

# Meeting Minutes

## City Council Sustainability and Technology Subcommittee Meeting

November 8, 2024 | 10:30 a.m.  
City Hall 5<sup>th</sup> Floor Large Conference Room  
175 S. Arizona Ave., Chandler, AZ



### Call to Order

The meeting was called to order at 10:30 a.m.

### Roll Call

#### Subcommittee Attendance

Councilmember Mark Stewart  
Councilmember Matt Orlando  
Councilmember Angel Encinas

#### Staff Attendance

Steven Turner  
Dawn Lang  
John Knudson  
Simone Kjolsrud  
Mike Hollingsworth  
Daniel Haskins  
Jeremy Abbott  
Alexis Apodaca  
Toni Smith  
Adam Kleisler  
Tera Scherer

### Discussion

#### 1. Turf to Xeriscape Conversion Update

JOHN KNUDSON, Public Works Director, introduced the item and presented information on the city's conversion from turf to xeriscape and our conservation of water with historic draught conditions that has caused Colorado River levels to drop extensively.

The state has offered various rebate programs and grants that many cities are taking advantage of. Chandler received a \$3 million WIFA (Water Infrastructure Finance Authority of Arizona) grant to help fund the turf to xeriscape conversion program to for unused public grassy spaces to aid in water sustainability, as outlined in the 2023-2025 Strategic Framework.

COUNCILMEMBER ORLANDO stated he has no problem with xeriscaping but is concerned about the upkeep and maintenance associated with conversions. He referenced Elliot, Alma School, and Dobson roads and the xeriscaping done some years back, stating that no upkeep has been performed. He asked if there is an ongoing maintenance plan and strategy for annual or 18-month refresh of plants and trees.

MR. KNUDSON stated it is a separate capital improvement fund for what is referred to as “reveg” (revegetation) of areas affected by weather and storm damage and agreed that they may need to investigate bolstering the maintenance and replacement program associated with the xeriscaping. Mr. Knudson further stated they recently replaced a lot of the vegetation along Chandler Boulevard in the medians as well as a few other areas throughout the city.

COUNCILMEMBER ORLANDO requested that the reveg strategy be reviewed and discussed at a later date.

SIMONE KJOLSRUD, Water Resources Manager, began the presentation and noted they will be speaking specifically about some of the city’s public spaces with a goal of saving water. Watering grass is much more water-intensive than xeriscaping such as retention basins, that average between three and six million gallons of water for irrigation each year, which is roughly equivalent to the annual water use for 30-60 homes. Retention basins are considered non-functional grass as they are not used for recreation purposes, with most of the basins located along major streets.

COUNCILMEMBER STEWART asked for clarification on the amount of water being used for each site, or the whole city.

MS. KJOLSRUD responded that each site uses between 3- and 6-million gallons per year and further stated that in the winter months they do not overseed any of the sites due to the excess watering requirements.

COUNCILMEMBER STEWART asked if those sites are watered in the winter months.

MS. KJOLSRUD responded that the sites are still watered in the winter, but the frequency is reduced.

COUNCILMEMBER STEWART asked how much water the plants would use.

MS. KJOLSRUD responded that the presentation includes water savings estimates for each site, but projections show usage will be approximately 20-25 percent of current usage.

COUNCILMEMBER ORLANDO inquired about other ground cover available other than rocks, as he stated the heat dissipates from the rocks and wonders if it is far too hot for the foliage, which goes back to his original concern about the maintenance and upkeep of dying plants.

MS. KJOLSRUD replied that there are other types of ground cover, and we can also work with the landscape design company for recommendations for other possibilities for ground cover. She further stated that one

of the design principles that is commonly employed with the xeriscape design is to implement a mix of trees and shrubs for the purpose of providing a canopy for shade. The goal is to have enough canopy from both trees and shrubs that it is helping to provide enough shade coverage to alleviate the excess heat. Additionally, choosing plants that are hardy and sturdy, as well as drought-tolerant trees and shrubs that can handle summer heat.

COUNCILMEMBER ORLANDO would like staff to investigate the reduction of trimming and cutting of the plants, as that is a water reduction strategy as well and inquired if the vegetation selected can last a couple of years between trimmings. He then inquired about the percentage of shade coverage on the xeriscape plans being presented.

MR. KNUDSON stated there is a goal of shade coverage of 30-50 percent of each site.

