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A New Framework is needed for Arizona's water future.

Climate change is affecting precipitation and the amount and timing of river flows. Runoff in the Colorado and other river systems on which a significant amount of Arizona's water supply depends for direct use and for groundwater recharge will decline by 20-40 percent by mid-century, exacerbating water supply shortages that already exist¹. The Colorado River system has been overallocated since the signing of the 1922 Compact and is unable to meet future demand.² In 2021, for the first time, the federal government declared shortages on the Colorado River, which disproportionately affect Arizona and began in January 2022, and more recently cuts have been made relative to water in Lake Powell, all of which is a bit of a shell game. Reduced precipitation, increasing heat, increased evapotranspiration from soils and plants, and changes in the timing of runoff to the rivers are making serious droughts of more frequent occurrence and duration. Arizona is in its 26th year of a long-term drought, perhaps the most extreme in the last 1200 years according to scientists.³ This indeed may be a new normal, aridity, rather than a drought, which would end at some point. Both groundwater and surface water resources are already over-allocated. Climate change is exacerbating that.

That is why the Arizona Legislature and Governor Ducey should focus on more sustainable water policies; ones that limit groundwater pumping throughout Arizona and especially outside active management areas and in areas where it is affecting the flows in our rivers. Rather than merely pursuing importing water from outside Arizona, they should examine the sustainability of the current growth and development patterns, the current agricultural practices, and the opportunities for deeper conservation such as reclamation and treatment of wastewater flows. Water law should be amended to provide for ecological flows in Arizona's watercourses that will support biological diversity, which currently is gravely threatened by climate change and existing laws that ignore the needs of riparian ecosystems.

Modernize and Improve Arizona Water Laws

- Adopt groundwater pumping limits statewide. This could be via enhanced Rural Management Areas or making all of Arizona an active management area with some enhancements as well.

¹ <https://www.demos.org/research/economic-and-environmental-impacts-climate-change-arizona>

² "The Colorado River Is Overcommitted. Here Is Why & What We Can Do about it," Bret Jaspers, December 19, 2019, <https://kjzz.org/content/1359436/colorado-river-overcommitted-heres-why-and-what-we-can-do-about-it>
"Management of the Colorado River: Water Allocating, Drought, and the Federal Role," Charles Stern, Perrvance A. Sheikh, Congressional Research Service, August 16, 2021, <https://crsreports.congress.gov/product/pdf/R/R45546>

³Arizona Drought, Arizona State Climate Office, Accessed 11/05/2021

<https://azclimate.asu.edu/drought/#:~:text=Arizona%20is%20currently%20in%20our,of%20a%20long%2Dterm%20drought.&text=Since%20Arizona%20has%20an%20arid,few%20wetter%20than%20normal%20years.>
<https://www.azcentral.com/story/news/local/arizona-environment/2020/05/06/western-megadrought-centuries-worsened-climate-change-global-warming/3036460001/>

- Recognize the hydrological connections between ground and surface water in order to protect rivers, streams, and springs from excessive groundwater pumping. Limit groundwater pumping in areas where it threatens base flows of surface waters.
- Phase in a requirement to achieve safe yield in Phoenix, Tucson, Prescott, and Pinal AMAs.
- Require all AMAs not in safe yield to prepare a long-range conservation plan.
- Require all new construction to be on sewer and that the treated wastewater be recharged to benefit the aquifer, not pumped to support new development. Permanent recharge.
- Adopt programs to discourage growing thirsty crops or attracting water-intensive industry in Arizona and to promote greater efficiency in water use. This could be accomplished via a combination of regulation and incentives but must include accountability and enforceability.
- Adopt legislation to protect ecological flows in Arizona rivers, recognize water for nature.
- Adopt a state environmental policy act that requires evaluation of the environmental impacts, including relative to environmental justice, of any proposed project that involves state dollars or resources and specifically any water project the state is considering funding. Require selection of alternatives that have the least environmental impact. Require full consultation and engagement of a broad range of voices in the process.
- Adopt and fund programs for reuse of wastewater.
- For basins in water shortage, conduct a comprehensive evaluation that identifies and compares alternative solutions for economic, environmental, and social impacts - not simply engineering studies. The alternatives should include aggressive conservation, stormwater capture for aquifer recharge, increasing recovery of wastewater for recharge by reductions in direct reuse, direct potable reuse, reductions in urban landscape water use, and reductions in agricultural water use by fallowing, improved irrigation techniques, and transitioning away from low-value high-water crops like alfalfa and cotton.
- Adopt a climate resiliency plan for Arizona and direct every agency, but especially the Arizona Department of Water Resources and Arizona Department of Environmental Quality, to implement rules to help ensure greater resiliency regarding our waters.

