



# Webinar

## Water Wise Development Coalition Meeting - 2

Date: July 12, 2023

00:00:22 --> 00:00:23: Hi, everyone.

00:00:23 --> 00:00:24: Thank you so much for joining today.

00:00:25 --> 00:00:26: I'm Marion Epic.

00:00:26 --> 00:00:29: I'm the Director of Resilience for the Urban Land Institute,

00:00:29 --> 00:00:32: and this is our second water wise development coalition.

00:00:33 --> 00:00:36: And just for some newbies, we developed this coalition in

00:00:36 --> 00:00:41: partnership with the Alliance for Water Efficiency, the Sonoran Institute,

00:00:41 --> 00:00:43: and the Water Now Alliance.

00:00:43 --> 00:00:46: And the whole point of this coalition is to convene

00:00:46 --> 00:00:50: land use and real estate professionals with policy makers and

00:00:50 --> 00:00:54: decision makers to advance water, smart real estate development and

00:00:54 --> 00:00:56: supportive policies.

00:00:56 --> 00:00:59: We have 3 quarterly virtual meetings, and this is one

00:00:59 --> 00:00:59: of them.

00:00:59 --> 00:01:02: And we hope that you'll help us spread the word

00:01:02 --> 00:01:03: about this coalition.

00:01:04 --> 00:01:07: Anyone who emails me or fills out the survey form

00:01:07 --> 00:01:10: for the coalition is welcome to join.

00:01:10 --> 00:01:11: We're excited that you're here.

00:01:13 --> 00:01:16: In terms of the agenda for today, we hope that

00:01:17 --> 00:01:19: you introduce yourself in the chat box.

00:01:19 --> 00:01:24: Please include your name, title, organization, and where you're calling

00:01:24 --> 00:01:24: in from today.

00:01:26 --> 00:01:28: I just let you know a little bit about the

00:01:28 --> 00:01:31: Development Coalition, but if you have any questions, feel free

00:01:31 --> 00:01:33: to put those in the chat box or e-mail me.

00:01:33 --> 00:01:36: You can see my e-mail address on my On My

00:01:36 --> 00:01:40: Face icon and then we'll have 4 presentations today.

00:01:41 --> 00:01:43: The 1st is by Brock Smethills, who's the President of

00:01:43 --> 00:01:45: Sterling Ranch Development Company.

00:01:46 --> 00:01:49: Then Kyle Harris, the Senior Vice President of Community Development

00:01:49 --> 00:01:50: for Mcwinney.

00:01:50 --> 00:01:51: Stephen Conchier.

00:01:51 --> 00:01:53: I'm sure I'm mispronouncing that.

00:01:53 --> 00:01:57: Steve Sorry, Director of Housing Development for Maker Housing Partners

00:01:57 --> 00:02:02: and Jacob Batala, Vice President of Sustainability Initiatives for KB

00:02:02 --> 00:02:02: Home.

00:02:03 --> 00:02:06: We'll have plenty of time for Q&A and group discussion

00:02:06 --> 00:02:06: towards the end.

00:02:06 --> 00:02:09: We'll also be talking about upcoming meeting topics, So we

00:02:09 --> 00:02:11: hope you stay until the end.

00:02:12 --> 00:02:14: And with that, we'll just get started.

00:02:15 --> 00:02:16: I'll introduce our first speaker, Brock.

00:02:17 --> 00:02:17: Go ahead, Brock.

00:02:20 --> 00:02:22: Marianne, thank you so much for having me.

00:02:23 --> 00:02:27: So I am my name is Brock Smethols.

00:02:27 --> 00:02:32: I am President of Sterling H Development Company and I

00:02:32 --> 00:02:34: will go through my slide deck.

00:02:34 --> 00:02:38: So let me know if we can see my screen

00:02:38 --> 00:02:39: here hopefully.

00:02:42 --> 00:02:44: Can you go into presenter mode Brock, or do you

00:02:44 --> 00:02:45: need to share a different screen?

00:02:46 --> 00:02:47: Did that work?

00:02:47 --> 00:02:48: Yep, that works great.

00:02:48 --> 00:02:49: Thank you.

00:02:49 --> 00:02:49: Yeah.

00:02:51 --> 00:02:51: All right.

00:02:53 --> 00:02:56: So I said earlier, I'm president Sterling Reinstalling company.

00:02:57 --> 00:03:02: Our mission statement is building premier and enduring communities that

00:03:02 --> 00:03:04: enrich our customers lives.

00:03:06 --> 00:03:09: For those of you who are unaware of Sterling Ranch,

00:03:09 --> 00:03:12: we're a 3400 acre master plan community just South of

00:03:12 --> 00:03:15: Chapel Reservoir located in Douglas County.

00:03:15 --> 00:03:19: We're about 15 miles to the southwest of downtown Denver,

00:03:19 --> 00:03:22: about 30 to 45 minutes from downtown.

00:03:22 --> 00:03:23: Almost done.

00:03:26 --> 00:03:31: Let's see that picture box here.

00:03:33 --> 00:03:37: So again, 3400 acres were zoned for 12,050 units.

00:03:38 --> 00:03:41: We have 19150 occupied homes and ultimately the master plan

00:03:41 --> 00:03:44: will have about 1300 acres of parks and open space.

00:03:47 --> 00:03:49: You know a little bit about our land plan.

00:03:49 --> 00:03:53: We really embrace the the quote Serban environment, which is

00:03:53 --> 00:03:57: a, a term that John Burns has developed to define

00:03:57 --> 00:04:03: suburban communities that embrace some urban attributes like walkability, neighborhood

00:04:03 --> 00:04:08: walkable retail and kind of combine the best attributes of

00:04:08 --> 00:04:09: suburban and urban.

00:04:09 --> 00:04:11: So that is that is really what formed our master

00:04:11 --> 00:04:12: plan design.

00:04:13 --> 00:04:15: We have 9 villages and ultimately a Town Center.

00:04:15 --> 00:04:18: Each of these colors on this map delineate a different

00:04:18 --> 00:04:21: village that'll be within 5 to 10 minutes walking in

00:04:21 --> 00:04:22: Citrix circles of retail.

00:04:26 --> 00:04:27: So this is a view of the property.

00:04:27 --> 00:04:29: It's actually an older picture, but it's one of the

00:04:29 --> 00:04:32: prettier ones of dusk looking to the southwest.

00:04:32 --> 00:04:34: This is our first phase.

00:04:34 --> 00:04:36: It's about 1000 minutes that are fully occupied.

00:04:36 --> 00:04:39: And then you can see development activities going on in

00:04:40 --> 00:04:43: the South, just South, as well as approximate mountains.

00:04:44 --> 00:04:46: And this is it, as you can see, a lot

00:04:46 --> 00:04:48: greener with all the rain that we've been getting.

00:04:48 --> 00:04:51: So this was taken in in May, but you can

00:04:51 --> 00:04:53: see we've had substantial growth.

00:04:53 --> 00:04:56: We've been the top selling master plan community in the

00:04:56 --> 00:04:58: demo metro for the past three years and we should

00:04:58 --> 00:04:59: be again this year.

00:05:02 --> 00:05:04: And I'll, I'll point this out a little bit later.

00:05:04 --> 00:05:05: I'm sure one of my other panelists will touch on

00:05:05 --> 00:05:06: this.

00:05:06 --> 00:05:08: But as you can see, the native grasses take a

00:05:08 --> 00:05:09: little bit longer to grow in.

00:05:10 --> 00:05:13: You know, this is 3 to 4 years post construction.

00:05:13 --> 00:05:16: So of the rec center, excuse me, two years post

00:05:16 --> 00:05:20: construction rec center and it's certainly takes a little bit

00:05:20 --> 00:05:24: longer for some of these native Colorado grasses to grow.

00:05:27 --> 00:05:29: So Sterling Ranch is thriving.

00:05:29 --> 00:05:34: We have 5600 total residents, 25 plus events a month  
00:05:34 --> 00:05:39: with 19150 occupied homes, 3100 developed lots and then really  
00:05:39 --> 00:05:44: embracing that mixed-use retail serve an environment over.  
00:05:44 --> 00:05:46: We have 45,000 square feet existing and we'll be adding  
00:05:46 --> 00:05:47: 150,000 square feet.  
00:05:47 --> 00:05:50: So at full build out will be you know our  
00:05:50 --> 00:05:55: little valley here in Chatfield Valley, which includes Roxboro and  
00:05:55 --> 00:05:58: Solstice will be in the top 25 largest kind of  
00:05:58 --> 00:06:00: municipalities in the state.  
00:06:04 --> 00:06:07: So we've defined sustainability in three components.  
00:06:07 --> 00:06:10: And obviously today's topic is water, but those three are  
00:06:10 --> 00:06:13: water lifestyle, energy and, and to Marianne's point, I'm here  
00:06:13 --> 00:06:17: to talk about kind of holistic water sustainability and water  
00:06:17 --> 00:06:18: demand management.  
00:06:19 --> 00:06:23: So this slide does the best job that I know  
00:06:23 --> 00:06:27: of to, to describe the situation in Colorado.  
00:06:27 --> 00:06:30: So there's Colorado's 8020 rule.  
00:06:30 --> 00:06:33: 80% of our population is east of the Continental Divide  
00:06:33 --> 00:06:35: where we only have really the S Platte.  
00:06:35 --> 00:06:39: The Arkansas 20% is West of, sorry, 80% of our  
00:06:39 --> 00:06:43: water is West of the Continental Divide where there's 20%  
00:06:43 --> 00:06:45: of the population.  
00:06:45 --> 00:06:49: So clearly there's a mixed match of natural resources and  
00:06:49 --> 00:06:50: population densities.  
00:06:52 --> 00:06:54: And as such, if you look at the area in  
00:06:54 --> 00:06:58: between Denver and Colorado Springs, the vast majority of the  
00:06:58 --> 00:07:00: of the development in our area has been on groundwater.  
00:07:00 --> 00:07:07: And and groundwater is a non replenishing, non renewable source  
00:07:07 --> 00:07:12: of water that has enabled Douglas County to grow from  
00:07:12 --> 00:07:17: 7000 people in 1975 to now over 382,000 people in  
00:07:17 --> 00:07:18: 2023.  
00:07:18 --> 00:07:21: And now a lot of water districts in our area  
00:07:21 --> 00:07:26: including Centennial, Parker and Castle Rock are all converting from  
00:07:26 --> 00:07:32: groundwater, which is relatively affordable and easy to deliver to  
00:07:32 --> 00:07:33: renewable water.  
00:07:33 --> 00:07:34: And that's a huge cost.  
00:07:34 --> 00:07:37: And so every drop of water really needs to be

00:07:37 --> 00:07:37: used to extinction.

00:07:38 --> 00:07:41: And then what is unique to Sterling Ranch is also

00:07:41 --> 00:07:45: unique to Douglas County is we're fortunate that we can

00:07:45 --> 00:07:49: actually use the aquifer really in a conjunctive use system,

00:07:49 --> 00:07:52: which just means that we use renewable water when it's

00:07:52 --> 00:07:53: available.

00:07:53 --> 00:07:56: When it's not available, we're able to use groundwater to

00:07:56 --> 00:07:57: create a resilient system.

00:08:00 --> 00:08:05: So in the West, waters whiskeys for drinking, waters for

00:08:05 --> 00:08:05: fighting.

00:08:06 --> 00:08:10: This map just shows the number of water districts in

00:08:10 --> 00:08:14: Douglas County alone, and that's a county of 382,000

00:08:14 --> 00:08:17: people.

00:08:17 --> 00:08:21: So you can see just how to spare it.

00:08:21 --> 00:08:25: The infrastructure is in our area and how there's so

00:08:25 --> 00:08:29: many different water and wastewater providers.

00:08:29 --> 00:08:34: In addition, both the city of Denver, Denver water, I

00:08:34 --> 00:08:38: should say, and Aurora water infrastructure underlie Sterling

00:08:38 --> 00:08:41: Ranches property.

00:08:41 --> 00:08:42: So in addition to all the map colors you see

00:08:42 --> 00:08:46: on the map, you also have downturn Aurora in very

00:08:46 --> 00:08:49: crowded space.

00:08:49 --> 00:08:53: As a as you saw earlier in the the Basin

00:08:53 --> 00:08:55: maps, the South Flat River is really the lifeblood of

00:08:55 --> 00:08:58: the Denver metro area for our water source and we're

00:08:58 --> 00:09:02: fortunate to be adjacent to it.

00:09:02 --> 00:09:06: And I'll explain a little bit more of our water

00:09:06 --> 00:09:07: source, but this map also shows the amount of infrastructure

00:09:07 --> 00:09:10: that we've had to construct to deliver our water supplies

00:09:10 --> 00:09:13: to Sterling Ranch.

00:09:13 --> 00:09:16: So the green, blue and purple pipelines were all cost

00:09:16 --> 00:09:19: shared with the city of or the town of Castle

00:09:19 --> 00:09:22: Rock and Parker Water and Sanitation District.

00:09:22 --> 00:09:25: And then we ended up building this blue line all

00:09:25 --> 00:09:26: the way from the town of Castle Rock up to

00:09:26 --> 00:09:29: Sterling Ranch along with two series of tanks cumulatively for

00:09:29 --> 00:09:30: cost.

00:09:30 --> 00:09:33: That's about, you know, \$40 million of infrastructure, not

00:09:33 --> 00:09:36: even

00:09:36 --> 00:09:38: including the water.

00:09:38 --> 00:09:43: So Sterling Ranch will be able to exist with the

00:09:43 --> 00:09:46: water supply without regional partnerships.

00:09:46 --> 00:09:49: Most of our renewable water comes from contract water with

00:09:43 --> 00:09:47: the city of Aurora, where water we traded with the

00:09:47 --> 00:09:51: city of Aurora for service in Sterling Ranch as well

00:09:51 --> 00:09:55: as YS, which stands for Water infrastructure system efficiency.

00:09:56 --> 00:09:58: The map on the right is the map of the

00:09:58 --> 00:09:58: Y system.

00:09:58 --> 00:10:02: So we're actually using water that comes from the South

00:10:02 --> 00:10:05: Flat River, even though it's a mile away from Sterling

00:10:05 --> 00:10:09: Ranch, most of our water comes from the South River

00:10:09 --> 00:10:11: 85 miles away using Prairie waters.