MS. KJOLSRUD agreed and continued the presentation, stating that normally, the goal would always be 50 percent of an area have shade, but noted it differs a little bit depending on whether you're looking at shade coverage from shrubs versus trees. Ms. Kjolsrud then showed the proposed plan and noted the large number of trees included in the designs. She further stated that is an investment in water savings, with intense pressure from not just the state of Arizona, but from the entire Colorado River Basin to invest in water savings. Many municipalities in Arizona are in negotiations on Colorado River shortages, with the desire to see visible, meaningful changes happening within each municipality. Many Phoenix area cities are working on finding the right projects using grant funding for the benefit of water savings. Ms. Kjolsrud noted the goal of this project is not to take grass away from actively used recreational spaces, but rather to locate spaces where there will be meaningful water savings without impacting recreational opportunities and quality of life.

MS. KJOLSRUD stated the state of Arizona has dictated that some of the ARPA funding will be used for water conservation projects, with a specific amount of money set aside through the Water Infrastructure Finance Authority (WIFA) to incentivize municipalities to do some of these larger grass removal projects that would normally not be possible due to the expense. The WIFA grant funding was approved by Council in September of 2023, and included a list of different projects, but Ms. Kjolsrud wanted to state for the record, that today's meeting is solely to discuss the \$3 million grant for Turf to Xeroscape Conversions on publicly owned property. The terms of that grant require a 25 percent match from the city for funding, and with a total amount spent for the projects will be \$4 million. The terms of the accepted grant state the city will have to spend five percent of the funds by December 2, 2024, and we will meet that required grant milestone with the completion of the design process. The next required milestone will be to spend \$2 million by the end of 2025, so we will need to begin construction on the sites identified in Phase 1 of the project, with a project completion requirement of summer of 2026.

COUNCILMEMBER ORLANDO asked if there are any other grants available.

MS. KJOLSRUD stated that other WIFA funding has gone towards other projects, as they are all earmarked for specific usage. The \$250 million that went to the Water Conservation Grant Fund has been appropriated and none but not used wholly.

MS. KJOLSRUD continued the presentation with an overview of expected water savings per year based off historical use, to be around \$84,000 per year in utility savings, at about 27 million gallons per year, which is a substantial amount of water savings. The maintenance costs are not going to decrease, however, but the goal is to try to keep maintenance costs flat if possible. She pointed out that it is a different maintenance program to maintain xeriscape versus grass and further stated the current landscape contract is for five years, and there would be an option to adjust those costs as needed for the xeriscape.

COUNCILMEMBER ORLANDO requested staff review the statement of work on the maintenance contract to ensure that the xeriscape plants and trees are maintained in much better condition.

MR. KNUDSON stated that once each area is converted, we would then review the agreements. If it is mid-year, or mid-contract, the vendor would review the area in question and rebid that area. Mr. Knudson explained each area is bid individually and pricing is based on the condition of the area at the time of the bid process.

COUNCILMEMBER ORLANDO asked if they do plant replacement.

MR. KNUDSON stated he does not believe they are contracted for replacement, only maintenance. The re-vegetation is what will need to be reviewed.

MS. KJOLSRUD explained how the sites for phase one of this project were selected, based on an in-depth analysis on what the water use history has been in the past, what surrounds each site, and how to get the most out of the investment. Conversion of all 15 sites would not be possible through WIFA funding based on timing requirements, so it has been determined that eight sites will be prioritized based on size, and the amount of grass, with sloped areas that require excessive watering being targeted. The remaining areas will be included as phase two of the project. The prioritized sites and initial design options for 100 percent grass removal, 100 percent conversion to xeriscape design is what were presented at the public meetings that were held.

DANIEL HASKINS, Capital Projects Manager, explained the process for the public meetings. Conceptual designs for each site were completed with informational postcards being mailed to 3,500 residents that live near each of the retention basins to seek feedback. The area was broader than just direct neighbors of each of the sites, with whole neighborhoods included in the mailings. Two separate public meetings were held in which residents in attendance could speak with the designer and city staff to talk through the conceptual plans on display. In addition to the notification postcards that were sent out, a website has been created to track the project status, and a survey was also sent out. All information on responses received were compiled.

MR. HASKINS began presenting the conceptual designs for each of the sites (*refer to presentation*), stating that most of the sites are along busy streets. The sites are not being overseeded in the wintertime, and therefore do not get extra water. Additionally, he pointed out that many existing and established trees will be kept as possible, indicated in the conceptual designs as having a plus (+) sign on top.

