

---

This document was created from the closed caption transcript of the October 12, 2021 City Council Work Study meeting and has not been checked for completeness or accuracy of content.

A copy of the agenda for this meeting, including a summary of the action taken on each agenda item, is available online at:

<https://www.scottsdaleaz.gov/Assets/ScottsdaleAZ/Council/current-agendas-minutes/2021-agendas/10-12-21-special-and-work-study-agenda.pdf>

An unedited digital video recording of the meeting, which can be used in conjunction with the transcript, is available online at:

<https://www.scottsdaleaz.gov/scottsdale-video-network/council-video-archives/2021-archives>

For ease of reference, included throughout the transcript are bracketed "time stamps" [Time: 00:00:00] that correspond to digital video recording time.

For more information about this transcript, please contact the City Clerk's Office at 480-312-2411.

---

#### **CALL TO ORDER**

[Time: 00:00:00]

Mayor Ortega: Hello, everyone. I call the December 12<sup>th</sup>, 2021 city council work study session to order: City clerk, Ben Lane, would you please conduct the roll call?

#### **ROLL CALL**

[Time: 00:00:16]

Clerk Lane: Thank you, Mayor. Mayor David Ortega.

Mayor Ortega: Present.

Clerk Ben Lane: Vice Mayor Tammy Caputi.

Vice Mayor Caputi: Here.

Clerk Ben Lane: Councilmembers Tom Durham.

Councilmember Durham: Here.

Clerk Ben Lane: Betty Janik.

Councilmember Janik: Here.

Clerk Ben Lane: Kathy Littlefield.

Councilmember Littlefield: Here.

Clerk Ben Lane: Linda Milhaven.

Councilmember Milhaven: Here.

Clerk Ben Lane: Solange Whitehead.

Councilmember Whitehead: Here.

Clerk Ben Lane: City Manager Jim Thompson.

Jim Thompson: Here.

Clerk Ben Lane: City Attorney Sherry Scott.

Sherry Scott: Here.

Clerk Ben Lane: City Treasurer Sonia Andrews.

Sonia Andrews: Here.

Clerk Ben Lane: City Auditor Sharron Walker.

Sharron Walker: Here.

Clerk Ben Lane: And the Clerk is present. Thank you, Mayor.

[Time: 00:00:45]

Mayor Ortega: Thank you very much. We have Scottsdale Police Officer Tony Wells and Dustin Patrick, as well as firefighter Travis Gunita available should anyone require assistance. Now, our work study session today is an opportunity for the council to discuss in an informal setting, specific issues as posted on -- to the public. We will not be voting on any particular item. We are just collecting information and providing some sort of feeling consensus of -- on the posted issue.

At the beginning of the work study, we provide an opportunity for public comment, and to be efficient with our time, we restrict that to five members of the public who could remain on topic and at this point, I do not show any public comment requested, either online or in person. So with that, I would then close the public comment portion of our work study.

**ITEM 01 – COLORADO RIVER DROUGHT AND SHORTAGE UPDATE**

[Time: 00:02:18]

Mayor Ortega: The next area is very critical, having to do with the Colorado River drought, and shortage update. So our presenter is Brian Biesemeyer, with the water resources and Scottsdale water and he, of course, is our executive director. Please proceed.

Brian Biesemeyer: Thank you, Mayor and council. It's my pleasure to be here tonight and we have a little update for you on the current Colorado River drought and tier one shortage. And I will be presenting with Gretchen Baumgartner, our water policy manager. So on this slide, just a little reminder of the number of accounts. We have 93,000 active water accounts. The majority of those are residential accounts of 82,000. And then the bottom of this slide, I put a little thing about an acre foot. An acre foot is a measurement we use quite often. It's literally that, one acre, one foot deep in water. It's an odd measurement, I agree, and that's 325,851 gallons. Sorry about that. You got it?

So in 2020, just a little diagram to show our water deliveries in 2020, which was a very hot and dry year, you can see that three-quarters of our water deliveries came from the central Arizona project, the Salt River project, reclaimed water and groundwater being the other components. I do always have to state with groundwater, when we use groundwater, that's water that we actually already put in the ground. Since 2006, we have been in the condition called safe yield, meaning we put more water in the ground every year than we use. So when we say we used 3500-acre feet of groundwater, that's water we have put in the ground. It literally defines where we got it. We got it from a well that we previously put water in. So with that, I will have Gretchen come and talk to you about the tier one situation and I will be back to talk about some of our actions after that.

