

Austin Water Oversight Committee (AWOC)

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[1:36:15 PM]

>> Good afternoon, colleagues. I hope everyone's having a great day so far. Our first item on our agenda is to call the meeting to order. I will call this meeting of the Austin water oversight committee to order at exactly 1:36 P.M. And we have a quorum present with councilmembers pool and councilmember Ellis joining us, as well as the mayor pro tem alter. So, thank you all for being here. It's my understanding that we do not have any here for public communication, is that right? Correct. So the next item is the approval of the minutes from the March 31st, 2022 special called meeting. Is there a motion for approval? Mayor pro tem motions, seconded by councilmember pool. Any discussion? All in favor say aye? Unanimous approval on the minutes. Colleagues, we're going to save the winter storm uri review until the end.

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I'm going to call up the briefing on the Austin water service extension request program, ser. This is a program that I myself, as a newer councilmember, wanted to learn more about. Certainly we've gotten several ser requests on our council agendas, so I thought it would be great for us to learn more about the policy associated with the Sers and to hear from staff. So I will now turn it over. Thank you. >> Good afternoon, I'm Kevin, assistant director with Austin water, over environmental planning and developmental services. Happy to be here with you to talk to you about our ser process. By way of overview, our process is a very important part of our overall utility planning efforts across the utility. It's a key planning tool that we use to incorporate a number of our different planning throughout the utility.

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You can imagine planning for a utility of our size involves a lot of planning, such water forward, a 100-year plan. We have our long range utility planning, a 30-50-year planning infrastructure guide. That feeds into our capital improvement program, which is more of a five and ten-year look at capital needs for our utility. Ultimately, we use the ser process as a tool to link more near-term needs through that whole planning cycle. It's basically how we assure that ongoing or near-term needs associated with commercial development, we're able to meet those needs in a way that complies with all of the city codes and ordinances, can be done in an equitable and transparent way. And so we're going to talk to you about the ser process and

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try to link that back to a variety of utility code directives that we use to manage our process. With me here this afternoon is swetha, division manager over utility development services division. That area is responsible for all of the integration and outreach with the development community. In the division completely there is our service extension request program. There's also our utility plan review process. On-site water reuse, and wholesale customer contracts and our wholesale districts program. So, that's kind of an overview. Swetha will talk through that process and give you an idea of workflow, some of the criteria associated with evaluating Sers and how it blends together. With that, I'm going to turn it over to swetha. She'll go through, and then we'll be available for questions. Thank you. >> Thanks.

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>> Thank you, Kevin. Good afternoon, chair and council. My name is swetha. I'm the business strategy manager for Austin water. And my division oversees land development activities for Austin. Next slide, please. In our agenda today, we will go over some high-level program information about service extension requests, or Sers. We look at what is an ser, when is it triggered, what is the purpose of an ser. We look at factors considered prior to issuing an ser. We'll go into the workflow and approval process, oversizing and cost participation, and I'll conclude the presentation with some high-level program statistics. Next slide, please. So, this exhibit here represents in a very simplistic manner Austin water's service area, co-terminus with city council approved impact fee boundary.

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So, the red outline on this map is the impact fee boundary. Austin water must provide service within the city's full purpose jurisdictions and the service area. So that is represented by the yellow boundary on this map. Anything outside the yellow consists of the limited full purpose, the two-mile, and the five-

mile etj. Austin water may choose to provide service in the blue areas, or release it from its service area for another utility provider to provide service. The decision to provide service is dependent on municipal planning and utility imperatives. Austin water cannot accept applications outside the red impact fee boundary. Next slide, please. So, on this slide, we'll look at what is an ser and what does it do. Sers exist in order to ensure that the city's water,

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wastewater, and reclaimed water systems have adequate capacity for new projects. Further, they ensure that proposed extensions of the utility system meet both the city and Austin water's infrastructure planning goals. Sers evaluate infrastructure improvements required to provide the requested level of service for a project. This could be in the form of brand new extensions or they could be upgrades to the existing infrastructure. The key that I want to highlight here is that Sers are specific to a project use, size, and utility demands, so they are not for a subject tract. They're very -- sort of blanket approval for a subject tract. It's very specific to a project. Sers also serve as a feasibility tool prior to any formal design plans in order to get a sense of what kind of cost, what kind of construction impacts there will be based on

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the project. Next slide, please. Land development code 25-9 governs the process, for water/wastewater systems. Procedurally, service extension requests are required if any of these three conditions are met, or not and. When an existing system is greater than 100 linear feet from the property, an ser is needed. If the existing system is not suitable or sufficient to meet the project needs. Suitable and sufficient essentially means that the existing system at the location of the project can meet the project demands and that it meets the utility criteria manual's minimum sizing and capacity requirements. And finally, when there's a connection proposed to an existing water transmission or a wastewater interceptor line. Transmission is 24 inches and

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larger and wastewater interceptors are 18 inches and larger. So when any of these three conditions are met, a service extension is triggered by code. So this request proceeds any kind of formal development application, such as concept site plans, preliminary plans, plats, sites and sub division plans, so on. Next slide, please. So, in the next couple of slides we'll be looking at what are some factors that are considered prior to issuing an ser. I want to start off by saying that Sers promote orderly and equitable expansion of Austin water's infrastructure system. In order to process an ser, initially there is an initial phase called the ser completeness or administrative approval process, which looks at things like if fees

are paid, if the application is complete, and any project-specific information as provided. The project-specific information

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will need to be engineer-stamped and it can include conceptual sketches, drawings, any preliminary plans that can help staff perform a more detailed technical review. Once the administrative process is deemed complete, it proceeds to the technical review. Technical review is performed by a professional engineer licensed in the state of Texas or an engineer in training. The technical review broadlien compasses are view for size, capacity, and hydraulic evaluations and overall the impacts caused by the project on our existing system. One of the key things that is evaluated at this phase is the alignment with long-range planning. This is Austin water and city's long-range planning goals. A preliminary routeing is proposed at this time based on rough proportionality, which is essentially -- just means that the project is sized to meet what the project will need in

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terms of pipe sizes and capacities. So, it's really a determination of rough sizes of pipes and capacity needed to serve that project itself. Other factors such as ease to be able to construct the project, the ability for future maintenance and access to these facilities are also evaluated at this stage. Next slide, please. Some basic information that's needed in order for the technical review to be complete includes project-specific information about average and peak wastewater flows, average and peak water demands, and fire protection information. It's a must for technical staff performing this to have a general sense of state and city design criteria in order to be able to lay out the alignment that eventually can generally be designed and constructed. Any oversizing requirements are

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also considered at this stage. I will talk a little bit more in detail about oversizing in my upcoming slides, but simplistically, oversizing is considered when Austin water's long-range plans require a size of pipe or infrastructure larger than what the development or the project itself needs for itself. Another key part of technical review includes coordination with internal Austin water stakeholders as well as other departments. Within Austin water, we interface with engineering services, with systems planning, with operation staff to make sure that what is proposed can eventually be maintained. With other city departments, there's key interface with Austin fire for any fire protection needs or challenges, there's interface with development services department for any forthcoming development applications, planning and zoning for any annexation requests, and the watershed protection department for any environmental reviews. Once technical review is

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complete, staff depict a conceptual line drawn on the ser map with some descriptions specific to the upgrades itself. That is then called the draft ser. Next slide, please. So before I dive into the workflow and approval processes, I want to revisit this map one more time, this time with a different set of layers. In the context of Sers in addition to jurisdictions the location of the project with respect to desired development zone or the drinking water protection zone is also key. So on this map here, the red outline is the impact fee boundary and the pinkish purple is the desired development zone. And the greenish color is the drinking water protection zone. And I'll talk a little bit more about how this references with the approval process in my next few slides. Next slide, please. So, this is a very high-level

