

Austin Water Oversight Committee Meeting Transcript

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>> Kitchen: I call to order the water oversight meeting at 3:33. Today, just to lay out what we're doing here with Austin water, we have a hard stop at 4:30. So we have a follow-up presentation from Austin water, follow-up for a meeting that we had -- I believe that it was March 3rd, the last meeting that

[3:34:07 PM]

we had. And so today what we're going to do is that our staff is going to talk to us about the financial relief achieved to date, about Austin water's resilience efforts, and further updates that we began last time on winter storm demand analysis. And also I just want to let everybody know that the next meeting -- so we have an hour today -- and we appreciate chair pool for letting us to be part of this joint meeting of Austin energy. The next meeting of Austin water will be on April 19th. That will be a regular meeting of Austin water. At that meeting we'll be able to drill down into more detail on the infrastructure and communication issues. So today I'll turn it over to the team. I'm going to ask him to go ahead and to go through his full presentation before we stop and we ask questions. That way I'd like to try it that way because that will give us

[3:35:08 PM]

more concentrated time at the end so that we can ask questions and have a conversation with him. So, we have a hard stop at 4:30 and I know that you have some interesting information to provide to us so just do that in 40 minutes if you can. And then we'll open it up for conversation. So, thank you. >> Councilmember pool, sorry to interrupt, this is Heather coté from Austin water. Did you want to adopt minutes first from the last meeting. You were posted to do that. I'm sorry councilmember kitchen, I

apologize. >> Kitchen: I don't want to do that at this time and we have a short amount of time so I want to get moving on this. >> Got it, my apologies. Thank you. >> Thank you, councilmember. The director of Austin water. Chair kitchen outlined what we

[3:36:09 PM]

want to do today going over our resiliency effort. We had an opportunity to examine the water use. It's important to understand where all of the water went as we're coming to better understand this event. So we want to share some of that with you. Both at a system level, the entire water system, as well as sharing some of our Ami meters and we have 4,000 installed in our pilot project and we'll share that with you today in terms some of the experience that we had reviewing that data. And then on to April where we'll dive deeper into communication strategies and infrastructure. I will say that Austin water is staying involved at the state level. Here last week I attended a meeting with other large utility water directors across the state where we shared experiences and some lessons learned and are committed to continuing to communicate with each other on different approaches to coming

[3:37:09 PM]

to terms with improved performance during a winter event of this nature. And also with the state of commission on environmental quality is arranging for surveys of water facilities. They had over 2,300 water utilities to have significant disruption during the winter storm and they'll serve those groups to learn more and to find out best practices and sharing that information. So we'll stay engaged at those levels and share that with you. And with that I'd like to just keep flowing and to turn it over to the assistant director Gonzalez and he'll give you a review of where we are with financial relief matters. >> Thank you, director. My name is Joseph Gonzalez, the assistant director over financial services and I'll have a brief overview of the relief efforts in response to the

[3:38:11 PM]

February winter storm. Next slide, please. Thank you. So our goal from the very beginning was to avoid potentially high bills for our customers as a result of dripping faucets and burst pipes during the storm event. As a reminder, earlier this council approved a temporary residential rate reduction that dropped the volume metric rates from tiers 3 through 5, and to the rate of \$3.55. Now through the use of estimated reads for bill cycles immediately following the storm event, we were able to push almost all high residential consumption resulting from the storm into building periods beginning March 19th when the reduced rates took effect to essentially cap the residential bills at 6,000 gallons of consumption which is around \$37

[3:39:11 PM]

for water use. Now in addition the ordinance granted the Austin water authority to have adjustments to commercial and multifamily accounts impacted by the winter storm event. Next slide, please. So through -- let's see -- sorry -- next slide, please. There we go. Through the first five bill cycles that were scheduled to bill since the temporary rates took effect on March 19th, approximately 78 million gallons of consumption occurred in tiers 3 through 5, resulting in 990,000 dollars of rate relief as compared to the amount that would have been billed under our normal rate structure. Now to put that in perspective, the bill relief numbers to date represent about 25% of our monthly bill cycles. However, the 78 million gallons billed in those tiers 43 through

[3:40:12 PM]

