Feb 2022 Ullrich Boil Water Notice Event
Austin Water: Combined Council Q& A from Feb 15 and Feb 17

Council Member Ellis

E1) Are we training staff effectively?
Existing training for plant and operations staff consist of classes for licensure, health and safety, and equipment-specific operations and maintenance. Day-to-day operations training occurs through the onboarding process for new staff, preparation and review of Standard Operating Procedures with all staff, and on-the-job training by Supervisors and senior staff. Current training practices and potential additional training(s) for AW staff are currently being reviewed as part of the after action.

E2) Are we paying staff effectively?
Austin Water is finalizing a market study where early findings indicate that for certain jobs, particularly in Operations, our pay rates lag other water utilities and are not competitive. We are also considering changes to our employee referral program, increasing our licensure stipend amounts, and requesting an increase in the amount of our shift differential pay. Fiscal impacts of these measures will be calculated as recommendations are finalized.

E3) Are working conditions safe and supportive?
Austin Water prides itself in creating and maintaining safe working conditions for all employees and the public. This is a primary focus of the investigation underway, which includes completing staff interviews and formalizing a report. Depending on the investigative outcomes, additional actions and timeframes could be required.

E4) Can the infrastructure currently hold all the capacity needed for events like this?
Combined treated water reservoir storage for Austin Water totals approximately 185 MG which allows continuous capacity for its customers and events such as this. Additionally, when increased turbidity was detected at Ullrich Water Treatment Plant, it was taken offline, and water production was increased at Austin Water's other two plants (Davis and Handcox). This provided continuous water supply and reliability to keep water flowing to all parts of our service area when production capacity was limited from Ullrich. However, because our distribution system is interconnected and the water intermingles as it leaves all three plants, the issues at Ullrich triggered state and federal regulations requiring a city-wide boil water notice and subsequent sampling across our distribution system.

E5) Is there any unfunded infrastructure?
There are many infrastructure improvement projects for Ullrich Water Treatment Plant and others across Austin Water's system that are planned as part of the five- and ten- year capital improvements plan. The budget for all of Austin Water's infrastructure is updated on an annual basis and is based on need and risk. These projects, brought before City Council, have been supported to date. Austin Water manages its infrastructure risks through a data-driven asset management program, guided by Effective Utility Management principles. Enterprise business intelligence tools enable AW to identify the greatest asset risks, which are then addressed through a combination of proactive maintenance and capital investment. Austin Water will require periodic rate increases to fund its capital improvement program and is forecasting a rate increase for FY2024.

E6) What is the reporting process to TCEQ and how do the testing and conversations with TCEQ work?
Water quality compliance issues and/or violations can be reported to the TCEQ by phone or email. Through their website, regulatory guidance manuals, and other routine communications with water systems, the TCEQ makes available drinking water program-specific contacts from their central Austin office. Additionally, the TCEQ has an Austin regional office that maintains a 24-hour emergency phone service for reporting. TCEQ drinking water regulations and standards from the Texas Administrative Code are available on-line and via regulatory guidance publications for reference. Austin Water regulatory staff track the contact information for the TCEQ to ensure it is current and available as needed. Upon contact with TCEQ staff, water quality information and available testing data are provided to describe the situation or violation either verbally or via email. Consultation with the TCEQ occurs to review the technical information and circumstances of the situation to make or confirm a regulatory determination and review the appropriate and required actions to be performed by the water system. TCEQ regulations state that a water system must consult with the TCEQ within 24 hours from when an elevated turbidity violation in the finished drinking water is identified.

On February 5, 2022, Austin Water regulatory staff initiated contact with the TCEQ via their 24-hour regional office emergency phone line. After speaking to staff from the Austin regional office, phone contact was also made with TCEQ staff from the central Austin office drinking water program. Subsequent communications with the TCEQ that day were made via phone, email, and also through a virtual meeting. Following review of water quality testing data submitted by Austin Water, the TCEQ determined that a violation had occurred. Austin Water responded by submitting a Violation Report Form via email, as directed by TCEQ.

Council Member Kitchen

K1) What was the response system both from the standpoint of the workflow for staff and the technological alerts?
This question is a primary focus of the investigation underway, which includes completing staff interviews and formalizing a report. Depending on the investigative outcomes, additional actions and timeframes could be required.