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workflow of the service extension request process for the approvals. I have detailed diagrams in my next two slides, so I'll spend a shorter amount of time on this one. So at a high level, an application is received after administrative and technical review is complete. There can be two outcomes -- one, there are no infrastructure improvements needed or two, infrastructure improvements are needed. When there are no improvements needed it proceeds to a suitable and sufficient level being issued. And when infrastructure improvements are needed then there are two other factors that staff evaluate -- the location of the project, and the use of city funds. Depending on the location, if the project is in the desired development zone and city's full purpose it proceeds on to staff approval. Alternatively if it's located in the drinking water protection zone outside city full purpose, it moves to seek council approval. Along the same lines, when applicant seeks to use city funds for oversized

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infrastructure it also proceeds to city council approval. And I have detailed diagrams about this. Next slide, please. So, on this, very similar to what I explained, this work low is specific only to staff approval of Sers. So you'll see when an application is received, at the top left-hand corner and technical review is complete, it could have no improvements needed, and it proceeds to issuance of a suitable letter. A glimpse of that letter is on the right-hand side of the slide, saying that the water system can meet the project demands at the location of the project and still meets utility criteria manual requirements. The alternate path is that infrastructure improvements are needed. If the project site is located

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in the city's full purpose limits and in the desired development zone, then this proceeds on to technical review and staff approval, where staff issue a draft ser and it is sent to the applicant and finalized. Next slide, please. This workflow recognizes a slightly busy chart, but I'll walk us through all the boxes. This workflow is specific for city council approvals. So back to our first step where an application is received and technical review is completed, we seek city council approval only when infrastructure improvements are required. So there is not an alternate situation where there are no infrastructure improvements needed. When infrastructure improvements are needed, it can have two paths. One, the developer is interesting city's cost participation for oversized infrastructure. Essentially, oversized infrastructure is anything larger than what the developer

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needs for their project demands. When that is the situation, it proceeds to water/wastewater commission and is placed on council agenda to seek council approval. The other path is when Sers are located outside city's full purpose and in the drinking water protection zone. This is an "And" statement. It needs to be both conditions. The map on the right-hand side of the slide, the black hashed areas are represented above the areas that are outside full purpose and in the drinking water protection zone. So, when those Sers are submitted, it goes through a couple of steps prior to seeking city council approval. It goes through watershed department environmental review and then it proceeds to environmental commission recommendations. And it concurrently also goes to water/wastewater commission and eventually city council for

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approval. Austin water and watershed protection staff work jointly to review the environmental finding memo and provide a joint recommendation to city council. Austin water's purpose with the ser program is to ensure that we can provide service to the project based on city and state requirements. Next slide, please. So, this slide here really talks about the oversizing and the cost participation piece of it. So as previously discussed, oversizing is considered when Austin water requests the applicant to construct improvements that are larger than what is roughly proportional to what their project needs, so, rough proportionality is when an applicant is required to construct infrastructure to meet their project. Anything beyond that would be called oversizing and that would be where the city has the ability to participate.

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Austin water technical staff determine what is roughly proportionate to the development or the project needs. And the methodology to calculate cost participation is outlined in line development code 25-9-

62. Essentially, the reimbursement for cost participation follows a percentage of hard cost and up to 15% of that percentage for soft costs. So essentially, hard costs are generally costs of construction, of the material and so on. As a percentage of that. And soft costs are usually design, geotechnical surveying, and things of that sort. And Austin water can take up to 15% off for soft costs. And how is the hard cost determined? Typically, they are a percentage pipe size differential if it's infrastructure, and it's a percentage capacity differential if it's any facility. That's how the calculation works. We have detailed tables in land

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development code that guide staff and applicants to see how this process is done. It's fairly transparent. Next slide, please. Also, I wanted to mention that city code does prohibit oversizing of wastewater infrastructure in the drinking water protection zone. So, with the city cost participation, there are five simple linear steps. It seeks city council approval to use city funds. There's an agreement negotiated with the applicant and a public bid and procurement process that includes all of standards, m/wbe goals and minority goals from the city. There is Austin water oversight of cost, and a reimbursement payment plan. And that reimbursement kicks in after final acceptance of the project. The reimbursement is based off the location of the project, whether it's in the drinking water protection zone or in the desired development zone. Next slide, please.

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So, this slide here really talks about how the service volumes have increased in the last ten plus years. You'll see that in fy10 we processed about 80 or so applications. And in fy21 that has increased to 400 plus applications. That reinforces the growing land development patterns within the city of Austin. Next slide, please. So, as I conclude my presentation today, I want to summarize some of the items that I mentioned. This extension request program exists to ensure that water/wastewater and reclaimed systems have adequate capacity to meet project needs. They promote equitable expansion of the water infrastructure system. These plans are developed in consultation both internally within Austin water and other city departments. And an approved service is an approved utility service plan for the proposed project. Service improvements are

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conceptually depicted and can be used as a feasibility tool. Applicants are required to construct things proportionate to the size of the project. Anything beyond that is oversizing and the city has mechanism to participate. With that, I thank you for your time and I'm happy to answer any questions. >> Fuentes: Thank you. Colleagues, any questions? Yes, councilmember Ellis. >> Ellis: Thank you. Just a bit of a

historical question. The difference between coming to council for approval and the drinking water protection zone and being administratively approved and the desired development zone, was that a council-approved direction or was that something developed through engineering and other expectations that y'all look at? >> I believe it was council-approved direction and I believe there was some initial discussions in 2009 and eventually code was modified in 2013 and that was direction from city council. >> Fuentes: Okay. Thank you. >> Thank you.

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>> Fuentes: A couple questions I had. How would you define equitable expansion of infrastructure as part of the ser considerations? >> I think what we look at in terms of equity is that we're fair and we're consistent when applying these rules. We believe the ser program -- the fact that it's in code, we don't -- Kevin's favorite statement is we provide utility service without prejudice. We don't discriminate between areas, geographic boundaries. Anybody who needs service, we evaluate them for what option they have to receive service and apply the same rules. In terms of oversizing and the use of city funds, we use the same consistent methodology. That's how we believe it's an equitable process. >> Fuentes: Okay. That sounds more like it's an equal process. I was thinking more that for areas, especially since we know that the east part of the county is not in the drinking water

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protection zone, that that would have -- the areas that have been largely zoned and designated as a development desired zone would have perhaps some increased infrastructure standards or needs given especially now, the increase in development that we're seeing, especially in southeast Austin. >> Chair Fuentes, I would add that our code requirements, including our technical criteria manual, really set the bottom level of minimum requirements. And that's really our making sure that at least those minimum requirements are met. We do look for opportunities to potentially oversize. That's where our long-range plans, other city initiatives, imagine Austin, water forward, etc., would come into play on how far we would oversize those lines. So that's basically how we take

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those into consideration. Realize that a lot of it is driven by commercial needs that are on the ground, folks that are moving forward to try to develop property for a variety of uses. It's kind of that interplay that leads us to choosing to oversize where we can. >> Fuentes: Okay. Then also, how does our ser program compare with other ser programs throughout the state, or throughout the country with the considerations that we have for service extensions? How would you rate our program? >> I don't know about the ranking system, chair, but I can say that when we went through the code -- land development

code changes, I believe that there was a benchmark study that was conducted with other comparable cities such as Dallas, Houston, San Antonio. And I think that they all have programs similar to this. They may not call it exactly this. We did perform a benchmark study and it seemed like we were in

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line with that study. I can get more information about that if you're interested. >> Fuentes: When was that benchmark study conducted? >> I believe one part was completed in 2009 and there was a followup in 2013. I'll have to verify the dates, chair. >> Fuentes: Okay. Colleagues, any other questions? All right. Thank you so much. I appreciate it. >> Thank you. >> Fuentes: Our next topic is the -- we're moving on to item number 4, Austin water's aquifer storage and recovery project update. Asr. If you wouldn't mind introducing yourselves as you begin, that would be great. Thank you. >> Good afternoon, chair and councilmembers again. I'm Kevin, Austin water. This afternoon we'll be now describing to you the status of