5 are less than our normal consumption for this time of year. For commercial and multifamily accounts we're manually reviewing those accounts to look for high consumption and abating bill adjustments to reduce the bill consumption down to the normal expected level of consumption for this time of year. And to date we have applied almost 256,000 of bill adjustments for commercial customers and approximately \$588,000 in bill adjustments for multifamily accounts. Now in the commercial side, 47 million gallons have been adjusted to date, you know, reduced down to an expected level of consumption and that represents about 7% of our normal monthly commercial consumption while on the multifamily side, 124 million gallons have been adjusted to date which represents about 17% of our normal monthly consumption for this time of year. Now in total, we have provided over \$1.8 million in bill

[3:41:14 PM]

relief. And looking ahead we expect a bulk of the financial relief process to be completed by the end of April. But it may take a few additional billing cycles to fully resolve some of the issues that our customers may be experiencing. Particularly for those customers, for example, whose reads weren't able to be -- or, read during the storm event. Since the March read, the subsequent read, it is currently the only data point that we have for those customers. And any ongoing issues or leaks might not become fully apparent until we get the next read. So while we work identify as many issues as we can, we encourage customers with any high bill concerns to reach out to the city of Austin utilities for assistance. That concludes the bill relief portion of this update and I'll turn it over to the assistant director to discuss Austin water's resiliency efforts.

[3:42:20 PM]

>> Good afternoon, chair kitchen, can you hear me? Okay. Great, thank you. Good afternoon, chair, and councilmembers. I am Anna Brian boraj. This afternoon I'm going to share information with you about Austin water's emergency management staff, our enterprise resiliency strategic initiative and how we prepare for future events and compliance with an important federal law pertaining to water utility resilience. Although these efforts were underway before winter storm, the storm highlighted that we still have much work to do to prepare for and to respond to extreme weather. Austin water staff will re-evaluate our resilience efforts to ensure that we are appropriately managing the risk of extreme winter weather. Improving water utility resilience is not just a priority for Austin water, it is a state and a national priority. At Austin water we are highly

[3:43:21 PM]

engaged with our industry on this topic. Here are just a couple of the examples of how we are doing that through the American water works association. Our utility emergency management coordinator serves on the Texas resiliency and cybersecurity committee. And I serve on the national strategic management practices committee. Going forward, we will continue to use our professional associations to learn what works at other utilities. Next slide, please. Now I'm going to talk about our proactive emergency management program. Back in 2010, Austin water began implementing the national incident management system through training and standard operating procedures. As you may know, this national framework provided by FEMA guides organizations to prevent, respond to, and to recover from incidents. Today, Austin water has built up a professional emergency management staff.

[3:44:22 PM]

The team now consists of three ftes and next year it will grow to five. We have a highly qualified staff who bring a combined nearly 70 years of experience in the following disciplines -- public safety, military operations, nursing and public health, fire, rescue and emergency medical services, and occupational safety and health. The emergency management staff hold degrees, certifications and state licenses related to these fields. Austin water also has a dedicated space at our headquarters for our departmental operational center. It's equipped with meeting space and technology that allows the incident management team to gather and to respond to emergencies. During covid, we have transitioned to a virtual departmental operation center, while maintaining the structure of our incident management team. Austin water also has a regular ongoing training program to

[3:45:22 PM]

prepare for emergencies. We train our employees in FEMA's incident command system, or ics and our emergency management staff are FEMA certified ics instructors. Austin water employees have completed ics courses at beginner, intermediate and advanced levels. We have regular tabletop exercises to prepare for emergencies and to practice the incident command system. Employees have participated in simulations on a variety of scenarios, including wastewater overflow, loss of water reservoir and boiled water notice, drug distribution in case of a biological threat, and plane crash on property. We also conduct drills at our facilities, including chemical disaster, fire evacuation and long horn dam gate operations. Finally, in 2020, we began

[3:46:25 PM]

implementing the specialized emergency management software. This software allows us to monitor daily situational awareness, to prepare continuity of the operations plans, and to activate the incident management team very rapidly. We are in the initial training and development phase of implementing this new software. Next slide, please. Now I'd like to discuss how Austin water considering resilience in our strategic planning. Austin water uses effective utility management as our planning and improvement framework. Effective utility management or eum, is an industry best practices framework developed by the EPA in partnership with the water industry. Eum has a comprehensive framework related to operations, infrastructure, customer satisfaction, sustainability, and financial performance. As shown in the graphic, the

[3:47:27 PM]

framework consists of five management practices and 10 attributes that are necessary for a water utility to be effectively managed. Austin water launched our eum initiative in 2016. We have leveraged it to pursue improvements in affordability, customer satisfaction, infrastructure maintenance, risk-based capital planning, and employee development. Just today the EPA has published a case study on Austin water's effective utility management initiative. I could spend more time to discuss this framework, but for our purposes today I would like to highlight the enterprise resiliency attribute. It means that the staff work to anticipate, to respond to, and to avoid problems. The utility effectively manages a full range of business risks, consistent with the industry trends. And the utility plans for business continuity. Next slide, please.