Gretchen Baumgartner: I'm a little shorter than Brian. Thank you. I want to thank mayor and council for having me here tonight. My name is Gretchen Baumgartner. Before moving to the next screen, 75% of our water is from the Colorado River which is why we are here. In August of this year, the Bureau of Reclamation has declared first ever tier one shortage. This was made in August but it's for January 1, 2022.

The projections for lake Mead will be below the 1075 trigger and it will be at 1065 as made by the United States secretary of interior. I like to quote the department of water resources director Tom Bushoski in his joint statement when this happened. We work collaboratively with Arizona stakeholders and basin states to deploy more adaptive measures consistent with the drought contingency plan and associated agreement and at the same time, the Arizona

department of water resources in central Arizona project will continue to work with partners within Arizona and across the basin to develop longer term solutions and shared risk we all face in the Colorado River now and in the future. I like quoting this, because this is not a Scottsdale problem. This is not a valley problem. This is not an Arizona problem. This is a regional basin state problem. And to find solutions and implement plans is going to take a lot of hard conversations and a lot of innovative tools to do so. So let's talk about how this affects the basin states.

[Time: 00:06:15]

I will talk about the lower basin states because they are governed a little different than the upper basins. That's Nevada, California, and Arizona. What triggers the shortage on the Colorado River is the level of lake Mead and lake Mead is the lowest and largest reservoir on the system, up there near Vegas. When the lake levels get to 1075 we trigger Tier 1 and there's a higher level of shortage as you can see on the big figure on the right. So January 1, we have the blue circle, and we have a reduction to the state of Arizona.

That's largely comprised of central Arizona project water and that's about a third of the central Arizona project water that's allocated for the system. So what does lake Mead look like in the last 20 plus years? This graph is the levels of lake immediate over the last 22 or so years, and you can see how it progressively decreased. Now, there's several reasons for this. One, we're in a drought. We have been in a drought for about 22 years. It's driest 22 years in recorded history. The other thing is there's increasingly evidence that we are seeing a ridification in the desert southwest.

The conditions that we're seeing in lower hydrology might not just be a drought condition. There might be a new normal and we are not sure exactly what that looks like so there's uncertainty built into the system. And the third component is the structural deficit. When the states got together and made the Colorado River compact in 1922, and they used the period on record at that time, it was the wettest period of record.

So they took a bunch of water and said we will divvy it up amongst the basin states. We haven't seen that type of water since then. It's over allocated and all of these components bring us to where we are today. Oh, that went -- that was interesting. So this is the 24-month study by the Bureau of Reclamation. These are the projections for the next two years and this is what triggers the official shortage. They look at the hydrology in the 90<sup>th</sup> percentile. That's the wet year. The 50<sup>th</sup> percentile which is the normal and the 10<sup>th</sup> is the driest. And it's below the 1075 mark. For the next several years we are projected to be in a Tier 1.

You can also see from this graph, out into 2023 there's a potential projection to be a 1050 which is a Tier 2a. This is really concerning that the projections are going lower and lower. So what does this mean for the city of Scottsdale and its allocation? I know this is a little bit confusing but I will go through it. So the figure on the right is the central Arizona project priority stack. Western water is based open a priority system, senior rights and junior rights. Those with senior

rights are on the bottom of the party stacking and get cut last.

You can see from the gray scaled out of the 512,000-acre feet of a Tier 1 reduction the priority stack is cut into thirds. So those in the priority of agricultural pool or other excess are completely cut in Tier 1. Those in what is called the NIA priority pool are cut approximately about 65%. On the table on the left which is color coded to those priority rights is Scottsdale's allocation of central Arizona project. We have a very small sliver of water in N.I.A. priority. About 4% of our CAP supply is NIA priority and that's the amount of water that's at risk. The overwhelming majority is M&I or the Indian leases under the higher priority water. So what does it look like in some of the other stages of the drought?

[Time: 00:10:12]

This table came directly out of the drought management -- the drought management plan which you all approved back in November and this is an approximation of cuts we are assuming that we will see in each one of those tiers.

Now, I want to note that this was put in there for planning purposes, and long range and there are some mitigation strategies that the state has in place, and I was also talking about but those are short ranged and uncertain. This is the outside of any mitigation strategies. You can see in a Tier 1 and a Tier 2a and b, it's not large amounts of water. It's really the Tier 3 cut that we would see -- we would start to get concerned.