00:10:12 --> 00:10:15: So you know we'll get into water conservation in a

00:10:15 --> 00:10:19: second, but I'm just explaining that really why water conservation

00:10:19 --> 00:10:23: is so important to continue growth in the metro region

00:10:23 --> 00:10:26: just given how constrained we are in in water assets

00:10:26 --> 00:10:27: here.

00:10:28 --> 00:10:31: Ultimately at full build out, we are required in our

00:10:31 --> 00:10:34: zoning to be a minimum of 70% renewable water on

00:10:34 --> 00:10:36: a 10 year rolling average.

00:10:36 --> 00:10:39: Our goal is to achieve 90 plus percent.

00:10:40 --> 00:10:43: We are the state's only rainwater harvesting pilot project.

00:10:44 --> 00:10:46: So that means that we will be able to use

00:10:46 --> 00:10:50: rainwater for outdoor irrigation purposes for the entire master plan.

00:10:50 --> 00:10:53: And I'll touch on how important that is for demand

00:10:53 --> 00:10:54: management in a second.

00:10:57 --> 00:11:00: Just the water demand reductions that we're talking about in

00:11:00 --> 00:11:03: the next couple of slides have reduced the amount of

00:11:03 --> 00:11:07: infrastructure and districts that have to build by over \$100

00:11:07 --> 00:11:07: million.

00:11:08 --> 00:11:10: That's over \$10,000 a house.

00:11:11 --> 00:11:15: And and ultimately getting into developers bottom line that increases

00:11:15 --> 00:11:19: the amount per lot the developer can charge by 2500

00:11:19 --> 00:11:20: to \$3000 a lot.

00:11:21 --> 00:11:25: And ultimately what's enabled Sterling Ranch to exist is we

00:11:25 --> 00:11:28: use water to extinction, IE we will treat wastewater at

00:11:28 --> 00:11:32: a wastewater treatment plant that we will be building with

00:11:32 --> 00:11:33: the town of Castle Rock.

00:11:34 --> 00:11:37: At that time we will discharge it into the South

00:11:37 --> 00:11:41: flat and actually intake downstream and be able to use

00:11:41 --> 00:11:43: indoor water to extinction.

00:11:43 --> 00:11:46: And that's our largest single water supply as we're using

00:11:46 --> 00:11:46: water.

00:11:47 --> 00:11:50: And ultimately that's whatever use of the of the pond.

00:11:53 --> 00:11:55: So I'm talking about success in water demand management and

00:11:55 --> 00:11:57: I'll explain how we achieved the success.

00:11:58 --> 00:12:03: In 2022 our per home water consumption was .17 acre

00:12:03 --> 00:12:07: feet was about 55,000 gallons.

00:12:08 --> 00:12:11: A typical rule of thumb for Denver water or for

00:12:11 --> 00:12:14: most water providers across the country is a typical home

00:12:14 --> 00:12:15: uses half an acre foot.

00:12:16 --> 00:12:21: So we're less than half of what the averages nationwide

00:12:21 --> 00:12:26: are 45% roughly lower than the Denver metropolitan area and

00:12:26 --> 00:12:31: ultimately that's 26% lower than what the state water plan

00:12:32 --> 00:12:36: calls for what super water fishing homes in 2050.

00:12:37 --> 00:12:38: So how do we achieve that?

00:12:40 --> 00:12:45: We achieve that really using technology and rate structures and

00:12:45 --> 00:12:49: then we also kind of layered in it wasn't really

00:12:49 --> 00:12:53: A1 silver bullet 1, you know, quick easy fix.

00:12:53 --> 00:12:55: It was a series of incremental steps.

00:12:55 --> 00:12:59: So the first one on the technology side is there's

00:12:59 --> 00:13:02: a local company here in Colorado that had a large

00:13:02 --> 00:13:06: investment from Amazon called Ratio and they tie in the

00:13:06 --> 00:13:11: irrigation controllers for residential houses to weather monitoring stations and

00:13:12 --> 00:13:15: they irrigate at the most efficient time of day.

00:13:16 --> 00:13:20: They also can provide some predictive analytics and that's all

00:13:20 --> 00:13:24: you know, available throughout \$250 I believe Amazon.

00:13:25 --> 00:13:27: In addition to that, we have dual water meters.

00:13:28 --> 00:13:29: Why is that important?

00:13:29 --> 00:13:31: Well, as I said earlier, we'll be using indoor water

00:13:31 --> 00:13:32: to extinction.

00:13:32 --> 00:13:35: So it goes from the house to the wastewater treatment

00:13:35 --> 00:13:35: plant.

00:13:35 --> 00:13:39: It is treated to higher quality water than what the

00:13:39 --> 00:13:42: intake raw S flat discharges it into a river.

00:13:43 --> 00:13:46: The intake off the the river are fully consumable return

00:13:46 --> 00:13:47: flows.

00:13:47 --> 00:13:48: It comes back in the system and it goes through

00:13:48 --> 00:13:49: the system again.

00:13:50 --> 00:13:53: Well, every time it stays on the indoor system of

00:13:53 --> 00:13:56: our water system, we get to reuse it.

00:13:57 --> 00:14:00: Every drop of water that's used in outdoor irrigation is a system loss.

00:14:00 --> 00:14:01: It's basically going to irrigate plants and it evaporates and

00:14:01 --> 00:14:04: it's gone out of the system entirely.

00:14:04 --> 00:14:06: So outdoor water has a higher rate, indoor water has

00:14:06 --> 00:14:10: a lower rate.

00:14:10 --> 00:14:11: And in lieu of using, you know, water consumption during

00:14:11 --> 00:14:15: the winter months to create a baseline, we actually truly

00:14:15 --> 00:14:19: monitor water separately with two separate meters.

00:14:19 --> 00:14:23: As part of that, we partnered with Siemens Building

00:14:24 --> 00:14:28: Technologies

00:14:28 --> 00:14:31: to also partner with another company called Copper Labs that

00:14:31 --> 00:14:35: provides predictive analytics both for water, but also for gas

00:14:35 --> 00:14:37: and electric in conjunction with Excel.

00:14:37 --> 00:14:40: So on your phone, you're able to see what your

00:14:40 --> 00:14:43: anticipated monthly bill will be in each of the natural

00:14:43 --> 00:14:45: resource consumption areas.

00:14:45 --> 00:14:48: So water, natural gas and electricity.

00:14:49 --> 00:14:51: And then ultimately we also do kind of the standard,

00:14:51 --> 00:14:53: which is low flow fixtures in in the West and

00:14:53 --> 00:14:55: and become more commonplace.

00:14:56 --> 00:14:59: On the landscaping side, we have a partnership with the

00:14:59 --> 00:15:00: Denver County Gardens.

00:15:00 --> 00:15:02: We've had that partnership for over 10 years, including a

00:15:02 --> 00:15:06: pilot project where we experimented with rainwater harvesting before the

00:15:06 --> 00:15:08: state legislature, legislature changed the law.

00:15:09 --> 00:15:13: They created our palette of landscapes that homeowners can pick

00:15:13 --> 00:15:17: from when they're doing their landscapes, which rolls into our

00:15:17 --> 00:15:18: home owner education.

00:15:19 --> 00:15:24: So we have a series of landscaping classes that are

00:15:24 --> 00:15:27: available to every home owner.

00:15:28 --> 00:15:31: Ultimately what they get is a example landscape plan is

00:15:31 --> 00:15:34: like the one on the screen and it says based

00:15:34 --> 00:15:37: on this lot width and this depth, here is a

00:15:37 --> 00:15:39: way to achieve a water budget.

00:15:39 --> 00:15:42: Every lots square footage has a water budget they can

00:15:42 --> 00:15:46: use for outdoor irrigation and that's what ultimately sets their

00:15:46 --> 00:15:48: rates for the outdoor tiers.

00:15:48 --> 00:15:52: So we have a tiered outdoor water rate that changes

00:15:52 --> 00:15:55: based on if you're within your water budget or over



00:15:55 --> 00:15:59: your water budget and how far over your water budget

00:15:59 --> 00:16:04: dictates which to every single landscape plan goes through a

00:16:04 --> 00:16:05: design view committee.

00:16:06 --> 00:16:11: We have two to three full time landscape architecture viewing

00:16:11 --> 00:16:13: all these plans that come in.

00:16:14 --> 00:16:17: I think one thing that's a little unique that you

00:16:17 --> 00:16:20: probably don't hear from a lot of jurisdictions is there's

00:16:20 --> 00:16:22: a big push to to eliminate grass.

00:16:23 --> 00:16:26: I don't personally believe that grass is is the enemy

00:16:26 --> 00:16:27: always.

00:16:27 --> 00:16:29: I think, you know, dogs still need a place to

00:16:29 --> 00:16:33: relieve themselves when they're walking at the street and

00:16:33 --> 00:16:34: everyone

00:16:33 --> 00:16:34: in Colorado is a dog.

00:16:34 --> 00:16:37: So I think there really isn't A1 size fits all

00:16:37 --> 00:16:37: solution.

00:16:37 --> 00:16:41: I think this opportunity of saying you homeowner have a

00:16:41 --> 00:16:43: budget, stay within that budget.

00:16:43 --> 00:16:46: How do you use that budget is wholly up to

00:16:46 --> 00:16:49: you really generates a diversity of landscaping in in the

00:16:49 --> 00:16:52: community and it adds to the overall community fuel.

00:16:53 --> 00:16:57: So these are some examples of different landscape pallets

00:16:57 --> 00:17:02: we

00:16:57 --> 00:17:02: have across communities are taken just straight from

00:17:02 --> 00:17:06: different residents

00:17:02 --> 00:17:06: backyards and, and we have all these homeowners that like

00:17:06 --> 00:17:09: you said, have gone through that design process.

00:17:09 --> 00:17:12: And, and again, you know, I, I think the grass,

00:17:12 --> 00:17:16: you see some artificial grass, you see some actual real

00:17:16 --> 00:17:20: bluegrass hybrids that are, are meant more for Colorado air

00:17:20 --> 00:17:20: climates.

00:17:21 --> 00:17:24: That blend really creates A pallet that doesn't just look

00:17:24 --> 00:17:24: monotone.

00:17:24 --> 00:17:27: And I know a lot of jurisdictions are really pushing

00:17:27 --> 00:17:28: to enforce all rock.

00:17:28 --> 00:17:30: And I think that that's ultimately a mistake.

00:17:33 --> 00:17:36: And then another thing too is just product diversity.

00:17:36 --> 00:17:39: You know, the house on the far left is going

00:17:39 --> 00:17:43: to use significantly more water than for outdoor irrigation than

00:17:43 --> 00:17:47: per unit than the apartment building down on the right.

00:17:47 --> 00:17:50: And so I think what allows us to get those,

00:17:51 --> 00:17:55: those lower water usages is that we're really creating that

00:17:55 --> 00:17:58: diversity of product, diversity of housing.

00:18:00 --> 00:18:04: And ultimately that diversity of housing will let us, you

00:18:04 --> 00:18:08: know, provide housing for right variety of incomes and created

00:18:08 --> 00:18:12: a diverse community other than just everyone having \$1,000,000 that

00:18:12 --> 00:18:13: mansion.

00:18:14 --> 00:18:16: I know that's unpopular term, but it's true.

00:18:17 --> 00:18:21: And then ultimately, you know, I think this product diversity,

00:18:21 --> 00:18:24: you know really plays out and you're creating a diverse

00:18:24 --> 00:18:25: street scene.

00:18:25 --> 00:18:27: So it's not just something that it looks like the

00:18:27 --> 00:18:29: same community over and over and over again.

00:18:29 --> 00:18:33: And then finally you know before I wrap up, so

00:18:33 --> 00:18:37: I'm sure your name will come down over, but we

00:18:37 --> 00:18:42: are 2022 number was .17 acre feet with rainwater harvesting

00:18:42 --> 00:18:46: I believe on a fully consumed basis, meaning water we

00:18:46 --> 00:18:50: take from the river and bring into our system and

00:18:50 --> 00:18:55: is lost either through consumption and domestic use or in

00:18:55 --> 00:18:56: outer irrigation.

00:18:56 --> 00:18:59: I think we'll be able to get that down to

00:18:59 --> 00:19:01: .1 acre feet or .12 which would be roughly 10

00:19:02 --> 00:19:03: homes per acre foot.

00:19:03 --> 00:19:05: So we would have increased the number of homes per

00:19:05 --> 00:19:07: acre foot by a factor of 5 which I think

00:19:07 --> 00:19:08: is a huge success.

00:19:08 --> 00:19:11: So when we're harvesting this huge component that we will

00:19:11 --> 00:19:14: not be able to get anywhere close to that number

00:19:14 --> 00:19:14: without it.

00:19:14 --> 00:19:17: So with that, I will stop sharing my screen and

00:19:17 --> 00:19:19: I'll be around for the Q&A.

00:19:19 --> 00:19:20: But thank you for having me, Marianne.

00:19:21 --> 00:19:23: Thank you so much, Brock.

00:19:23 --> 00:19:26: So we have we're going to have rapid fire presentations.

00:19:26 --> 00:19:29: So, so that you don't forget what questions you want

00:19:29 --> 00:19:31: to ask, please put them in the chat box and

00:19:31 --> 00:19:34: we'll circle back to those at the Q&A at the

00:19:34 --> 00:19:34: end.

00:19:34 --> 00:19:37: So our next speaker is Kyle Harris with Mcwinney.

00:19:38 --> 00:19:39: Awesome.

00:19:39 --> 00:19:39: Thanks, Marianne.

00:19:39 --> 00:19:41: Is this showing up for everybody?

00:19:41 --> 00:19:42: Yeah, looks great.

00:19:43 --> 00:19:43: Good deal, let.

00:19:44 --> 00:19:45: Me get my curse in the right spot.

00:19:45 --> 00:19:46: Awesome.

00:19:46 --> 00:19:47: Brock, thanks for that.

00:19:47 --> 00:19:50: Brock's actually a colleague also based in Denver.

00:19:50 --> 00:19:53: I happen to be in Denver, work for Mcwinney, SVP

00:19:53 --> 00:19:55: of Community Development.