[3:48:31 PM]

In early 2020, Austin water's executive team recognized the need to strengthen resilience. We already had several efforts underway, including emergency management activities, our water forward 100-year water resources plan, and wildfire mitigation on our wildlands. We wanted to go further by selecting the enterprise resiliency attribute as a focus of effective utility management. In early 2020, we elevated enterprise resiliency to a strategic initiative and committed to a comprehensive effort to improve resiliency over three years. We assembled a cross-functional team with representatives from emergency management, information technology, climate protection, wildlands, auditing, and security, to name a few. The team established a comprehensive three-year plan with these goals -- to ensure preparedness and response to incidents is effective,

[3:49:31 PM]

practiced and reviewed. To ensure operational resiliency through normal and emergent conditions. And to ensure resiliency by identifying and addressing natural hazards. To maintain focus and momentum, the enterprise resiliency team leader participates in weekly huddles to report progress and monthly briefings to our executive team. We expect that this strategic initiative will result in improvements in the months and the years ahead, and we will continue to report back to the Austin water oversight committee on those outcomes. Next slide, please. Now I'd like to speak to one way that we are preparing for future emergencies. During both the Colorado river flood of 2018, and winter storm Muri in 2021, Austin water supported the distribution of bottled water to the community which led by the city's homeland

[3:50:34 PM]

security and emergency management department. One of the lessons learned from these events is that we need to have a portfolio of options to provide water to the community during times of emergency. Bottled water is one part of the portfolio, but it is not the only solution. And in the aftermath of winter storm Muri, Austin water purchased 60 bulk water totes that are portable, 275-gallon water tanks and contracted with water trucks to provide bulk water distribution. These resources were deployed to locations across the city as our community was recovering from the storm. Going forward, Austin water is committed to having a portfolio of options for providing emergency water as a means of supporting community resilience. We are investigating bulk water trucks and right-sizing the inventory of bottled water to keep on hand. During winter storm Muri, more

[3:51:36 PM]

than 2,300 water system has a boiled water notice and there was a tremendous demand on the bottled water supplies across the state. By having a portfolio of options available, Austin water will have greater

flexibility to provide water to our community during times of emergency. Next slide, please. Finally, I'd like to talk with you about America's water infrastructure act. This federal law enacted in 2018 reflects as I had mentioned earlier that improving the resilience of water utilities is a national priority. The law requires drinking water systems to assess risks to and resilience of their systems. After completing the risk and resilience assessment, utilities must prepare an emergency response plan that incorporates the findings of the risks and the resilience assessment. Austin water complied fully and on time with the requirements of this law and we certified our

[3:52:36 PM]

compliance with the law to the EPA. Next slide, please. Here's some additional information about the requirements of America's water infrastructure act. The risk and resilience assessment takes an all-hazards approach, meaning that a utility should consider both natural hazards and the threat of malevolent acts. The utility should assess the resilience of its infrastructure, including not only the pipes and the plants, but also the electronic systems. The utility should assess its practices related to monitoring the system, chemical handling, and operations and maintenance. The emergency response plan includes strategies to improve resilience, both physical security and cybersecurity, response procedures, actions to lessen the impacts of hazards and actions to detect threats. At Austin water we assigned an experienced internal auditor with the certification in risk

[3:53:38 PM]

management to lead the risk and resilience assessment. And the emergency response plan was prepared by our emergency management coordinator. Our assessment also included a review of the city's climate resilience action plan for city assets and operations. In preparing the risk and resilience assessment and the emergency response plan, we identified the highest risk threats based on past experience in emergency incidents. Those threats included inclement weather in general, flood, drought, and extreme heat. And those threats have not historically included extreme winter weather. However, moving forward, Austin water will adjust our responses to meet the threats that are evolving. And our risk assessment will include extreme winter weather going forward. Next slide, please.

