, sometimes relatively intense winter period
**00:26:37 --> 00:26:41:** and then a long dry period throughout the summer and
**00:26:41 --> 00:26:41:** fall.
**00:26:43 --> 00:26:46:** Just a little bit on our water supply reliability.
**00:26:47 --> 00:26:50:** Just to give a little more background information, in the
**00:26:50 --> 00:26:53:** last couple of years we've diverted in the low 500
**00:26:53 --> 00:26:54:** acre foot a year.

**00:26:54 --> 00:26:57:** So it's in the grand scheme of things pretty small.

**00:26:58 --> 00:27:01:** We have two main aquifers we draw from with a

**00:27:01 --> 00:27:03:** well filled each aquifer.

**00:27:04 --> 00:27:08:** The walkers themselves are relatively small, relatively constrained.

**00:27:09 --> 00:27:10:** We're lucky that they refill every year.

**00:27:11 --> 00:27:15:** However, about on every about every 20 years we get

**00:27:15 --> 00:27:19:** one year with incomplete recharge, which is the release to

**00:27:19 --> 00:27:22:** the our water reliability supply reliability issues.

**00:27:26 --> 00:27:28:** So this gives an idea of our, our, our service

**00:27:28 --> 00:27:29:** area.

**00:27:31 --> 00:27:32:** So just a little bit a bit about us.

**00:27:32 --> 00:27:34:** We're a California special district.

**00:27:34 --> 00:27:38:** We provide water and sewer service, Fire Protection, Rexy's collection,

**00:27:38 --> 00:27:39:** a small amount of St.

**00:27:39 --> 00:27:41:** lighting and some parks, recreation, open space management.

**00:27:42 --> 00:27:46:** An important consideration for us is that we're located in

**00:27:46 --> 00:27:49:** a urban wildlife interface and part of our community is

**00:27:49 --> 00:27:52:** located inside a native Monterey pine forest.

**00:27:55 --> 00:27:58:** So just a little bit of background on the land

**00:27:58 --> 00:28:01:** use that kind of drives the the how we how

**00:28:01 --> 00:28:02:** we do things.

**00:28:03 --> 00:28:04:** We're a part of San Francisco County.

**00:28:04 --> 00:28:07:** They are the land use authority.

**00:28:09 --> 00:28:11:** And though we do not have land use authority, we

**00:28:11 --> 00:28:14:** have an influence development obviously as our authority is the

**00:28:14 --> 00:28:16:** water and sewer service and Fire Protection providers.

**00:28:17 --> 00:28:23:** The California Coastal Commission also has jurisdiction over our entire

**00:28:23 --> 00:28:27:** service area and they any land use decision made by

**00:28:27 --> 00:28:29:** Saint Louis, St.

**00:28:29 --> 00:28:32:** Louis Obispo County can be appealed by the to the

**00:28:32 --> 00:28:36:** Coastal Commission for an additional hearing and either approval or

**00:28:36 --> 00:28:37:** denial.

**00:28:37 --> 00:28:39:** And this will be important later on.

**00:28:41 --> 00:28:44:** So we have had a moratorium on all new water

**00:28:44 --> 00:28:47:** connections since November of 2001.

**00:28:48 --> 00:28:50:** So this I mean effectively halted development.

**00:28:50 --> 00:28:53:** They were projects going on at the time that we're

**00:28:53 --> 00:28:58:** allowed to continue and those projects were required to use
**00:28:58 --> 00:29:02:** retrofit or could continue the retrofit to build program that
**00:29:02 --> 00:29:04:** it was already in place.
**00:29:05 --> 00:29:07:** Despite the moratorium, we do allow a limited amount of
**00:29:07 --> 00:29:08:** development.
**00:29:08 --> 00:29:09:** We allow tear downs and rebuilds.
**00:29:09 --> 00:29:12:** We allow active service transfers so you can tear a
**00:29:12 --> 00:29:15:** house down to one location, move it to another location
**00:29:15 --> 00:29:17:** within town and then rebuild.
**00:29:17 --> 00:29:20:** We allow remodels and there have been a limited number
**00:29:20 --> 00:29:23:** of public use buildings that have been constructed since the
**00:29:23 --> 00:29:24:** moratorium.
**00:29:26 --> 00:29:29:** So this the the our water wise development practices.
**00:29:46 --> 00:29:48:** So the the points and the points bank system.
**00:29:49 --> 00:29:52:** It was great to hear kind of before this presentation
**00:29:52 --> 00:29:56:** started a little bit of the background and how Cambria's
**00:29:56 --> 00:29:59:** model was kind of a little bit of an inspiration
**00:29:59 --> 00:30:03:** for creating this kind of water offset demand system.
**00:30:04 --> 00:30:07:** We've had a version in place of this since about
**00:30:07 --> 00:30:08:** 1989.
**00:30:08 --> 00:30:11:** So the late 1980s it wasn't, it was definitely it's
**00:30:11 --> 00:30:15:** methodology was called into question at times.
**00:30:15 --> 00:30:19:** And so that resulted in an update in 2013.
**00:30:20 --> 00:30:24:** Our system allows either direct retrofits or you can pay
**00:30:24 --> 00:30:27:** in lieu fees and the fees would be used by
**00:30:27 --> 00:30:31:** the CCC to retrofit properties and add points back to
**00:30:31 --> 00:30:33:** the points bank.
**00:30:37 --> 00:30:40:** The the purchase of in lieu fees is something that
**00:30:40 --> 00:30:44:** will be subject to approval by the by the board
**00:30:44 --> 00:30:47:** of directors and then again, retrofit points will be added
**00:30:48 --> 00:30:51:** back to the bank when retrofits were completed either upon
**00:30:52 --> 00:30:54:** resale, expansion of use or remodels.
**00:30:56 --> 00:30:59:** So I was looking through and again, it has, it
**00:30:59 --> 00:31:03:** hasn't been minimally utilized since the 2013 update and this
**00:31:03 --> 00:31:06:** has largely been due to the book Commission of the
**00:31:06 --> 00:31:10:** moratorium and the pressure of the Coastal Commission on new
**00:31:10 --> 00:31:11:** development.
**00:31:12 --> 00:31:14:** There's a couple of examples here.
**00:31:14 --> 00:31:17:** We did have an affordable housing project go through which
**00:31:17 --> 00:31:20:** the Coastal Commission approved, but we believe their approval was

**00:31:20 --> 00:31:23:** due to the project being an affordable housing project and
**00:31:23 --> 00:31:26:** therefore exempt from resource constraints considerations.
**00:31:28 --> 00:31:32:** In 2019, a private resident a used the retrofit point
**00:31:32 --> 00:31:34:** system to attempt to build a residence.
**00:31:35 --> 00:31:37:** It was approved by San Luis Visible County.
**00:31:38 --> 00:31:40:** The Coastal Commission did not approve it.
**00:31:45 --> 00:31:46:** So then a little bit more about the other water
**00:31:46 --> 00:31:49:** stuff we have, conservation stuff we have going on.
**00:31:50 --> 00:31:54:** Our water code a little more strict than the Calgreen
**00:31:54 --> 00:31:57:** code with bathroom faucets being limited to .5 where Calgreen
**00:31:57 --> 00:32:00:** allows up to I think it's even 2.2 gallons per
**00:32:00 --> 00:32:01:** minute.
**00:32:03 --> 00:32:03:** Yeah.
**00:32:03 --> 00:32:06:** And so we've done a lot of work to try
**00:32:06 --> 00:32:09:** to retrofit the properties to these new standards.
**00:32:09 --> 00:32:12:** It can sometimes cause problems because the contractors might not
**00:32:12 --> 00:32:15:** realize that our standards are more strict than Calgary.
**00:32:15 --> 00:32:18:** So they go install all new faucets and now we
**00:32:18 --> 00:32:20:** have to tell them, oh by the way, you have
**00:32:20 --> 00:32:24:** to modify those new faucets you just installed so they
**00:32:24 --> 00:32:25:** meet our flow requirements.
**00:32:30 --> 00:32:33:** So again we have also have a retrofit upon resale
**00:32:33 --> 00:32:35:** remodeling, expansion of use program.
**00:32:36 --> 00:32:38:** This was a way of kind of reducing water use
**00:32:39 --> 00:32:42:** whether there was going to be development or not.
**00:32:43 --> 00:32:46:** Properties must verify that the fixtures meet their current code.
**00:32:46 --> 00:32:49:** This is inspection done by a plumber who then attest
**00:32:49 --> 00:32:52:** to the fact that those retrofits were performed and then
**00:32:52 --> 00:32:55:** the water the savings would be added to the to
**00:32:55 --> 00:32:56:** the points bank.
**00:32:59 --> 00:33:02:** The other requirement we have to kind of minimize our
**00:33:02 --> 00:33:06:** water, our water impact is the requirement for properties with
**00:33:06 --> 00:33:09:** with a a lot size of greater than 8000 square
**00:33:09 --> 00:33:09:** feet.
**00:33:11 --> 00:33:13:** They must install a rainwater cistern.
**00:33:13 --> 00:33:17:** The minimum size for that cistern will be 3000 gallons
**00:33:17 --> 00:33:20:** and it must have an attached distribution system so that
**00:33:20 --> 00:33:23:** that water can be used for irrigation.
**00:33:23 --> 00:33:28:** We don't have any provisions allowing indoor use of that
**00:33:28 --> 00:33:30:** water at the at this time.

**00:33:35 --> 00:33:36:** And this has had kind of a limited effect.
**00:33:36 --> 00:33:38:** Most of the lots in Cambria are on the smaller
**00:33:38 --> 00:33:38:** side.
**00:33:38 --> 00:33:41:** There's usually quite a bit smaller than 8000 square feet.
**00:33:41 --> 00:33:44:** So there haven't been a lot of citions installed under
**00:33:44 --> 00:33:44:** this program.
**00:33:46 --> 00:33:48:** So I guess a couple of takeaways.
**00:33:48 --> 00:33:51:** The points bank was a was kind of a after
**00:33:51 --> 00:33:54:** the moratorium was visualized as a way of maybe development
**00:33:54 --> 00:33:57:** could continue despite the moratorium by offsetting water use.
**00:33:58 --> 00:34:03:** However, the Coastal Commission and the the resource constraint issues
**00:34:03 --> 00:34:07:** of Cambridge Water supply have that that has really not
**00:34:07 --> 00:34:08:** been the case.
**00:34:08 --> 00:34:12:** The Coastal Commission does not view it as a vital
**00:34:12 --> 00:34:15:** means of reducing water demand and they they made that
**00:34:15 --> 00:34:19:** statement very clear in the staff report for the the
**00:34:19 --> 00:34:22:** book out Singapore residents when they stated the CCS CS
**00:34:22 --> 00:34:26:** program does not appear to actually offset water use and
**00:34:26 --> 00:34:31:** applicants participation will have no discernible effect on the above
**00:34:31 --> 00:34:32:** water supply.
**00:34:32 --> 00:34:36:** This is in reference to the the act the realities
**00:34:36 --> 00:34:39:** of Cambria's constrained water supply.
**00:34:44 --> 00:34:48:** So as you imagine, there haven't been many takers of
**00:34:48 --> 00:34:51:** the of you trying to use our retrofit point system
**00:34:51 --> 00:34:54:** because nobody wants to pay money and time and go
**00:34:54 --> 00:34:58:** through the whole retrofit process only to have their project
**00:34:58 --> 00:35:02:** denied when it came to the to the Coastal Commission.
**00:35:04 --> 00:35:06:** And so with that, I'm open for questions.
**00:35:10 --> 00:35:10:** Thank you so much.
**00:35:10 --> 00:35:14:** Tristan, I'm just going to start with the question I
**00:35:14 --> 00:35:17:** think might be on many people's minds of what did,
**00:35:17 --> 00:35:21:** did the Coastal Commission have data to come to that
**00:35:21 --> 00:35:25:** decision or what was what was the reasoning behind that,
**00:35:25 --> 00:35:26:** that decision?
**00:35:30 --> 00:35:34:** Sort of you know, we still haven't seen the really
**00:35:34 --> 00:35:37:** concrete data that they have yet to provide on, on
**00:35:38 --> 00:35:40:** why they've come to this decision.
**00:35:41 --> 00:35:44:** They to be fair our with water withdrawals used to
**00:35:44 --> 00:35:45:** be a lot more.