So you can see in a Tier 3, we are cut approximately around 15,000-acre feet of water or 13.5mgd, and, again, those are approximates. And we have all known this for decades. Water planners know that this is something that was potentially coming down to us and we have been planning for this. Arizona has a rich history of water resource planning and all the municipalities and providers have a rich history of planning. What has Scottsdale been doing to plan for this?

This table here is a breakdown of what we have been doing for recharge of our extra central Arizona project supply that we have that we don't necessarily need to satisfy today's demands as well as recharge water for our reclaimed water up at the water campus. Now, when you talk about water resources, our personal finances is a really great analogy. So we all have a savings being, right? We put it away for things like our air conditioning breaking or our kids going to college or retirement. This is no different than that. This is our savings account.

So this is going to be a really great tool to weather those rainy or unrainy days. What is interesting here is going back to this table. You can see the Tier 3 was 15,000-acre feet approximately cut. On average over last five years, and this is just a snapshot, over the last five years we recharged about 15,000-acre feet in our savings, which is a really great place to be but you wouldn't want to rely on your savings account for the long term.

So those are the kind of questions that we need to ask and we need to implement programs to make sure that every single one of our residents and commercial entities and ourselves

conserve to make sure that we manage in the best way that we can. And I'm going to turn this back to Brian so he can talk about some of the things we have been working on.

Brian Biesemeyer: Thank you, Gretchen. So we'll move forward. So what have we done and what do we intend to do? Well, as Gretchen mentioned on August 16<sup>th</sup>, the Bureau of Reclamation declared a tear e1 shortage on the Colorado River and the city manager activated our drought management plan at a stage 1 level.

We were the first city to activate the drought management plan and to this date the only city in the state that I know of that has activated the drought management plan. We suspect several cities will activate their drought management plan in January when the actual cuts come. It was our evaluation that it's coming. We know it's coming. We might as well declare this. We don't need to wait until the actual cuts come. And so the city manager made this declaration.

At a stage 1, it invokes no cuts to our customers or no restrictions to our customers, but it does require us to up our game as far as conservation messaging, as well as activate our drought management team. And our response, the first line is all that we currently do. So we do a lot, and where he'll take a minute to talk about that. We have a robust conservation effort that Gretchen's team heads up. We also have -- we are a nationwide leader in recycled water and we will continue to recycle water as we have done for decades. So we take water and we treat it through our reclamation plant.

[Time: 00:14:32]

We treat it again through the advanced water treatment facility with ozone, ultra filtration, R.O., and ultra violate filtration. So we will use all of that, treat it to better than drinking water standards and put that water back in our aquifer and Gretchen showed some of the volumes that we do. So we will continue to do that. In addition, as I mentioned, we have activated a drought management team and expanded the conservation messaging. I will get to more of that in detail. We will begin with our ASR well program.

So council authorized in Scottsdale water put on its strategic plan back in 2019 to do four aquifers and recovery wells. Those wells do three things for us. First of all, they allow us to put our unused portion of our CAP water in the ground, in Scottsdale where we can use it. The other thing is that we can recover that water, either that same year or in later years. Additionally, those wells are all within several miles of our water campus.

So they can enable us to further recover our effluent, the treated water that we put into the ground, our recycled water and allow us to recover that as well. We're going to expand our recycled water recharging and irrigation systems where we can. And I will talk about the AMI portal and web portal in the next slide. So one the big things we have done is this year is activated our water smart web portal.

So customers can go online in their web portal and see their water consumption online, either

through their phone or via computer. It allows them to look at usage, and that gives them some interactive tools. And it's really useful when combined with our automated meter infrastructure. So what we'll call AMI. And that's we can read meters via fixed radio network and we can get that information on a near real-time basis.

So you can actually see on an hourly basis what they have been using. We plan to initiate leak alerts early next year, so that customers can actually interactively get leak alert notices that will allow them to actually act on a water leak in their backyard that they may not recognize they have. And we currently have 40,000 of our 90 plus -- 93,000 customers on AMI, and we'll continue to expand that by another 10,000 every -- 10 to 15,000 every year until we have all of our customers on the AMI system.