[3:54:41 PM]

In the future, Austin water will exceed the requirements of America's water infrastructure act with what we are calling awia2.0. And however, Austin water will repeat this process every two years for the water system. In addition, this law does not apply to wastewater systems. However, Austin water will conduct a risk and resilience assessment of the wastewater system as part of awia 2.0. We launched this assessment in early 2021, and it is led by an experienced internal auditor with certifications in auditing,

risk management, and information security. Again, we will repeat that wastewater assessment every two years. Through awia 2.0, we are implementing annual standardized

[3:55:42 PM]

risk assessments and developing corresponding response plans. To conclude, Austin water's leadership recognizes that much work lies ahead to support community resilience. We will build on the existing foundation of our enterprise resiliency initiative to learn from winter storm, and to become a more resilient utility. Now I will pass it on to the next presenters, assistant director, and corando. >> Thank you, Anna. Next slide, please. Again, I am with Austin water, the assistant director for environmental planning and development services. And this section of our presentation we wanted to provide some initial insights related to our analysis of the water uses and loss during the storm. I'll start the presentation by providing some information related to the events of the storm. And then provide some preliminary analysis of how we believe that the water was used

[3:56:44 PM]

and lost through our experience in the system. And then I will ask the assistant director of operations coranado to provide some additional insights that we have been able to gain with the customer side impacts based on the preliminary information that we have received from our Ami pilot data. Next slide, please. You may recall the slide from our initial report and its impact on our water system. This graph depicts three key responses, and there's key system characteristics of our system. The green line, which is shows the water pumped from our water treatment plants throughout the event. The blue line which shows the water usage in our system, which includes all uses and losses. And then the red line, which shows the water storage volumes in our potable water reservoirs. Overall the graphic shows how the water system responded throughout the event.

[3:57:45 PM]

Beginning in the days preceding the winter storm on February 10th that shows the more typical responses and behavior, through the critical period beginning in the early morning hours of February 16th. And then we began to see out of range demands and shortened system periods and notable reductions in water shortage volumes. And going through the recovery period, starting in the morning hours of February 18th, and then our final recovery where we were able to lift the boiled water notice on February the 23rd when our system was stabilized. Overall the winter storm impacted our community for approximately 12 to 14 days with certain elements of our community experiencing even longer outcomes related to private side plumbing disruptions. From between approximately February 12th through February 20th, the entire area saw continued below freezing

[3:58:47 PM]

weather. We've highlighted what we have called the critical period in blue in this particular slide. Which is really where we began to see the system behaving outside of normal ranges due to a number of factors. Some of these factors included increased customer demand, which were likely due to customer dripping faucets and other winter storm precautionary measures like storing water on site. To private plumbing breaks and leaks. And then public water system breaks and leaks. The combination of these demands on the system resulted in significant loss of stored water volumes in our potable water storage reservoirs, which in turn resulted in much of our system being depressurized or depleted of the water storage volume. Which ultimately resulted in widespread loss of system service throughout our system. Next slide, please. In the week since the storm, we

[3:59:47 PM]

have worked on analyzing a variety of data sets to try to provide more information about the individual components of uses and losses throughout our system. This particular slide tries to characterize those different losses and uses by category in our system. I apologize in advance, it's a little bit dense slide, but I'll try to walk you through it briefly. Generally speaking the time period of this particular slide is similar to the prior slide that I showed. It -- you know, I would note that in the dark blue bars that are generally along the bottom, that those are bars that reflect what I would describe as the base customer use or demand. That information has been gleaned from a number of individual data sources, including our historical records, our preliminary manual meter reading information, and it's been enhanced with

[4:00:48 PM]

information from the evaluation as I said earlier of our pilot Ami data. The yellow bars represent our estimates of utility-side water system loss and leaks. Again, those are primarily based on field estimates from staff in the field conducting repair work on our infrastructure. The Orange bars represent estimated customer-side leak and water loss. Again, that includes the water loss from private plumbing breaks and loss due to the private dripping of faucets in preparation or protection for freeze damage, and then likely on-site premise storage and bathtubs of water. This data was estimated based on a review of a number of historical data sources. And, again, we applied our information from our Ami system to try to enhance this. The green bars represent the storage -- water being stored,

[4:01:48 PM]

pumped, into our water storage storereservoirs, and the white green is elements of our pipeline distribution network that had been de-watered during the system outage. Generally from this information what you will see is that the dark blue bars at the bottom, you know, generally in the early parts of the storm, staying at kind of normal demand levels. And then dropping as the storm progressed. And the water system pressure began to drop and the storage volumes began to fall. As the system began to stabilize around the 18th, you can see that the water storage began to increase and we were able to restore service and it started to pick up on individual demands. A couple of observations about this. In the very early days, a couple