**00:35:46 --> 00:35:49:** There was I think the highest was 799 acre feet.
**00:35:49 --> 00:35:51:** So we've come down quite a bit since then.
**00:35:51 --> 00:35:54:** The drought of 20/13/2015 was a big driver.
**00:35:55 --> 00:35:58:** I think we'd, we'd reduced our demand 40% in that
**00:35:58 --> 00:35:59:** year alone.
**00:36:01 --> 00:36:03:** So I don't know if there's, there hasn't been much
**00:36:03 --> 00:36:05:** of A re evaluation of that stance since then.
**00:36:06 --> 00:36:09:** They're basing a lot of it on a in stream
**00:36:09 --> 00:36:13:** flow assessment that was performed actually during that drought.
**00:36:14 --> 00:36:17:** That then kind of demonstrate, Oh well, we, there isn't
**00:36:17 --> 00:36:20:** sufficient water to provide for the environment and for the
**00:36:21 --> 00:36:24:** people and you have this kind of just reliability issue.
**00:36:24 --> 00:36:27:** And at the, again, at the time we what Cambria
**00:36:27 --> 00:36:29:** was using significantly more.
**00:36:29 --> 00:36:32:** We had a year the 20/13/2014 when there when the
**00:36:32 --> 00:36:34:** aquifers did not completely recharge.
**00:36:34 --> 00:36:37:** And so there was the very real chance that Cambria
**00:36:37 --> 00:36:38:** would have actually run out of water.
**00:36:38 --> 00:36:40:** And so that I feel like that's a lot of
**00:36:40 --> 00:36:42:** what they're basing that decision on.
**00:36:45 --> 00:36:46:** Thank you.
**00:36:47 --> 00:36:50:** Looks like Jay Alstrom had a similar question to what
**00:36:50 --> 00:36:52:** I just asked and Randall Hanson has a question.
**00:36:52 --> 00:36:54:** Randall, do you want to unmute and ask?
**00:36:56 --> 00:36:57:** Sure.
**00:36:57 --> 00:37:01:** I was just wondering what your requirements are for Sigma
**00:37:01 --> 00:37:05:** and whether you've developed AGSA with respect to the Bullet
**00:37:05 --> 00:37:08:** 118 designations in your area?
**00:37:08 --> 00:37:11:** And are you using any kind of an integrated hydrologic
**00:37:11 --> 00:37:15:** model to assess the entire hydrologic cycle in your area?
**00:37:18 --> 00:37:21:** You know, we haven't, we are in the process of
**00:37:21 --> 00:37:25:** getting a regular coastal development permit for our advanced water
**00:37:25 --> 00:37:26:** treatment facility.
**00:37:27 --> 00:37:30:** And as part of that we developed a hydrologic model
**00:37:30 --> 00:37:33:** to kind of show what the effect of that was
**00:37:33 --> 00:37:35:** going to be on the on the groundwater.
**00:37:36 --> 00:37:40:** But we haven't had like a really comprehensive one done
**00:37:40 --> 00:37:41:** to my knowledge.
**00:37:45 --> 00:37:47:** So you were not required to to form AGSA or
**00:37:47 --> 00:37:49:** anything under Sigma at all.

**00:37:49 --> 00:37:51:** Do you have some exemption to that?
**00:37:52 --> 00:37:55:** I think it's, I think it has to do with
**00:37:55 --> 00:37:58:** the fact that our groundwater levels are stable like year
**00:37:58 --> 00:38:01:** like at year over year like we're not at the
**00:38:01 --> 00:38:04:** because of the aquifer recharge occurs every year.
**00:38:05 --> 00:38:09:** We haven't had to be regulated under Sigma.
**00:38:09 --> 00:38:12:** I know there is a like basement management plans and
**00:38:12 --> 00:38:16:** a little bit a certain amount of coordination between US
**00:38:16 --> 00:38:20:** and the agricultural users just like not quite that hasn't
**00:38:20 --> 00:38:22:** gotten quite to the formality of of Sigma.
**00:38:26 --> 00:38:27:** OK, thanks.
**00:38:29 --> 00:38:31:** Dave Elstrom, do you want to follow up on your
**00:38:31 --> 00:38:31:** question?
**00:38:34 --> 00:38:36:** No, you asked exactly what I was going to ask,
**00:38:36 --> 00:38:36:** so thank you.
**00:38:39 --> 00:38:41:** Any other questions for Tristan?
**00:38:44 --> 00:38:46:** OK, I'm not seeing any right now.
**00:38:46 --> 00:38:47:** So if you if they occur to you later, please
**00:38:48 --> 00:38:50:** put them in the chat box and Tristan can address
**00:38:50 --> 00:38:50:** them directly.
**00:38:50 --> 00:38:52:** Thank you so much, Tristan.
**00:38:52 --> 00:38:53:** Thank you for having me.
**00:38:53 --> 00:38:57:** Our next speaker is Rachel Belisle Toller.
**00:38:57 --> 00:38:59:** I hope I'm saying that correctly, but you can correct
**00:38:59 --> 00:38:59:** me if I'm wrong.
**00:38:59 --> 00:39:03:** Rachel from Ipswich, Massachusetts.
**00:39:03 --> 00:39:03:** Go ahead, Rachel.
**00:39:05 --> 00:39:06:** Hello everybody.
**00:39:07 --> 00:39:08:** Good afternoon.
**00:39:09 --> 00:39:16:** Just going to share my screen and OK, can everybody
**00:39:16 --> 00:39:17:** see that?
**00:39:17 --> 00:39:17:** Everything good?
**00:39:19 --> 00:39:19:** Excellent.
**00:39:21 --> 00:39:24:** Such a pleasure to be here with you all virtually
**00:39:24 --> 00:39:26:** today across the country.
**00:39:28 --> 00:39:29:** My name is Rachel Lyle Toller.
**00:39:29 --> 00:39:31:** You said that perfectly.
**00:39:31 --> 00:39:35:** And I am the water Resources Manager in Ipswich, Massachusetts,
**00:39:35 --> 00:39:38:** a tiny little town in Northeast Massachusetts.
**00:39:39 --> 00:39:43:** And my role for the utilities department here is lots
**00:39:43 --> 00:39:49:** of different things, but primarily thinking creatively about our