K2) Is there any technology that could be added that would help with that response system?
Austin Water immediately met with staff at all three treatment plants to review the incident and has taken steps to increase system redundancies that include establishing proper setpoints and increasing the frequency of turbidity audible alarms, expanded notification for turbidity exceedances, and review of automatic shutdown procedures for the filtration system when turbidities are exceeded. Additionally, Austin Water is implementing enhanced turn-over procedures that will aid in communications between shift changes, as well as the escalation of communications to plant superintendents, management, and executive staff when issues arise. Staffing level and additional training are currently being reviewed.

Council Member Fuentes

F1) Is there a SOP for seeding the filters and what does that process look like?
Yes, the Standard Operating Procedure for seeding the clarifier basins (the filters are not seeded) exists and provides guidance and instruction on the percent solids to achieve by seeding or transferring solids from another basin. Settled water from the clarifier basins flows through turbidimeters continuously to provide readings in real time. Given the need to closely monitor and adjust the solids content of the basin throughout the seeding process, the plant does not rely on programming or automatic control to stop solids flow to a clarifier based on settled water turbidity.

F2) Why did seeding process go on for so long?
This question is a primary focus of the investigation underway, which includes completing staff interviews and formalizing a report. Depending on the investigative outcomes, additional actions and timeframes could be required.

F3) Why was it not terminated successfully?
This question is a primary focus of the investigation underway, which includes completing staff interviews and formalizing a report. Depending on the investigative outcomes, additional actions and timeframes could be required.

F4) Why were alarms not going off? Were they intentionally disabled?
An initial review of the alarm list indicates that both visual and audible alarms occurred to notify staff onsite of the issue. This is a primary focus of the investigation underway, which includes completing staff interviews and formalizing a report. Depending on the investigative outcomes, additional actions and timeframes could be required.

F5) Was it a matter of not having a system in place where the alarms were activated appropriately when levels exceeded regulatory requirements?
An initial review of the alarm list indicates that both visual and audible alarms occurred to notify staff onsite of the issue. This is a primary focus of the investigation underway, which includes completing staff interviews and formalizing a report. Depending on the investigative outcomes, additional actions and timeframes could be required.

F6) Were there valves that could have been closed to prevent the high turbid water from leaving the plant?
Yes, there are valves that could have contained the turbid water before it reached the clear well, underground storage tanks. Understanding why the turbid water was not contained is a primary focus of the investigation underway, which includes completing staff interviews and formalizing a report. Depending on the investigative outcomes, additional actions and timeframes could be required.

In this event, when the turbid water from the filters was detected, it had already been conveyed to the clearwell. Since the turbid water had already made its way to the clearwell, there were no valves that could have been closed to prevent the turbid water from leaving the plant. The corrective action that was taken involved shut down of the pumps leaving the plant.

F7) How long will the investigation take?
Austin Water is working to conclude the investigation process within approximately 2 weeks. The investigation process includes both interviews of employees and analysis of the systems.

F8) When did AW have its last peer review?
Austin Water participates in the Partnership for Safe Water, which is comprised of an alliance of six prestigious drinking water organizations:

- AWWA – American Water Works Association
- AMWA – Association of Metropolitan Water Agencies
- ASDWA – Association of State Drinking Water Administrators
- NAWC – National Association of Water Companies
- USEPA – U. S. Environmental Protection Agency
- WRF - Water Research Foundation

In 2016, the Ullrich WTP received the President's Award for meeting exceptionally high standards of filtered water quality. Most recently, in 2021, Ullrich WTP received the 5-year President's Award for continuing to maintain the President's Award with annual reporting and review.
This analytical review process involves a team of Austin Water staff completing a self-assessment procedure prescribed by the Partnership for Safe Water (PfSW). The report is submitted to the PfSW and reviewed by members from peer utilities. Upon approval of the report, the Ullrich WTP received the program's Director's Award. To remain in good standing, Director's Award plants submit annual reports to the program, consisting of performance data and an annual summary of improvement activities.