[4:02:48 PM]

days into freezing, we began to see and experience increased usage. Again, likely due to public-side leaks. You can see those shown in the Orange around, say, the 15th. And you can also see the yellow bar on top of that showing public-side leaks. And as the event progressed you can see that those Orange and yellow bars began to grow to a maximum on the 17th where we predicted that we had sort of the largest impact of water loss from public side loss and private side loss. As the system de-pressurized on to the 18th timeframe, you can see that folks began to repair leaks. We began to get a better hold on public side losses. And we were able to begin refilling the reservoirs starting on or about the 18th.

[4:03:51 PM]

And that phenomenon continued through the remainder of the recovery period. We were able to continue to fix leaks. People obviously stopped dripping faucets. So we continued through the period and we were able to provide water into the water storage reservoirs as well as being able to provide water into the de-watered portions of the distribution system. And, of course, that kind of concluded in the 22nd through the 26th period, where we returned to more normal operations. Ultimately, all of this data has really been enhanced by just the small set of pilot Ami data that we have been able to access through our ongoing Ami pilot. That provides us, you know, enormous amount of information from an individual customer meter perspective, and we're very excited about the

[4:04:51 PM]

information that that will provide us in the future. Not only from a post-event situation, but really in a real-time system operations context. So with that, I'll invite Rick up to kind of talk through some of the details on what we've been able to glean from this very small example of how we might use Ami data now and in the future. >> Good afternoon, councilmembers. Chair kitchen. Rick coranado, assistant director for operations. So I'm going to continue on with this graphic and just kind of highlight some of the areas that you've already been discussing. In particular the customer side, the Orange bars. This kind

of represents the initial demand on the system that we saw in the early days of the 15th to -- through the 17th,

[4:05:52 PM]

where it peaked out. Also some of the discussions will be a little bit about the utility side leaks that we have experienced that was subsequent of the 17th where we started to see more of the main leaks or the main breaks surface by the 18th. Next slide, please. So we've mentioned my atx water pilot, that consists of about -- about 3,700 customers that are currently in the different neighborhoods. Riverplace, Glenn lake, long canyon, Mueller and Windsor park. So we'll kind of highlight a little bit of what we saw in the insights of the data and the data analytics that we're starting to explore on a routine basis. Next slide, please. This graphic is a little detailed but I'm going to

[4:06:53 PM]

explain to you what this graphic represents. The number of Ami customers or my atx water customer portal customers is about 3,700 customers. We have in this representation, we have anywhere from zero to 1,200 customers that may have experienced during the events some level of what we call continuous usage. And continuous usage, the system that we use is the smart water software, but it's called my atx water portal. It has some analytics. So continuous usage is defined as water over three gallons per hour that has experience that -- that is an experience for an extension of 36 hours. These are all customizable systems or triggers, but that's what this data represents is in

[4:07:53 PM]

excess of three gallons per hour. The system now collects data every hour for a duration of 36 hours. And burst leak is another defined trigger. And burst leak is defined as an excess of 120 gallons per hour for a duration of 8 hours. And so we'll give some examples on what -- how some of the customers may have experienced some of these either continuous usage or the burst leaks. And, finally, the cumulative leaks, which really is a reference of both the continuous usage and the bursts represented in the bar chart that we had about in the order of -- at one point 30% of the customers experience a higher level usage or burst leaks. Next slide, please.

[4:08:55 PM]

Some of the customer profiles that we pulled from our database is customers that is represented, number one, where someone is running a water hose -- an outdoor water hose, the system notifies them that there's some continuous usage and then later there was an event that transitioned into a burst leak. The second customer example that you'll see is a burst leak due to a frozen irrigation line. And so those are things that we'll continuously monitor, analyze the information from my atx water portal. And also to continue to communicate with the customers on some of these types of events. Next slide, please. So this graphic just represents a normal use pattern. It's not unusual to have hourly peaks and valleys in some of the

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data sets as well as no water usage during some of the hourly reads. This would be considered normal usage. There's no continuous usage that would trigger a flag, and there's no excess usage that would also flag a burst, defined on the previous slides. Next slide, please. So going back to example number one. The system identified a continuous usage alert some time probably 36 hours into the customer's usage from the 13th -- I'll just kind of depict the timeframes -- from the 13th there was a continuous usage in excess of three gallons per hour. Some time probably three days -- or 36 hours later -- the system notified the customer that it