efficiency

**00:39:49 --> 00:39:55:** programs, our outreach, education, science communication, how to make our

**00:39:55 --> 00:40:01:** infrastructure projects participatory, how to help manage developments and also

**00:40:01 --> 00:40:05:** research and confront threats to our water supply.

**00:40:06 --> 00:40:10:** If you don't know anything about Ipswich, Massachusetts, it's again,

**00:40:10 --> 00:40:14:** tiny little town, just under 14,000 folks living in Ipswich.

**00:40:15 --> 00:40:19:** And although we're small, we are on the commuter rail

**00:40:19 --> 00:40:21:** train line to to Boston.

**00:40:21 --> 00:40:26:** And so there's been several statewide initiatives to really promote

**00:40:26 --> 00:40:31:** zoning changes that would allow for affordable housing and multi

**00:40:31 --> 00:40:35:** family housing in general that are close to those areas

**00:40:35 --> 00:40:37:** of transportation.

**00:40:38 --> 00:40:42:** Because of that, development is a really hot topic in

**00:40:42 --> 00:40:46:** our community, in addition to the fact that we have

**00:40:46 --> 00:40:50:** been struggling with our supply due to the historic droughts

**00:40:50 --> 00:40:52:** that we've been having.

**00:40:52 --> 00:40:55:** No, I know you don't think droughts when you think

**00:40:55 --> 00:40:59:** of Massachusetts, but for whatever reason, our little town does

**00:40:59 --> 00:41:03:** not get the adequate weather patterns needed to recharge our

**00:41:03 --> 00:41:04:** supplies.

**00:41:04 --> 00:41:06:** We rely on two different river basins.

**00:41:07 --> 00:41:11:** We have two reservoirs and five wells and we have

**00:41:11 --> 00:41:16:** repeatedly, more so than a lot of surrounding communities, in

**00:41:16 --> 00:41:21:** fact really struggled with having adequate water in a water

**00:41:21 --> 00:41:22:** ban right now actually.

**00:41:23 --> 00:41:27:** So development being a hot topic politically in our area

**00:41:27 --> 00:41:32:** and also environmentally, the town has charged me with trying

**00:41:32 --> 00:41:36:** to respond with what we call our water use mitigation

**00:41:36 --> 00:41:41:** program or our lump, but I'm still workshopping that name.

**00:41:41 --> 00:41:44:** I don't think it's going to stay that way because

**00:41:44 --> 00:41:47:** it's not the not the catchiest name, but a WAMP

**00:41:47 --> 00:41:51:** is very similar to your traditional water bank program.

**00:41:52 --> 00:41:56:** When a new development goes through the permitting process, it

**00:41:56 --> 00:42:01:** gets triggered to us and residential and commercial projects need

**00:42:01 --> 00:42:05:** to pay a fee that goes into balancing and mitigating
**00:42:05 --> 00:42:06:** the water supply.
**00:42:07 --> 00:42:09:** So that happens in a couple of different ways.
**00:42:09 --> 00:42:12:** It funds part of my salary and it also funds
**00:42:12 --> 00:42:16:** a lot of the outreach programs and educational programs that
**00:42:16 --> 00:42:19:** I'll get a little bit more into in a minute.
**00:42:19 --> 00:42:22:** So we are again a small town.
**00:42:22 --> 00:42:26:** So I know these numbers might not be super shocking
**00:42:26 --> 00:42:29:** to you, but our one since it was just implemented
**00:42:29 --> 00:42:32:** a few years ago has generated just under 300,000.
**00:42:33 --> 00:42:36:** We don't actually have a ton of new, massive new
**00:42:36 --> 00:42:38:** development projects in Ipswich.
**00:42:39 --> 00:42:41:** Like I said, they're really quite controversial.
**00:42:41 --> 00:42:44:** And so it's a very long process and the community
**00:42:44 --> 00:42:46:** is really involved.
**00:42:46 --> 00:42:49:** The majority of lumps that I see and improve on
**00:42:49 --> 00:42:54:** the residential side are really single family homes being built
**00:42:54 --> 00:42:57:** or remodeled to include additional bedrooms.
**00:42:57 --> 00:43:00:** And so I can sort of explain to you what
**00:43:00 --> 00:43:01:** that looks like.
**00:43:02 --> 00:43:07:** We charge developers $1500 per additional bedroom, whether it's a
**00:43:07 --> 00:43:09:** new build or a remodel.
**00:43:10 --> 00:43:13:** And then on the commercial side, we charge based on
**00:43:13 --> 00:43:17:** our Title 5 here in Massachusetts, which governs law about
**00:43:17 --> 00:43:21:** septic use and includes projections for gallons per day for
**00:43:21 --> 00:43:25:** different types of commercial establishments.
**00:43:25 --> 00:43:29:** So we have some commercial presence in Ipswich, not a
**00:43:29 --> 00:43:33:** ton of new commercial development going on.
**00:43:34 --> 00:43:37:** We do have a significant, relatively significant amount of agriculture,
**00:43:37 --> 00:43:39:** which could be completely different presentation.
**00:43:40 --> 00:43:43:** But the best example I can give would be maybe
**00:43:43 --> 00:43:47:** a new restaurant going in downtown and that's typically, depending
**00:43:47 --> 00:43:50:** on the size of the restaurant, going to be between
**00:43:50 --> 00:43:51:** 3:00 and $5000.
**00:43:51 --> 00:43:53:** So it looks like a big number, but not a
**00:43:53 --> 00:43:57:** massive price tag compared to the other fees associated with
**00:43:57 --> 00:43:57:** development.
**00:43:58 --> 00:44:00:** And I'll talk a little bit about how we work
**00:44:00 --> 00:44:02:** with developers a little bit later.
**00:44:02 --> 00:44:06:** The way that I conceptualize our water use mitigation

program

**00:44:07 --> 00:44:10:** and all of the rebates also that you may have

**00:44:10 --> 00:44:13:** seen on the last slide that we also offer in

**00:44:13 --> 00:44:17:** conjunction with that for Watersense labeled products is this whole

**00:44:17 --> 00:44:23:** philosophy of mitigating for programming and through funding modernizing through

**00:44:23 --> 00:44:27:** trying to encourage developers even when they're not adding a

**00:44:27 --> 00:44:28:** bedroom.

**00:44:28 --> 00:44:31:** If I get a permit coming through the system where

**00:44:31 --> 00:44:35:** there's plumbing work going on, any kitchen renovations or bathroom

**00:44:35 --> 00:44:39:** renovations, I give that plumber a call or give the

**00:44:39 --> 00:44:41:** the developer a call and say did you know there

**00:44:42 --> 00:44:45:** are some options to consider for what are since label

**00:44:45 --> 00:44:49:** projects, products that are partially refunded by our department and

**00:44:49 --> 00:44:51:** to measure we do use AMI in Ipswich.

**00:44:51 --> 00:44:55:** I am working really hard to sort of move that

**00:44:55 --> 00:44:59:** towards more of the cutting edge on demand metering technology.

**00:45:00 --> 00:45:03:** We're sort of in the very beginning stages of exploring

**00:45:03 --> 00:45:06:** that data is power and we really want our customers

**00:45:06 --> 00:45:09:** to make sure that they have that power of being

**00:45:09 --> 00:45:11:** able to track their use.

**00:45:11 --> 00:45:16:** And that's a very well supported method of of reducing

**00:45:16 --> 00:45:19:** residential consumption.

**00:45:19 --> 00:45:22:** So we're eager to explore that more and additionally exploring

**00:45:22 --> 00:45:24:** the things that we're not metering.

**00:45:24 --> 00:45:27:** As you know, the data that we collect only tells

**00:45:27 --> 00:45:31:** part of the story and it's only telling the story

**00:45:31 --> 00:45:35:** of our connections and certainly not the other folks who

**00:45:35 --> 00:45:38:** exist in our town who may not be having the

**00:45:38 --> 00:45:41:** meter run through and measure that for us.

**00:45:41 --> 00:45:43:** So that's a really big part of what I do

**00:45:43 --> 00:45:44:** as well.

**00:45:45 --> 00:45:47:** So why whomp?

**00:45:47 --> 00:45:51:** Besides the fact that it is what we think a

**00:45:51 --> 00:45:56:** really important response to the values of our community saying

**00:45:56 --> 00:46:01:** that they are very concerned about development in Ipswich, We

**00:46:01 --> 00:46:04:** also have data to suggest that it really works.

**00:46:05 --> 00:46:10:** Even though Ipswich's population has gone up slightly but steadily

**00:46:10 --> 00:46:16:** throughout the years, consistently our water use on the residential

**00:46:16 --> 00:46:19:** side and total has gone down overall.

**00:46:19 --> 00:46:21:** So we're really, really proud of that.

**00:46:22 --> 00:46:27:** Our residential gallon per per capita per day is about

**00:46:28 --> 00:46:29:** 41 this year.

**00:46:30 --> 00:46:34:** And in general, for total consumption, based on the connections

**00:46:34 --> 00:46:37:** that we have, we do see a downward trend even

**00:46:37 --> 00:46:39:** as growth is happening.

**00:46:39 --> 00:46:42:** So we we see this as a as partially contributing

**00:46:42 --> 00:46:46:** to that effective response to concerns about developments.

**00:46:47 --> 00:46:49:** And it also helps us shift the narrative, which is

**00:46:49 --> 00:46:51:** something that's really important to me.

**00:46:52 --> 00:46:55:** If you've seen me talk about this before, I apologize

**00:46:55 --> 00:46:56:** for going on the spiel again.

**00:46:56 --> 00:47:00:** But when we're talking about concerns about development, it's a

**00:47:00 --> 00:47:03:** very easy get to get to this place of scarcity

**00:47:03 --> 00:47:03:** panic.

**00:47:03 --> 00:47:07:** And we really believe that this sort of effective measure,

**00:47:07 --> 00:47:12:** you can shift the narrative to abundancy through efficiency, abundance

**00:47:12 --> 00:47:15:** of water, not scarcity, not that there's not enough for

**00:47:15 --> 00:47:20:** you, but with the right stewardship, with the right practices,

**00:47:20 --> 00:47:23:** there's enough for everybody to A to a point, certainly

**00:47:23 --> 00:47:25:** at a sustainable rates.

**00:47:25 --> 00:47:28:** And we really think that the lump supports that theory

**00:47:28 --> 00:47:30:** and supports shifting that narrative.

**00:47:33 --> 00:47:35:** So this is just a couple graphs to show you

**00:47:35 --> 00:47:37:** that our consumptions going down.

**00:47:37 --> 00:47:41:** We're really proud of this figure here.

**00:47:41 --> 00:47:45:** I'm having in 2022 actually as low as 40 gallons

**00:47:45 --> 00:47:49:** of per capita per day on the residential side.

**00:47:51 --> 00:47:56:** Additionally, the lump allows utilities to have the capacity to

**00:47:57 --> 00:48:02:** dedicate staff time to community engagements and community education.

**00:48:04 --> 00:48:07:** Science communication, I think is more important than ever.

**00:48:07 --> 00:48:11:** And doing so in a participatory way that is community

**00:48:11 --> 00:48:15:** based, that is spending time in person as a representative

**00:48:15 --> 00:48:18:** of your, your utility with people goes along with this
**00:48:19 --> 00:48:20:** narrative shift.
**00:48:20 --> 00:48:24:** But in my opinion and experience, very, very, very crucial
**00:48:24 --> 00:48:30:** to an effective reciprocal conversation about conservation and inefficiency and
**00:48:30 --> 00:48:33:** behavior around water usage in your community.
**00:48:34 --> 00:48:37:** This is a very value driven effort.
**00:48:38 --> 00:48:40:** We spend a lot of time with our youth in
**00:48:40 --> 00:48:40:** town.
**00:48:40 --> 00:48:43:** We spend a lot of time with our seniors, with
**00:48:43 --> 00:48:44:** our Housing Authority.
**00:48:44 --> 00:48:47:** I part of the reason I've been able to have
**00:48:47 --> 00:48:51:** some success with this approach is because of our incredible
**00:48:51 --> 00:48:51:** partners.
**00:48:51 --> 00:48:54:** I see there's a couple of representatives on the call
**00:48:54 --> 00:48:58:** today from Massachusetts Department of Conservation, Recreation, the Office of
**00:48:58 --> 00:48:59:** Water Resources.
**00:48:59 --> 00:49:03:** Having state agencies supportive of what I've been doing and
**00:49:03 --> 00:49:07:** partnering with them on what they've been doing has been
**00:49:07 --> 00:49:11:** absolutely central to being able to roll out successful community
**00:49:11 --> 00:49:16:** engagement and making sure that our residents feel that government
**00:49:16 --> 00:49:20:** on multiple scales is really, really responding and therefore their
**00:49:20 --> 00:49:21:** concerns.
**00:49:21 --> 00:49:25:** So just a couple snapshots of the stuff that we
**00:49:25 --> 00:49:30:** do, lots of different education about water and wastewater infrastructure,
**00:49:30 --> 00:49:32:** about native plants.
**00:49:32 --> 00:49:36:** If you don't know about mass.gov/plant Palette, please go check
**00:49:36 --> 00:49:36:** it out.
**00:49:36 --> 00:49:40:** It's all about drought tolerant and native planting and there's
**00:49:40 --> 00:49:44:** some excitement around that nationwide and, and hope to sort
**00:49:44 --> 00:49:45:** of expand that.
**00:49:45 --> 00:49:49:** That was a partnership between lots of folks and primarily
**00:49:49 --> 00:49:51:** DCR and EEA in Massachusetts.
**00:49:52 --> 00:49:54:** We're on tons of regional committees.
**00:49:55 --> 00:49:58:** And the last thing I'll I'll talk about in terms
**00:49:58 --> 00:50:01:** of engagement is what the the lump really funds is

