PUBLIC MEETING ON PROPOSED MANAGEMENT PLAN FOR THE
TUCSON ACTIVE MANAGEMENT AREA
FOR THE FIFTH MANAGEMENT PERIOD

PUBLIC HEARING

Metro Water District
6265 N. La Cañada Drive
Tucson, AZ 85704
April 26, 2022
1:00 PM

Name (Please Print)          Marvin Schultz

Address (Please print)       5900 W. Western Way Circle Tucson, AZ 85718
                            (Street) (City/Town) (Zip)

Title/Office/Representing    Tucson Estates P.O.A./Golf Course
### Tucson Estates Property Owners Association

#### Preliminary Savings from Golf Course Water Reductions – Jan/Feb/Mar, 2022

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>Consumption % Decrease</th>
<th>Total Cost % Decrease*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate</td>
<td>$3.36/ccf</td>
<td>$3.36/ccf</td>
<td>$3.69/ccf</td>
<td>(up 10%)</td>
<td></td>
</tr>
</tbody>
</table>

#### January:
- Volumes in CCFs (1 ccf = 748 gallons): 2481 ccf, 2592 ccf, 981 ccf, 62% decrease
- Cost: $11,897, $12,378, $5,484, 55% decrease

#### February:
- Volumes in CCFs: not avail., 2132 ccf, 1738 ccf**, 18%** decrease
- Cost: not avail., $10,297, $9,389**, 9%** decrease

If Feb/22 error is corrected, we estimate:
- Volumes in CCFs: not avail., 2132 ccf, 993 ccf, 53% decrease
- Cost: not avail., $10,297, $5,365, 48% decrease

#### March:
- Volumes in CCFs: 2276 ccf, 2941 ccf, 884 ccf, 66% decrease
- Cost: $10,970, $14,696, $5,143, 60% decrease

*% savings on consumption is different from % savings on cost since rates per ccf went up in 2022 and since some fixed costs don’t change.

** possible error on Feb, 2022 bill - under investigation. It appears we were billed twice for one golf course water meter.

It's early to estimate savings from just 3 months, but it's looking promising.
We should expect the most savings during the summer months when we have regularly watered the fairways in the past.
# Tucson Estates Water Reduction Plan

## A. What have we already done?

<table>
<thead>
<tr>
<th>PHASE 1</th>
<th>GOALS</th>
<th>TIMELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce watering of fairways</td>
<td>Finalize areas to be watered. Adjust sprinkler heads</td>
<td>COMPLETED Jan - March 2022</td>
</tr>
<tr>
<td>Reduce tee box sizes</td>
<td>Reconfigure large tee boxes</td>
<td>COMPLETED</td>
</tr>
<tr>
<td>Eliminate water of tee box approaches and surrounds</td>
<td>Adjust sprinkler heads to only water the tops of the tee boxes</td>
<td>COMPLETED</td>
</tr>
<tr>
<td>Measure water usage and savings</td>
<td></td>
<td>Quarterly</td>
</tr>
</tbody>
</table>

## B. What are we working on now?

<table>
<thead>
<tr>
<th>PHASE 2</th>
<th>GOALS</th>
<th>TIMELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace grass in the practice range</td>
<td>Stop watering the practice range immediately. Install artificial turf practice range mats</td>
<td>Board approved April/22 Men's Golf Club offered to fund.</td>
</tr>
<tr>
<td>Replace forward tee Hole #6</td>
<td>Current tee is in poor condition. Trial for artificial turf tees.</td>
<td>Board approved April/22 Men's Golf Club offered to fund.</td>
</tr>
<tr>
<td>Measure water usage and savings</td>
<td></td>
<td>Quarterly</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHASE 3</th>
<th>GOALS</th>
<th>TIMELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clubhouse lawn</td>
<td>Cease irrigation of lawn area and chipping green (Putting green can be used for chipping so separate area not needed.) Design desert landscape. Study inclusion of &quot;Memorial&quot; facility</td>
<td>April to October</td>
</tr>
<tr>
<td>Chipping green</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measure water usage and savings</td>
<td></td>
<td>Quarterly</td>
</tr>
</tbody>
</table>
C. What do we plan for the future?

<table>
<thead>
<tr>
<th>PHASE 4</th>
<th>GOALS</th>
<th>TIMELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circle Park</td>
<td>Resurface? Decorative rock/paving stone paths and seating areas? Desert landscaping?</td>
<td>2022 - 2023</td>
</tr>
<tr>
<td>Kids playground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explore water harvesting for</td>
<td></td>
<td>2022 - 2023</td>
</tr>
<tr>
<td>the Circle area</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHASE 5</th>
<th>GOALS</th>
<th>TIMELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review new water usage and</td>
<td>Determine additional areas where water usage can be reduced</td>
<td>2024</td>
</tr>
<tr>
<td>total savings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study alternative water</td>
<td>Determine alternative water sources</td>
<td>2024</td>
</tr>
<tr>
<td>sources</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Golf Course Water Discussion

BY MIKE FOLKERTH AND AL BRUDELIE
will be another 26 billion gallons of water. That loss in 2022 will take affect in January of 2023. That loss will be another 26 billion gallons of water. Water authorities believe a Tier 2 shortage will materialize.

Water delivered to the Central Arizona Project Canal of water delivered to the Central Arizona Project Canal will trigger a 33% decrease in the amount. In January, for the first time in the 87 year history, a Tier 1 Colorado River has been declining for over 20 years.

