



City of Goodyear

See meeting location
below

Meeting Minutes

Water Conservation Committee

Tuesday, April 18, 2017

6:00 PM

Goodyear City Hall
190 N. Litchfield Rd.
Goodyear, AZ 85338

1. CALL TO ORDER

Chairman Columbia called the meeting to order at 6:00 p.m.

2. ROLL CALL

Present: 9 - Chairman Columbia, Vice Chairman Barber, Committee Member Booth, Committee Member Faiello, Committee Member Gilmore, Committee Member Kaino, Committee Member Minarik, Committee Member Moll and Committee Member Teiche

Excused: 2 - Committee Member Kagan and Committee Member Smith

MOTION BY Committee Member Faiello, SECONDED BY Committee Member Teiche, to EXCUSE Committee Members Kagan and Smith from the meeting. The motion carried by the following vote:

Ayes: 9 - Chairman Columbia, Vice Chairman Barber, Committee Member Booth, Committee Member Faiello, Committee Member Gilmore, Committee Member Kaino, Committee Member Minarik, Committee Member Moll and Committee Member Teiche

Excused: 2 - Committee Member Kagan and Committee Member Smith

Staff Present: Water Resources Manager Mark Holmes, Water Demand Advisor Ray Diaz, Water Resources Planning Advisor Gretchen Erwin

Others Present: Facilitator Teresa Makinen and her assistant Rebecca Schulte

3. APPROVE MINUTES

- 3.1 [MINUTES](#) [29-2017](#) Approve draft minutes of the Water Conservation Committee meeting held on March 21, 2017.

Committee Member Minarik said on page three, before paragraph four, the following should be inserted: "Committee Member Minarik suggested that the Committee develop a problem statement to summarize the situation as it pertains to future water. With a problem statement in hand, the Committee will have an established basis for discussion and recommendations. After discussion and general agreement for such a statement, Committee Member Minarik agreed to

draft a proposed “problem statement” for the next meeting.”

Committee Member Minarik further proposed a revision to page three, the final paragraph, to read: “After discussing water use and conservation strategy, it was agreed that examining water use by single family homes would be the first priority of the Committee.”

Committee Member Gilmore then stated that on page four, section 6.1, paragraph three, first sentence, CC&Rs are controlled by the developer, not the city, and the statement should be reworded. Committee Member Moll noted that it was his question at the meeting, and the statement should reflect a question. Moll asked to change the statement to a question and replace “said that with” to “asked whether”.

Committee Vice-Chairman Jennifer Barber said that the previous corrections were not updated regarding where Committee Member Kagan said on page three, paragraph six: “Cantamia” was misspelled and Committee Member Barber said that on page four, paragraph three: “WestStar” should be one word. Facilitator Teresa Makinen said that this area records the changes requested and the corrections are reflected in the revised minutes.

MOTION BY Committee Member Gilmore, SECONDED BY Committee Member Moll, to APPROVE draft minutes of the Water Conservation Committee meeting held on March 21, 2017 with noted changes. The motion carried by the following vote:

Ayes: 9 - Chairman Columbia, Vice Chairman Barber, Committee Member Booth, Committee Member Faiello, Committee Member Gilmore, Committee Member Kaino, Committee Member Minarik, Committee Member Moll and Committee Member Teiche

Excused: 2 - Committee Member Kagan and Committee Member Smith

4. CITIZENS COMMENTS/ APPEARANCES FROM THE FLOOR

None.

5. OLD BUSINESS

5.1 Meeting Schedule and Administration

None.

6. NEW BUSINESS

6.1 Presentations

6.1.1 ASU School of Sustainability Presentation on Technology and Education

Water Resources Manager Holmes introduced the Arizona State University (ASU) School of Sustainability Presentation on Technology and Education, “Smart Sprinklers Save the City of

Goodyear”, created by Warren Rivera (Senior, Interdisciplinary Studies), Hannah Luke (Senior, Earth and Environmental Studies) and Brienna Leonard (Senior, Earth and Environmental Studies).

The following represents the question and answer segment of the technology presentation. Committee Chairman Columbia asked who was using the Rachio Smart Sprinkler Controller. Presenter Warren Rivera responded that the Cities of Scottsdale and Chandler both offer resident rebates, with an average of 50% off the product costs, with no extended user fees.