COUNCILMEMBER ORLANDO stated again his concern for how quickly areas deteriorated that had been xeriscaped, after only three or four years, with many of the areas entryways into communities.

MR. KNUDSON agreed that his concerns are valid and that the loss of shrubs and trees will need to be addressed.

MR. HASKINS continued the presentation of each site, highlighting the utility savings for each area.

MR. HASKINS stated staff would like to move forward with the phase one sites presented today, since there was not much negative feedback received from residents. Furthermore, staff will be contacting residents that did leave feedback to discuss the project further, with the website being updated with all conceptual designs.

MR. KNUDSON led the subcommittee on a brief discussion of the areas presented thus far, reiterating that no negative feedback was received from the community, as those areas are not used for recreation purposes.

MR. HASKINS continued the presentation with the areas that received mixed feedback from residents, stating that more in-dept conversation may need to be held. Site 416B feedback was to keep the area as is, as it is used by residents as walking paths. Mr. Haskins stated the area will remain available for that use; with more shade provided as part of the plan.

COUNCILMEMBER ORLANDO asked whether these sites were inside an HOA area but owned by the city.

MR. KNUDSON replied these are odd areas, as they are within an HOA or adjacent to HOA owned areas but are city owned.

MR. HASKINS continued the presentation and discussion was held regarding area 419 and the strange slopes that exist.

MR. KNUDSON explained that the reason for the large hill is due to a sewer line extending from Intel into the greenspace within the Twelve Oaks neighborhood. The mound of soil was placed there to protect the sewer line from damage.

COUNCILMEMBER STEWART asked if the tree roots would have an impact on the sewer line.

MR. KNUDSON stated that the trees would be planted far enough away they would not impact the sewer line.

COUNCILMEMBER STEWART asked for verification on whether the community uses that area for recreation purposes.

MR. HASKINS responded that they have a couple of recommendations for area 419 to keep green space in the flat areas of this site and staff is recommending option C.

COUNCILMEMBER ENCINAS asked why Option B is not being recommended.

MS. KJOLSRUD responded that option B does not have a lot of water savings, and part of our commitment for the funding qualification is to omit 200 acres of grass to achieve the water savings, and option B just does not get us to that point. Although there is not a commitment outlined specifically in the grant contract, the further away we get from our initial commitment, we do run the risk of the grant parameters being modified and receiving less funding. This city-owned retention basin uses a significant amount of water and it is more than any other.

Discussion among the group was held surrounding the options for this site and subcommittee members have requested the grassy area be extended to Butler Drive.

MS. KJOLSRUD stated she would take that option to the designer.

COUNCILMEMBER STEWART stated that this area seems like a great opportunity to install a park with play equipment and a couple pavilions and asked where the nearest park was located and whether this area would be an area to consider for future use.

MR. KNUDSON responded that it could certainly be an option to consider for a future project, but extensive work would need to be completed to add sidewalks, lighting, ADA compliant features, etcetera and it would be a completely different project at that point.

MS. KJOLSRUD added that the topography is strange, and a project of that nature would be tricky, plus we must be mindful that it is still a retention basin and adding too much will take away from the purpose of the land.

MR. HASKINS resumed the presentation, reiterating that staff will contact residents again to notify them of the project.

COUNCILMEMBER ENCINAS asked if there will be additional public meetings with the decided site plans, or if staff will be reaching out to the residents that had specific feedback or questions.

MS. KJOLSRUD stated they will do individual outreach and reminded everyone that there are timelines that must be followed to reach our required benchmarks for grant qualifications.

MR. KNUDSON reiterated staff will reach out to discuss the intentions with residents as well as posting the conceptual plans to the website: <https://www.chandleraz.gov/residents/city-improvements/projects/turf-to-xeriscape>.

COUNCILMEMBER ENCINAS asked about feedback for area 418B near Chandler Mall.

MS. KJOLSRUD stated the feedback was for more related to shade because the sidewalk gets too hot, as well as incorporating grass intermittently. One person complained that was trash accumulating in the basin. None of the feedback received was specific to the xeriscape conversion project.

COUNCILMEMBER ENCINAS asked if there was feedback asking for design elements such as walking trails.

MS. KJOLSRUD reiterated that we do not want to give the perception of these conversions being for “parks,” but for the conversion of retention basins. She said even the Twelve Oaks area that looks like a great place for a park—it still needs to hold its primary purpose of being a stormwater retention basin.

