



UTILITIES ADVISORY COMMISSION
Regular Meeting
Wednesday, July 03, 2024
Council Chambers & Hybrid
6:00 PM

Utilities Advisory Commission meetings will be held as “hybrid” meetings with the option to attend by teleconference/video conference or in person. To maximize public safety while still maintaining transparency and public access, members of the public can choose to participate from home or attend in person. Information on how the public may observe and participate in the meeting is located at the end of the agenda. Masks are strongly encouraged if attending in person. The meeting will be broadcast on Cable TV Channel 26, live on YouTube <https://www.youtube.com/c/cityofpaloalto>, and streamed to Midpen Media Center <https://midpenmedia.org>.

VIRTUAL PARTICIPATION [CLICK HERE TO JOIN](https://cityofpaloalto.zoom.us/j/96691297246) (https://cityofpaloalto.zoom.us/j/96691297246)
Meeting ID: 966 9129 7246 Phone: 1(669)900-6833

PUBLIC COMMENTS

Public comments will be accepted both in person and via Zoom for up to three minutes or an amount of time determined by the Chair. All requests to speak will be taken until 5 minutes after the staff’s presentation. Written public comments can be submitted in advance to UACPublicMeetings@CityofPaloAlto.org and will be provided to the Council and available for inspection on the City’s website. Please clearly indicate which agenda item you are referencing in your subject line.

PowerPoints, videos, or other media to be presented during public comment are accepted only by email to UACPublicMeetings@CityofPaloAlto.org at least 24 hours prior to the meeting. Once received, the Clerk will have them shared at public comment for the specified item. To uphold strong cybersecurity management practices, USB’s or other physical electronic storage devices are not accepted.

Signs and symbolic materials less than 2 feet by 3 feet are permitted provided that: (1) sticks, posts, poles or similar/other type of handle objects are strictly prohibited; (2) the items do not create a facility, fire, or safety hazard; and (3) persons with such items remain seated when displaying them and must not raise the items above shoulder level, obstruct the view or passage of other attendees, or otherwise disturb the business of the meeting.

TIME ESTIMATES

Listed times are estimates only and are subject to change at any time, including while the meeting is in progress. The Commission reserves the right to use more or less time on any item, to change the order of items and/or to continue items to another meeting. Particular items may be heard before or after the time estimated on the agenda. This may occur in order to best manage the time at a meeting to adapt to the participation of the public, or for any other reason intended to facilitate the meeting.

CALL TO ORDER 6:00 pm – 6:05 pm

AGENDA CHANGES, ADDITIONS AND DELETIONS 6:05 pm – 6:10 pm
The Chair or Board majority may modify the agenda order to improve meeting management.

PUBLIC COMMENT 6:10 pm – 6:25 pm
Members of the public may speak to any item NOT on the agenda.

APPROVAL OF MINUTES 6:25 pm – 6:30 pm

1. Approval of the Minutes of the Utilities Advisory Commission Meeting Held on June 3, 2024

UTILITIES DIRECTOR REPORT 6:30 pm – 6:45 pm

NEW BUSINESS *(a 10 minute break will be imposed during this section)*

2. Approval of UAC Budget Subcommittee Members to Serve a Short Term of July 3, 2024 to July 2, 2025 (**ACTION** 6:45 PM – 6:55 PM)
3. Discussion on Palo Alto Utilities Schools Grant Program (**DISCUSSION** 6:55 PM – 7:25 PM) Staff: Brian Ward
4. Discussion and Review on the Installation of Separate Utilities Meters and Services for Accessory Dwelling Units (**DISCUSSION** 7:25 PM – 8:25 PM) Staff: Tomm Marshall and Matt Zucca

FUTURE TOPICS FOR UPCOMMING MEETING ON SEPTEMBER 4, 2024 AND REVIEW OF THE 12 MONTH ROLLING CALENDAR

COMMISSIONER COMMENTS AND REPORTS FROM MEETINGS/EVENTS

ADJOURNMENT

SUPPLEMENTAL INFORMATION

The materials below are provided for informational purposes, not for action or discussion during UAC Meetings (Govt. Code Section 54954.2(a)(3)).

Informational Report: Utilities Quarterly Report for FY24-Q3

INFORMATIONAL REPORTS
12-Month Rolling Calendar
Public Letter(s) to the UAC

PUBLIC COMMENT INSTRUCTIONS

Members of the Public may provide public comments to teleconference meetings via email, teleconference, or by phone.

1. **Written public comments** may be submitted by email to UACPublicMeetings@cityofpaloalto.org.
2. **Spoken public comments using a computer** will be accepted through the teleconference meeting. To address the Council, click on the link below to access a Zoom-based meeting. Please read the following instructions carefully.
 - You may download the Zoom client or connect to the meeting in- browser. If using your browser, make sure you are using a current, up-to-date browser: Chrome 30 , Firefox 27 , Microsoft Edge 12 , Safari 7 . Certain functionality may be disabled in older browsers including Internet Explorer.
 - You may be asked to enter an email address and name. We request that you identify yourself by name as this will be visible online and will be used to notify you that it is your turn to speak.
 - When you wish to speak on an Agenda Item, click on “raise hand.” The Clerk will activate and unmute speakers in turn. Speakers will be notified shortly before they are called to speak.
 - When called, please limit your remarks to the time limit allotted. A timer will be shown on the computer to help keep track of your comments.
3. **Spoken public comments using a smart phone** will be accepted through the teleconference meeting. To address the Council, download the Zoom application onto your phone from the Apple App Store or Google Play Store and enter the Meeting ID below. Please follow the instructions B-E above.
4. **Spoken public comments using a phone** use the telephone number listed below. When you wish to speak on an agenda item hit *9 on your phone so we know that you wish to speak. You will be asked to provide your first and last name before addressing the Council. You will be advised how long you have to speak. When called please limit your remarks to the agenda item and time limit allotted.

CLICK HERE TO JOIN Meeting ID: 966 9129 7246 Phone:1-669-900-6833

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CITY OF
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Utilities Advisory Commission Staff Report

From: Dean Batchelor, Director Utilities
Lead Department: Utilities

Meeting Date: July 3, 2024
Staff Report: 2406-3145

TITLE

Approval of the Minutes of the Utilities Advisory Commission Meeting Held on June 3, 2024

RECOMMENDATION

Staff recommends that the UAC consider the following motion:

Commissioner _____ moved to approve the draft minutes of the June 3, 2024 meeting as submitted/amended.

Commissioner _____ seconded the motion.

ATTACHMENTS

Attachment A: 06-03-2024 DRAFT UAC Minutes

AUTHOR/TITLE:

Jenelle Kamian, Program Assistant I



UTILITIES ADVISORY COMMISSION MEETING MINUTES OF JUNE 3, 2024 SPECIAL MEETING

CALL TO ORDER

Chair Scharff called the meeting of the Utilities Advisory Commission (UAC) to order at 6:03 p.m.

Present: Chair Scharff, Vice Chair Mauter, Commissioners Croft, Phillips, Gupta, Metz and Tucher

Absent: None

AGENDA REVIEW AND REVISIONS

None

ORAL COMMUNICATIONS

None

APPROVAL OF THE MINUTES

ITEM 1: ACTION: Approval of the Minutes of the Utilities Advisory Commission Meeting Held on May 1, 2024

Chair Scharff invited comments on the May 1, 2024 UAC draft meeting Minutes.

ACTION: Commissioner Phillips moved to approve the draft minutes of the May 1, 2024 meeting as submitted.

Commissioner Croft seconded the motion.

The motion carried 5-0 with Chair Scharff, Vice Chair Mauter, Commissioners Croft, Metz, and Phillips voting yes.

Commissioner Gupta and Tucher abstained.

UNFINISHED BUSINESS

None

UTILITIES DIRECTOR REPORT

Dean Batchelor, Utilities Director, delivered the Director's Report

SOAR Award: The American Public Gas Association (APGA) recently presented CPAU with the prestigious APGA System Operational Achievement Recognition (SOAR) for excellence in operating its natural gas utility. Public natural gas systems are entrusted by their customers to deliver clean and affordable natural gas through a safe and reliable distribution pipeline system. To accomplish this mission, a forward-thinking natural gas utility constantly strives to improve its operating capabilities, overcome challenges, and adapt to its changing environment. Out of approximately 750 APGA members, CPAU was selected for SOAR level Silver by its peers on the APGA Operations and Safety Committee. The selection was based on demonstrated excellence in the four areas of system integrity, system improvement, employee safety, and workforce development. While CPAU is focused on reducing greenhouse gas emissions through switching from fossil-fueled gas applications to carbon neutral electricity, we remain committed to maintaining our natural gas distribution system in a safe and reliable way while in operation in our community. View apga.org/programs/soar for more about the program.

New OMS Feature: CPAU's new Outage Management System (OMS) can now call customers who do not have mobile phones or have opted-out of receiving text messages to inform them of power outages and provide status updates. We have opted in all customer landline (non-mobile) phone numbers on file for notification purposes. Customers can also opt out of phone calls if they prefer not to receive notifications. Details on outage notifications and updates are available at cityofpaloalto.org/outages

Business and Key Account Customer Surveys: CPAU is a member of the California Municipal Utilities Association (CMUA), which is facilitating customer satisfaction surveys on behalf of member agencies for business and key account customers. CMUA's contractor, GreatBlue Research, Inc. will soon begin a statewide survey of randomly selected municipal and investor-owned utility business customers to gauge satisfaction with their utility in the areas of customer service, rates, reliability, safety, emergency response, customer programs, and communication. Once the statewide survey is complete, CPAU has contracted with GreatBlue to also conduct an "oversample" survey of Palo Alto customers this summer to gain a deeper understanding of the issues that are specifically of interest to our community members.

Utility Rate Changes: CPAU staff have been developing a comprehensive outreach strategy to inform customers about upcoming utility rate changes, including through website, print and digital materials, and collaboration with partners such as the local media. Our goal is to be transparent about the reasons for rate changes and what factors into the need for increases. The decision to increase rates is never taken lightly. It is the result of careful consideration of the need for infrastructure upgrades, system maintenance, regulatory compliance, and maintaining adequate financial reserves. These investments are crucial to maintaining the integrity of our utility systems and ensuring that we deliver the dependable service our customers rely on every day. While these factors are impacting utilities throughout California, Palo Alto consistently provides utility services at more affordable rates compared to surrounding communities. For example, by comparison, the average residential electric rate for PG&E customers is close to 60% higher than CPAU, and neighboring Community Choice Aggregation (CCA)

agency electric rates are around 50% higher than CPAU. However, we always strive to provide our customers with access to efficiency programs and services to help keep utility bill costs low and offer financial assistance for those in need. Details on rates are available at cityofpaloalto.org/ratesoverview

Preparing for Public Safety Power Shutoffs (PSPS): In today's agenda, you will hear about CPAU's wildfire mitigation plan, which outlines specific ways in which our utility is preparing for and mitigating against possible wildfire ignition from electric equipment. Many people are familiar with the term PSPS, which stands for Public Safety Power Shutoff. This is when a utility will deenergize electrical lines in areas when there is a potential risk of wildfire. As we enter the hot and dry summer season, staff are coordinating outreach mechanisms and providing information to customers about PSPS, including how to prepare and reduce wildfire risks on their properties, and what to expect from us in terms of communication about PSPS potentially before, during, and after an event. Information on PSPS is available at cityofpaloalto.org/safutility

EV Charger Incentive Program: The EV Charger Incentive Program has provided a total of 31 properties with rebates for EV charging infrastructure. There are currently an additional 48 active projects in the pipeline: 37 of these are enrolled in the CLEAResult technical assistance program, while the other 11 are being assisted directly by City staff as they navigate the vendor selection, site design, permitting, and installation, and inspection processes.

EV Discount Campaign: Over the month of May, staff worked with Ride and Drive Clean to run a Pre-Owned EV Discount Campaign. This effort had one of the most highly attended EV workshops on May 15 with a total of 94 participants, demonstrating residents' continued interest in electric vehicle purchases.

Upcoming Events and Workshops: Details and registration at cityofpaloalto.org/workshops

Monday, June 10, 5-6pm: What to Expect as a New EV Owner Webinar

Thursday, June 20, 6-9pm: Third Thursdays on California Avenue

Commissioner Phillips commended Director Batchelor and the staff for the award.

Mr. Batchelor clarified that when they came to the UAC, they went to the Finance Committee about rates and there was a change between the Finance Committee and the time they approved the rates and that was to consider a higher gas transfer. Council made a decision to take an additional \$2 million out of the transfer which pushed the average gas rate increase to 12.5 percent. Finance made that recommendation to Council who had a study session on it and the final approval portion will be on June 10th or 17th.

Commissioner Metz asked if that \$2 million would take it up to the cap.

Mr. Batchelor said there is still about \$900,000 left so all indications from what they heard from the Finance Committee was that next year they will take it up to the 18 percent. It is at 14.5 percent now.

Chair Scharff commented it went really high because of the commodity prices. He wanted to know if they would have to take less as the commodity prices stabilize.

Mr. Batchelor confirmed that to be the case explaining that it flattens out. That is why there is only about a \$900,000 increase next year then after that it stays flat until revenues catch up.

NEW BUSINESS

ITEM 2: ACTION: City of Palo Alto Utilities Wildfire Mitigation Plan (WMP) Annual Update

Tomm Marshall, Assistant Director of Electric Operations and Engineering, shared that they do the Wildfire Mitigation Plan annually to reduce the fire risk on the Foothill lines within areas that have been designated by the state as being fire areas. It starts somewhere around Arastradero Road and runs all the way to the top of Montebello Ridge. The report is done annually to the California Wildfire Safety Advisory Board and must be submitted by July 1. He was requesting a public hearing and comments on this item. The purpose of the plan is to mitigate wildfires in the Foothills. The plan consists of proactive maintenance, power shutoff protocols and public outreach protocols, and undergrounding of the lines.

Commissioner Croft was curious what percentage of the customers they have a direct line with.

Mr. Marshall felt confident that they had most of them. Every year they verify addresses on there and typically contact them to make sure the addresses and emails are up to date.

Commissioner Croft queried if these residents have different communications than the ones that do not live in that zone.

Mr. Marshall confirmed they will get notified before the fire season that there is a possibility to have a PSPS.

Commissioner Croft was curious whether any shutoffs were implemented due to the very high wind experienced this winter.

Mr. Marshall explained shutoffs are not just for high winds but there has to be a high fire risk. That is generally seen in late fall. He said it only happened once. They monitor fire and wind conditions to make the decision.

Commissioner Croft wanted to know about the animal events that were noted in the report.

Mr. Marshall answered that squirrels and birds would get into the lines sometimes.

Commissioner Phillips questioned if there are any non-Palo Alto customers on the line.

Mr. Marshall remarked there are a few non-Palo Alto customers mainly around Los Trancos and they are on the notification program, as well.

Commissioner Phillips asked if the connection from the underground line to the houses was entirely undergrounded and who pays for that.

Mr. Marshall explained that it depends on the circumstances. Most of the homes already have underground service with the exception of the one at the very top where the radio antennas are. Typically the homeowner pays for that.

Commissioner Tucher queried if he was talking about Black Mountain and if that was actually in Palo Alto.

Mr. Marshall confirmed he was talking about Black Mountain and it is located in Palo Alto and they provide the power for the antennas and all structures on top of the mountain.

Commissioner Tucher assumed the undergrounding taking place was mostly relatively close to Page Mill Road up to Montebello.

Mr. Marshall explained a lot of it was already done through Arastradero Preserve and then there are sections now coming out of Foothills Park they have to do. Once they get beyond that, it goes on to Page Mill Road for a few miles and then off on Montebello Road.

Commissioner Gupta was curious if in the limited times when they activate this protocol if they coordinate with any cooling centers in case residents needed air conditioning while the power might be cut off.

Mr. Marshall instructed the Office of Emergency Services runs that portion of the program and they are in coordination with them during heat events.

Chair Scharff wanted to know what they will do for an annual report update once it is all undergrounded.

Mr. Marshall thought they would still have to do an annual report.

ACTION: Commissioner Phillips moved to approve Staff recommendation the Utilities Advisory Commission accept and approve the updated 2024 Wildfire Mitigation Plan

Commissioner Mauter seconded the motion.

The motion carried 7-0 with Chair Scharff, Vice Chair Mauter, Commissioners Croft, Gupta, Metz, Phillips, and Tucher voting yes.

ITEM 3: ACTION: Staff Recommends that the Utilities Advisory Commission Recommend the City Council Adopt the 2024 Annual Water Shortage Assessment Report

Mr. Batchelor pointed out a change made in the packet where it reads, "report to the City Council to consider the adoption on June 19" to be June 17.

Lisa Bilir, Senior Resource Planner, provided a slide presentation about the 2024 Annual Water Shortage Assessment Report and the recommended motion.

Commissioner Phillips wanted to know if the tables were what is actually filed.

Ms. Bilir confirmed that was what they would be approving. It was recommended to the Council and when Council approves it through a consent item on the 17th of June, Staff would submit those tables through the portal that DWR has on their website. The Urban Water Suppliers including Palo Alto could choose to write a report and outline the methods but the requirement is tables that have that information and those are the standard tables.

Commissioner Croft queried who uses the non-potable water and where it comes from. She was curious if there was a plan to ever try to increase the use of non-potable water in the City as a conservation method.

Ms. Bilir explained the non-potable water comes from the Regional Water Quality Control Plant and is treated for non-potable uses. A small amount of it is used by the City in certain facilities. She stated the question of increasing the use of non-potable water could be discussed in the One Water Plan.

Chair Scharff queried if the salinity has improved.

Ms. Bilir did not have data on that but she thought it had improved a bit. The last she heard several months ago they were using it more at Greer Park.

ACTION: Vice Chair Mauter moved to approve Staff recommendation the Utilities Advisory Commission (UAC) recommend the City Council adopt the 2024 Annual Water Shortage Assessment Report.

Commissioner Croft seconded the motion.

The motion carried 7-0 with Chair Scharff, Vice Chair Mauter, Commissioners Croft, Gupta, Metz, Phillips, and Tucher voting yes.

ITEM 4: DISCUSSION: City of Palo Alto One Water Plan: Presentation of Initial Results

Dean Batchelor, Utilities Director, shared that this was the first beginnings of talking about the One Water Plan. They hope to get feedback on this. They plan to bring it back again when they roll the plan out a little bit more.

Lisa Bilir, Senior Resource Planner pointed out that they have been working as part of an interdisciplinary team between the Public Works and Utilities Departments. They are close to the end of the consulting agreement with their consultants, Carollo Engineers, who are in the process of writing up the report and doing a sensitivity analysis. They were particularly interested in feedback and input to the sensitivity analysis. They will be presenting preliminary

portfolios and invited feedback on those. She offered a slide presentation about the One Water Plan initial results discussing an outline, previous UAC meeting on One Water Plan, the One Water Plan goal, the One Water Plan approach, key uncertainties, One Water Plan overview, Water Supply and Conservation Project Screening, screening results: top water supply projects, enhanced conservation phase 1 and 2 possible measures, and groundwater options.

Vice Chair Mauter wanted to know what the TDS range of the groundwater is across the wells.

Matt Zucca, Assistant Director of Water, Gas, and Wastewater Engineering and Operations, answered it varies by range and is around 750.

Commissioner Gupta questioned if that is post reverse osmosis.

Mr. Zucca instructed that was raw groundwater.

Commissioner Gupta wanted the number after reverse osmosis.

Mr. Zucca answered that varies based on the design but the target would be to get it similar to what the TDS would be for the San Francisco supply.

Ms. Bilir provided explanation about blending where they would extract the groundwater and then blend it with SFPUC water before it enters into the distribution system instead of treating it. As part of the study, a determination was made that they would not carry that option forward even though it is less costly because the water that would be delivered to customers would have different aesthetic qualities than the SFPUC water. She then resumed the slide presentation discussing direct potable reuse (DPR), and indirect potable reuse (IPR).

Chair Scharff opined IPR seemed less efficient than DPR but understood that they would get more water that way because they get the groundwater.

Ms. Bilir confirmed that to be correct. She added they did not look at an option of groundwater plus DPR but that it could be looked at.

Chair Scharff thought it seemed by putting water in the ground it would be lost as opposed to piping it directly.

Ms. Bilir advised there are a million different configurations they could think of and they could look at that one if the UAC wanted that. She shared that some of these options are very expensive and if they reconfigure, do emergency wells and treatment, and build the pipeline with the brine in it they did not think to also combine that with building Palo Alto's own DPR facility.

Mr. Zucca added DPR is a relatively new technology from a regulatory standpoint. IPR has been around for a while. The reinjection has a little bit of an improvement to the palatability of the water from an overall public perception standpoint.

Vice Chair Mauter pointed out any issues with groundwater taste and odor were currently not modeling an additional RO stream following the groundwater extraction so there was still potential for changes in taste and odor relative to what SFPUC was providing.

Commissioner Croft wanted to know if there was a difference in taste and odor between IPR and DPR.

Ms. Bilir answered there was basically no difference in taste and odor between IPR and DPR because they modeled that IPR has the exact same treatment. She was going to modify the chart to show that.

Vice Chair Mauter asked if it was correct that if you have iron and manganese, you have TDS.

Mr. Zucca stated that was held constant in all the options that involve groundwater to keep the comparable.

Ms. Bilir explained the only option where that is not the case is blending which is not really being included in the One Water Plan but they are bringing it out for discussion so they can know what the results are when they see it up against the other ones because it gets fairly good scores and might be worth having further discussions about it.

Vice Chair Mauter wanted to clarify because you have iron and manganese as well as TDS removal, you still have to build the brine line.

Ms. Bilir confirmed that to be correct.

Commissioner Croft asked where the taste and odor was located in the criteria.

Ms. Bilir explained the way they were thinking about this with the consultant was that because all of these options do not have a difference in their water quality, they did not need a criteria because it would be non-differentiating across the options. She thought it was important to note that as they show the results for blending, there is a difference that is not captured in the score.

Commissioner Croft asked if she was correct in thinking they were only considering things that have equivalent taste and odor but that one is currently off the table and if they were to bring it back they would have to have a way to measure that.

Ms. Bilir confirmed that she was correct.

Commissioner Tucher observed that 5 to 6 percent of Palo Alto's total water was recycled and wanted to clarify that is what they are talking about here.

Ms. Bilir explained their current recycled water is all for non-potable uses. Here they are talking about actually supplementing the drinking water supply.

Commissioner Tucher wanted to know if the assumption would be that it would be mixed in all the time for all customers.

Ms. Bilir answered they have not done a study on which customers would get the water coming from the different sources but depending on which option, different customers might get different sources of water. They would have to study further who and when would get the different water.

Commissioner Tucher believed Palo Alto uses 10 or 11 million gallons of water a day. He thought usage was trending down dramatically in total over the years. He wanted to know the backdrop for the discussion of lessening their use.

Karla Dailey, Acting Assistant Director, Resource Management, described how imported water in general is under a lot of different strains. In the introduction, Ms. Bilir referred to the Bay Delta Plan that would increase the unimpaired flow on a lot of the rivers in the state. The San Francisco Public Utilities Commission has done an analysis and informed the agencies that take SFPUC water that by the second year of a drought under full implementation of the Bay Delta Plan, they could be looking at 50 percent or more reductions in water. On top of that, Palo Alto City Council passed a resolution supporting the Bay Delta Plan.

Chair Scharff recalled Council passing this resolution and that they were told this was fear mongering on the SFPUC's part. He did not think the vote would have gone that way if the Council believed there would be a 50 percent reduction. He queried if the state has adopted the Bay Delta Plan.

Ms. Dailey answered the state has adopted it but it has not been implemented.

Chair Scharff stated every time they implement conservation efforts, the ability to cut gets harder and harder. He cautioned Staff to have a robust discussion to Council.

Ms. Dailey remarked this was a chance for Council and the community to weigh in on these weighted criteria and decide what the priorities are of this Council.

Commissioner Croft wanted to know if there was an analysis of the water use by commercial versus residential and then by function.

Ms. Bilir explained they have information about the customers' water usage by customer class, account class, and by individual customer. The state has a new requirement that there is no watering of outdoor nonfunctional turf for commercial customers. This goes a step further in not allowing the turf to be installed. She advised there is a very short staff report with a link to the list of water supply and conservation options that were assembled including feedback from the stakeholders. She added that staff are looking at their supplier (SFPUC) and the cutbacks SFPUC is providing to Palo Alto. SFPUC provided their numbers to Palo Alto as part of the Urban Water Management Plan and staff incorporated that 50 percent cutback during a drought number into Palo Alto's Urban Water Management Plan. Even if that is not a correct

number, SFPUC has a 20 percent level of service goal for cutbacks during a drought and during a regional cutback of 20 percent, wholesale customers have to cutback by more than 20 percent because there is more outdoor water usage in the wholesale customer area than in San Francisco and the City. Those cutbacks will be greater than 20 percent in Palo Alto and it may be harder to reach those number in the future because demand is hardened. She then resumed the slide presentation discussing Baywater desalination, project normal year yield comparison (acre feet per year), and project unit cost per acre foot comparison.

Commissioner Phillips calculated the commodity charge for Tier 1 as \$2269.50 and asked if that is what was presented in the slide.

Ms. Bilir confirmed that the amount shown on the slide was the commodity charge that Palo Alto charges its water customers for every unit of water and it includes a debt service charge Palo Alto pays to SFPUC through BAWSCA.

Ms. Bilir continued the slide presentation with project compatibility with Valley Water effluent transfer, tool for water supply portfolio analysis, water supply portfolio evaluation criteria and suggested weights, and initial water portfolio evaluation results.

Commissioner Croft asked for a clarification about reliability.

Ms. Bilir said the reliability criteria was being defined as how much dry year supply does it provide. They also look at the normal year supply as a sub-criteria of the environmental benefits. She added there are scenarios in the Urban Water Management Plan that describe what would happen in a multiyear drought. This just looks at a user input of what if they have a cutback.