Committee Chairman Columbia asked if this ties to a watering system. Rivera responded that it replaces the existing sprinkler controlled system. Committee Vice-Chairman Barber asked if this is the only company that does rebates, do they have any competition, and if the company would be willing to collaborate with the city. For example, maybe the city could have a neighborhood meeting to discuss with residents? Rivera responded yes, that there are 15 to 20 other types of systems but this is the highest reviewed, mostly widely implemented system with the most experience on the municipal level. For the pilot programs, it is recommended that it include resident education. Committee Chairman Columbia asked how it is able to tie to a cell phone. Rivera responded that it works through a wireless network that connects to the Rachio network. Committee Chairman Columbia said that some garage doors can be opened by other people who have the similar door by using their remote controls and asked if that is a possibility with this system. Rivera responded no, that each user has an account that is specific to each unit and can only be accessed by using the app or an online account. Committee Chairman Columbia asked if it would cost extra to store data at Rachio company headquarters. Rivera responded no, stating there are additional costs for purchasing a waterproof shell, around \$20, but there are no other additional costs. Committee Member Minarik asked if HOAs would see more savings with a Smart Sprinkler System or the Rachio system. Rivera responded yes, that the Rachio base system has eight areas and larger units have 16 areas. Committee Member Teiche asked what is the maximum recommended size of land for the unit to be useful? Rivera responded that Rachio is best for residents with lot sizes up to 1 acre. Committee Member Kaino said she lives in an area that is serviced by a private water company that will likely not offer rebates. Can she still use this product? Rivera responded yes, anyone can buy and install it. Committee Member Moll asked what the repayment period would be if there was no rebate offered. Rivera responded that the return on investment would happen in a very brief period of time. Water Resources Manager Holmes asked if the product was WaterSense approved. Rivera responded yes. Water Resources Manager Holmes informed the committee that Group #2 scheduled for the Education portion of the presentation was not in attendance.

6.1.2 ASU Decision Center for a Desert City (DCDC) Presentation on Urban Heat Island Mitigation through Landscape Design

Holmes introduced the ASU Decision Center for a Desert City (DCDC) Presentation on Urban Heat Island Mitigation through Landscape Design, “Greener Years for Goodyear”, created by Marshall Styers (ASU undergraduate Senior in the School of Sustainability and intern with the City of Goodyear).

The following represents the question and answer segment of the presentation. Committee

Member Minarik asked if reflection from the side walls of houses increases the temperatures in the same way as a roof. Intern Marshall Styers responded yes, there is a higher albedo, especially from the south and west walls. Committee Member Minarik asked if the popular adobe red roofs are good or bad. Styers responded that darker colors are hotter, while the color white keeps the house, the neighborhood and the city cooler. Committee Member Minarik asked about urban heat islands contributing to 1% increase in overnight temperatures, as referenced in the presentation. Styers responded that plants will transpire more, which will help with cooling, but then the plants require more water. Committee Member Minarik asked for any suggestions for asphalt which is black and absorbs heat. Styers responded that as the city builds out, instead of using asphalt, slab concrete and white concrete would be a better choice, and that replacing existing asphalt during regular maintenance with slab concrete would be cheaper than coating, along with a future recommendation to include a check of updated costs. Committee Member Kaino asked if the white concrete would produce glare. Styers answered that coating is a desirable choice, which allows striping to be visible and that it is up to Goodyear to determine what a more direct threat is. Committee Chairman Columbia mentioned that Singapore recently conducted a full-blown roof program, and asked if Styers looked at Singapore. Styers responded that he only looked at other cities in the United States, noting that Los Angeles ran a model on cool roofs that could potentially reduce the temperatures up to 5.5 degrees F.

6.1.3 ASU School for the Future of Innovation in Society Presentation

Holmes introduced the ASU School for the Future of Innovation in Society Presentation, “To Use or Not to Use? Reducing Goodyear’s Outdoor Water Consumption”, created by Jessica Givens (ASU undergraduate Senior at the School for the Future of Innovation in Society).

The following represents the question and answer segment of the presentation. Committee Chairman Columbia asked if the recommendations included were directed at residential usage or commercial/HOA usage. Givens responded commercial/HOA; the HOAs are not telling residents what to do, but someone is telling the HOAs to work on themselves to share best practices together. Committee Chairman Columbia asked if there is specific data used. Givens responded no, not specific data. Holmes shared that Christina Plante, from City of Goodyear Neighborhood Services, attends all HOA meetings and recently referenced a HOA that changed their processes resulting in water usage decreases, from 90 million gallons to 45 million gallons. Committee Member Faiello mentioned that Las Vegas recently replaced natural turf with artificial turf on 40 acres of land, asking if that contributed to the urban head island. Givens responded that all implementations will have a trade-off. Committee Member Minarik asked if the bias is real, regarding exterior water usage in single family homes, or do HOAs present a big problem as well? Givens responded that the HOA’s can be used to facilitate discussions for and with single-family homes.

6.1.4 Progress Update on City of Goodyear/Salt River Project (SRP) 100-Year Agreement (Mark Holmes, Water Resources Manager)

Water Resources Manager Holmes shared a progress update on the City of Goodyear/Salt River Project 100-Year Agreement, stating it is a 50-year agreement with a 50-year renewal option.

This is a \$114 million-dollar project that gives two decades of additional planning for conservation and water management, helping to drive commerce, development and a huge return on investment, so this partnership is a big deal. Holmes pressed the point that the committee must help on the front end to make sure the water is effectively, efficiently and sustainably used to allow for growth. This project will not be financed with any fee increases. About 60% of the money will be from development impact fees with another portion coming from developer partnerships, construction sales tax, and General Obligation Bonds. Some projects will be deferred, such as dry wells, and the City will have to build a surface water treatment plant. This facility's capacity will help serve growth beyond 2040 and the city will be in good shape for the next two decades. The agreement process took only seven months. SRP is happy to be a partner and wants to see the West Valley succeed. When the plant comes online, the city will be taking their CAP water directly to the city. The five-year rate study committee decided to only order the annual total demand, due to costs. Right now, the City can't take CAP water directly, so this agreement qualifies as an assured water supply with direct delivery. This is a huge, fast tracked project expected to be online December 2021. SRP will deliver CAP water for the next 100 years, with the first phase delivery at 8 million gallons a day, and the second phase doubled it to 16 million gallons a day. The location is adjacent to the water reclamation facility, which is centrally located and will be next to a future direct potable reuse facility. There are 32 projects nationwide that are directly taking reclaimed water and treating to potable standards.