[4:10:57 PM]

was registering a continuous usage. The customer themselves notified Austin water some time on the 18th that they -- they were running an outdoor water hose due to the freeze as a means of protection. Some time on the 20th there was an initial spike in water usage that would represent what we call a burst leak. And a notification to the customer would have occurred eight hours after that threshold was achieved which, again, as a reminder that was 120 gallons per hour of water use. Next slide, please. This represents another customer profile that -- in which we had continuous usage in excess of 120 gallons per hour. This was identified with the

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customer communication that this was a bursted irrigation line. And so as you can see the gallons per hour was in excess of 1,000 to 1,200 gallons per hour. That lasted for several hours before it was rectified in the subsequent day. So this kind -- this is insight into two of the customer profiles that was typical through the data set of about 3,700 customers that are currently on Ami or my atx water system. Next slide, please. In addition to, you know, that information that we just kind of went over with Ami information, we are still exploring some of the information that's on the public side. Obviously, some of the public side information is estimates on

[4:12:58 PM]

flow or water loss. In the last presentation I shared with you that we saw an excess of probably 150 main breaks. The last count we had is 166 main breaks with a good portion of that, 80% of that, is defined as main breaks that were cast iron piping. We also have about that same amount of water service lines. Typical breaks between mains and water service lines is that we usually see water service line breaks greater than water main breaks. In this event, they did not increase as much as the water main breaks, although they take a little longer to surface sometimes. So as we continue to analyze that information, we'll probably see in excess of 100 of those water service lines in our work

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order system. Some of the information that we'll also share in the next update includes some of the communications. Typical work order -- or service request demands come through our dispatching office and phone number. We had to stand up some of that online management of that data through an online forum. And so as we continued to collect that information, we were refining what our actual water main breaks and service line breaks surfaced as. Again, the initial water main break analysis right now consists of over 150 to 160 water main breaks and 80% of that is consistent with cast iron main breaks and we'll continue to map those against previous breaks that have occurred throughout the city.

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And adjust our renew Austin program in which we'll give more updates on the infrastructure report out in the next meeting. Also I wanted to add a couple of side notes. In addition to not only water service mains and service line mains, which is the line from the main to the meter, is that we also had to address over 1500 emergency water shutoffs. So that's, you know, dispatching crews to go out and shut off the meters and the cutoff meters there at the private side. Or I'm sorry, at the public side of the meter, in order for customers to address any private side leaks. With that, I'll entertain any questions. >> Kitchen: Okay, thank you all. If you could take the slides down, I can better see who has questions. So let me just say thank you

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all for this -- this information. I know that we have now about 15 minutes, and I'm sure that we'll have more questions than we have time for. So if everyone could limit themselves to, you know, to one

question so that the most people can ask questions. And then, of course, as I mentioned we'll have more opportunities for people to ask questions and then again at our next water committee meeting we'll go into more depth on the infrastructure and communications. I see councilmember alter. So councilmember alter first and then the mayor after that, because I see those two hands up. >> Alter: Thank you. I appreciate the presentation and I want to focus in on the focus in on the presentation by Brian. I appreciate you responding to some questions that I had raised in some private meetings with respect to America's water

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infrastructure -- infrastructure act, and I appreciate your honest and forthright response here. Which is that that plan did not plan for cold weather because it was not considered a high risk event. And I want to raise this, and I appreciate you were honest about the fact it was not in there, this is something I'm seeing across multiple plants. We do not seem to have planned as a city with respect to our infrastructure and other things for cold weather. And I'd like to better understand why not. It sounds like you are going to be relooking at the plan and there's a lot of things obviously we're going to now say this is something we have to plan for, but I want to understand why we didn't plan for it. Was it just that our climate -- we're making plans on a lot of things based on climate projections

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and those are not perfect. , But if all our climate projections say we're not cold, why wasn't it there and what we're doing about it. >> Sure. Thank you for your question and for the opportunity to follow up on earlier conversations on this top he can. -- Topic. Looking at climate work that has been done within the city, even reviewing the city's climate resilient action plan, it did not identify cold weather as a risk factor for us. You know, it identified the risk of increasing temperatures and called out the fact that Austin is known for mild winters. So I think we are all learning, unfortunately in retrospect, that the risk of the polar vortex as this