Commissioner Gupta was curious what kind of bump that might provide to the baseline SFPUC in the inclusion of conservation phase 1 and phase 2.

Ms. Bilir answered comparing the baseline SFPUC on the left and the conservation portfolio that says 3.04 is what he is looking for.

Commissioner Tucher queried if the taste of the water is factored anywhere in here.

Chair Scharff explained that is why groundwater blending was taken off the table.

Commissioner Tucher wanted to know if the whole idea was that they could turn this on and off for drought years or would it be a permanent change in the water supply.

Ms. Bilir advised what was being modeled here was to supplement the water in a drought year and a normal year.

Commissioner Tucher again asked if the taste was factored into the weighting system.

Mr. Zucca explained that the assumption was that with the treatment technologies they have that all of the taste and odor from the middle bars of this graph are roughly the same.

Commissioner Tucher wanted to know if the Valley Water Transfer is the recycling center that is delayed for several years and what is the earliest it might come onstream.

Ms. Bilir confirmed that to be correct.

Ms. Dailey answered it would be more somewhere between 10 and 20 years. Valley Water has the option until 2033 to tell Palo Alto and Mountain View whether Valley Water plans to take the effluent or not. She addressed that there is a possibility for groundwater that they could use intermittently. The other options are not cost effective to use just during droughts.

Commissioner Phillips felt in the dark about what kind of problem they are trying to solve. He thought doing everything with expected cost below Hetch Hetchy water was a no brainer. For him to support doing anything more expensive, he would need to be convinced that there is a big problem they were solving somewhere down the line and he did not have that sense.

Ms. Bilir resumed the slide presentation talking about initial water portfolio evaluation results, initial observations, sensitivity of initial results, initial results sensitivity to cost weighting, and the next steps.

Commissioner Gupta was curious if they have considered water quality differences between these options beyond odor and taste, particularly the differences there might be in terms of any contaminants.

Mr. Zucca stated the assumption is that all water options will meet the maximum contaminant levels (MCL) and for the purified water, there is sufficient redundancy and rigor in the treatment processes to deal with the unregulated contaminants. The primary difference would be minor changes in aesthetics.

Commissioner Croft asked if they were just assuming that all the options are similarly remediable.

Mr. Zucca explained the treatment process is sufficiently robust that it should take into account no unconventional contaminants.

Commissioner Gupta was curious to see beyond the MCL what the differences might be in contaminants between the options and wondered if that was something that could be put into the weighted criteria rankings.

Mr. Zucca advised that they would not know the specifics until they get into the design. He thought the contaminants were basically the same and they would not treat an option that had slightly more of one versus another if it was less than the MCLs. He stated they could consider that going forward.

Commissioner Metz thought the linear weighting system was not adequate. He recommended changing how the results are presented before taking this to City Council.

Ms. Dailey asked for a specific recommendation about how to change the way the consultant was thinking about these weightings. She added there were several plans they did over the past few years that fed into the work that Carollo is doing in this plan. One was a Northwest County Recycled Water Strategic Plan they did in partnership with Valley Water and there was an extensive groundwater study done by a groundwater consulting specialist as part of the overall study. They do know there are some contaminations plumes in Palo Alto and some wells that are relatively close to those plumes so they have cut those out of this study and not considered pumping groundwater from any wells anywhere near any of those contamination plumes.

Chair Scharff asked Commissioner Metz to follow-up with Staff on the measurement schemes and then have Staff share the information with the Commission.

Vice Chair Mauter asked if the O&M costs on conservation were assumed to be staff based costs.

Ms. Bilir explained they made their high-level planning level estimate for each of the options including conservation and there were staffing costs included in the conservation options as well as other options.

Vice Chair Mauter queried if there are any O&M costs in addition to staff in the conservation.

Ms. Bilir thought there may be other costs in there in some cases.

Linda Grand, Sustainability Program Administrator, explained that mostly they did focus on staffing cost for conservation and then there are some additional program costs included in there.

Vice Chair Mauter noted a difference in the yield and total annual cost in the SFPUC water in 2045 as a possible typo. She asked if they explored discharging to the sewer line in the groundwater treatment case.

Mr. Zucca confirmed they spoke with the plant and they were reluctant to commit to being able to receive the water due to the combination of the high TDS and potential for some of the metals so they made the assumption that they needed the volume pipeline.

Vice Chair Mauter explained why she thought that was an option they should continue to keep on the table. She thought a sense of the frequency with which they would need an intermittent supply was missing from this report and would make a difference in plans. She thought they needed to break out CapEx versus OPEX costs in these systems to augment the discussion around whether this is a baseload or intermittent supply. That is what would reduce cost for them. The SFPUC option itself is likely to incorporate a diverse set of water sources in the future including the potential for indirect and/or direct potable reuse. All of the options might include some sort of reuse in the future and the need for immediate outreach to the community now is

imperative. She thought it would be helpful for Council to better understand this in the context of water rates. She did not think that Carollo was providing a trigger-based implementation plan and should be critically looked at.

Ms. Bilir clarified that the trigger-based implementation plan is in next steps.

Ms. Dailey added SFPUC's Alternative Water Supply Plan was looking at projects similar or identical to the projects being talked about here. One potential recommendation from this report could be to not do anything locally but rely on the bigger region. As staff were scoping this plan, they had to figure out what to build the fence around and they built it around Palo Alto and what they could do here but there is a world of opportunities to partner or support SFPUC in their quest to add to their water supply portfolio. She added that even today their regional water system is about 85 percent water from the Tuolumne River so every year the upcountry part of that system is shut off for maintenance and Palo Altoans are not getting Hetch Hetchy water. She added a word of caution about groundwater that Valley Water is the manager of the groundwater basin in Santa Clara County and they have a program where they monitor the health of the aquifer and have asked for voluntary reductions in groundwater pumping during times of drought. They have the authority to make those mandatory cutbacks and levy fines for groundwater pumpers who are not complying with whatever constraints they put in place. There would be a big public process before any of that would happen so she was not implying they could wake up one morning and start making cutbacks mandatory but it is in their purview as the groundwater manager. She did want to give a false sense of reliability for groundwater.

Commissioner Metz asked if they have also seen increasing costs to groundwater.

Ms. Dailey confirmed that to be correct stating it was reflected in their cost estimates. The Valley Water groundwater pumping fees are projected to be higher than SFPUC commodity rates in the future.

Ms. Bilir explained the different yield number in the future that Commissioner Mauter pointed out for SFPUC was because of an increasing demand estimate and stated they would relabel that. She described costs that would be associated with using the sewer if they were to find they could use that.

Vice Chair Mauter added it is a low CapEx, higher OPEX option and supports intermittent utilization rather than baseload supply.

Chair Scharff asked if the sewer fees go to the City.

Vice Chair Mauter confirmed they do.

Chair Scharff observed they were really just taking money out of one pocket and putting it in another and they should think about that more carefully.

Vice Chair Mauter explained that they were paying themselves but the cost of running the wastewater plant is split between three different entities.

Ms. Bilir discussed one thing they could get from the tool Carollo has provided is the weighted average portfolio unit cost of water. Instead of focusing on the unit cost of one particular new supply, they could look at it together with their conservation and SFPUC supply in each year on average in the weighted portfolio unit cost. This is a preliminary look at the initial results but they are still working with Carollo to draft the actual One Water Plan and other information but they can make a point of Staff looking at the question of how it impacts the rates but the weighted average cost portfolio ranges from about a 20 to 75 percent increase in cost. That can be thought of as applying to about half of the utilities costs, because water purchases makes up about half of the water utility's costs.

Vice Chair Mauter thought the rate impact was an important thing to present to Council because it helps inform the options on the table and their impact. She would not want to take good options off the table because of one big number on the pie chart.

Commissioner Phillips supported taking a rate-based view with this. He was not clear on what the other outcomes are needed for and what the potential combinations of outcomes would be that would require them to draw upon them.

Ms. Dailey advised there is a basic assumption that needs to be confirmed or denied by Council which is if there is a desire to rely on Tuolumne River water less.

Mr. Batchelor thought they have to look at what the best options are and what is cost effective. The state could take the 50 percent at any given time or more in an extended year drought. He thought that was the main reason for this exercise. They know Valley Water is off the table for at least 10 years. The question now is if they can get out of the contract portion and wait until 2033. They could wait to see if there are other partnerships they could work out but he thought they needed to plan for the future portion of it and have to look at what is the most cost effective and build in time for planning.

Chair Scharff thought there was a possibility to over plan. If SFPUC was to cut back 50 percent or more, he observed that would cause political mayhem. He did not think they need to plan for the disaster scenario. He thought they needed to phrase this to Council correctly. The question was if they want to rely on the SFPUC. What Palo Alto does is not going to move the needle on the Tuolumne River. He thought the rate-based idea was great and is what the Council should focus on. He agreed that they just need to focus on the drought scenario with incremental water supplies. Customers can put up with poor-tasting water during droughts for short time periods. For the rest of the time, draconian cutbacks are not going to happen. He did not think it was worth paying the consultant on the large infrastructure projects. He did not think conservation measures helped them in a drought.

Ms. Bilir agreed that as demand got more hardened, it will become more difficult to get the same percentage cutback when there is a drought.

Vice Chair Mauter thought it was important to note that the cutback calculations in a period of drought are likely to be a function of how many people they have. One thing they should advocate for is also considering things like tree canopy. She opined they could weigh the varying factors that should go into the overarching equation for what their cutback are.

Ms. Bilir agreed they do need to think about the tree canopy and vegetation but that is outside the scope of this study.

Commissioner Tucher asked that the next time they discuss this that there be a bit more contextual information. He thought their rates are pretty well structured so if you use a little bit of water you do not pay a lot and escalate as more water is used. That would put a financial burden on the rate payer who uses a lot of water. He recalled that the City just spent money on a recycling plant for watering the trees, fish ponds, and golf course but it was not in the packet. It was hard to talk about these things without having information like this. He thought it seemed rushed to be recommending DPR this year.

Vice Chair Mauter thought DPR was likely to be a part of the water supply portfolio in the future so they need to start education and outreach now.

Commissioner Croft asked if there is any plan for capturing stream water in the considerations and would they have the ability to capture that.

Ms. Bilir was not sure they looked at capturing stream water but did look at stormwater capture. They had one option recommended by a stakeholder that she thought would be making stormwater go into Lake Lagunita on Stanford Campus and percolating into the groundwater from there.

Mr. Zucca thought it would be difficult to conceive of a surface water treatment plant that was capturing surface water and using that as an augmented source because of fish rights and the fact that it has not been done before. He thought that could be considered a recharge option for groundwater.

Ms. Dailey added they did look at green stormwater infrastructure. It is expensive and does not yield a lot of water so was screened out early in the process.

Commissioner Croft felt it was likely they would have prolonged drought at some point and it seemed smart to think about the options. She agreed that if SFPUC is going to be spending a lot of money in building this and they could ride on their coattails would be considered. She also thought they should not leave it to that if they have resources there they could use at a reasonable cost. She wanted to understand tiered rates and asked if that could be explored.

Ms. Bilir described the tiered rates they have for residential customers. Every customer pays the same amount for the commodity portion of the rate that pays for each unit of water from SFPUC. They could explore how they set the rates in a cost of service study with a specialized consultant that is familiar with the legal requirements of Prop 218.

Commissioner Croft asked if there was anything that could be done in terms of tiers for foreseeing the drought situation.

Ms. Bilir explained that Palo Alto has a drought surcharge in order to recover costs. If there is a drought and they need to recover the cost associated with the distribution system in particular because their revenue has gone down from the quantity of water going down, they can use that drought surcharge mechanism to increase the rate.

Commissioner Croft wanted to know if that would have any tiered impact to further encourage conservation or just flat.

Ms. Bilir answered there was no tiered impact but that was something they could potentially explore.

Commissioner Croft encouraged continued exploration of tiered rates and scenario dependent tiered rates and of ideas on the conservation side.

Ms. Grand described that they would be connecting the hourly water use to their WaterSmart portal and be sending automated potential leak alerts as part of their AMI deployment.

Ms. Bilir clarified that there is a tiered drought surcharge rate for residential customers right now for the tier 1 that is lower than tier 2.

ACTION: None

COMMISSIONER COMMENTS and REPORTS from MEETINGS/EVENTS

None

FUTURE TOPICS FOR UPCOMING MEETINGS:

Vice Chair Mauter – 12 month rolling calendar does not have a One Water Report, Recommend Oct. Nov.

NEXT SCHEDULED MEETING: July 3, 2024

Commissioner Phillips moved to adjourn.

Vice Chair Mauter seconded the motion.

The motion carried 7-0 with Chair Scharff, Vice Chair Mauter, Commissioners Croft, Gupta, Phillips, Metz, and Tucher voting yes.

Meeting adjourned at 8:43 p.m.



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Utilities Advisory Commission Staff Report

From: Dean Batchelor, Director Utilities
Lead Department: Utilities

Meeting Date: July 3, 2024
Staff Report: 2403-2763

TITLE

Approval of UAC Budget Subcommittee Members to Serve a Short Term of July 3, 2024 to July 2, 2025

RECOMMENDATION

Recommended Motion

Commissioner ____, Commissioner ____, and Commissioner ____ volunteered to be on the Budget Subcommittee for a short term of July 3, 2024 to July 2, 2025.

EXECUTIVE SUMMARY

Historically, two or three Commissioners serve on a UAC Budget Subcommittee and will meet with Utilities Staff outside of the regular UAC monthly meetings to learn about and review the Utilities budget. The budget item(s) will come to the full UAC for additional discussion and action. This matter is agendaized so the UAC can approve member appointments to the UAC's Budget Subcommittee.

AUTHOR/TITLE:

Jenelle Kamian, Program Assistant I



CITY OF
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Utilities Advisory Commission Staff Report

From: Dean Batchelor, Director Utilities
Lead Department: Utilities

Meeting Date: July 3, 2024
Staff Report: 2405-3077

TITLE

Discussion on Palo Alto Utilities Schools Grant Program

RECOMMENDATION

Staff is bringing to the Utilities Advisory Commission an informational update and presentation of the status Palo Alto Utilities Schools Grant Program.

BACKGROUND

The City of Palo Alto Utilities Department (CPAU) is dedicated to supporting Palo Alto Public Schools, which serve approximately 10,000 students across 17 schools. Through its annual education grant, CPAU provides essential funding aimed at fostering sustainability and promoting energy and water efficiency. These grants support a wide range of initiatives, including teacher training programs, curriculum development, and educational projects that integrate sustainability concepts into daily learning experiences.

FISCAL/RESOURCE IMPACT

This is an informational item and there is not financial or fiscal impact.

ATTACHMENTS

Attachment A: Presentation

AUTHOR/TITLE:

Dean Batchelor, Director of Utilities

Staff: Brian Ward, Utilities Key Accounts Representative

PAUSD/City of Palo Alto

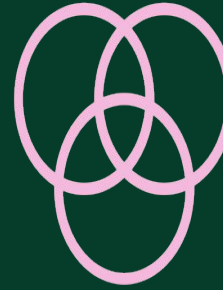
UTILITIES GRANT

2023-2024



\$50,000

The City of Palo Alto is contributing up to \$50,000 to support the Sustainable Schools Grant Program



4 Focus Areas

Funding supports student learning in sustainability, water conservation, energy efficiency, & renewable energy

Palo Alto

Utilities/PAUSD Grant

Program



Funds Projects & Experiences

Funding for field trips, assemblies, speakers, clubs, technology, equipment, curricular supports, programs, and more



Elementary, Middle, & now High School

Teachers, grade levels, departments, sites, and students can apply

Overview of Applications for 2023-24



18 applications. 8
from elementary
schools and 10 from
middle schools

Projects range from
marine biology field
trips to TK sensory bins,
from wind kits, to
demonstration gardens



\$37,612 approved in
grant funding

4156 students
impacted by grant
(many impacted by
more than one grant)



Examples of Grant-Funded Projects



Hoover Elementary School: Water and Energy Conservation is the focus of the Slide Ranch Field Trip

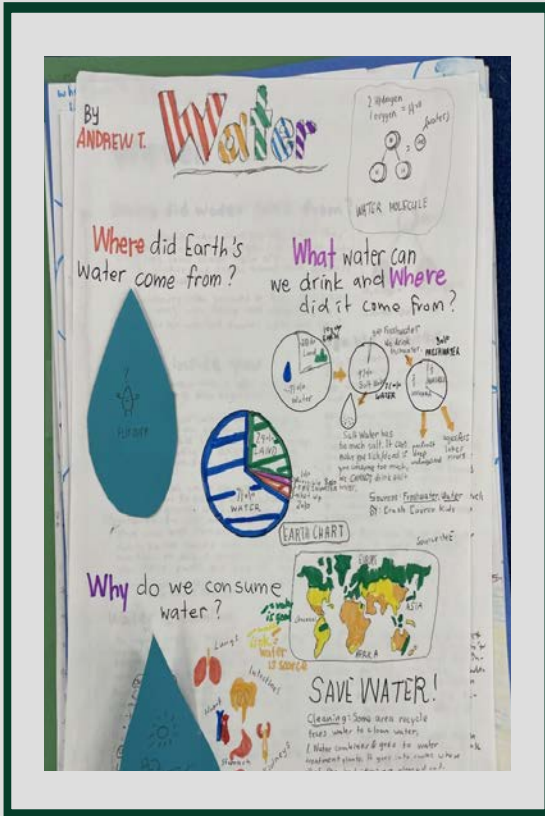


JLS Middle School: Water Conservation is an important element of the Marine Biology Field Trip

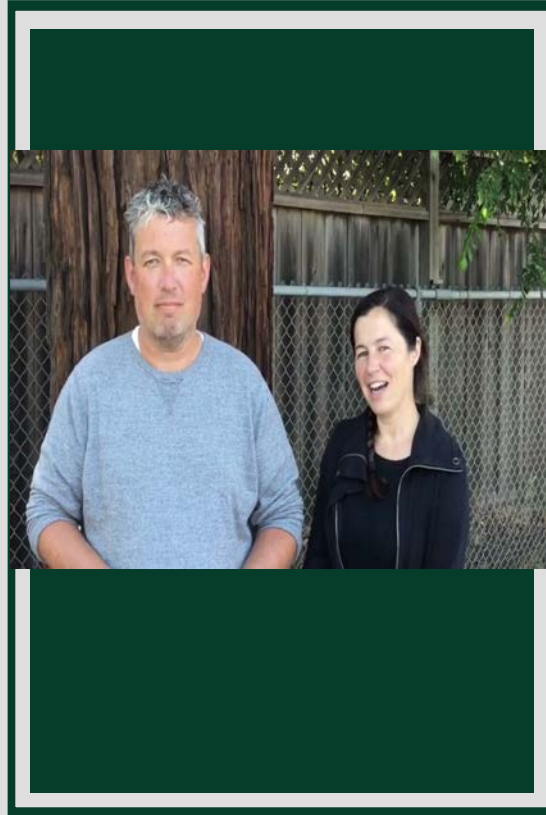


Fletcher Middle School: Sustainability is at the heart of the food service program, the KidWind lab, and the demonstration garden

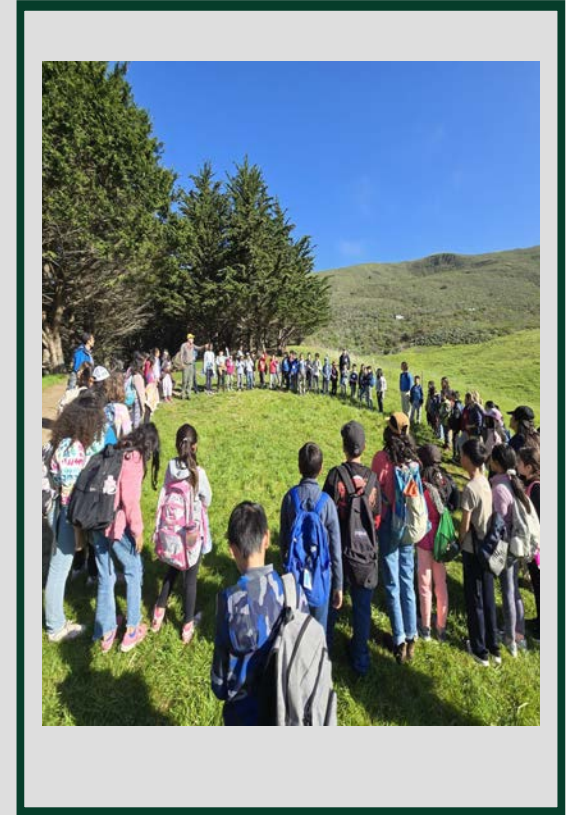
Living Off the Land - Grade 4



To prepare for the field trip, students research water and energy conservation and share their learning through posters.



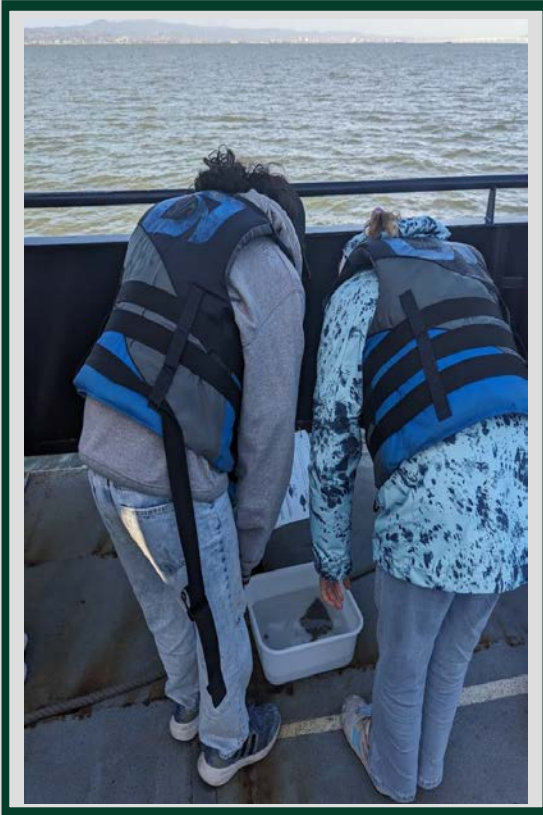
Hoover teachers Colleen Coburn and Kevin Mcalpin explain what a memorable experience visiting Slide Ranch has been for their fourth graders.



At the ranch, students learn firsthand about sustainable farming practices, drip irrigation, and energy-efficient

animal husbandry.

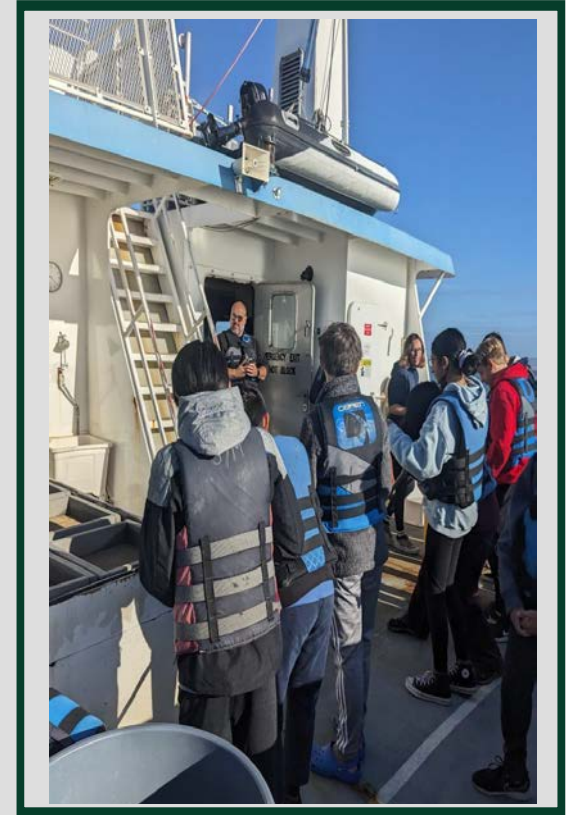
Ocean Exploration - MS Elective



At the Ichthyology Station, students study fish using dichotomous keys and gain an appreciation for the Bay's biodiversity firsthand.

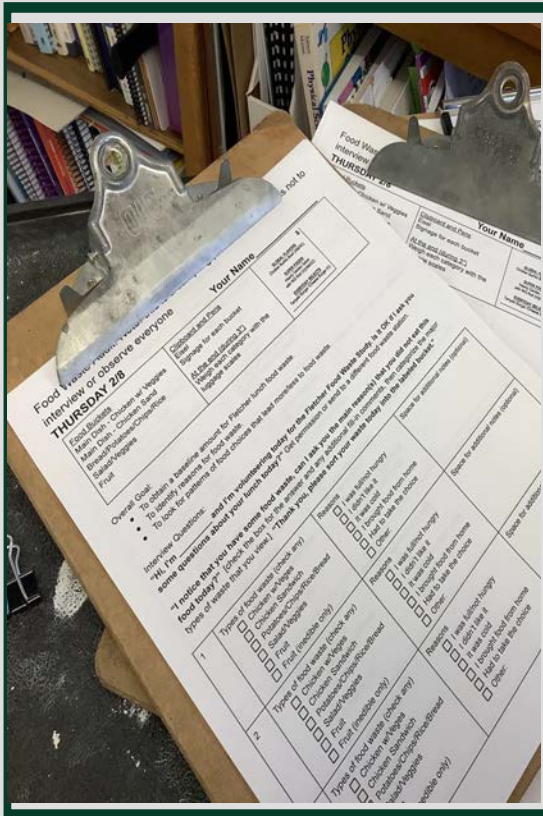


In this video, JLS science teacher Fred Berghout explains what receiving the grant for the past 3 years has meant to him and his students.