6.2 Discussion on Recommendation Topics and Concepts

Makinen referenced the materials distributed from Committee Member Minarik and Committee Member Smith, and requested Committee Member Minarik share information regarding the draft problem statement. Committee Member Minarik said that he did his best to present a very dire picture, and wanted to walk the committee through the data to help all to understand how he came to his numbers. He is unsure if the new CAP announcement from Mark Holmes changes the numbers. The third column - percentage of population served - represents Liberty water, not Goodyear water. Right now, 4/9 of the city population is served by Liberty water and 5/9 is served by Goodyear water. Liberty's area is at about 80% build out so that is why the numbers grow significantly higher. If the trends continue, within the next 30 years, 305,000 residents will be served by the City of Goodyear water. This data is provided by the census, which identified Goodyear as one of the fastest growing cities. Mark Holmes can check the city's projections to see if they match. 9,000 acre feet is needed to serve the current population. CAP water, plus reclaimed water, minus the needs with the surplus, which diminishes with the population growth. Within 30 years, the city has used up all its banked surplus and all credits. The supply won't be enough.

Committee Member Minarik feels we need to send out an immediate statement to give this matter attention. Committee Chairman Columbia feels that this information needs to be put out to the residents of Goodyear in a very calm state of mind, and doesn't want to wait until it's too late. The committee really needs to act. Committee Member Minarik feels we need to say it now, so that 20-50 years from now, we are still in good shape. Committee Member Gilmore questioned if we can assume safe yield would be 2025, where we zero it out. Committee Member Minarik answered yes and that single unit home use is the biggest problem.

Holmes said this was a great model that reflects there isn't enough water and the clock is ticking. We can choose to augment the water supply or rob the bank that will end up in a shortage. This is our opening letter to council and the public, showing our concerns and why we took this big issue to heart. These are our recommendations that we think help buy time and help with solutions and sustainability. Committee Member Teiche asked if in December 2021, when does the 18,000 slide in and start to be included in the surplus water. To clarify, there are acre feet of surplus water, which is diminishing to zero/negatives. Wouldn't the 18,000 acre feet start to be counted when the plant goes online? Holmes answered that we are not ordering and banking surplus water. In four years, we will already be behind. Committee Member Minarik stated that the 18,000 acre feet are in the third column to make it simple and that is how much CAP water we are allowed. Holmes said that in 2021, the plant will have capacity for 8 million gallons per day, which is far less than what is needed for the city's demand. The city will also have wells online to help. Holmes said the 18,000 acre feet is the total CAP allocation as if we had it today. If the city ordered all 18,000 acre feet and banked what it could. By 2030 the demand would be equal to the CAP allocation, which would result in an accumulation of 75,000 total acre feet banked, but that window keeps closing every year. The assumption includes as if we received that every year.

Committee Member Teiche restated his question, asking if at some point the number must go from negative to positive, meaning surplus water is shown as negative. It must be a positive for the city to keep supplying water coming from the 18,000 at some point. Wouldn't that show when the city will run out of CAP water? Holmes said we are basically going into our bank account. The model is good, but must be fine-tuned. This tells the story that if we don't accumulate or acquire new water, someday we will hit the wall. That puts up a moratorium of no new building and this area is only good for 100 years, or we stretch that time with conservation. Chairman Columbia feels this is a good message to send to council, even if we are off by 5-10 years, that point of zero is going to happen.

Facilitator Makinen asked the committee to look at the data again before the next meeting, and she shared Committee Member Smith's request for staff to compile individual tables from Mark's presentation in February so they can be looked at together. Makinen also shared information regarding the staff handouts that were distributed via email. Committee Chairman Columbia asked for evaporation rates in relation to all the City's swimming pools reflecting water loss, which Holmes said could be provided.

Water Resources Manager Mark Holmes said he would check with the Clerk's office to see if the tours are counted as meetings and will update the committee with the response.

7. QUESTIONS FROM THE PUBLIC

None.

8. INFORMATION ITEMS

Committee Member Kaino asked for all hours spent for this committee be captured, so that the Volunteer Appreciation Event can acknowledge their volunteer time, which also boosts the overall city volunteer numbers. Holmes answered yes.

Committee Chairman Columbia asked if ASU Team 2 communicated with Holmes on why they were not in attendance. Holmes said no, that he would investigate why they were not there, and apologized on their behalf.

9. ADJOURNMENT

There being no further business to discuss, Chairman Columbia adjourned the meeting at 8:16 p.m.

Respectfully Submitted by:

Mario Columbia, Chairman

Date: _____