Mayor Adler

AD1) Do you think the KLBJ caller was one of the people who was suspended?
Austin Water has no evidence that the KLBJ caller was one of the employees placed on administrative leave. As of February 22, 2022, no Austin Water employees have been "suspended" as a result of the boil water event. Three employees were placed on "administrative leave", pending the outcome of the ongoing investigation.

AD2) Was the human error involved between 2am and 8am?
This question is a primary focus of the investigation underway, which includes completing staff interviews and formalizing a report. Depending on the investigative outcomes, additional actions and timeframes could be required.

AD3) From 8am to 8pm, was there potential for bacteria to be released into the drinking water? Would the amount of water released be of sufficient concentration in the system that it would pose risk to the public? What risk, if any, did the public face from 8am to 8pm?
There has been no evidence of contaminants in the water during this event. The boil water notice was required because turbidity levels at Ullrich Water Treatment Plant (UWTP) exceeded regulatory requirements. Although our water disinfection parameters were strong and remained within regulatory levels, we issued a boil water notice in alignment with state and federal regulations, because the risk of

contaminants is raised when there are suspended particles, or high levels of turbidity, in the water. The risk of contaminants can increase with higher turbidity, which is why regulatory limits for turbidity are an important element of measuring water quality. UWTP was in operation from 8 am to 9:30 am and then shutdown as a corrective action measure. UWTP was restarted about 12am under the boil water advisory.

AD4) Three citywide boils in the last 4 years and 2 others more contained geographically. Is there a commonality over the 5 events?
Past boil water notices have involved natural disasters (2018 Colorado River Flood, 2021 Winter Storm Uri). The 2019 zebra mussel event and the most recent event were the result of operational issues. The zebra mussel event did not result in a boil water notice.

After each incident (both natural disasters and operational incident), Austin Water conducted a thorough after-action analysis and took corrective action. Austin Water remains committed to a thorough and responsive after-action process to this event. Operations and communication at Ullrich have improved through documentation or updating of relevant standard operating procedures, additional training, and emphasis on communication of situational awareness. These activities are ongoing.

The localized "fire foam" event that occurred in and around the Tanglewood Forest neighborhood in 2020 was a cross contamination event that occurred due to the Austin Fire Department improperly connecting their fire trucks to public fire hydrants. AFD has corrected their SOP and implemented training procedures to prevent future occurrences.

AD5) At the time that the water was being released (when we didn't know if it was contaminated), what risk was present to the community?
Throughout this event, water disinfection parameters were strong and remained within regulatory levels. Austin Water issued a boil water notice in alignment with state and federal regulations, because the risk of contaminants, such as pathogens, is raised when there are suspended particles, or high levels of turbidity, in the water. Particles that are not a health risk themselves can shield pathogens from disinfection. So low turbidity means lower risk that pathogens have passed through the treatment process and fewer places for them to hide from disinfection.

If an individual ingests water with harmful pathogens in enough volume, they can get sick. Typical symptoms include diarrhea. And certainly, the highest risk would be those that are vulnerable with compromised immune systems or very young children.

AD6) Was the contaminated water diluted within the whole system?
Yes, the high turbidity water mixed with hundreds of millions of gallons in the water distribution system and was diluted by water that met turbidity standards. Turbidity standards have changed over time, requiring lower turbidity in drinking water. The regulations appropriately have changed as water system are able achieve lower turbidity in order to drive up public health and safety.

Council Member Tovo

T1) Please clarify the KLBJ caller's remark and their assertions do not match info that weatherization at the plant failed or was faulty.
Austin Water has no evidence that the KLBJ caller was one of the employees placed on administrative leave. Austin Water also has evidence to support that the turbidity issue at Ullrich was the result of operational errors and was not related to freezing temperatures or recommendations from the Winter Storm Uri After-Action Report.

T2) Provide response to assertions in media that the infrastructure was old, faulty, or insufficiently unfunded.
The turbidity issue at Ullrich was the result of operational errors and was not related to insufficient or underfunded issues. Austin Water and the City Council have taken appropriate actions for capital improvement projects and related forecasts.

T3) Basin 6 – how many basins are in the plant and can they be detached from the rest of the system? (page 2 answer needs more clarification) – could system be changed or upgraded in some way to cut off a basin if problems are detected?
There are 7 basins at the Ullrich plant. Each basin can be detached from the treatment process by closing a valve from the control room to prevent the basin from sending water to the filters.