**00:50:01 --> 00:50:05:** this push towards rainwater harvesting, which I understand may be

**00:50:05 --> 00:50:08:** popular in many of your committees and has been for

**00:50:08 --> 00:50:09:** a long time.

**00:50:09 --> 00:50:12:** But New England is sort of new at this whole

**00:50:12 --> 00:50:14:** drink management thing to an extent.

**00:50:14 --> 00:50:16:** I mean, it's been going on for a long time,

**00:50:16 --> 00:50:19:** but on the local scale, we've been confronted with this

**00:50:19 --> 00:50:20:** in a new way in the last few years.

**00:50:20 --> 00:50:23:** So we have been really been pushing rainwater harvesting.

**00:50:23 --> 00:50:25:** We offer a rebate for rain barrels.

**00:50:25 --> 00:50:29:** We offer actually support for residential folks to come and

**00:50:29 --> 00:50:32:** have us come out with an expert to give them

**00:50:32 --> 00:50:36:** personalized suggestions for their outdoor water use and how Ringwater

**00:50:36 --> 00:50:39:** can support all of their needs and and surpass their

**00:50:39 --> 00:50:41:** needs and give them an actual site plan.

**00:50:42 --> 00:50:45:** We work with agriculture to see how Rainwater can support

**00:50:45 --> 00:50:45:** that.

**00:50:46 --> 00:50:49:** And I'm also working on a project right now to

**00:50:49 --> 00:50:54:** retrofit 13 multi family buildings in our Housing Authority with

**00:50:54 --> 00:50:58:** not just rain barrels, but all of the equipment that

**00:50:58 --> 00:51:03:** you need, diverters, bases, hoses, everything with installation support, with

**00:51:03 --> 00:51:09:** workshops, with brochures and that communities primarily elderly and disabled.

**00:51:09 --> 00:51:13:** So we are really pushing this because we believe it's

**00:51:13 --> 00:51:16:** not just a conservation method, but a way of life

**00:51:16 --> 00:51:20:** and a way of interacting with water consumption that is

**00:51:20 --> 00:51:21:** life changing.

**00:51:22 --> 00:51:25:** So that's sort of just a quick overview of our

**00:51:25 --> 00:51:28:** community engagement and over the last few years.

**00:51:28 --> 00:51:31:** And again, just to end on what I said about

**00:51:31 --> 00:51:35:** shifting this narrative, we do see a lot of people

**00:51:35 --> 00:51:39:** who are worried about conservation and who are making behavior

**00:51:40 --> 00:51:43:** changes because they are already worried about it.

**00:51:43 --> 00:51:46:** We're very lucky that that's a primary value in our

**00:51:46 --> 00:51:48:** community in Ipswich.

**00:51:48 --> 00:51:52:** However, we feel strongly that we need to expand that.

**00:51:52 --> 00:51:54:** We need to really think about the language that we're

**00:51:54 --> 00:51:55:** using.

**00:51:55 --> 00:51:57:** We're talking about conservation, which is why we talk more

**00:51:58 --> 00:51:59:** about efficiency these days.
**00:52:00 --> 00:52:04:** And we try to really, really, really prioritize accessibility, make
**00:52:04 --> 00:52:08:** sure that we're really careful about technical language and that
**00:52:08 --> 00:52:12:** we're really listening a lot and really kind of governing
**00:52:12 --> 00:52:13:** through kindness.
**00:52:13 --> 00:52:16:** And that's a huge value of mine.
**00:52:16 --> 00:52:18:** I'm grateful if, which has been supportive of that, grateful
**00:52:18 --> 00:52:19:** our partners have been.
**00:52:20 --> 00:52:22:** We really believe that efficiency is for everybody.
**00:52:23 --> 00:52:28:** And with the right approach, right programming, it's really possible
**00:52:28 --> 00:52:31:** to have this type of mitigation plan and this type
**00:52:31 --> 00:52:35:** of outreach plan a part of a successful solution for
**00:52:35 --> 00:52:37:** mitigating development.
**00:52:37 --> 00:52:39:** I know that we're on a very different scale than
**00:52:39 --> 00:52:42:** many of your your scenarios, So take that with a
**00:52:42 --> 00:52:42:** grain of salt.
**00:52:42 --> 00:52:45:** And we are still in a water emergency right now.
**00:52:46 --> 00:52:49:** But as far as mitigating this particular concern from a
**00:52:49 --> 00:52:52:** suppliers perspective, we found a lot of success and hope
**00:52:52 --> 00:52:53:** in this program.
**00:52:54 --> 00:52:56:** So that's it for me and I'd love to take
**00:52:56 --> 00:52:59:** questions or wait till the end, whatever works.
**00:53:01 --> 00:53:02:** Thank you so much, Rachel.
**00:53:02 --> 00:53:03:** That was great to see.
**00:53:03 --> 00:53:07:** I love seeing the consumption graph of everything going down
**00:53:07 --> 00:53:08:** despite the growth.
**00:53:08 --> 00:53:09:** That's wonderful.
**00:53:09 --> 00:53:11:** Does anyone have any questions for Rachel?
**00:53:18 --> 00:53:19:** I'm not seeing any.
**00:53:20 --> 00:53:21:** We can move on.
**00:53:21 --> 00:53:23:** If you do have questions for Rachel, please put them
**00:53:23 --> 00:53:25:** in the chat box and we might have some time
**00:53:25 --> 00:53:26:** at the end to discuss as well.
**00:53:28 --> 00:53:28:** All right.
**00:53:29 --> 00:53:33:** Our final speaker today is Alan Hook from Santa Fe,
**00:53:33 --> 00:53:33:** NM.
**00:53:36 --> 00:53:47:** Hello, everyone share here Yeah, I'll see that Great everyone
**00:53:47 --> 00:53:51:** can you hear me clearly?
**00:53:53 --> 00:53:54:** Good.
**00:53:54 --> 00:53:54:** Thank you.

**00:53:56 --> 00:54:00:** So those are great presentations and I'm, I'm going to
**00:54:00 --> 00:54:03:** apologize for Christine Chavez.
**00:54:03 --> 00:54:05:** She's our water conservation manager.
**00:54:05 --> 00:54:08:** She could not be here today, but she did ask
**00:54:08 --> 00:54:12:** me to talk about our water development process as it
**00:54:13 --> 00:54:15:** relates to our water bank.
**00:54:15 --> 00:54:18:** So it's, I'm going to talk a little bit more
**00:54:18 --> 00:54:22:** policy then sort of an overview of how the processes
**00:54:22 --> 00:54:24:** worked and our utility itself.
**00:54:25 --> 00:54:28:** This is a photo of Santa Fe, downtown Santa Fe.
**00:54:28 --> 00:54:30:** We are in northern New Mexico.
**00:54:31 --> 00:54:35:** We're the capital city of New Mexico and we're settled
**00:54:35 --> 00:54:39:** in the southern Rockies known as the Sangre de Cristo
**00:54:39 --> 00:54:40:** Mountains.
**00:54:41 --> 00:54:45:** And this picture kind of looks to the southwest where
**00:54:45 --> 00:54:49:** the Rio Grande River runs through the center of northern
**00:54:49 --> 00:54:51:** New Mexico, which is one of our supplies.
**00:54:52 --> 00:54:56:** We get 90% of our water supply, 50% of our
**00:54:56 --> 00:55:01:** demand is provided by federal water through the Rio Grande.
**00:55:02 --> 00:55:05:** So it's actually the headwaters of the Colorado gets transferred
**00:55:05 --> 00:55:06:** to the Rio Grande.
**00:55:06 --> 00:55:10:** We divert there and then the other 40% or so
**00:55:10 --> 00:55:16:** comes from the watershed above the city, the San Cristos.
**00:55:16 --> 00:55:18:** We have a couple reservoirs.
**00:55:18 --> 00:55:22:** So that's our cheapest source and that's where the Santa
**00:55:22 --> 00:55:24:** Fe River eventually runs to the Rio Grande.
**00:55:24 --> 00:55:28:** And our city, which is older than 400 years, more
**00:55:28 --> 00:55:31:** than 400 years old, grew up around the Santa Fe
**00:55:31 --> 00:55:32:** River.
**00:55:32 --> 00:55:35:** And then we have various wells that we rely on
**00:55:35 --> 00:55:37:** about 10% of our demand.
**00:55:38 --> 00:55:39:** It's kind of our savings account.
**00:55:41 --> 00:55:44:** So again, I'm going to talk about development and how
**00:55:44 --> 00:55:46:** it relates to our established water bank.
**00:55:52 --> 00:55:54:** So the purpose of the water bank was to ensure
**00:55:54 --> 00:55:56:** adequate water for increased water use.
**00:55:57 --> 00:56:00:** So water demand tied to newer construction.
**00:56:00 --> 00:56:05:** So on the demand side, it's water conservation results in
**00:56:05 --> 00:56:07:** demand capacity on our system.
**00:56:08 --> 00:56:12:** And on the supply side, the code requirement required new
**00:56:12 --> 00:56:16:** water rights allowing for increased supplies.