[Time: 00:17:20]

Our drought management team and these are the folks that are on our drought management team by their position, additionally assistant city manager Bill Murphy has been joining us as well. The team's responsibility to coordinate and communicate both internally and externally.

And every one of our meetings, which we have monthly, Gretchen also gives an update of where we are with the Tier 1 shortage and the shortage on the Colorado River. And we have set internally a goal of 5% reduction in our water use as the city for the next year. So our goal internally is to use 5% less water than we used the prior year. And we also want to communicate the great job that the number of our departments and divisions have done. One of those I will -- I want to tout is parked, which is traditionally provided water -- or watered the parks with 15% less than the Arizona department of water resources conservation allocation for turf irrigation.

So they have been performing at 15% less than the state expects folks to be able to water that turf with. As a result, over the last 20 years we saved 3 billion gallons of water. That's substantial. Is that enough? No. We don't think that's enough. We want to step up our game. So we will try to save another 5%.

Additionally our facilities, we have been going through facility audits, both with commercial entities, in the community, and we started this year with our facilities group, and we have done a number of those audits that have resulted in a potential savings of 8 million gallons a year, within our own facilities and we have a number of these to continue working on.

One of the neat savings -- I will go through here on a facilities audits is we obviously meet with our facilities folks, water resources works hand in hand with our facilities and we identify leaks, potential rebates, submetering and our cooling towers are one of the areas where a lot of water is used in cooling towers.

We have a pilot program this year where we will put new controllers on three different cooling towers with the idea of saving additional water and we will monitor that and pilot that. So we

will have internal information, not only to use with our other facilities, but also with external facilities as well. So we are excited about our team work with our facilities groups. Another area that we're pursuing is with HOAs and multifamily resources. Now this says new.

I have to say that we have been actively engaged with our HOAs and multifamily facilities for a number of years. But that typical engagement goes in putting out the information about rebates and letting the HOA.s decide whether -- what they want to do. This year, we're going to actively pursue them so that we are going to message them and actively contact them trying to have meetings with HOA boards, landscapers and the management companies. So we can proactively work with our HOAs and the multi-families facilities.

We want to understand our water feeds and we want to suggest water savings that they can do, such as forgoing winter lawn. Removing turf. And it talks about preserving asphalt. So one of the side benefits -- so if you look at the picture -- I apologize, it's rather small, right below the graph on the left with the green grass, that's a little strip of green grass, and person alley, I find those really irritating mostly because they are always the ones we get a call about that we are over watering and it's not the city. It ends up being generally an HOA that's over watering on an area. But that over watering causes accelerated wear of asphalt and concrete. It actually degrades the infrastructure.

[Time: 00:21:39]

So the HOA can save themselves money with their own infrastructure as well as the city's infrastructure when they don't over water and they take out those strips and they can put Xeriscape. They can save themselves a bill, and premature wear on infrastructure. And we end up with the water budget for the HOA. It helps them understand their water feeds and gives them a target for the water use. And economic growth.

How can we grow in a constrained environment? The staff would like to propose some tools that council can use to make some evaluation on what are the good decisions to make with water and economic development? These tools we put under the umbrella of sustainable water management principles.

And the land use tools that we are proposing, the first one was net water use. So we were -- we as a city, evaluate water as one water. So that includes drinking water, wastewater, all water has value, all water has a purpose for us and we recycle all the water that's returned to us. So really when you look at a development or economic activity, and they use water, you need to understand the net water consumptions.

A little example. If you have two different entities both use 10,000 gallons a day of water. One entity returns 2,000 gallons to the sewer. The other entity returns 8,000 gallons to the sewer. The net water for the one that returns 2,000. You have 8,000 gallons of water that are out there that's gone. After that 8,000 gallons is gone. Compare that to the other that returned 8,000 gallons to the sewer, the net water is 2,000. Very dramatic differences and if you don't



look at net water and only look at the potable water and the drinking water going into that facility, it would cause you to think that they are both the same, and, in fact, they are not the same as far as the net water use.

Also commitment of water over time, a lot of different industries have different water consumptions over time, and it's important to understand what that is. Location of growth, I alluded to this earlier when the discussions in old town. We have two surface water suppliers, the CAP and the SRP. The CAP water, we can use throughout the city. It has no restrictions on where we can use it and how we can use it. Salt River project water is restricted to Salt River project lands. And so it's basically any place south of the Arizona canal.

