MEMORANDUM

Date: May 10, 2021

To: The Honorable Chair and Members
   Pima County Board of Supervisors
From: C.H. Huckelberry
   County Administrator

Re: City of Tucson Water Policy Related to Differential Water Rates

As you are aware, the City of Tucson continues to pursue a higher differential water rate for unincorporated County customers despite an overwhelming recommendation not to do so from the City of Tucson Citizen’s Water Advisory Committee. I provided information responding to City staff justifications for a differential rate to Supervisor Rex Scott, which he attached to Board of Supervisors Resolution 2021-9 affirming support for jurisdictional rate parity for Tucson Water customers, adopted on April 6, 2021.

In efforts to further justify a differential rate, City of Tucson staff has introduced additional points through a presentation delivered to the Citizen’s Water Advisory Committee on May 5, 2021 (Attachment 1). I would like to take the opportunity to further inform the Board on the points raised in that presentation.

1. Differential Infrastructure Use

City staff has indicated that unincorporated County customers comprise 29 percent of Tucson Water customers and that these 29 percent utilize 36 percent of Tucson Water assets based on pipe measurements. It is unclear whether this measure included renewable water assets mostly located in the unincorporated area serving all City residents. Regardless, it is not a substitute for a cost of service study and the City is yet to demonstrate that it is more costly to serve unincorporated areas.

Additionally, Tucson Water states that unincorporated County customers use 43 percent more water than City customers. Since Tucson water has a tiered rate structure based on consumption, the average County customer is generating substantially more revenue than the average City customer (much more than the 43 percent increased consumption), thereby significantly subsidizing City customers at the current rate structure despite geographic distribution of water assets.

Furthermore, the City staff position regarding geographic distribution of infrastructure and customers is disingenuous in that most of the Tucson Water well pumping and recharge facilities are located in the unincorporated areas. The attached Tucson Water exhibit depicts well fields serving Tucson Water customers (Attachment 2). Interestingly, only two of the
six well fields are entirely contained within the City. Tucson Water is acting as though it has exclusive ownership and management of the Tucson Active Management Area by withdrawing water from the unincorporated areas to serve City customers all while proposing to penalize those customers located in the geographic area of water withdrawal through differential rate increases.

2. Differential Resource Use

City staff has indicated that 32 percent of unincorporated County customers are on septic systems compared to 5 percent of City customers. This is primarily due to many rural areas and communities served by Tucson Water not having access to regional wastewater collection infrastructure. However, reclaimed water is not used as a potable source by the City which instead primarily uses it for landscape irrigation and recharge. Septic systems achieve the same goal at much lower cost since effluent from these systems do not need to be reclaimed and redistributed. Instead it infiltrates directly into the ground, either reaching the aquifer (recharge) or is available for tree root irrigation and reduction of heat island effect through evapotranspiration. Due to the large reduction in energy needed for on-site recharge and irrigation, it can be argued that septic systems can be as environmentally sustainable as centralized treatment and redistribution systems. This is substantiated by the U.S. Environmental Protection Agency promotion of benefits on their septic systems overview web page:

- **Public health benefits** - Proper use of decentralized systems reduces the risk of disease transmission and human exposure to pathogens, which can occur through drinking water, surface water, and shellfish bed contamination.

- **Environmental benefits** - Wastewater treatment removes pollution from surface water, recharges groundwater, and replenishes aquifers.

- **Economic benefits** - Decentralized wastewater systems help communities reduce large infrastructure and energy costs to collect and treat wastewater.

No perceived penalty should therefore be directed toward water users with septic systems. Similarly, no penalty should be applied to City regulation and rebates regarding diverting grey water to irrigation.

City staff further points to water resources retained by Pima County produced at the Corona de Tucson and Avra Valley water reclamation facilities. Indeed the County retains this effluent since it is legally entitled to do so as substantiated by the Arizona Supreme Court ruling that the utility treating the wastewater controls the resulting effluent (Arizona Public Service Co. v. Long, 1989). The County bears the entire regulatory burden and financial cost of producing reclaimed water. The fact that the County granted the City rights over 90 percent of the effluent produced by the metropolitan water reclamation facilities via the 1979 City-County Agreement constitutes a gift to the City not borne out by case law, and which would be subject to reconsideration should the 1979 Agreement be placed into question.
3. Differential Conservation Results

City staff has indicated that customers in the unincorporated County use 43 percent more water on average than City customers. As demonstrated above, this additional consumption results in unincorporated customers subsidizing Tucson Water infrastructure and operations for City residents. Additionally, and as noted by the City Citizen’s Water Advisory Committee, water use is complex and influenced by a number of factors including multi-family units which have much lower consumption and are more prevalent in the City.

