MEMORANDUM

TO: David Godlewski, President
Southern Arizona Home Builders Association

FROM: Thomas J. Bourassa, CPA

DATE: October 18, 2021

RE: City of Tucson Cost of Service Study Supporting Differential Rates

For many decades, the City of Tucson (City) has provided water utility service to customers within and outside its municipal boundaries. These customers include persons and businesses situated in other municipalities, on tribal lands, and in unincorporated areas within Pima County. In effect, the City has operated as a regional water provider. The City’s customers have always been subject to the same water rates and charges, regardless of whether they are located within the City, within another municipality, on tribal land, or within an unincorporated area.

On June 22, 2021, the Tucson Mayor and Council approved a differential rate structure for certain Tucson Water customers located within unincorporated Pima County (Outside City Customers) with an effective date of December 1, 2021. This rate structure will not apply to the other customers of the City (Inside City Customers). Subsequent to this decision, a Cost of Service Study ("COSS") was prepared by Raftelis on behalf of the City and submitted to the Citizens Advisory Committee on September 15, 2021.

While a higher charge for utility service to Outside City Customers is allowed, they must be justified by actual cost differences and cannot be simply policy considerations. In that regard I have three primary areas of concern with respect to the COSS: (1) the validity of the basis for the classification of customers as Inside City Customers versus Outside City Customers; (2) whether the assumptions used and construction of the allocation factors employed in allocating both rate base components and operating costs overall and between the Inside City Customers and Outside City Customers are fair and reasonable; and (3) whether a rate of return differential for determining the cost of service between Inside City Customers and Outside City Customers is justified.

Inside City Customers vs. Outside City Customers – The concept of ownership, under which the Inside City Customers are treated as “owners” of the municipal utility, and Outside City Customers are treated as non-owners, is severely strained in the COSS’s Utility Approach and, in my view, constitutes a significant deficiency. A fundamental basis for the use of the Utility Approach for a government-owned utility system is the concept of ownership, i.e., owners

1 Inside City Customers include a sizeable number of customers that are located in other municipalities and on tribal lands. Thus, the use of “Inside City Customers” as a term to describe the customers being charged higher rates is misleading. Only some customers outside the City’s boundaries will receive rate increases.
and non-owners. A government-owned utility may be considered to be the property of the citizens within the city. As such, the customers within the city may be considered owner-customers and who sometimes bear the risks and responsibilities of utility ownership. Outside City Customers may bear a different responsibility for costs. The ownership concept therefore serves as a fundamental basis for determining differences in the cost of service, including the allocation of risk, between owner-customers and non-owner customers.

In classifying customers in the Tucson COSS, however, the basic concept of ownership is severely violated. Inside City Customers (owners) are classified on the basis of whether they are located in an incorporated area of Pima County and not whether the customers are located within the City of Tucson. City customers within incorporated areas such as the Town of Marana, the Town of Oro Valley, and City of South Tucson are included in the Inside City Customers class and considered utility owners. Further, customers within tribal lands controlled by the Pascua Yaqui and the Tohono O'odham are included in the Inside City Customers class and considered utility owners. These customer groups are clearly not customers located with the City of Tucson boundaries and are not customer-owners under the concept of ownership. Therefore, it is obviously improper to assign greater risk to the Inside City Customers class in the COSS.

Assumptions and Allocation Factors – The assumptions and computation of the allocation factors used in the COSS should be examined in detail and validated, particularly customer characteristics such as usage and demand factors. The customer usage and demand factors are primary factors in allocating rate base, operating and maintenance expenses, and depreciation, and thus are consequential in the assignment of costs between the two classes of customers. The COSS authors state that the demand factors are based upon monthly production data. In other words, they are not based upon a customer demand study. While use of production data may serve as an alternative to a customer demand study it requires making assumptions about class demand patterns and peaking factors. However, the sources and validity of the data used to allocate plant and costs are unknown. The COSS fails to disclose how the demand calculations were made and what assumptions were used. This information is necessary to ensure that the assigned customer demands reconcile to observed system production as well as to ensure accuracy and prevent subsidization between customer classes.

For some types of expenses, therefore, there are serious concerns as to whether the allocation factors reasonably reflect the customers causing the costs. For example, it is not clear whether the general and administrative expenses (director office and business services expenses) are fairly allocated. If these costs are primarily being allocated using commodity (base) and demand (peak day, peak hour) factors, this would be a serious problem. General and administrative expenses typically do not vary by volume of water sold or by peak demand usage.