[Time: 00:24:35]

And of those two systems as we talk, the shortage is on the CAP system and its shortage is not on the SRP system. The SRP system has been able to weather the drought conditions better currently, than the CAP systems. I can't make forecasts for what is going to happen in the future, but I can tell you right now that the SRP system is not incurring a shortage. And so when you look at that, I can't take -- we can't take SRP water and pump that off of SRP lands. If we do, in the end we pay them back with our other water resources be that groundwater or CAP water.

So we are rather restricted to that water to that particular area and it's important to note. And then the last one is economic value of water. So when two entities approach us, approach the city, with an economic opportunity, we like to consider what the economic impacts are per gallon of water.

So it would look at what are they providing on a direct and indirect economic value to the city divided by their water use and that would give you an economic value of water. We like to propose those and back to council in the spring, with the full bread of these tools for council to consider and hopefully approve.

Additionally, we would like to do things that we will do on water side and our infrastructure planning, our water resource acquisition, and water recharging and recycling and put them in a singular document that talks about how we have sustainable water system and how we manage water in Scottsdale.

So we plan to be back to you in the spring with these developed and have a further discussion with council in the spring. Any last slide, but not my last point. Scottsdale water trends. So in this slide, you can see our drinking water, our potable water consumption by career from 2006 on. Again, we like 2006, because that's when we started with our safe yield.

And you can see so the blue bars are by year, the amount of drinking water that we delivered. The orange line is the service connections and you can see growth in the service connections through that time. And the black line is a trend line. It's just a statistical trend line. It's going down while we are growing. So that's -- to me, that says conservation works. We have been

pushing conservation. It works. Will that line continue to go down, as we grow, no, I don't suspect it will. Will it eventually go up? I suspect it will. But it's evidence that conservation works.

Going back to the slide, my first slide when I talked about our customer counts, 82,000, the majority, the vast majority are single family homes and single-family homes on average, 70% of the use is outdoors. That gives us a tremendous potential for water conservation and water conservation to work in our community. Thus our messaging for that. And, again, I will go -- can you put the Elmo on, Kelly? Thank you. Let's see if that comes up.

[Time: 00:28:18]

Just more evidence of things we want to pursue this year. These little strips of turf, you can never water them correctly. If they are less than 4 feet, the water systems don't work. They are all over water. They end up prematurely wearing the asphalt, the concrete. You can see dampness on both sides of this.

These are just a wait of water kids are not playing on it. It's not even useful for kids. It's right next to the road. Nobody wants their kid right next to the road. So it's really serving very little purpose. And we want to go after these. And my last point, last week, I know ASU was here and they were talking about the heat island effect and mitigation strategies. And several councilmembers pointed out, boy, that seems in contradiction to water conservation.

We want vegetation but we don't necessarily have the water to provide for the vegetation. I don't think it's quite as stark as that. We in the water side, what we want to attack is this turf and particularly turf like this, that provides no function, and while you could argue that that has some heat effect, if you go across the street -- I know it's a little hard to see, there's a xeriscape that has a shade canopy that doesn't have the overwatering effect here, that provides a heat effect and doesn't result in what this strip does.

And additionally, when we talk about removing turf, and our turf rebate program, we propose putting xeriscape irrigation in. And to the point, xeriscape, the first one here, is not xeriscape. We don't propose to just put rock everywhere. That's ugly. It has a terrible heat effect. That's not what is being proposed.

You can see the multilayers and the trees providing shade and providing heat mitigation. That is what we propose when we remove turf to put in vegetation like this, where we do have a heat mitigation effect and we also reduce water usage. So I think we can work combining to reduce heat mitigation and reduce water use all together. It takes a little planning and a little thought, but we can do that. And that concludes my presentation, pending your questions.

Mayor Ortega: Thank you, Mr. Biesemeyer. I see Councilwoman Whitehead. Go ahead.

Councilmember Whitehead: I just want to thank you. That was a great presentation. I keep

trying to be an expert on this topic and every time you speak, I learn more. I know I'm not the expert yet, but thank you. Great presentation.

Brian Biesemeyer: Thank you.

Mayor Ortega: Well, let me start with the big picture. And as you mentioned, the resources of Salt River project and their raising the dam, the Roosevelt dam back in '91, really helped to get more water storage.