Learning about the Bay's water quality and salinity gives students a deeper appreciation for clean water and leads them to reflect on how to reduce their

Sustainability for All - Fletcher MS



Sharing is Caring: students work on combating food waste and reducing water usage through an organized system of food sharing, starting with a careful audit.



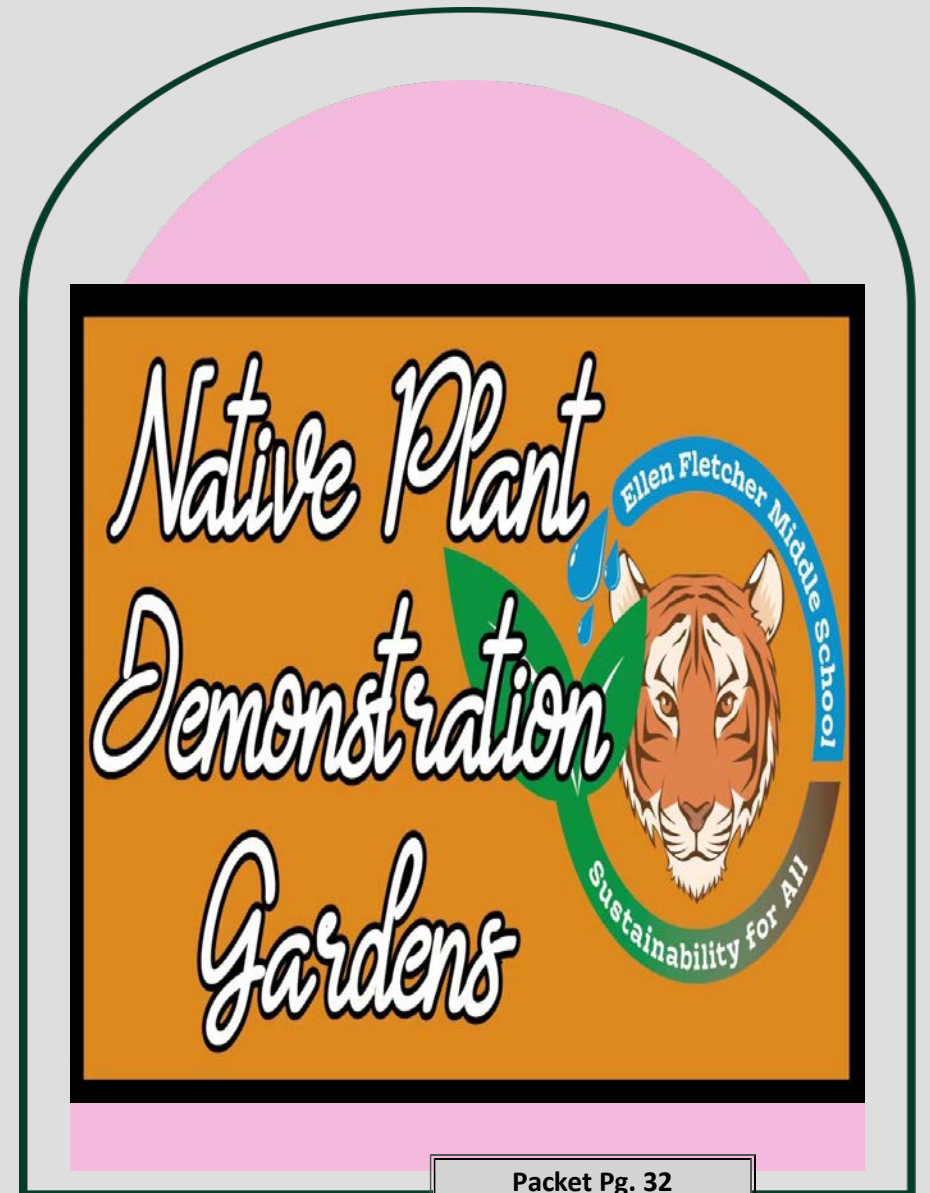
Sustainability Elective: Students get hands-on experience with renewable energy, energy efficiency, and engineering by working on the KidWind lab kits.



Native Plants Demonstration Garden: students learn about conserving water while encouraging biodiversity and native habitats with a community garden.

Fletcher Demonstration Garden

In this video, Fletcher students Faith and Hope reflect on the new native plant demonstration gardens. They talk about how the gardens have beautified Fletcher while encouraging native habitats to flourish.



Thank you!



Thank you for supporting PAUSD! Your donations make a huge difference for our students.

PAUSD Utilities Grant Coordinator:
Karen Logue klogue@pausd.org



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Utilities Advisory Commission Staff Report

From: Dean Batchelor, Director Utilities
Lead Department: Utilities

Meeting Date: July 3, 2024
Staff Report: 2405-3040

TITLE

Discussion and Review on the Installation of Separate Utilities Meters and Services for Accessory Dwelling Units

RECOMMENDATION

Staff is seeking feedback from the Utilities Advisory Commission on the current practices of serving properties with multiple units and guidance on possibility of separation of services.

BACKGROUND

The City of Palo Alto Utilities Department currently supports the installation of separate meters for residential properties with Accessory Dwelling Units (ADUs). The Utilities Advisory Commission has requested information regarding the feasibility of installing separate services to the ADUs. Staff will present information on current practices and why installation of separate services is not recommended.

FISCAL/RESOURCE IMPACT

This is a discussion and there is not financial or fiscal impact.

ATTACHMENTS

Attachment A: Presentation

AUTHOR/TITLE:

Dean Batchelor, Director of Utilities

Staff: Tomm Marshall, Assistant Director of Utilities – Electric

Staff: Matt Zucca, Assistant Director of Utilities – Water, Gas, & Wastewater



Utility Service Lines Installation Current Practices

Presented by: Tomm Marshall,
Assistant Director of Electric and
Matt Zucca, Assistant Director of
WGW

July 3, 2024

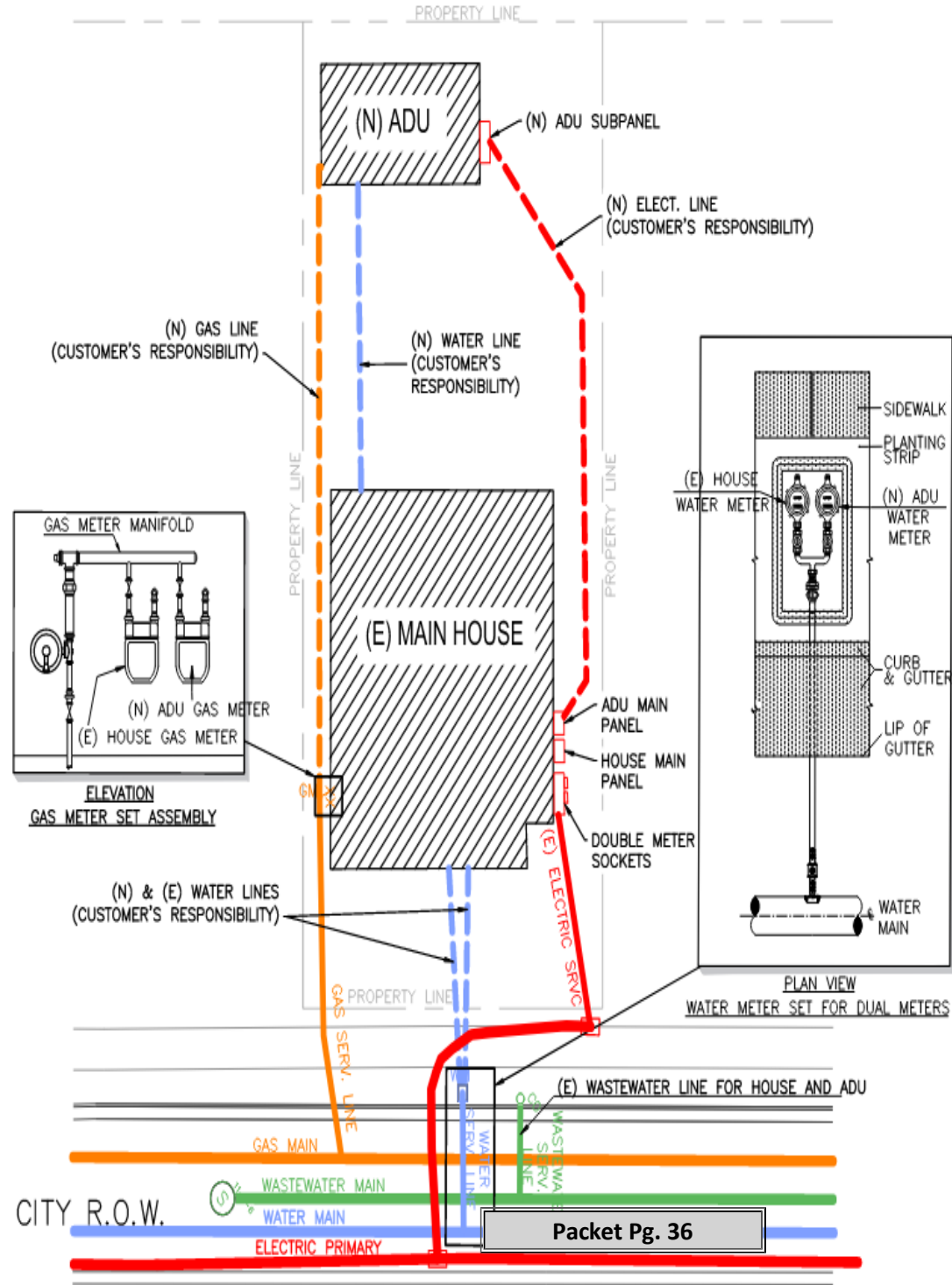
Approved Configuration: Electric in Front of Home

Electric: One service owned by the City to a two-meter set located at the main house. Private lines feeding ADU.

Gas: One service owned by the City to a two-meter set located at main house. Private house lines feeding the main house and ADU

Water: One service to a two-meter set located at back of sidewalk. Private house lines feeding main house and ADU

Sewer: One lateral to cleanout located at back of sidewalk



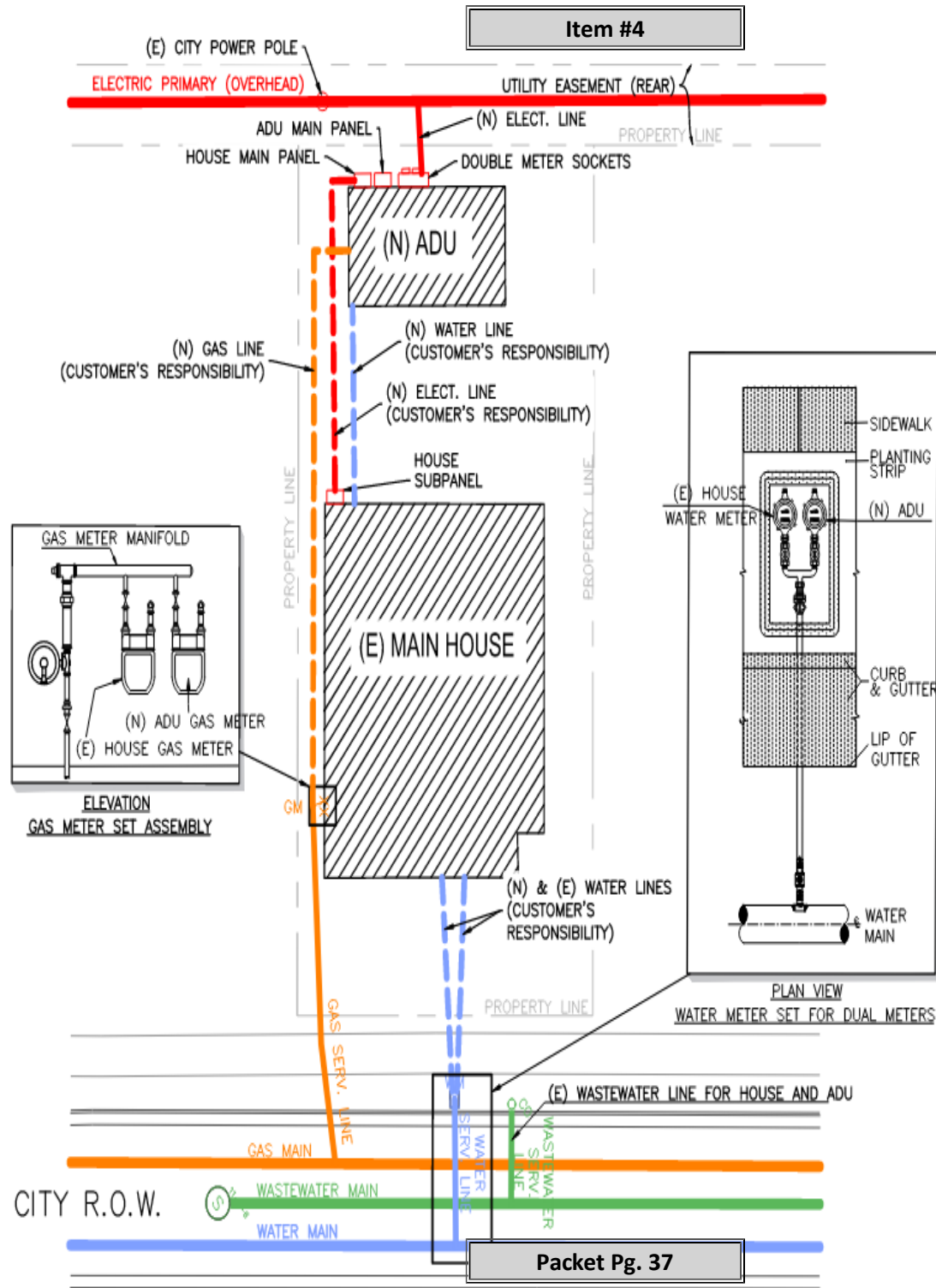
Approved Configuration: Electric Behind Home

Electric: One service owned by the City to a two-meter set located at the ADU. Private lines feeding main house.

Gas: One service owned by the City to a two-meter set located at main house. Private house lines feeding the main house and ADU

Water: One service to a two-meter set located at back of sidewalk. Private house lines feeding main house and ADU

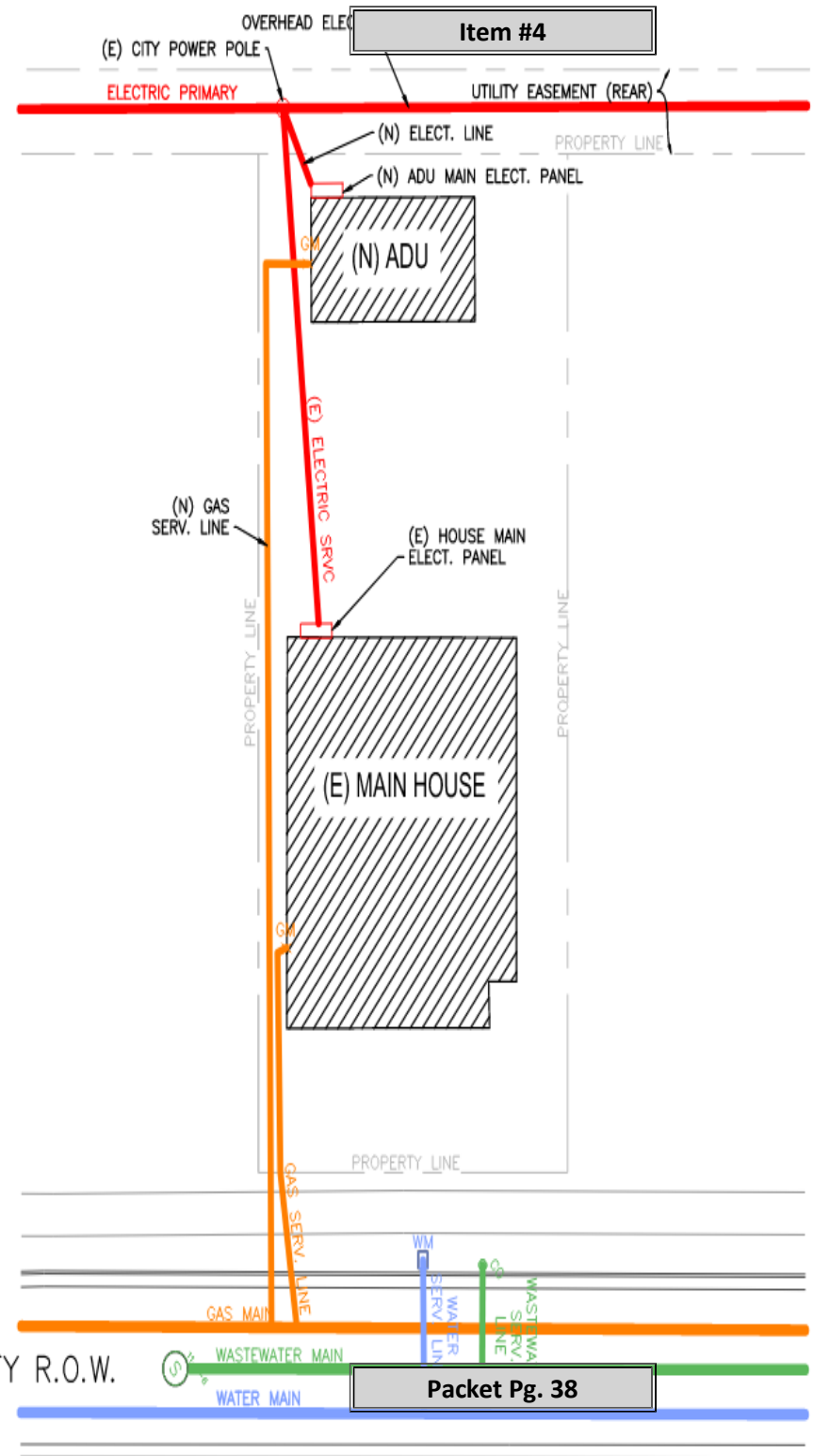
Sewer: One lateral to cleanout located at back of sidewalk



Non-Approved Configuration: Electric Behind Home

Electric: Two services owned by the City to two, separate electric panels and meters located at the main house and ADU.

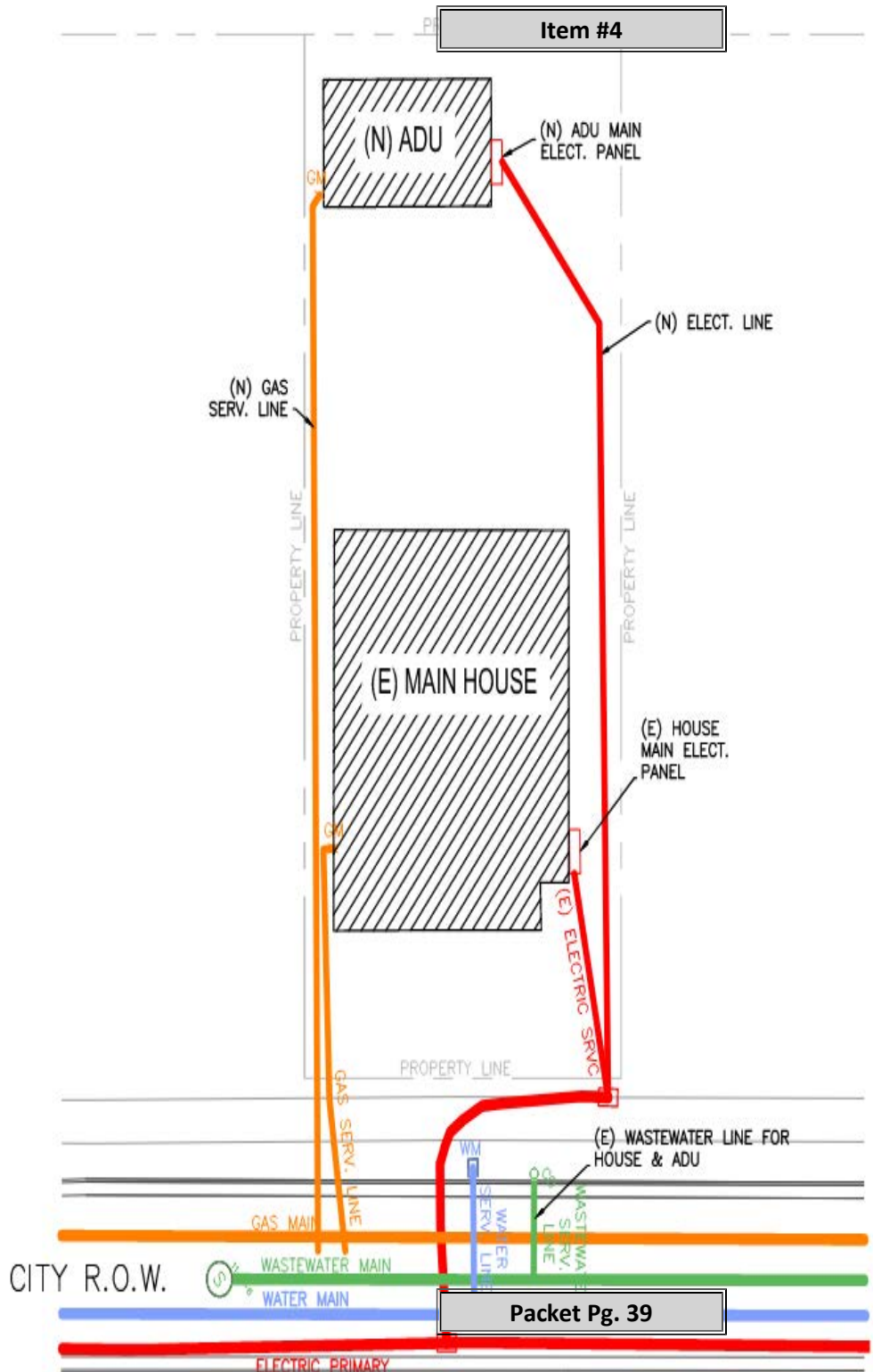
Gas: Two services owned by the City to two, separate meters located at main house and ADU.



Non-Approved Configuration: Electric In Front of Home

Electric: Two services owned by the City to two, separate electric panels and meters located at the main house and ADU.

Gas: Two services owned by the City to two, separate meters located at main house and ADU.





Utilities Advisory Commission Staff Report

From: Dean Batchelor, Director Utilities
Lead Department: Utilities

Meeting Date: July 3, 2024
Staff Report: 2405-3000

TITLE

Informational Report: Utilities Quarterly Report for FY24-Q3

RECOMMENDATION

This is an informational report, and no action is requested.

EXECUTIVE SUMMARY

This report for the Utilities Advisory Commission is an informational update on water, gas, electric, wastewater collection and fiber utilities, efficiency programs, legislative/regulatory issues, utility-related capital improvement programs, operations, reliability impact measures and a utility financial summary. This updated report has been prepared to keep the Utilities Advisory Commission apprised of the major issues that are facing the water, gas, electric, wastewater collection and fiber utilities. A separate quarterly report on the financial position is prepared consistent with when the City closes its books.

Items of special interest in this report are summarized below:

Vacancies and Staffing – Appendix B

- The Utilities Department has 38 vacant positions out of 259 authorized positions or a 15% vacancy rate at the end of March 2024 compared to 44 vacancies or 17% in September 2023 and 49 vacancies or 19% in June 2023.
- Due to HR staffing constraints, Utilities has designated three HR liaisons from Utilities Administration to assist HR with some of the recruitments. Since then, the number of vacancies has decreased, and the recruitment timeline has shortened.
- Progress has been made in filling vacant Electric Engineering and Operations positions year over year from 32 vacancies in March 2023 to 22 vacancies in March 2024, a decrease of 10 positions and vacancy percentage rate has decreased from 36% to 24%.

Electric Utility:

- Improved hydroelectric generation and revenue from Resource Adequacy sales are resulting in a projected net supply cost of \$71.5M for FY 2024, or a 24% decrease compared to budget. (Section 1.1.1)
- In-state REC sales have generated \$16.5M while out-of-state purchases cost \$0.7M. (Section 1.1.3)
- A number of construction projects are in progress or have been recently completed. (Section 1.2)
- An amendment to the Ox Mountain landfill gas PPA with Ameresco that will extend the contract for approximately 17 years and expand the project's generating capacity from 10 MW to 13 MW. (Section 1.1.4)
- A summary chart of quarterly electric outages is included in the report. (Section 1.4)
- FY 2024 electric sales are 3.7% higher than forecasted, while actual sales revenues are 2.7% lower than budgeted so far. (Section 1.5.1)

Gas Utility:

- Gas prices have decreased and stabilized since last winter's spike. In August 2024, Council will consider a longer-term strategy to mitigate the impact on rate payers during similar events. (Section 2.1)
- One gas main replacement project was completed, one is in progress, and one is in the design stage. (Section 2.2)
- Gas sales in Q3 FY 2024 were 8.3% lower than forecasted. (Section 2.5.1)

Water Utility:

- As a result of the above average precipitation last year and an increase in precipitation 2024, Palo Alto's water supplier does not expect water shortages this summer. (Section 3.1)
- Work continues on the One Water Plan with the goal of Council adoption of a supply plan; the One Water Plan will be a 20-year adaptable roadmap for implementing water supply and conservation portfolio alternatives. Initial results were presented at the June 2024 UAC meeting. (Section 3.1)
- Several capital programs are in progress. (Section 3.2)
- Water sales through Q3 were 1.0% lower than forecasted and water sales revenues were 3.7% lower than budgeted. (Section 3.5.1)

Wastewater Utility:

- A status overview of Regional Water Quality Control Plant (RWQCP) rehabilitation projects is provided, including an overview of financing plan for the projects. The first project to begin construction will be the primary sedimentation tank rehabilitation. (Section 4.1)
- A sewer system rehabilitation replacement project on El Camino and Page Mill (SSR 31) is complete. (Section 4.2)
- Actual wastewater sales revenues have been lower than expected due to low water usage in the commercial sector. (Section 4.4.1)

Fiber Utility:

- The FTTP Project CEQA evaluation resulted in a final Initial Study-Mitigated Negative Declaration (IS/MND), concluding that no significant and unavoidable impacts are anticipated for the project with the proposed mitigation measures. Council approved the IS/MND for FTTP on June 17, 2024. (Section 5.5.1)
- CPAU is recruiting for an Outside Plant Manager to oversee planning, construction, and inspection of the FTTP infrastructure and new fiber backbones. This position will oversee field technicians and coordinate construction, installation, and repair activities while adhering to quality and customer service standards.
- In conjunction with the City's wildfire mitigation plan to underground utility poles in the foothills, CPAU is also working with customers in the foothills area to provide them dark fiber to enhance their home broadband service.