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our aquifer storage and recovery project. You'll reflect or remember that asr project came out of our long-range water forward plan, our 100-year water supply plan. In that plan we identified a number of strategies to try to meet our community's water needs for the next hundred years. Those strategies included protecting the core Colorado river water supplies, continuing our focus on water conservation, advancing the use of both centralized and decentralized on-site reuse, as well as implementation of our smart metering program. In addition, one of our largest single supply development side projects would be our aquifer storage and recovery project. That project is unique in a number of ways, because it is one of our larger projects on the books to try to help meet our community's future water supply. Also, even though asr is used

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very widely across the world and the United States, and even in Texas, it will be our first foray into this particular type of technology. So, there's some unique aspects of it. We continue to advance the project, so we're happy to say that we're continuing along that. And Helen will provide you with more specifics on project overview and status. Helen is an engineer in our systems planning group, specifically our water resources team, project manager over our asr pilot project. With that, I'm going to turn it over to Helen. >> Thank you, Kevin. I'm the Austin water project manager for the asr project. Next slide, please. So today I'll talk a little bit about background on our aquifer storage and recovery project, tell you guys about the project timeline, some of the work that we've been doing so far, and what the plan is for next steps

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and upcoming work. Next slide, please. As you might be able to infer from the name, aquifer storage and recovery, asr is a strategy to store water in an aquifer in wet times when the water is available and then recover it later when it's needed such as during severe droughts. Asr is a water supply strategy that's being used all over the United States and especially in Texas. San Antonio, El Paso, and Kirville have operating asr systems. Next slide, please. Before I talk more about aquifer storage and recovery, I wanted to go over hydrogeology basics. Aquifers are layers of rock or sediment below the ground that can hold large amounts of water. The water is stored in the pores between the rocks. You can think of it sort of like a sponge. And that water that's stored in those spaces is what is known as

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groundwater. Different aquifers can have different properties depending on the type of groundwater stored, the type of rock or sediment that makes up the aquifer, the size of the pores in the rock and many other factors. Typical wells work by pumping out the groundwater that's stored in those spaces in the aquifer and asr is unique and different than a typical groundwater well because we pump water into the aquifer before we recover it. So asr will never recover more water out of the aquifer than what was previously stored. Next slide, please. Aquifer storage and recovery is a key strategy in the water forward plan, Austin's council-approved integrated water resources plan that Louise lays out a map of strategies. Key drivers for that water-forward plan include needs in the future due to growing population, severe droughts and the effects of climate change. Asr is an important piece of

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that water-forward plan as it provides a source of water supply for those long-term severe droughts. And in addition to asr, the water forward plan includes many other strategies such as conservation strategies to reduce demand and water reuse strategies. Work on the first phase of our asr project began in early 2021. And the goal of this first phase of work is to identify possible locations for our asr project. Next slide, please. As I mentioned earlier, asr would store water when supplies are plentiful. Aquifer storage and recovery is planned to store high-quality water from Austin's drinking water system. That water would be pretreated before it goes into the ground to protect the aquifer system. The water that would be used for asr is available under Austin's existing water rights, so that would allow us to maximize our existing supplies by increasing our operational flexibility with that additional

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storage. The water remains stored in the aquifer until it is needed. Next slide, please. And then when regular supplies become scarce, such as during a severe drought, the water stored in the asr can be pumped out or recovered and used to meet demands for water customers. When that water is recovered, it will be treated before it is sent to any customers. Next slide, please. Aquifer storage and recovery systems are a useful water supply strategy for a number of reasons, including the project benefits that are shown up here. Asr will help make Austin's water supply more resilient to the effects of climate change and draughts by providing stored water. An asr system can store large amounts of water with minimal disturbance to the land above. Water is available under our existing water rights, allowing us to maximize our local water

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resources. Storing water underground in a natural aquifer prevents losses like those we experience with reservoirs. And storing water in a natural aquifer is more cost effective than many other similarly-sized storage options. An asr system could provide a second source of water during supply emergencies such as severe droughts or supply upsets. Next slide, please. This timeline shows the steps for the asr project, from the projects beginning in 2021 through completion of full-scale asr construction, estimated to wrap up by 2035. Right now we're far to the left on this graphic, in phase 1a, when we're working to determine the best location for an asr project. Once we have a location identified the next step will be to build a small-scale pilot project. A pilot project would be a small-scale project that gives

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us an opportunity to test our assumptions and gather detailed data before any work would begin on a full-scale asr project. Upon successful completion of a pilot project, design and construction of that full-scale asr could begin. And that would be estimated to be complete by about 2035, at which point we could begin storing water in the asr and hope to build up supply by 2040 in alignment with our water forward goal of having 60,000-acre feet of water stored by 2040. This timeline hopefully gives you a high-level look at the timing of the project and emphasizes that we're still in the very early stages of phase 1a and have lots of time to work with the community throughout the process to share updates and gather input. Next slide, please. So this slide lays out the timeline for our current stage of work, what I've been calling phase 1a. That's what we're working on

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right now. The goal of this phase 1a is to identify the most favorable sites for an asr project. Everything that we're working on right now is desktop-based, computer modeling. There's no fieldwork being done in this stage of the project. So the first step of the work we've been doing was to look at nearby aquifers to determine which were most favorable for asr. This was done in two steps, a high-level screening to narrow down and focus in our more detailed analysis. I'll talk a little bit more about that high-level screening in later slides, but we identified at a high level aquifers in Travis, bastrop, and Lee counties that we'll be analyzing in more detail. In parallel to looking at the aquifers we're looking on the Austin water distribution side to determine where an asr project could tie back in with our Austin water infrastructure. We're calling those integration points where the asr could tie in. Our next step will be to combine

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the outcome of those two investigations, looking at the aquifers and the integration points to create full asr project configurations that will then go through a detailed evaluation using criteria and weightings which will be developed with community input. We have outreach planned for the summer as well as dedicated community workshops to receive input on the criteria and weightings that will be used to evaluate those project configurations. After we've performed that evaluation, we'll report out to the community with the results, with the ultimate outcome of this phase of work being a site that has been identified as the location -- a favorable location for field testing and asr piloting. And throughout the process we'll continue to engage with the community and we'll be performing ongoing equity and affordability work, including development of an equity and affordability road map and tool that will help guide implementation of asr. We have also already begun some

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of our community engagement for this project. We hold two community workshops at the end of March. Those community workshops were conducted to share information about the asr project, answer any questions that folks had, and then receive input on equity and affordability considerations to feed into that roadmap that I mentioned. Those workshops were advertised in all three of the counties that were identified as areas of further interest and we had attendees participate from all three of the counties. Next slide, please. So I'll talk about the high-level screening that I mentioned. So, this was done because we wanted to cast a wide net for possible asr options. The screening identified aquifer areas at a large scale that would be favorable for Austin's asr with the goals of that project. And the results of this screening help us focus future work on identifying favorable asr sites within these broad

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areas. So as part of that initial screening, we looked at Travis and the surrounding counties for a total of an eight-county area and looked at the aquifers in those areas, including the major aquifers, the Trinity, Edwards, and Willcox. We looked at subunits of those major aquifers to get more granular information. Next slide, please. In addition to the major aquifers, we looked at minor aquifers in the eight-county area. There were six minor aquifers that we looked at and we looked at the outcrop and sub-crop regions of those as appropriate. Those were the Jackson, the Sparta, queen city, marble falls, and Hickory aquifers. Next slide, please. We screened these major and minor aquifers and their subunits based on several factors which are shown here

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with their scores. Those include feasibility of meeting project yield goals, hydrogeology factors, permitting factors and proximity to the existing Austin water system. The data from that screening is shown here with the key takeaway being the three areas listed at the top. The metric shows those three areas were the most favorable for further investigation. And those areas are the Willcox in bastrop, Lee, and Travis county. So those will be moving forward for more detailed spatial analysis to continue our work to look for favorable asr sites in those areas. Next slide, please. This shows you an illustration of the results on the previous slide showing the Willcox and Trinity aquifers in that Travis, bastrop, and Lee county area.