Another example concerns fees and charges for the Central Arizona Project (CAP) water and related treatment costs. It is not clear whether or to what extent Outside City Customers benefit from the City's CAP water allocation, and therefore whether CAP-related costs are reasonably allocated to Outside City Customers. The same is true for other water treatment costs to address contamination and other water quality issues within the City. As one more example, while the water distribution system has been identified and segregated, other water system assets have not been. For example, are there water production and distribution facilities serving Outside City Customers in lieu of the facilities used to treat and deliver CAP water within the
City? Thus, there are serious concerns about whether other assets and/or capital expenditures may only benefit, or mostly benefit, one class versus the other class of customers. If those circumstances exist, then the assets should be separately identified and the cost of the assets and the related depreciation and operating and maintenance expenses should be separately allocated.

These are just a few examples of why the COSS’s conclusion that even if there is no rate of return differential, there is still a cost-based differential of approximately 5% is highly questionable.

Differential Rates of Return – The COSS states that the differential rate of return approach allows for the recognition of the risks borne by the Inside City Customers (considered to be owners) by applying a higher rate of return to the rate base allocated to Outside City Customers (considered to be non-owners). Putting aside the concerns over fiction of classifying customers as “owners” and “non-owners” discussed previously – particularly when some of the “owners” are located in other municipalities and on tribal land, the COSS does not explain the basis for the difference in risk, nor is there any attempt to quantify the risk differential between the two customer classes. The COSS only states that the decision to base the Outside City Customer rates using a rate of return differential was based on City policy. Without a specific rate of return differential determined by a risk study or analysis, the COSS arbitrarily provides for a range of rate of return differentials from 1% to 5% from which the City may choose.

I do not believe there is a risk differential between the Inside City Customers and Outside City Customers because there is no discernable difference in the risks and the responsibilities for costs between the two classes. Risk implies uncertainty regarding both the amounts and timing of expected revenue or income and the availability of financial resources to fund utility capital requirements. The City of Tucson Water Department is a regional water provider and operates as a separate enterprise fund. The enterprise fund is financially self-sustaining; its operational needs and capital needs are entirely supported by utility rates charged to its utility customers. As a regional water provider, the City is a monopoly service provider with captive customers. Because neither class of customers has an option of leaving the system and bears the same responsibilities for cost, there is no difference in business risk or financial risk. Further, because there is no chance of Outside City Customers leaving the City’s system to start their own water utility, there is no difference in liquidity risk. I am not aware of any facts or circumstances which would result in a higher degree of risk for Outside City Customers than for Inside City Customers under the circumstances.

A claim that the City of Tucson General Fund “backstops” the City’s water enterprise fund and therefore faces greater risk as an “owner” has little merit under the circumstances. The general fund does not backstop the financial needs of the enterprise fund. All customers of the utility pay for the financial needs of the enterprise fund through rates and charges for water service. There is nothing in the COSS indicating that the City’s water enterprise operates at a

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3 Business risk is the uncertainty and consequence of events that result in the inability to collect sufficient revenues to meet financial obligations and pay required capital costs that fund plant and other assets.

3 Financial risk is the uncertainty that the utility will have the cash flow necessary to meet its financial obligations.

4 Liquidity risk is the uncertainty that investments in infrastructure will not be recovered.
loss or requires funding from other City sources. If shortfalls in funds to cover the enterprise fund costs arise in the future, it is the customers of the utility who will pay, not the general fund.

Arguably, the water enterprise fund is effectively subsidizing the general fund through the inclusion of Payment In Lieu of Taxes (PILOT) in the cost of service, which is allocated to both Inside City Customers and Outside City Customers. Further, outside City customers may actually help to reduce overall risk of the utility enterprise fund by contributing to economies of scale and by providing a more broad and stable revenue base. They may even provide for reductions to borrowing costs through enhanced and more stable cash flows when the utility enterprise fund needs to borrow funds for capital improvements. The COSS fails to demonstrate a discernable differences in risk and responsibilities for cost between the two classes, therefore if the City of Tucson decides to charge higher rates to Outside City Customers using different rates of return that is based solely on policy, then the rates will be unjust and discriminatory.