While water conservation is a regional aspiration, utility incentives/disincentives to promote conservation should be applied regardless of geographic distribution. There are environmentally-minded extremely low water users in the unincorporated areas just as there are extreme water users in the City. An equitable sustainable water use policy should target consumption of each user and not geographically discriminate based on geographic location. The Tucson Water tiered rate structure is a good example of one method already in place that supports a sustainable water use policy.

4. Equity and Precedent

City staff continues to claim that differential rates would address alleged inequities, that City is extending a City service to non-City residents with no return-on-investment, and that the region loses $40-$50 million in state-shared revenues due to unincorporated County population.

I believe that I have adequately addressed the latter issue of state-shared revenues and the large cost of annexation in my April 30, 2021 communication to you. As to the former, it has already been noted that unincorporated customers are subsidizing City customers at the current rates and despite Tucson Water groundwater withdrawals occurring primarily in the unincorporated areas. However, even more importantly is that the City selected to provide this large number of unincorporated customers with water service at a time when the City was operating as a regional provider. Had the City not provided water to these areas, property owners would have looked to other providers, such as the Metropolitan Domestic Water Improvement District (Metro Water) to establish service.

It is especially noteworthy that should these unincorporated areas have incorporated into Metro Water service, they would be paying lower water rates than currently paid to Tucson Water. Indeed, the current average Metro monthly bill, inclusive of miscellaneous changes, taxes and fees is $50.94 per month compared to $52.06 per month for Tucson Water users. The City has voluntarily extended service to serve the unincorporated areas and now hold these customers hostage without political recourse, by seemingly punishing them for having accepted water from the City. Had they not been provided City water, they would have secured water at lower cost in addition to not facing what could be construed as extortion under the guise of equity.
5. **Obligation to Serve and City-County IGAs**

It is agreed that the City has no legal obligation to serve outside City boundaries, has no legal obligation to extend service to those areas included in original Central Arizona Project (CAP) application and that a differential rate would not violate the 1979 City-County Agreement. However, what is at issue is the City’s past intentions demonstrated through its actions whereby it extended service far beyond City limits and included representations as a regional water provider in its CAP water allocation application and the 1979 City-County Agreement to justify reclaimed water allocations.

Had the City not presented itself as the principal regional water provider in 1979, it would not have been able to claim control over the Santa Cruz River Basin and adjacent basins. This would have resulted in a City allocation reduction of both CAP and County effluent of at least 29 percent, as these unincorporated areas would have secured water through other providers who would have directly claimed these allocations. Furthermore, the City allocation reduction of both these renewable resources would have been much larger than 29 percent as the City is receiving a disproportionately large share of CAP and effluent allocations based on prior representations made as a regional water provider. The City receives 74 percent of regional effluent and 79 percent of regional CAP allocations to serve only 65 percent of the area population.

The 2000 City-County Agreement forced the City to reassign some of its County effluent allocation to other regional water providers including Metro Water, Marana and Oro Valley, based on the original premise that the water provider controls the effluent as conceded by the County in the 1979 City-County Agreement. However, based on the Arizona Supreme Court decision, we now know that original premise is contrary to law, resulting in County effluent being gifted to the City and other water providers.

In summary, it is unfortunate that the City staff are recommending a differential water rate policy to the Mayor and Council that is not borne out by the facts and that will create large inequities without apparent recourse to affected unincorporated County customers. I suggest the forthcoming City Equity Office could provide some insight into this context.

CHH/anc

Attachments

c: Jan Lesher, Chief Deputy County Administrator  
   Carmine DeBonis, Jr., Deputy County Administrator for Public Works  
   Yves Khawam, PhD, Assistant County Administrator for Public Works  
   Jackson Jenkins, Director, Regional Wastewater Reclamation  
   Kathy Chavez, Water Policy Manager
Fiscal Year 21-22 Water Rates

Timothy Thomure, PE
Interim Assistant City Manager
AGENDA

- Overview
- Policy Considerations
  - Infrastructure Differential
  - Water Resources Differential
  - Water Conservation Differential
  - Equity and Precedent
- Stakeholder Comments
- Differential Rate Options
- Bill Impacts
- Q&A
Overview of Water Rates for FY 21-22