Customer Programs:

- In November 2023, the City began offering lower pricing for heat pump water heater replacements thanks to a limited state funding opportunity. More than 200 HPWHs have been installed as a result of the program. (Section 6)
- The City hosted a successful facilities managers meeting generating four new leads for electrification and efficiency programs.
- Design of an emergency water heater replacement program is underway.
- 23% of all water customers have utilized the City's new WaterSmart online water management tool.

Communications:

- A digest of major outreach efforts is provided in Section 7, with topics including extreme energy prices and high utilities bills, new EV chargers at Stanford Health Care, and water supply and conservation updates.

Legislative, Regulatory and Industry Activity:

- There is no legislative, regulatory and Industry Activity update this quarter.

Utilities at a Glance:

For additional context for the data included in this report, please see:

<https://www.cityofpaloalto.org/Departments/Utilities/Customer-Service/Utilities-at-a-Glance>

Utilities Quarterly Report FY 2024-Q3



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1 Electric Utility

The City’s electric utility serves all residential and non-residential electric demands in Palo Alto at a lower cost than PG&E in surrounding communities. Its electric supply portfolio is 100% carbon neutral. The City maintains and operates an electric distribution system and one small natural gas generator but does not operate any transmission lines or any significant generating capacity on its own. However, the City belongs to Northern California Power Agency (NCPA) which operates its Calaveras hydroelectric generating plant and provides power scheduling services for its other generating resources. This carbon free power is supplied through power purchase agreements with various generation operators.

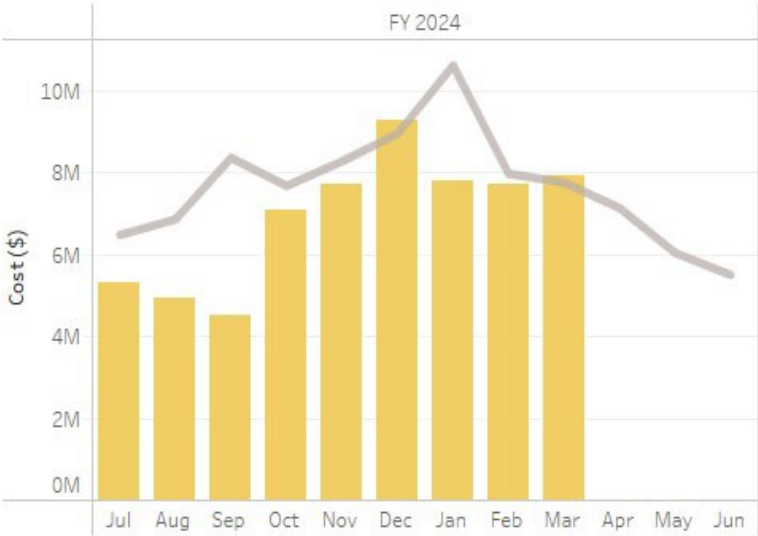
1.1 Electricity Supply and Transmission

Below is an update on electricity supply and transmission services.

1.1.1 Forecasted Supply Costs

With hydroelectric generation conditions improving significantly and market prices coming down over the past year, the electric net supply cost for FY 2024 is currently projected to be \$71.5M, which represents a 24% decrease from the Adopted Budget level (\$91.7M). The cost decrease is primarily driven by the aforementioned improvement in hydro generation projections, as well as greater than projected revenues from resource adequacy (RA) capacity sales. For FY 2025, electric net supply cost is projected to increase slightly to \$76.8M.

Figure 1: FY 2024 Supply Cost Forecast vs. Actuals



1.1.2 Hydroelectric Conditions

The City receives power from two hydroelectric projects, the Calaveras project and the Western Base Resource contract for federal hydropower from the Central Valley Project¹. The watershed for Western hydropower is primarily in the northern end of California, while the watershed for the Calaveras project is in the Central Sierras.

Following the extremely wet water year of 2022 to 2023, reservoir levels across the state began this water year at above average levels. With the majority of the rainy months behind us, water year 2023 to 2024 has so far been roughly average from a precipitation and snowpack perspective, which has resulted in reservoir levels being well above average for this time of year. As of May 14, precipitation and snowpack levels in central and northern California were either at or slightly (10%) below average for that time of year. As a result of these favorable conditions, hydro generation levels are projected to be slightly above average this year and next year, with total output of about 110% of the long-term average level² for FY 2024 through FY 2026.

Figure 2: Hydro Generation: FY 2024 - FY 2026 Projections (GWh)

	FY 2024	FY 2025	FY 2026
Calaveras Generation (GWh)	110	134	151
Western Generation (GWh)	329	315	290
Total Hydro Generation (GWh)	439	449	441
% of Long-term Average Total	109%	112%	110%
Long-term Average Total Hydro (GWh)	401	401	401

1.1.3 REC Exchange Program

Under the Renewable Energy Credits (REC) Exchange Program, which was approved by Council in August 2020 ([Staff Report #11556³](#)), staff has contracted to sell 210 GWh worth of in-state RECs (for \$16.5M) and purchased 155 GWh worth of out-of-state RECs (for \$0.7M) thus far in FY 2024. The price spread between in-state versus out-of-state RECs has widened significantly since the start of 2023, due to the strong demand for in-state products. Additional REC Exchange transactions are planned around Q1 of FY 2025.

1.1.4 Renewable Energy Procurement

In recent months, the City Council has approved two renewable energy procurement agreements:

1. A new power purchase agreement (PPA) to buy a small amount of electrical output (about 3 GWh/year in total) from the Zero Waste Energy Development Company (ZWED) anaerobic digester facility in San Jose, in order to satisfy the Senate Bill (SB) 1383 requirements, which were established in 2020. NCPA will be the counterparty to the PPA with ZWED, and the Cities of Palo Alto and Santa Clara will each receive a share of the output via Third Phase Agreements with NCPA.
2. An amendment to the Ox Mountain landfill gas PPA with Ameresco that will extend the contract for approximately 17 years (the original contract expires in 2029) and expand the project’s generating capacity from 10 MW to 13 MW. Palo Alto splits the output of this project with the City of Alameda.

¹ The Calaveras project is a hydropower project located in Calaveras County that is maintained and operated by the Northern California Power Agency on behalf of the City and other project participants. The City is also one of several public entities with contracts with the Western Area Power Administration for “Base Resource” electricity, which is the hydroelectric power available from the federal government’s Central Valley Project (operated by the Bureau of Reclamation) after accounting for power used for Central Valley Project operations and power delivered to certain “preference” customers.

² The long-term average forecast levels for both Western and Calaveras have been revised downward (about 20% each) in recent years to reflect the impact of climate change. These values may need to be revisited again in the coming years.

³ Staff Report #11556 <https://www.cityofpaloalto.org/files/assets/public/v/1/agendas-minutes-reports/reports/city-manager-reports-cmrs/year-archive/2020/id-11556.pdf>

In addition, NCPA recently issued a Request for Proposals (RFP) for new renewable energy and storage projects to meet NCPA members’ procurement needs. The RFP yielded a total of 25 proposals – nine for standalone solar projects, six for standalone battery energy storage systems (BESS), and ten for solar-plus-storage projects. Utilities staff is in the process of evaluating these proposals (for total value to the City and ability to meet the City’s procurement needs) and providing feedback to NCPA on which proposals to pursue further.

1.2 Capital Improvement Plan Status

The following capital projects are currently in progress or have been recently completed:

EL-17001 (East Meadow Circles 4/12kV Conversion)

- This project is scheduled to be completed in several phases. Phase 1 is completed. Phase 2 engineering design is in progress and to be completed by December 2024. Phase 2 construction will be completed June 2025. EL-11003 (Rebuild Underground 15)
- This project has been canceled.

EL-10006 (Rebuild Underground 24)

- This project is in the design phase and scheduled to be completed in Dec 2024. Construction will be completed Summer 2025.

EL-16000 (Rebuild Underground 26)

- This engineering design for this project is currently in progress and is expected to be completed in Dec 2024. Construction will be completed Summer 2025.

EL-19004 (Wood Pole Replacement)

- 30 poles have been replaced so far in 2024. CPAU staff and contract consultants are continuously working on pole replacement designs for construction although the output is delayed this year because of staffing shortages.

EL-16003 (Substation Physical Security)

- This project is scheduled to be completed in several phases. A substation security lighting and camera contract was awarded in June 2022 with installation to be completed over a 2-year period. Construction is currently in progress. During the last quarter, all the substation security lighting was completed, and the contractor is now beginning to install the security camera system for each substation. Anticipated completion is October 2024. EL-17002 (Substation 60kV Breaker Replacement)
- This project funds the purchase and replacement of both 60kV and 12kV substation circuit breakers that are reaching the end of their useful life expectancy. In this past quarter, Council approved the purchase request for the sixteen 12KV circuit breakers. A purchase order has been issued and the breakers are scheduled to be received in late August 2024. The installation of the breakers will be completed in FY 2025. The project to purchase the seven 60KV breakers has progressed past bid solicitation and the Purchase Order was approved by Council on May 20, 2024. The engineering design and installation of the above breakers will occur in FY 2025.

EL-21001 (Foothills Rebuild)

- This project will rebuild the approximately 11 miles of overhead line in Foothills Park, as necessary to mitigate the possibility of wildfire due to overhead electric lines. Staff has completed 7,000 feet of substructure work and design which will eliminate the corresponding 26 poles. Substructure for Phase 1 was completed in Spring 2022 and the substructure for Phase 2 was completed in June 2023. Phase 3 substructure installation is currently in progress and Phase 4 construction is in progress.

EL-02011 (Electric Utility Geographic Information System (GIS))

- The project scope includes on-going maintenance/technical support of the existing GIS system and implementation of the new GIS platform, ESRI.

EL-16002 (Capacitor Bank Installation)

- This project is completed.

EL-24000 (Grid Modernization)

- Engineering design and construction is in progress. 18 poles out of the 83 designed have been replaced in the Grid Modernization Pilot area.

1.3 Rate and Bill Comparisons

Effective January 1, 2024, PG&E raised its residential rates 13%. Santa Clara also raised its rates 10% January 2024. Figure 3 shows an updated bill comparison based on these updated rates. Staff estimates that based on these rates the average monthly bill (a full year’s worth of bills divided by 12) for the median residential customer is less than half of what it would be in PG&E territory and about 15% above what it would be in Silicon Valley Power (City of Santa Clara) territory. During Q3, staff finalized the rates, financial plan, and cost of service analysis for FY 2025 and is projecting a wide range of rate changes that differ by rate class. The median residential user will see a 9% bill increase impact effective July 1, 2024.

Figure 3: Residential Monthly Electric Bill Comparison (Effective 1/1/2024, \$/mo.)

Season	Usage (kwh)	Palo Alto	PG&E	Santa Clara
Winter	300	52.56	126.03	49.02
	(Median) 453	88.16	191.88	74.93
	650	136.75	295.44	108.29
	1200	274.41	584.55	201.42
Summer	300	52.56	130.78	49.02
	(Median) 365	66.45	153.33	60.03
	650	136.75	314.76	108.29
	1200	282.18	603.87	161.54

1.4 Reliability

CPAU tracks electric outages. A summary chart of these outages can be found below.

Figure 4: Electric Outage Reliability, FY 2019 to FY 2022

Outage Reliability	FY18	FY19	FY20	FY21	FY22
System Average Interruption Duration Index (SAIDI) ⁴	76.28	137.54	72.85	94.22	18.93
System Average Interruption Frequency Index (SAIFI) ⁵	0.51	1.15	0.55	0.90	0.23
Customer Average Interruption Duration Index (CAIDI) ⁶	150.26	119.99	131.97	104.78	81.91

Figure 5: Electric Outage Reliability, FY 2023 to FY 2024

Outage Reliability	FY 2023				
	Q1	Q2	Q3	Q4	Annual
System Average Interruption Duration Index (SAIDI)	81.69	7.38	111.90	1.09	198.60
System Average Interruption Frequency Index (SAIFI)	0.61	0.04	1.00	0.01	1.64
Customer Average Interruption Duration Index (CAIDI)	134.77	190.12	110.80	121.48	121.15
Outage Reliability	FY 2024				
	Q1	Q2	Q3	Q4	Annual
System Average Interruption Duration Index (SAIDI)	15.36	14.23	67.03	-	-
System Average Interruption Frequency Index (SAIFI)	0.05	0.06	0.36	-	-
Customer Average Interruption Duration Index (CAIDI)	336.87	266.61	183.33	-	-

⁴ System Average Interruption Duration Index (SAIDI) - Measure of the total duration of an interruption for the average customer during a given time frame. SAIDI = (Sum of Customer Minutes Interrupted) / (Total Customers Served)

⁵ System Average Interruption Frequency Index (SAIFI) - the average number of times a customer will experience an interruption during a given time frame. SAIFI = (Total Customers Interrupted) / (Total Customers Served)

⁶ Customer Average Interruption Duration Index (CAIDI) - the average time to restore service. CAIDI = (Sum of Customer Minutes Interrupted) / (Total Customers Interrupted)

1.5 Financial Health

Below is a summary of the financial position for the electric utility.

1.5.1 Sales Forecasts vs. Actuals

Since the beginning of FY 2024, actual electric sales volumes exceeded forecasts by 3.7%, while revenues were 2.7% lower. These results are indicative of lower-than-expected electricity prices and align with the FY 2024 Financial Plan.

Figure 6: Electric Sales Volume (kWh), up to FY 2024-Q3

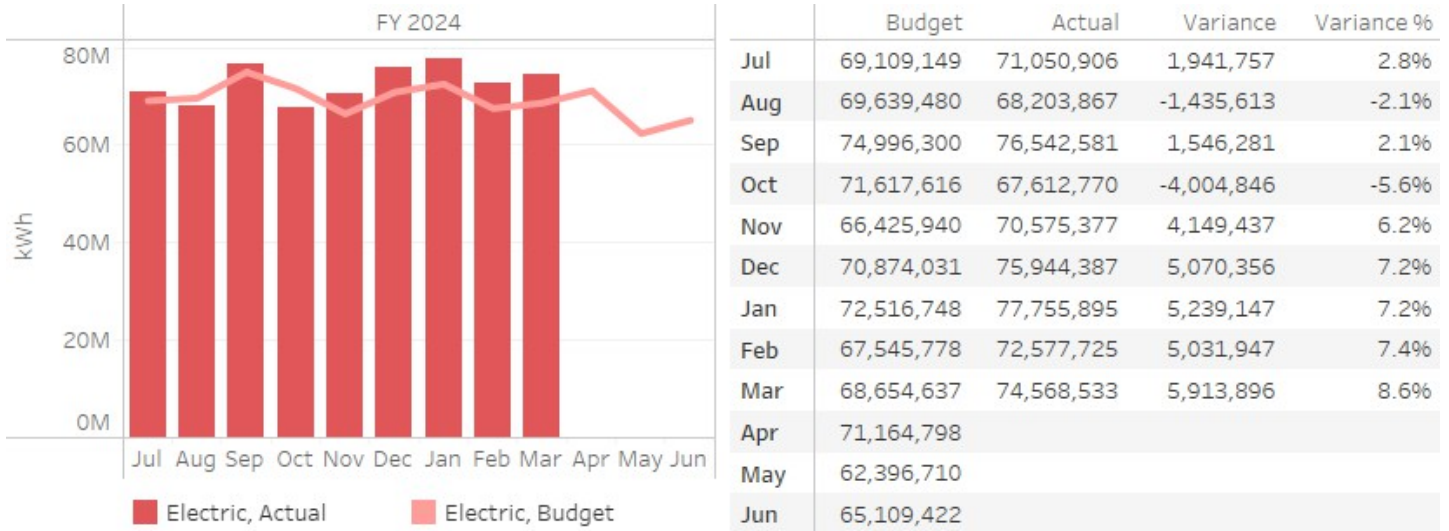
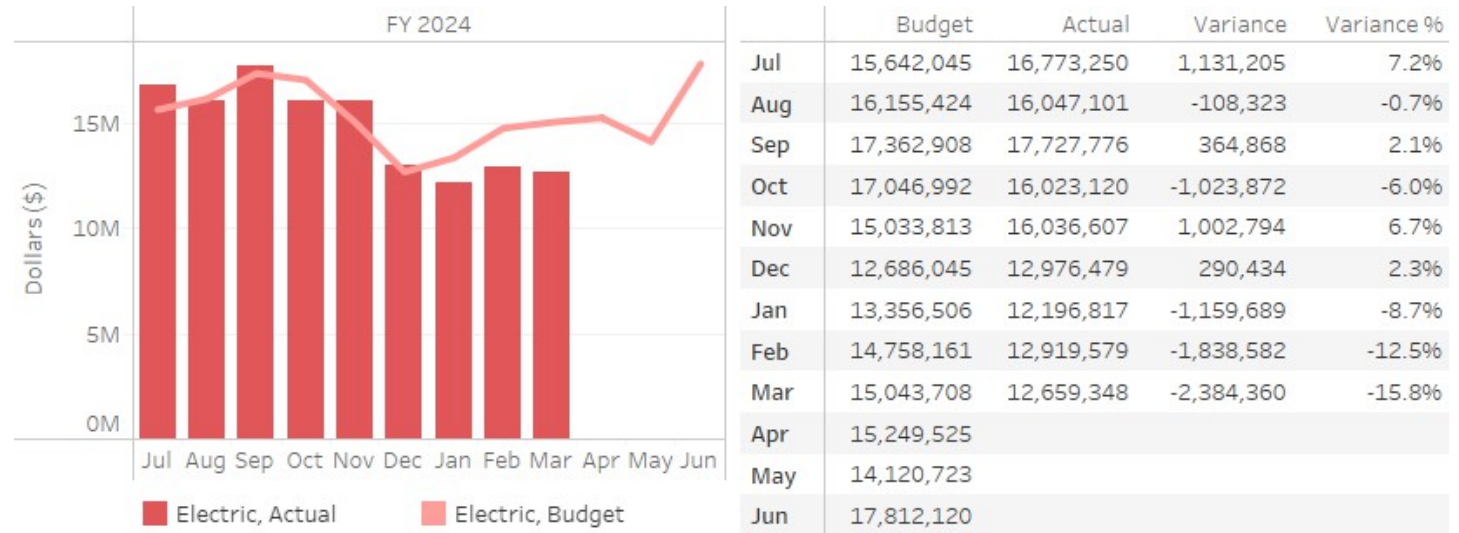


Figure 7: Electric Sales Revenue (\$), up to FY 2024-Q3



1.5.2 Financial Position

The Electric Operations Reserves ended Q2 FY 2024 at \$23.6 million, below the target of \$45 million and below the minimum guideline of \$32 million. Based on the proposed FY 2025 Financial Plan, the Operations Reserves are projected to be \$22.5 million at the end of FY 2024, below the minimum guideline of \$30.3 million. The low reserve level is due to a large one-time capital investment, and the timing of the start of the grid modernization project, which is beginning before the first debt issuance for that project. The first debt issuance will be completed in FY25, and the reserves will be replenished within the guidelines. Despite low operations reserve levels, the financial plan also replenishes \$17 million of funds in the hydro stabilization reserve, which will enhance the utility's ability to manage supply cost volatility in the future and prevent drastic rate changes like those experienced after the Covid-19 pandemic from 2020-2022.

In the first half of FY 2024, the electric utility generated \$114 million in revenue in comparison to \$103 million during the same period a year ago. Retail sales increased \$12 million year over year due to increased rates as of July 1, 2023 and higher sales volumes of 2.2% during the period. Wholesale revenues related to surplus energy, resource adequacy, and renewable energy credits accounted for roughly \$7 million of additional revenue in comparison to the same period in the prior fiscal year.

Total operating expenses declined from \$85 million in FY 2023 to \$81 million in FY 2024, largely driven by lower supply costs of \$52 million in comparison to \$60 million one year prior. The supply cost reductions were partially offset by higher costs in resource management of \$1.2 million with more vacancies filled and higher operations and maintenance costs of \$1.8 million driven by higher contracting costs for tree clearing and overhead construction. Net income during the first half of FY 2024 was \$24 million primarily driven by the increase in rates and lower supply costs.



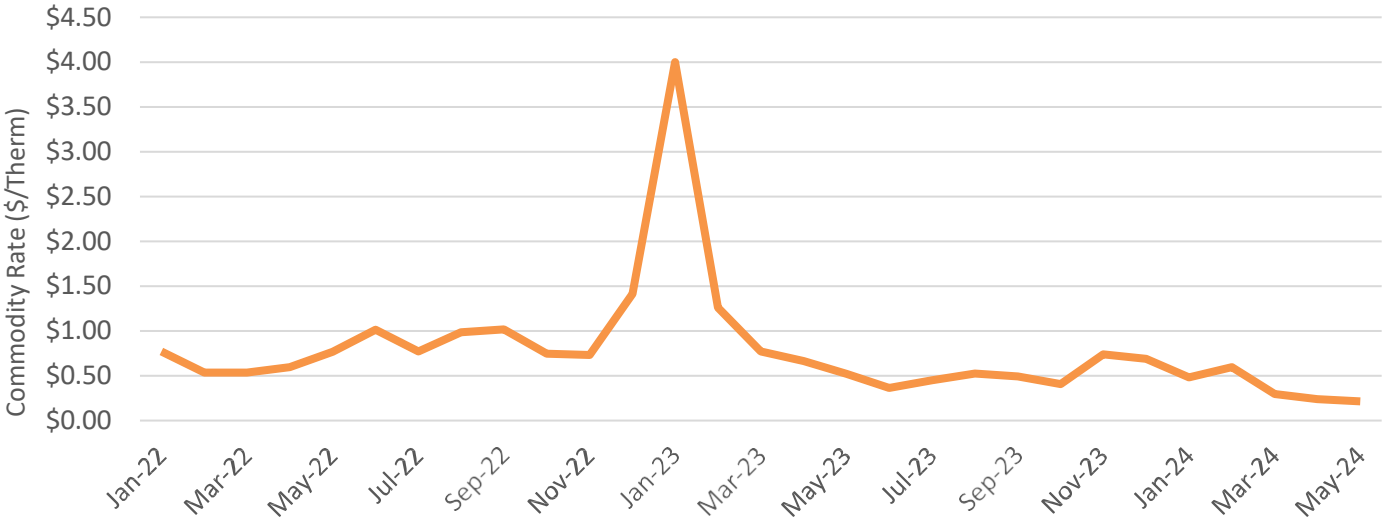
2 Gas Utility

The City’s gas utility serves all residential and non-residential gas demand in Palo Alto. The City maintains and operates a system of low-pressure gas lines for delivering gas but does not operate any transmission lines. Costs for the gas utility are split approximately two thirds for the operation, maintenance, and capital improvement and one third for the cost of the gas commodity, PG&E gas transmission, compliance with the State’s Cap and Trade Program and the City’s Carbon Neutral Gas Program.

2.1 Gas Supply and Transmission

After experiencing a notable price spike during winter 2022-23, natural gas prices have seen a significant decline, returning to more typical ranges. This shift can be attributed to several factors, including milder temperatures nationwide that diminished demand for heating and above average gas storage levels nationwide. The combination of these factors has put downward pressure on natural gas prices, and we expect this trend to continue in the near future. The chart below shows Palo Alto’s gas commodity rates from 2022 to present.

Figure 8: Palo Alto Gas Commodity Rates



Long Term Gas Hedging Policy

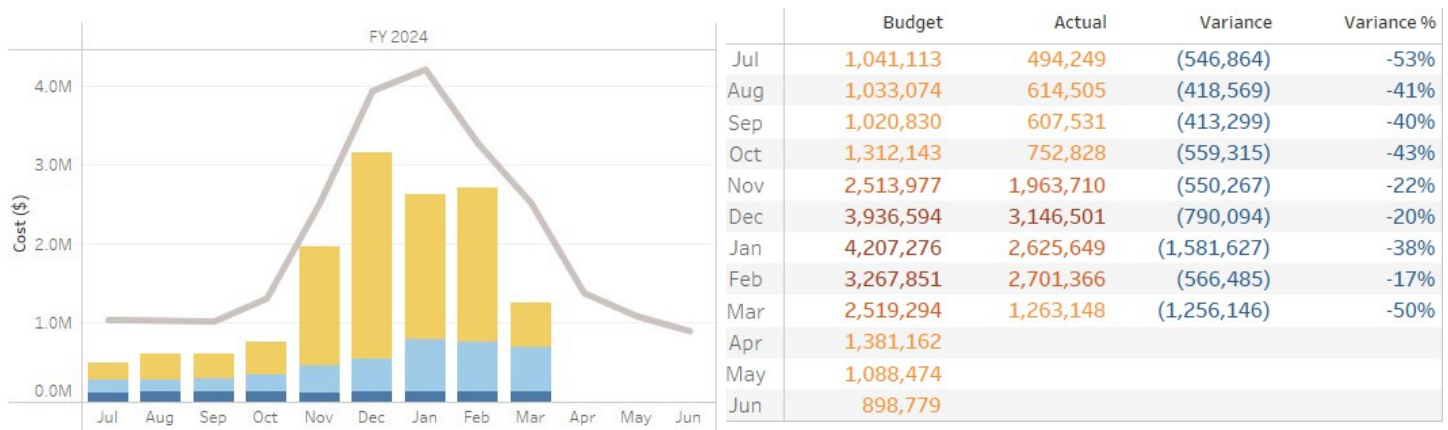
Staff presented an alternative to the capped-price premium adopted by the Council last year for consideration at the May 2024 UAC meeting. This alternative suggests adding about 10 cents per therm for a period of 4 years, aiming to accumulate about \$11M in a reserve to mitigate short-term price spikes, such as the one experienced in January 2023. This proposal also includes gradually lowering the maximum commodity charge from \$4 per therm to \$2 per therm over time as the reserve is built up. In their motion, the UAC offered two preferable alternatives: (1) Maintain the maximum commodity charge of \$4 per therm and collect 6 cents per therm for 3 years, and for Staff to return

Raise the maximum commodity charge to \$5 per therm without collecting funds for #{{item.number}}. Commissioners expressed a preference for the 2nd alternative (higher maximum commodity charge without collecting funds for a reserve). The Commissioners also recommended the City Council advise Staff to investigate options to protect low-income customers and to expand price spike informational campaigns. The Commissioners discussed options for protecting low-income customers from gas price spikes by utilizing General Fund resources. Staff will add the UAC’s proposals and present to the Finance Committee in June and the City Council in August.

