

**Metropolitan Domestic Water Improvement District  
Board of Directors Study Session**

**July 11, 2011**

**Discussion and Direction on the Water Wheeling Rate Study**

**Synopsis**

The Board of Directors is requested to discuss and provide direction on the Water Wheeling Rate Study prepared on behalf of Tucson Water, Oro Valley Water Utility, and Metro Water District.

**Background**

The Oro Valley Water Utility, Tucson Water and Metro Water District entered into an Intergovernmental Agreement (IGA) to jointly fund a water wheeling rate study to determine the costs associated with delivery of the District's and Oro Valley's recovered CAP water while utilizing a portion of Tucson Water's storage facility. The study was conducted by CH2M Hill and the scope of work was prepared by the three entities. Based on available capacity of the existing transmission main, it was determined that 4,000 ac-ft was available for OVWU and the District and that an even split of that availability would be used for the analysis of this report. Additionally, since both OVWU and the District were still needing to operate their respective wells, the delivery of the CAP would not include any peaking factors and would be delivered at a constant rate.

**Findings of the Report**

The largest amount of effort was spent on an analysis of Tucson Water's operating costs. CH2M Hill needed to determine what percentage of each activity of the departmental costs should be attributed to the operation of delivery of recovered water from the storage facilities in Avra Valley. (The complexities of these percentages are found in an appendices report that could be provided if you would like to review the costs determinations at that level of detail.)

The summary of the water wheeling usage charge components are found in Table 5 (page 8) and include O & M Expense, Power Cost, Net Capital Expenditures and Taxes/Fees. The largest of the costs are of course related to the O & M expense. This includes the costs associated with the storage of the CAP water, maintenance of the wells to recover the water and the operation of the transmission mains and storage facilities along the way. It does not include the cost of CAP water since each entity would be responsible for their respective amounts that would be stored in the facility.

Power costs are different between Oro Valley and the District due to the need to deliver water to Oro Valley at a higher elevation. For the District, the only power costs would be for the wells to

pump the recovered water from the storage facility to the Clearwell Reservoir. From that point, all the delivery would be by gravity flow to the Oasis Reservoir near Thornydale and Lambert Roads. However, Oro Valley would then have their water pumped to the Naranja Reservoir and take delivery there.

Capital costs are for all the components that would be utilized for the delivery of the water which include the CAVSARP/SAVSARP recharge facilities, wells, transmission mains, part of the treatment plant that is used for disinfection, and storage reservoirs.

The cost for delivery of the District's recovered CAP water wheeled through Tucson Water's infrastructure would be \$381.25 ac-ft in 2011 dollars. Due to projected increases in Tucson Water rates that are planned, there are also tables that define a five year average cost and also an update cost per year depending on when deliveries would start. The concept for the recharge and recovery would be that it is an annual storage and recovery program and not utilizing long term storage credits already in hand. For a little background and comparison, in the Asset Purchase Agreement between City of Tucson and the District in 1992, the cost for delivery of CAP water was \$348 ac-ft but that also included the cost of the water.

So what does all this mean for the District? Our Northwest CAP recharge and recovery program is currently on hold since all of our available funding has gone towards County road projects and the associated waterline relocations. It may be several more years before we are back on track with getting that program up and running. Meanwhile, we continue to pump groundwater from the CDO and Rillito basins that lead to additional groundwater depletion throughout this area. If we choose to have a portion of our CAP water wheeled through Tucson Water, we can reduce our groundwater pumpage and slow the overall groundwater decline. Also, by taking approximately 2,000 acre-feet of CAP water through Tucson Water, the District is able to gain an understanding of how recovered CAP water adapts to our system, which would be helpful to understand prior to the Northwest CAP System.

In looking at the long term, if the District did consider this water wheeling proposal, some level of revenue increase would be mostly likely necessary to offset the additional cost to pay for the wheeling of the CAP water. If you combine this revenue increase as a part of the revenue that would be needed to help finance the future Northwest CAP recharge and recovery project, then you would limit what the future increase may need to be to pay for this system. For example, if \$500,000 is needed to pay for approximately 1,000 ac-ft of delivered CAP through the Tucson Water infrastructure, that same \$500,000 could be used to pay a future debt service when the District is ready to proceed with and finance the Northwest CAP system. In reality, you would be raising revenue now for one purpose that would be transferred to pay for a future need. The pros and cons of wheeling our CAP water through Tucson Water could be further developed to look at the financial implications, possible benefits to the District's system, and the relationship with the Northwest CAP system.

**Staff Recommendation**

It is recommended that the Board of Directors discuss with staff the issues involved with a wheeling agreement with Tucson Water for utilizing more CAP water within the District's actual service area. It is also recommended that the Board direct staff to further develop a more detailed financial analysis of the Northwest CAP system and how a water wheeling agreement may benefit the Northwest CAP system.

**Suggested Motion**

The Board may want to consider directing staff to develop a more detailed financial analysis of the Northwest CAP system and how a water wheeling agreement may benefit the Northwest CAP system.

Respectfully submitted,

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General Manager