

I. Arizona's water situation is not what many people assume it is.

Arizona's population and economy have experienced explosive growth in the last five or six decades. **But this growth has not resulted in an overall increase in demand for water.** The state's total water demand has actually declined since 1980. Current demand is the same as it was in 1957, although we now have almost six times the population and our economy has increased twenty-fold. (Page 31 of the background report has a graphic illustration.)

Arizona is not in a water crisis now because the state has always carefully planned for both shortage and growth.

- Carl Hayden, John Rhodes, Mo Udall, Paul Fannin and other Arizona leaders made sure that the state benefited from big Bureau of Reclamation projects: Roosevelt Dam and the Salt River Project and Glen Canyon and Hoover Dam and the Central Arizona Project.

- No less significant has been Arizona's **Groundwater Management Act** (1980). Key features:
 - 5 Active Management Areas that cover nearly 85% of Arizona's population

 - Assured Water Supply requirement that link development and water supply—cities, towns and developers must prove a 100-year water supply is available before new subdivisions can be built

- Mandatory conservation requirements that for years have prompted municipalities, industries and farmers to invest in water efficiency.
- **Arizona Water Banking Act (1996)**
 - Objective was to create a reserve water supply for communities dependent on the CAP during times of drought on the Colorado River.
 - To date, 3.8 MAF stored—well over twice the annual CAP allocation.

So as a result of this careful planning, Arizona has not experienced the water rationing and emergency restrictions we've witnessed in California. We are weathering the drought, now in its fifteenth year, and we have made preparations for a shortage on the Colorado River.

II. Nevertheless, as the Background Report states, Arizona

faces significant challenges with respect to future water

supplies. We have enough water to meet today’s demand,

but our population is projected to double in the next half-

century, and we will face a supply gap. Our generation must

ensure these challenges do not become crises.

Major Challenges: (First, in rough numbers, assume 40%

from CAP, 30% SRP and 30% groundwater.)

- **Colorado River:** Over-allocation, drought and other pressures add complexity to the drought. Lake Mead, the main reservoir for the Lower Basin states, is at an **all-time low**, at under 50% of capacity. **Lake Powell**, the major upstream reservoir is similarly low. The “Miracle May” rains this year spared us from a “shortage declaration” in

2016, but there is still a possibility that a shortage will be declared in 2017 or 2018. And because more water is allocated out of Lake Mead than goes into it, year by year, without corrective measures, Lake Mead could fall to the non-functional 1,000' level in five to eight years.

- **Our Intrastate Arizona Surface Water Supplies** (mostly rain and snow in our mountains) have experienced impacts from drought, decades of poor watershed management and groundwater pumping.
- **Groundwater: One of the biggest water policy challenges Arizona faces.** To read the recent news stories, one might conclude there are **two Arizonas**. Cities and towns in Active Management Areas generally have secure water supplies and reserves, thanks to the

Groundwater Management Act. Outside of the AMAs, where groundwater is not regulated, there is great potential for problems to arise.

- Recently, communities in Willcox and San Simon have divided over how much new groundwater pumping should be allowed, leading to unsuccessful petitions to the Department of Water Resources for legal designations that would limit pumping.
- In the last month, the news has featured stories about foreign interests that have bought land in arid western Arizona, which the buyers plan to use to grow alfalfa and other crops for export abroad. All the water for these crops comes from non-replenishing groundwater.

- Outside of Arizona's five Active Management Areas and three Irrigation Non-Expansion Areas, there are virtually no limitations on groundwater pumping. We can expect more controversies over expanded groundwater withdrawals.

Now, In addition to challenges presented by physical stresses on the Colorado River, Arizona's rivers and our groundwater aquifers, we also need legal clarity over water rights.

Which brings us to:

- **The General Stream Adjudications:** The General Stream Adjudications are lawsuits to resolve all the surface water rights claims in two large watersheds in Arizona, the Little Colorado and the Gila River. Commenced in

the 1970s, the Adjudications are among the longest running and most complex lawsuits in the history of the United States, involving tens of thousands of claims and thousands of parties ranging from individual property owners to cities, from mining and agricultural concerns to Indian tribes and the National Park Service. To cite just one example of problems confronting the adjudications courts--

Subflow: As the Background Report explains, the “subflow issue” has proven to be an enormous obstacle in the adjudications. The Arizona Supreme Court has articulated a test for determining when water percolating into the ground constitutes the subflow of a river, but the test has proven cumbersome to apply. Imagine thousands of wells near the Verde River

pumping water that may be subflow of the river, in which case, the water belongs to downstream users, e.g. landowners in Phoenix.

Why Resolving the Adjudications is critical for Arizona:

- **We need to start planning:** Financing, regulatory hurdles and other planning related to water augmentation projects require long timelines. Until there's clarity regarding water rights and priorities, potential stakeholders do not have sufficient incentive to invest in the necessary early planning.
- **The Adjudications should remain in state court:** It is in Arizona's best interests for the Arizona state courts to retain control of the entirety of the Adjudications. Delays create risk for removal of federal claims,

resulting in fragmented proceedings, greater expense for everyone, including Arizona taxpayers, greater difficulty in effecting Indian water settlements, and more potential delay.