COUNCILMEMBER ORLANDO asked if staff's recommendation is to remove all the grass from area 416B, stating that it looks like a lot of comments were received about not removing grass.

MS. KJOLSRUD verified comments were received about retaining some grass on that site.

COUNCILMEMBER ORLANDO asked if that was going to happen.

MR. HASKINS stated that option A was chosen due to the HOAs on either side already converting either area to xeriscape, as well as the majority of feedback received relating to shade for walking and riding trails along that site.

COUNCILMEMBER ORLANDO requested staff reconnect with residents to communicate the plans for the project.

COUNCILMEMBER STEWART asked if there was any way to divest any of the land to the HOAs so they can maintain the area, expressing interest in deeding the land over.

MR. KNUDSON stated that has not been discussed.

Further discussion was held among the group about whether these sites were all adjacent to HOAs and the HOAs having more area to maintain.

COUNCILMEMBER STEWART requested staff research the option of turning the land over to the HOAs to see if it would be an option to defray ongoing operations and maintenance of these sites.

COUNCILMEMBER ORLANDO requested staff go back to residents to get opinions on area 416B and the other options that would provide a little grass for residents. He further stated we could always pick another site to get the water savings needed.

MS. KJOLSRUD reminded councilmembers that they will not have time to go back to do more public meetings and have design plans completed for other sites with the timeline involved for the grant funding.

COUNCILMEMBER ORLANDO asked if we had plans to apply for any more grants.

MS. KJOLSRUD responded that currently there are not any water conservation grants available for public use property.

COUNCILMEMBER ORLANDO asked if there were any other properties in Chandler that could be used.

MS. KJOLSRUD responded that there is a phase two with other sites, but those sites would not make the grant benchmarks for this phase in time to receive grant funding, as it takes too long to go through the public meeting and design processes.

MR. KNUDSON stated on area 416B, staff would engage with residents on their comments relating to grass. He then referenced the Site Conversion Totals slide with substantial costs in these conversions, versus the return on investment. He reminded the group this project is about water savings, with our water bill savings estimated at \$83,000 per year. It is unknown at this time about maintenance costs but stated staff will do their best to keep costs flat, but that will be up to our negotiations with contractors. He reminded the group that today's meeting is to discuss the volume of water savings.

MR. HASKINS reviewed recommendations from the subcommittee:

- Notify residents of plans to move forward with projects
- Add design recommendations to the website
- Moving forward with sites 107, 108, 119, 416A, and 418A, and 418B as recommended
- Area 416B request further feedback on options available from area residents
- Area 419 to extend grass to Butler Avenue and will require a new design

MS. KJOLSRUD added she will request the designer complete conceptual designs on discussed options to extend grass to Butler Avenue.

COUNCILMEMBER ENCINAS questioned if the project is focusing on the northwest area of Chandler due to it being a more established area of the city.



MR. KNUDSON responded that the areas they are focusing on are because they are not in HOAs.

COUNCILMEMBER ENCINAS inquired about comments received on Site 119.

MS. KJOLSRUD stated that someone responded they were concerned about what would happen to the existing trees, another question was relating to how xeriscape affects the ambient temperature, and whether xeriscape would amplify street noise. Another comment was received stating they have lived in the area 30 years and have only seen the space used a handful of times. Ms. Kjolsrud stated the comments received were not significant in relation to the project.

COUNCILMEMBER ENCINAS verified staff will reach out to residents regarding 418B.

All of staff agreed they would make contact.

COUNCILMEMBER STEWART asked if any studies were being conducted regarding the heat island effect and whether temperature will be measured after the project is completed. He understands the goal is to save water, but we do not want to have this heat island effect continue to grow.

MS. KJOLSRUD responded that the goal of adding so many trees is to mitigate any heat island effect. She further stated that what you will see is that the number one thing that's going to impact how hot those spaces get is tree canopy, whether it's grass or DG groundcover. Either way, the number of trees that you have to shade whatever is underneath them is going to be the most impactful variable in heat island effect. She further stated that ASU has done a ton of studies on the heat island effect, and it is why there is a whole program that's been going on for years now that shows the impact of planting trees to mitigate heat island effect.

COUNCILMEMBER STEWART asked for that information and Ms. Kjolsrud agreed to send it to him to read.

COUNCILMEMBER STEWART verified artificial turf is not being installed with this project.