- Notice of Intent adopted April 6, 2021
- Public Hearing June 8, 2021
- No general rate increase (second consecutive year)
- No reclaimed rate increase (second consecutive year)
- No rate increase to Tucson Water customers located in other jurisdictions (Marana, Oro Valley, South Tucson, Pascua Yaqui)
- Proposed rate increase for unincorporated areas (aka Differential Rate)
City Services Inside and Outside of City Jurisdiction

- Unincorporated Pima County total services: 71,260
- Inside City of Tucson total water services: 160,875
- Inside other jurisdictions (Marana, Oro Valley, South Tucson, Pascua Yaqui): 15,490
- 29% of Tucson Water customers are in unincorporated Pima County
Differential Infrastructure Use

29% of Tucson Water customers (County) utilize 36% of the assets*

<table>
<thead>
<tr>
<th>Row Labels</th>
<th>%INCORPORATED</th>
<th>%UNINCORPORATED</th>
<th>%COMBINED</th>
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<td>DISTRIBUTION</td>
<td>57.36%</td>
<td>30.14%</td>
<td>87.50%</td>
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<tr>
<td>TRANSMISSION</td>
<td>7.07%</td>
<td>5.42%</td>
<td>12.50%</td>
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</table>

*Measured by pipes, the largest asset. Excludes renewable water assets that serve all customers.
Differential Resource Use

City’s water resources are only “one-time use" in County growth areas

Water resources lost to septic systems

- 32% of County customers (5% of City customers) are not connected to a sewer system. The water delivered by the City is used only once.

Water resources retained by Pima County

- Unlike for City customers, the reclaimed water for many County customers is not returned to the City as a resource. It is retained by the County, even though the water was provided by the City.
- Corona de Tucson WWTP produces 400 AF/YR and growing.
- Avra Valley WWTP produces over 1,500 AF/YR and growing.
Differential Conservation Results

Customers in unincorporated County use 43% more water on average than City customers

Average monthly residential water use
- System-wide = 8 CCF*
- City customer = 7 CCF
- County customer = 10 CCF

*1 CCF is 100 cubic feet of water or 748 gallons. This is the unit of measurement we use for our water rates and billing.
**Equity and Precedent**

Historically, all Tucson Water customers have paid the same rates, despite these inequities

Differential rates for unincorporated area customers address the inequities and acknowledges that:

- City customers bear the utility’s financial risks
- City is extending a City service, with its own resources, to non-City residents with no return-on-investment
- The region loses $40M - $50M in State Shared Revenues every year due to high unincorporated area population

Almost all Arizona cities charge differential rates
Answers to Stakeholder Comments

Tucson Water is not the regional water provider

- There are multiple local water providers [See Map – Slide 10]
- City has transferred effluent ownership to other water providers since 2001
- Obligations outside City jurisdiction are limited to contracts and infill [See 12-10-2007 Memorandum]

The City’s CAP Subcontract does not obligate service to specific areas

- Delineation of a CAP Service Area did not create an obligation to serve; rather, it was intended to limit the City’s use of groundwater outside of that area
- City has since transferred CAP allocations to others [See 12-11-2007 Memorandum]

Charging a differential rate does not violate any of the City-County IGAs

- 1979 IGA obligated County Wastewater to serve inside the City, but not the opposite
- County water customers are outside of the City’s jurisdiction, whereas City wastewater customers are inside of the County’s
• The 2001 City-County Effluent IGA recognizes the co-equal importance of other regional water providers.

• The City is not the "sole regional provider" of potable water service and has transferred effluent to a wide variety of other regional water providers.
## Options for Consideration

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<th>Single Family Residential</th>
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<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
<th>Option 4</th>
<th>Option 5</th>
<th>Option 6</th>
<th>Option 7</th>
<th>Option 8</th>
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<tr>
<td></td>
<td></td>
<td>Flat 10%</td>
<td>Flat 20%</td>
<td>Flat 30%</td>
<td>Flat 40%</td>
<td>Flat 50%</td>
<td>5% Differential Rate on Base plus Escalating Tiers (T1-5%, T2-10%, T3-15%, T4-20%)</td>
<td>10% Differential Rate on Base plus Escalating Tiers (T1-10%, T2-20%, T3-30%, T4-40%)</td>
<td>15% Differential Rate on Base plus Escalating Tiers (T1-15%, T2-30%, T3-40%, T4-50%)</td>
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<td>Monthly Base Rate (5/8”)</td>
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<td>20%</td>
<td>19.60</td>
<td>30%</td>
<td>21.23</td>
<td>40%</td>
<td>22.86</td>
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<td>1 – 7 Ccf</td>
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<td>8 – 15 Ccf</td>
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<td>4.20</td>
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<td>4.58</td>
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<td>40%</td>
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<tr>
<td>16 – 30 Ccf</td>
<td>$8.39</td>
<td>10%</td>
<td>9.23</td>
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<td>10.91</td>
<td>40%</td>
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<tr>
<td>Over 30 Ccf</td>
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<td>14.22</td>
<td>20%</td>
<td>15.52</td>
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<td>16.81</td>
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## Revenue Estimates

