

# Regional Water Assessment Task Force *ThinkTank* Report

– AUGUST 2011

Conducted in the Tucson  
Active Management Area

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## PURPOSE

In order to assist the region in shaping its efforts to achieve a sustainable water future, the Regional Water Assessment Task Force (Task Force) gathered input and guidance from stakeholders throughout the Tucson Active Management Area on priority regional water issues as well as water management options. By recognizing areas of concurrence and divergence, the Task Force hopes to define possible routes toward improving regional cooperation. This report describes how and why the Task Force was formed and the ThinkTank process used to gain stakeholder input. This report will serve as the basis for a public meeting to gain additional input on our findings to date.

## BACKGROUND

Interest in water supply and demand extends beyond the water manager and regulator to individuals and organizations throughout our regional community. Specifically, those interested in economic development and the environment have expressed interest in becoming involved in formulating our region's water management policy. In addition, citizens have questioned long-term availability of water supplies in light of anticipated impacts of climate change on Colorado River supplies.

### City of Tucson/Pima County Water Study

In 2008, the City of Tucson and Pima County began the multi-year Water and Wastewater Infrastructure, Supply and Planning Study (Water Study), outlining a five-phase approach. The first two phases focused on the City and County metropolitan service areas. The final three phases suggested using similar methodologies, but expanding to the larger metropolitan area and involving neighboring municipalities as well as other water providers.

Phases I and II involved a series of public meetings, establishing baseline information about water resources, infrastructure, treatment, reuse and sustainability factors. Upon completing Phase II of the study, in January 2010, the City and County developed and adopted an action plan for their jurisdictions. In a joint memo from the Pima County Administrator and the Tucson City Manager, dated January 12, 2010, it was recommended that Pima Association of Governments convene an expanded regional water and wastewater study process. ([www.tucsonpimawaterstudy.com](http://www.tucsonpimawaterstudy.com))

## Pima Association of Governments

In early 2010, Pima Association of Governments (PAG) received direction from its Regional Council to assess community interest in convening a regional water process. Upon examination, PAG staff found that most of the recommendations produced by the City/County study either impacted or would be of interest to the broader regional community if implemented.

PAG assessed interest in a regional process through interviews with representatives from jurisdictions, water providers, the business community, environmental activists, the Tohono O'odham Nation, the San Xavier District, the Santa Cruz Providers and Users Group, state agencies and many knowledgeable long-time participants in water management. Based on these interviews and other input, it was clear that running a process similar to the City/County Water Study would not work on a regional level. Feedback indicated participating entities would not be able to, or would not be interested in, devoting the extensive level of staff and resources necessary to complete Phases III-V as originally outlined.

### Regional Water Assessment Task Force

Based on the results of PAG's interviews and interest expressed by others in exploring options for undertaking a regional water assessment, the following representatives formed a Regional Water Assessment Task Force.

**Carolyn Campbell**, *Community Water Coalition* (July 2010 -Jan. 2011)

**Madeline Kiser**, *Community Water Coalition* (Jan. 2011- present)

**Sharon Megdal**, *University of Arizona Water Resources Research Center*

**Mark Stratton**, *Southern Arizona Water Users Association*

**Vince Vasquez**, *Tucson Regional Water Coalition*

**Claire Zucker**, *Pima Association of Governments*

Information gathered from the PAG interviews and initial Task Force discussions led the Task Force to conclude that the regional process should reflect the opinions and sentiment of a diverse group of regional participants rather than strictly follow the guidelines suggested in Phases III-V of the City/County Water Study. The Task Force chose to employ an Internet-based software tool called ThinkTank to gain input from regional participants. PAG provided the ThinkTank equipment and guidance for this process and the sessions were held at PAG's offices and at the

Water Resource Research Center. This software allowed the Task Force to collect information from the participants in an open, yet confidential environment with the use of laptops and a meeting facilitator. The objective was to collaboratively brainstorm and then to prioritize the ideas generated by the group. The rankings enabled the Task Force to identify those ideas with the highest level of consensus.