[Time: 00:32:00]

However, you know, the CAP problem is tremendous for our neighbors that have more alliance on CAP water than we do. I have seen the charts about drought and the reduction and it's not much of a roller coaster. It's pretty much that down stepping all the time. Have we had a chart of graph showing development?

What we're talking about is new units coming online, whether they are multifamily, single family, I have never seen a graph showing -- because in my opinion, we had quite a takeoff and an acceleration of development and really raw numbers. So who -- who would track that or show us a graph of our incline in development?

Brian Biesemeyer: We can show you our service connections that have been made per year and we can show you where they have occurred. I don't have those now, but I can certainly get you those.

Mayor Ortega: And the other point is, you know, you say we have 91,000 connections, however, there may be a 200 unit complex, right, apartment or condo coming online. Does that count as one service connection generally speaking?

Brian Biesemeyer: It's going to have several. There will be multiples but it won't be 5,000.

Mayor Ortega: I see. So just to maintain water pressure and make sure it doesn't blow out the faucets and the toilets, there's several connections.

Brian Biesemeyer: We spend a lot of time when development comes in looking at their basis of design to ensure we understand all of those flow mechanisms and how much water is going to be used.

Mayor Ortega: Sure. As I looked at chart, you see from 2019 till 2021, this is an acceleration of -- there was -- the current 2021 is higher than 2012, and I realize that there was more development going on, but we are on a trend probably an upward trend of new units coming online.

I thought we should notice that. That graph indicates that we are on one hand asking people to

spend more and save less to make room for new development, I guess, and then saying that it's benefiting both, both the -- the existing consumer and the new consumer. I just think that we need to look at the overall impact.

Eventually our growth will semi plateau, but I also want to point out, you mentioned the Salt River project again, feeding new water or water that's filtered and goes to households and SRP area, right? South of the canal.

Brian Biesemeyer: To clarify, if may, mayor. Well, we use that from the canal and we treat it. I want to make the clarification. We treat that water and then we provide it to them through our system.

Mayor Ortega: Sure. I live south of the Arizona canal and so we get that water. At the same time, you also discussed the cost of water, in that the -- the CAP water or SRP water, the -- whether it goes back into the system, that is the wastewater gets recleaned or inserted, it's my understanding that most of our sewer water south of the canal or the same McCormick ranch exits the city.

[Time: 00:35:59]

So on one hand, we have a provider SRP, that's able to provide water, not paper water, but generally that would go to the SROG that was exported and goes downstream and we lose that water; is that correct?

Brian Biesemeyer: Mayor, you are correct. Generally, we send that down to our SROG partnership which is treated and then at the 91<sup>st</sup> annual treatment and used for the Palo Verde nuclear generating system.

Our plan as we grow in the south, is to reach down as that growth occurred, to reach down and build additional infrastructure to p.m. than north so that we -- to pump that north so that we stay at our -- our commitment is around 8 to 8.5 million gallons a day. It varies through the year.

It's just definitely given to us on a graph. But roughly on an annual basis, 8 to \$8.5 million a day. Our plan is to reach further south to ensure that we meet our commitment of 8.5 million gallons day but no more than our commitment so we can pump and recycle that water for ourselves. I have to also say that that water is -- you know, we get a return from that water, for the use at the Palo Verde.

It's sold to Palo Verde and that price goes up over time. I didn't bring that graph, but that price goes up tremendously over time. And after 2025, it becomes tiered and it provides APS a better incentive to use less water. And I believe with that tier and the cost factor, they will improve the water usage. They recycle their water over 20 times.

When they get our water, they recycle it 20 more times to ensure -- 20 plus times to ensure that

they get the most out of that water Tom answer -- but to answer your question in full, we have 20 million over to the SROG partners and over time we will reach in and send it north.

Mayor Ortega: Over time, 10 to 20 years from now that we will actually be -- I want to say building infrastructure, raising taxes to build something so that it can be pumped up north where we can recycle it and control it ourselves and still meet the 8 million minimum, you know, with the SROG commitment. I think that's through 2050.

So we still -- you know, we are exporting water from the growth areas south of Arizona canal, just generally speaking, but with a long-term goal of somehow building more infrastructure to control the wastewater treatment and recharge.

Brian Biesemeyer: You will see that in the next C.I.P. five-year plan and we will start the process for planning that out.

Mayor Ortega: Sure. So we will have some expenses coming for discussion and water rate increases to make that happen. The I see there's three other council people. Councilwoman Janik.