Community Participation:

- Reject the process for establishing this bill and the processes in the bill.
- Bring new people to key water tables, including full Tribal participation and those willing to talk about a climate emergency, the perils of unlimited growth, and the power structures that have allowed this folly to continue.

Arizona Water Authority

The framework for the Water Authority is all wrong as it focuses on continuing business as usual by identifying and funding water projects outside Arizona with no consideration of the environmental impacts. We need a regulatory framework, not an unaccountable opaque entity that doles out dollars for augmentation.

Focusing so much money, attention, and effort on finding new water when there are so many other opportunities for increased water efficiency, water reuse, and water savings by fallowing or transitioning some agricultural lands to less water-intensive crops is wrong. If this new water authority is going to be reality whether or not it is practical, it must have some mechanism for regulating water use, groundwater pumping, and surface water use.

If there is going to be a Water Authority, it should be housed in the Arizona Department of Water Resources (ADWR) rather than setting up a separate entity. Firewalls between the regulation and the funding can be established within the agency and an oversight board can be established. A funding entity could have a structure similar to the Water Infrastructure Finance Authority (WIFA) within ADWR. That would also simplify the whole construct.

The Water Authority should be required to maximize conservation before exploring outside augmentation. Likewise, it should be required to look at Arizona solutions rather than seeking to import massive amounts of water from outside the state.

“CONSERVATION THROUGH REDUCING EXISTING WATER USES, SAVING WATER, OR CREATING ADDITIONAL OR MORE EFFICIENT USES OF EXISTING WATER SUPPLIES SHALL BE CONSIDERED, FUNDED, AND IMPLEMENTED PRIOR TO CONSIDERING AND FUNDING AUGMENTATION PROJECTS.”

Augmentation projects should only be considered after a full environmental impact statement is done to determine alternatives, cumulative impacts, environmental justice implications, etc. Projects with environmental benefits shall be given preference to those without. **No funding should be allocated for projects that degrade surface waters, including springs and rivers, directly by diversions or indirectly by groundwater pumping.**

Projects should not be funded unless shown to be the most cost-effective solution through a comprehensive evaluation that identifies and compares alternative solutions for economic, environmental, and social impacts - not simply engineering studies. The alternatives should include aggressive conservation, stormwater capture for aquifer recharge, increasing recovery of wastewater for recharge by reductions in direct reuse, direct potable reuse, reductions in urban landscape water use, and reductions in agricultural water use by fallowing, improved irrigation techniques, and transitioning away from low-value high-water crops like alfalfa and cotton.

Augmentation should be the last alternative after other less expensive, more immediate strategies. More than one strategy may be required - avoid “silver bullet” solutions such as the desalination proposal the Governor has advocated.

Require ADWR to evaluate surface and groundwater conditions for all major sub-basins not in AMAs. If found out of balance, require establishment of local management authority. Require creation of plan meeting ADWR specifications to bring sub-basin into balance. ADWR should be required to evaluate the supply and demand while including rivers and springs. Public and stakeholder participation should be required.

Joint Legislative Committee on Water

Include an equal number of Republicans and Democrats on this committee and require that urban, rural, and Tribal interests are represented.

Narrow the information that the committee can keep confidential. The language in the bill is too broad.

Delete provision that “THE AUTHORITY IS A CORPORATE AND POLITICAL BODY. THE AUTHORITY IS NOT A PUBLIC SERVICE CORPORATION SUBJECT TO REGULATION BY THE CORPORATION COMMISSION.” Replace it with language establishing it as a division of ADWR.