**00:56:16 --> 00:56:19:** So this really started in about 2005.

**00:56:19 --> 00:56:22:** We had a code requirement law that said all new

**00:56:23 --> 00:56:25:** development in 2005 needed water rights.

**00:56:25 --> 00:56:29:** So the water rights come from the Middle Rio Grande.

**00:56:29 --> 00:56:33:** So, so new development had to bring in water rights.

**00:56:33 --> 00:56:37:** And typically that's going to come from either a groundwater

**00:56:37 --> 00:56:41:** well, another municipality, mostly farmers in the middle Rio Grande

**00:56:41 --> 00:56:43:** that are willing to sell water rights.

**00:56:44 --> 00:56:48:** And again, this is regulated policy by the state engineer

**00:56:48 --> 00:56:50:** of New Mexico.

**00:56:50 --> 00:56:53:** So they have to transfer water rights up to our

**00:56:53 --> 00:56:53:** municipality.

**00:56:55 --> 00:56:58:** So then there was a code change with the land

**00:56:58 --> 00:57:01:** use department in 2016 because the city realized if you

**00:57:01 --> 00:57:05:** just needed to build a, a casita or small accessory

**00:57:05 --> 00:57:08:** dwelling unit, it was kind of overbearing to ask you

**00:57:08 --> 00:57:12:** to bring water rights from a farmer because it takes

**00:57:12 --> 00:57:13:** quite a bit of time.

**00:57:13 --> 00:57:18:** And at the time it wasn't price constricted, but now

**00:57:18 --> 00:57:23:** the price is actually become greater And so that became

**00:57:23 --> 00:57:24:** a burden.

**00:57:26 --> 00:57:29:** So this is kind of the code language, you know,

**00:57:29 --> 00:57:30:** approved water budget.

**00:57:30 --> 00:57:35:** So we have calculations for different types of development, single

**00:57:35 --> 00:57:41:** family home, multi family developments, apartments, townhomes, commercial businesses, a

**00:57:41 --> 00:57:42:** whole spectrum.

**00:57:42 --> 00:57:45:** And that was based on a 2008 survey of all

**00:57:45 --> 00:57:49:** the different types of water uses throughout the city of

**00:57:49 --> 00:57:50:** Santa Fe.

**00:57:51 --> 00:57:53:** And again, there's two types of programs.

**00:57:54 --> 00:57:57:** There's what is now 1 branch of it is called

**00:57:57 --> 00:58:01:** water conservation credit program or there's the water right transfer

**00:58:01 --> 00:58:02:** programs.

**00:58:02 --> 00:58:05:** So to offset the development, so you can either bring

**00:58:06 --> 00:58:09:** a new water rights to the bank to offset their

**00:58:09 --> 00:58:09:** demand.

**00:58:10 --> 00:58:14:** And again, that's that's a state engineer transfer process or

**00:58:14 --> 00:58:18:** now if you're under what we call thresholds, so smaller

**00:58:18 --> 00:58:22:** developments you can offset the demand or we had an

**00:58:22 --> 00:58:26:** older program which was a toilet retrofit program.
**00:58:26 --> 00:58:31:** So the retrofit program kind of started where the city
**00:58:31 --> 00:58:35:** had a bulk purchase and giveaway with the low flow
**00:58:35 --> 00:58:36:** toilets.
**00:58:36 --> 00:58:39:** We were trying to replace much older 5 gallon per
**00:58:39 --> 00:58:40:** flush toilet.
**00:58:40 --> 00:58:45:** But that savings credit was banked as a water conservation
**00:58:45 --> 00:58:45:** credit.
**00:58:46 --> 00:58:51:** And so eventually developers started purchasing low flow toilets and
**00:58:51 --> 00:58:55:** we would track credits of toilet retrofits, but that is
**00:58:55 --> 00:58:57:** slowly faded out.
**00:58:58 --> 00:59:02:** And so there's, there's kind of barely a few retrofit
**00:59:02 --> 00:59:03:** credits left.
**00:59:04 --> 00:59:08:** The byproduct of the toilet retrofit program was there was
**00:59:08 --> 00:59:12:** a lot of developers who were hoarding toilets, you know,
**00:59:12 --> 00:59:17:** re refurbishing them, replacing them, had all these retrofit credits
**00:59:17 --> 00:59:18:** to cash in.
**00:59:19 --> 00:59:22:** And so it kind of created this alternative market for
**00:59:22 --> 00:59:23:** retrofit credits.
**00:59:24 --> 00:59:27:** So that's slowly been tapped out as as they've used
**00:59:27 --> 00:59:29:** those for newer developments.
**00:59:30 --> 00:59:34:** Final point to this affordable housing, we as the water
**00:59:34 --> 00:59:39:** division provide affordable housing the offset to their demand.
**00:59:39 --> 00:59:41:** So we do that by our own water rights that
**00:59:42 --> 00:59:45:** the city of Santa Fe traditionally had or that we
**00:59:45 --> 00:59:48:** sometimes go out every once in a while, usually about
**00:59:49 --> 00:59:49:** a decade.
**00:59:50 --> 00:59:55:** And if there's any available water rights or somebody comes
**00:59:55 --> 00:59:59:** to us with available water rights, we try to purchase
**00:59:59 --> 01:00:00:** those, so.
**01:00:01 --> 01:00:05:** Water offsets the city's always continuing efforts in water conservation.
**01:00:05 --> 01:00:07:** We've becoming nationally recognized.
**01:00:07 --> 01:00:12:** Our GPCD for us is below 9090 gallons per person
**01:00:12 --> 01:00:15:** per day per capita per day.
**01:00:17 --> 01:00:20:** And again we use a dual track approach to growth
**01:00:20 --> 01:00:24:** management related to water demand, water conservation at home and
**01:00:24 --> 01:00:27:** through schools and progressively scaled rate pricing.
**01:00:27 --> 01:00:31:** So we have different rates for different usage and those

**01:00:31 --> 01:00:35:** and the usage you're allowed changes in the summer season
**01:00:35 --> 01:00:40:** versus the winter season because it's covering both outdoor use
**01:00:40 --> 01:00:41:** and indoor use.
**01:00:41 --> 01:00:45:** Winter season is much less because obviously not not as
**01:00:45 --> 01:00:50:** much outdoor use, but it also includes community advertising.
**01:00:50 --> 01:00:55:** We do replacement of older water, wasteful household fixtures and
**01:00:55 --> 01:00:59:** then also targeted community advertising, education, going out to the
**01:00:59 --> 01:01:03:** schools, elementary schools to get the message out about water
**01:01:03 --> 01:01:07:** conservation and then finally the transfer of water rights.
**01:01:07 --> 01:01:10:** The new and as I mentioned before, the new residential
**01:01:10 --> 01:01:15:** commercial development must be offset by anticipated water use unless
**01:01:15 --> 01:01:17:** you have conservation credits themselves.
**01:01:18 --> 01:01:23:** So since 1995, the city's overall annual water consumption decreased
**01:01:24 --> 01:01:27:** by 25%, while the population is increased by 33%.
**01:01:30 --> 01:01:34:** So I just wanted to jump into this development water
**01:01:34 --> 01:01:35:** budget process.
**01:01:35 --> 01:01:39:** So a developer brings it a proposed project to our
**01:01:39 --> 01:01:43:** land use department, which is separate from the water division,
**01:01:43 --> 01:01:47:** but we are integrated into the land use approval process.
**01:01:48 --> 01:01:50:** And then they come to us with what's called a
**01:01:50 --> 01:01:51:** development water budget.
**01:01:52 --> 01:01:56:** So they, you know, depending on the type of development
**01:01:56 --> 01:02:01:** they have single family residential, commercial, you know, could be
**01:02:01 --> 01:02:04:** a church institutional project.
**01:02:04 --> 01:02:08:** Then they determine the water usage based on a kind
**01:02:08 --> 01:02:11:** of a schedule or, or a fee schedule that we
**01:02:11 --> 01:02:11:** have.
**01:02:12 --> 01:02:15:** They also try to determine their outdoor irrigation budget.
**01:02:15 --> 01:02:19:** So those two items make up their development water budget.
**01:02:20 --> 01:02:23:** They can subtract out affordable housing waivers.
**01:02:23 --> 01:02:27:** So there is a sort of mandatory 20% for residential
**01:02:27 --> 01:02:30:** developments of affordable housing.
**01:02:30 --> 01:02:34:** Now we also have a fee in lieu of into
**01:02:34 --> 01:02:37:** our affordable housing program.
**01:02:37 --> 01:02:41:** So certain developments can actually just pay off that 20%

**01:02:41 --> 01:02:42:** instead of being required to.

**01:02:43 --> 01:02:47:** We found over time that some developers said, hey, that

**01:02:47 --> 01:02:50:** 20% is just too much to get housing units out

**01:02:50 --> 01:02:53:** there to be marketable, but it's also allowed the affordable

**01:02:54 --> 01:02:58:** housing department to actually buy properties and create affordable housing.

**01:03:00 --> 01:03:03:** And then eventually you get to the sort of your

**01:03:03 --> 01:03:07:** subtotal and you add a 9.8 contingency fee.

**01:03:07 --> 01:03:11:** Reason for this is for any non ribbon water leakage.

**01:03:11 --> 01:03:13:** Also for fire flows.

**01:03:13 --> 01:03:16:** That gives us a little a little bit of revenue

**01:03:16 --> 01:03:19:** to cover that part of our utility system.

**01:03:20 --> 01:03:24:** And so this is kind of the breakdowns or examples

**01:03:24 --> 01:03:26:** of how much we charge.

**01:03:27 --> 01:03:32:** You'll see a single family house .15 acre feet and

**01:03:32 --> 01:03:34:** we speak in acre feet terms.

**01:03:34 --> 01:03:38:** If you don't know what that means, if if you're

**01:03:38 --> 01:03:41:** a farmer and you have one acre, you flood your

**01:03:41 --> 01:03:44:** field 1 foot deep, it's about 325,851 gallons.

**01:03:45 --> 01:03:49:** So typically one acre foot could be about four to

**01:03:49 --> 01:03:53:** six single family residential homes depending on your efficiencies.

**01:03:55 --> 01:03:57:** And then the price next to it on the fee

**01:03:57 --> 01:03:59:** is what you would pay if you were under the

**01:03:59 --> 01:04:00:** threshold.

**01:04:00 --> 01:04:04:** So I'll talk next about the above threshold process.

**01:04:05 --> 01:04:08:** So again, this requires state recognized water rights.

**01:04:09 --> 01:04:12:** Somebody has to bring in water rights from somewhere along

**01:04:12 --> 01:04:13:** the middle Rio Grande.

**01:04:14 --> 01:04:15:** It's a little more onerous now.

**01:04:15 --> 01:04:17:** It's become more expensive.

**01:04:18 --> 01:04:22:** We do the administration process with the waterite transaction, and

**01:04:22 --> 01:04:27:** then eventually when the applicant gets their waterite transferred through

**01:04:27 --> 01:04:31:** the state engineer process, they come back to us.

**01:04:31 --> 01:04:34:** They do what's called a special warranty deed.

**01:04:34 --> 01:04:38:** They deed it over to us and then that offsets

**01:04:38 --> 01:04:39:** their demand.

**01:04:40 --> 01:04:43:** And where the water rate goes, it doesn't go into

**01:04:43 --> 01:04:47:** our reservoirs, it doesn't go to the Rio Grande, but

**01:04:47 --> 01:04:50:** it does go into our well field, which is if

**01:04:50 --> 01:04:54:** it's almost like our savings account, if our surface water
**01:04:54 --> 01:04:59:** supplies, let's say, through continuous drought really drop and we
**01:04:59 --> 01:05:02:** have to lean on our wells to be pumped more,
**01:05:02 --> 01:05:06:** we have to provide offsets for pumping to surface water
**01:05:06 --> 01:05:08:** rights on the Rio Grande.
**01:05:08 --> 01:05:11:** So we're basically putting all those water rights into our
**01:05:11 --> 01:05:12:** savings account.
**01:05:13 --> 01:05:17:** And so this chart kind of shows our breakdown for
**01:05:17 --> 01:05:18:** commercial use.
**01:05:18 --> 01:05:21:** If you're under 5 acre feet, you can just again
**01:05:21 --> 01:05:24:** pay into US providing those water rights.
**01:05:25 --> 01:05:28:** If you've got mixed-use, it's 7 1/2 acre feet and
**01:05:28 --> 01:05:30:** then residential is 10 acre feet.
**01:05:33 --> 01:05:36:** So below the threshold, you're able to pay the city
**01:05:37 --> 01:05:38:** to dedicate conserved water.
**01:05:38 --> 01:05:42:** So the way we kind of see ourselves, we're offsetting
**01:05:42 --> 01:05:45:** water conserved through our conservation programs.
**01:05:45 --> 01:05:49:** So we track all of our conserved water programs.
**01:05:50 --> 01:05:53:** A lot of that is retrofit programs, especially for commercial
**01:05:53 --> 01:05:53:** usage.
**01:05:53 --> 01:05:54:** Restaurants.
**01:05:55 --> 01:05:57:** We've done a lot of residential programs.
**01:05:57 --> 01:06:02:** We've done conserved water through city infrastructure itself, so that
**01:06:02 --> 01:06:06:** could serve water helps us offset a lot of the
**01:06:06 --> 01:06:08:** small development demand.
**01:06:09 --> 01:06:12:** If we cannot actively offset from year to year because
**01:06:12 --> 01:06:16:** we found, you know, since this program started O5 with
**01:06:16 --> 01:06:19:** water rights, then the water bank started in 2009.
**01:06:20 --> 01:06:22:** We found the low hanging fruit.
**01:06:22 --> 01:06:24:** We've kind of we can serve as much as we
**01:06:24 --> 01:06:24:** can.
**01:06:24 --> 01:06:28:** So if conservation is not offsetting the small demand, then
**01:06:28 --> 01:06:31:** we actually have to account for out of our water
**01:06:31 --> 01:06:32:** rights from the well field.
**01:06:33 --> 01:06:37:** And again the administration is pretty much within the city
**01:06:37 --> 01:06:40:** of Santa Fe and our water division itself.
**01:06:41 --> 01:06:45:** And so we tracked these through what's called application to
**01:06:45 --> 01:06:49:** construct dedicate that's typically larger projects.
**01:06:49 --> 01:06:53:** Applications for metered service usually is like a one off
**01:06:53 --> 01:06:56:** for a person who wants to add an accessory dwelling