Councilmember Janik: Thank you. That was a nice presentation. I would like more information on the A.M. I. You said 30,000 of the 90,000 that we have are on that program.

Brian Biesemeyer: Yes, ma'am.

Councilmember Janik: How could you decide who gets it? Who pays for it? Have you seen any progress that when people get feedback, they tend to use less water?

[Time: 00:39:55]

Brian Biesemeyer: We haven't yet seen that. I mean, that's a gross measure. So it will take us several years to support through that. On average, when you look at other cities that have put this technology in, it's a 3 to 5% savings in water consumption. When you get them used to the water portal and monitoring their consumption, it's generally about 3 to 5% of savings.

Councilmember Janik: And how do you decide who gets in.

Brian Biesemeyer: We have poles and there's replays that have to take the message and send it to one spot and relay that to another spot. So it takes a lot of planning and infrastructure work to grow that out. I would love to -- next year to just go and, boom, we have got 90,000 people on it, but it's just not practical.

We have to expand those towers, do the radiometric studies to make sure that we get the reception correctly and then put the infrastructure in and slowly go about that. Additionally, as we get further in some of the northern areas where the terrain is up and down, it gets much

more difficult. It's a slow, methodical process. We absorb it all in our current rates.

Councilmember Janik: Thank you. Appreciate that information.

Mayor Ortega: Councilwoman Littlefield and then Vice Mayor Caputi.

Councilmember Littlefield: Thank you, Brian. You are so dedicated to this and it shows the work, the thought and the effort that you put into this. I just want to make one comment and I like the idea of people being able to monitor their water usage and find, what am I using and try to figure out how can I cut back in the ways that will be least impactful for my quality of life, but good for the city to save the water.

So I think that is an excellent, excellent way to go for a lot of individuals and I think you will probably have from my emails I think you will have a lot of interest in that from our citizens. Thank you.

Brian Biesemeyer: Good. Thank you.

Mayor Ortega: Vice Mayor Caputi.

Vice Mayor Caputi: I think it's really important that we are having this conversation today because, of course, all of our residents are very concerned about water. We all get emails all day long about this. So it's great that we are having this conversation. That last graph was reassuring, showing that the conservations do work. I thought that was pretty powerful, the fact that service connections have increased and water usage has gone down.

The other fact that we don't have an SRP shortage which is everything south of our canal, again, that should make people feel a little bit -- sleep a little bit easier at night. We don't actually have an emergent situation south of our canal yet which is great. One question.

You made the point that the vast majority of water users were single-family homes, is that because we have so many more single-family homes than apartment buildings.

[Time: 00:43:18]

Brian Biesemeyer: No, it's really the connections. And the mayor had it correctly. There's not as many connections with a multifamily facility. We many measure them at connections. While I say 5,000 connections, that could -- it's a much larger population than 5,000. I don't mean to imply that. They do generally use less and not as much outdoors through the multifamily units. But they also have, as we showed, large turf areas that we want to encourage them to take care of and if they can remove.

Vice Mayor Caputi: But there must be some efficiencies with a multifamily hookup. It has to be a more efficient model, right? You have all of those toilet flushes coming from one location and

all the water going in and out from one spot?

Brian Biesemeyer: Yes, ma'am. When you look at a net water usage, you get more return for the water actually provided.

Vice Mayor Caputi: Okay. I know and you pointed out back to the things we would be able to use to make good conditions, I think one of those was the location of where the development goes and I think that ties in with that, you know, it's a more efficient use. Just something to think about as we make decisions going forward. Thank you.

Mayor Ortega: Thank you. Councilmember Milhaven.

Councilmember Milhaven: Thank you. And thank you Mr. Biesemeyer for a great presentation. I'm glad they were able to do this in this form because we were all getting questions about where we are in the water shortage. Doing this in a public meeting is very, very helpful. Thank you for your help. After we have the tier one we have lots and lots of questions from constituents and your emails to them were enlightening to them and to us as well.

Some of the things that I found compelling, we recharge more water back into the ground than the entire city of Scottsdale uses in a year. Did I get that right? That's okay. You can correct me.

Brian Biesemeyer: Mayor, Councilmember Milhaven no, we -- we recharge more water than any of the tier shortage -- than the tier shortages. And over time, we have several years upwards of three years of water that we recharge and credit. So theoretically we have a big bank account where it's multiple years of total water consumption that's stored in the aquifers through groundwater recharge that we could recover.