T4) Same with linkage between water treatment plants: why we can't just rely on other two plants – could that system change? What would it take to alter the intermingling situation? Should we work toward that and what would it take to get there?
When increased turbidity was detected at Ullrich Water Treatment Plant, it was taken offline, and water production was increased at Austin Water's other two plants (Davis and Handcox) to provide continuous water supply and reliability to keep water flowing to all parts of town when production capacity was limited from Ullrich. However, because our distribution system is interconnected and the water intermingles as it leaves all three plants, the issues at Ullrich triggered state and federal regulations requiring a city-wide boil water notice and subsequent sampling across our distribution system.

The interconnectivity of our water distribution system enhances our system resiliency and helped ensure that customers did not experience water outages when the Ullrich WTP was down during this event. Austin Water's CIP includes projects to enhance our ability to move water from Davis and Handcox throughout the service area to further enhance this resiliency strategy.

T5) Why did the alarms not activate a different response by staff? Should alerts be external to the team? Explain if there were alarms going off why were they not getting the attention they needed?
An initial review of the alarm list indicates that both visual and audible alarms occurred to notify staff onsite of the issue. This is a primary focus of the investigation underway, which includes completing staff interviews and formalizing a report. Depending on the investigative outcomes, additional actions and timeframes could be required.

T6) Page 2 paragraph in Attachment B re: description of conditions at Ullrich during heavy rain and ice, the answer is still a bit technical: please describe in lay person terms.
The paragraph in question and requested in lay person terms states: Quality controls currently in place include online process control/water quality instrumentation, audible and visual control system alarms, frequent grab sampling and analysis, and escalation to supervisory staff. Austin Water has taken immediate steps to increase system redundancies that include increasing the frequency of turbidity audible alarms, automatic notification of supervisors for turbidity exceedances, and automatic shutdown of the filtration system when turbidities are exceeded.

Wet weather that transitioned to icy conditions was experienced at Ullrich from January 30 through February 4. No issues were experienced through the wet weather event. Through the icy conditions, Ullrich experienced frozen lime feed lines (the systems that allow lime to be added to the basins) at two basins. The lime feed system is currently under construction by a Contractor. The frozen lime lines were experienced on the morning of February 4 but were thawed out by that afternoon. Additionally, because of the icy road conditions, the trucks that haul solids from our process were grounded on February 3 and 4. On February 4, the plant staff was focused on managing solids and fixing solids processing equipment that was experiencing issues (un-related to the weather). The City of Austin had declared February 3 and 4 as bad weather days with only essential staff reporting to duty those days. As a result, all maintenance, management, and engineering staff were not required to report to the plant on February 3 and 4. However, because of the issues experienced with the frozen lime lines and solids processing equipment, two maintenance and one supervisor staff members were deployed to Ullrich for most of the day on February 4 to support the three on-duty operations staff.

T7) Has it always been AW practice not to have supervisors on night shift?
Yes, it has been the practice to not have a supervisor on the night shift.

Austin Water has worked recently to enhance staffing at Ullrich WTP, our largest plant. Each plant has a Superintendent. At Ullrich, we have added a second Superintendent to oversee maintenance activities while the other Superintendent oversees operations. In addition, a fourth plant Supervisors was recently added to Ullrich to support additional staff span of control. There also is a Division Manager (added in 2020) and Operations Manager who oversee all the water plants.

Each plant also has Process Engineer that specializes in that plant. That individual is embedded at the plant and works a standard Monday through Friday schedule.

T8) Can you explain the impact of winter weather event on Ullrich operations? (clarification of Memo passage)
The winter weather had two primary impacts on Ullrich operations on Friday, February 4, neither of which were related to the events that caused the Boil Water Notice based on our analysis.

First, sludge hauling was grounded due to icy road conditions. Typically, sludge is hauled away from the plant every day in trucks. During the icy weather, trucks were not in use and staff was focusing on storing the sludge onsite with the ability to haul it away temporarily unavailable.

Second, Ullrich experienced frozen lime feed lines (the systems that allow lime to be added to the basins) at two basins. The lime feed system is currently under construction by a contractor. The frozen lime lines were experienced on the morning of February 4 but were thawed out by that afternoon.