[4:19:09 PM]

event has been called, exists. When we do risk planning, we also look at, you know, we look at the whole spectrum of risks. That's why we call it an all hazards approach. But the items that are selected for specific corrective action are those items that have a very high likelihood of coming to free advertise. So there -- fruition. So there are many risks that one could envision that would face the utility. The ones we would select for specific planning, specific investments in infrastructure, for specific training opportunities are the ones that would be rated high risk. And unfortunately in this event we did not

have information to indicate that extreme wintry weather was a risk for us. We have weathered other winter storms in the past and they have not had a significant impact on our

[4:20:11 PM]

infrastructure. So while unfortunately in retrospect now we have the benefit of hindsight and we will correct that going forward, that was not one of the high risks that we evaluated during our risk assessment. >> Alter: Thank you. I want to underscore that you are absolutely right, that if you go back and look at our climate resilience plan, it doesn't highlight cold weather. One step here is understanding why it wasn't in there and figuring out what else we have to do. And for colleagues, I'm working on trying to figure out the next step for climate resilient infrastructure and that's one of the observations that I think is really important in there. If it was not a risk, was there, like, what kind of planning did you do for cold weather? >> We do have regular operational procedures for cold weather. So I don't want to leave with you the impression that we are completely unprepared

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for cold weather. But in terms of a risk assessment for preparing for emergencies, it did not rise to that level. I'd like to ask assistant director Rick Coronado to talk about some of the day-to-day operational activities that prepare us for winter weather. >> Alter: And I just want to clarify, I didn't mean to suggest for day to day. I'm particularly interested in that infrastructure piece. >> Yes, and -- and please remember that we have limited time and we want people to have opportunities to ask questions. So some of this we may have to take off line. I think this is a very important questions, councilmember alter, so I appreciate you raising it. Let's try to limit the response and take some of it off line or go into more detail at our next meeting. Is that all right if we move on, councilmember alter? Did you get enough of your question answered? >> Alter: I can go off

[4:22:12 PM]

line if necessary. >> Kitchen: Okay. It's a very important question and you appreciate you letting us now you are looking into that, councilmember alter, because I think that's really key. So mayor, I think you had a question or is there anyone else that had a question after the mayor? Go ahead. >> Mayor Adler: Let me ask one that I think would be quick but is responsive to questions we're hear from constituents. With respect to the water demand and how it peaked and you had a slide here in this last presentation that spoke to that, there was some questions that were being asked in the community about how much the instruction to drip faucets contributed to the -- the eventual challenge. Because we told people to drip faucets and came back later and said now stop dripping faucets because the risk is greater. When I look that the numbers you presented, it almost looks as if dripping faucets

[4:23:14 PM]

didn't really contribute to much demand in that early period of time in those first six days as compared to the pipes bursting thereafter. And I just want to hear you talk just for a second with respect to that decision to tell people to drip their faucets, did that contribute to the load that we had and the vent problem? -- Eventual problem? >> This is Kevin. >> Go ahead. >> This is Kevin, Austin water. Just as it relates to the specific graphic, what is characterized in I believe Orange really represents both private plumbing leaks and breaks and customer behaviors like dripping faucets and, again, potentially storing water on premise, like filling bathtubs. It's very difficult to tease that out, mayor. I do think and in the previous question I think dripping faucets is a -- you know, a well used technique for short duration freezes,

[4:24:14 PM]

but as we start to look at, you know, more extreme events that are more long duration with deeper temperature impacts, I think clearly we're going to have to enhance our communications and our education of our customers about that technique. So we -- we did see excess or additional flows entering our wastewater plants so that we do know that dripping faucets was at least of a significant enough level to register in our wastewater plants. So ... >> Mayor Adler: Thank you. >> Kitchen: Okay, councilmember Fuentes. >> Fuentes: I want to ask about relief provided to customers. I want to make sure I'm following here. It seemed that for the relief provided for multi-family accounts, that was about 17% of your average rate cycle.