**01:06:56 --> 01:06:57:** unit.
**01:06:57 --> 01:06:59:** Now they need a single meter.
**01:06:59 --> 01:07:03:** So these those are the usually the small, small development
**01:07:03 --> 01:07:05:** projects that go along.
**01:07:05 --> 01:07:08:** And then all water offsets from the water bank must
**01:07:09 --> 01:07:12:** be paid prior to the approval of a construction building
**01:07:12 --> 01:07:12:** permit.
**01:07:12 --> 01:07:15:** So that's the way we kind of our stick or
**01:07:15 --> 01:07:20:** it's kind of our regulatory process is that we communicate
**01:07:20 --> 01:07:23:** with the land use building permitting section.
**01:07:23 --> 01:07:27:** They make sure that we approve that they've already offset
**01:07:27 --> 01:07:31:** their demand and then from there we approve their meter
**01:07:31 --> 01:07:35:** installation to get their water utility account active.
**01:07:35 --> 01:07:40:** And so kind of final slide development equals increased water
**01:07:40 --> 01:07:44:** demand in Santa Fe and it's supported by water resource
**01:07:44 --> 01:07:50:** perspective, by conservation as I've mentioned before, also the purchase
**01:07:50 --> 01:07:52:** of water rights in the Rio Grande.
**01:07:53 --> 01:07:57:** Those three things, that one more pumping, what we call
**01:07:57 --> 01:07:59:** our buck and well field, that well field is right
**01:07:59 --> 01:08:01:** near the Rio Grande.
**01:08:01 --> 01:08:05:** So any any strong pumping or increased demand there in
**01:08:06 --> 01:08:10:** that well field, we have to offset with the state
**01:08:10 --> 01:08:15:** engineer with with groundwater rights to impacts on surface water
**01:08:15 --> 01:08:20:** and permanent transfer of water right from agricultural usage is
**01:08:20 --> 01:08:23:** going to again our municipal usage.
**01:08:23 --> 01:08:27:** That's just a reality of of how development has worked
**01:08:27 --> 01:08:28:** around Santa Fe.
**01:08:29 --> 01:08:33:** Conservative purchased water is tracked in the water bank.
**01:08:33 --> 01:08:36:** And so this is a breakdown of kind of our
**01:08:36 --> 01:08:37:** portfolio.
**01:08:38 --> 01:08:42:** The Santa Fe River itself provides around 4300 acre feet.
**01:08:43 --> 01:08:46:** We have water rights to a total of 5040 acre
**01:08:46 --> 01:08:49:** feet from the Sangre de Cristo Mountains.
**01:08:50 --> 01:08:52:** In this photo, kind of look past our Plaza and
**01:08:52 --> 01:08:55:** the church in the background you can see the Sangre
**01:08:55 --> 01:08:57:** de Cristo Mountains under those clouds.
**01:08:58 --> 01:09:02:** San Juan Chama is the name for our federal project
**01:09:02 --> 01:09:02:** water.
**01:09:03 --> 01:09:06:** Again, that's the headwaters of the Colorado, which get