MS. KJOLSRUD stated that that is the number one enemy of heat island effect as it gets twice as hot as rocks. We generally do not use a lot of turf as it is not recreation friendly for people or pets due to the temperature and the amount of water needed to cool off the material.

COUNCILMEMBER STEWART asked if we are taking turf out completely from the xeriscape program.

MS. KJOLSRUD responded that in September 2023 council approved a policy which limits the amount of turf that can be used in any conversion area to be limited to 50 percent or less of the area.

COUNCILMEMBERS STEWART AND ORLANDO asked that this item be brought to council to discuss the possibility of changing that to zero allowance, given that artificial turf is not environmentally friendly.

MR. HOLLINGSWORTH began part two of the Sustainability Technology Subcommittee presentation on the electric feasibility study, stating that the strategic goal is taking calculated risks to explore new technologies

and innovative pilot programs to promote efficiency, productivity, sustainability, and connectivity while demonstrating return on investment. The ELT (executive leadership team) action plan item to continue the replacement of aging city vehicles with electric and hybrid alternatives that generate return on investment. Currently, there is not any language in the city's vehicle replacement policy that addresses alternative vehicles and/or sustainability, although administrative regulations updates are in progress within his department now. Mr. Hollingsworth further stated they currently consider hybrid and EV options on a case-by-case basis, depending on usage and a multitude of other factors.

MR. HOLLINGSWORTH provided the current statistics of the city's fleet, with four percent of our vehicles being hybrid or electric models with a total of eight electric and 28 hybrids. In 2025, there will be 11 more hybrids added to our fleet. Additionally, the city has 18 public car charging ports and 11 fleet designated ports.

MR. HOLLINGSWORTH stated the analysis that was completed based on vehicle types (*slide 4 of presentation*) comparing hybrid, EV (electric vehicle) and ICE (internal combustion engine) vehicles. He explained that for his analysis he chose to use comparable vehicles. The city has some Ford Mavericks, and they make both a hybrid and an ICE version, and then the Chevrolet Bolt, as they fall into the same usage categories based on baseline data of 5,000 miles per year, as we already know what their miles per gallon or miles per kilowatt hour are on those respective models and was able to calculate the comparisons.

COUNCILMEMBER ORLANDO asked for clarification on comparing miles per hour to the EV vehicles.

MR. HOLLINGSWORTH responded that it was calculated per kilowatt hour.

COUNCILMEMBER ORLANDO (referring to his phone) stated he was looking online at their conversion tables and is trying to figure out how we equate the Bolt to miles per gallon.

MR. HOLLINGSWORTH advised the kilowatt per year based on 5,000 miles per year, which equates to 1,315 kilowatt hours per year at \$.14 per kilowatt hour and the cost per gallon which varies widely throughout the year. When calculated at a cost per year is where you it starts to level off and realize what the actual savings are.

COUNCILMEMBER ORLANDO asked how much it costs to license an average vehicle in our state.

MR. HOLLINGSWORTH responded he is not sure of that cost but knows we do get a different rate from what the private sector or citizen pays.

COUNCILMEMBER ORLANDO stated that the cost to register an EV is \$25 per year.

MR. HOLLINGSWORTH continued the presentation with the police vehicle comparisons, noting that we do not track idle hours, so there is a factor that is not being considered. The Ford Lightning does realize an annual fuel savings, but that vehicle is no longer being manufactured.

MR. HOLLINGSWORTH continued the presentation with residual values and how that pertains to the city, as we usually keep a vehicle in service for up to nine years, then we sell them and want to maximize the revenue we receive on the sales of our fleet vehicles, reminding the group that this data is subjective as market trends vary year to year as well as location.

MR. HOLLINGSWORTH closed his portion of the presentation by stating that based on a few of our electricity costs, hybrid represents an economic single alternative to both EV and ICE vehicles, all things being equal. Auto manufacturers' EV strategy is changing due to evolving technology. For example, increase in battery life and then also advances in hybrid, plus, new is the increased interest in hydrogen power as well. Shifting regulatory landscapes and changing consumer preferences are also things to be considered.

STEVEN TURNER, Sustainability and Performance Officer, continued the presentation by stating one of the struggles being realized by municipalities is the availability of electric vehicles, as all major producers are slowing the production in pursuit of hydrogen powered.