[4:25:15 PM]

Is that right? And then along the lines of that, and 25% for residential. And so I just wanted to learn a little about the differentiation between multi-family units versus residential customers. Is it because the average, there's more residential customers than multi-family, and should we be giving, you know, equitable attention to customers that live in multi-family units when it comes to relief amounts that we provide? >> Well, so it's -- in terms of those percentages, the 25% I spoke to was -- at this point we made it through 25% of our customer bill cycles. And so from a residential perspective, I describe that the number of gallons that have been adjusted at

[4:26:15 PM]

78 million gallons equates to slightly over 50% of the consumption that we normally see in tiers 3 through 5. Recall this time of year we don't generally see a ton of consumption in tiers 3 through 5. About 85% of our consumption is in the lower two tiers jaws because we don't generally see that much demand during this time of year. But on the multi-family side, you know, the gallons that were adjusted account for about 17% of what we would normally bill over the entire month this time of year. And I think that that -- I think as we continue to go through the additional bill cycles, I think that will come down. I think there were a couple of outliers, a couple of large leaks and large impacts that are reflected in a that number that, you know, we likely won't be

[4:27:15 PM]

indicative of the full bill cycle when we make it through all of the bill cycle. It's a little early to try and extrapolate show of toes numbers. Does that make sense? >> Fuentes: It does. Thank you. >> Kitchen: Other questions? I have a question. I'm not seeing others and I can't see everybody -- >> I do have one. >> Kitchen: Thank you, councilmember tovo. Let me ask my questions and I'll be right with you. So -- so I'm not sure, this may be for Anna, but the conversation about the three-year preparedness plan and also about resilience assessments that were being done. My question relates to the degree to which currently our plans, our preparedness plans account for working

[4:28:15 PM]

with the community. And I want to be more specific. You know, we've had some conversations and I know other councilmembers have brought as part of the resilience plans the concept of working with neighborhoods, neighborhood leads on, you know, level of preparedness. So I'm wanting to know if currently Austin water's plans account for and [inaudible] For connection to neighbors. And if not, is that something that we can consider in the future. >> Thank you, chair kitchen. I can address that in certain -- our plans do look at our communication to the community. So part of the enterprise resiliency effort is to improve the materials that we use to communicate with

[4:29:17 PM]

the community during emergencies. But I don't think that's exactly what you're asking about. I think you're going to -- >> Kitchen: It's not. >> -- Direct engagement if neighborhoods. That has not traditionally been part of our plan. It's not a part of our plan now. I will say during the aftermath of winter storm uri, we did have the opportunity to support the community through the community recovery phase. And so that was certainly a new effort for us. I think we got a lot out of that as an organization, and I would defer to director Meszaros if that's something how we might build upon that going forward. >> This is Greg. I think, councilmember, there's opportunities to incorporate more of the

engagement with the community. I think, you know, some efforts of that is happening when we think about resiliency with water flow, that was an intensive

[4:30:19 PM]

community-driven process. Also we know the council is working on other community coordination after steps such as resilient hubs and Austin water is already been involved in working with other city staff on thinking through resilient hubs and resilient water systems for those hubs. On an additional communication strategies to tie the community to better our support of our emergency water with enhancements in bottled water storage and trucks and other storage devices. So I think, you know, some of that framework is in place, but certainly opportunities to continue to enhance that. >> Kitchen: Okay, well, thank you. That's a much longer conversation that I think doesn't just touch on Austin water but touches on the whole emergency response, so I look forward to having that with my colleagues about how we might build into our emergency response

[4:31:20 PM]

a more structured system moving forward. I know councilmember tovo, we're a minute over time, if you can keep it to one question, then we'll have to wrap it up. >> Tovo: Thanks. I look forward to that conversation about resilience hubs. I have questions about the supplies we had on hand. There was a slide in a presentation about bottled water and the purchase of I think you said 60 whatever they are called, tank water -- tank distribution. So I'll just highlight that conversation I'd like to have perhaps in the emergency storm we are sessions. I would like to drill down on what emergency supplies we had on hand when those were purchased, the 60 tanks, and again I'm sorry that's not the right word. What some of the [inaudible] Are for how much quantity of those supplies we have on hand, what were the learnings that came out of the flood and the bottled

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water situation. Again, how much was on hand, how much was ordered and when and how we consider moving forward in that direction in terms of supply storage. >> Kitchen: Okay. Thank you very much for flagging that. So I'm going to go ahead and call our meeting to a close. I want to say to everyone that we will work through the [inaudible] In such a way that we have more time for a conversation. I think we'll be at the point where we're starting to drill down, so I ask my committee members just to let me know what specifically that you all want to drill down on. We'll be talking about infrastructure and communication, but any particular aspects of that. And then we will -- that will be a full meeting for us so we will schedule more time for conversation. So thanks everybody for participating and thank you for, Mr. Meszaros and your team for providing this information to us. So at 4:33, I will call our

[4:33:21 PM]

Austin water oversight committee meeting to a close. Thank you.