T9) Do the frozen lines Friday have anything to do with what happened in Basin 6?
No. We were able to bring on basins online after we unfroze those lines, which were the sections of the line for slurry.

The frozen lime lines experienced on Friday were thawed out by Friday afternoon, before the issues with Basin 6 occurred.

Council Member Pool

P1) Who was the KLBJ caller and what vetting might have been done to verify their identity?
Austin Water has no evidence that the KLBJ caller was one of the employees placed on administrative leave.

P2) What actually happened among the crew members?
This question is a primary focus of the investigation underway, which includes completing staff interviews and formalizing a report. Depending on the investigative outcomes, additional actions and timeframes could be required.

P3) Do we need additional alarms on top of alarms?
This question is a primary focus of the investigation underway, which includes completing staff interviews and formalizing a report. Depending on the investigative outcomes, additional actions and timeframes could be required.

Mayor Pro-Tem Alter

AL1) Better understanding of the operational system errors of the organization issues - what resources are needed to invest to prevent future water quality and supply failures?
This question is a primary focus of the investigation underway, which includes completing staff interviews and formalizing a report. Depending on the investigative outcomes, additional actions and timeframes could be required.

AL2) Alarms went off but nothing was done -why were they not monitored or detected by other fail safes? Are there things not in place that should have been?
This question is a primary focus of the investigation underway, which includes completing staff interviews and formalizing a report. Depending on the investigative outcomes, additional actions and timeframes could be required.

AL3) Are we following best practices for manual processes and automation levels?
This question is a primary focus of the investigation underway, which includes completing staff interviews and formalizing a report. Depending on the investigative outcomes, additional actions and timeframes could be required.

AL4) Do we need to update our SCADA system?
Given the sensitive nature of details pertaining to critical infrastructure, Austin Water is available to work with the City Council on how best to provide additional details on this answer.

AL5) Do we need to revise SOPs?
This question is a primary focus of the investigation underway, which includes completing staff interviews and formalizing a report. Depending on the investigative outcomes, additional actions and timeframes could be required.

AL6) Do we need to change treatment approaches?
No, a change to treatment approaches would not have prevented the operational issue from occurring.

AL7) Do we need to recommend regulations to TCEQ?
No, Austin Water is not recommending regulatory updates to TCEQ.

AL8) Can we do water treatment in more efficient and resilient way?
Austin Water's three water treatment plants and the interconnected distribution system is a strength of our system and contributes to our system resiliency. Austin Water continuously reviews and advances water treatment, storage, pumping and transmission projects through regular updates to its Capital Improvement Program. Additionally, as demonstrated by our 100+ year water plan, Water Forward, Austin Water is working to further enhance system resilience through an Aquifer Storage and Recovery (ASR) Project which will facilitate the storage of some 60,000-acre feet of treated water for use in the event of drought or other system disruptions or emergencies.

AL9) Are other SCADA failures happening within our treatment plants that may not be reported to management?
Based on our review, there were no failures of the SCADA system during this event. An operational error was the cause of the Boil Water Notice.

AL10) Re: choices made on Saturday: could we have issued a hydrologic model based BWN? Did we consider a smaller area and if so, why or why not?
Austin Water, in consultation with the TCEQ, did consider a hydrologic model-based Boil Water Notice but proving the affected areas with precision would have added human calculation and many hours and deliberation. For these reasons, a citywide Boil Water Notice was issued.

In 2021, during Winter Storm Uri, Austin Water was able to rescind its notice by pressure zones since the BWN was issued due to a loss of pressure, as opposed to this incident which was a result of treatment process and turbidity.

AL11) Please respond to and challenge narrative that BWN and zebra mussels outside of AW's control: 4 of 5 water quality supply incidents all related to Ullrich; the intakes handled turbidity without BWN in 2018; 2021 emergency switch failure, zebra mussels was an Ullrich plant issue?
Past boil water notices have involved natural disasters (2018 Colorado River Flood, 2021 Winter Storm Uri). The 2019 zebra mussel event and the most recent event was the result of operational issues. After each incident (both natural disasters and operational incident), Austin Water conducted a thorough after-action analysis and took corrective action. Austin Water remains committed to be a thorough and responsive after-action process in response to this event.