transferred

**01:09:06 --> 01:09:09:** all the way down to the Rio Chama to which

**01:09:09 --> 01:09:09:** we diverted from.

**01:09:10 --> 01:09:13:** And then we have wells within the city and then

**01:09:13 --> 01:09:16:** the Buckman well area is near the Rio Grande.

**01:09:16 --> 01:09:21:** The reason why I have the question marks is there

**01:09:21 --> 01:09:27:** is a state hydrologic model that the state engineer uses.

**01:09:27 --> 01:09:31:** We've also used more modern hydrologic models to say, well,

**01:09:31 --> 01:09:35:** what is the actual kind of renewable supply and in

**01:09:35 --> 01:09:40:** other words the sustainable supply of drawing down year to

**01:09:40 --> 01:09:41:** year that well field.

**01:09:42 --> 01:09:45:** So we put question marks because it depends on what

**01:09:45 --> 01:09:48:** model you're you're actually discussing.

**01:09:48 --> 01:09:53:** And so 3500 acre feet from the city wells approximately

**01:09:53 --> 01:09:57:** about just under 1900 from the well field near the

**01:09:57 --> 01:09:58:** Rio Grande.

**01:09:59 --> 01:10:03:** I highlighted this because this is primarily where we are

**01:10:03 --> 01:10:09:** depositing those transferred water rights into that well field, not

**01:10:09 --> 01:10:10:** our other supplies.

**01:10:11 --> 01:10:14:** So that's a total of, you know, on paper, paper

**01:10:15 --> 01:10:18:** water we can get 1500 acre feet, but we we

**01:10:18 --> 01:10:22:** don't go over that again right now our demand is

**01:10:22 --> 01:10:26:** 9000, but years ago and in 1995 we were over

**01:10:26 --> 01:10:30:** 12,000 acre feet per year, which was really pushing up

**01:10:30 --> 01:10:33:** on our idea of sustainability.

**01:10:33 --> 01:10:36:** We've come down quite a ways to be consistently below

**01:10:36 --> 01:10:37:** 9000 acre feet.

**01:10:39 --> 01:10:43:** So that's kind of our water development process as it

**01:10:43 --> 01:10:47:** relates to, you know, development and land use department.

**01:10:47 --> 01:10:51:** We are always continually communicating about new developments that are

**01:10:51 --> 01:10:54:** coming in, what types of developments are occurring.

**01:10:55 --> 01:10:58:** And right now we're actually going through a code rewrite

**01:10:59 --> 01:11:00:** of the land use department.

**01:11:01 --> 01:11:03:** And if it's also kind of forced us in the

**01:11:03 --> 01:11:07:** water utility to do a code rewrite of our process

**01:11:07 --> 01:11:10:** also to kind of make it more efficient.

**01:11:11 --> 01:11:14:** Again, the audit of our water use throughout the city

**01:11:14 --> 01:11:15:** was done in 2008.

**01:11:16 --> 01:11:19:** So we're looking at our numbers and seeing where development

**01:11:20 --> 01:11:24:** is really occurring and how developments actually become more water

**01:11:24 --> 01:11:28:** wise and more efficient and are our calculations really reflecting

**01:11:28 --> 01:11:29:** that.

**01:11:30 --> 01:11:32:** So I want to say thank you for the chance

**01:11:32 --> 01:11:35:** to present on our water development and how that's linked

**01:11:36 --> 01:11:38:** to land use and I'll stand for any questions.

**01:11:39 --> 01:11:41:** Thank you so much, Ellen.

**01:11:41 --> 01:11:43:** I see some questions in the chat box already.

**01:11:43 --> 01:11:46:** Randall, do you want to unmute and ask your questions?

**01:11:47 --> 01:11:47:** Sure.

**01:11:47 --> 01:11:48:** Thanks, Alan.

**01:11:50 --> 01:11:52:** I've New Mexico Tech alum and I've modeled quite a

**01:11:53 --> 01:11:55:** bit of New Mexico, so forgive me for these detailed

**01:11:55 --> 01:11:58:** questions, but how does impairment get assessed by the New

**01:11:58 --> 01:12:01:** Mexico State Engineer with respect to the water rights transfers

**01:12:01 --> 01:12:03:** or new water rights is my first question.

**01:12:04 --> 01:12:05:** Yeah.

**01:12:05 --> 01:12:08:** So that's a very good question because we do a

**01:12:08 --> 01:12:10:** third party analysis.

**01:12:10 --> 01:12:13:** So let's say there's a, there's a farmer in the

**01:12:13 --> 01:12:17:** middle of Rio Grande below Albuquerque, which is to the

**01:12:17 --> 01:12:17:** South of us.

**01:12:17 --> 01:12:19:** And they say, you know, we've got 10 acre feet

**01:12:19 --> 01:12:21:** of water we'd love to sell you.

**01:12:22 --> 01:12:23:** We do an analysis.

**01:12:23 --> 01:12:27:** We try to see the viability of, of that water

**01:12:27 --> 01:12:30:** right, with a specialist, a hydrogeologist.

**01:12:31 --> 01:12:33:** But there's also a transfer cost.

**01:12:33 --> 01:12:36:** There's typically the, the OC calls the like a, as

**01:12:36 --> 01:12:40:** you're saying, is there going to be an impairment on

**01:12:40 --> 01:12:43:** other water rights up and down the middle of Rio

**01:12:43 --> 01:12:44:** Grande?

**01:12:44 --> 01:12:47:** But there's also a conservation cost of transferring that up

**01:12:47 --> 01:12:48:** to us.

**01:12:49 --> 01:12:53:** The impairment part is, is a very touchy subject because

**01:12:53 --> 01:12:57:** there's called the Middle Rio Grande Conservancy District.

**01:12:57 --> 01:13:01:** They're big farming community of irrigators.

**01:13:01 --> 01:13:03:** There's also the tribes.

**01:13:03 --> 01:13:08:** So the Pueblos of New Mexico have prior, prior water

**01:13:08 --> 01:13:08:** rights.
**01:13:09 --> 01:13:14:** So they have protested before some of our purchases, the
**01:13:14 --> 01:13:16:** direct purchases of water rights.
**01:13:17 --> 01:13:21:** There is a legal administrative process through the OC that
**01:13:21 --> 01:13:22:** occurs to address that.
**01:13:23 --> 01:13:26:** So I would say, you know, it's, it's kind of
**01:13:26 --> 01:13:30:** a, a legal process of whether that our transfer of
**01:13:30 --> 01:13:33:** water rights from, let's say a farmer to us is
**01:13:33 --> 01:13:37:** creates an impairment or if it actually still keeps the
**01:13:37 --> 01:13:41:** Rio Grande whole because there's still enough native water rights
**01:13:41 --> 01:13:43:** to keep the Rio Grande whole.
**01:13:44 --> 01:13:47:** Well and and the, the, the other element of impairment
**01:13:47 --> 01:13:50:** is whether where it's transferred to is impairing any nearby
**01:13:50 --> 01:13:51:** wells.
**01:13:51 --> 01:13:52:** True, yes.
**01:13:52 --> 01:13:53:** And my.
**01:13:53 --> 01:13:55:** My other question if I may real quick is it
**01:13:55 --> 01:13:58:** seems like your water budget thresholds are below the required
**01:13:58 --> 01:14:02:** reporting threshold for monthly pumpage that's been lost since 2009.
**01:14:02 --> 01:14:05:** Is that does that still get reported somehow or what?
**01:14:05 --> 01:14:06:** What's your your sorry?
**01:14:07 --> 01:14:09:** Can you say that again?
**01:14:09 --> 01:14:13:** It seems like your water budget thresholds are below the
**01:14:13 --> 01:14:17:** required reporting threshold for monthly pumpage reporting that's been lost
**01:14:18 --> 01:14:18:** since 2009.
**01:14:18 --> 01:14:21:** How are you keeping track of that information?
**01:14:21 --> 01:14:25:** So we do keep track of our pumping rates.
**01:14:26 --> 01:14:29:** So every year we have to actually well the beginning
**01:14:29 --> 01:14:32:** of January on every calendar year we have to provide
**01:14:32 --> 01:14:35:** the state in G or what we think we're going
**01:14:35 --> 01:14:38:** to pump and then we actually have to you know,
**01:14:38 --> 01:14:41:** report what we are pumping and then we have to
**01:14:41 --> 01:14:42:** provide offsets to that.
**01:14:43 --> 01:14:45:** And so right now we do have enough water rights
**01:14:46 --> 01:14:48:** in the in the Buckland whale field near the rear
**01:14:49 --> 01:14:52:** Grande to offset what we have been pumping or if
**01:14:52 --> 01:14:55:** there's other impacts, we do have the flexibility to provide
**01:14:55 --> 01:14:58:** that salmon Chama water on the Rio Grande where we
**01:14:59 --> 01:15:00:** have storage of San Juan Chama.

**01:15:02 --> 01:15:03:** Great.
**01:15:03 --> 01:15:03:** Thanks.
**01:15:04 --> 01:15:04:** Sure.
**01:15:04 --> 01:15:04:** Thank.
**01:15:05 --> 01:15:08:** You, Jessica also has a great question for all of
**01:15:08 --> 01:15:09:** the speakers.
**01:15:09 --> 01:15:12:** Jessica, if you want to unmute, and I'm just going
**01:15:12 --> 01:15:14:** to add to her question, like what have you done
**01:15:14 --> 01:15:17:** to address any pushback you've seen?
**01:15:18 --> 01:15:18:** Yeah.
**01:15:18 --> 01:15:18:** Thanks, Marian.
**01:15:19 --> 01:15:22:** Yeah, my question is really for anyone that spoke today.
**01:15:22 --> 01:15:23:** Thank you all very much for that.
**01:15:24 --> 01:15:27:** And my question is, do you receive pushback from general
**01:15:27 --> 01:15:32:** community members, especially those that don't like the growth that's
**01:15:32 --> 01:15:34:** happening in your communities?
**01:15:34 --> 01:15:38:** Do you receive pushback from them for using water saved
**01:15:38 --> 01:15:43:** through existing rebate programs to support that growth?
**01:15:49 --> 01:15:50:** So I'll jump in.
**01:15:50 --> 01:15:53:** As I mentioned during my presentation, I, I, I've seen
**01:15:53 --> 01:15:57:** that since the 1980s, it has been a consistent message
**01:15:57 --> 01:16:00:** when customers are on restrictions or in, in water short,
**01:16:00 --> 01:16:03:** you know, being told to, to do a lot of
**01:16:03 --> 01:16:07:** conservation activity and then they see, you know, major development
**01:16:07 --> 01:16:09:** going in, in their service area.
**01:16:09 --> 01:16:12:** They complain, but the only way to, to get around
**01:16:12 --> 01:16:16:** that is to actually get them involved in, in the
**01:16:16 --> 01:16:16:** solution.
**01:16:16 --> 01:16:19:** I think if you go through a more moratorium as
**01:16:19 --> 01:16:21:** we did, and you learn how painful it is and
**01:16:21 --> 01:16:25:** how disruptive and vituperative it is, it, it really splits
**01:16:25 --> 01:16:26:** and polarizes the community.
**01:16:26 --> 01:16:29:** And this is one way to get everybody to, you
**01:16:29 --> 01:16:32:** know, sort of collaborate on solutions that will work for
**01:16:32 --> 01:16:32:** everyone.
**01:16:33 --> 01:16:36:** And making them part of the design of the solution
**01:16:36 --> 01:16:39:** in an outreach process is probably the best way to
**01:16:39 --> 01:16:42:** diffuse that they they they need to feel like they're
**01:16:42 --> 01:16:43:** being listened to.
**01:16:48 --> 01:16:50:** Tristan, I think you commented also that you've been seeing

**01:16:50 --> 01:16:51:** it.

**01:16:53 --> 01:16:54:** Yes.

**01:16:54 --> 01:16:59:** So we definitely have an active contingent of our community

**01:16:59 --> 01:17:02:** who are very anti growth and very and very vocal

**01:17:02 --> 01:17:03:** about it.

**01:17:04 --> 01:17:09:** They have comprised the majority of the appeals to the

**01:17:09 --> 01:17:15:** Coastal Commission for various projects within our jurisdiction and they

**01:17:15 --> 01:17:19:** haven't been so vocal about the using kind of saved

**01:17:19 --> 01:17:23:** water to just promote development as much as it's just

**01:17:23 --> 01:17:28:** anti development of of any kind that could that impact

**01:17:28 --> 01:17:32:** the water supply and could possibly make it a precarious

**01:17:32 --> 01:17:33:** situation worse.

**01:17:39 --> 01:17:42:** I might add in Santa Fe, we've had that, you

**01:17:42 --> 01:17:46:** know, that we've had a lot of vocal resistance from

**01:17:46 --> 01:17:50:** folks and they're, and they're very clear about it that

**01:17:50 --> 01:17:54:** they saw Santa Fe is this great small city, you

**01:17:54 --> 01:17:57:** know, we're only 87,000 or less than 100,000.

**01:17:57 --> 01:17:59:** And they're like, we don't want to see this new

**01:17:59 --> 01:18:00:** development.

**01:18:02 --> 01:18:05:** But they also realize, you know, we're short at least

**01:18:05 --> 01:18:08:** by 6000 units for existing population.

**01:18:08 --> 01:18:12:** I mean, more than 40% of our workforce.

**01:18:12 --> 01:18:16:** It's a lot of federal agencies, state agencies, city, our

**01:18:16 --> 01:18:20:** our municipality are living somewhere else and then commuting in.

**01:18:22 --> 01:18:24:** So that, you know, that's not an ideal situation either.

**01:18:24 --> 01:18:29:** So residents understand that our water portfolio is actually quite

**01:18:29 --> 01:18:32:** good for New Mexico and the fact that we're using

**01:18:32 --> 01:18:35:** a lot of renewable surface water supply.

**01:18:35 --> 01:18:39:** So we have room to grow into development, but it's

**01:18:39 --> 01:18:41:** also interesting to see.

**01:18:43 --> 01:18:44:** I would say it's kind of back to the future.

**01:18:44 --> 01:18:49:** There's there's a lot of reuse of older buildings.

**01:18:49 --> 01:18:53:** Again, we're we've got older Pueblo design housing.

**01:18:54 --> 01:18:58:** Pueblos were supposed to be kind of centralized homes with

**01:18:58 --> 01:19:00:** like a central Plaza.

**01:19:01 --> 01:19:05:** You kind of build almost like a multi family and

**01:19:05 --> 01:19:09:** keep open space around you instead of like singular family

**01:19:09 --> 01:19:10:** ranchets.

**01:19:11 --> 01:19:15:** So that's kind of happening in a more modern technique.

**01:19:15 --> 01:19:20:** And so I think architects and developers are getting more

**01:19:20 --> 01:19:25:** creative to not just create a large suburb or subdivision
**01:19:25 --> 01:19:27:** in the process.
**01:19:27 --> 01:19:30:** And that also helps in the water footprint that we
**01:19:30 --> 01:19:30:** have.
**01:19:31 --> 01:19:34:** So it's kind of getting education of the public to
**01:19:34 --> 01:19:37:** understand what kind of develops are are occurring and that
**01:19:37 --> 01:19:41:** they're actually having less of an impact than more traditional
**01:19:41 --> 01:19:43:** subdivision developments.
**01:19:47 --> 01:19:49:** I'd love to also jump in.
**01:19:49 --> 01:19:52:** Obviously our program is quite different because we're not using
**01:19:52 --> 01:19:54:** actual water, it's a water bank.
**01:19:55 --> 01:19:58:** So dealing with money and we do have a lot
**01:19:58 --> 01:20:03:** of anti development rhetoric, but it this program is seen
**01:20:03 --> 01:20:06:** as something that helps respond to that.
**01:20:06 --> 01:20:08:** So it's generally something that people support.
**01:20:09 --> 01:20:12:** In terms of pushback from developers, which is the most
**01:20:12 --> 01:20:16:** common question I get because we're charging the developers money,
**01:20:16 --> 01:20:19:** I don't receive almost any any pushback from them at
**01:20:19 --> 01:20:20:** all, surprisingly.
**01:20:20 --> 01:20:25:** They typically are very accepting an understanding of the fee
**01:20:25 --> 01:20:29:** and in the tiers I've been managing the program have
**01:20:29 --> 01:20:35:** gotten almost no really significant complaints from developers.
**01:20:39 --> 01:20:40:** That's great to hear.
**01:20:40 --> 01:20:41:** Thank you all for your responses.
**01:20:42 --> 01:20:45:** Are there any other questions for our speakers?
**01:20:48 --> 01:20:50:** OK, I'm not seeing any, so I'm going to just
**01:20:50 --> 01:20:51:** wrap up.
**01:20:51 --> 01:20:52:** Oh, go ahead and.
**01:20:52 --> 01:20:54:** I I put it in the chat, but I just
**01:20:54 --> 01:20:56:** wanted to say that because I forgot to say it
**01:20:56 --> 01:20:57:** in the presentation.
**01:20:58 --> 01:21:00:** The Netblue program doesn't have to be done as a
**01:21:00 --> 01:21:02:** land use ordinance on the city or county level.
**01:21:02 --> 01:21:05:** It can be done as a new connection program.
**01:21:05 --> 01:21:08:** So especially if a utility serves a number of different
**01:21:08 --> 01:21:12:** communities and in doing land use ordinances in each of
**01:21:12 --> 01:21:14:** the communities would be a a pain, a royal pain
**01:21:14 --> 01:21:15:** to coordinate.
**01:21:16 --> 01:21:18:** They can do it as a new connection requirement and
**01:21:18 --> 01:21:20:** there is at least one utility that has done that