## THINKTANK SESSIONS

The four ThinkTank Sessions were held on Nov. 22, Dec. 8, 9, and 13, 2010. In total, sixty-four individuals attended, with each session including 15 or more participants. Every effort was made to have a diversity of perspectives represented at each session. Representatives from the following community sectors and interest groups were invited to participate: Elected officials; municipal managers; public utilities including water and wastewater; private water utilities; Central Arizona Project (CAP) Board and staff; state and federal agencies; Indian nations; agricultural interests; mining interests; University of Arizona; environmental advocates; land management groups; economic development interests; and individuals with long-term involvement in water issues including attorneys.

The Task Force developed the following questions, which were distributed in advance, to solicit responses during the ThinkTank sessions:

1. What regional water issues need to be addressed?
2. What could our water use priorities be at a regional level?
3. How can water resources be managed at a regional level?
4. How can water use be managed at a regional level?
5. How can water infrastructure for the region be funded?



The Appendices to the report include the questions and other materials provided to participants.

## Methodology and Data Analysis

The data gathered from the four ThinkTank sessions resulted in 888 individual responses. Each session allowed fellow participants to rank each comment on a high, mid, low priority ranking scale. These rankings provided quantifiable statistics for further sorting of the responses. To identify the region's areas of agreement, the Task Force's analysis focused on those responses that received the highest level of consensus from participants. The Task Force defined high consensus responses as those that scored in the top 25 percent. The 222 responses above this cut off were then categorized into one of the ThinkTank themes described in the next section.

The methodology for data analysis and all responses collected through the ThinkTank process are available for review in the Appendices to this report. In some cases, ideas were offered numerous times, but did not achieve high levels of consensus during the ranking portion of the session. In other cases, a particular idea polarized the

ThinkTank session and future evaluation of these ideas can help us identify areas for further consensus building.

## THINKTANK THEMES

### I. Coordination and Cooperation

**Cooperation & Coordination Broadly Supported** – There was strong agreement among participants that greater coordination and cooperation under a shared vision would be beneficial and would help the region achieve a sustainable water future. Participants would like to see a regional process where all regional entities participate and that is based on inclusiveness.

Participants generally supported the concept of standardizing conservation programs throughout the region as a form of cooperation. There was also general agreement that the region should explore ways to integrate land use and water resource planning, which will necessarily require a heightened level of cooperation among jurisdictions, water providers and others. Participants recognized that regional cooperation and coordination should be based on a shared vision regarding the desirable balance in the region of urbanization, agriculture, industry and natural desert. Coordination among political bodies, between governments and water bodies, and between entities that manage groundwater, surface water and effluent was supported by ThinkTank participants.

**Structuring Cooperation** – While most agreed that cooperation and coordination benefit the region, there was a broad range of recommended structures. Some participants favored a loose affiliation of entities that would collectively uphold an agreed-upon water management framework, supporting continued primacy of individual entities' decision-making. Others favored cooperation on individual efforts, such as project-specific infrastructure development, supply acquisition or standardized conservation programs. Finally, participants supported evaluating the possible benefits of establishing a regional organization.

**Linkages** – Given that regional planning will be impacted by state-wide decisions and institutions, participants felt the region would benefit by developing a unified and effective voice to express our region's concerns in dialogues that extend beyond our region.

### II. Sustainability

**Balance and Priorities** – Participants emphasized that we must balance and prioritize the water needs of people, the economy and the environment in order to maintain a livable region. A related concern surfaced about the importance of living within our hydrological means, in balance with the physical limits of our desert environment. Participants expressed their perception that the uncertainty of current and future water supplies may jeopardize our ability to meet the water needs of future generations, as well as those of the natural environment.

**Hydrologic Sustainability** – Participants expressed concern about the long-term health of regional groundwater supplies. Specifically, comments reflected concern regarding localized overdraft of the aquifer due to the lack of hydrologic connectivity

between recharge and recovery. Participants also expressed concern about the effects on riparian habitat if there is localized drawdown in shallow aquifers. Similarly, many participants agreed that the region needs to focus on the measurable goal of achieving Safe-Yield, and expressed concern that the Tucson Active Management Area will not achieve Safe-Yield by 2025.

**Integrated Management** – Participants raised the issue of managing water to gain sustainability through connecting water and energy management and by setting up a coordinated management system to link ground water, surface water and effluent.