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So these are the broad areas we're focusing in our further work to identify favorable asr sites. Next slide, please. So, next step for this project includes the detailed special spatial analysis to identify possible asr well field locations. We'll be evaluating those locations and their associated asr project configurations using evaluation criteria informed by community input. Again, we have outreach planned over the summer as well as dedicated workshops scoped that will be used to receive input on the criteria and weightings. Based on the evaluation results, the end of phase 1a will be a recommendation for a location for further field testing and asr piloting. Phase 1a is projected to wrap up by about the end of 2023 as our current schedule and we'll need council approval for future phases of work and any land

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agreements that come out of that process. Then throughout the process we'll continue to work to engage with the community and implement asr with an equity and affordability lense with our equity and affordability roadmap and tool to help guide that implementation. Next slide, please. And here we

have a few resources for the asr project. We have our project page on our Austin water website, as well as our asr project page on the speakup Austin site. On the speakup Austin page, folks can submit questions to the project team. We have resources uploaded there for people to learn more. You can request a presentation from the project team about asr. We also have a link to our asr educational video, which there's a screen capture of on the slide there. And that video just talks a little bit more about what asr is and Austin's asr project. And so with that, thank you very

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much for your time, and I'm happy to answer any questions you may have. >> Fuentes: Thank you so much. Councilmember pool. >> Pool: Thanks, chair, and thanks to our staff for a really good briefing on the potential for aquifer storage and recovery, that project update. I was curious, in the conversations that you've been having with the community as you've done your preliminary assessments and so forth, have you talked about what impacts it would have to the local communities and by doing so, the visuals or -- because I noticed on one of the slides you show -- go back to one of the slides, you have a couple of images to show location. Yeah. Those two little . . . I don't know what they would indicate. So that cylinder and then the square with a little roof on it,

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I assume those are part of the storage system, the facility for it. So I was curious what people may have said when they came to get the information in your outreach and whether there were any criticisms of this approach. Because basically we have to do something. Austin water has been looking at this issue for many years, that the storage of water is a really good solution to this. But there's always the other side of the question. So I was curious what kind of position or criticisms have you run into, if any? >> Thank you for your question. People were most interested in where it will be, which we don't currently know. There was a lot of interest in how it would affect neighboring wells. And since we don't know where it

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will be, we don't have specific details on that. But a priority is to implement that asr project equitably. And hopefully our equity and affordability tool will help us identify those potential impacts that we would have on neighboring wells and identify mitigation strategies that we could use. We also tried to explain, compared to other storage strategies, asr has a pretty minimal impact to the land above it. The little square with the triangle on top in the picture, you know, I think would be about the size of a large shed, you know. So a -- you'd have several of those at all the different wells, but a pretty minimal footprint compared to other strategies. We tried to emphasize that. I have felt like people were

generally supportive at the meetings that we went to, and mostly had a lot of questions. So we'll need to do a lot of work once we narrow down where

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we're going to help address their concerns and make sure we're taking into account all the different thoughts and opinions. >> Pool: That sounds good. How would we transport the water from the aquifer when we needed to tap into it? Would it be trucked in, or is there a pipeline? >> Yeah, it would eventually be some sort of transmission infrastructure that would go between our system and the asr. That's part of the reason why proximity to the Austin water system was used as a screening criteria at the very beginning, because obviously more transmission infrastructure means higher costs and more operational complexity. So that's definitely something that's being considered. >> Pool: So that pipeline - this would be a pipeline and it would run underground. So this must be where different property owners were concerned about the impacts on their particular wells, is that correct? >> Mhmm. >> Pool: Not so much for the actual storage tank, although

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perhaps for that, but also and possibly more for the transmission pipeline between wherever the storage tank is and the main receiving location, which would be in Austin at one of water treatment plants? Where would the end point be? >> Sure. And then just to clarify, you're mentioning a storage tank. I just wanted to emphasize -- I know in our picture it's kind of shaped like a round storage tank, but the water is stored in the aquifer. >> Pool: It's in the aquifer. >> There's no tank, it's in the natural rock matrix, which is part of why it's so cost effective compared to other large storage options. So there would be potentially some impacts from the transmission main, since that's running underground along people's properties, but also since we're directly putting water into the aquifer and taking it out, folks were concerned about maybe fluctuating aquifer levels as a result of that. And then yes, the transition

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main would tie back into the Austin water system. That -- we looked at that as part of our integration point analysis. So it wouldn't necessarily have to be a water treatment plant. It could tie back in at any spot where we could have some additional infrastructure to help balance out the water and get it up to the right pressure, and do any treatment we needed. So we looked at existing Austin water sites such as pump stations as well as Austin water-owned sites with decommissioned infrastructure, that kind of location. >> Pool: And a large enough capacity that it could be transmitted fairly quickly, a large volume. Thanks so much, chair. Thank you. >> I might just add, again, we have been engaging the public in virtual forums. A lot of the folks so far, people that probably have more interest in the actual

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groundwater aspects of it. So they're fairly familiar with hydrogeology. So right now I would reinforce what Helen said. A lot of the concern right now is about potential drawdown effects in the aquifers themselves. We do expect that we will have people, as we further define where we're going to actually locate the facilities, some questions about physical facilities. Again, what's shown here, the graphical representation, size-wise most of these facilities -- surface features are pretty innocuous and blend in, but to your point, they will be new things and things that people aren't used to seeing. And there will be transmission mains and pump stations and other things, so we're starting to tease those things out of community in our engagement and we'll try to include all of that as our planning continues, so. >> Pool: That's really

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helpful. And one last point that that made me think is there would also have to be some kind of a security perimeter I imagine, around whatever the little huts or small buildings might be, kind of like a -- an electrical substation. Hopefully not -- maybe it would be nicer-looking. [Laughing] Not that we don't love our Austin energy substations. Thanks. >> Fuentes: Thank you. Colleagues, any other questions? All right. Thank y'all so much. >> Thank you. >> Fuentes: All right. So next up is item number 5, which is Austin water's wildfire mitigation strategies. We will have staff join us for this presentation. I believe mayor pro tem alter requested this briefing and as it is wildfire prevention and wildfire safety awareness month, correct? Yes. This is very timely. Thank you. >> Surprise, it's me again.

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[Laughing] >> Good afternoon. Kevin, Austin water. We're here to talk to you about our fire management practices. Primarily on our wildlands, but we'll also fill you in on other activities we're working on throughout the utility. Austin water is a fairly large landholder in our community. So we're going to talk to you about what we're doing. We've got a very -- I like to believe we have a very strong program in that regard. Realize that land management, open space management is not exclusively our province. We do that in partnership with others. There's many other public and private landowners. Wild park protection is a shared responsibility. We're very proud of our work, but we have to use a lot of partners to make that a reality. So, we're going to share with you our efforts in that regard, specifically focused on the wildlands and talk a little bit about how we're also using that in other areas of the utility.

