**ICMA Program Excellence Awards: Community Partnership Award**

**Phoenix/Tucson Water Exchange**

**Problem Assessment, the Challenge or Need That Prompted the Local Government to Develop the Program**

Desert cities know the value of water, and for years, the City of Phoenix (“Phoenix”) has been a leader in water resource planning and management. After more than fifteen years of sustained drought and with the possibility of water shortage on the Colorado River a distinct possibility, Phoenix recognized the need to do more to ensure not only water resource sustainability, but also resiliency. The result was a groundbreaking partnership with the City of Tucson (“Tucson”), Arizona’s second-largest city, to enhance the resiliency of both cities’ water resources and further insulate the majority of Arizona residents from water shortage on the Colorado River. The partnership allows both cities to more effectively and efficiently use their respective Colorado River allocations to meet the challenges of a changing climate under current legal and political structures.

Phoenix uses approximately two-thirds of the Colorado River water to which it has contract rights. Under the terms of the partnership, Phoenix has begun the delivery of some of this unused allocated Colorado River water to the City of Tucson through the Central Arizona Project canal. Tucson stores this water in its aquifer recharge facility. These “storage credits” belong to Phoenix, but reside in Tucson’s Southern Avra Valley Storage and Recovery Project (SAVSARP) aquifer. During future times of water shortage on the Colorado River, Phoenix is able to give Tucson the storage credits issued under Phoenix’s name in the Tucson aquifer. Tucson can pump the credits out of its aquifer and deliver this water to Tucson customers. In exchange for these credits, Tucson will deliver its allocation of Colorado River water to Phoenix’s turnouts on the Central Arizona Project canal.

This exchange agreement not only supports but enhances each city’s water infrastructure. The Tucson water system is reliant on wells and the Phoenix water system is reliant on surface water. Phoenix may store and recover up to 37,000 acre-feet annually of its Colorado River surface water. Tucson benefits in the short term through increased water levels in its aquifer that lower pumping costs, while Phoenix benefits by receiving surface water deliveries at its water treatment plants in the future during times of water shortage on the Colorado River.

By leveraging the unique infrastructure characteristics of each system and partnering together, both communities increase the resiliency of their systems and demonstrate a transformative and sustainable action for Arizona cities to utilize.

**Program Implementation and Costs**

 Initial-phase program costs included time and staff resources to develop a practical and legal framework to accomplish the goals of the partnership. Existing Tucson storage and Central Arizona Project canal infrastructure are utilized without necessitating new costs. Costs associated with Phase II of the Intergovernmental Agreement include an annual water storage fee which starts at $67.59 per acre-foot to cover Tucson’s maintenance, replacement, and administrative costs, as well as a fee to facilitate expansion of Tucson’s storage facility to accommodate Phoenix’s additional stored water.

**Tangible Results of Measurable Outcomes of the Program**

Direct benefits to the cities of Phoenix and Tucson are resilient water supplies during times of shortage on the Colorado River. In the first year of the program, Phoenix was able to store approximately 1,000 acre feet of water. That represents the annual needs of about 3,000 average Phoenix-area households. To date, Phoenix has stored 4,850 acre-feet at Tucson’s SAVSARP. By leveraging Tucson’s existing well capacity, Phoenix avoids the cost of developing additional wells in its own service territory, estimated at around $6 million per well. Tucson benefits with lower short-term groundwater pumping costs.

**Lessons Learned During Planning, Implementation, and Analysis of the Program**

 Development and implementation of this groundbreaking intergovernmental water exchange agreement required flexibility, innovation, and collaboration with Tucson, the Central Arizona Project, the Arizona Department of Water Resources, the Arizona Water Banking Authority, and the United States Bureau of Reclamation. The complexity of the program required legal expertise, communication, patience, and perseverance to accomplish its strategic vision.

**How the Program Raises Awareness of the Contributions of Local Government Managers**

The exchange agreement between Phoenix and Tucson is a nationally recognized advancement in water resource management in Arizona. This unique collaborative effort has significantly increased the resiliency of Arizona’s water supplies in its two largest population centers. By working with desert city partners, Phoenix continues to ensure the availability of reliable water supplies needed to advance public health, economic opportunity and quality of life. This exchange demonstrates sustainable actions and implements effective water management strategies to ensure dependable water supplies both now and for future generations to come.

An important result of the exchange agreement was insight to a potential to expand this exchange model to other municipalities that use Colorado River water in Central Arizona. By working with regional, local, state, and federal officials to provide flexible delivery of water resources, local government managers are better positioned to meet water shortage challenges on the Colorado River. This partnership serves as a new model for intergovernmental collaboration. Securing Arizona’s water future is one of Phoenix’s highest priorities – for residents and for the economy. This partnership demonstrates that cities can find creative means to protect water supplies and safeguard against drought and climate change.