[Time: 00:46:10]

Councilmember Milhaven: Despite the cutbacks we continue to recharge water, I think that was said earlier in the presentation. So even with the cutbacks we have water that we can recharge?

Brian Biesemeyer: Could you, Kelly, go back to that slide?

Councilmember Milhaven: That should give some folks a feel better about how we are able to manage through the shortage or the cutback.

Brian Biesemeyer: So this is -- this shows our recharge efforts in effluent and CAP water. And I think Gretchen's analysis of a bank account is very valid. It's a fixed value. You don't want to -- we use that in emergency situations.

And if we need it, but obviously, it is like a bank account and we want to be very conservative at using that if we have to.

Councilmember Milhaven: Okay. And I also understand, you do forecast future demands for water and those forecasts anticipate -- look at sort of what has been approved and what will be planned and what future development might. So you are planning for future development already?

Brian Biesemeyer: Well, we brought our impact fee analysis, the land use, they had plans for development and we based them on our work with long-range planning within the city and the Maricopa association of growth patterns.

Councilmember Milhaven: Thank you for staying ahead of things. Thank you very much.

Mayor Ortega: Many times we talk of the bank account and I heard the carefree aquifer. I understand that that's the recharge area where the city recharges; is that correct?

Brian Biesemeyer: We have a recharge. That's not our primary recharge area. Yes, we have done that and that's been great for that particular aquifer, but that's been rather limited. The majority of our recharge is not in is that same area.

Mayor Ortega: Is the recharge basically in the city limits of Scottsdale? I'm speaking generally because I remember when the Aqualalla venture was done 21 years ago and there was discussion of the carefree aquifer. So is the storage area generally within Scottsdale city limits or does it kind of bleed over to carefree and other areas?

Brian Biesemeyer: Well, carefree is a little separate. We do have some wells up there. We have several wells up there that we can recover from and we do recover from. That is different. We do have a recharge area up there and we have the ability to recover up there was well. The point being of our ASR wells was to expand that capability.

We had water and we recharged it at other places. Grusp is one area that we recharge in the east Salt River basin, and we have at times recharged in areas outside the city of Scottsdale but as we go forward, the intent is to put all of that water with the ASR wells into the aquifer within the city of Scottsdale.

[Time: 00:49:38]

You are correct that that aquifer goes all different corrections. So -- but the good news is while aquifers move and the water moves in the aquifer, it moves in the waters of meter a year and it's not on a lightning race to get out of the city. It's a very slow, methodically process as that water moves.

Mayor Ortega: Good. I wanted to clarify that. If the water treatment was right on Scottsdale Road, right where the border is to Phoenix. So we do have a bank but we have several people withdrawing from that bank. That's my general point. And finally to close out the question. I saw a request or a possible app for underground water just tracking it and they had tutorial for me



and council to look at. Did you see that come across?

Brian Biesemeyer: That is a new one to me.

Mayor Ortega: I think it might have been through AMWAR or somebody. Thank you. Finally, Vice Mayor Caputi.

Vice Mayor Caputi: I wanted to close it out -- I want to underscore what Councilwoman Milhaven just said. I think the most important thing for people to understand is that we are planning. We're having presentations. We are all getting will god on the issue -- getting schooled on the issue of water and we are looking far, far ahead. And when we get the emails where are you going to find the water. We are looking far ahead.

We have an entire department continually repping and making sure that we are in a good situation. So I want everyone to just -- if they could take one thing away from this conversation, it's that we are being thoughtful and we are planning carefully for the future because we do live in the desert and we are certainly giving great thought to the fact that water is a scarce resource.

That's why we are having work studies on drought and on heat mitigation and on planning thoughtfully for the future. So this council is certainly very interested in making sure that we do all those things correctly moving forward. Thanks.

Brian Biesemeyer: Thank you.

## **ADJOURNMENT**

[Time: 00:51:59]

Mayor Ortega: I think that would conclude our work study item. And thank you. At this point, I would just reopen public comment as a matter of record. Seeing none, I would close public comment. And then ask for a motion to adjourn our work study.

Councilmember Janik: I make a motion to adjourn our work study session.

Brian Biesemeyer: Second.

Mayor Ortega: A see a motion and a second from Ms. Whitehead. Please record your vote. We are adjourned. Unanimous.