Amend Section 45-2803 to read:

“A. THE LEGISLATURE FINDS NOW AND INTO THE FORESEEABLE FUTURE THAT ARIZONA IS EXPERIENCING THE IMPACTS OF CLIMATE CHANGE AND INCREASING ARIDITY THAT MEAN REGIONS OF THE STATE LACK ACCESS TO THE NECESSARY WATER TO MEET THEIR CURRENT AND LONG-TERM WATER NEEDS AND THAT PROTECTING THE RESIDENTS OF THIS STATE AND INSURING A MORE SUSTAINABLE FUTURE BOTH ECONOMICALLY AND ENVIRONMENTALLY REQUIRES A NEW APPROACH TO WATER AND WATER MANAGEMENT. THE BEST FOCUS FOR THIS IS LOOKING AT SUSTAINABLE GROWTH AND DEVELOPMENT, CONSIDERS LIMITS ON WATER INTENSIVE DEVELOPMENT AND AGRICULTURE, AND RETHINKS THE UNLIMITED GROWTH POLICIES OF THE PAST. THE ARIZONA WATER AUTHORITY BOARD IS ESTABLISHED AND SHALL PROVIDE OVERSIGHT OF THE ARIZONA WATER AUTHORITY WITH THE PURPOSE OF IDENTIFYING AND FUNDING SUSTAINABLE WATER PROJECTS THAT MEET THE NEEDS OF THE STATE, INCLUDING VIA EFFICIENCY AND CONSERVATION AND LIMITED AUGMENTATION, IF NECESSARY.”

“B. THE ARIZONA WATER AUTHORITY BOARD SHALL CONSIST OF TEN MEMBERS WITH A DIVERSE KNOWLEDGE OF AND EXPERIENCE WITH THE CULTURAL, ENVIRONMENTAL, HISTORICAL, LEGAL, AND ECONOMIC SIGNIFICANCE OF WATER STATEWIDE INCLUDING”

“APPOINTED MEMBERS OF THE BOARD SHALL HAVE BEEN A RESIDENT OF THIS STATE FOR AT LEAST TEN YEARS WITH A DIVERSE KNOWLEDGE OF AND EXPERIENCE WITH THE CULTURAL, ENVIRONMENTAL, HISTORICAL, LEGAL, AND ECONOMIC SIGNIFICANCE OF WATER STATEWIDE.”

Appointments are for five years. Why? How about considering three years? Also, it should limit the reappointment to one time – ten years is a long time for the same people to control this board.

Scrap the water authority board appointment recommendation committee or make it more diverse, but the current makeup is a who’s who of the usual suspects. Again, the reappointment should be limited.

Require collaboration among state agencies, including universities and regarding data sharing.

Include an independent water assessment by universities, perhaps reinstate the water collaboration project among the three universities. Utilize this and existing studies to establish water needs and ability to address them with conservation, efficiency, and reuse.

Keep independent audit of finances.

Public Private Partnership Agreements

Section 45-2837

Include additional limits on these or scrap this altogether. Private entities should not be using public money to gain greater control of water, something that is essential for life.

Rural Water Supply Development Fund

This section should include some of the same requirements for funding conservation first, not funding any projects that harm rivers and streams, and requiring an upfront environmental analysis.

Projects should only be considered after a full environmental impact statement is done to determine alternatives, cumulative impacts, environmental justice implications, etc. Projects with environmental benefits shall be given preference to those without. **No funding should be allocated for projects that**

degrade surface waters, including springs and rivers, directly by diversions or indirectly by groundwater pumping.

Projects should not be funded unless shown to be the most cost-effective solution through a comprehensive evaluation that identifies and compares alternative solutions for economic, environmental, and social impacts - not simply engineering studies. The alternatives should include aggressive conservation, stormwater capture for aquifer recharge, increasing recovery of wastewater for recharge by reductions in direct reuse, direct potable reuse, reductions in urban landscape water use, and reductions in agricultural water use by fallowing, improved irrigation techniques, and transitioning away from low-value high-water crops like alfalfa and cotton.