2.1.1 Actual and Forecasted Supply Costs

Actual supply and costs in FY 2024 up to Q3 were approximately 32% lower than budgeted in the FY 2024 Financial Plan. This decrease was primarily attributed to substantially lower gas commodity prices, which were driven by milder temperatures nationwide, resulting in lower-than-expected demand for heating.

Figure 9: Gas Supply Costs (\$), Actual vs Budget, up to FY2024-Q3

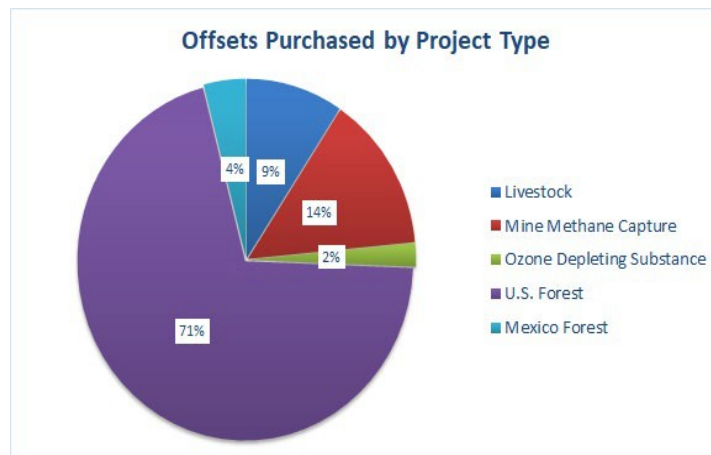


2.1.2 Carbon Neutral Gas Program

In December 2020, Council adopted [Resolution #9930⁷](#) maintaining the Carbon Neutral Natural Gas Plan to achieve carbon neutrality for the gas supply portfolio using high-quality carbon offsets with a cost cap of \$19 per ton CO₂e.

Offsets are purchased to neutralize emissions equal to those caused by natural gas usage in Palo Alto. Staff procured 290,000 tons of offsets during Winter 2023/24 to cover FY23 and FY24 usage. The figure below shows the composition of offset purchases.

Figure 10: Offset Portfolio Composition



The following table provides a description of the projects.

⁷ Resolution #9930 <https://www.cityofpaloalto.org/files/assets/public/v/1/city-clerk/resolutions/resolutions-14>

Figure 11: Offset Project Descriptions

Project Name	Project Type	Description
Grotegut Dairy	Livestock	Grotegut Dairy is a 3,900 milk-cow operation in Newton, Wisconsin with a methane capture system.
Green Trees	U.S. Forest	GreenTrees Advanced Carbon Restored Ecosystem is reforestation of agricultural lands into native hardwood forest in Mississippi, Louisiana, Arkansas, and Illinois
San Juan Lachao	Mexico Forest	Protection of forests located in High Biological Value Zones which contain flora and fauna listed in the Mexican Endangered Species List and the International Union for Conservation of Nature’s Red List of Threatened Species. Project in San Juan Lachao near Palo Alto’s Sister City of Oaxaca.
Blandin Forest	U.S. Forest	Blandin Native American Hardwoods Conservation and Carbon Sequestration project in Minnesota.
Pocosin+	U.S. Forest	These projects are all forested land that will not be disturbed by human development. Without this protection, the forests would be converted to grow wheat or corn. Forest conservation plays a vital role in protecting freshwater systems like lakes. The forests around the lakes act as natural water filters and purify the water for all who use it. The projects also support healthy populations of red wolf, bald eagle, black bear, and various bird species.
Refex ODS	Ozone Depleting Substance	The RemTec facility in Bowling Green, Ohio uses an argon arc plasma destruction device to achieve 99.99 percent removal. The majority of refrigerants originated in California, and all were sourced within the United States. The RemTec facility uses an argon arc plasma destruction device to achieve the required destruction and removal efficiency of 99.99 percent. The majority of ODS refrigerants originated in California, and all were sourced within the United States.
Methane Capture	Mine Methane Capture	This project is the first of its kind. Peabody Natural Gas, LLC removed methane from the North Antelope Rochelle Coal Mine before mining. The methane was compressed and transported to a natural gas pipeline and distributed to a national gas grid for use as fuel. Before implementation of the project, all the methane was vented to the atmosphere.
Virginia Conservation Forestry Program	U.S. Forest	The Virginia Conservation Forestry Program - Clifton Farm and Rich Mountain is a 9000+ acre improved forest management project in which the timber and carbon ownership and management rights have been transferred to The Nature Conservancy’s Conservation Forestry Program. The program manages for multiple goals to include: Water quality protection, habitat diversity, high value forest products, and carbon sequestration. Co-benefits: Biodiversity, Watershed Protection, Climate Resilience, and Connectivity
Riverview Farm Anaerobic Digester	Livestock	Riverview is a carbon offset project generating emission reductions through the capture and destruction of methane at a dairy farm in Minnesota. Under the baseline, manure managed in open lagoons led to the fugitive emission of methane to the atmosphere. In the project scenario, this methane is captured by an anaerobic digester and destroyed on site in the production of electricity. Co-benefits include job creation and the improvement of local air and water quality.
Big River / Salmon Creek Forests IFM	U.S. Forest	The Big River and Salmon Creek Forests are located in Mendocino County, CA and cover 16,000 acres of redwood and Douglas-fir forest. This project is a conservation-based forest management project. Co-benefits include the creation of 140 jobs, protection of 37 miles of streams, and improved water quality for local fish and bird species.
Hiawatha Sportsmans Club	U.S. Forest	Located in Michigan’s Upper Peninsula, Hiawatha Sportsmans Club (HSC) is a member-owned 35,000-acre forest and Michigan’s oldest certified Tree Farm. The property contains a variety of habitats: Lake Michigan shoreline, inland lakes, spring-fed rivers, marsh, mature conifer and hardwood forest and open fields. Supported by HSC’s sustainable forest management, these diverse habitats attract and sustain a wide variety of birds, mammals and other wildlife.

2.1.3 Gas Transmission Line Capacity Valuation

Palo Alto contracts for capacity on the Redwood pipeline, the path from the California-Oregon border to PG&E’s mid-pressure transmission system, at a cost lower than the market value. During the summer months, Palo Alto does not need all of the capacity to serve demand. The excess capacity is monetized by purchasing gas at the California-Oregon border and selling an equal amount of gas at the terminus of the pipeline. The variable cost of transporting the gas is much less than the gas price difference between the two points. The net benefit to the Gas Utility up to FY 2024-Q3 was \$394K, or a reduction of about 4% of the total gas commodity costs up to FY 2024-Q3.

2.1.4 Gas Prepay Valuation

On September 15, 2014, Council adopted [Resolution #9451⁸](#), authorizing the City’s participation in a natural gas purchase from Municipal Gas Acquisition and Supply Corporation (MuniGas) for the City’s entire retail gas load for a period of at least 10 years. The MuniGas transaction includes a mechanism for municipal utilities to utilize their tax-exempt status to achieve a discount on the market price of gas. The program reduced gas commodity costs by about \$240K at the end of Q3 FY 2024.

2.2 Capital Improvement Plan Status

The following capital projects are currently in progress:

GS-14003 – GMR 24A (Gas Main Replacement 24A)

- The GMR 24A project is completed and 2,450 linear feet of gas main was replaced along Shopping Center Way and Orchard Lane in Stanford Shopping Center. Easement documents are being finalized and submitted to the County for recording.

GS-14003 – GMR 24B (Gas Main Replacement 24B)

- The GMR 24B project construction has started. Gas pipelines on University from Webster to Hwy 101 and surrounding streets, as well as Geng Rd and Town & Country Village, are scheduled to be replaced. Construction is anticipated to be completed in March 2025. The project was not selected to receive a federal grant award, although the project was “Highly Recommended” and funding was provided to other “Highly Recommended” projects. The funding source for this project will be the remaining available budget under GS-14003. However, the City submitted another grant application as part of the subsequent round of federal grants issued by PHMSA.

GS-15000 – GMR 25 (Gas Main Replacement 25)

- The GMR 25 design drawings are being finalized and will include the replacement of pipes on Ross Road from Colorado Avenue to East Meadow Drive and surrounding streets, as well as North and Southampton Drive and surrounding streets, and Walter Hays Drive and surrounding streets. The project is expected to replace approximately 26,000 linear feet of gas mains if full federal funding is approved. If full federal funding is not awarded, the scope of the project may be reduced. Staff was informed in April 2024 that the project was selected to receive a federal funding grant, although the amount of the federal funding grant has not been provided.

2.3 Rate and Bill Comparisons

The figure below compares the estimated gas bills for residential customers in Palo Alto and PG&E in FY 2024, at various usage levels. The PG&E bills are based on their Climate Zone X, which includes Menlo Park, Redwood City, Mountain View, Los Altos and Santa Clara. For the summer season, Palo Alto's median residential bill is estimated to be about 40% more than that of PG&E. Conversely, during the winter, Palo Alto's median bill drops to about 28% less than PG&E's. On an annual basis, the median residential bill Palo Alto residents tend to pay around 4% less than PG&E customers.

⁸ Resolution #9451 <https://www.cityofpaloalto.org/files/assets/public/v/1/city-clerk/resolutions/reso-9451.p...>

Figure 12: Residential Natural Gas Bill Comparison (\$/month)

Season	Usage (Therms)	Palo Alto	PG&E Zone X	% Difference
Summer*	10	\$ 28.24	\$ 7.14	75%
	(Median) 18	39.62	23.87	40%
	30	66.88	52.08	22%
	45	104.11	87.34	16%
Winter	30	\$ 62.98	\$ 71.23	(13%)
	(Median) 54	102.15	130.65	(28%)
	80	164.94	201.98	(22%)
	150	353.40	397.56	(12%)
Annual* (\$/year)	Median	\$ 788.10	\$ 820.39	(4%)

*PG&E's bill estimates included an \$85 annual Climate Credit

2.4 Reliability

The City of Palo Alto tracks all gas service interruptions. A summary chart of these interruptions can be found below. Gas service interruptions are usually due to repairs of broken or damaged gas services and mains. This kind of damage is often caused by excavation by outside parties digging in the City.

Figure 13: Gas Service Interruptions, FY 2023 to FY 2024-Q2

Gas	FY 2023				FY 2024		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Number of Breaks	9	4	3	7	5	1	5
Total Minutes	643	330	240	1560	540	120	570
Customers Affected	20	5	7	60	51	1	41

2.5 Financial Health

Below is a summary of the financial position for the gas utility.

2.5.1 Sales Forecasts vs. Actuals

Through FY 2024 Q3, gas commodity prices were lower-than-forecasted due to milder temperatures nationwide, which diminished demand for heating. As such, actual gas sales volumes and actual gas sales revenues were 8.3% and 11.1% below the FY 2024 Financial Plan, respectively.

Figure 14: Gas Sales Volume (Therms), up to FY2024-Q3

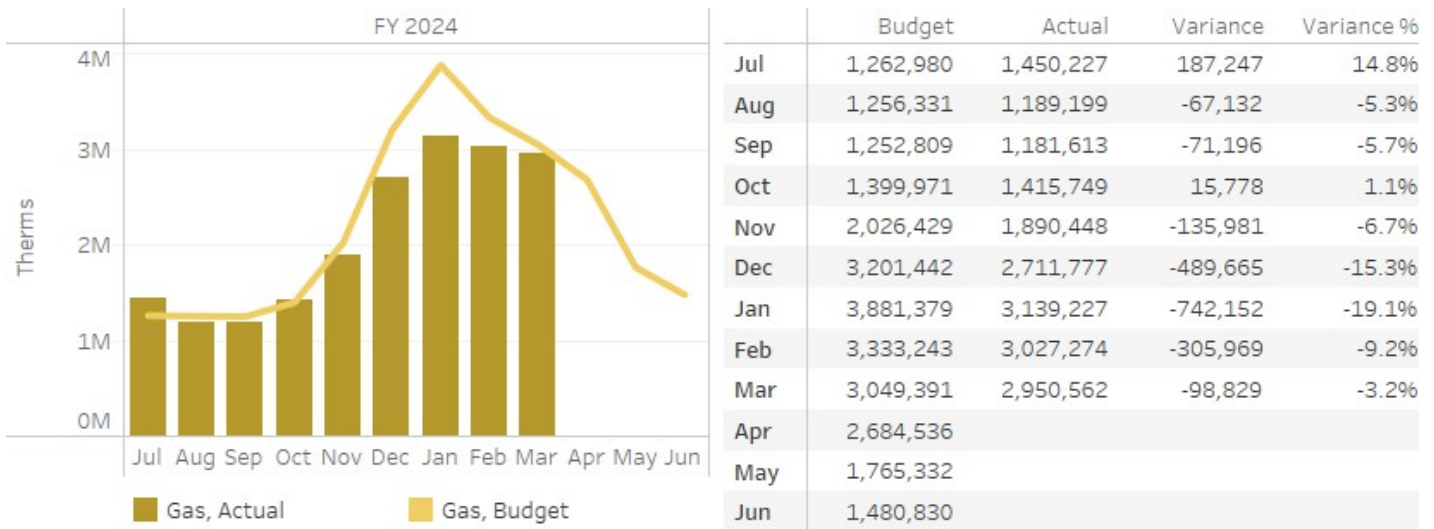
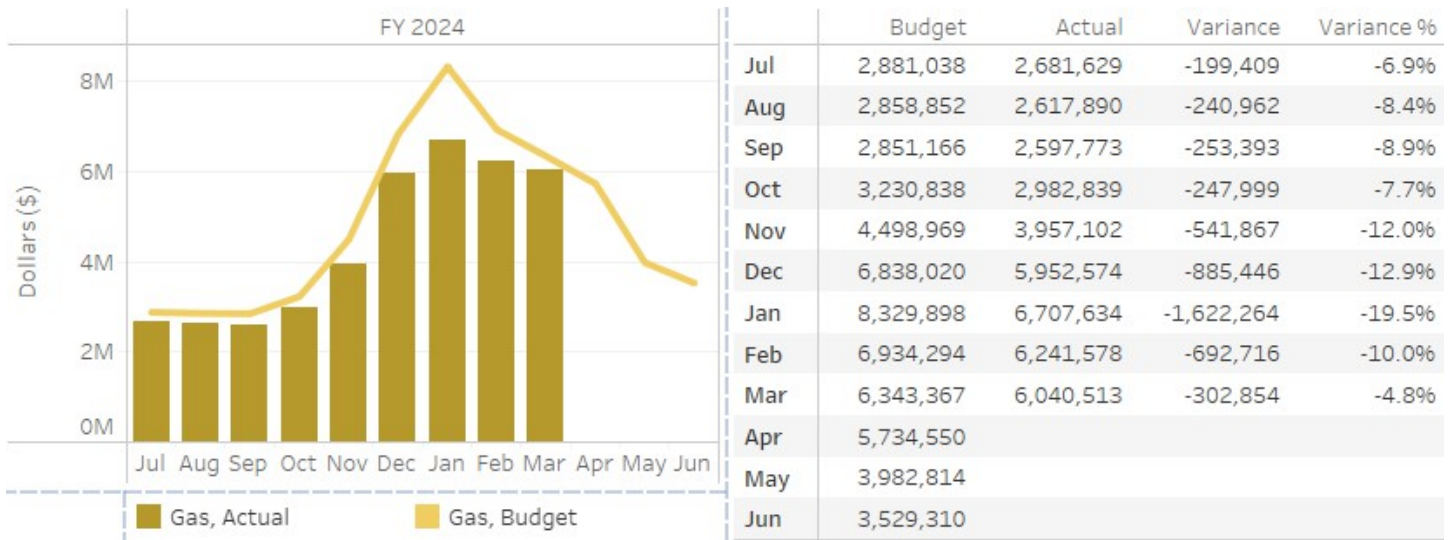
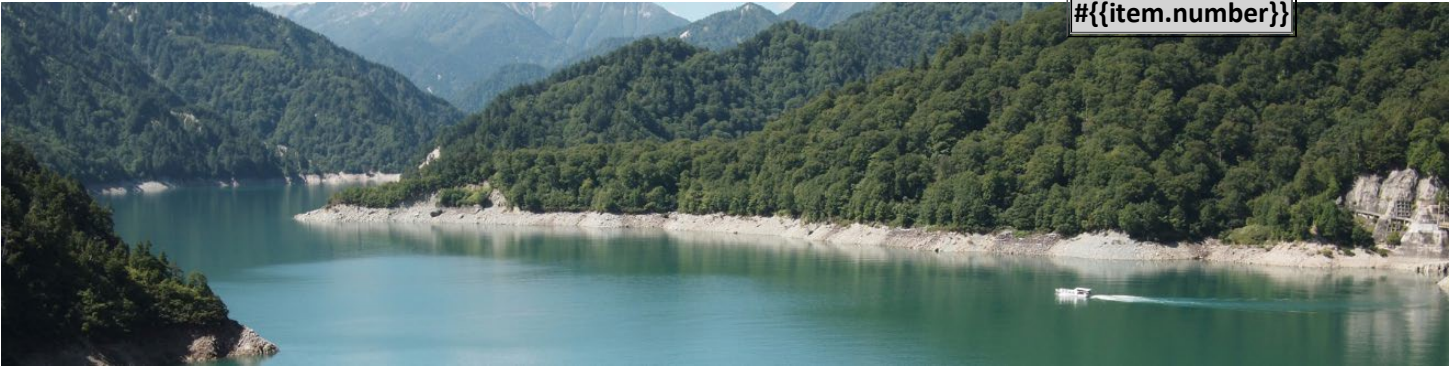


Figure 15: Gas Sales Revenue (\$), up to FY 2024-Q3



2.5.2 Financial Position

The FY 2023 ending Operations Reserve balance was \$14.4 million. Based on the proposed FY 2025 Financial Plan, the Operations Reserve balance is expected to drop below the minimum guideline level at the end of FY 2024, due to one-time expense items deferred from FY 2023 to FY 2024, such as carbon offset purchases and Cap and Trade revenue transfer. Overall expenses are also higher than overall revenues in FY 2024. Sales revenues up to Q3 in FY 2024 were lower by approximately 11.1% or \$5 million from last year's projections, attributed to reduced consumption and commodity prices.



3 Water Utility

The Water Utility serves water to virtually all Palo Alto residential and non-residential customers. All potable water in the City is from the San Francisco Public Utilities Commission (SFPUC) Hetch Hetchy Water System. This system delivers high quality water from the Sierra Nevada and uses no pumping to deliver water to the City. Palo Alto uses a small amount of recycled water for irrigation of the Municipal Golf Course and a few other sites near the Regional Water Quality Control Plant. The City also maintains a system of reservoirs and wells that enable Palo Alto to serve water during an interruption of the Hetch Hetchy system. Costs for the Water Utility are split approximately half for the operation, maintenance and periodic replacement of Palo Alto’s water system and half for the costs of the water purchased.

3.1 Water Supply and Transmission

On November 10, 2022, Governor Newsom’s senior Water-Policy Officials, the San Francisco Public Utilities Commission (SFPUC), and the Modesto and Turlock Irrigation Districts reached agreement on a Memorandum of Understanding for proposed Voluntary Agreements to provide greater water flows and increased habitat for the Tuolumne River. The State Board has initiated its evaluation of the proposed Tuolumne River Voluntary Agreement as an amendment to the adopted Bay Delta Plan. The State Board is completing CEQA review of the Tuolumne River Voluntary Agreement. The SWRCB’s schedule indicates development of the draft Scientific Basis Report for the Tuolumne River Voluntary Agreement in Summer 2024 and response to comments on the draft Scientific Basis Report by late 2024.

Concurrently, the State Board is moving forward with implementation of the Adopted Phase I Bay Delta Plan including the adoption of initial biological goals for the lower San Joaquin River flow objectives. The Court in the State Board Cases on the litigation on the Adopted Phase I Plan ruled in the State Water Board’s favor on all 116 claims by the 12 petitioners.

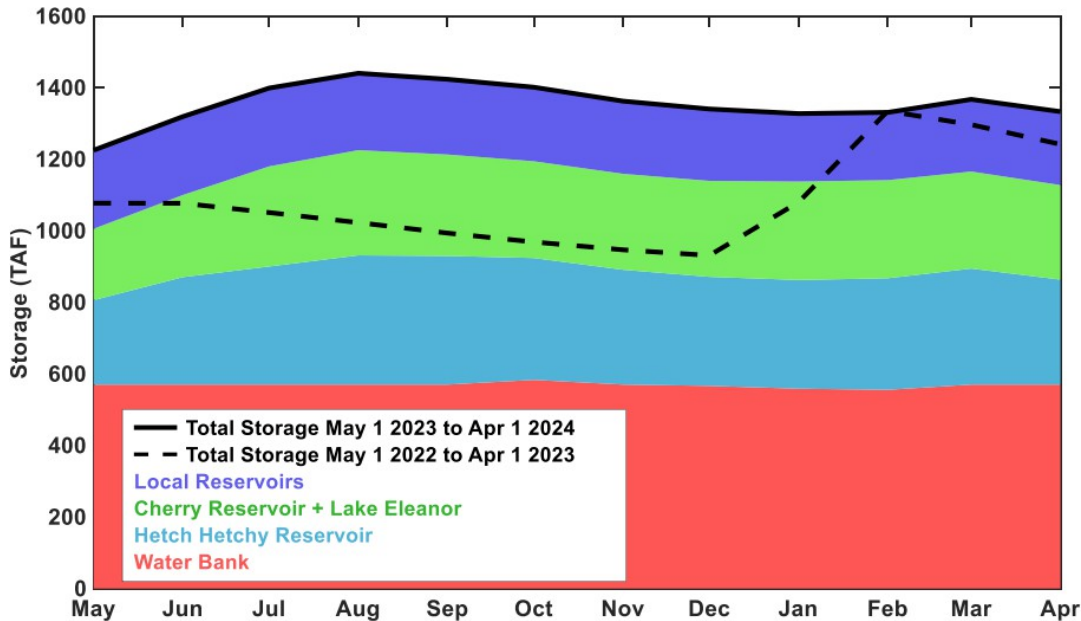
In August 2018, Palo Alto’s City Council voted to support the SWRCB’s Bay-Delta Plan to have 40 percent of natural water in the Central Valley to enter the Delta from February to June and associated Southern Delta salinity objectives; and send a letter expressing this policy position to the Bay Area Water Supply and Conservation Agency (BAWSCA), California State Water Resources Control Board, SFPUC, and other stakeholders.

In order to plan for future reductions to existing water supply from climate change and regulatory uncertainties, the SFPUC undertook the Alternative Water Supply Plan. This plan is a roadmap to guide water supply planning to help address projected supply shortfalls through 2045. The SFPUC Commission approved the plan in February 2024 and expects to update the plan in Fiscal Year 2027.

BAWSCA is a special district created by legislative action (AB 2058) in 2002 to protect the water supply and conservation interests of SFPUC’s wholesale water customers, including Palo Alto. BAWSCA’s goal is to ensure a reliable supply of high-quality water at a fair price. In fall 2023, BAWSCA began scoping its Long-Term Reliable Water Supply Strategy 2045. This planning document will enable BAWSCA to identify the highest priority water supply management activities to achieve its goal.

Cumulative Hetch Hetchy Weather Station precipitation for October 2023 through March 2024, which is 85% of the median. As of April 1, 2024, the Regional Water System total storage operated by the SFPUC was at 92% of maximum storage and Water Bank was full. In the figure below, the solid black line shows storage in the Regional Water System for the past 12 months (color bands show contributions to total system storage) and the dashed black line shows total system storage for the previous 12 months. Regional Water System Storage is 1,332 Thousand Acre Feet (TAF) as of April 1, 2024.