00:19:55 --> 00:19:57: In that capacity, I lead our master plan community group.

00:19:58 --> 00:20:01: Whereas Brock is about 15 miles South of town, I

00:20:01 --> 00:20:04: am 15 miles north of town with a project that

00:20:04 --> 00:20:07: I'm going to be talking about and that is let's

00:20:07 --> 00:20:09: see if I can get this to.

00:20:09 --> 00:20:13: There we go, which is baseline and just to Orient

00:20:14 --> 00:20:18: the group, we are a community, 1100 acres at this,

00:20:18 --> 00:20:23: at this master plan community and the entitlements are pretty

00:20:23 --> 00:20:28: robust, 9205 residential units and eye popping 17.2 million

00:20:28 --> 00:20:32: square

00:20:32 --> 00:20:33: feet of commercial which I will tell you is not

00:20:33 --> 00:20:37: going to get built.

00:20:37 --> 00:20:46: We're probably looking at closer to 6 to 7 million

00:20:46 --> 00:20:51: ultimately at full build out.

00:20:51 --> 00:20:55: One of our guiding principles is environmental stewardship

00:20:55 --> 00:20:59: and water

00:20:59 --> 00:21:04: conservation falls squarely within that guiding principle.

00:21:04 --> 00:21:05: So we have had that as one of our values

00:21:05 --> 00:21:08: from the get go, but we haven't until recently tried

00:21:08 --> 00:21:11: to quantify what is the ROI on the expense associated

00:21:11 --> 00:21:15: with that.

00:21:15 --> 00:21:19: So my presentation is going to be concerned a bit

00:21:19 --> 00:21:20: more on just the the economics of what that looks

00:21:20 --> 00:21:23: like as it pertains to water consumption on call it

00:21:23 --> 00:21:24: the public lands or the publicly accessible lands within the

00:21:24 --> 00:21:29: baseline community.

00:21:29 --> 00:21:34: One other point of reference before I dive into some

00:21:34 --> 00:21:38: of the specifics.

00:21:38 --> 00:21:42: We have also partnered with the Butterfly Pavilion Center for

00:21:42 --> 00:21:45: Invertebrate Research and Conservation and in so doing are

00:21:45 --> 00:21:51: creating

00:21:51 --> 00:21:55: a pollinator district across the entire 1100 acres of baseline.

00:21:55 --> 00:21:59: And So what this is doing is it means that

00:21:59 --> 00:22:03: we are creating a very curated landscape.

00:22:03 --> 00:22:07: We actually have entomologists and horticulturalists from the

00:22:07 --> 00:22:11: Butterfly Pavilion

00:21:51 --> 00:21:55: on our design review committee to ensure that we are  
00:21:55 --> 00:21:59: increasing both the absolute number of pollinators and the  
diversity  
00:21:59 --> 00:22:01: of pollinators within the community.  
00:22:02 --> 00:22:05: And that's has a bit of a symbiotic relationship between  
00:22:05 --> 00:22:08: water conservation because it means we're using in large  
part  
00:22:08 --> 00:22:10: native species, Xerox species.  
00:22:10 --> 00:22:13: And so you'll see that come into play as we  
00:22:13 --> 00:22:14: go through the presentation.  
00:22:16 --> 00:22:18: This is a master plan for baseline.  
00:22:18 --> 00:22:21: We're still relatively early in the build out phase.  
00:22:21 --> 00:22:25: What we've done is we have color-coded the various we  
00:22:25 --> 00:22:27: call landscape typologies.  
00:22:27 --> 00:22:31: Again, these are the the public portions of the community.  
00:22:31 --> 00:22:33: So we've got our tree lawns, pocket parks, open land  
00:22:33 --> 00:22:36: tracks and by open land tracks, those are actually we're,  
00:22:37 --> 00:22:39: we're calling them garden ways and more on that in  
00:22:39 --> 00:22:40: just a moment.  
00:22:40 --> 00:22:45: Parkways are largely those areas which are adjacent to our  
00:22:45 --> 00:22:49: arterial roadway network and then of course the large  
regional  
00:22:49 --> 00:22:50: open lands tracks.  
00:22:52 --> 00:22:54: And So what we've done is we'll go through each  
00:22:54 --> 00:22:56: of those typologies and talk a little bit about the  
00:22:57 --> 00:23:00: economics and associated with the landscaping that we're  
doing.  
00:23:00 --> 00:23:03: So what you see here are the tree lawns, bottom  
00:23:03 --> 00:23:07: right hand corner approximately 20 acres worth in the darker  
00:23:07 --> 00:23:07: blue.  
00:23:09 --> 00:23:12: And when you look at the chart on the left,  
00:23:12 --> 00:23:16: what we attempted to do is take a subset of  
00:23:16 --> 00:23:20: a tree lawn in this instance 3000 acres and say,  
00:23:20 --> 00:23:23: OK, how are we developing that tree lawn?  
00:23:23 --> 00:23:28: What are the landscaping styles that we're doing here  
relative  
00:23:28 --> 00:23:32: to what is more typical in in the marketplace?  
00:23:33 --> 00:23:36: And so you see in there the typical category tree  
00:23:36 --> 00:23:39: lawns, the, the de facto standard is, hey, just throw  
00:23:39 --> 00:23:43: some turf in there, spray irrigate it highly water consumptive.  
00:23:43 --> 00:23:47: And so you see at the bottom for that 3,  
00:23:47 --> 00:23:51: three, yeah, 3000 square foot of tree lawn space, it's  
00:23:51 --> 00:23:56: consumptive of approximately 58,000 gallons per year.

00:23:56 --> 00:24:01: By contrast, the planting strategy that we are employing is  
00:24:01 --> 00:24:05: far less on the irrigated turf side of the equation,  
00:24:05 --> 00:24:08: about 1/3 of what is typical.  
00:24:09 --> 00:24:12: Instead we are using a lot of drip irrigation for  
00:24:12 --> 00:24:16: the shrubs and those pollinator plantings that I referenced.  
00:24:16 --> 00:24:20: And we're also using rock mulch crusher finds and the  
00:24:20 --> 00:24:25: results of that is overall consumption that is at 66%,  
00:24:25 --> 00:24:28: so considerably less than 100% of typical.  
00:24:28 --> 00:24:32: And you can see what we're estimating as the reduction  
00:24:32 --> 00:24:37: in water consumption 58 for 58,000 gallons for typical 27,  
00:24:37 --> 00:24:40: it was 28,000 for the tree lawn treatment.  
00:24:42 --> 00:24:44: And Marianne, thank you for asking us to do the  
00:24:44 --> 00:24:47: ROI because we at some base level thought that well  
00:24:47 --> 00:24:49: we'll be really happy if we break even on this  
00:24:49 --> 00:24:52: with we are doing it because we think it is  
00:24:52 --> 00:24:53: the right thing to do.  
00:24:53 --> 00:24:56: But this is actually caused us to do a bit  
00:24:56 --> 00:24:59: of a deep dive into the numbers and so and  
00:24:59 --> 00:25:01: we were pleased with what we discovered.  
00:25:01 --> 00:25:06: Not surprisingly the installed cost on the landscaping  
typologies that  
00:25:06 --> 00:25:10: we are putting in is greater than what is what  
00:25:10 --> 00:25:12: we would consider the standard.  
00:25:12 --> 00:25:14: By the way, I should mention when we talk about  
00:25:14 --> 00:25:19: the standard, we're comparing ourselves against adjacent  
properties and what  
00:25:19 --> 00:25:21: is being what is typically being done sort of in  
00:25:21 --> 00:25:22: our marketplace.  
00:25:23 --> 00:25:27: So yes, to get this done initially, it's about a  
00:25:27 --> 00:25:31: 40% higher cost initial capital, but we get a significant  
00:25:32 --> 00:25:34: reduction in our water rights.  
00:25:34 --> 00:25:38: Think about our tap fees, 52% reduction there.  
00:25:38 --> 00:25:43: Yes, because of these drip irrigated shrubs replacement  
requirements, the  
00:25:43 --> 00:25:46: cost to maintain is a bit higher.  
00:25:46 --> 00:25:49: But then again on our yearly water costs, we have  
00:25:50 --> 00:25:51: a significant savings 52%.  
00:25:52 --> 00:25:57: So using this 3000 square foot example we have and  
00:25:57 --> 00:26:01: then propagating that over a 10 year.  
00:26:02 --> 00:26:07: We're showing a 29% decrease in expense or a 10  
00:26:07 --> 00:26:10: year savings of 226, almost \$227,000.  
00:26:10 --> 00:26:13: So this was a little bit unexpected for us.  
00:26:13 --> 00:26:16: Again, we thought we were going to be hitting a

00:26:16 --> 00:26:18: break even, but I think this is showing that there

00:26:19 --> 00:26:21: is some economic motivation to to do this.

00:26:21 --> 00:26:24: Similarly, pocket parks that you see in purple, by the

00:26:24 --> 00:26:26: way, you may say, well, wait a minute, why aren't

00:26:26 --> 00:26:28: there pocket parks on the entire eastern half of the

00:26:28 --> 00:26:29: project?

00:26:29 --> 00:26:31: But frankly that's because we have not gotten there yet.

00:26:31 --> 00:26:34: We're still in the process of doing the master planning.

00:26:34 --> 00:26:38: But for what you see represented there, 25 acres, again

00:26:38 --> 00:26:40: similar analysis.

00:26:42 --> 00:26:46: The the big differences are far less reliance on high

00:26:46 --> 00:26:49: water consumptive irrigated turf.

00:26:49 --> 00:26:51: It's not to say that we've gotten rid of it

00:26:51 --> 00:26:53: all together to Brock's earlier point, we still believe there's

00:26:53 --> 00:26:54: a place for it.

00:26:54 --> 00:26:56: It's just in far lesser quantities.

00:26:56 --> 00:27:02: And again, more reliance upon drip irrigated shrubs,

00:27:02 --> 00:27:06: significant reduction

00:27:06 --> 00:27:09: in water gallons per year, 343,000 versus 100 and about

00:27:09 --> 00:27:11: 146,000 for our pocket parks.

00:27:11 --> 00:27:14: And then from the cost side, again a little bit

00:27:14 --> 00:27:18: more expensive on the initial capital outlay, but in this

00:27:18 --> 00:27:22: instance, we have savings on the tap fees, yearly

00:27:22 --> 00:27:24: maintenance

00:27:24 --> 00:27:25: costs and on yearly water costs.

00:27:25 --> 00:27:29: So for our pocket parks, on average, we're seeing a

00:27:29 --> 00:27:33: 17% sort of 10 year look at the economics.

00:27:34 --> 00:27:38: So again compelling argument there, open lands and garden

00:27:38 --> 00:27:41: ways,

00:27:41 --> 00:27:45: this is a maybe a little bit unique to us,

00:27:45 --> 00:27:49: but what these are, are these non motorized pathways, sort

00:27:49 --> 00:27:52: of we're calling them garden ways sort of in deference

00:27:52 --> 00:27:57: to all the plantings we're putting in in support of

00:27:57 --> 00:28:02: the pollinator district ways for homeowners to have their

00:28:02 --> 00:28:05: homes

00:28:05 --> 00:28:09: directly fronting these pedestrian through ways, great

00:28:09 --> 00:28:12: opportunities to have

00:28:12 --> 00:28:13: these Zurich pollinator plantings.

00:28:13 --> 00:28:17: We have two flavors, 1 is what we're calling the

00:28:17 --> 00:28:20: native flavor and the other one is Botanic.

00:28:20 --> 00:28:22: In the economic slide you'll see next what we're comparing

00:28:22 --> 00:28:25: is the typical to our Botanic version because that's what

00:28:25 --> 00:28:28: is most prevalent in the community.

00:28:24 --> 00:28:30: Again, you'll see significantly less turf area, a very, very  
00:28:30 --> 00:28:36: huge emphasis on the shrubs, on the pollinator plants drip  
00:28:36 --> 00:28:37: irrigated.  
00:28:37 --> 00:28:41: And then at the end, you see again a significant  
00:28:41 --> 00:28:45: reduction in water consumption based upon this type of  
00:28:45 --> 00:28:47: planting regime.  
00:28:47 --> 00:28:52: And not unexpected, the installation costs, again heavier on  
the  
00:28:52 --> 00:28:56: front end, but significant savings on the initial tap fees.  
00:28:56 --> 00:28:59: Maintenance on this is a lot more expensive because of  
00:28:59 --> 00:29:02: the prevalence of those shrubs and plants.  
00:29:02 --> 00:29:07: But again, we get a significant yearly or annual water  
00:29:07 --> 00:29:08: savings cost wise.  
00:29:09 --> 00:29:11: And I was a little surprised to see that's on  
00:29:11 --> 00:29:13: average this yields over that 10 year.  
00:29:13 --> 00:29:18: A 51% reduction in overall sort of 10 year life  
00:29:18 --> 00:29:21: of project cost Parkways.  
00:29:21 --> 00:29:23: This is around our arterioles.  
00:29:24 --> 00:29:27: You can see an example in the in the photo  
00:29:27 --> 00:29:32: there a lot of reliance upon rock mulch, drip irrigated  
00:29:32 --> 00:29:35: Zurich grasses as well as Buffalo grasses.  
00:29:35 --> 00:29:37: I'll just cut to the chase.  
00:29:37 --> 00:29:40: You can see again the same analysis of typical versus  
00:29:40 --> 00:29:42: how we are doing things.  
00:29:43 --> 00:29:49: The reduction in water is significant, 359,000 gallons per year  
00:29:49 --> 00:29:55: versus it's 98,000 and again similar economics, more  
expensive to  
00:29:55 --> 00:30:01: install, but a lot of savings on the ongoing maintenance  
00:30:01 --> 00:30:05: and a cost of the water over a 10 year  
00:30:05 --> 00:30:05: period.  
00:30:06 --> 00:30:11: Last typology that I'll mention is the regional parks.  
00:30:12 --> 00:30:13: We have a lot of these.  
00:30:13 --> 00:30:16: I think this shows about 83 acres.  
00:30:16 --> 00:30:19: This is sort of the main event within the community.  
00:30:20 --> 00:30:21: This bisects the project.  
00:30:22 --> 00:30:26: Our goal was to have something that feels a bit  
00:30:26 --> 00:30:29: more natural than curated.  
00:30:30 --> 00:30:35: We are irrigating less of the high water consumptive turf,  
00:30:35 --> 00:30:40: but we are actually in total irrigating more acreage than  
00:30:40 --> 00:30:41: what is typical.  
00:30:41 --> 00:30:45: And the type of irrigation we're deploying is largely to  
00:30:46 --> 00:30:50: not only the shrubs and the pollinator plants, but also

00:30:50 --> 00:30:51: native seed.