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<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
<th>Option 4</th>
<th>Option 5</th>
<th>Option 6</th>
<th>Option 7</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Flat 10%</td>
<td>Flat 20%</td>
<td>Flat 30%</td>
<td>Flat 40%</td>
<td>Flat 50%</td>
<td>5% Differential Rate plus Escalating Tiers</td>
<td>10% Differential Rate plus Escalating Tiers</td>
<td>15% Differential Rate plus Escalating Tiers</td>
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<td>$6,340,000</td>
<td>$12,690,000</td>
<td>$19,030,000</td>
<td>$26,520,000</td>
<td>$34,010,000</td>
<td>$4,960,000</td>
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<td>$14,030,000</td>
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## Residential Bill Examples

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<tr>
<td>Low</td>
<td>4</td>
<td>$27.81</td>
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<td>Inside City Average</td>
<td>7</td>
<td>$36.42</td>
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<tr>
<td>Outside City Average</td>
<td>10</td>
<td>$50.28</td>
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<tr>
<td>High</td>
<td>45</td>
<td>$417.18</td>
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### Option 1
- **Flat 10%**

### Option 2
- **Flat 20%**

### Option 3
- **Flat 30%**

### Option 4
- **Flat 40%**

### Option 5
- **Flat 50%**

<table>
<thead>
<tr>
<th>Rate Description</th>
<th>Option 6</th>
<th>Option 7</th>
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<tr>
<td>5% Differential Rate on Base plus Escalating Tiers (T1-5%, T2-10%, T3-15%, T4-20%)</td>
<td>10% Differential Rate on Base plus Escalating Tiers (T1-10%, T2-20%, T3-30%, T4-40%)</td>
<td>15% Differential Rate on Base plus Escalating Tiers (T1-15%, T2-30%, T3-40%, T4-50%)</td>
<td></td>
</tr>
</tbody>
</table>
Potential Uses of Funding

- Infrastructure resiliency
- Water bill assistance programs
- Pay down existing debt
- Climate resiliency investment
Where does remediated water come from?

- Remediated water is formerly contaminated groundwater that comes from the TARP/AOP Treatment Facility (Tucson Airport Remediation Project/Advanced Oxidation Process) at I-19 and Irvington Road.
- TARP/AOP is part of the larger federal Superfund site near the Tucson International Airport. The treatment facility was largely funded by the original polluters.
- 1994 – Tucson Water began operating the TARP plant, which removes an industrial solvent (trichloroethylene or TCE) from the groundwater.
- Since 2014 – Tucson Water operates the TARP/AOP Treatment Facility, which removes TCE and 1,4–dioxane (an emerging contaminant, see page 22) from the groundwater.

Benefits:

- Removes pollutants from the aquifer and prevents the further spread of pollutants in the aquifer.
- Enables the use of groundwater that would otherwise not be suitable for drinking purposes.
- In 2017, TARP/AOP provided about 5% of our drinking water.

How does the TARP/AOP Treatment facility work?

- Contaminated water is pumped out of the ground and moved through a treatment system.
- The water is cleaned up to drinking water standards by saturating it with hydrogen peroxide, and running it through ultraviolet reactors to oxidize and remove compounds from water.
- After water quality testing, the remediated water is discharged from the treatment facility into Tucson Water’s distribution system.
- Remediated water blends with other water in the distribution system and is delivered to customers.

Drinking Water Well Fields – Groundwater, Colorado River Water, and Remediated Water

- Prior to 2001 – The Central Well Field provided most of Tucson Water’s water supply (groundwater).
- Since 2008 – Tucson Water has delivered more blended Colorado River water than groundwater.
- 2018 – The Central and Southside Well Fields are continuously maintained to be able to provide water service on short notice.

Most water delivered to customers:

- Comes from Tucson Water’s CAVSARP, SAVSARP, and Santa Cruz Well Fields.
- Is a Colorado River water blend.