**Conservation** – There was broad agreement that consistent conservation goals and standards based on best practices should be set across the region. The group supported the idea that incentives and rewards should be provided to all water users to promote conservation and efficiency. In addition, it was noted that a coordinated campaign to educate the public about conservation should be established.

### III. Supply

**Reliability and Availability** – Participants voiced strong support for building supply reliability into our region. Participants were concerned about the long-term reliability of the region's water supply given factors such as possible shortages on the Colorado River and population growth forecasts. Simply stated, participants want to know if the region's water supply portfolio will be sufficient—in a variety of possible supply/demand scenarios—to sustain current and future populations, accommodate expected growth, and maintain healthy ecosystems.

**Full-Utilization of Existing Supplies/Entitlements** – Participants agreed that the region should focus on ways to improve the management of the existing water supply portfolio. Specifically, participants agreed that the region should collectively strive toward full-utilization and/or improved management of existing supply sources such as CAP allocations, effluent supplies, as well as alternative sources such as rainwater and stormwater.

Participants recognized that improved management of the region's water supply involves better utilization of and investments in regional infrastructure. Comments reflected a desire to improve physical access to CAP in growth areas and to improve the hydrologic connectivity between recharge and recovery. Participants expressed a desire to fully utilize effluent through direct delivery to non-potable uses and/or to maximize long-term storage credits.

**Acquisition of Additional Supplies** – There was general agreement that ensuring a sufficient, reliable long-term water supply for the region will require the development and acquisition of additional supplies. Participants expressed interest in coordinating with other regional entities to acquire and/or develop water supplies for the region, including cooperative participation in CAP's ADD Water program and exploring desalination options. They suggested possibly developing a regional entity charged with acquiring new supplies. The attendees supported utilizing stormwater/rainwater as a potential resource and expanding the use of effluent and reused water and increasing public support for their increased use.

**Water Quality** – People were concerned about having clean reliable water, particularly as it relates to emerging contaminants. In addition, matching the water quality used to the quality needed for specific uses was emphasized.

**Natural Limits** – Participants expressed concern that both existing and new supplies be utilized in ways that are hydrologically sound, acknowledging natural limits of the desert environment. There was general agreement that the region should not promote growth in areas that lack sufficient water resources. Other participants stated a need to establish policy that connects the management of surface water and groundwater supplies.

### IV. Cost, Pricing, Funding

**Cost** – Support was voiced for reflecting the value of water as an economic (scarce) resource when considering how it is used. There was considerable discussion regarding capturing the full cost of water and wastewater service in rates. Statements regarding "full cost pricing" were supported by a general view that under pricing of water/wastewater service is leading to misallocation and misuse of available resources, dilapidation of existing infrastructure, and an inability to plan effectively for the future. It was noted that a regionally cooperative effort can result in cost savings.

**Pricing** – There was general agreement among participants that rates are low and will need to be increased as we seek a sustainable water future. Participants viewed higher rates as a means to support traditional utility objectives such as infrastructure maintenance and development, acquisition of new supplies, etc. Water rates that include all the costs of the water would also support conservation goals, better allocation of water, and environmental and social benefits.

**Funding** – Participants agreed that those who create costs should pay them, and likewise those who benefit from regional resources should pay for those benefits. This theme was closely linked to the view that growth should "pay for itself," a concept that received broad support among participants. There were a number of comments regarding evaluating and/or establishing funding mechanisms within the region for infrastructure development as well as acquisition/development of new supplies. Supported ideas included taxing groundwater use and providing incentives for successful water management.

Participants generally agreed that there should be some cooperative financial planning among regional entities. However, comments reflected a variety of opinions as to the degree of financial cooperation the region should explore. Sentiment ranged from a desire to exhaust individual efforts before looking to regional financial structures, to a desire to cooperate on specific projects that are regional or sub-regional in scale, to more comprehensive cooperative financial planning efforts such as a regional authority.

### SUMMARY AND RECOMMENDATIONS

A few priorities emerged through the ThinkTank process, based on a single underlying conclusion: It is essential to ensure the region has a safe, reliable and sufficient water supply to meet the current and future needs of people, the environment and the economy. Therefore:

- There needs to be more collaboration and cooperation in managing water resources at a regional scale.
- Current water resources should be fully utilized,

including CAP water, effluent and rainwater/ stormwater.