00:30:52 --> 00:30:56: And you can again see the reduction in the gallons,

00:30:56 --> 00:31:01: 28 million big #28,000,000 gallons versus about 13 million on

00:31:01 --> 00:31:03: an annual basis.

00:31:04 --> 00:31:08: Cost wise, this is interesting, a little bit less expensive

00:31:08 --> 00:31:11: to do the treatment that we are at baseline versus

00:31:12 --> 00:31:13: what would be more typical.

00:31:14 --> 00:31:18: And then you can see the associated cost savings

00:31:18 --> 00:31:23: throughout

00:31:23 --> 00:31:28: the other categories, put that all into a blender and

00:31:28 --> 00:31:29: basically propagate those ideas and those metrics across all

00:31:29 --> 00:31:33: of

00:31:33 --> 00:31:38: baseline.

00:31:38 --> 00:31:42: And you can see that overall and this was a

00:31:42 --> 00:31:44: big aha for us that actually taking the 10 year

00:31:44 --> 00:31:48: view, we have a cost savings of \$24 million by

00:31:48 --> 00:31:53: going this route.

00:31:53 --> 00:31:56: To be clear, there has to be an ability and

00:31:56 --> 00:31:59: a willingness to do some initial capital investment.

00:31:59 --> 00:32:03: I think the installed cost which is showing a little

00:32:03 --> 00:32:06: bit less on that first line, the Regional Park is

00:32:06 --> 00:32:08: masking that somewhat because quite frankly in most

00:32:08 --> 00:32:09: instances of

00:32:09 --> 00:32:14: our neighborhoods is a higher initial cost.

00:32:14 --> 00:32:16: But looking over that 10 year.

00:32:16 --> 00:32:21: This is significant cost savings and something that makes us

00:32:21 --> 00:32:27: very happy.

00:32:27 --> 00:32:31: Last slide here, this is just a summation of the

00:32:31 --> 00:32:32: various landscape prototypes showing that putting all of this

00:32:32 --> 00:32:34: together,

00:32:34 --> 00:32:38: we're showing a 64% in water consumption versus what is

00:32:38 --> 00:32:41: typical.

00:32:41 --> 00:32:44: And again what is typical is what we're looking at.

00:32:44 --> 00:32:48: We actually had our water engineers and our planners look

00:32:48 --> 00:32:49: at what is going around in our immediate vicinity.

00:32:49 --> 00:32:54: So this is a significant pick up in water conservation

00:32:54 --> 00:32:57: versus what's going on at least currently around our and

00:32:57 --> 00:33:01: our surrounding area.

00:33:01 --> 00:33:05: Last thing I would mention, all of our publicly accessible

00:33:05 --> 00:33:07: lands are also using what we call purple pipe.

00:33:07 --> 00:33:11: It's our reuse water that is supplied to us at

00:33:11 --> 00:33:15: a reduced cost through the City of Broomfield.

00:33:15 --> 00:33:19: So just another data point there.



00:33:08 --> 00:33:10: So that is it and I thank you and I

00:33:10 --> 00:33:13: will turn it over to our next presenter.

00:33:15 --> 00:33:17: Thank you so much, Kyle.

00:33:17 --> 00:33:21: Our next presenter is Steven, and I'll let him say

00:33:21 --> 00:33:22: his own last name's.

00:33:22 --> 00:33:24: I don't Butcher again, Steven, go ahead.

00:33:26 --> 00:33:26: Thank you, Marianne.

00:33:26 --> 00:33:28: Thanks everyone and good afternoon.

00:33:28 --> 00:33:32: My last name is Kunscher and thanks for having me.

00:33:32 --> 00:33:37: I'm the Director of housing development for Maker Housing Partners.

00:33:37 --> 00:33:41: We are a Housing Authority and we are the Housing

00:33:41 --> 00:33:46: Authority for Adams County IN just north of Denver in

00:33:46 --> 00:33:47: Colorado.

00:33:48 --> 00:33:52: And we as part of our mission, we own, manage

00:33:52 --> 00:33:57: and affordable housing throughout the county.

00:33:57 --> 00:34:02: We currently have just over 2000 units under management across

00:34:02 --> 00:34:03: 17 communities.

00:34:03 --> 00:34:10: We also administer the housing vouchers for Adams County, which

00:34:10 --> 00:34:12: are a subsidy for renters.

00:34:14 --> 00:34:16: And today I want to talk a little bit about

00:34:16 --> 00:34:18: some water strategies for affordable housing.

00:34:20 --> 00:34:23: I'm going to first start with talking a little bit

00:34:23 --> 00:34:27: about what affordable housing is, and then I'll look at

00:34:27 --> 00:34:30: a case study of an existing property that we were

00:34:30 --> 00:34:33: able to do some retrofits on plumbing fixtures, talk about

00:34:33 --> 00:34:37: some of our strategies for new construction, and lastly go

00:34:37 --> 00:34:41: over some of the benefits and why implementing these strategies

00:34:41 --> 00:34:42: is important.

00:34:46 --> 00:34:50: So first, affordable housing, sorry, there we go, the most

00:34:50 --> 00:34:52: common types of affordable housing.

00:34:52 --> 00:34:54: First, you have housing choice vouchers.

00:34:55 --> 00:34:59: Those are Section 8 vouchers that households can take to

00:35:00 --> 00:35:04: any community and rent a market rate or income restricted.

00:35:05 --> 00:35:06: Second is public housing.

00:35:06 --> 00:35:10: This is the traditional HUD model which is going away.

00:35:11 --> 00:35:14: We actually disposed of our last affordable or public housing

00:35:14 --> 00:35:18: community and converted it to tax credit housing.

00:35:18 --> 00:35:21: So there are still a lot of public housing communities

00:35:21 --> 00:35:24: across the country, but it is not a typically a

00:35:24 --> 00:35:25: new type.

00:35:26 --> 00:35:30: And then lastly, the most common to HUD subsidized project based Section 8, that's a community that has Section 8

00:35:30 --> 00:35:34: vouchers, housing choice vouchers built into the project specifically to

00:35:34 --> 00:35:39: serve all of the units at that project.

00:35:39 --> 00:35:41: And then I think the biggest and most common type

00:35:42 --> 00:35:45: low income housing tax credit program, which is what we've

00:35:45 --> 00:35:49: been using for the last decade plus to build new

00:35:49 --> 00:35:52: and renovate our existing communities.

00:35:52 --> 00:35:54: And one quick thing to note as we start to

00:35:58 --> 00:36:01: talk about utilities and water usage rules for the road.

00:36:01 --> 00:36:05: So there's some requirements for both tax credits as well

00:36:05 --> 00:36:11: As for Section 8 households that the utility costs must

00:36:11 --> 00:36:16: be deducted from the gross rent for the rent that

00:36:16 --> 00:36:20: the tenant pays.

00:36:20 --> 00:36:22: So as you can see in this example, the current

00:36:22 --> 00:36:26: rents for a 60% average area median income household, 2

00:36:26 --> 00:36:31: bed units, 1675 water and sewer utility allowance, \$70.00 per

00:36:31 --> 00:36:36: month.

00:36:36 --> 00:36:37: They end up paying a net rent of 1605 dollars.

00:36:37 --> 00:36:42: The first, the first thing I want to talk about

00:36:47 --> 00:36:50: is a case study of a property we've owned since

00:36:50 --> 00:36:53: the early 80s called Orchard Crossing.

00:36:53 --> 00:36:56: We recently in 2021 went through a replacement of all

00:36:57 --> 00:37:01: of the plumbing fixtures in the units.

00:37:01 --> 00:37:04: This is a 74 unit property was built in 1973.

00:37:05 --> 00:37:08: We had a lot of old outdated fixtures, a lot

00:37:08 --> 00:37:11: of hodgepodge of fixtures replaced at various times

00:37:11 --> 00:37:15: throughout the

00:37:15 --> 00:37:17: four decades we've owned the property.

00:37:18 --> 00:37:21: This is a project based Section 8 community, so we

00:37:21 --> 00:37:24: serve typically 30 to 50% very median income residents, so

00:37:24 --> 00:37:26: very low income households.

00:37:27 --> 00:37:30: It has one 2-3 and four bedroom units.

00:37:30 --> 00:37:32: So we have a lot of families, a lot of

00:37:32 --> 00:37:36: kids, so a lot of water usage and different types

00:37:36 --> 00:37:40: of water usage or levels of water usage throughout the

00:37:40 --> 00:37:41: community.

00:37:42 --> 00:37:44: This actually was a project that was funded by the

00:37:44 --> 00:37:45: City of Westminster.

00:37:45 --> 00:37:49: It's a pilot, pilot project and they hired Mile High

00:37:49 --> 00:37:52: Youth Corps to complete the retrofits.

00:37:53 --> 00:37:55: The total project cost was 75,000.

00:37:55 --> 00:37:59: And this was part of a program that the West

00:37:59 --> 00:38:03: that City of Westminster was looking at to reduce consumption

00:38:03 --> 00:38:07: throughout the city and therefore lower their costs on new

00:38:08 --> 00:38:12: projects related to their water infrastructure and the high cost,

00:38:12 --> 00:38:17: high capital cost for that infrastructure throughout the city.

00:38:18 --> 00:38:22: So what we targeted here is replacements of all toilets,

00:38:22 --> 00:38:25: shower heads, kitchen faucets and bathroom faucets.

00:38:25 --> 00:38:30: And you can see the levels here, the flow rates

00:38:30 --> 00:38:36: that we installed on each of those fixtures and the

00:38:36 --> 00:38:37: results.

00:38:38 --> 00:38:41: We looked at the average winter consumption.

00:38:41 --> 00:38:43: So when our irrigation is turned off, we can look

00:38:43 --> 00:38:45: at just what the households are using.

00:38:46 --> 00:38:49: We saw a 48% reduction the first year in our

00:38:49 --> 00:38:53: water usage, so very significant reduction.

00:38:54 --> 00:38:58: That was in 2021, the winter compared to 2022 or

00:38:58 --> 00:38:59: I'm sorry, 2020.

00:39:01 --> 00:39:04: And then on a cost basis, these costs do include

00:39:04 --> 00:39:07: irrigation since that's included in our overall cost.

00:39:08 --> 00:39:11: But you can see we started at a very high

00:39:11 --> 00:39:14: cost 159,000 annually in 2020.

00:39:15 --> 00:39:18: This is we targeted this property because it is one

00:39:18 --> 00:39:22: of our highest cost properties for water and sewer.

00:39:23 --> 00:39:28: And we saw immediately the first year a 33% reduction

00:39:28 --> 00:39:33: in our cost and then into 2022 A 43% reduction

00:39:33 --> 00:39:34: from 2020.

00:39:35 --> 00:39:39: And there was a 4% increase in our water rate

00:39:39 --> 00:39:41: from 2020 to 2021.

00:39:41 --> 00:39:43: So we were able to not only absorb that, but

00:39:43 --> 00:39:45: then see additional reduction.

00:39:45 --> 00:39:48: And I think one of the things we saw year

00:39:48 --> 00:39:52: over year is we saw not only our consumption reduced,

00:39:52 --> 00:39:55: but then they adjust your sewer costs based on your

00:39:55 --> 00:39:57: average winter consumption.

00:39:57 --> 00:40:00: So our sewer costs then dramatically lowered as well.

00:40:00 --> 00:40:02: So we saw this.

00:40:03 --> 00:40:04: Two year decrease.

00:40:04 --> 00:40:07: So we're very happy with that.

00:40:07 --> 00:40:11: However, I can say that this community does still have

00:40:11 --> 00:40:14: some work to do on the irrigation side, which will  
00:40:14 --> 00:40:17: bring our costs even lower to what we're seeing at  
00:40:17 --> 00:40:21: our new communities where we do have some new  
strategies  
00:40:21 --> 00:40:24: implemented on our irrigation to keep our our costs low.  
00:40:27 --> 00:40:30: And for our new construction projects, here are some of  
00:40:30 --> 00:40:32: the things that we do.  
00:40:32 --> 00:40:36: So on our unit fixtures, we follow the Enterprise Green  
00:40:36 --> 00:40:37: community's 2020 standards.  
00:40:38 --> 00:40:41: That's a requirement by our local housing and finance  
authority  
00:40:41 --> 00:40:44: or by the state housing and finance authority.  
00:40:45 --> 00:40:48: And we have to install all Watersense certified fixtures.  
00:40:49 --> 00:40:53: I can tell you since 2013, we've been opting for  
00:40:53 --> 00:40:58: the rates that were in the previous slide, the most  
00:40:58 --> 00:41:01: advanced why rates that we can find.  
00:41:01 --> 00:41:05: One exception that we've got a lot of pushback from  
00:41:05 --> 00:41:09: our maintenance and I'll mention this as a practical matter  
00:41:09 --> 00:41:13: for any management development groups out there is on the  
00:41:13 --> 00:41:16: toilets there's a .8 gallon per flush toilet.  
00:41:16 --> 00:41:20: However, what we've seen is the cost to maintain those  
00:41:20 --> 00:41:24: and replace those is very high still down the road.  
00:41:24 --> 00:41:28: And so we've seen some pushback on our maintenance  
teams  
00:41:28 --> 00:41:30: ongoing from the 1.1 to the .8.  
00:41:32 --> 00:41:35: But we're going to continue looking at that and hoping  
00:41:35 --> 00:41:38: that there's going to be some lower cost up front  
00:41:38 --> 00:41:41: as well as maintenance wise on on the lower flow  
00:41:41 --> 00:41:42: toilets down the road.  
00:41:44 --> 00:41:47: The other thing that I want to mention here is  
00:41:47 --> 00:41:49: leak detection systems.  
00:41:49 --> 00:41:53: There are now some more affordable options for leak  
detection  
00:41:53 --> 00:41:56: for a lot of market rate groups.  
00:41:56 --> 00:42:00: They'll use meter systems so they can track the amount  
00:42:00 --> 00:42:03: of usage per unit and charge back.  
00:42:03 --> 00:42:07: In our case, we include all water and sewer costs  
00:42:07 --> 00:42:11: in our rent, so we do not charge back our  
00:42:11 --> 00:42:12: residents.  
00:42:12 --> 00:42:15: So it's very important for us to keep our costs  
00:42:15 --> 00:42:19: low and make sure if there's any issues with toilet  
00:42:19 --> 00:42:23: sinks that we know what what's going on and we  
00:42:23 --> 00:42:25: can address those issues.