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So, this afternoon, Sherry Cool is joining me, our environmental resource officer. Sherry is over our environmental resource office in Austin water. That group includes our Hornsby Bend environmental research center. It includes oversight of our wildlands which includes our water quality protection lands as well as our BCP holdings. Sherry and her team are responsible for our Balcones Canyonland planning work, as well as our climate work. So, glad to have Sherry here. She's going to talk us through it. >> Thank you, Kevin. Good afternoon. I'm happy to be here this afternoon. Next slide, please. As you all know, Austin continues to grow. With all that new development, a lot of times can come more -- what we call the wildland/urban interface, or WUI. You'll hear that term a lot,

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which is basically where the homes abut some wild space of some form. In this area in central Texas, most of our fires, over 90% are caused by humans in some way. We don't have the dry lightning and some things that happen out west. And so that -- continued development just allows more opportunity for wildfires that the homeowners are concerned about from the wild space, but also fires that could start in the human space moving into the wildlands. As you also are aware, I'm sure, it's forecasted to be a hot, dry summer. So we're trying to be as prepared as we possibly can for that. Next slide, please. So, today I'm going to walk through a little bit of the role of the wildland conservation division, how we do our planning. Planning is key to the work that

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we do. All the cooperative projects that we have. Some of the tools that we're able to use for wildfire preparedness, and then our work with Austin water facilities and operations, and our next steps. Next slide, please. So the role of the wildland conservation division is really to manage our fire use and our fire potential on the wildlands in a way that benefits our watersheds and the habitat that we're tasked with managing and public safety. So we're not in a first responder role, but we're in a role of trying to be prepared and making sure that we're doing all of the right things to be as -- as ready as we can for that situation. And some of those things are listed on that slide. I'm going to walk through all of those things. Next slide, please. This slide is kind of a large

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scale but we put it in to show you the span of the lands that we manage that go from all the way up around Cedar Park down to Kyle, close to Kyle. Next slide, please. I don't have time today really to talk about the two programs, but we'd be happy to present on that at another meeting. But the first -- one

of the programs is the balcones conservation plan that Kevin mentioned and councilmember pool is on the coordinating committee, which also has commissioner Brigid Shea from Travis county. It's a partnership with the city and the county that we hold that permit and these lands that we manage are mitigation lands for that permit. So basically back in the 1980s a number of endangered species were listed in the Travis county area and it created a conflict

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between the developers and the environmental community and our local leaders at the time had a vision to put together this county-wide permit. So it enables the development to occur in a very streamlined process and also enabled us to cobble together this preserve system that we would not be all to do today. And then the program that the cities have purchased through the bond -- citizen approved bonds to protect the water quality in Barton springs and they also protect the water quality -- tbrowpped water quality in Haines county and southwest Travis county. So between those two programs we directly manage over 25,000 acres of land and then we have about 22,000 acres of land in conservation easements in the

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water quality protection lands program. And that's where the city purchases the development rights to protect water quality, but the landowner continues to ranch or whatever the land use was, but they don't develop the property. And so between those two programs, we're up to about 48,000 acres that are helping to protect water quality and endangered species throughout our region, our county, central Texas counties. Next slide, please. And so planning is critical to what we do, and we have a number of different ways that we plan. Next slide, please. That's out on the water quality protection lands, by the way. We have land management plans for all of our properties that we manage that include best management practices for wildfire mitigation. And those plans have existed since the beginning of those

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programs. It took about three years to get the first draft of the balcones canyonlands plan together and it's multiple volumes and that's been updated almost completely in 2007 and then several updates of different chapters of that since then. And the same with the water quality protection lands, the first plan was in 2001. It's on a 10-year update cycle, so we have a 2012 plan that we're operating under now, and we're actually working right now on the 2022 update. And we'll be coming back to council hopefully by the end of this year with that. Next slide. We also did wildfire risk modeling. Austin was a major player. Austin water, Austin fire department and our emergency management services, along with Travis county and other partners in the development of our

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community wildfire protection plan. And one of the key aspects of that plan is that we were able to do some hazard modeling with Joseph White who is a local expert at Baylor University that would -- that looked at the risks of our vegetation and our topography and our climate, and before that we had been reliant on western models which were not directly applicable to this area. So that was a big win to be able to use -- develop those models and use them to protect risk. One of the things that we found from that modeling is that the mature ash juniper oaks woodlands doesn't readily burn in normal conditions. It's a good -- it's good to keep that mature forest and keep it moist. I'm sure that as you know when you go out and you walk about, it's much cooler and moisture in the woodlands than it is out in

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the open. And so we've been able to use that to help develop just tools to work with that habitat type and try to keep that habitat in place, which is what we have to manage for the golden warbler. Next slide, please. We've also done strategic site plans. We did a series of map books called "Wildfire contingency plans" for all of our balcones preserve lands and our water protection wildlands and we have shared those electronically with all of our first responders. It's basically information about the roads, because some of the roads are not very passable. They're certainly not passable with a full-sized fire truck. They might be passable with a brush truck. Water sources, buildings, that sort of thing, rare species or caves that they wouldn't want to drive into. So all of our staff in the

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wildlands have been trained to be resource providers or resource person in the event of a wildfire, so we would be out there helping to -- to just provide information to the people that were responding to the fire. We have also done site plans just doing fire-wise treatments around the buildings that -- where the offices are out at Bee Cave and the ranch and some of our other facilities. Thank you. Next slide. Another type of plan that we require of any contractors or infrastructure providers when they come out to do work on the wildlands is called a wildfire prevention plan. And they lay out in this plan basically who -- who will be out there, what type of work are they doing. They have to have a spotter if it's going to be hot work, and if it's in high fire risk

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conditions, they let us know what type of fire suppression equipment they have. They have to have fire extinguishers in their vehicles. So it really serves as a two-way communication tool if something were to happen and we need to get in touch with them, we have their contact information and they also have our contact information. Next slide. Cooperative projects are also key to what we do. We couldn't do what we do without cooperating with all of our partners and our volunteers. These are some of our volunteers. Next slide. We are very active in the austin-travis county wildfire coalition. I serve on the executive committee for that, along with a number of our staff from the Austin fire department and Travis county partners, and a number of our wildland staff also serve on committees,

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working committees of that coalition. We have a long-term volunteer program on live, called live fuel moisture monitoring. It's very dedicated volunteers that go out biweekly and take samples of the juniper needles, and there's a whole process they go through to dry them and look at what the live fuel moisture is. And it's been a very good indicator of the fire risk, and also is useful for our prescribed burn program to give us information about how the fire will behave. We do collaborative projects with our infrastructure providers. We've been trying to point out to them when there's lines that we feel like could use some treatment, and we have even worked with Austin energy on moving some distribution lines that works better for them too that they can access those lines if we move them out of the

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preserve. And then we have guidelines that they have to follow for major transmission lines through the preserve and so we work with all of our infrastructure providers on that process. And then we work very closely with the Austin fire department wildfire division. We work cooperatively on education with our neighbors to the preserve. And we found that they like to hear those messages from the fire department that they -- they have a lot of trust in the fire department, telling them what they should do to harden their home and to be ready for wildfire. And so we try to partner with them when we do that outreach. Next slide. We also have a number of tools that we can use for wildfire preparedness. Next slide, please. One of the major ones that we

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use that you have probably heard about are shaded fuel breaks. This is a technique from out west that we modified for golden warbler habitat. It's generally for habitat and it could be another woodland types. But the idea is that the fire is likely to come in what we call fine fuels or grass, so you limit the trees, but you keep the canopy intact and the shade, so that helps to shade out the grass and the finer fuels, but you try to prevent the fire from moving up into the canopy where it would become a more

severe fire. So we're doing this work now along all of our boundaries where we have homes within 150 feet of our boundary. Next slide, please. It's kind of a boots on the ground type analysis. We plan out ahead of time what we think that we're going to do, but we might go out and find that there's a new home and we

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need to do an additional stretch. Or we might find a short stretch that we were going to skip and we feel that we can do that. So we call all of this the potential treatment zone. Next slide. It's challenging work. I don't know if you can see the topographic layers on this map but it's very steep terrain where a lot of our properties are. So the big challenge of getting crews in there and it's a challenge getting the material out without causing damage to the habitat or to the soil erosion, so it's kind of slow paced work sometimes, but we're trying to move through it as quickly as we can. We also have a limitation that we can only be cutting in the woodlands where the golden sheet warblers are for about six months out of the year when they're not here, so September