- New water supplies need to be acquired/developed.
- Conservation initiatives and education should be implemented at a regional scale
- The era of cheap water is over. Rates will need to be increased to build new infrastructure, meet water quality standards, acquire new supplies, and improve allocation of water resources.
- Regional water policy should be consistent with the natural limits of the region and should consider evolving climate conditions.

The challenges southern Arizona faces regarding water are not unique. However, the complexity of water management can create confusion among policymakers, the public and the press. Yet, water management decisions affect the social, environmental and economic well-being of the region. The Task Force therefore recommends that Best Management Practices be evaluated to help inform our future water policy making. In addition, we recommend that four working groups be formed to collectively develop workable solutions and strategies for the high priority areas identified in the ThinkTank process.

### **1. Best Management Evaluation**

Research and evaluate existing regional water management systems as case studies to inform the local process, providing possible methods and structures that have been implemented in other communities. In order to move forward, a full Scope of Work will need to be developed and funding will need to be secured. This study can be conducted concurrently with the other recommendations outlined below.

### **2. Regional Solution/Strategy Groups**

The purpose of these four suggested Regional Water Strategy Groups is to bring together those people who are working on, or concerned about, these issues in order to move forward in a cohesive way. The Task Force recognizes that many of the elements outlined below are being actively pursued by groups or members of our community. Identifying the following community supported goals and possible ways of implementing them can move us closer to joint actions that can benefit our region. All four groups should consider the economic, social, and environmental implications in their respective areas of study and work.

#### **Group #1 – Supply**

**Goal: To fully utilize existing supplies, whether by direct use or recharge/recovery.**

- o Develop solutions for improved utilization or full-utilization of existing supplies, including CAP allocations, excess CAP, effluent and stormwater/ rainwater.
- o Develop strategy for regional cooperation on acquisition and/or development of new supplies. The group should address regional participants' coordinated engagement in CAWCD's ADD Water process as well as all other possible sources of supply.

- o Understand and develop strategy to monitor the region's vulnerabilities to supply shortages. Develop strategies designed to mitigate potential impacts of supply shortages.

#### **Group #2 – Infrastructure**

**Goal: To identify water infrastructure needs as well as potential funding mechanisms to pay for infrastructure or to compensate owners of existing infrastructure for capacity.**

- o Define and create inventory of existing "regional" infrastructure. Develop strategies designed to increase utilization of existing regional infrastructure such as building upon the success Tucson Water has had in developing wheeling agreements with local providers.
- o Identify and prioritize new regional and sub-regional infrastructure projects that will advance regional water management objectives such as improving hydrologic connection between recharge and recovery as well as physical access to renewable supplies in growth areas.
- o Develop equitable funding strategies for cooperative use of existing infrastructure as well as development of new regional and sub-regional projects.

#### **Group #3 – Conservation/Demand Management**

**Goal: To coordinate conservation programs to improve consistency and water use efficiency throughout the region. Programs and individual measures should consider associated costs and benefits.**

- o Evaluate existing water conservation programs of various water providers in the region as well as successful programs outside the region. Evaluation should include an overview of state requirements for water providers' conservation programs.
- o Develop strategy to coordinate water conservation programs in the region. Strategies developed should be informed by cost-benefit and/or cost-effectiveness analysis, and should compare water conservation programs/measures to alternatives such as supply acquisition.

#### **Group #4 – Reliability, Sustainability and Aquifer Health**

**Goal: To monitor and integrate information about the following topics, among others: Colorado River reliability and CAP availability, effluent, stormwater resources, local drought impacts, sub-regional aquifer drawdown, and riparian health to improve regional water decision making and to provide reliable information to the public and the press.**

- o Develop strategies to help the Tucson AMA achieve Safe-Yield by 2025, in the context of broader dialogue about long-term aquifer sustainability.
- o Develop strategies to protect and restore the region's riparian areas, including reducing localized groundwater in environmentally sensitive areas.
- o Serve as a liaison among sustainability and reliability initiatives in southern Arizona and at the state level.
- o Prepare informational/press releases regarding these issues.