00:42:25 --> 00:42:29: Currently our leak detection system is not a technological system,

00:42:29 --> 00:42:33: it's a maintenance solution where our maintenance team inspects the

00:42:33 --> 00:42:36: units on a regular basis and we also monitor our

00:42:37 --> 00:42:39: usage on a on a regular basis as well.

00:42:40 --> 00:42:46: Then the last thing I'll mention is resident education, particularly

00:42:46 --> 00:42:52: with the populations that we serve typically and when you're

00:42:52 --> 00:42:57: including utilities with rents, we tend to see the usage

00:42:57 --> 00:42:59: education be very low.

00:42:59 --> 00:43:03: And So what we've tried to do, and we're partnering

00:43:03 --> 00:43:06: currently with one of our larger municipalities is to provide

00:43:07 --> 00:43:10: a consistent education to residents on how to lower their

00:43:10 --> 00:43:13: water usage, on why it matters, on where the water

00:43:13 --> 00:43:14: comes from.

00:43:14 --> 00:43:16: A lot of times folks will take it for granted

00:43:16 --> 00:43:19: that you go and turn on the faucet and leave

00:43:19 --> 00:43:21: it on while you're brushing your teeth and it's just

00:43:21 --> 00:43:24: there and you have great clean, fresh water.

00:43:24 --> 00:43:27: But we're facing some real challenges.

00:43:28 --> 00:43:32: And so we're really trying to educate our population, which

00:43:32 --> 00:43:34: not only is going to help with our usage but

00:43:34 --> 00:43:36: lower our overall operating costs.

00:43:38 --> 00:43:41: On the landscape and irrigation side, a lot of the

00:43:41 --> 00:43:45: strategies that we have already been talked about.

00:43:45 --> 00:43:49: We are implementing on some of our current projects, installing

00:43:49 --> 00:43:54: native species plantings as well as using drip systems only

00:43:54 --> 00:43:55: less spray systems.

00:43:56 --> 00:43:59: We limit the use of turf and grass.

00:43:59 --> 00:44:02: The picture on the first slide, you can see there's

00:44:02 --> 00:44:06: one rectangular area of turf and that was it except

00:44:06 --> 00:44:09: for the requirement along the tree lawn on the main,

00:44:09 --> 00:44:12: main road from the city to have additional turf.

00:44:12 --> 00:44:15: We really try to limit turf use and anything we're

00:44:15 --> 00:44:17: installing is on a drip system.

00:44:18 --> 00:44:20: So we've gone away from the aesthetics of turf to

00:44:20 --> 00:44:23: really what is it functioning and who's using it and

00:44:23 --> 00:44:25: what are the areas we need to target.

00:44:26 --> 00:44:30: We've also done larger properties, used native seed and we've

00:44:30 --> 00:44:34: seen some success there as well in lowering our water

00:44:34 --> 00:44:39: usage, weather based irrigation controllers, very simple low cost solution.

00:44:40 --> 00:44:42: We see a lot of our older properties do not

00:44:42 --> 00:44:46: have this very easy to implement on new construction and

00:44:46 --> 00:44:48: very cost effective on existing communities.

00:44:48 --> 00:44:52: We just saw in Colorado typically very dry and when

00:44:52 --> 00:44:56: is 2 months in decades, so can save a lot

00:44:56 --> 00:45:00: of money with a very simple solution on the controller

00:45:00 --> 00:45:00: side.

00:45:01 --> 00:45:03: And then lastly, high efficiency sprinkler heads.

00:45:04 --> 00:45:07: Like I said, we're using DRIP and anywhere we can

00:45:07 --> 00:45:10: and anywhere there are sprinkler heads, we're going towards the

00:45:10 --> 00:45:14: newer high efficiency sprinkler heads, very low cost upfront, simple

00:45:14 --> 00:45:15: solution.

00:45:18 --> 00:45:20: And then lastly, why does it matter?

00:45:21 --> 00:45:24: The big thing, the bottom line, it reduces our utility

00:45:24 --> 00:45:28: expenses and improves the NLI, the performance, financial performance at

00:45:28 --> 00:45:29: our properties.

00:45:29 --> 00:45:33: As I mentioned, we include utilities in all of our

00:45:34 --> 00:45:38: rents and so it does make a big difference when

00:45:38 --> 00:45:39: water usage is high.

00:45:40 --> 00:45:44: Typically, as you can see from the example on replacing

00:45:44 --> 00:45:47: fixtures, you have a \$75,000 upfront cost and you're saving

00:45:48 --> 00:45:51: that within two years, you're seeing that payback.

00:45:52 --> 00:45:55: That also allows us to take on other costs and

00:45:55 --> 00:46:00: we've seen significant increases overall throughout the last few years

00:46:00 --> 00:46:02: in our maintenance expenses.

00:46:02 --> 00:46:05: So we can now divert those funds to other things.

00:46:06 --> 00:46:10: Secondly, we're able to decrease our upfront tap fees by

00:46:10 --> 00:46:14: showing the municipalities that we can use less water in

00:46:14 --> 00:46:18: our new developments, we can lower our tap sizes.

00:46:18 --> 00:46:22: This can really create hundreds of thousands of dollars of

00:46:23 --> 00:46:25: savings upfront on new projects.

00:46:26 --> 00:46:30: One of the larger municipalities we work in the city

00:46:30 --> 00:46:33: of Thornton, they recently put a stop to all new

00:46:33 --> 00:46:38: development because they do not have water, their water supply

00:46:38 --> 00:46:43: connected and cannot allow any future any further growth.

00:46:43 --> 00:46:47: Their tap fees are currently or I'm sorry in 2024

00:46:47 --> 00:46:50: will be just under \$40,000 per unit.

00:46:50 --> 00:46:54: So it's a very significant cost and by showing we

00:46:55 --> 00:46:59: can utilize less water, we can reduce our cap size

00:46:59 --> 00:47:05: and reduce those fees 700,000 reduce consumption and preserving our

00:47:05 --> 00:47:06: water resources.

00:47:06 --> 00:47:10: Another issue that we're seeing is we are now being

00:47:10 --> 00:47:15: required to purchase water shares and bring those to the

00:47:15 --> 00:47:17: city and assign those to the city.

00:47:18 --> 00:47:21: Whereas typically your tap fee purchased was the rights that

00:47:22 --> 00:47:22: the city owns.

00:47:22 --> 00:47:27: So the cost of of providing water for a project

00:47:27 --> 00:47:29: has gone up significantly.

00:47:30 --> 00:47:33: And any way we can partner to reduce consumption and

00:47:33 --> 00:47:37: show to municipalities that we have the lowest water usage

00:47:37 --> 00:47:40: and our new projects are going to be really at

00:47:40 --> 00:47:44: the cutting edge of water usage is really going to

00:47:44 --> 00:47:48: help improve our our ability to move forward with projects

00:47:48 --> 00:47:50: and reduce our our upfront cost.

00:47:52 --> 00:47:55: And lastly, it lowers cost for low income households.

00:47:55 --> 00:47:58: As part of our mission, we want to provide the

00:47:58 --> 00:48:01: best quality affordable housing for our residents.

00:48:01 --> 00:48:05: And in cases where we are charging back for utilities

00:48:05 --> 00:48:09: being able to show or for for groups that do

00:48:09 --> 00:48:13: charge back utilities, being able to keep that cost as

00:48:13 --> 00:48:16: low as possible is going to make a huge difference

00:48:16 --> 00:48:18: for these households.

00:48:20 --> 00:48:24: And lastly, this is really a strategy of promoting equity

00:48:24 --> 00:48:26: and affordability for our residents.

00:48:27 --> 00:48:30: And you can see here in this chart the makeup

00:48:30 --> 00:48:33: of the residents that live in our communities.

00:48:34 --> 00:48:38: Just over 75% are at 50% or below of the

00:48:38 --> 00:48:40: area median income.

00:48:40 --> 00:48:45: For a family of four in Adams County, that is

00:48:45 --> 00:48:49: around \$42,000 per year at the 50% level.

00:48:49 --> 00:48:53: So almost 40% at 30% or below these are we

00:48:53 --> 00:48:57: have a lot of residents that are seniors on fixed

00:48:57 --> 00:49:01: income, disabled folks on, on fixed incomes.

00:49:01 --> 00:49:05: And so we're really wanting to make sure that when

00:49:05 --> 00:49:09: we're passing on cost and we're providing quality housing

00:49:09 --> 00:49:13: that,

00:49:09 --> 00:49:13: that our our families can rely on the the cost

00:49:13 --> 00:49:17: of rent and not having great fluctuation in their costs.

00:49:21 --> 00:49:25: And thanks everybody, and I'll pass it on to Jacob.

00:49:27 --> 00:49:28: Thank you so much, Steve.

00:49:29 --> 00:49:29: Thank you.

00:49:35 --> 00:49:37: Steve, you can stop screen sharing and then great.

00:49:37 --> 00:49:38: There you go.

00:49:43 --> 00:49:44: Jacob, take it away.

00:49:45 --> 00:49:46: Yes.

00:49:50 --> 00:49:54: Oh, are you seeing all right, You're seeing the right

00:49:54 --> 00:49:54: screen.

00:49:56 --> 00:49:57: Good afternoon, everyone.

00:49:57 --> 00:50:01: It's a pleasure to be amongst this panel and with

00:50:01 --> 00:50:01: you all.

00:50:02 --> 00:50:05: I think the panel has done a fantastic job and

00:50:05 --> 00:50:09: prepping for what I'm going to say and probably reducing

00:50:09 --> 00:50:11: how how much I will say.

00:50:13 --> 00:50:17: But we're really taking a lot of what they said

00:50:17 --> 00:50:21: to from the macro level to a micro level to

00:50:21 --> 00:50:25: the lot to the last 50 feet of of this

00:50:25 --> 00:50:29: of these strategies and see what we can do with

00:50:29 --> 00:50:30: it.

00:50:30 --> 00:50:36: So I'm Vice President of Sustainability and Innovation at KB

00:50:36 --> 00:50:42: Home and my responsibility spans across the entire footprint

00:50:42 --> 00:50:47: of

00:50:42 --> 00:50:47: KB Home, which is coast to coast mostly in the

00:50:47 --> 00:50:49: Sunbelt of the US.

00:50:50 --> 00:50:53: As such, we have a lot of of our lots

00:50:53 --> 00:50:57: that we own or control that are in stressed water

00:50:57 --> 00:51:02: stressed areas, whether that is drought or whether it is

00:51:02 --> 00:51:08: infrastructure or water stress in terms of the economics of

00:51:08 --> 00:51:08: it.

00:51:09 --> 00:51:14: So it's important to a builder even at the last

00:51:14 --> 00:51:20: 50 feet to bring together a very good water efficiency

00:51:20 --> 00:51:22: strategy for the homes.

00:51:22 --> 00:51:25: I'm going to talk about efficiency by design.

00:51:25 --> 00:51:28: We heard a lot about it at the macro scale.

00:51:28 --> 00:51:32: We'll talk a little bit about it on on the

00:51:32 --> 00:51:37: micro, talk about how we can also then verify the

00:51:37 --> 00:51:42: efficiency and what you measure you can always improve.

00:51:42 --> 00:51:45: So we'll talk about ratings and scores and how can

00:51:45 --> 00:51:48: we improve these scores going forward.

00:51:49 --> 00:51:53: We'll talk a little bit about confirmed savings and and



00:51:53 --> 00:51:58: then a little bit about permitting and carrots and sticks

00:51:58 --> 00:51:59: in that area.

00:51:59 --> 00:52:04: And then because we're a publicly traded home builder, ESG

00:52:04 --> 00:52:06: is important to us.

00:52:06 --> 00:52:10: It's important to even non public companies, but very

00:52:10 --> 00:52:14: important

00:52:14 --> 00:52:15: to public companies and we'll talk a little bit about

00:52:15 --> 00:52:23: that as well.

00:52:23 --> 00:52:28: So KB Home, we focus on affordability balanced with

00:52:28 --> 00:52:32: sustainability.

00:52:32 --> 00:52:36: The two work together, attainability, the initial price point of

00:52:36 --> 00:52:40: the house because we're focused on first time and 1st

00:52:40 --> 00:52:40: move up buyers, we have to have the right price

00:52:40 --> 00:52:45: point to to allow for people to to fulfil their

00:52:45 --> 00:52:49: dream.

00:52:49 --> 00:52:51: And then affordability also as we heard from Steve, it

00:52:51 --> 00:52:55: continues in the ownership of the home in lower bills

00:52:55 --> 00:52:59: for customers.

00:52:59 --> 00:53:03: And I think even from the earlier presentations, I'm making

00:53:03 --> 00:53:04: an assumption that they have lower HOA fees with the

00:53:04 --> 00:53:05: lower cost of irrigation and and with the savings that

00:53:05 --> 00:53:11: we saw there.

00:53:11 --> 00:53:15: So moving on to the next slide, let's just quickly

00:53:15 --> 00:53:20: get into the efficiency again.

00:53:20 --> 00:53:25: But before I go there, let me just mention that

00:53:25 --> 00:53:29: we've been earning the EPA Sustained Excellence Award for

00:53:29 --> 00:53:32: from

00:53:32 --> 00:53:33: Watersense program for many years.

00:53:33 --> 00:53:38: And that's because of a real deep commitment for water

00:53:38 --> 00:53:44: efficiency.