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1st to March 1st. So we're able to set up some long-term contracts and we've got geared up. We did some work this fall and winter, and then we're geared up to hit the ground running again in September. We also have had some challenges in the past with workforce because we were all using the same crews between us and Travis county and private landowners. But now that we have those contracts, I think that we won't have any issues with that going forward. Next slide, please. We've also developed some gis tools to track all of this work that we're doing. Our gis folks also developed a tool to collect the data, which made data collection go a lot more quickly. Next slide, please. And we do a lot of training. Our staff worked in partnership with AFD on annual wildfire awareness training where we

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bring in people to talk about what's going on across the country. We do incident command training. We've done -- right now we're working at Hornsby bend. Kevin mentioned that cer is in my area now, the center for environmental research. And we have some old houses on Platt lane out near Hornsby, where AFD is doing some wildland urban training and they're trying to get all of their staff through that training and there's just some old houses there that helps them to have a place to work. So we're working with them on that. We do -- we look into wildfire causes whenever we have a wildfire on the properties that we manage. We try to figure out what happened, what caused it. And then, of course, we do a lot of prescribed burn training as well. We were also able to add two additional staff with support from our management this past

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couple years. We added a forestry specialist in 2019, and then a second one in 2021. And the one in 2021 has been focused largely on doing an assessment of our Austin water facilities. Next slide. We do prescribed burning. It accomplishes our land management goal primarily, where we're trying to manage for oak Savannah or habitat. But it also can reduce fuel load where you are a little more in control of what's going to burn before a wildfire were to happen. We follow the national standards. We've worked with AFD on a permitting system. We have regular meetings with them to talk about that. AFD has also participated in all of our prescribed burns since the beginning of that program,

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and they -- since 2001, we have been able to burn about 11,000 acres on the water quality protection lands. Next slide. So, Austin water facilities and operations -- we're doing some of this work as part of our effective utility management enterprise resiliency work. Next slide, please. We did an assessment of all of the major -- the water treatment plants and the wastewater treatment plants and then our smaller treatment plants at satellite facilities. And then also lift stations, all of the Austin water facilities. We were able to complete this assessment and we're just now starting to work with our operations and emergency management staff on implementation of a lot of those recommendations. One of the highest priorities

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was alrec water treatment plant and we were able to complete all of the work that was right around the plant this past season, and right now there's a construction project on the north side but we're going to be going in after that project to see if we need to do additional work on that part of the property. Next slide, please. So the next steps are that we're going to continue working with our partners. We were able to work with the Austin civilian conservation corps. We helped to train a crew that did shaded field break work, and we're hoping to be able to do that again with that crew. And then with our new contracts we'll be continuing that work. And then one of the big things that we're looking at now is just climate change considerations for the woodlands and the golden sheet warbler habitat, we're trying to keep those woodlands intact, you

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know, keep them -- keep the water there. We do berms and Swales and other things and soil restoration and projects to try to keep that environment the way that it is. And then on the water quality protection lands, we're managing more towards the oak Savannah so there may be different strategies on how we deal with what our changing climate brings to us. That's the link for our website. And I'm happy to answer any questions. >> Fuentes: Thank you, thank you so much for the presentation. Colleagues? Mayor pro tem. >> Alter: Thank you, I really appreciate the overview, you know, it's not obvious that Austin water would be a place where we would be doing our wildfire work, and I think that it's really important as we're in wildfire awareness month that we recognize that there are a lot of departments that have a responsibility to help prevent wildfire. I wanted to ask if you could go

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a little bit deeper on the facility assessments. As I understand it you said that the facility assessments were completed and that you had done a portion of the fuels reduction work at Ullrich. Can you speak a little bit more about how you're tackling that -- that work, and the time frame. Obviously, fuels mitigation has to happen on a regular basis, but in terms of completing the initial work laid out in those plans, what is the timetable? >> Yeah, we -- um, we just finished writing up that information and so we're just now meeting with our operations folks to be able to let them know, you know, what all of those recommendations were. And I think that due to the seasonal restrictions with golden sheet warbler habitat, it will probably be -- again, we'll get that all ready to roll by September 1st and hopefully we can start implementing more of that work beyond Ullrich in the fall.

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But we also have to go through more departmental coordination for that work, because our lift stations are sometimes within parkland or even on private property with an easement. And so we -- we're going through the general services, or general permit, and working with other departments on making sure that they're okay with the proposed work that we're proposing to do. So I think that in the fall hopefully we can make a good -- get a good chunk of that done. I would say two years on that work. It will probably take two non-bird seasons to implement all of those measures. Some of them are -- a lot is vegetation, but some is structural too. So we just need to get back with the operations staff on how -- you know, whether we could replace a wooden fence with a

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metal fence or a metal building and things like that. So it might take time to get that in place and some might have to go into cep projects. >> Alter: Is that informed by the wui code that we adopted? [Indiscernible] Interface -- >> The wui code, I'm not an expert on the wui code but a lot of it applies to

new development. And this is more informed just by best practices for wildfire prevention, while trying to create a fuel break between the facility and the wild space. Also looking at the electrical supply. We've also looked at whether or not the electrical supply to that facility could be compromised or not. So it's more informed by just best practices for more fire-wise type techniques that

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people would do around their home and not necessarily to comply with the wui code. >> Alter: That's why I said informed by and I didn't mean that it would be complying to it, because it doesn't apply to old structures, but I think that they've -- you know, in applying the wui code in our area, they've been learning a lot about how it works and where there are challenges. And have developed some techniques and a greater knowledge than the fire department had before. So they may be able to add some additional insight to things that you might be doing there that are specific to our area and what we're observing in terms of the wildfire risks. So it might be -- if you're not already deeply involved with the fire marshal for this work, to circle back and just see have we learned anything with that that we need to be thinking about here that might help us to achieve our goals -- goals faster and more effectively. >> Sure.

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>> Alter: Ullrich is not the only treatment plant in the wui code. Davis is as well. What are the plans for Davis? >> Davis didn't have as much -- doesn't have as much, um, habitat or, you know, woodlands close to the facility, but there is some land that we own that is just north of the plant. And we do have some plans to do work in there. So, that would be coming up the next fall. And we did -- we did have someone from AFD who helped us with the assessments but that's a good suggestion and I'll get back to them on some of the wui code recommendations. And I didn't really talk about fire wise, but that is certainly -- we tried to help to promote that the best thing that citizens can do is to harden their homes because the embers can come from a mile and a half away, and so even if you're not right next to the woodland, it's better if you can harden your home to wildfire risk or any

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kind of fire -- it could come from another structure. >> Alter: Thank you. And the last thing -- I just wanted to flag is that I'm pleased that you have been able to partner with the civilian conservation corps and I really hope that will be able to continue that connection. I got to meet some of the folks who had been working on the crew. We had an exhibit -- I think that it may still be out there -- an exhibit opening on Friday with over 100 some people there, talking about the civilian conservation corps and the cadet program over at pard and what it means for us to learn for equitable green jobs. And I know that you

mentioned that one of the challenges that you're having is getting your crews. And so I would encourage you to continue those conversations with Warren tucker who is leading that program, because I think that there's a lot of really innovative ideas and we would be able to channel some of those folks into your contractors who are working on

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some models that help, you know, to take our crews that were doing, and having them working with the contractors who are then the ones who are doing some of the other work. But then they're getting crews that have the experience and we're able to get folks who otherwise don't have access through that program. And we're able to recruit better because we're able to promise jobs at the other end. And that's really one of the things that they really learned for the equitable green jobs is that it's not enough just to give them the foothold into that type of job. We need to be creating these pathways and giving the job market that we're in right now and the challenge that our contractors are having hiring, etc. -- I just want to flag that for you as something to look at, you know, because the way that is set up. They do a lot of that work and it helps to do some of that navigating to help you to solve your contracting problems and helping you to solve your hiring problems.