Operations and communication at Ullrich have improved through documentation or updating of relevant standard operating procedures, additional training, and emphasis on communication of situational awareness. These activities are ongoing.

The localized "fire foam" event that occurred in and around the Tanglewood Forest neighborhood in 2020 was a cross contamination event that occurred due to the Austin Fire Department improperly connecting their fire trucks to public fire hydrants. AFD has corrected their SOP and implemented training procedures to prevent future occurrences.

AL12) Have we ever done a third-party review by inviting high-performing US water utilities such as peers in AWWA to review best practices?
Austin Water participates in the Partnership for Safe Water, which is comprised of an alliance of six prestigious drinking water organizations:

- AWWA – American Water Works Association
- AMWA – Association of Metropolitan Water Agencies
- ASDWA – Association of State Drinking Water Administrators
- NAWC – National Association of Water Companies
- USEPA – U. S. Environmental Protection Agency
- WRF - Water Research Foundation

In 2016, the Ullrich WTP received the President's Award for meeting exceptionally high standards of filtered water quality. Most recently, in 2021, Ullrich WTP received the 5-year President's Award for continuing to maintain the President's Award with annual reporting and review.

This analytical review process involves a team of Austin Water staff completing a self-assessment procedure prescribed by the Partnership for Safe Water (PfSW). The report is submitted to the PfSW and reviewed by members from peer utilities. Upon approval of the report, the Ullrich WTP received the program's Director's Award. To remain in good standing, Director's Award plants submit annual reports to the program, consisting of performance data and an annual summary of improvement activities.

AL13) Can you talk more about the strategic planning process with respect to resilience and emergency preparedness protocols and in the event of operational failures?
Austin Water has identified resiliency as a strategic focus area as part of its Effective Utility Management approach. A cross-functional team with executive-level sponsors identifies and implements resiliency strategies with regular oversight by the Austin Water Executive team.

In addition, Austin Water conducts a thorough after-action process after an emergency event or operational failure. Austin Water has completed all after-action recommendations from the 2018 Boil Water Notice, including completion of a polymer system at Ullrich Water Treatment Plant and temporary systems constructed at Davis and Handcox while the systems are being constructed.

Austin Water meets all requirements of the America Water Infrastructure Act (AWIA), using an all-hazard risk approach.

Planning for climate adaptations is at the heart of Water Forward, Austin's 100-year integrated water resource plan. Implementation of several strategies from this plan have begun, including the Advanced Metering Infrastructure and Aquifer Storage and Recovery, focused on leveraging our Colorado River supply through our own river rights, as well as our LCRA agreements.

Austin Water also works to address specific risks to our community such as wildfires. We are evaluating and taking steps to reduce wildfire risk at some of our critical facilities. As well, Austin Water is responsible for all the city's Water Quality Protection Lands as well as Austin's Balcones Canyonlands Preserve lands, and so we're taking steps to build shaded fuel breaks and mow lines along all the high-priority boundaries along that.

Investing in employees, knowledge transfer systems and how we're managing attrition and compensation is another important aspect of our work to make the utility more resilient.

AL14) Why was this not escalated to supervisor more quickly, if no system alerting supervisors up the chain about problem?
That is one of the key questions Austin Water will work through in the investigation and the report.

AL15) What was the SOP for alerting up the chain, if there wasn't automatic notification? Were they trained to reach out?
Supervisor notification and escalation procedures will be thoroughly reviewed in the investigation and after-action process.

Council Member Kelley

K1) How does AW emergency manager work with the HSEM director?
Austin Water's Division Manager of Emergency Management oversees a staff of five employees. As a long-standing practice for Austin Water, this position serves as Austin Water's single point of contact to coordinate and attend regular meetings with HSEM. Austin Water has also added an Emergency Plans Officer Senior position that will be co-located at HSEM two days a week and will be a shared resource to help both Austin Water and HSEM continue to enhance our bonds of collaboration and overall emergency planning and response. The hiring process to fill that position is complete as of last week, and Austin Water has started the on-boarding process with the new staff member.

K2) What steps are in place to prevent repeat of initial findings during the investigation?
Austin Water has taken immediate steps to increase system redundancies that include increasing the frequency of turbidity audible alarms, automatic notification of supervisors for turbidity exceedances, and automatic shutdown of the filtration system when turbidities are exceeded.