00:53:44 --> 00:53:49: We really saw it as a permit to operate and

00:53:49 --> 00:53:55: social responsibility #1 but it also with the price of

00:53:55 --> 00:54:00: water to to the end consumer going up higher than

00:54:00 --> 00:54:04: any other many other indices, it's, it's the right thing

00:54:04 --> 00:54:08: to do to lower their monthly cost.

00:54:08 --> 00:54:13: And so we, the Water Sense program came about in

00:54:13 --> 00:54:19: 2010 and we jumped on it right away.

00:54:19 --> 00:54:22: And then there was a rating system created for water

00:54:22 --> 00:54:29: efficiency and we were the first builder also to implement

00:54:29 --> 00:54:32: it to water efficiency by design.

00:54:32 --> 00:54:36: We've heard about this from from the previous presenters.

00:54:36 --> 00:54:42: And the main thing that I would say is you

00:54:42 --> 00:54:48: gotta take it as a whole house approach, not just

00:54:36 --> 00:54:40: fixtures, not just the landscaping, the whole house approach.

00:54:40 --> 00:54:44: One of the big wasters of of water inside the

00:54:45 --> 00:54:48: house is hot water distribution.

00:54:49 --> 00:54:52: You're waiting a lot, a lot of time for the

00:54:52 --> 00:54:55: hot water to arrive at the at the faucet or

00:54:55 --> 00:54:56: shower.

00:54:56 --> 00:55:02: And that can be resolved with what's called on demand

00:55:02 --> 00:55:06: resork pumps, or it can be solved also by quick

00:55:06 --> 00:55:07: design.

00:55:07 --> 00:55:12: So for example, many floor plans and designs of homes

00:55:13 --> 00:55:17: have the water heater in the garage at the far

00:55:17 --> 00:55:23: side of the garage towards the side side side yard.

00:55:23 --> 00:55:27: But a simple relocation of that water heater to the

00:55:27 --> 00:55:32: other side of the garage, the side that's closer to

00:55:32 --> 00:55:36: the middle of the house makes it very much easier.

00:55:36 --> 00:55:39: And the distance that hot water has to travel is

00:55:39 --> 00:55:40: much less.

00:55:40 --> 00:55:45: So that's a minimum kind of design feature that that

00:55:46 --> 00:55:47: we do everywhere.

00:55:47 --> 00:55:51: It's minimum cost and and it's very effective.

00:55:52 --> 00:55:56: The one other thing you've seen here, the water sense

00:55:56 --> 00:56:02: fixtures, others talked about them, water pressure regulators

00:56:02 --> 00:56:05: are important

00:56:06 --> 00:56:09: because even if you have low flow fixture but the

00:56:09 --> 00:56:10: pressure is very high, it will still flow more water

00:56:12 --> 00:56:15: than needed.

00:56:15 --> 00:56:18: And finally, technologies, we heard about them.

00:56:18 --> 00:56:19: I'm not going to go there, but lot size is

00:56:19 --> 00:56:22: very important.

00:56:22 --> 00:56:26: I don't know if you all have been noticing lot

00:56:26 --> 00:56:28: sizes are getting smaller and with a smaller lot size

00:56:30 --> 00:56:33: we can do better.

00:56:33 --> 00:56:34: However, how do we communicate all this to a customer

00:56:35 --> 00:56:37: in a very simple way?

00:56:38 --> 00:56:39: Well, and and of course, how do we measure so

00:56:40 --> 00:56:46: we can continue to improve?

00:56:46 --> 00:56:47: That's where certification like the water sense certificate for

00:56:47 --> 00:56:51: the

00:56:51 --> 00:56:52: house.

00:56:52 --> 00:56:53: We're not talking water sense certificate for a fixture, toilet

00:56:52 --> 00:56:53: or or a shower head.

00:56:52 --> 00:56:53: This is for the whole house.

00:56:53 --> 00:56:56: So the whole house approach there is such a certificate.

00:56:57 --> 00:57:02: It has a easy check, not easy, but an effective

00:57:02 --> 00:57:08: doable checklist and it also requires on the score for

00:57:08 --> 00:57:14: for the Resnet hers H2O score, it requires a score

00:57:14 --> 00:57:19: of 70 or less and the lower the better of

00:57:19 --> 00:57:20: course.

00:57:20 --> 00:57:23: But if you have 70 or less with the checklist

00:57:24 --> 00:57:29: that they have minimal prescriptive checklist, you get the

00:57:29 --> 00:57:34: home

00:57:29 --> 00:57:34: water sense certified, which is an easy communication with

00:57:35 --> 00:57:39: our

00:57:35 --> 00:57:39: home owners to say you, you know, your home has

00:57:39 --> 00:57:42: achieved an EPA better than standards label.

00:57:43 --> 00:57:47: And of course the with the score as well.

00:57:47 --> 00:57:50: We are, we have a yardstick that is very, very

00:57:50 --> 00:57:56: usable throughout our territories, also throughout different

00:57:56 --> 00:57:56: floor plans we

00:57:56 --> 00:57:56: use.

00:57:57 --> 00:58:01: And we, we can use it to continually improve or

00:58:01 --> 00:58:04: even play what if, what if we change this and

00:58:04 --> 00:58:09: see how the scores change or set targets for ourselves.

00:58:09 --> 00:58:15: Today, our last year in in 22, our average HERS

00:58:16 --> 00:58:19: H2O score across was 62.

00:58:20 --> 00:58:24: We may set a standard in five years, we want

00:58:24 --> 00:58:25: to be at 50 etcetera.

00:58:26 --> 00:58:31: And this certification and rating is very easy because it

00:58:31 --> 00:58:35: is done by the same raters that come to do

00:58:35 --> 00:58:39: energy rating and very easy for for us to do

00:58:39 --> 00:58:40: that.

00:58:41 --> 00:58:45: So what's covered in the H2O rating there is there

00:58:45 --> 00:58:50: are they cover everything from inside the house to outside

00:58:50 --> 00:58:54: the house and all the uses related to that including

00:58:54 --> 00:58:55: leaks.

00:58:55 --> 00:59:02: So they predict some leaks, particularly in the landscaping

00:59:02 --> 00:59:07: irrigation

00:59:02 --> 00:59:07: and they create, they compare that to a standard home

00:59:07 --> 00:59:11: and a baseline home, which was designed in the NC

00:59:11 --> 00:59:16: standard for this rating system and it it goes from

00:59:16 --> 00:59:17: there.

00:59:17 --> 00:59:20: We don't ourselves, KB Home does not do a whole

00:59:20 --> 00:59:24: lot of pools and spas, but if other builders do,

00:59:24 --> 00:59:26: that's calculated in there as well.

00:59:28 --> 00:59:33: The result is an analysis in the software and a

00:59:33 --> 00:59:34: score.

00:59:34 --> 00:59:38: This is the score for our lowest home in our

00:59:38 --> 00:59:41: fleet that we got last year.

00:59:41 --> 00:59:44: It had a HERS H2O score of 44 and the

00:59:44 --> 00:59:49: analysis provides that information for a home owner along with

00:59:50 --> 00:59:54: this water sense label and then of course tells us

00:59:54 --> 00:59:59: a little bit about what sort of savings the customer

00:59:59 --> 01:00:03: can expect and what's, what are the savings in terms

01:00:03 --> 01:00:04: of gallons.

01:00:05 --> 01:00:09: As it was said by Steve a few minutes ago,

01:00:09 --> 01:00:13: these kind of things can can help us present to

01:00:13 --> 01:00:18: a municipality that a builder and new construction, new development

01:00:18 --> 01:00:21: is part of a the solution, not the.

01:00:22 --> 01:00:27: Problem, the problem are the homes that use a lot

01:00:27 --> 01:00:30: of water and here is a solution.

01:00:30 --> 01:00:34: It also could help us produce our tap fees and

01:00:34 --> 01:00:37: other requirements that we've heard about so far.

01:00:40 --> 01:00:42: You know, was this confirmed?

01:00:42 --> 01:00:45: Was this tested and confirmed?

01:00:45 --> 01:00:50: Yes, by EPA, they with the Southern Nevada Water Authority

01:00:50 --> 01:00:54: took the fleet of homes, some of the homes that

01:00:54 --> 01:00:59: we built in Las Vegas that were Watersense labeled in

01:00:59 --> 01:01:04: the year 2021 and worked with the local water utilities

01:01:05 --> 01:01:09: to access the actual usage of these homes for about

01:01:09 --> 01:01:11: a year, a year plus.

01:01:12 --> 01:01:16: And did the did the analysis on how was how

01:01:16 --> 01:01:21: are these homes using water versus homes that are typically

01:01:21 --> 01:01:23: in the in the market.

01:01:23 --> 01:01:29: And also against this predictive analysis that the software did.

01:01:30 --> 01:01:32: And the answers were really good.

01:01:32 --> 01:01:34: This this study is available.

01:01:35 --> 01:01:40: It was published in AW, the journal AWWA, which is

01:01:40 --> 01:01:43: a very, very reputable journal.

01:01:43 --> 01:01:47: And again, this is a study by EPA and and

01:01:47 --> 01:01:53: result is that the median water use for these water

01:01:53 --> 01:02:00: sense labeled homes was 44,000 gallons per year compared to

01:02:00 --> 01:02:05: typical 97,000 gallons per year in the area.

01:02:05 --> 01:02:11: That's an average savings of 55% roughly when we talked

01:02:11 --> 01:02:16: about acre foots earlier and so on, roughly 7.5 home

01:02:16 --> 01:02:22: per homes, 7.5 homes per acre foot per year compared  
01:02:22 --> 01:02:27: to three or four homes per acre foot per year  
01:02:27 --> 01:02:30: typically seen in the West.  
01:02:30 --> 01:02:35: So significant savings documented and can be used for the  
01:02:35 --> 01:02:41: purposes that we talked about upstream in the development  
and  
01:02:41 --> 01:02:44: entitlements and taps etcetera.  
01:02:46 --> 01:02:51: Moving on to quickly to what's the entitlement picture out  
01:02:51 --> 01:02:56: there, we're seeing mixed picture carrots and sticks.  
01:02:56 --> 01:03:01: Let's just focus on, I'll focus on Arizona for a  
01:03:01 --> 01:03:01: minute.  
01:03:01 --> 01:03:07: And we've seen what the governor had stated just recently.  
01:03:07 --> 01:03:12: Yet at the same time, there is a water authority  
01:03:13 --> 01:03:19: that is responsible for recharging the water tables in a  
01:03:19 --> 01:03:25: portion of Arizona that had evaluated, you know, these  
homes  
01:03:25 --> 01:03:31: and what they save and decided or calculated the value  
01:03:31 --> 01:03:36: of keeping that water for in, in the in, in,  
01:03:36 --> 01:03:42: in the aquifers and provided an incentive for a water  
01:03:42 --> 01:03:44: sense home, \$1000.  
01:03:44 --> 01:03:49: Takes us a long way to and incentivizes other builders  
01:03:49 --> 01:03:54: to, to start building water sense labeled homes and rate  
01:03:54 --> 01:03:57: them and, and document their savings.  
01:03:57 --> 01:04:01: So that's just a sample.  
01:04:02 --> 01:04:06: Arizona, of course, Colorado, the 2 examples that we heard,  
01:04:06 --> 01:04:10: master plan communities that we heard is amazing.  
01:04:10 --> 01:04:15: And we'd clearly like the carrots more than the sticks,  
01:04:15 --> 01:04:18: but we have to deal with both of them.  
01:04:20 --> 01:04:25: Finally, as I said, we are a publicly traded company.  
01:04:27 --> 01:04:32: ESG is becoming very important to investors and water is  
01:04:32 --> 01:04:37: a big portion of the ESG environmental, social and  
governance  
01:04:38 --> 01:04:39: and we report on it.  
01:04:39 --> 01:04:44: There is a a report or or a disclosure form  
01:04:44 --> 01:04:53: called SASB Sustainability accounting standards and that  
that standard, they,  
01:04:53 --> 01:04:59: they have it for financial FAS B is for financial.  
01:04:59 --> 01:05:02: Now there is a SAS B for sustainability accounting.  
01:05:03 --> 01:05:08: They have a certain framework for disclosure and very, very  
01:05:08 --> 01:05:12: pointedly they ask question how many of your lots are  
01:05:12 --> 01:05:17: in water stressed area based on a Atlas that's available  
01:05:17 --> 01:05:20: online for where are water stresses.  
01:05:20 --> 01:05:23: You have to declare that and, but also they ask

01:05:24 --> 01:05:27: how many homes did you label as water sense or  
01:05:27 --> 01:05:30: where do you use water sense fixtures?  
01:05:30 --> 01:05:32: How many of your homes use water sense fixtures?  
01:05:32 --> 01:05:37: So that starts to create transparency and accountability in front  
01:05:37 --> 01:05:38: of investors.  
01:05:39 --> 01:05:44: And it's, it's, it's very useful.  
01:05:45 --> 01:05:51: It's KB has been very responsive in that area and  
01:05:51 --> 01:05:59: we have earned the Newsweek responsible company designation for several  
01:05:59 --> 01:06:00: years now.  
01:06:01 --> 01:06:05: But I think water will continue to get more important  
01:06:05 --> 01:06:10: for investors, municipalities and consumers as we go forward.  
01:06:10 --> 01:06:14: And I'm so glad that Marianne put together this this  
01:06:14 --> 01:06:14: forum.  
01:06:14 --> 01:06:17: So I'll stop sharing.  
01:06:17 --> 01:06:19: I think I can.  
01:06:21 --> 01:06:23: Thank you so much, Jacob, and a huge round of  
01:06:23 --> 01:06:25: applause to all of our panelists today.  
01:06:26 --> 01:06:28: It's been so exciting to see the ROI that you  
01:06:28 --> 01:06:30: guys are showing us.  
01:06:30 --> 01:06:32: I haven't seen these numbers before, so thank you.  
01:06:33 --> 01:06:36: And all of you are just rock stars in this  
01:06:36 --> 01:06:36: space.  
01:06:37 --> 01:06:40: We've been receiving a lot of great questions in the  
01:06:40 --> 01:06:41: chat box.  
01:06:41 --> 01:06:44: Thank you to our audience members for submitting those.  
01:06:44 --> 01:06:46: I'm going to go through them as much as I  
01:06:46 --> 01:06:49: can and, and if you wanna unmute and ask as  
01:06:49 --> 01:06:51: well, you're welcome to do that.  
01:06:52 --> 01:06:54: I'm gonna start with a few questions that I saw  
01:06:54 --> 01:06:57: and any of the panelists are welcome to respond.  
01:06:58 --> 01:07:01: The first one was how should water districts engage with  
01:07:01 --> 01:07:02: builders?  
01:07:02 --> 01:07:05: And I'll just mention that you and I published a  
01:07:05 --> 01:07:09: report called Water Wise Strategies for Drought Resilient Development recently.  
01:07:09 --> 01:07:12: I'm going to put that in the chat box and  
01:07:12 --> 01:07:15: we talked a lot about how water districts and city  
01:07:15 --> 01:07:18: planners should work more in tandem and then together they  
01:07:18 --> 01:07:21: canmore effectively communicate with the development community.