Course, nobody! There is nobody talking about closing down the golf and Tucson Estates to discuss water issues in Arizona.
Tucson Water raised water rates 10 percent December

Our only choice is treated water from Tucson Water beneath our community with insufficient amount of water. Drilling a well is not an option because of the shallow aquifer. Hauling water at 4,000 gallons a load was cost prohibitive. Plus approximately $36,000 a year to pump the water. Pipeline to pump recycled water 7.8 miles costs $5.7 million. Course.

Most pressing issue is water cost and availability for the estates. And Tucson Estates to discuss water issues in Arizona Presentation for December 13, 2021
Front Nine Course Water Reduction Recommendations

- With water rates going up from 10 to 40 percent Tucson Estates needs to figure out how to reduce the effects of these increases.
28% Full
Lake Powell is down 160 feet and is
Think of it this way, last year our water bill was approximately $392,000 or just over $1,075 a day.

The country is having this discussion.

The area. Brian also stated that every golf course he visits in the highest water use rates per acre of any golf course.

Brian Whitlark, USGA Agromonomist said Tucson Estates has an

Maintenance play at near current level

Identify areas being watered, but out of play

Maintain most important aspects of play

Become a proactive group to reduce water usage

Focus:

Golf Course Water Reduction Recommendations
CAN GET THROUGH THE PRESENTATION

PLEASE SAVE YOUR QUESTIONS OR COMMENTS UNTIL THE END SO WE

...some possibilities...

...hole by hole we will take you hole by hole
1. Stop fairway watering forward of ladles’ tee to about 30 yards in front of hole one
2. Add new additional forward tee
Hole #2

1. Stop water surrounding the Tee box
2. Stop water on fairway forward of Tee box
3. Start water on fairway on far side of cart path continuing to surround
4. Add forward Tee box

Possible Synthetic Forward
No Water
Tee
Bunker Area
1. Reduce water on Tee box to forward area only
2. Water from the dip all the way to the surrounding
3. Add new forward Tee box

Hole 3

Possible Synthetic Forward

Tee

No Water

Water
1. Reduce tee box by up to 50%.
2. Stop water to fairway to a point that will provide adequate landing area.
1. Reduce Tee box by eliminating back portion.
2. Water fairway back from the surround to the large tree on the right.
1. Tee box - no change
2. Fairway - no water to top of large dip
3. Water to everything from top of dip to the surround

Hole 6

Water

No Water
1. Reduce tee box by 1/2 lengthwise.
2. Create two separate watered areas for tee boxes.
3. Water through the valley to the front of the surround.
Hole 8

1. Tee box - no change
2. Fairway - stop water in front of the box out to 100 yards marker
3. Water from 100 yards out to the surrounding

No Water
Water
Hole 9

1. Ladies tee box reduced by 50%
2. Fairway - no water on west side of cart path
3. Water fairway inside cart path 100 yards out

from the surround.

Non Water Area

Water

[Map diagram with highlighted areas]
1. Driving range - possibly convert to synthetic material or reduce watered area
2. Replace lawn area in front of pro-shop with desert landscaping
3. Chipping green next to the pro-shop, discussion is needed

Other Topics
1. Tee box – reduce by 50%
2. Fairway – water from sprinkler head located on the slope to the front

Hole ten
Hole Eleven

Reduced water on fairway
No other changes
Hole Twelve

2. No water from current surround to the east

1. Fairway - no water needed
Hole Thirteen

1. Eliminate men's tee box
2. Fairway – no water
3. No water outside the current surround
1. Reduce size of ladies' tee box
2. Surround size reduced on the back side

Hole fourteen

No water
Hole fifteen

Extension of the surround

2. Fairway – stop water except for a minor

1. Eliminate men's tee box
Hole Sixteen

1. Fairway - water 30 yards in front of surround

No Water
Hole Seventeen

1. Eliminate water adjacent to sides of tee

2. Pathway - no water

Box

32.11,32, N 117, 05,23 W

No Water
1. Reduce width of ladies' tee box
2. Fairway - water from dip forward to surround
5. New tee boxes would require physical construction but work could be
required.

4. Reducing size of the tee boxes would require physical redressing and sprinkler
alterations. Recommendations from staff for accomplishing the former w

3. Changes to lawn areas or driving range would require physical
reconstruction but would not impact play.

2. Water stopped immediately does not require additional labor or relocation
of sprinkler/irrigation heads.

1. Project planning and action items can be divided into stages, what can
be done immediately, and things that need to be longer term.

Other considerations:
for each unit or a $96.00 a year increase in fees.

- A 40 percent increase in water rate would equal $8.00 a month increase for each unit or a $72.00 a year increase in fees.
- A 30 percent increase in water rate would equal $6.00 a month increase for each unit in the park or a $48.00 a year fee increase.
- A 20 percent increase in the water rate would equal $4.00 a month increase.

In the base revenue the park or $24.00 a year fee increase. $24.00 x 1665 units = $39,999

Golf course would equal nearly $22.00 a month increase for each unit in the water rate.

In the water rate costs that will probably not be affordable.

What is the cost to do nothing?
We need to be a part of the solution, not a part of the problem. For this reason, what are we going to do?

If we adopt this water reduction plan, we estimate we will save approximately 5%. 

Rationing:
Increasing water rates and...