**01:21:20 --> 01:21:20:** with NIPLU.
**01:21:21 --> 01:21:23:** So I just offered that as an option as well.
**01:21:24 --> 01:21:26:** It's much more similar to what you've been hearing about
**01:21:26 --> 01:21:27:** from others today.
**01:21:28 --> 01:21:28:** Wonderful.
**01:21:28 --> 01:21:29:** Thank you, Marianne.
**01:21:30 --> 01:21:33:** OK, Before we all take off, I've got some updates
**01:21:33 --> 01:21:36:** and resources for folks and I just want to take
**01:21:37 --> 01:21:39:** a moment to thank our all of our speakers.
**01:21:39 --> 01:21:41:** Again, you guys are amazing.
**01:21:41 --> 01:21:43:** It's so great to learn from all the work that
**01:21:43 --> 01:21:44:** you guys are doing on the ground.
**01:21:44 --> 01:21:45:** So thank you.
**01:21:47 --> 01:21:50:** So just to share some final things, we have some
**01:21:50 --> 01:21:51:** updates.
**01:21:51 --> 01:21:55:** We started based on all of our meetings that we've
**01:21:55 --> 01:21:59:** been doing with the coalition, we started resource lists for
**01:21:59 --> 01:22:04:** landscape templates and codes, public policies and ordinances and affordability
**01:22:05 --> 01:22:05:** resources.
**01:22:05 --> 01:22:08:** So how do we retain affordability when the prices are
**01:22:08 --> 01:22:09:** going up?
**01:22:09 --> 01:22:12:** So I'm in the chat box, I'm going to share
**01:22:12 --> 01:22:13:** these resource lists.
**01:22:13 --> 01:22:15:** These are open and editable.
**01:22:15 --> 01:22:18:** So we really hope that members of the coalition help
**01:22:18 --> 01:22:21:** add to these resource lists so that they're a true
**01:22:21 --> 01:22:23:** resource for everybody in the coalition.
**01:22:23 --> 01:22:26:** If you, if you're looking for templates for something, for
**01:22:26 --> 01:22:28:** example, you can find them in these resource lists.
**01:22:29 --> 01:22:30:** It's very low tech.
**01:22:30 --> 01:22:34:** It's just, you know, Word, Word online documents that you
**01:22:34 --> 01:22:36:** can go in and edit.
**01:22:37 --> 01:22:41:** Also, Joel Benson from Buena Vista, Co, he asked that
**01:22:41 --> 01:22:45:** we share this survey with you all if you don't
**01:22:45 --> 01:22:47:** mind clicking on it.
**01:22:47 --> 01:22:49:** I also just put it in the chat box.
**01:22:49 --> 01:22:50:** It shouldn't take too long to fill out.
**01:22:50 --> 01:22:54:** This is to help him with his research on water
**01:22:54 --> 01:22:56:** and land use resilience.
**01:22:56 --> 01:22:58:** So if you don't mind filling that out, he would
**01:22:58 --> 01:22:59:** greatly appreciate it.

**01:23:00 --> 01:23:03:** And then finally, I'm going to turn it over to
**01:23:03 --> 01:23:05:** my oh, thank you for letting me know, Liesl.
**01:23:05 --> 01:23:08:** I will in my follow up e-mail, I'll make sure
**01:23:08 --> 01:23:10:** you guys have links that work.
**01:23:11 --> 01:23:12:** Thanks, Liesl.
**01:23:13 --> 01:23:16:** And then I'm going to turn it over to Meryl
**01:23:16 --> 01:23:17:** Corbin.
**01:23:17 --> 01:23:17:** One second.
**01:23:18 --> 01:23:19:** Marianne, do you have something you want to add?
**01:23:21 --> 01:23:21:** No.
**01:23:21 --> 01:23:25:** OK, so my colleague from Sonoran Institute is going to
**01:23:25 --> 01:23:28:** talk about the growing Water smart network.
**01:23:30 --> 01:23:30:** Thank you.
**01:23:31 --> 01:23:33:** So just to introduce myself, my name is Merrill Corbin.
**01:23:33 --> 01:23:36:** I'm with the Snoring Institute and I help manage the
**01:23:36 --> 01:23:40:** Growing Water Smart program throughout the Colorado River Basin.
**01:23:40 --> 01:23:43:** And just a quick, very brief plug.
**01:23:43 --> 01:23:47:** So Growing Water Smart is a training and assistance program
**01:23:47 --> 01:23:51:** that empowers local leaders to implement plans and policies to
**01:23:51 --> 01:23:54:** support community and Regional Water resilience.
**01:23:54 --> 01:23:57:** And one of the key components of our program is
**01:23:57 --> 01:23:58:** our peer network.
**01:23:59 --> 01:24:02:** And that peer network is really an opportunity for interested
**01:24:02 --> 01:24:06:** professionals in that sort of land use water resource space
**01:24:06 --> 01:24:09:** to advance some integrated water resource management policies.
**01:24:09 --> 01:24:12:** And one of the ways that we do that is
**01:24:12 --> 01:24:13:** through webinars.
**01:24:13 --> 01:24:17:** And so I just wanted to plug our upcoming webinar,
**01:24:17 --> 01:24:21:** which is December 12th from 12:00 to 1:30 Mountain time.
**01:24:22 --> 01:24:25:** And this webinar is an opportunity for water and land
**01:24:25 --> 01:24:29:** use professionals to learn from each other's and, and share
**01:24:29 --> 01:24:32:** examples about how to maintain momentum as we start to
**01:24:32 --> 01:24:35:** embark on some of these big policy changes.
**01:24:35 --> 01:24:39:** And, you know, talking about water budgets and just what
**01:24:39 --> 01:24:42:** kind of hurdles are you facing to, to implement these
**01:24:42 --> 01:24:44:** integrated plans and policies?
**01:24:44 --> 01:24:46:** And so we'll have 3 panelists.
**01:24:46 --> 01:24:51:** We'll have Joaquin Maruffo from the Environmental justice Coordinator of

**01:24:51 --> 01:24:56:** the Arizona Department of Environmental Quality and then Environmental Quality

**01:24:56 --> 01:25:00:** and Environment, and he's also the water committee delegate for

**01:25:00 --> 01:25:02:** the Arizona Mexico Commission.

**01:25:03 --> 01:25:07:** We'll also have Kelly Kopp and Joanna Interwada from U

**01:25:07 --> 01:25:09:** Utah State University.

**01:25:09 --> 01:25:12:** They managed the Utah Growing Water Smart program and then

**01:25:12 --> 01:25:15:** Chris Cross, who's the city administrator from the city of

**01:25:15 --> 01:25:17:** Fort Lupton here in Colorado.

**01:25:17 --> 01:25:19:** And they'll just speak to their successes and some of

**01:25:19 --> 01:25:22:** the hurdles that they found push back from community members,

**01:25:22 --> 01:25:24:** kind of all those things that we're dealing with.

**01:25:24 --> 01:25:27:** So they'll present a little bit about how they've maintained

**01:25:27 --> 01:25:29:** momentum and then we'll have some Q&A.

**01:25:29 --> 01:25:31:** So I hope you all can join us and I

**01:25:31 --> 01:25:34:** will put the link in the chat.

**01:25:34 --> 01:25:36:** Yeah, 'cause it doesn't work from the screen.

**01:25:36 --> 01:25:36:** Yeah.

**01:25:38 --> 01:25:38:** Thank you.

**01:25:38 --> 01:25:40:** Thank you so much Meryl.

**01:25:40 --> 01:25:42:** I registered for it and I'm looking forward to it.

**01:25:44 --> 01:25:47:** Just before everyone leaves, we love having your input into

**01:25:47 --> 01:25:49:** upcoming coalition meeting topics.

**01:25:50 --> 01:25:53:** The current plan is to cover a water and land

**01:25:53 --> 01:25:58:** use forecasting and data-driven planning that incorporates water using data

**01:25:58 --> 01:26:01:** to right size taps and water infrastructure.

**01:26:01 --> 01:26:04:** We hope to have someone from the Babbitt Center present.

**01:26:04 --> 01:26:07:** If you have anyone else who you think would be

**01:26:07 --> 01:26:10:** a good fit as a speaker for that session, please

**01:26:10 --> 01:26:11:** send me an e-mail.

**01:26:11 --> 01:26:14:** My e-mail address is listed on my face, so you're

**01:26:14 --> 01:26:16:** welcome to just shoot me an e-mail.

**01:26:16 --> 01:26:18:** You can also reply to the calendar invite if you

**01:26:18 --> 01:26:19:** would like.

**01:26:20 --> 01:26:23:** We're also planning on having water reuse as an upcoming

**01:26:24 --> 01:26:27:** Topic 1 water and also the an update on the

**01:26:27 --> 01:26:30:** Colorado Water Wise Guide book on best practices.

**01:26:31 --> 01:26:34:** If there are any other ideas or speakers or topics

**01:26:34 --> 01:26:37:** that you would like to share or speak on, or

**01:26:37 --> 01:26:40:** do you have thoughts that you'd like to just share
**01:26:40 --> 01:26:43:** with the group, please put them in the chat or
**01:26:43 --> 01:26:43:** e-mail me.
**01:26:43 --> 01:26:49:** We'd love to hear them and that is all.
**01:26:49 --> 01:26:51:** Here's my e-mail address.
**01:26:51 --> 01:26:54:** We'd love to hear from you and we want to
**01:26:54 --> 01:26:56:** just thank you all so much for attending today.
**01:26:56 --> 01:26:59:** And a huge thank you to our speakers for sharing
**01:26:59 --> 01:27:02:** their expertise and experience with us as a group.
**01:27:02 --> 01:27:05:** Many of you have asked for the links and we
**01:27:05 --> 01:27:05:** will.
**01:27:05 --> 01:27:08:** I'll share those with you in a follow up e-mail
**01:27:08 --> 01:27:11:** along with the recording and slides from this session.
**01:27:11 --> 01:27:13:** So thank you all so much for joining and we
**01:27:13 --> 01:27:15:** hope to see you again soon.
**01:27:16 --> 01:27:18:** Thank you, the webinar was excellent.
**01:27:19 --> 01:27:19:** Oh, great.
**01:27:19 --> 01:27:20:** Thank you so much.
**01:27:20 --> 01:27:20:** Thanks.

---