

# A Conservation Vision for Arizona's Water Future



Credit: Gary Beverly

## A Vision for Water Sustainability:

We envision a future where all citizens can live comfortable, economically secure lives with good jobs, and enjoy healthy natural areas with flowing rivers and springs, healthy riparian habitats, vigorous wildlife, and recreational opportunities. Water is life. To sustain our lives and environment for the future, we need sustainable water policies.

Arizona needs to achieve a sustainable water future through effective management that controls surface water and groundwater use in a manner that can be maintained for an indefinite time, without causing unacceptable environmental, economic, or social consequences. To achieve that, water users – farmers and ranchers, cities and towns, tribal communities, business and industry, environmental interests and everyday people – must work together to better manage our water resources.

## The Challenges:

Studies by federal<sup>1</sup> and state agencies<sup>2</sup> report numerous challenges to our water supply that threaten our future economy, our lifestyle, and our environment and wildlife. The time to address these

challenges is now.

Since Arizona's statehood, groundwater pumping and surface water diversions have severely impacted major groundwater basins and seriously degraded five of Arizona's major perennial rivers: the Colorado, Gila, Salt, Santa Cruz, and much of the San Pedro. Additionally, future perennial flow in the upper Verde River is deeply threatened. Researchers<sup>3</sup> predict that in 2050 groundwater demand in seven river basins will exceed base flow, thus endangering the Agua Fria, Babocomari, San Pedro, upper Verde, and Little Colorado Rivers. One indicator of the declining health of Arizona's rivers and streams is the status of native fish populations. Most of Arizona's native fish species now have status under the Endangered Species Act. Reduced river flows and deterioration of riparian habitats also have detrimental effects on hunting, fishing, boating, birding, and other water-based recreational activities that significantly contribute to Arizona tourism – a growing \$20.9 billion industry bringing revenue from outside Arizona. For communities that have centered their way of life and economy on Arizona's rivers and streams, the loss of these waters will have a profound and adverse impact on their future.

To date, Arizona has been unable to bring either surface water or groundwater to a sustainable condition. The "*General Adjudication of All Rights to Use Water in the Gila River System and Source*" has spanned four decades with costs exceeding one hundred million dollars, yet it has failed to resolve all but a fraction of the tens of thousands of outstanding water claims that are presently before the Court. The 1980 Arizona Groundwater Management Act (AGMA), while an important milestone in Arizona's water history, has also failed to achieve the key goal of "safe yield" in its five, mostly urban, Active Management Areas. The

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<sup>1</sup> US Bureau of Reclamation "Colorado River Basin Water Supply and Demand Study",  
<http://www.usbr.gov/lc/region/programs/crbstudy.html>

<sup>2</sup> Arizona Department of Water Resources, *Arizona's Next Century: A Strategic Vision for Water Supply Sustainability*,  
[http://www.azwater.gov/AzDWR/Arizonas\\_Strategic\\_Vision/](http://www.azwater.gov/AzDWR/Arizonas_Strategic_Vision/)

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<sup>3</sup> Marshall RM, Robles MD, Majka DR, Haney JA (2010) Sustainable Water Management in the Southwestern United States: Reality or Rhetoric? PLoS ONE 5(7): e11687. doi:10.1371/journal.pone.0011687

AGMA, which only covers **13 percent** of the state, has weak regulatory authorities and is administratively underfunded. The AGMA also fails to consider the water needs of Arizona's environment ("environmental water").<sup>4</sup> In fact, nowhere in Arizona's water policies is environmental protection made a substantive goal. In the portions of the state not covered by the AGMA, residents now confront a myriad of threats to existing and future water supplies that are crucial to sustaining environmental water resources and our communities.

### **Clearer Vision Needed:**

The Arizona Department of Water Resources report *Arizona's Next Century: A Strategic Vision for Water Supply Sustainability* proposes to meet Arizona's critical water needs by focusing on ways to "augment" or increase state water supplies through a series of expensive, large scale infrastructure projects or other expensive projects that would move water supplies from one area of the state to another or import water. We believe a clearer vision of water sustainability for Arizona's future is needed, one that would:

- Consider environmental water needs and propose policies to keep rivers, streams, and springs flowing;
- Consider the water needs of rural Arizona;
- Incorporate the high probability that climate change will afflict Arizona with multi-decadal droughts, increased temperatures, and diminished water supplies;
- Include new possibilities for controlling water demand through creative and strong water conservation measures; and
- Include a comprehensive economic evaluation of alternative augmentation techniques and advanced water reuse technology.

### **Modernize Arizona Water Law**

The window of opportunity to better manage our water resources is closing quickly – groundwater responds slowly both to stresses and improved management. Once a perennial stream or river dries

up for part of the year or for certain stretches, species disappear and the ecological integrity of the system is degraded. We must act now to reduce additional permanent damage from unsustainable water use.

Arizona's water laws need to be modernized, in consultation with a broad spectrum of interests. In general, we should strive to simplify water law, address rural Arizona's water issues, integrate the best available science and refocus on sustainability with a strong emphasis on conservation, reuse, and the environment. Water law reform is notoriously difficult; five previous state study commissions<sup>5</sup> have produced some valuable perspectives but no improvements to state water law. It is time for our leadership and everyday people to rise to the challenge.

### **Arizona Sustainable Water Workgroup**

We are convening a Sustainable Water Workgroup to propose policies that will prevent further degradation of Arizona's rivers, lakes and springs and find new ways to balance Arizona's water interests. New statewide policies should integrate the management of ground and surface water and ensure restoration of environmental flows, or non-degradation of current environmental flows. We are committed to including a broad range of stakeholders (both large and small) in the discussion, including our towns and communities, rural communities, Indian tribes, grassroots and community groups, local businesses, and the environmental community.

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<sup>4</sup> <https://wrrc.arizona.edu/Environmental-Water-Needs-Assessment>

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<sup>5</sup> Arizona Department of Water Resources, *Arizona's Next Century: A Strategic Vision for Water Supply Sustainability*, [http://www.azwater.gov/AzDWR/Arizonas\\_Strategic\\_Vision/](http://www.azwater.gov/AzDWR/Arizonas_Strategic_Vision/)  
See Appendix III