- **Uncertainty discourages economic investment.**

Industry is going to locate where long-term water supplies are secure. Communities throughout Arizona are eager to attract new businesses. Those communities won't have the economic development they seek if they can't show that they have certain and sustainable water supplies.

These are just some of the challenges we face as we plan for the state's water future.

III. Now allow me to mention some potential pitfalls in the

Town Hall water discussion:

There are some myths about water planning of which we must be aware.

- **Conservation**—demand reduction—has been instrumental in extending our existing water supplies to support more people and economic activity; but, as both the BOR & DWR reports confirm, we’ve squeezed about all we can from conservation-- **conservation cannot close the supply gap**. We will need to look at augmentation, including maximizing wastewater re-use, which ADWR says could meet half of the increased future demand.
- **Rushing to desalination would be imprudent.**

Desalination technology is improving and the cost of

desalinating water is going down. However, desalination plants are still very costly and very very costly to operate: It still takes enormous quantities of electricity to operate desalination plants. Just building the new plant at Carlsbad, California will cost \$1 billion. And desalination plants in Tampa and Santa Barbara, California have been idled or mothballed because there was insufficient water demand to justify the expense of operating them. In effect, these plants function as the world's most expensive reserve water supply. **Doing the other things we can do now and waiting for the appropriate demand and price indicators is the wisest course.**

- **Water Markets are not the simple, elegant solution.**

Water rights and regulations in Arizona and the West are

legally complex and nuanced. Economies and communities have developed in reliance on our water rights regime.

This is particularly the case in rural areas. So, even if it could be done legally, which is problematical, altering this regime, for example, to enable water rights holders to sell water in an open market, would have potentially very disruptive consequences for those rural communities and economies, with ramifications extending well beyond.

These consequences necessitate very careful consideration. So what to do? Maybe we can again turn to the federal government, some suggest.

- **Well, the Reclamation Era is behind us.** Over the twentieth century, the nation had an interest in investing in settlement and developing agriculture in the west.

During that era, there were water supplies that could be developed through reservoirs and diversions. **Today, we have no realistic prospect of a large-scale federally financed water development project.** We should not hold out hopes for a Reclamation-scale federal project to bail us out.

And yet--

IV. There are reasons for optimism.

- **Governor Ducey has demonstrated a commitment to meaningful water supply planning.** Last month, the Governor directed the Department of Water Resources to move forward with the 2014 Strategic Vision—the Department’s roadmap for statewide water planning. The Department will first focus on the highest priority areas of

the state—the water hotspots. The Governor also announced the formation of a group to study and make recommendations on water augmentation strategies for Arizona. Another welcome development.

- **There is now a productive discussion about resolving claims in the General Stream Adjudications.** For about a year, a group of some forty attorneys and water managers representing parties in the Adjudications have been working with the Kyl Center for Water Policy to try to reach consensus on improving the process for resolving claims. The group has made significant progress on a proposal, but there's difficult work ahead. It is really really hard to efficiently but fairly resolve tens of thousands of claims to Arizona's surface water.

But, we're working on it--constructively and in good faith.

- **There's greater awareness among the general public and Arizona's leaders that we are approaching some critical decisions.**

- Senators McCain and Flake are consulting with the Governor and ADWR Director Buschatzke on Arizona's water priorities.
- The Kyl Water Center's announcement that it is establishing a Leadership Roundtable has been met with enthusiasm from elected officials across the state who want to understand water issues and contribute to solving them.
- A November 3rd daylong workshop offered by the Water Center and the Arizona Republic sold out! Over 250

people paid to learn from water managers, other experts and journalists about the state of Arizona's water supply resilience. And, I am pleasantly surprised at the willingness of Arizona's water user representatives to constructively and imaginatively tackle some very difficult issues. There is real awareness that we have no time to waste.

V. Closing thoughts for Town Hall Participants

Here are some key goals and thoughts for your discussion this week.

- We must make resolving the **General Stream**

Adjudications a priority. When people don't know how much water they have a right to and in what priority, the

incentives for planning and investment in future water supplies are out of kilter.

- Until we have some rules about **groundwater pumping outside the AMAs and INAs**, we will see conflict after conflict arise as existing groundwater users feel the impacts of new, additional groundwater demands.
- During the Great Recession, the budget for the **Arizona Department of Water Resources** was cut in half, resulting in the loss of a significant part of the agency's brain-trust of water expertise. Recognizing ADWR's critical role, Governor Ducey and the legislature took the first small steps to restoring some of the Department's funding. But, as the song goes, "there is a long way to go and a short time to get there." We must accelerate the **re-building of**

the agency so that it can fully perform its functions,

including:

- groundwater management in AMAs and INAs
- water planning throughout the state, especially in rural areas, which lack the planning resources that large urban areas have
- technical support of the General Stream Adjudication, and
- representing Arizona in interstate negotiations on the Colorado River.

The summer of 2015 was the thirty-fifth anniversary of the passage of the Groundwater Management Act and the thirtieth anniversary of the first delivery of Central Arizona Project water. Both were the product of hard-fought political

compromise. Arizona's growth and economic development could not have happened without them. This is a moment in time when Arizonans are once again called upon to look to the future, to compromise, to plan and to invest to ensure that we have water for Arizonans' continued well-being and prosperity. Your deliberations over the next couple of days can contribute to this important endeavor. I wish you all the best.