MR. TURNER continued the presentation, discussing CO2 impacts over the life of a vehicle, as well as the production of a lithium battery. Considering the production of a vehicle as part of its lifecycle, an ICE produces about six tons of CO2 by the time it hits the showroom, and an EV is about 12 tons. You would have to drive an EV 80,000 to 90,000 miles before it would produce less CO2 than a conventional vehicle (over its lifetime). These figures are based on the 125-mile range for an EV and a 400-mile range for a conventional vehicle. When comparing them side by side with an electric battery with a 400-mile range, that CO2 impact is significantly higher, with every one-ton of lithium mined emitting 15 tons of CO2 into the air. That said, you would have to drive an EV greater than the average lifespan of a vehicle for it to produce less CO2 than an ICE vehicle. Hybrids are recommended to bring more flexibility and efficiency than a conventional vehicle. These vehicles have a smaller battery than an EV, making the carbon impact much less significant. After the life of the vehicle, the hybrid and the electric ranges would intersect at 450,000 miles, meaning you must drive the electric vehicle 450,000 miles for it to have produced less CO2 into the air than a hybrid vehicle.

MR. TURNER stated that the strategic goal by city council, of taking calculated risks to explore new technologies and innovative pilot programs that promote efficiency, productivity, sustainability, and connectivity while demonstrating return on investments. As part of our ELT action plan, we said we were going to complete the city's fleet electric vehicle charging study and define the municipal role for placement of charging stations in the community.

COUNCILMEMBER STEWART asked that from a return on investment, from the ability to get range, the convenience of a hybrid, if that is the direction being suggested and recommended from the analysis completed and presented today.

MR. HOLLINGSWORTH responded that their recommendation is to treat vehicle replacements on a case-by-case basis and decide based on usage and need, as several departments have unique requirements. He further stated he is not discounting EV, but according to the data presented, the hybrid is the better option.

COUNCILMEMBER ORLANDO brought up Amazon, and Walmart, as well as school busses and solid waste trucks, and thinks those smart corporations going completely EV to save money and questioned what we may be missing for them to make that business decision.

MR. HOLLINGSWORTH responded that Amazon does not make their money on deliveries, but on data mining. He further stated that those corporations' business philosophies and decisions are based on sustainability and social responsibility, but those decisions often do not make smart business sense for others.

Further discussion was held surrounding other companies and reasoning for moving to an EV fleet.

COUNCILMEMBER ORLANDO asked how many miles are being put on public safety or public works vehicles daily.

MR. KNUDSON responded that in his area (public works) the fleet cars do not all accrue heavy mileage, but rather the condition of the vehicles that is the basis for the decision to replace any given vehicle. As an example, streets and other areas likely see 40-50 miles each day, as supervisors are visiting various sites to perform status checks throughout the day.

MR. HOLLINGSWORTH agreed that it varies and that our police department vehicles are accruing approximately 14,500 annually.

COUNCILMEMBER ORLANDO stated we need to keep PD separate, as he agrees, we cannot allow for a battery to die if an officer is in a car chase. Regarding infrastructure, he knows ours is there and then Mesa and Gilbert are working on federal grants to allow for plug-ins for their own fleet, but he states for around-the-town driving when you are only putting on 35-50 miles a day it would be more economical to plug in overnight when you're only paying \$.09/kilowatt and asks why we would not consider that.

MR. HOLLINGSWORTH stated we are paying more per kilowatt hour than \$.09.

COUNCILMEMBER ORLANDO asked if we are APS or SRP.

MR. HOLLINGSWORTH responded that we have both APS and SRP and that the key is utilization; the more miles per year the more advantageous to use EV, the less miles per year, the less advantageous to use EV and reiterated that it truly is a numbers game.

COUNCILMEMBER ORLANDO asked if his recommendation was to go with hybrids.

MR. HOLLINGSWORTH responded that it is their recommendation to treat it on a one-by-one basis and if EV makes sense, then absolutely.

Discussion was held around the capability with EV and usage outside the city for longer distances with the consensus in agreement that vehicles should be considered on a case-by-case basis and what makes sense for how the vehicle is planned to be used.

MR. TURNER continued the presentation and discussed the grant received from SRP to conduct a fleet electrification plan and the parameters around acceptance of that grant, which made the grant very cost prohibitive due to the cost of converting heavy duty vehicles over to EV. The study did not include hybrid vehicles, purely EV.

COUNCILMEMBER ENCINAS asked if there is a certain number of vehicles required for the grant.