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So I would just encourage you to have those other conversations about how Austin water can be part of those pathways through hacccc or through the other equitable green jobs that are pathways that we are developing, so, thank you. >> All right, thank you, I'll look into that. >> Fuentes: Thank you. Colleagues, any other questions, yes, councilmember Ellis? >> Can you tell us about the collaboration with the wildflower center and they do routine prescribed burns and part is maintenance and part is research so I didn't know if you were in contact with them? >> Yes, we have a memorandum of understanding with them and so we do send folks to work on their burns. They are more research oriented and they're usually pretty small. They are at the wildflower

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center. But we do participate with them and they also come out and assist us with the prescribed burning as well. >> Ellis: That's great to hear, thanks. >> Yeah. >> Fuentes: Thank you and I want to acknowledge that our vice chair kitchen has joined the meeting, good to see you. Mayor pro tem. >> Alter: Sorry, forgot to ask. Can you tell us what operational procedures you have in place if there were a significant wildfire event for the utility operations? >> What we have in place -- >> Alter: Like an operation plan if there were to be a significant wildfire event. >> On the wildlands? >> Alter: I want to

know the wildlands but I'm also particularly interested with respect to the utility structures themselves.
>> Do you want to speak to that? For the wildlands we do have an emergency management plan for

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how -- what we'll do with our staff at raker ranch, in term of any emergency event and of course different events have different response, but for wildfire we have a plan on what we'd do if there was a wildfire at that particular facility. If there's a wildfire in another wildland facility, I think that our role would be as a resource to help with that. And I'll take this moment to introduce Matt Holland who many of you know who is our new division manager for the wildland conservation division. We hired him away from watershed protection department, and we're very happy to have him managing the wildlands. >> So I'll just open up -- as it relates to other facilities within the utility, of course, we have a sort of all-hazards emergency management response. And I'm probably going to just ask Anna to come up and talk briefly about it. >> Good afternoon, committee. I'm Anna Brian borha, with

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assistance services at Austin water. We would handle our response to a wildfire, either in the community or specifically affecting our facilities and properties, following the procedures that we have through our emergency management division. So we have established a matrix of operating condition levels, and we would escalate from normal operations up through escalated awareness to a limited scope incident. Or a full utility incident. So our emergency management team is monitoring conditions every day. When there is elevated wildfire risk that information is shared with our emergency management team and our utility leadership team. And so if that were to evolve from elevated risk, to an actual incident, we would most likely initially put our emergency management team on standby if it was heightened risk. But if a fire were to break out

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I expect that we would activate our emergency management, incident management team, to at a minimum to monitor, if not oversee operations. So as Kevin said, it's an all-hazards approach. We would follow the protocols that we have followed in other emergencies. Does that answer your question? >> Alter: Yes. But I would also like to know that you had some specific exercises or thinking through just the specific types of scenarios that might be experienced in a wildfire situation. I mean, an all-hazards approach gives you a framework but doesn't give you the instincts to know in a wildfire situation that you never thought about before what are the factors that we would need to be thinking about, you know, whether it was the wildlands situation -- although I think that is probably one of their biggest hazards. But for the utility, you know,

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what could that mean for the utility and what are the pieces that you need to worry about that might be a specific result of a wildfire that is affecting any one of the utilities facilities, because it could be a treatment plant and it could be a pump station. You know, how -- how are we thinking about -- how do we think about that beyond the preparedness piece? >> Agreed. I think that is an excellent point and certainly something that we can take into account for future exercises, because we do have a program of regular scenarios and exercises. When Sherri Kewell mentioned the facility planning exercise, a member of our management team was part of that team, and that member of our emergency management team also has a background in firefighting. So I think that some thought has

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been given as those facilities have been evaluated, but it's an excellent point that we could certainly consider a scenario specific to that. >> Alter: Yeah, I mean, you could have embers floating into any one of the treatment plants beyond the shaded field breaks, creating a lot of havoc, for instance. And so I just -- I would like to see that incorporated into some of your exercises in the near future as appropriate. >> I might add, I do believe that we've actually done a desktop on wildfire -- it's been quite some years since we've done it so I couldn't give you the date but we certainly provided that. I participated in a tabletop and again I'm an incident commander in my other job, but, like, last week it involved -- I think that it was the detonation of a nuclear device that would have a fire associated with and so not

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specifically wildfire only to say -- absolutely. It's certainly a risk that we see and it's certainly something that we need to continually plan for and think about. >> Alter: I think with the wildfires that we are seeing all over the country and in Texas, there's some more knowledge about what happens in the case of utilities there. Thank you. >> Thank you. I will definitely take your feedback to our emergency management staff. >> Fuentes: Thank you. Great questions. All right, thank you all so much for the presentation. Colleagues, we now have -- we skipped over item number 2 which was status updates on winter storm Uri and the February 2022 boiled water after action reviews. Would you like to quickly go over it, or would you prefer a memo update instead? Our next committee meeting would be on August 24th. Yes, Mayor pro tem, feedback? >> Alter: I have us down to 3:30 so I'm comfortable going to the

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report. But if no one else wants to -- I just think that is our key responsibility. >> Fuentes: Okay. All right, then we'll go through a brief update. Thank you. Be. >> Good afternoon, Randy Jenkins, assistant director at Austin water and as mentioned I'm here to provide an update on our after-action statuses. Next slide, please. And so as a high-level overview as mentioned, I'm going to cover both winter storm uri improvements plan as well as our improve plan. I would like to start off that we do plan to provide you with a detailed overview and update on specific statuses but we'll use this briefing to provide a high level of those activities. And so to date following winter storm uri, we provided an update in January at our last awak

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meeting and for turbidity, we reported out in March to you. So this combined -- all of those activities. With uri, of the 79 improvements with our after-action report I'm happy to report that 68 of those items are completed to date. With our Ullrich turbidity event, 38 improvements were identified with 30 of those complete. And of those that remain of our overall activities, 14 are provided in our longer term cip initiatives. And so those do not have a near-term completion but they are moving forward in the planning process. Next slide, please. And so to highlight our recently completed resiliency improvements, we've kind of identified them into several buckets. So under operation staffing procedures and training, we've added access for management staff to monitor remotely.

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And this is a direct follow-up action after our Ullrich turbidity event from this past February. We have enabled external notification of turbidity, related to scada and the February event, most recent. And then lastly, we have enabled automatic backwashing of filters for our turbidity trigger, so those would automatically kick in, in the event of a similar event. Some of the infrastructure enhancements that have been completed to date, we have completed our Davis water treatment plant power distribution upgrade. So that is in place. As well as we have add our third electrical feed to Ullrich. Certainly, that did not come without a lot of hard work from both Austin water staff and Austin energy staff, but we are happy to report that that third feed has been enabled for automatic switching. In addition, our internal and external communications, we were able to test out our

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improvements that we modeled and identified from our uri after action and we tested those out in the February event. And those went off without a hitch. And those were -- that we provided emergency notifications using the customer portal and our warn central Texas system. And then in addition, that was a direct follow-up from our winter storm uri where we did not but have since then enacted internal

notifications to all of Austin water staff so that they were made aware and informed of the emergency. And so that -- it served us well, so as they're out in the community and they are getting questions, they have the same information that all staff members do, as well as your offices. Next slide, please. So some of the resiliency improvements that are underway, and I will note that these are expected to be completed by September 30th so right at the

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end of our fiscal year. And under a similar bucket approach, operation staffing procedures and training, our new operations and training positions that you approve through the recent resolution, the recruitment process is underway for all 16 of those staff members that we'll be adding based on the February event. And then we've also defined and implemented operational situation awareness criteria for all of our operational staff and positions to handle that activity throughout our utility. In addition, infrastructure enhancements replacement of the north Austin reservoir. That's been a long-standing project but is nearing completion and they're at the final stations of working through the exercises to get that reservoir up and running so we are really close there. And I'll also note the completion of winterization of components at plants. And you may note that you've

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heard that activity being marked as complete before, and I want to just point out that this is actually pertinent to some of the additional items that we have recently added to our plants and making sure that those components are winterized as well. So, those last pieces will be completed before this fall, before we near the next winter season. Lastly, review scada alarms and sending alert pop-ups and modernization opportunities of our scada system. Those are underway and we'll be nearing completion. And then the last bucket of emergency preparedness, we implemented emergency preparedness plan in order to meet the sb3 requirements and we gave you a specific report out on sb3 here recently, but I'll note that our emergency preparedness plan is near implementation. And then the last bullet point on our slide here is increase incident management team roster and conduct annual training activities.