Figure 16: Regional Water System Storage

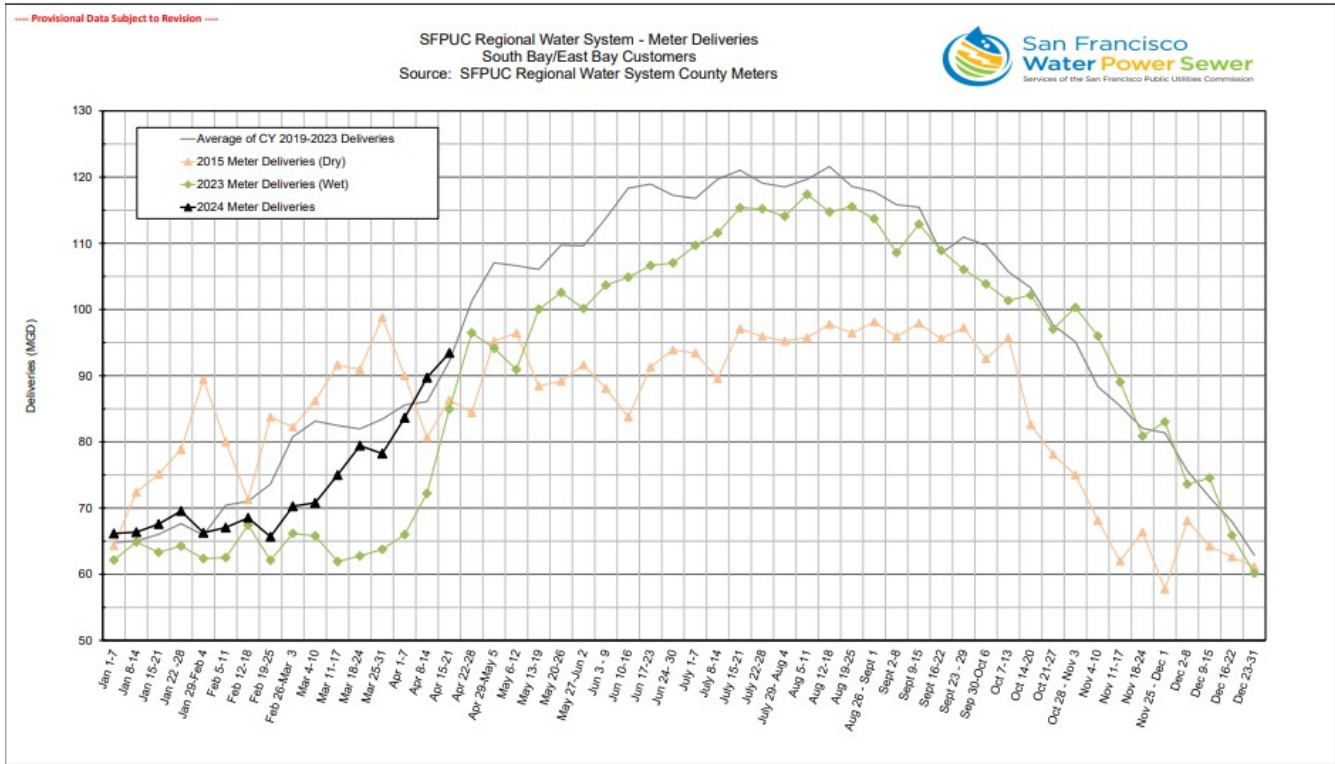


No local water use restrictions are in place at this time. The State’s emergency regulation banning the use of drinking water for watering decorative grass in commercial, industrial, and institutional areas, other than to the extent necessary to ensure the health of trees and other perennial non-turf plantings, is expected to remain in effect until June 2024.

During droughts that require up to 20% cutbacks, water is allocated between San Francisco and the Wholesale Customers collectively based upon the Water Shortage Allocation Plan (or Tier One Plan) that is outlined in Palo Alto’s water supply contract with San Francisco. The collective Wholesale Customer share from the Tier One Plan is then allocated among Wholesale Customers based upon a formula in a negotiated and adopted “Tier Two Plan.” Since January 2022, staff have been participating in a negotiation with the other Wholesale Customers to update the Tier Two Plan. Staff expects to finalize the updated Tier Two Plan in 2024.

The figure below shows water usage for the South Bay/East Bay (including Palo Alto) compared to several benchmarks including 2015 and 2023. For the South Bay/East Bay region as well as systemwide, demand for the first three months of 2024 was similar to or lower than the average of the last five years but higher than the same months in 2023, which had historically wet weather.

Figure 17: SFPUC Water Deliveries



Palo Alto staff is continuing to focus on education and outreach and providing resources to eliminate water waste and achieve efficient water use. Palo Alto kicked off the WaterSmart Customer Portal and Residential Home Water Report Program and also continued to work with Waterfluence software to target water efficiency for large landscape customers. Staff continues to promote water conservation rebate programs and resources through online outreach, bill inserts, and newsletters.

Palo Alto continued its work on the One Water Plan with the goal of Council adoption of a One Water supply plan, a 20-year adaptable roadmap for implementation of water supply and conservation portfolio alternatives. In June 2022 the City Council approved a contract for this work with Carollo Engineers, Inc. In September and December 2022, staff conducted stakeholder engagement meetings with community members and City staff focusing on One Water community needs and priorities and water supply and conservation options and draft evaluation criteria. The UAC received a status update in February 2023 ([Staff Report #14974](#)) and staff shared initial results at the UAC’s June meeting.

3.2 Capital Improvement Plan Status

The following capital projects are currently in progress:

WS-07000 – California Avenue and Page Mill Road Turnouts

- The California Avenue and Page Mill Turnouts project upgrades the California Avenue Turnout and adds seismic restraints to the pressure reducing valve at Page Mill Road Turnout. The construction was delayed due to supply chain issues on the valves. Construction started in January 2024 after all material was delivered and is on target to be completed in May 2024.

⁹ Staff Report #14974 <https://www.cityofpaloalto.org/files/assets/public/v/1/agendas-minutes-reports/agendas-minutes/utilities-advisory-commission/archived-agenda-and-minutes/agendas-and-minutes-2023/02-feb-2023/02-01-2023-id-14974-item-3-46>

WS-15002 – WMR 29 (Water Main Replacement 29)

- The WMR 29 project will replace approximately 8,000 linear feet of water main on Park Boulevard from Mariposa Avenue to Lambert Avenue, on College Avenue from Park Boulevard to El Camino Real, and on Birch Street from College Avenue to Sherman Avenue. The project started in November 2023 and is anticipated to be complete in August 2024.

3.3 Rate and Bill Comparisons

The figure below shows the water bills for single-family residential customers compared to what they would be under surrounding communities’ rate schedules as of February 2024. CPAU is among the highest monthly bills of the group. Palo Alto’s water bills at 9 CCF per month are 11% higher than the comparison group average.

Figure 18: Residential Water Bill Comparison (\$/month)

Usage CCF/month	Palo Alto	Menlo Park	Redwood City	Mountain View	Santa Clara	Hayward
4	\$53.20	\$65.20	\$64.16	\$46.95	\$31.88	\$45.17
(Winter median) 7	\$80.60	\$91.00	\$86.27	\$72.69	\$55.79	\$69.59
(Annual median) 9	\$103.68	\$108.19	\$112.31	\$89.85	\$71.73	\$85.87
(Summer median) 14	\$161.38	\$155.10	\$180.22	\$132.75	\$111.58	\$135.87
25	\$288.32	\$271.23	\$340.49	\$278.63	\$199.25	\$245.87

3.4 Reliability

The City of Palo Alto tracks all water service interruptions. A summary chart of these interruptions can be found below. Water service interruptions are usually due to repairs of broken or damaged water services and mains.

Figure 19: Water Service Interruptions, FY 2023 to FY 2024-Q2

Water	FY 2023				FY 2024		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Number of Breaks	10	12	6	2	8	9	8
Combined Minutes	1007	1050	690	100	1086	880	1230
Customers Affected	46	249	63	19	147	96	164

3.5 Financial Health

Below is a summary of the financial position for the water utility.

3.5.1 Sales Forecasts vs. Actuals

Actual water sales volumes through FY 2024 Q3 were slightly below budgeted levels by 1.0%, while water sales revenues were 3.7% lower than anticipated. Lower-than-expected volumes in March were due to an unusually rainy month, which deviated from our projections based on historical averages.

Figure 20: Water Sales Volume (CCF), up to FY 2024-Q3

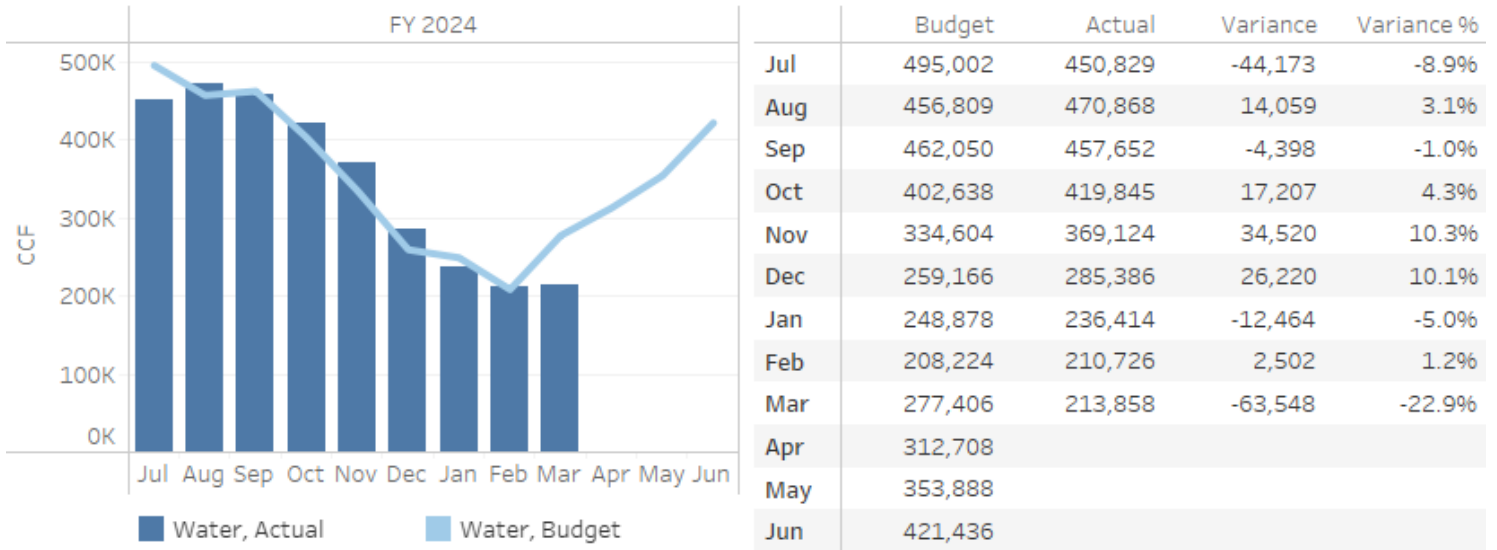
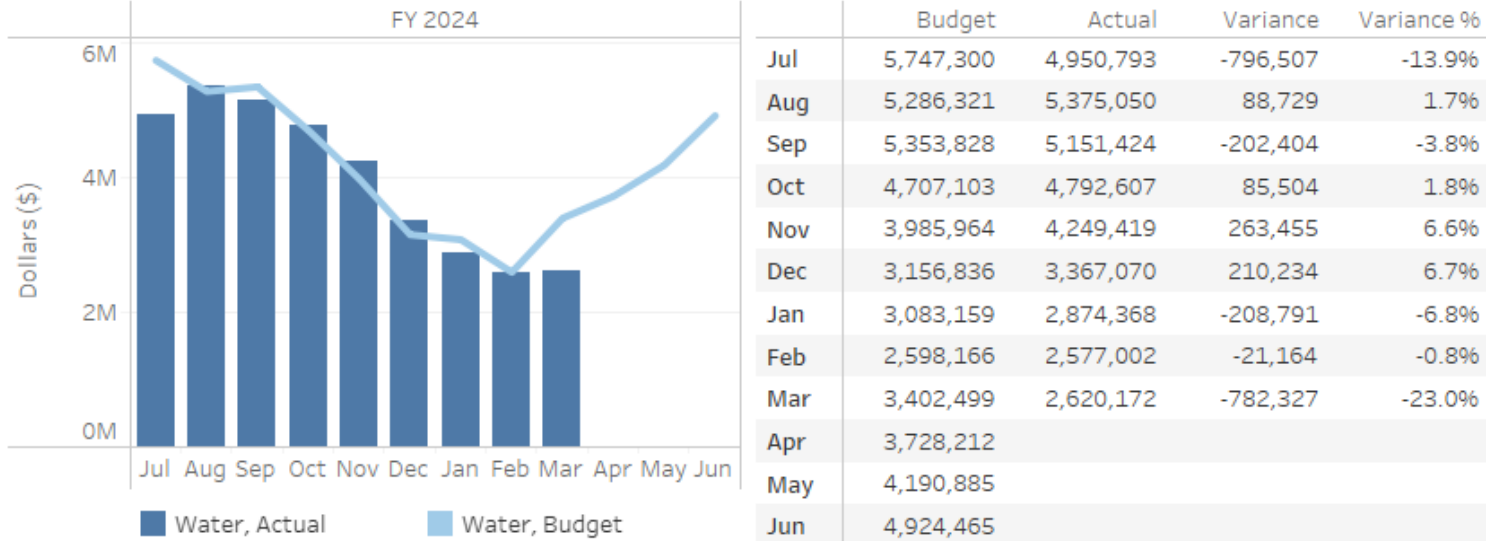


Figure 21: Water Sales Revenue (\$), up to FY 2024-Q3



3.5.2 Financial Position

At the end of FY 2023, the Water Operations Reserve was \$7.9 million, which is within the guideline range, but below the target of \$10.8 million. Based upon the proposed FY 2025 Financial Plan, the Operations Reserve is projected to end FY 2024 at \$9.2 million. The Water Utility is relying on funding from the Rate Stabilization Reserve to pay for costs while sales revenues are experiencing declines as a result of drought and slow drought rebound. The FY 2025 Financial Plan forecasts water rate increases will be needed to maintain the Operations Reserve within the guideline range during each of the next five years. The FY 2025 Water Financial Plan is scheduled to go to the Council in June 2024.



4 Wastewater Utility

The Wastewater Utility includes the system of sewer pipes that collect and transport wastewater to the Regional Water Quality Control Plant (RWQCP) operated by the City of Palo Alto under a partnership agreement with several surrounding communities, as well as Palo Alto’s share of the cost of operating the RWQCP. The RWQCP provides treatment and disposal of wastewater for Palo Alto. Costs for the Wastewater Utility are split approximately half for the operation, maintenance and periodic replacement of Palo Alto’s sewer collection system and half for the costs of wastewater treatment at the RWQCP.

4.1 Wastewater Treatment Updates and Capital Planning Status

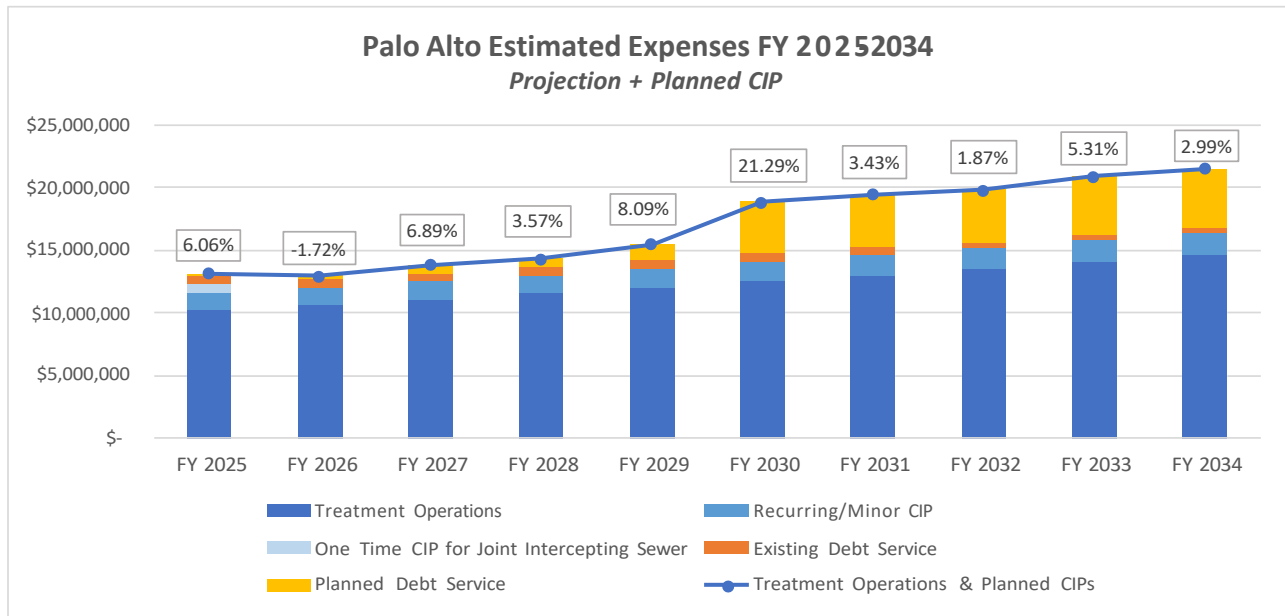
The RWQCP is operated by Palo Alto’s Public Works Department and provides wastewater treatment to Palo Alto, Mountain View, Stanford, Los Altos, East Palo Alto and Los Altos Hills. The Palo Alto Wastewater Collection Utility pays its share (approximately 32% projected in FY 2025) of the costs for wastewater treatment and disposal. Capital costs for wastewater treatment are a major driver for cost increases for the Wastewater Treatment Utility and by extension for the Wastewater Collection Utility. The RWQCP is facing the need for major upgrades in coming years, due to aging equipment and changing environmental regulations. Rehabilitation and replacement of plant equipment that has been in use for over 40 years is necessary to ensure the City can continue to conduct wastewater treatment operations safely and in compliance with regulatory requirements for the discharge of treated wastewater 24 hours a day.

4.1.1 Treatment Cost Trends

RWQCP staff project treatment costs paid for by Palo Alto’s Wastewater utility to increase by approximately 5.6% annually on average from FY 2025 through FY 2034. A key driver of the increases are capital projects, parts, materials and debt. The treatment capital expenses, including debt service costs, are increasing at an average of about 10% per year from FY 2025 through FY 2034 to keep up with ongoing replacement of aging equipment and complete major upgrades. Larger increases to capital expenses are expected to begin in FY 2029 in the form of new debt service for major projects to implement the Plant’s capital program. The figure below shows Palo Alto’s share of each component of estimated treatment costs. Major upcoming capital projects and estimated years for debt service or other capital cost payments to begin are reflected in the “Planned Debt Service” bar in the figure below and include:

- Joint Interceptor Sewer Rehabilitation (FY 2024)
- Building Purchase (FY 2025)
- Primary Sedimentation Tank Rehabilitation and Equipment Room Electrical Upgrade (FY 2025)
- Outfall Line Construction (FY 2027)
- Headworks Facility (FY 2029)
- Secondary Treatment Upgrades (FY 2030)

Figure 22: Palo Alto’s Share of Estimated Wastewater Treatment Expenses (Projection)



The figure above shows the ongoing annual CIP reinvestment (“Recurring/Minor CIP” and “Existing Debt Service”), one pay-as-you-go project, the Joint Intercepting Sewer in FY 2025, as well as treatment operations costs, which make up the majority of the treatment costs but are not growing as quickly as the planned debt service. Additional factors not yet included in the budget estimate could increase costs further such as debt expense for cash flow issues associated with slow State Revolving Fund loan reimbursement, and property expenses for an acquired property. Factors that are contributing to cost increases for treatment operations are rising salary and benefits costs, sludge hauling services unit price increases, commodity increases to operate the facility, and Palo Alto’s flow share increased in FY 23 from 32% to 35% based on updated flow data; this increases Palo Alto’s cost share.

Palo Alto is in the process of applying to Valley Water’s “Guiding Principle 5” grant program that awards funds to communities like Palo Alto where property taxpayers pay State Water Project property taxes but receive on average 85% of their water supply from sources other than Valley Water managed supplies. Guiding Principle 5 awards grants to each community for certain purposes including wastewater treatment environmental upgrades. Staff plans to bring a Guiding Principle 5 funding agreement to the City Council in June 2024 and will then incorporate the expected grant funding into the treatment costs expected for Palo Alto.

4.1.2 Regional Water Quality Control Plant Capital Planning Status

The Long-Range Facilities Plan, completed in 2012, guides the capital plans for the RWQCP. The RWQCP is currently soliciting consultant proposals to begin an update to the Long-Range Facilities Plan in 2024. The findings from the Long-Range Facilities Plan update will direct additional/future CIP. The RWQCP’s current capital work in-progress includes an estimated \$485.6 – \$515.6 million in projects. The following table summarizes these ongoing projects and provides their status and costs.

Figure 23: Current RWQCP Capital Work In-Progress (based on March 2024 Pa

Project	Status	Expense (million \$)
Primary Sedimentation Tanks Rehabilitation and Equipment Room Electrical Upgrade	Construction	\$19.4
12kV Electrical Loop Upgrades	Phase 1 in Construction, Phase 2 Construction Bidding	\$12.5
New Outfall Pipeline	90% Redesign	\$17.8
Secondary Treatment Upgrades	Construction	\$193
Advanced Water Purification System	100% Design, Architectural Review Board Approval	\$63.6
Headworks Facility Replacement	Advanced Planning	\$120-150 (estimated based on headworks project costs in the Bay Area)
Joint Interceptor Sewer Rehabilitation	Contract Awarded	\$8.9
Staff Buildings	Advanced Planning/Planning	\$50.4
	Subtotal	\$485.6 – 515.6

One of the largest projects listed above is the Headworks Facility Replacement, which involves replacement or rehabilitation of the parts of the facility that pump raw sewage to the main treatment works (the headworks), and rehabilitation of primary sedimentation tanks that separate out primary sludge. Additionally, the RWQCP anticipates regulations to limit nutrient discharges (on total nitrogen) into the San Francisco Bay. The current secondary treatment design cannot remove nitrogen and the largest project listed above, the Secondary Treatment Upgrades, will address this regulatory change as well as address aging mechanical and electrical equipment that must be replaced.

In addition, the RWQCP is evaluating the purchase of neighboring properties in order to build an environmental services and lab building.

The RWQCP plans to fund these capital projects through a combination of mechanisms including State Revolving Fund loans, and revenue bonds. Several sources of funding will be used for the Advanced Water Purification System: Valley Water will provide \$16 million, Palo Alto was awarded a \$12.9 million grant from the United States Bureau of Reclamation’s WaterSMART program, which allocates Title XVI Program funding under the Water Infrastructure Improvements for the Nation (WIIN) Act, and the City of Mountain View will pay for the remainder of the capital cost.

4.2 Collection System Capital Improvement Plan Status

The following capital project is currently in progress:

WC-19001 - SSR 31 (Sanitary Sewer Replacement 31)

- The SSR 31 project replaces approximately 11,000 linear feet of wastewater main, sewer laterals, and manholes on El Camino Real and Page Mill Road. Construction of this project started on 7/31/23 and it will be completed in May 2024. Staff continues to coordinate the schedule with Caltrans and County of Santa Clara to stay ahead of their street improvement/paving projects to avoid digging into Caltrans or County’s newly paved streets.

WC-15002 – Sewer Master Plan Study

- The Master Plan Study will evaluate the City’s existing wastewater collection system, flows, and flow patterns to determine the adequacy of the system’s hydraulic capacity to meet current and anticipated future wastewater flow demands. The project kicked off in December 2023 and is anticipated to be completed in March 2025.

4.3 Rate and Bill Comparisons

The figure below shows the wastewater monthly bill for residential customers in Palo Alto #{{item.number}} they would be under surrounding communities’ rate schedules as of February 2024. Palo Alto’s monthly sewer bill is about 26% lower than the comparison group average. Menlo Park in this table refers to the West Bay Sanitary District.

Figure 24: Residential Wastewater Bill Comparison (\$/month)

Palo Alto	Menlo Park	Redwood City	Mountain View	Los Altos	Santa Clara	Hayward
\$48.64	\$108.83	\$89.28	\$53.10	\$51.47	\$48.28	\$41.29

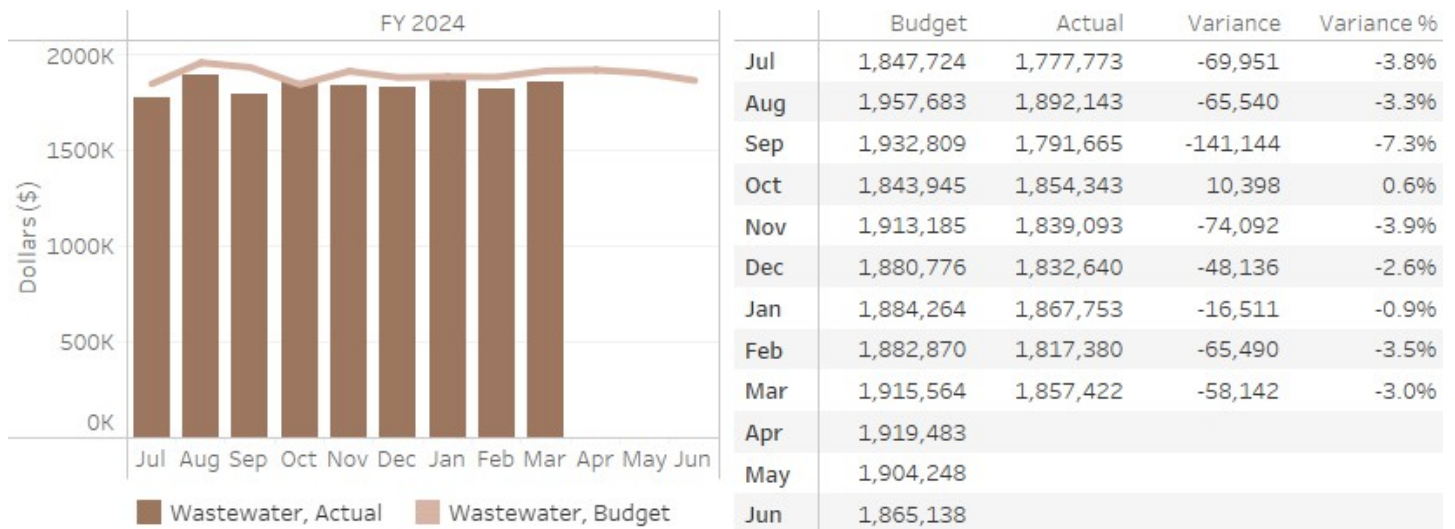
4.4 Financial Health

Below is a summary of the financial position for the wastewater utility.