MR. TURNER stated that they reviewed Chandler's entire fleet.

MR. HOLLINGSWORTH used the parks, aquatics and facilities fleet on Ryan Road as an example, stating that if we converted the majority of the fleet there to EV, there is not enough utility at the facility to satisfy the grant requirement and it would be very costly to update the utility service for that building to have the necessary charging capability.

MR. TURNER continued the presentation and discussed car charging stations, pointing out that the 2023 Maricopa Association of Governments (MAG) Electrification Readiness Strategic Plan found an excess of charging stations around the valley based on the current demand. Additionally, in speaking with area municipalities regarding their use of grant funding for charging stations, he learned they are not using the funding for their own fleet, but rather to encourage public use of electric vehicles and remove barriers from owning an EV.

COUNCILMEMBER ORLANDO stated that the older charge stations are slower and inquired about what the city has available.

MR. TURNER responded that all of ours are level two and continued providing details on the public car charging stations from the presentation.

COUNCILMEMBER STEWART asked if we are subsidizing the chargers.

MR. TURNER responded that we are not and that on average, cars are parked for about three hours, with about 110 cars using the charging stations.

Discussion among the members was held surrounding the possibility of subsidization and time limits being added to chargers, as well as usage parameters, with no definitive requests or decisions being made.

MR. TURNER continued the presentation, stating that council did not implement zoning stipulations for new developments to include charging stations. He further stated that the capacity at our public charging stations downtown have not been reached. We added that we are finding that repairs have been difficult, with providers being non-responsive and parts often on backorder.

Discussion among the group was held regarding solid state batteries and new technologies being introduced, which could change the EV market. Further discussion was held about a new battery manufacturing facility in the east valley.

MR. HOLLINGSWORTH continued the presentation with the Recommended Policy slide.

COUNCILMEMBER ORLANDO asked if we get a percentage of the proceeds from our private vendor charging stations.

MR. TURNER responded that we do, and it is minimal; about \$80 every few months.

COUNCILMEMBER ORLANDO asked if the companies installing charging stations are also installing the infrastructure.

MR. TURNER responded in the affirmative.

MR. HOLLINGSWORTH added that the city-owned charging stations are not generating revenue, with the two awaiting installation in the new city hall parking lot being the first ones to potentially be pay-to-charge stations, as they will be owned by the city. He further stated that he has received guidance from the vendors that the typical charge for the stations is two times the utility rate we would be charged to offer the service.

COUNCILMEMBER ENCINAS inquired about the purchasing policy and asked if there is a ratio that should be considered as part of the policy to show we are trying to prioritize EV and hybrids within our fleet.

MR. HOLLINGSWORTH responded that when completing the TCO (total cost of ownership) analysis, it becomes very apparent which type of vehicle is the best option. He further stated that our motor pool vehicles are the best candidates for EV and hybrids, as the older vehicles age out.

COUNCILMEMBER ORLANDO asked if we have investigated purchasing any plug-in hybrids.

MR. HOLLINGSWORTH responded that due to low inventory for fleet purchases, he has not and that the pure hybrid models are more readily available.

MS. LANG led councilmembers on a discussion of the recommended policy and whether they agree with what was presented today.

COUNCILMEMMBER STEWART suggested removing the word "require" from the last bullet, as it insinuates that it has been added to code as a requirement for new developments and redevelopments and suggests changing that word to "encourage," or "recommend."

Discussion was held surrounding the recommended policy.

COUNCILMEMBER ORLANDO stated that he is not ready to move forward on recommendations and would like to do more research and information gathering prior to it being presented to council.

COUNCILMEMBER STEWART asked if that mean a decision will not be made today.

COUNCILMEMBER ORLANDO stated that he would like time to compile his notes and ask more questions of staff before offering further thoughts.

COUNCILMEMBER STEWART suggested the council subcommittee members meet virtually with staff to further discuss.

Further discussion was held among the group, with no further agreements made.

COUNCILMEMBER ENCINAS stated agreement with the first three bullets, as they state they are reviewed annually, which is important with advances to technology, but he would also like more clarification on the last bullet.

COUNCILMEMBER STEWART stated they are all in agreement with the first few bullets, but the group will plan a follow-up call with further clarification needed on the last bullet presented.

All members agreed with Councilmember Stewart and the meeting was adjourned.

## **Adjourn**

The meeting was adjourned at 12:24 p.m.

  
Recording Secretary