As part of the after-action review, Austin Water will evaluate Interlock technology that prevents high turbidity water from leaving the filters, automatic external notification for elevated turbidities, and additional SCADA alarms as improvements and technologies that might have prevented this event.

K3) Uri AAR findings noted lack of incident command training and lacked familiarity with emergency management protocols: what training has been done since that recommendation was made?
Incident Command System in-person training sessions have resumed, beginning November 2021. Additionally, rosters for incident management team positions have been reviewed and updated to increase the number of staff available to perform those roles in an emergency. Also, three additional positions in the Emergency Management Division are included in AW's approved FY 2022 budget to focus on emergency response, preparedness, resiliency and community engagement.

K4) What is the status of SB 3 documents that must be submitted to TCEQ submittal due by March 1, 2022 status and could Council receive a copy?
The SB 3 documents are in process for the March 1, 2022, deadline. Given the sensitive nature of details pertaining to critical infrastructure, Austin Water is available to work with the City Council on how best to provide additional details on this answer.

K5) Previous incidents identified problems with communication with tenants that do not have direct AW accounts: how did we do outreach to multifamily tenant associations, and property managers during this incident?
Austin Water partnered with the COA Utilities and Austin Energy to send notifications to over 53,000 customers. The delivery rate was 99.5% and directed customers to the Austintexas.gov Active Emergency Information Hub.

In advance of winter, as a part of Austin Water's winter weather preparedness activities, a similar tip sheet was provided that included actions for signing up for emergency notifications through Warn Central Texas, how to report a water issue, and water distribution locations.

K6) Handcox only pushes out 50 MGD, what would it take to get to possibly 150 MGD or more?
The Handcox Water Treatment Plant currently has a treated water production capacity of 50 MGD, with the ability to expand certain components up to 300 MGD. At this time, AW anticipates the need to expand the Handcox WTP to at least 75 MGD in conjunction with AW's Aquifer Storage and Recovery (ASR) Project. AW will continue to monitor water treatment capacity needs across the service area and on a plant-by-plant basis to make recommendations for future Water Treatment Plant capacity expansions in conjunction with future capital improvement program needs.

K7) What are the expected audit costs and source of funds?
The resolution passed by the City Council on February 17, 2022, directs the City Manager to procure services for an external audit through the Office of the City Auditor. The cost and funding source for this audit is still being determined.

Council Member Vela

V1) Credits/refunds to bills, is there any precedent statewide for municipal utility to give any billing credit to customers, given that there was no natural disaster proximate cause?
Austin Water has researched and found two occasions of utilities offering a goodwill credit to customers. While customer flushing impacts would have been minimal, Austin Water is reviewing potential scenarios for offering a credit to impacted customers which will be discussed further with the Austin Water Oversight Committee on February 23, 2022.

V2) Is there any civil liability or class action possible?
Austin Water would need to consult with its COA legal department to understand potential civil liability or potential class actions.

Council Member Renteria

R1) What is needed to retain AW employees? Will it involve a wage increase?
For the last several years the Austin MSA has seen unemployment rates as low as 2%; lower than anywhere in Texas and the US. Given the competition we have with other large-scale employers, we have seen smaller candidate pools, particularly since the beginning of the pandemic. We also lose candidates during the hiring process as well as post-offer due to entry level pay. We routinely place our job postings on external job boards, schools, and professional associations to reach as many potential candidates as possible. We constantly assess our hiring practices for continuous improvements. Austin Water is finalizing a market study where early findings indicate that for certain jobs, particularly in Operations, our pay rates lag other water utilities and are not competitive. We are also considering changes to our employee referral program, increasing our licensure stipend amounts, and requesting an increase in the amount of our shift differential pay. Fiscal impacts of these measures will be calculated as recommendations are finalized

R2) Will a higher rate be required?
Austin Water is finalizing a market study where early findings indicate that for certain jobs, particularly in Operations, our pay rates lag other water utilities and are not competitive. We are also considering changes to our employee referral program, increasing our licensure stipend amounts, and requesting an increase in the amount of our shift differential pay. Fiscal impacts of these measures will be calculated as recommendations are finalized.