4.4.1 Sales Forecasts vs. Actuals

Wastewater sales revenues through FY 2024 Q3 were 3.0% lower than forecasted in the FY 2024 Financial Plan. The decrease in sales can be attributed to reduced water usage, particularly in the commercial sector, following a period of drought.

Figure 25: Wastewater Sales Revenue (\$), up to FY 2024-Q3



4.4.2 Financial Position

The Wastewater Collection Operations Reserve was within the guideline range at the end of FY 2022 and dropped below guideline range and below zero at the end of FY 2023. Palo Alto began Sanitary Sewer Replacement project 31 with an increased budget and start date in FY 2023 instead of FY 2024 because of coordination with Caltrans to limit or avoid digging into newly-paved street on El Camino Real. At the end of FY 2023 staff completed the transfers that were approved by the Council in the [FY 2024 Wastewater Collection Financial Plan¹⁰](#). These included transferring \$3.2 million from the CIP Reserve to the Operations Reserve and \$0.34 million from the Rate Stabilization Reserve to the Operations Reserve bringing both the CIP Reserve and the Rate Stabilization Reserves to zero. However, during FY 2023, CIP-related costs were approximately \$3 million higher than forecasted, transfers out to capital projects were \$0.3 million higher than forecasted, and revenue was \$0.5 million lower than forecasted. In July 2023, wastewater rates increased by 9%, however in the first three quarters of FY 2024, wastewater sewer service revenue increased by only 6% compared to the same months in FY 2023; water use reductions during the winter of 2023 contributed to lower commercial revenues. Given the low reserve

¹⁰ FY 2024 Wastewater Collection Financial Plan <https://www.cityofpaloalto.org/files/assets/public/v/3/agendas-minutes-reports/reports/city-manager-reports-cmrs/attachments/03-07-2023-id-2302-0944-ww-financial-plan-lisa.pdf>

levels, and lower than expected revenue, there is a risk that this short-term need for cash **Item #{{item.number}}** will be cash. For this reason, the Finance Committee is recommending to Council in June to approve a short-term loan up to \$3 million from the Fiber Optics Fund Reserve for FY 2024 to cover the potential shortfall of cash in the Wastewater Utility. The Wastewater Collection utility would repay any such loan in FY 2026 (or sooner) at a rate equal to the City's portfolio rate plus 0.25%. The FY 2025 Wastewater Financial Plan is scheduled to go to the Council in June 2024.



5 Fiber Utility

The City offers a "Dark" fiber service providing a fiber connection from Palo Alto businesses to the downtown Internet Exchange. At the exchange, businesses select an internet service provider (ISP) for bandwidth and connection speed.

5.1 Fiber Utility Strategic Planning

Below are some upcoming key activities of the Fiber-to-the-Premise (FTTP) Project:

- City Council approval of the Initial Study/Mitigated Negative Declaration for FTTP including the Mitigation Monitoring and Reporting Program which will be enforced by the Planning Department during project construction. (Jun 2024)
- Purchase and installation of the fiber hut at Colorado substation to serve as an aggregation site for FTTP and house fiber networking equipment. (Jun – Dec 2024)
- Recruitment of an Outside Plant Manager to manage day-day construction activities and fiber expansion planning. Recruitment of a Sales and Marketing Manager to lead marketing campaigns and customer acquisition programs for Palo Alto Fiber broadband. (Jun – Sep 2024)
- Issue formal solicitations for fiber materials, fiber construction, operating and business support systems, broadband installation, and technical support. (Jun 2024 – Feb 2025)

5.2 Capital Improvement Plan Status

On June 19, 2023, the City Council approved the FY 2024 CIP Budget with the new FTTP project, and Grid Modernization for Electrification Project. The approval of the electrification project accelerated efforts to align electrification and fiber construction, which impacted the Fiber Expansion Plan. Staff is deploying a pilot to determine how to align the grid modernization project and projects under the Fiber Expansion Plan to help minimize utility engineering pole make-ready work, pole replacements, noise disruption, and construction activity in neighborhoods. With hundreds of miles of overhead and underground construction activity between electric grid modernization and FTTP, the purpose of the pilot is to determine the feasibility of engineering designs and construction methods and implement best practices to facilitate the most cost-effective deployment of resources.

CPAU will provide progress updates of the Grid Mod and FTTP pilot when construction ramps up. For the Pilot, the City is building only fiber-to-the-premise (FTTP) primarily in the overhead areas which will be charged solely to the Fiber Fund. Joint costs with Electric will occur when we begin construction of the two new fiber backbones (one for electric only; second one for City, dark fiber, and FTTP) or when we joint trench in the underground areas for FTTP and Grid Mod. The City will provide the cost allocation after we issue the invitation for bid for construction and receive cost proposals for the fiber backbone and joint trenching.

5.3 Reliability

There were no unplanned fiber outages or events to report in Q3 of FY 2024.

5.4 Financial Health

Below is a summary of the financial position for the fiber utility.

5.4.1 Fiber Sales

Actual dark fiber licensing sales in FY 2024 Q3 were \$2.7M and aligned with the revenue forecast. Fiber expenses were \$2.7M including \$0.9M of FTTP-related costs and aligned with the expense forecast. Expenses are projected to ramp up in FY 2025 for purchase materials and construction services for FTTP. Staff is working on a modified Fiber pro forma statement with Magellan for the pilot and phase one of FTTP.

5.4.2 Financial Position

The ending FY 2024 Q3 Fiber Optic Utility Rate Stabilization Reserve is \$32.8 million.



6 Customer Programs (Efficiency and Sustainability)

The City’s Utilities Department maintains a number of programs to help customers save money, use energy and water efficiently, and reduce carbon emissions. These programs are funded through a variety of funding sources, some of which are summarized below.

6.1 Customer Programs Updates

Below is a summary of the City’s energy and water efficiency programs, as well as programs to encourage building electrification and adoption of electric vehicles. Summary descriptions of Utilities Customer Program are provided in Appendix D.

6.1.1 Energy and Water Efficiency

Energy & Water Efficiency Workshops

The City, in partnership with the Bay Area Water Supply and Conservation Agency (BAWSCA), offers landscape education classes throughout the year to introduce residents to the concepts of water-efficient and sustainable landscaping. Workshop topics include rain gardens, how to water trees, steps to take to convert lawns into drought-tolerant landscapes, and available rebates. Workshops are held in the Spring and Fall every year. To date in 2024, the City held three water efficiency workshops on turf conversion, native plants, and laundry graywater systems.

Please visit the BAWSCA website for a complete list of available classes and events at: <https://bawasca.org/consERVE/programs/classes>. All past Landscape Class Videos are available online at: <https://bawasca.org/consERVE/landscaping/videos/>. For updates on future events and workshops, please visit <http://cityofpaloalto.org/workshops>.

Residential Energy Efficiency Programs The Home Efficiency Genie program continues to provide residents with professional advice and information to improve their home’s efficiency and comfort and lower their energy and water usage, and evaluate the need for an electric panel upgrade to accommodate future electrification projects. In addition to phone and email-based advice service, the Home Efficiency Genie program also offers both in-home and virtual efficiency assessments of energy equipment and the building envelope (attic, windows, walls), and evaluation of the electric panel to plan for future electrification upgrades. During Q3 FY2024, the Genie performed 13 comprehensive in-home assessments, and performed three virtual assessments.

CPAU’s Residential Energy Assistance Program (REAP) for income-qualified customers continues to reach our most vulnerable population offering energy and water efficiency improvements at no cost to the customer. In Q3 FY 2024, 11 customers participated in the REAP program.

Water Conservation Programs for Residents and Businesses

The WaterSmart customer portal, an online water management tool, launched in November 2022. The average open rate of home water report emails is 73%. As of May 1, 2024, 23% of all single-family customers have accessed the portal which provides information about their water consumption and personalized water conservation recommendations. Water savings from the WaterSmart program are being evaluated and will be available soon.

Commercial & Industrial Energy Efficiency Program (CIEEP)

As of May 1, 2024, Veolia, formally Enovity, has 13 projects in development with projected savings of 727,405kWh. The projected savings are expected to increase, as 8 of the 13 projects are still in the assessment phase and the projected kWh savings have not yet been accounted for. Key Account Representatives continue to proactively engage with customers through email correspondence, phone calls, site visits, tabling events, and face-to-face meetings. This spring the Commercial team attended an Earth Day Celebration at Stanford Research Park and a Sustainability Fair at Hewlett Packard and SAP. These opportunities provide a platform for staff to engage with employees and sustainability leaders and showcase the City's energy efficiency and electrification programs. These opportunities also lead to further engagement to explore potential partnerships and ways the City can support corporate sustainability initiatives and educational endeavors.

Aside from attending corporate Earth Day related events, for the first time since before the pandemic, the Commercial programs team facilitated an in-person Facility Managers Meeting on April 23, 2024. The meeting had 28 registered commercial customers and featured a tour of the electric heat pump VFR (variable refrigerant flow) HVAC system that showcased a completed decarbonization project at the Palo Alto Crown Plaza – Cabana Hotel. This is one of the first examples of a successful commercial Heat Pump system installed, providing heating and cooling to 184 guest rooms and common areas. The next Facility Managers Meeting is planned for this fall, with a commitment to maintaining in-person engagement while accommodating remote participation.

The CIEEP program's total value is trending behind schedule due to higher commercial vacancies. Many employers have remained fully remote and hybrid in 2023. This has led to a pause in facility reinvestments and upgrades. Despite the recent announcement of Tesla layoffs expected in June 2024, affecting 486 Palo Alto-based jobs, the company is actively upgrading and expanding its local operations. The Hanover Substation upgrade project signifies an upward trend in their commodity usage, providing increased electrical capacity for Tesla's engineering headquarters at the Hewlett Packard commercial campus. Other commercial customers that continue to expand their footprint include Stanford, CPI, and Google. Additionally, VMware recently completed its merger with Broadcom, leading to role consolidations and office space adjustments. This consolidation provides Broadcom with flexibility to either secure tenants for their available commercial space or pursue a sale. Potential new tenants or owners would likely necessitate retro-commissioning existing equipment and upgrading other areas to align with their operational needs.

As customers repurpose available space, some of the facilities may require retrofitting at which time we are discouraging the installation of any new gas equipment and encouraging them to participate in CIEEP which provides free consulting services. Program goals are to generate efficiency saving and electrification; however, a major corporation typically undergoes an extensive deliberation process before making a decision to transition from gas to electric equipment, encompassing multifaceted considerations such as technical feasibility, logistical implications and financial viability.

Figure 26: Energy Efficiency Program Energy Savings

Customer	Type of Project	Customer Facility Address	Project kWh Savings at Installation	Project Utility Cost Savings at Installation	Project Cost at Installation	Project Incentive at Installation
Stanford School of Medicine	LED Phase 2	1050 Arastradero	38,211	\$6,037.34	\$37,100.00	\$3,821.10
Alexandria Real Estate	LED Phase 2	3165 Porter St	54,070	\$9,408.18	\$44,673.30	\$5,407.00
Stanford Health Care	LED Lighting	801 Welch	42,457	\$7,345.00	\$44,492.00	\$4,245.70
Stanford School of Medicine	Chiller RCx	855 California	48,600	\$8,200.00	\$4,577.00	\$2,288.50
Stanford Health Care	LED Lighting	1189 Welch	178,844	\$32,191.92	\$94,959.00	\$17,884.40
Stanford Shopping Center	LED Lighting	660 Stanford Shopping Center	178,732	\$32,707.96	\$45,086.21	\$17,873.20
Stanford School of Medicine	Economizer	1050 Arastradero	51,450	\$12,317.00	\$48,944.00	\$8,495.00
Stanford School of Medicine	Chiller RCx Phase II	855 California	22,754	\$3,846.00	\$4,910.00	\$2,275.40
Lucile Packard Children's Hospital - Stanford	LED Lighting	725 Welch Rd	686,818	\$96,155.00	\$241,065.00	\$68,681.80
Stanford School of Medicine	HWV Valve	1050 Arastradero A	33,500	\$7,418.00	\$24,734.00	\$5,050.00
Crown Plaza - Cabana Hotel	HP Chiller	4290 El Camino Real	94,133	\$17,885.00	\$225,330.00	\$14,119.95

Business Energy Advisor

Since the Business Energy Advisor (BEA) program launched in June 2022, 58 site assessments have been completed. In Q3, participation increased significantly compared to months prior. Since January 2024, we increased efficiency rebates by 20% for customers who complete projects by May 31, 2024. Due to this limited time boosted incentive campaign, we completed 17 assessments between January and April 2024 which is more than what was completed in Q1 and Q2 combined. We provided one rebate last quarter for a lighting project done at an office building. We are expecting more projects to be completed next quarter including LED lighting, a refrigerator replacement, and HVAC upgrades.

Last quarter we continued to run social media ads through Meta platforms, which resulted in 1,118 clicks on our program webpage. Other marketing efforts included bill inserts, direct emails, email newsletters, call campaigns, flyers, and in-person outreach. The BEA team has consistently done in-person outreach, visiting businesses a minimum of one day per week. Next quarter we will continue our outreach efforts, mostly through in-person outreach and site visits.

In late April, staff hosted its first Commercial Energy Efficiency Webinar attracting 21 participants. The majority of customers were representing small to medium businesses but also attracted some of our key accounts, including two large property management companies. The presentations led by industry experts and engineers, discussed cutting-edge strategies for making commercial buildings more energy-efficient, particularly through HVAC and lighting advancements. After the webinar, one attendee immediately followed up and is interested in pursuing energy efficiency projects. With close to 60 RSVPs for this session and the success of this workshop, staff plans to put together other webinar opportunities for our Commercial customers. While the boosted incentives close out next quarter, we hope to continue to see a growth in interest in the BEA program. Our ultimate goal is to get even more projects completed and rebated.

6.1.2 Building Electrification

Full-Service Heat Pump Water Heater Program

CPAU launched the Full-Service Heat Pump Water Heater (HPWH) Program in March 2023, which provides an end-to-end advisory and installation service to homeowners to switch from a gas water heater to a HPWH at a discounted price. The program also offers an on-bill financing option with 0% interest to lower the upfront cost to customers. The Home Efficiency Genie team at CLEAResult has been serving as the program concierge, while Synergy is the installer that provides the project cost estimate and completes the installation. The City has also been partnering with a marketing consultant to drive program leads through creative marketing campaigns in various channels. As of April 25, 2024, the program has completed the installation of 237 HPWH units with another 23 units scheduled for installation; 74 of these projects have applied for on-bill financing. With the current pace of new signups, the City currently is on track to do around 250 installations per year, equivalent to about 25% of the water heaters replaced each year.

On April 15, 2024, City Council approved new pricing for the program after the statewide TECH Clean program came to an end. This new pricing sets the baseline installation cost for a 65 gallon heat pump water heater at \$2,300. This is the cost for a standard installation, however, most homes will require some additional work like installing a space saver breaker, penetrating an exterior wall to install electrical conduit, or installing a condensate pump. The new pricing also includes up to \$1,000 of subsidy for this type of site preparation work. A recent postcard outreach campaign to Palo Alto residents resulted in over 50 new customers signing up and we are confident that strong participation in the program will continue.

In addition to providing a prescreened contractor to install HPWHs, CPAU also offers the option for customers to choose their own contractor and apply for a HPWH rebate if the equipment meets the program criteria and has been permitted. The recent City Council approved new pricing for the Full Service HPWH Program also included an increase of the rebate from \$2,300 to a graduated rebate of 55% of total project cost up to \$3,500. So far in 2024, CPAU processed 26 HPWH rebates.

We are in the process of expanding our HPWH program to include an Emergency Water Heater Replacement Pilot to support the swift replacement of failed gas water heaters with heat pumps. An RFP concluding on March 22nd yielded a highly regarded contractor team that can meet our goal to restore hot water within 48 hours. In cases where it might take longer than 48 hours to install a heat pump water heater, the contractor will provide a loaner gas water heater as a temporary solution. Because most households wait until their water heater fails to replace it, this pilot program will launch before the end of the year to fill a major gap in our current service.

In addition, we have posted an RFP for an electrification expert to support home electrification, by providing assistance to customers constructing new homes, and potentially also supporting customers who opt to full electrify their homes. The expert will also provide assistance to HPWH Program customers that have been disqualified from the program due to challenging site constraints. In addition to expert guidance, this pilot program will create Home Electrification Plan templates that can benefit homeowners beyond the initial pilot. The pilot is slated to begin before the end of the year.

Business Electrification Technical Assistance Program (BE TAP)

The Business Electrification Technical Assistance program (BETAP) launched in August 2022, providing free electrification assessments and technical assistance to implement building electrification projects to businesses. In Q3, we saw the best participation rates since the program’s inception, completing 15 assessments. Additionally, we had our first completed project, and provided a custom rebate to a church that installed an electric water heater.

This last quarter we launched our first ever increased incentive campaign, “Spring Savings, Cash Back,” to see if it would boost interest in the program and motivate existing program participants to complete installations of electrification projects. For a limited time, the program doubled the amount of our existing prescribed and custom electrification rebates for projects completed by May 31, 2024. We utilized all outreach methods including bill inserts, direct emails to hundreds of customers, information in the small and medium business newsletter, in-person outreach, social media ads, and call campaigns.

We are still not seeing the number of completed electrification projects as we had hoped for. This is due to unexpectedly high quotes customers are receiving, permitting challenges, and insufficient rebate incentives. Even with the boosted incentives, customers are not able to spend the money it costs for the projects upfront. There is one heat pump HVAC project in the installation phase, but they are also facing challenges with the permitting process which is delaying the project for over a year since their initial assessment. Additionally, we are expecting a second heat pump HVAC project to get started in the next few months.

6.1.3 Electric Vehicle Programs

Palo Alto continues to facilitate the installation of EV charging infrastructure throughout the City to support mass EV adoption, with equitable access for multifamily and income-qualified residents, as well as workplaces, public parking lots and retail areas. Of the 11,000 multifamily households in Palo Alto, 4% currently have access to EV charging. The goal is to reach 10% of these households with EV charger installations by the end of 2024. CPAU's current programs provide technical assistance, incentives, and customer education and engagement to support electric vehicle adoption and on-site charging infrastructure, especially for residents of multifamily properties. In addition to the current program offerings as detailed below, CPAU is beginning to explore efforts to support EV fast charging mobility hubs and curbside charging stations that would benefit multifamily residents who do not have access to EV charging on-site.

EV Technical Assistance Program (EVTAP)

The Electric Vehicle Technical Assistance Program (EVTAP) was launched in 2019 with the goal of offering technical assistance to multifamily properties, nonprofits, schools, and small medium businesses to support the installation of electric vehicle charging stations.

To date, CLEAResult has prepared and presented Charging Evaluation Reports (“CER”) to a total of 95 sites. Eleven of these sites have already completed EV charging installations (4 multifamily properties, 6 nonprofits, and 1 school), and an additional 42 sites remain active. In order to support existing EVTAP customers to complete their projects, CPAU recently extended its contract with CLEAResult for an additional three years with the goal of having a total of 30 sites operational by the end of April 2027. Based on past results, CPAU estimates that at least 19 customer sites will complete projects by April 2027 – potentially leading to the installation of 150-200 more new ports.

EV Charger Rebate Program

The EV Charger Rebate Program was launched in 2017 to incentivize the installation of EV chargers at nonprofits, schools, and multifamily properties. Current incentive amounts are \$4,000 per Level 1 charging port and \$8,000 per Level 2 charging port to a maximum of \$80,000. Since the launch of this program, CPAU has facilitated the installation of 323 new EV charging ports/connectors across 12 multifamily properties and 17 non-profits (including 6 schools and 5 medical facilities). The average cost of each port has been \$10,000 and projects have averaged 18 months to complete. Staff predicts that a minimum of 30 multifamily properties will complete installations within the next three years.

California Electric Vehicle Infrastructure Project (CALeVIP)

The City of Palo Alto participated in the California Energy Commission (CEC)-run California Electric Vehicle Infrastructure Project (CALeVIP), providing \$1 million to match the \$1 million in funding from the CEC to facilitate and incentivize the installation of EV chargers at commercial sites. As of March 2024, a total of \$1.93M (out of \$2M) was reserved by 12 site owners through CALeVIP; these 12 sites, if completed as planned, will result in the installation of 138 Level 2 ports and 14 DC fast chargers in Palo Alto. Installations, however, are moving much slower than expected due to the impacts of COVID on supply chains as well as delays in permitting. Staff is working actively with the program administrator to fully reserve any available outstanding funds, and to encourage projects to move forward to completion.

EV Awareness and Outreach

CPAU’s EV education and outreach efforts are designed to raise awareness about electric modes of transportation. Utilizing the Support Services Program offered by the Northern California Power Agency (NCPA) and funding from the Low Carbon Fuel Standard (LCFS) Program, CPAU has contracted with [EVucation](https://www.evucation.com/)¹¹ and [Cool the Earth](#)¹²¹⁴ to offer over 20 EV

¹¹ EVucation <https://www.evucation.com/>

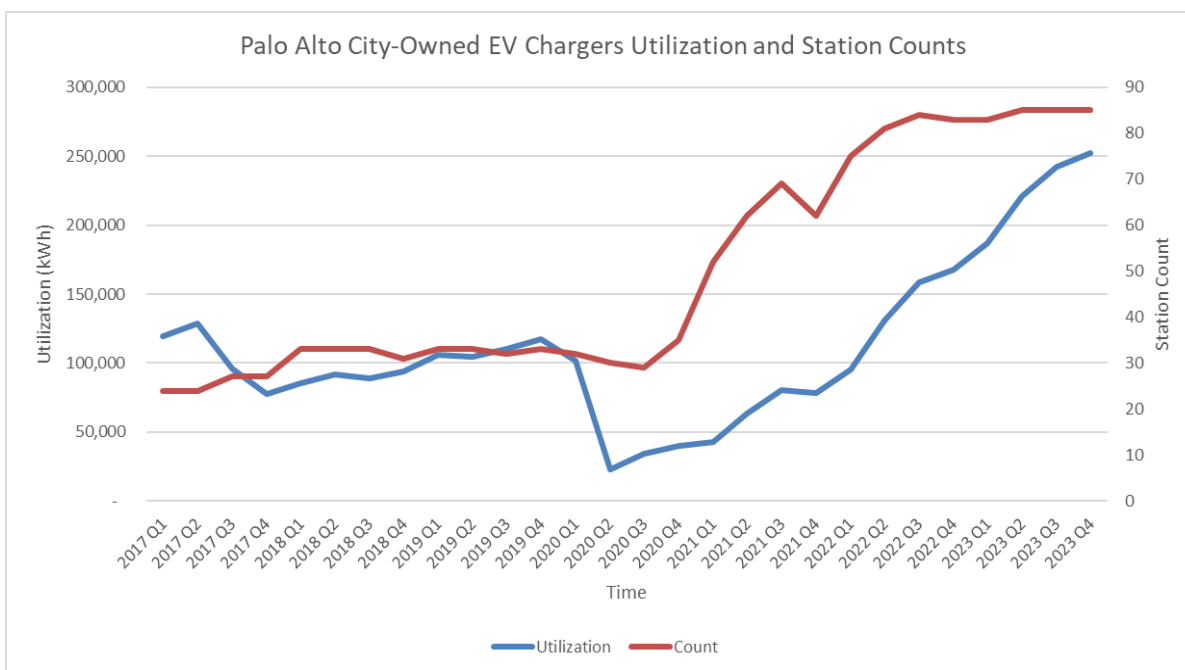
educational events in 2024 that will include a variety of in-person workshop classes, EV Expo, limited-time EV and eBike Discount Campaigns. During the first three months of 2024, three events (two webinars and one in-person workshop with an EV Expo) and one EV Discount Campaign were conducted. The webinars, workshop and EV Expo attracted approximately 150 participants and five new EVs were purchased by Palo Alto residents through the limited-time EV Discount Campaign that ran from early February through the end of March. EV Discount Campaign participants saved up to \$11,500 off MSRP on select new EVs and a plug-in hybrid electric vehicles (PHEV) manufactured by Audi, Ford, Hyundai, Kia, Volkswagen, and Volvo. A limited-time Pre-Owned EV Discount Campaign is anticipated to launch in late April and run through the end of May.

Qmerit

Qmerit is an online tool for Palo Alto homeowners to receive free online estimates from local, vetted contractors for EV charger installations. Qmerit also assists with raising customer awareness of embracing grid-friendly options, such as Level 1 and low-voltage Level 2 charging options. Utilizing NCPA’s Support Services Program and LCFS funding, CPAU is contracted with D+R International to provide reliable installers through the [Qmerit¹³](#) platform. Since January 2024, 33 project estimate requests were submitted, of which four projects were completed; there are currently two active projects in progress. CPAU anticipates an increase in program interest and participation with growing EV adoption and will increase outreach efforts of this program for interested EV owners of single-family homes.

City-Owned EV Chargers

As of the end of April 2024, there are 131 city-owned EV charging ports. Of those, 10 are dedicated to staff and City vehicles, and 121 are accessible to the public. The chart below displays the increase in utilization (blue line) of the publicly-accessible EV charging stations by quarter from 2017 through the end of 2023. While there was a dip in utilization of the EV charging stations during the beginning of the COVID epidemic, utilization has been steadily increasing each quarter since mid-2020. As more EV chargers have been added to the City (red line), utilization has increased accordingly. Note: one station may have only one port or may have dual ports.