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Arizona Anna mentioned just a minute ago, we do conduct regular training opportunities for different scenarios. And so those are still happening and occurring, and we did recently complete one in person, so it was really nice to get back in a room with staff now that we're post-pandemic. And in addition, all of the executive team have taken names and built out our imt roster, and so that has been taken interest account and we have increased staffing and positions based on these last two events. Next slide, please. And so as I mentioned at the onset of this presentation, several of the items that are still

marked as not complete, but certainly on its way to being underway, are longer-term resiliency improvements. And so those have been noted in our cip planning efforts and are

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on the horizon and in our forecast. But those include automatic shutdown of filters for turbidity exceedences that is somewhat different and it's a aspect of the automatic shutdown and how you would maneuver production capacity at that moment. But we are working through those. And then water storage and transmission projects and a distribution system. As you noted in winter storm uri, the capability to have additional elevated storage throughout our service area was something noted and that is on our horizon. Electric generation and power resiliency projects at all of our treatment plants and float stations and pump stations, that is also listed for improvements down the road. Improved chemical storage and sludge storage, disposal capabilities at all of our treatment plants and then last, but not least, would be the completion of installation of all of our Ami and atx water

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meters. Next slide, please. So that concludes my presentation and I'll open it up for any questions and discussion that you may have. >> Fuentes: Thank you. Colleagues, yes, mayor pro tem. >> Alter: Thank you. I appreciate that overview and I'm glad to see the progress. A couple small questions. For the part about the scada for the recently completed projects, were those changes with the access to the remote scada or the enabled external notification, etc., is that only at Ullrich or is it at other plants as well? Or do they already have it? >> Good afternoon, committee members. My name is Shea Rolson, the assistant director for engineering at Austin water. The improvements that were noted and we are looking at scada improvements for all facilities and not just Ullrich. >> Alter: But the ones that were completed. So there were two parts to the scada --

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>> The adding access to monitor scada remotely, that's for across plants, not just for Ullrich. >> Alter: Okay. And is it for multiple types of systems? Or is it only the type of system that failed in this case? >> I will have to look into the exact changes that were made and get back to you, but we can do that. >> Alter: Okay. Because one of the questions that I got from a few folks who have more operational knowledge is the importance of having the scada alarms and having that monitoring and raised the question whether there were other incidences where notification hadn't happened where there might have been other problems at the plant that were going unnoticed because that wasn't happening. And I think that there's probably, you know, there's clearly -- it's a huge operation and there's many types of

systems where you might have scada, so I'd like to know a little bit more when you have a chance if that's a broader --

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however that is being implemented or has been implemented. And then with respect to manitechs water, can you give us the current timeline for completion? >> We are expected to complete installs by spring of 2024. >> Alter: All right. >> We have -- we'll be providing an Ami update at our next committee. I believe that is on our slate at least for commission. I know that it is slated. So we are well underway. We -- I'll go ahead and make a small announcement, although I was really hoping for a big shebang. We have achieved 50,000 plus meter installations across the city thus far. So that was a big milestone that we were looking to hit. So more to come on that progress. But it's underway and doing well. >> Alter: And you should still celebrate that, however you -- however you planned.

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We need to celebrate the wins when we have big projects. >> Absolutely. >> Alter: That take years and years and years. So, thank you. >> Thank you. >> Fuentes: Wonderful. Thank you. And, yeah, just to continue the thread on this scada alarms, with we did the tour, which I found very helpful -- and thank you to staff for helping to host us and to facilitate that tour -- I found it super informative. And just being in the control room and the operations room, the alarms -- they're triggered quite frequently. I mean, just even in the time that we were there, I could see the alarms popping up. And it's not -- it doesn't take over your entire screen, it's a little tiny box at the bottom of your screen that's very easy to dismiss. So as part of the modernization efforts that y'all are looking at with updating the alarm system, are you also taking into account the visibility of the alarm, the frequency of it, and any additional triggers?

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And then my second part to that question is -- seeing how often the alarms are going off there, and I don't know to the extent of what was happening in that situation, but the managers that receive the external notifications -- are they just getting notified once it's a certain alarm that gets triggered? Or are they also seeing and receiving notification of all of those smaller alarms going off? >> Good afternoon, operations. I'll kind of address just those two parts. The first one is that we do have a lot of screens and alarms that come in, but it's also customized by the operator. So you could have individual screens that are just dedicated to alarms. And so even though they're small on screens, you can have a dedicated alarms only and filter through those. So that was kind -- that is kind

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of by design. As we kind of go in through the modernization look and feel of some of the screens that you have to make -- again, you have to understand that this one is dedicated to an operator that sits in the control room that is also attentive to not only alarms but the screens to control operations. So it's really customized to that individual. If you could repeat the other part of that question. >> Fuentes: Where supervisors off-site are notified of alarms? >> Just as you mentioned, you could get quite a bit of alarms in just sitting down for a small period of time. We have identified some critical alarms, and so in particular like turbidity. That is one that is programmed in to have an external notification process. So that was demonstrated, not only at a test level, but also on a production level.

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So if a turbidity alarm exceeds the threshold that we have for Ullrich or any other plant, that notification would go externally to a grouping. So not just one individual but also a group of maybe supervisors and managers or whoever we have on that distribution list. And that has been tested and is active right now. I think that to the point earlier about how are we implementing this, the implementation is across the board, because every plant is unique, but we're going to have standardized notifications on turbidity for all plants. We have standardized views to all of the plants right now, so every plant that you can access by who needs to have access to it. Meaning, if I'm familiar with and I manage and operate Ullrich, versus hancocks, those individuals have access to those plants right now. >> Fuentes: They do?

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That's great to hear that there will be some standardization of -- like, the turbidity alarms and the higher level of alarms. >> Correct. We started out with turbidity and may may expand to other types of notifications but turbidity is definitely a high priority. You know, the two main focuses is disinfection and particle removal, and we are right now focusing on particle removal but we can easily do that with other types of alarms. >> Fuentes: Okay, thank you. >> You're welcome. >> Fuentes: Any other panel questions? All right, thank you all. And so our last item on the agenda is item 6 to discuss the future items. Colleagues, our next committee meeting is August 24th and our final committee meeting for the year is October 19th. So we only have two committee meetings left, and anyone has any potential topics that they'd like for the committee to consider? Yes, vice chair kitchen.

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>> Kitchen: I'm hoping that, you know, we have done this periodically but it would be helpful to have an update on water forward. At one of these meetings. >> Fuentes: Okay, yeah, that's great. We will add that in for August 24th. >> Kitchen: Particularly, you know, we can look at an overview on the update on water forward but it would be interesting to understand the process for the storage -- the aquifer storage. >> Fuentes: Yes, thank you. And vice chair kitchen, we did have -- received a briefing on the aquifer storage recovery projects, so staff did provide a briefing earlier today on it. >> Kitchen: Okay, I'm sorry, well, I already missed that so I'll go back and look at it. >> Fuentes: thank you. Yes, mayor pro tem. >> Alter: I was going to just point out for those watching that there's a document in the backup with the water forward

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quarter two report, or at least in the backup that I have, I don't know if it's online. That might be a step in the right direction as backup. It may not be enough of what you want but you may not have seen that. >> Kitchen: Yeah -- no, I appreciate that mayor pro tem. I just think that it's useful to have the conversation publicly and periodically. So -- so that's why I was suggesting. I know that we have the reports and things. >> Fuentes: Thank you. All right, well, colleagues, thank you so much, and it is now 3:21, and I will adjourn our Austin water oversight committee meeting. Thanks. >> Thanks.