01:07:22 --> 01:07:24: So I'll just, I put that in the chat as  
01:07:24 --> 01:07:26: a resource for all of you, but I'd love for  
01:07:26 --> 01:07:28: our panelists to respond as well.  
01:07:28 --> 01:07:32: In addition to that question about water districts, there's a  
01:07:32 --> 01:07:36: question about how local government policies affect what is  
built  
01:07:36 --> 01:07:40: and what consumer responses to water efficient development  
are.  
01:07:41 --> 01:07:44: Maybe I'll ask, we'll do it maybe in speaker order  
01:07:44 --> 01:07:47: because I think everyone will have good response to this.  
01:07:47 --> 01:07:48: Brock, do you want to go first?  
01:07:51 --> 01:07:52: I was reading the check.  
01:07:52 --> 01:07:53: Can you repeat the question?  
01:07:55 --> 01:07:55: Sure.  
01:07:55 --> 01:07:58: So the So how should water districts engage with builders?  
01:07:58 --> 01:08:01: And then how do local government policies affect what is  
01:08:01 --> 01:08:03: built and how do consumers respond?  
01:08:05 --> 01:08:07: So we're in a little bit of a unique situation  
01:08:07 --> 01:08:10: where I serve on our water and sanitation district, but  
01:08:10 --> 01:08:12: I'm also the master developer and we had to build  
01:08:12 --> 01:08:13: our own water system.  
01:08:14 --> 01:08:16: So I, I, I've kind of seen it from both  
01:08:16 --> 01:08:19: the private sector side and the water district side.  
01:08:21 --> 01:08:25: You know what, what they're seeing up north in the  
01:08:25 --> 01:08:28: northern part of the metro area is there a lot  
01:08:28 --> 01:08:32: of builders are having to buy CBT shares and then  
01:08:32 --> 01:08:34: pay tap fees on top of that.  
01:08:34 --> 01:08:37: So a lot of our builders kind of see our  
01:08:37 --> 01:08:42: taps as being a relatively good deal relative to Castle  
01:08:42 --> 01:08:46: Rock and some of our other municipalities.  
01:08:46 --> 01:08:49: And then a lot of the technology, the push back  
01:08:49 --> 01:08:52: more comes on the technology and builder packages they  
have  
01:08:52 --> 01:08:55: to install more so than the actual tap fees given  
01:08:55 --> 01:08:58: where, where we are in water and sewer costs in  
01:08:58 --> 01:08:58: our area.  
01:08:58 --> 01:09:02: So we've seen it more on the, I'd say kind  
01:09:02 --> 01:09:07: of the dual water metering the ratios and making sure  
01:09:07 --> 01:09:10: their trades can get up to speed.  
01:09:10 --> 01:09:13: That's typically we've got mostly builder push back.  
01:09:14 --> 01:09:19: I'm an enforcement I we've had Lennar pretty much screw  
01:09:19 --> 01:09:24: up every landscape install they've done in the past year.  
01:09:24 --> 01:09:27: So we have to go out and hammer them pretty

01:09:27 --> 01:09:28: frequently, so.

01:09:28 --> 01:09:29: That's fun.

01:09:33 --> 01:09:35: Kyle, Steve and Jacob, anyone?

01:09:35 --> 01:09:36: Do you guys want to respond to this as well?

01:09:39 --> 01:09:42: I don't know that I have any silver bullets offer

01:09:42 --> 01:09:45: on how the water districts work with the builders.

01:09:45 --> 01:09:49: I think perhaps, and this is a supposition on my

01:09:49 --> 01:09:54: part, where you're located geographically probably has something to do

01:09:54 --> 01:10:00: with builder receptivity and the receptivity of your consumers to

01:10:00 --> 01:10:03: all these water conservation techniques.

01:10:03 --> 01:10:05: I mean, you've heard from a three of us are

01:10:05 --> 01:10:07: representing the Front Range.

01:10:07 --> 01:10:09: That is a lot of discussion right now.

01:10:10 --> 01:10:12: And there has been a fight, not necessarily fight, maybe

01:10:12 --> 01:10:15: a fight between, as Brock mentioned, all this water that's

01:10:15 --> 01:10:18: on the Western Slope that is now being apportioned to

01:10:18 --> 01:10:21: many other States and the Front Range is trying to

01:10:21 --> 01:10:21: get it.

01:10:21 --> 01:10:25: So it is top of mind with, I would argue

01:10:25 --> 01:10:28: everyone I'd speak with on on the Front Range.

01:10:29 --> 01:10:33: And so this idea of a builders, we want you

01:10:33 --> 01:10:39: to collaborate with us in creating these the Xeric landscapes

01:10:39 --> 01:10:45: and deploying the water wise toilets, faucets, all of that

01:10:45 --> 01:10:46: stuff.

01:10:46 --> 01:10:49: It's not a hard sell at all.

01:10:49 --> 01:10:52: But I suspect in places where you don't have the,

01:10:52 --> 01:10:55: OR at least there's not a perception of water scarcity,

01:10:55 --> 01:10:58: that might be a bigger a bigger challenge.

01:10:58 --> 01:11:02: I would mention that relative to how do the municipalities

01:11:02 --> 01:11:02: play into this.

01:11:02 --> 01:11:04: I was just on a call with Broomfield, one of

01:11:05 --> 01:11:07: the counties in and around the Denver metro area.

01:11:07 --> 01:11:12: They are mandating now water wise landscapes.

01:11:12 --> 01:11:14: So it is happening.

01:11:14 --> 01:11:17: And I think for all of us who develop in

01:11:17 --> 01:11:21: areas where water is a scarce resource, this is absolutely

01:11:21 --> 01:11:23: a sign of things to come.

01:11:23 --> 01:11:26: And if you haven't been mandated to do it, it's,

01:11:26 --> 01:11:29: it's, you're going to be in the not so distant

01:11:29 --> 01:11:31: future, probably not, not a help.



01:11:31 --> 01:11:33: I think I saw somebody from Texas who, who asked  
01:11:33 --> 01:11:34: for that advice.  
01:11:34 --> 01:11:37: I, I don't have a sense for the scarcity or  
01:11:37 --> 01:11:38: not of water in that area.  
01:11:38 --> 01:11:40: But for where it is scarce, you're going to see  
01:11:40 --> 01:11:42: a lot of additional regulation.  
01:11:42 --> 01:11:43: So better to get out of it.  
01:11:46 --> 01:11:48: I can say from my perspective, I am with a  
01:11:48 --> 01:11:52: Water Management District, I'm with the Southwest Florida  
01:11:52 --> 01:11:53: District.  
01:11:53 --> 01:11:57: As you just mentioned, Kyle, there's the difference between  
01:11:57 --> 01:11:59: the  
01:11:59 --> 01:12:02: scarcity and the perceptive scarcity.  
01:12:02 --> 01:12:04: When you live in Florida, we're surrounded by water with  
01:12:04 --> 01:12:05: rainfall and heavy, heavy humidity.  
01:12:05 --> 01:12:09: But that also means within Central Florida, we definitely our  
01:12:09 --> 01:12:12: population is growing 1100 people a day.  
01:12:13 --> 01:12:16: We've actually got Polk County is the 11th fastest growing  
01:12:17 --> 01:12:20: county in the nation, worked a lot with KB Homes  
01:12:20 --> 01:12:20: actually.  
01:12:20 --> 01:12:25: But from the water management perspective, we do offer  
01:12:25 --> 01:12:29: rebates  
01:12:29 --> 01:12:31: of \$1000 per home per day that meets certain water  
01:12:31 --> 01:12:35: efficiency criteria.  
01:12:35 --> 01:12:35: I will say those rebates we've had funding of \$13  
01:12:35 --> 01:12:38: million.  
01:12:38 --> 01:12:39: Now we're going on 14 years of \$13 million.  
01:12:39 --> 01:12:43: We've had absolutely 0 builders take advantage of a dollar  
01:12:43 --> 01:12:44: of any of that.  
01:12:45 --> 01:12:48: What we found is that in order to get the  
01:12:48 --> 01:12:52: rebate, it's more about the fact that it's just another  
01:12:52 --> 01:12:54: requirement in the inspection process.  
01:12:55 --> 01:12:58: So what we found is most effective is we do  
01:12:58 --> 01:13:01: work with local municipalities.  
01:13:01 --> 01:13:05: As of now, there are about 16 municipalities within one  
01:13:05 --> 01:13:07: county, specifically Polk.  
01:13:08 --> 01:13:08: Is that right?  
01:13:08 --> 01:13:11: It's a program called Florida Water \* If you want  
01:13:11 --> 01:13:14: to Google it, it's Florida Water star.com into ordinance.  
01:13:15 --> 01:13:20: There's, you know those local municipalities as well as even  
01:13:20 --> 01:13:24: within Water 1 water service provider, they're looking at  
building

01:13:24 --> 01:13:27: 20,000 homes within three years.

01:13:27 --> 01:13:30: 20,000 homes with one water service provider.

01:13:31 --> 01:13:33: So what they did there is an order for water

01:13:34 --> 01:13:37: service to transfer from the builder to the home buyer.

01:13:37 --> 01:13:40: They require Florida Waterstar certification.

01:13:41 --> 01:13:45: The way that we work with, I work with municipalities

01:13:45 --> 01:13:49: is really meeting with the city managers as well as

01:13:49 --> 01:13:54: local developers and builders together on the onset explaining the

01:13:54 --> 01:13:59: delicate water resource issue and then the water savings.

01:13:59 --> 01:14:02: We have been able to quantify water savings through this

01:14:02 --> 01:14:06: program through real world development studies comparing homes that are

01:14:06 --> 01:14:10: Florida Water Star certified compared to traditional development.

01:14:11 --> 01:14:16: Annual water savings per home is about 48,301 gallons per

01:14:16 --> 01:14:21: home and that also results also in annual utility savings,

01:14:21 --> 01:14:26: both water and electric of \$531 per homeowner per year.

01:14:27 --> 01:14:31: So right now with this current ordinances that are in

01:14:31 --> 01:14:36: place, we're looking at 55,989 homes, which ends up the

01:14:36 --> 01:14:42: numbers aren't going to multiply perfectly because I deducted a,

01:14:42 --> 01:14:46: A, it's 55,000 units cause some of these are apartment

01:14:46 --> 01:14:47: units.

01:14:47 --> 01:14:50: So I take the apartment units out because apartment units

01:14:50 --> 01:14:54: have less landscape area and that definitely has an impact.

01:14:54 --> 01:14:56: So this is actually lower than it would be.

01:14:56 --> 01:15:01: But annually we're looking at 2.68 million gallons of water

01:15:01 --> 01:15:04: a year saved just through those ordinances.

01:15:04 --> 01:15:07: So if anyone wants to learn more about how to

01:15:07 --> 01:15:12: work with both the local municipalities, your Water Management District

01:15:12 --> 01:15:17: also builders, developers on how to develop those relationships and

01:15:17 --> 01:15:21: focus groups and trying to work together even through rebates

01:15:21 --> 01:15:23: and mandates, I'm I'm happy to help.

01:15:25 --> 01:15:29: I would just comment on on the question and and

01:15:29 --> 01:15:33: these this information a little bit more.

01:15:34 --> 01:15:38: I would say from a consumer perspective, the answer is

01:15:38 --> 01:15:41: start with the dollars with the customer.

01:15:41 --> 01:15:45: I would say everybody loves green, but the first green

01:15:45 --> 01:15:48: they love is the green dollar in their pocket.