¹² Cool the Earth <https://cooltheearth.org/>

¹³ Qmerit: <https://qmerit.com/utility/cityofpaloalto/>

Electric Service Connection Fee Incentive

Many older properties in Palo Alto, especially multifamily buildings, have limited electric capacity to accommodate EV chargers and building electrification. The Electric Service Connection Fee Incentive helps to defray the cost of utility distribution system upgrades, triggered by EV applications, by providing \$10,000 per EV charging port, up to a maximum of \$100,000. Currently staff are working with the Kingsley Park HOA to complete their EV charger installation, which involves a transformer upgrade. This will be the first site to receive an upgrade, and it is anticipated that the chargers will come online in early fall 2024. While this project has taken a few years to complete, it represents a milestone for CPAU and has created opportunities for Utilities Engineering, Underground Services, and Urban Forestry to partner together to design a joint schematic for the EV chargers and improve customer service for the applicant. CPAU estimates that an additional 12-15 sites in the current EV project pipeline will require new transformers and could benefit from the Electric Service Connection Fee Incentive.

7 Communications

This section summarizes communications highlights, updates on major campaigns and noteworthy events. Copies of ads bill inserts, and brochures are available online at cityofpaloalto.org/UTLbillinsert

Residential Electric and Water Customer Satisfaction Surveys: In fall 2023, CPAU participated as a member of the California Municipal Utilities Association (CMUA) in customer satisfaction surveys for residential electric and water utility customers. CMUA’s contractor, GreatBlue Research, completed a statewide survey of municipal and investor-owned utilities customers as a method of benchmarking trends of customer satisfaction and program awareness across the state. CPAU opted to also participate in an “oversample” survey of Palo Alto residents so we can gain greater insight into some specific areas of interest for Palo Alto residents. Staff presented the key study findings and considerations to the UAC in February 2024 and plan to share the results with City Council.

Winter Energy Costs: Natural gas market prices were extremely high last winter, the highest since the 2001 energy crisis. On September 18, 2023, City Council adopted a revised natural gas purchasing strategy for the upcoming winter months. CPAU staff are communicating to customers about these changes to the way gas prices will be reflected on utility bills, as well as offer resources to help customers with access to free home efficiency assessments, payment arrangements, and more.

Text Messaging for Enhanced Outage Communication: CPAU’s new power Outage Management System now provides mobile text messaging capabilities to provide customers with outage alerts and status updates. We encourage utility customers to log into their [MyCPAU account](#)¹⁴ or contact Customer Service directly to ensure we have the best mobile phone number(s) on file to effectively communicate in the event of an unplanned or planned utilities service disruption. Find information on outages and mobile texting at cityofpaloalto.org/outages.

Advanced Metering Infrastructure (AMI) Project: CPAU continued its deployment of Advanced Metering Infrastructure (AMI) throughout 2023 and into 2024. Meters are being installed in phases to allow the City to test and validate quality assurance for data collection and billing. Full deployment of AMI for residential customers is estimated to be complete by the end of 2024. Commercial AMI meter installations will likely begin in late 2024 or early 2025 when supply chain limitations are alleviated. CPAU is communicating directly with customers who will receive the meters to share resources and help with any questions or concerns, as well as developing a video about AMI. www.cityofpaloalto.org/ami.

Program and Event Support: CPAU communications staff provide ongoing annual, monthly, and daily support for outreach to residential and non-residential customers about programs for sustainability, energy and water efficiency, solar, electric vehicles and eBikes, beneficial electrification, events and workshops, and more. Comprehensive communication campaigns include website, utility bill inserts, email newsletters, social media, print and digital advertisements, community outreach events, media relations and public correspondence.

8 Legislative, Regulatory and Industry Activity

There are no updates to the in Legislative session activity this quarter.

¹⁴ MyCPAU Account <https://mycpau.cityofpaloalto.org/portal/>

Appendices

9 Appendix A: Energy Risk Management Program

This appendix provides a quarterly update on the City’s Energy Risk Management Program.

9.1 Overview of Hedging Programs

The City’s Utilities Department maintains a hedging program for its Electric and Gas Utilities. In the Gas Utility the program protects against short-term (intra-month) price spikes caused by weather or major incidents on the Western gas system. However, the City does not hedge its gas supply more than one month in advance, choosing instead to protect the Gas Utility’s financial position by passing gas supply costs through to customers via a charge that varies monthly based on gas market prices. As a result, the Gas Utility’s only market exposure is the amount by which gas demand deviates from forecasts within the month. This exposure is relatively small and can be managed using Gas Utility Operating Reserves. A risk assessment is performed each year as part of the Gas Utility financial planning process to ensure adequate reserves to cover all risks. The most recent Gas Utility Financial Plan¹⁵ was adopted on June 17, 2024.

The City has entered into long-term contracts for its Electric Utility to ensure that the City has carbon free electricity supplies equal to 100% of Palo Alto’s annual electric demand. However, the output from these generating sources does not match Palo Alto’s electric load. In the summer, the City has a surplus of carbon-free energy and it has a deficit in the winter. This exposes the City to market risk, and staff maintains a hedging program to protect against this risk. In addition, hydroelectric generators make up approximately half the City’s energy supply. During dry years these resources do not generate as much energy, creating an additional market exposure that must be hedged. Unlike the gas hedging program, which is operated by City staff, the electric hedging program is operated by the Northern California Power Agency (NCPA), a joint powers agency the City formed in partnership with several other California publicly owned electric utilities, with oversight by City staff.

9.2 Overview of Energy Risk Management Program

The hedging programs described above are conducted in accordance with the City’s Energy Risk Management Program, which includes a set of Program Policies adopted by the City Council, Guidelines adopted by the City’s Utilities Risk Oversight Coordinating Committee (UROCC), and Procedures approved by the Utilities Director. In addition, for the electric hedging program, NCPA maintains its own Risk Management Program. The City is able to provide policy level oversight of this program through its seat on the NCPA Risk Oversight Committee, which is held by the City’s Risk Manager.

Per the Energy Risk Management Policies, the City Council must receive quarterly reports on the City’s forward contract purchases, market exposure, credit exposure, counterparty credit ratings, transaction compliance, and other relevant data.

9.3 Forward Deals

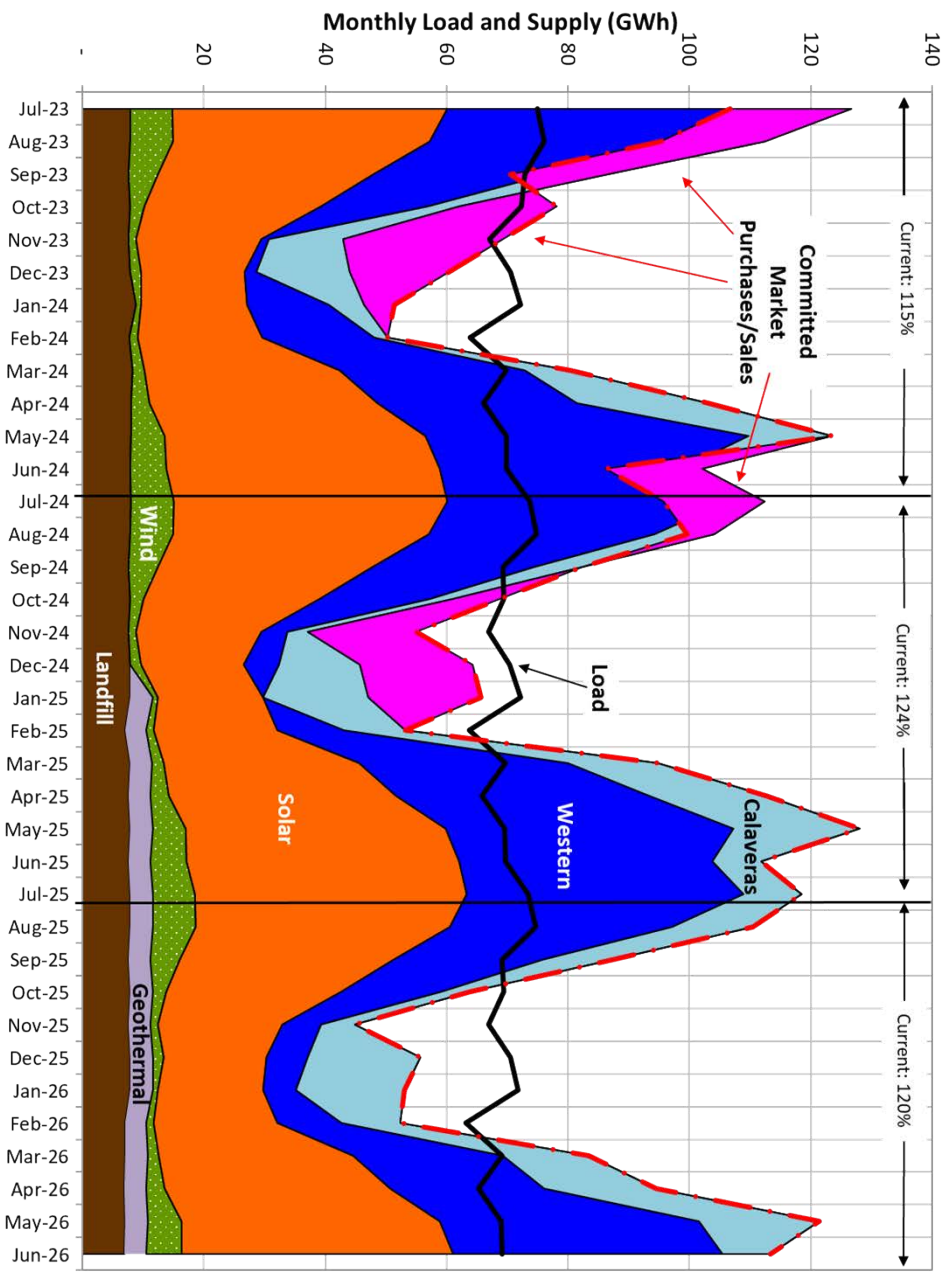
Palo Alto did not execute any of these Electric and Gas transactions in Q3 of FY 2024.

9.4 Electric Market Exposure

The chart below shows the City’s electric supply market exposure and committed purchases and sales to cover exposed positions. Additional purchases and sales will be executed for FY 2025 and FY 2026 in the coming months.

¹⁵ Gas Utility Financial Plan FY 2025: <https://www.cityofpaloalto.org/files/assets/public/v/2/agendas-minutes-reports/reports/city-manager-reports-cmrs/attachments/2024-rates/gas-financial-plan-fy25.pdf>

Figure 27: Electric Load Resource Balance, FY 2024 - 2026



Item
#{{item.number}}

9.5 Transaction Compliance

There are no transaction exceptions or violations to report.

10 Appendix B: Staffing and Vacancies

As of Q3 FY 2024, the Utilities Department has 38 vacant positions out of 259 authorized positions or a 15% vacancy rate. Below is a breakdown of the vacancies by division. Utilities has designated three HR liaisons from Utilities Administration to assist HR with some of the recruitments. With the three HR liaisons, CPAU will be able to post positions, schedule interviews, and make job offers at a faster pace. CPAU have been attending engineering career fairs at Sacramento State University, Cal Poly San Luis Obispo, and San Jose State University. Since the inception of the HR liaison program, Utilities has made steady progress in reducing the number of vacancies from 58 in Q1 2023 to 38 in Q3 2024 or a 34% decrease.

Figure 28: Utilities Vacancies and Position Movements by Division, up to Q3 FY 2024

As of March 31, 2024				
Division	Authorized FTEs	Vacant FTEs	Active Recruitments	Vacancy %
Administration	20.5	1	1	5%
Customer Service ¹	23	3	0	13%
Fiber & S/CAP ²	6	5	2	83%
Resource Management	25.5	0	0	0%
Electric Operations	69	17	12	25%
Electric Engineering	21	5	5	24%
WGW Operations	70	3	3	4%
WGW Engineering	24	4	4	17%
Total	259	38	27	15%
¹ 3 of the meter reading-related vacancies in Customer Service are frozen due to AMI				
² 4 vacant fiber positions for FTTP will be recruited in 2024				

11 Appendix C: Utilities Customer Program Descriptions

The City's Utilities Department maintains a number of programs to help customers save money, use energy and water efficiently, and reduce carbon emissions. These programs are funded through a variety of funding sources, some of which are summarized below.

11.1 Customer Programs Overview

Below is a summary of the City's energy and water efficiency programs, as well as programs to encourage building electrification and adoption of electric vehicles.

11.1.1 Energy and Water Efficiency

Residential Energy Efficiency and Water Conservation Programs

The Home Efficiency Genie program provides residents with professional advice and information to improve their home's efficiency and comfort, lower their energy and water usage and get guidance on home electrification options. Even with the Genie returning to in-home comprehensive and diagnostic assessments in the fall of 2021, the virtual option developed during COVID continues to be a service that residents are interested in. Both the in-home and virtual versions continue to help residents evaluate their homes for home electrification upgrades based on their existing electric panel and provide actionable next steps.

CPAU's Residential Energy Assistance Program (REAP) for income-qualified customers continues to reach our most vulnerable population offering energy and water efficiency improvements at no cost to the customer. Residents who are newly qualified for CPAU's Rate Assistance Program (RAP) are notified each month of their eligibility for free upgrades including building envelope improvements, lighting upgrades, replacement of gas water heater with heat pump water heater, replacement of gas furnace with air source heat pumps, and high-efficiency toilets. These upgrades are installed by CPAU's vendor Synergy.

For our multifamily (MF) property owners, CPAU continues to offer the Multi Family Plus (MF+) program which offers free energy efficiency upgrades installed by our vendor Synergy. These upgrades include lighting upgrades to LEDs and whole building envelope upgrades. Recently a new measure for high-efficiency toilets (HETs) was added.

CPAU partners with Valley Water to offer a robust portfolio of water conservation programs and [rebates¹⁶](#) for residents and businesses. On June 25, 2023, the City entered into a new cost-sharing agreement with Valley Water which includes \$1.4M over 7 years to help the City deploy Advanced Water Metering Infrastructure and home water conservation reports. The City receives program results once a year from Valley Water in October at the end of the fiscal year.

The WaterSmart customer portal, an online water management tool, launched in November 2022. Through this program, home water reports are sent to around 11,000 single-family customers on a monthly basis. A control group of around 4,000 single-family customers currently do not get the reports. As water supply conditions have improved, CPAU is focusing outreach on water conservation being a way of life and reducing water waste and continues to encourage participation in rebates and resources.

The Waterfluence program provides large commercial customers a monthly water budget that compares actual irrigation use to an ideal benchmark irrigation budget. Customers that are exceeding their suggested budget are eligible for a free landscape irrigation field survey. CPAU continues to engage Key Accounts on this resource to help them improve irrigation efficiency.

¹⁶ Rebates <https://cityofpaloalto.org/waystosave>

Bay Area SunShares Program

For the eighth year, the City of Palo Alto is an outreach partner for Bay Area SunShares, a solar and battery storage group-buy program administered by Business Council on Climate Change (BC3). Palo Alto's participation as an outreach partner helps CPAU customers receive information and discounted prices from two prescreened contractors – SolarUnion and Solar Technologies. As of January 15th 2024, the program is closed for registration. The Bay Area SunShares program will launch for the next cycle in the Fall of 2024, and CPAU will likely participate as an outreach partner for the ninth time.

Commercial & Industrial Energy Efficiency Program

The Commercial and Industrial Energy Efficiency Program (CIEEP) offers free energy audits to businesses. These audits help businesses identify areas where they can save energy, such as improving lighting, controls, occupancy sensors, refrigeration systems, HVAC systems, and other equipment. Furthermore, CIEEP's can help provide technical assistance to businesses to help them implement energy efficiency measures. This can include suggestions that help customers develop energy efficiency plans, provide information on energy-efficient technologies, and connecting businesses with contractors.

The Key Account program is increasingly focused on re-engaging major customers that have not historically partnered with the City on efficiency or electrification projects. Staff is focused on building deeper relationships with our customers. Traditionally, staff only dealt with facility managers, however we have been working to develop contacts with corporate sustainability teams (often not based in Palo Alto) and the property management companies that lease the buildings to our large customers. Staff is focused on creating action plans to address customer goals and pain points, while developing a strategic roadmap to better serve our key accounts and supporting their ESG commitment in the community.

Business Customer Rebates, formerly Commercial Advantage Program

The Business Customer Rebate (BCR) remains the primary program for customers to apply for rebates for energy efficiency and electrification projects installed at customers sites. City of Palo Alto Utilities (CPAU) offers rebates to commercial, industrial, and public sector customers to upgrade their equipment to energy-efficient products. In May 2022, BCR was expanded to offer electrification rebates to incentivize customers to retrofit gas space heating, water heating and cooking equipment with efficient electric alternatives.

Business Energy Advisor

The Business Energy Advisor program offers a free consultation and on-site assessments from CPAU's vendor, CLEAResult, who provides custom recommendations for businesses to help them lower utility costs with more efficient equipment. Rebates are provided to customers who complete recommended energy efficiency or water conservation projects. This program is available to small and medium businesses under 50,000 square feet.

11.1.2 Building Electrification

Full-Service Heat Pump Water Heater Program

This program, launched in early 2023, aims to make it easier and more affordable for residents to switch to a heat pump water heater (HPWH). The program has a goal of installing 1,000 HPWHs, by providing a prescreened contractor to install HPWH in single family homes at a cost comparable to a gas water heater installation and offering on-bill financing to lower the upfront cost. Customers also have the option to choose their own contractors and apply for a rebate if the equipment meets the program criteria and has been permitted.

Business Electrification Technical Assistance Program (BE TAP)

For commercial customers, staff partnered with CLEAResult in the launch of the Business Electrification Technical Assistance Program (BE TAP) in August 2022. This program offers free electrification assessment and technical assistance to implement building electrification projects to a variety of business types including but not limited to hotels, restaurants, churches, and office buildings. CLEAResult provides ongoing technical assistance, guiding customers through their projects to completion. The City then pays the customer electrification rebates through the Business Customer Rebates program.

11.1.3 Electric Vehicles

Palo Alto continues to facilitate the installation of EV charging infrastructure throughout the City to support mass EV adoption, with equitable access for multifamily and income-qualified residents, as well as workplaces, public parking lots and retail areas. Correspondingly, cross-departmental work is progressing on proposals for fleet electrification.

Summary of All EV Programs for Multi-family (MF) Properties and Workplaces

- **Mission:** The EV team’s mission is to facilitate the installation of EV chargers to support increased EV adoption with a priority on MF properties. To reach 80 by 30 S/CAP goals, it is imperative that there is enough charging infrastructure for residents, commuters and visitors. For residents, the priority is to close the MF EV access gap, as only 13% of EVs in Palo Alto are registered at MF buildings, while MF makes up 42% of households.
- **Goal of EV Programs:** Expand EV charging accessibility to 10% of MF households (about 1,100 homes) by 2025.
- **Why:** Most middle-income and low to moderate-income residents in Palo Alto live in MF housing. Of the 11,000 households living in MF, 23% have annual income levels which are under 400% Federal Poverty Levels. EVs provide significant lifetime household savings, and yet those who most need those savings have the hardest time gaining EV charging access due to the challenges associated with installing chargers at MF properties. Private industry is not adequately serving this market, whereas the City is well-positioned to support this hard to reach and slower to move customer segment, making meaningful use of available City funding sources for EV promotion.
- **Target Customer Segment:** MF property owners, Homeowners Associations (HOAs), nonprofits, owners of small medium businesses and buildings, as well large C&I customers.
- **What CPAU can provide:**
 - Trusted, neutral advisory services (rather than vendor sales services) with a direct connection to internal City staff to facilitate problems.
 - Technical assistance (site evaluation, including electrical capacity, business case development, project design, obtaining bids, preparing permit packages)
 - Incentives (both for charging equipment and distribution upgrades)
- **Strategy:** Facilitate development of shared Level 2 chargers in multi-family buildings as well as, as many Level 1 chargers as can be installed. Size electrical infrastructure to enable the building owner to add more EV charging ports in the future. Also, encourage the installation of low-power Level 2 chargers when appropriate as a grid-friendly strategy to increase EV charging options for as many EVs as possible.

EV Technical Assistance Program (EVTAP)

- **Goal:** Facilitate the installation of 180-360 ports @ 60-90 sites (By 2027)
- Offer technical assistance for the installation of EV chargers at Non-Profit and MF properties, involving a series of site visits, technical evaluations, engineering reviews, and design proposals, culminating in the landlord receiving contractor bids, followed by assistance submitting a building permit, applying for incentives and project management of the installation. Completed projects have taken up to 2 years to reach completion.
- Below is a diagram of the EVTAP process:

Get started with these steps:



EV Charger Rebate Program

- **Goal:** Incentivize the installation of EV chargers at Non-Profits and Multifamily properties. CPAU currently offers up to \$8,000 per port for up to 10 ports.

California Electric Vehicle Infrastructure Project (CALeVIP)

- **Goal:** Facilitate and incentivize the installation of EV chargers at commercial sites.

EV Awareness and Outreach

- **Goal:** Raise awareness, answer questions and encourage residents to consider transitioning to electrified modes of transportation, including electric cars, e-Bikes and other modes of clean transportation.

Qmerit

CPAU has partnered with Qmerit, for Palo Alto homeowners to receive free online estimates from local, vetted contractors for EV charger installations. Online estimates include permitting, inspections, and installation costs. Qmerit will assist with customer awareness of and education about embracing grid-friendly options, such as Level 1 and low-voltage Level 2 charging options.

City-Owned EV Chargers

- **Goal:** Install EV Charging Infrastructure for the public as well as City-fleet.

Transformer Upgrade Rebate Program

- **Goal:** Provide discounts to defray the cost of utility distribution system upgrades triggered by EV applications, costs that would otherwise be borne by the customers. With this program we are offering up to \$100K for MF & non-profits and up to \$10K for Single Family Homes.

Many older properties in Palo Alto, especially multifamily buildings, have limited electric capacity to accommodate EV chargers and building electrification. Yet, there is a nationwide transformer supply shortage, potentially delaying customer EV projects. In the meantime, the EV team is working closely with Engineering and is conducting a pre-screening of transformer loading for all commercial EV projects enrolled in EVTAP as well as proposing designs utilizing existing electric capacity.

11.1.4 Funding Sources for Emissions Reductions

Energy efficiency and water efficiency programs have traditionally been funded by electric, gas, and water rate revenues. To fund emissions reduction programs, the City has developed multiple alternative funding sources:

- **Low Carbon Fuel Standard (LCFS) Program:** The City participates in the California Air Resources Board (CARB) LCFS program, receiving credits for the provision of low-carbon fuels (such as clean electricity and compressed natural gas) and must use the revenues from the sale of these credits for programs and other efforts promoting low-carbon vehicle adoption.
- **Cap and Trade Program:** The City’s electric and gas utilities are required to participate in the State’s cap and trade program, but these utilities receive some of the revenue from the auction of allowances for the program. The revenue must be used for emissions-reducing activities.
- **Public Benefits Funds:** Locally owned municipal utilities must collect a surcharge from their electric utility customers under section 385 of the Public Utilities Code (there is a similar requirement for gas utilities) to be used on cost-effective energy efficiency and conservation, low-income programs, renewable energy, and research and development.

The amount of revenue currently held in reserve for each revenue source and the projections for future revenue are shown below.

Figure 29: Potential Emissions Reduction Funding Sources

Funding Source	FY 2023 Year-End	Projected Revenues		
	Reserves	FY2024	FY2025	FY2026
Low Carbon Fuel Standard	\$6,712	\$1,100	\$1,120	\$1,232
Gas Cap & Trade	6,731	3,163	3,327	\$3,612
Public Benefits	5,673	4,779	4,655	4,584
Electric REC Exchange Revenue (Electric Cap & Trade)	2,231	1,700	1,200	1,100
TOTAL	21,346	10,742	10,302	10,528

Expenditures for each revenue source are as follows:

- LCFS revenues have been used primarily to facilitate the installation of EV chargers in multi-family buildings and are expected to be used that way in the future unless the City’s priorities shift. Some has been used for general promotion of EVs.
- Cap and Trade revenues have been used to purchase renewable energy and for the Advanced Heat Pump Water Heater pilot. More use of these revenues for electrification programs is expected in the future, though no specific approvals have been sought yet.

Public Benefit funds are used for energy efficiency (including low-income programs) and building electrification.

APPROVED By:

Dean Batchelor, Director of Utilities

Staff: Tim Denterlein, Resource Planner

Item
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**FORECAST
12-MONTH ROLLING CALENDAR**

	Utilities Advisory Commission	City Council
July 2024	- Approval of UAC Budget Subcommittee Members to Serve a Short Term - Separate Utility Meter for ADUs - PAUSD/City of Palo Alto Grant Program	<i>No City Council Meeting</i>
August 2024	<i>No UAC Meeting</i>	* Long Term Gas Hedging Policy (C) * Cap-and-Trade Allowance Purchase (C) * Purchase for Generators for Water Pump Stations (C)
September 2024	- "One Margin" Reach Code Discussion - Permitting Process - Approved UAC Workplan Info Report - DER - Utilities Quarterly Report Q3	* NCPA Prepayment for Geothermal PPA (FCM)
October 2024	- Second transmission line update - Reserve Management Policy	
November 2024	-	
December 2024	- Reliability and resiliency strategic plan update	
January 2025	-	
February 2025	-	
March 2025	- Dark fiber utility rates comparison	
April 2025	-	
May 2025	-	
June 2025	-	

Reoccurring Items

- Educational Update on any Type of New Technology or Terminology
- Projects with a Resiliency Component
- Quarterly Reports (Q1-3 Info Rpts)(*Q4 Discussion Summary of the year*)
 - Financial Report
 - Utilities Programs Update
 - Informational EV Charger Installation Updates
 - Informational Bucket 1 REC Sales Updates
 - Informational Fiber Updates

To Be Scheduled

- 24/7 load following