01:15:48 --> 01:15:51: Then they can get you can continue the conversation to  
01:15:52 --> 01:15:53: other green items.  
01:15:53 --> 01:15:57: So always we like to give the customer a certificate  
01:15:57 --> 01:16:02: and some savings documentation of savings that they can  
use  
01:16:02 --> 01:16:05: that can help us with the customer.  
01:16:05 --> 01:16:08: But I will take that and say yes, kudos.  
01:16:09 --> 01:16:13: There is green dollars in in thirteen, \$14 million.  
01:16:14 --> 01:16:19: Perhaps the important thing that I would advise water utilities  
01:16:19 --> 01:16:23: and districts consider a program that is national in scope  
01:16:23 --> 01:16:28: because for you know, the small builder that's working in  
01:16:28 --> 01:16:32: a local market, yes, maybe a local program could work.  
01:16:33 --> 01:16:37: But for a program for a national builder that needs  
01:16:37 --> 01:16:41: to look at one process that works across the country,  
01:16:41 --> 01:16:46: a national program or national system like Watersense  
labeled homes  
01:16:46 --> 01:16:50: and the HERS H2O rating isn't a tool that we  
01:16:50 --> 01:16:53: can can use not just in Florida, but across the  
01:16:53 --> 01:16:54: whole country.  
01:16:55 --> 01:16:58: And so for you to get the get the big  
01:16:58 --> 01:17:04: builders to play, perhaps consider using tools that are  
national  
01:17:04 --> 01:17:08: in in scope that will get the attention and get  
01:17:09 --> 01:17:12: traction within that builder's machine.  
01:17:14 --> 01:17:17: I do completely agree and that's why I was definitely  
01:17:17 --> 01:17:20: involved with the Hearst development of their program.  
01:17:21 --> 01:17:22: We were on their team.  
01:17:23 --> 01:17:25: We actually started about 15 years ago.  
01:17:25 --> 01:17:28: The reason why Florida Water Star is a little bit  
01:17:28 --> 01:17:31: different is if you look at Colorado's environment versus a  
01:17:31 --> 01:17:35: very subtropical environment in Florida, it's very different.  
01:17:35 --> 01:17:37: But I really appreciate all your feedback.  
01:17:37 --> 01:17:38: I just wanted to throw that in there.  
01:17:38 --> 01:17:39: Thank you so much.  
01:17:40 --> 01:17:41: Thank you, Robin.  
01:17:41 --> 01:17:44: And I want to also mention that Austin, Austin, are  
01:17:45 --> 01:17:46: you still here?  
01:17:47 --> 01:17:49: He works for Denver Water and had a a good  
01:17:49 --> 01:17:51: response to this as well.  
01:17:52 --> 01:17:53: Yeah, I'm still here.  
01:17:53 --> 01:17:55: I can run through our program real quick.  
01:17:56 --> 01:18:00: So for new system development charges, if we have  
developers

01:18:00 --> 01:18:03: that want to reduce their tap fees, we require all  
01:18:04 --> 01:18:08: of the most efficient fixtures, appliances, water using devices  
that  
01:18:08 --> 01:18:10: are currently on the market.  
01:18:11 --> 01:18:15: And we go above and beyond the EPA Watersense products  
01:18:15 --> 01:18:20: because those are already mandated at the state level in  
01:18:20 --> 01:18:21: Colorado.  
01:18:21 --> 01:18:24: So those should be the only products that are available  
01:18:25 --> 01:18:26: in our marketplace.  
01:18:26 --> 01:18:29: So we need to take that next step to incentivize  
01:18:29 --> 01:18:31: developers to go beyond that.  
01:18:31 --> 01:18:34: But what we do is we offer a 2020% reduction  
01:18:34 --> 01:18:37: in tap fees if they put all the most efficient  
01:18:37 --> 01:18:42: fixtures in and then also design outdoor landscapes to use  
01:18:42 --> 01:18:44: 7.5 gallons per square foot or less.  
01:18:45 --> 01:18:49: And we have been running that program for about six  
01:18:49 --> 01:18:54: years now and probably have about 30 different large  
properties  
01:18:54 --> 01:18:58: developments through it and are just now getting back all  
01:18:58 --> 01:19:02: of our data analysis to show that it has worked  
01:19:02 --> 01:19:03: really well.  
01:19:03 --> 01:19:06: And we're seeing more than a 20% reduction in water  
01:19:06 --> 01:19:10: use compared to standard building construction in City and  
County  
01:19:10 --> 01:19:13: of Denver and our surrounding communities.  
01:19:17 --> 01:19:17: Excellent.  
01:19:17 --> 01:19:17: Thank you.  
01:19:17 --> 01:19:18: Sure.  
01:19:19 --> 01:19:22: And I'll just mention that we're going to focus more  
01:19:22 --> 01:19:24: on policies in another session.  
01:19:24 --> 01:19:26: So I'm going to go back to a question that  
01:19:26 --> 01:19:30: someone put in the chat about, you know, Mcwinney seeing  
01:19:30 --> 01:19:32: a lot of ROI in a 10 year time frame  
01:19:32 --> 01:19:35: and a lot of developers will build something and then  
01:19:35 --> 01:19:36: sell the asset.  
01:19:36 --> 01:19:39: So I think the question is, I mean, I know  
01:19:39 --> 01:19:42: you answered that you hold for 30, but for other  
01:19:42 --> 01:19:46: developers, are you also seeing an increase in asset value  
01:19:46 --> 01:19:51: from these efficiency improvements and how can we quantify  
that  
01:19:51 --> 01:19:53: And it's I guess for Kyle.  
01:19:54 --> 01:19:54: Sure.  
01:19:58 --> 01:20:01: The analysis that I I walked us through is actually

01:20:02 --> 01:20:06: a little bit different from being specific to an asset,  
01:20:06 --> 01:20:08: but rather the public lands.  
01:20:08 --> 01:20:10: And so this may be a bit of a unique  
01:20:10 --> 01:20:13: situation as a master developer.  
01:20:14 --> 01:20:18: We have you know we've got baselines 1100 acres and  
01:20:18 --> 01:20:19: terrace 3500 acres.  
01:20:19 --> 01:20:22: We have another project we're looking at is another 1000  
01:20:22 --> 01:20:22: acres.  
01:20:22 --> 01:20:25: So those, my comment on the 30 years was yes,  
01:20:25 --> 01:20:29: we will sell off some things during that time period,  
01:20:29 --> 01:20:30: but really the build out.  
01:20:30 --> 01:20:32: Is measured in terms of decades.  
01:20:33 --> 01:20:36: We will retain ownership of some of the physical assets,  
01:20:36 --> 01:20:39: some of the actual vertical assets themselves for for a  
01:20:39 --> 01:20:41: long period of time.  
01:20:41 --> 01:20:45: And I suspect if you have less water consumption specific  
01:20:45 --> 01:20:49: to those assets that could absolutely be calculated into an  
01:20:49 --> 01:20:51: NOI cap at at the end of some time period.  
01:20:51 --> 01:20:55: And you can figure out, hey, this is what the  
01:20:55 --> 01:20:59: value of that is more of from a master developer  
01:20:59 --> 01:21:00: perspective.  
01:21:01 --> 01:21:04: What is helpful for us is, and this gets a  
01:21:04 --> 01:21:09: little bit into the esoteric topic of metro districts and  
01:21:09 --> 01:21:12: other municipal financing mechanisms.  
01:21:12 --> 01:21:15: But to the extent that we can help our metro  
01:21:15 --> 01:21:19: district structures, which are quasi municipal structures that  
have the  
01:21:19 --> 01:21:22: ability in Colorado, I think there are Muds in Texas  
01:21:22 --> 01:21:26: and they're different iterations of these in other states.  
01:21:26 --> 01:21:31: They have the ability to put in infrastructure using by  
01:21:31 --> 01:21:35: and large tax increment financing to the extent that they  
01:21:35 --> 01:21:40: are also putting in irrigation infrastructure and paying for the  
01:21:40 --> 01:21:46: ongoing operation of landscaping and doing landscaping  
maintenance as part  
01:21:46 --> 01:21:48: of their charge.  
01:21:48 --> 01:21:53: Then from a master developer perspective, who relies upon  
those  
01:21:53 --> 01:21:57: districts and those funds that are generated to not only  
01:21:57 --> 01:22:03: lands, public landscaping, public irrigation, but also roadways  
and water  
01:22:03 --> 01:22:07: and sewer and any number of other things, those are  
01:22:07 --> 01:22:09: dollars that that district can save.  
01:22:10 --> 01:22:13: And in so doing, it can, because money is fungible.

01:22:13 --> 01:22:17: It can use those dollars to spend on other infrastructure,  
01:22:17 --> 01:22:20: public infrastructure projects.  
01:22:20 --> 01:22:23: And it's helpful to know that I've never worked on  
01:22:23 --> 01:22:26: a project where the Metro District funding mechanism is  
01:22:26 --> 01:22:27: enough  
01:22:26 --> 01:22:27: to cover all the infrastructure.  
01:22:27 --> 01:22:28: Cost.  
01:22:28 --> 01:22:32: So by saving the district money in one area, those  
01:22:32 --> 01:22:37: dollars can be deployed elsewhere and ultimately it reduces  
01:22:37 --> 01:22:41: the  
01:22:37 --> 01:22:41: dollars that the developer has to come to the table  
01:22:41 --> 01:22:42: with for infrastructure.  
01:22:43 --> 01:22:46: So that's really what and as a master developer who's  
01:22:46 --> 01:22:48: going to be doing this thing over the course of,  
01:22:48 --> 01:22:51: you know, well, 20-30 in some instances 40 years, that  
01:22:51 --> 01:22:52: adds up over time.  
01:22:52 --> 01:22:56: So we do have a long term perspective by virtue  
01:22:56 --> 01:23:00: of the build out of these long master plan communities.  
01:23:00 --> 01:23:03: And that's, I guess one of the motivations for for  
01:23:03 --> 01:23:06: doing what we're doing, if that makes sense.  
01:23:06 --> 01:23:07: Yeah, that's great.  
01:23:07 --> 01:23:08: And then, Jacob, I guess I'm going to turn that  
01:23:08 --> 01:23:09: question to you.  
01:23:09 --> 01:23:13: Are you seeing asset value increases from efficiency  
01:23:13 --> 01:23:15: improvements?  
01:23:13 --> 01:23:15: And I know you also do 00 homes.  
01:23:15 --> 01:23:17: I don't know if you can talk a little bit  
01:23:17 --> 01:23:17: about that.  
01:23:19 --> 01:23:19: Yeah.  
01:23:20 --> 01:23:25: So we have not tested it related to water efficiency,  
01:23:25 --> 01:23:28: but related to energy efficiency.  
01:23:29 --> 01:23:30: We've tested that.  
01:23:30 --> 01:23:35: And there are also some third party studies that were  
01:23:35 --> 01:23:39: done about the additional value especially at the resale level  
01:23:40 --> 01:23:44: if the home has the Energy Star certification for the  
01:23:44 --> 01:23:44: home.  
01:23:44 --> 01:23:49: There are studies out there, one by UCLA, another I  
01:23:49 --> 01:23:52: think by Fannie or Freddie.  
01:23:54 --> 01:23:55: They also did a study there.  
01:23:57 --> 01:23:59: As far as water, I'm not I'm not aware of  
01:23:59 --> 01:24:02: a study that was done or we have not been  
01:24:02 --> 01:24:03: able to put a value on that.  
01:24:03 --> 01:24:09: However, the tool cost of ownership as documented either by

01:24:09 --> 01:24:15: developers or by the rating software that we have, the

01:24:15 --> 01:24:21: rating system is very much achievable and will add value

01:24:21 --> 01:24:22: to to customers.

01:24:24 --> 01:24:29: As far as the 00, you know, we've heard the

01:24:29 --> 01:24:30: idea of 2 meters.

01:24:31 --> 01:24:32: We love that idea.

01:24:32 --> 01:24:35: We also love the idea of buying water once in

01:24:36 --> 01:24:40: the home and using it twice, but sometimes that doesn't

01:24:40 --> 01:24:44: happen for some economic or other regulations.

01:24:44 --> 01:24:48: We would love to see that happen where it's used

01:24:48 --> 01:24:52: after regular use, it's used in toilets or after regular

01:24:52 --> 01:24:56: use it's used in, in, in the landscaping before we

01:24:56 --> 01:24:58: give up that water.

01:24:59 --> 01:25:03: These are useful things and that's what the 00 house

01:25:03 --> 01:25:04: was about.

01:25:04 --> 01:25:06: It was or, or series of homes.

01:25:06 --> 01:25:10: It was homes with grey water recycling that used the

01:25:10 --> 01:25:12: water twice before letting it go.

01:25:12 --> 01:25:17: And it's still it's in in in its infancy again.

01:25:17 --> 01:25:22: There is some resistance to it economically, but also

01:25:23 --> 01:25:24: sometimes

01:25:25 --> 01:25:28: some regulations.

01:25:28 --> 01:25:29: And before I give up the mic, I just have

01:25:29 --> 01:25:32: to please forgive me.

01:25:32 --> 01:25:33: I need to drop off in a couple of minutes

01:25:34 --> 01:25:35: for another meeting.

01:25:36 --> 01:25:37: I know, I know a lot of us will need

01:25:37 --> 01:25:39: to drop off in a couple minutes.

01:25:39 --> 01:25:40: I just want to take a moment to thank all

01:25:40 --> 01:25:42: of our speakers.

01:25:42 --> 01:25:43: Again, I know we didn't get to all the questions

01:25:43 --> 01:25:45: in the chat box.

01:25:45 --> 01:25:47: If the speakers have a moment to look at those

01:25:47 --> 01:25:48: and respond to the ones that pertain to them, that

01:25:48 --> 01:25:51: would be great.

01:25:51 --> 01:25:55: And I'm just going to talk a little bit about

01:25:55 --> 01:25:55: our upcoming programming for the Coalition before everyone

01:25:56 --> 01:26:00: needs to

01:26:00 --> 01:26:02: leave.

01:26:02 --> 01:26:05: So our next meeting is already scheduled for September 6th

01:26:02 --> 01:26:05: from 1:00 to 2:30 PM Mountain Time.

01:26:02 --> 01:26:05: And I'll let you guys, I've already sent the calendar

01:26:05 --> 01:26:08: invite, so hopefully that's in your local time.

01:26:09 --> 01:26:13: We'll have a presentation from Jonah Shine with EPA Watersense

01:26:13 --> 01:26:17: program to talk about Watersense homes, which Jacob already did

01:26:17 --> 01:26:19: a great job teeing up today.

01:26:19 --> 01:26:23: And we'll also have a presentation by Michael Colignon about

01:26:23 --> 01:26:25: the water efficiency rating system.

01:26:26 --> 01:26:30: So these are really wonderful things that are resources for everyone.

01:26:30 --> 01:26:30: everyone.

01:26:31 --> 01:26:37: We'll have upcoming quarterly presentations on landscaping codes, water wise

01:26:37 --> 01:26:43: policies, water pricing and affordability, one water approaches, water reuse

01:26:43 --> 01:26:48: and then potentially appraisals and MLS listings and how do

01:26:48 --> 01:26:51: we advance water smart development.

01:26:52 --> 01:26:55: So if you have any other ideas or proposals for

01:26:55 --> 01:26:58: things that you would like to share with the group,

01:26:58 --> 01:27:02: please send me an e-mail, my emails on my face

01:27:02 --> 01:27:05: icon, but also you can find my e-mail and all

01:27:05 --> 01:27:07: of our e-mail communications.

01:27:07 --> 01:27:10: And we just want to thank you for joining us

01:27:10 --> 01:27:10: today.

01:27:10 --> 01:27:12: This has been a real pleasure to hear from you

01:27:12 --> 01:27:13: all and to see you.

01:27:13 --> 01:27:15: And we hope that you stay in touch over time.

01:27:16 --> 01:27:17: Thank you again.

01:27:23 --> 01:27:24: Thank you everyone.

01:27:24 --> 01:27:25: Thank you.

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