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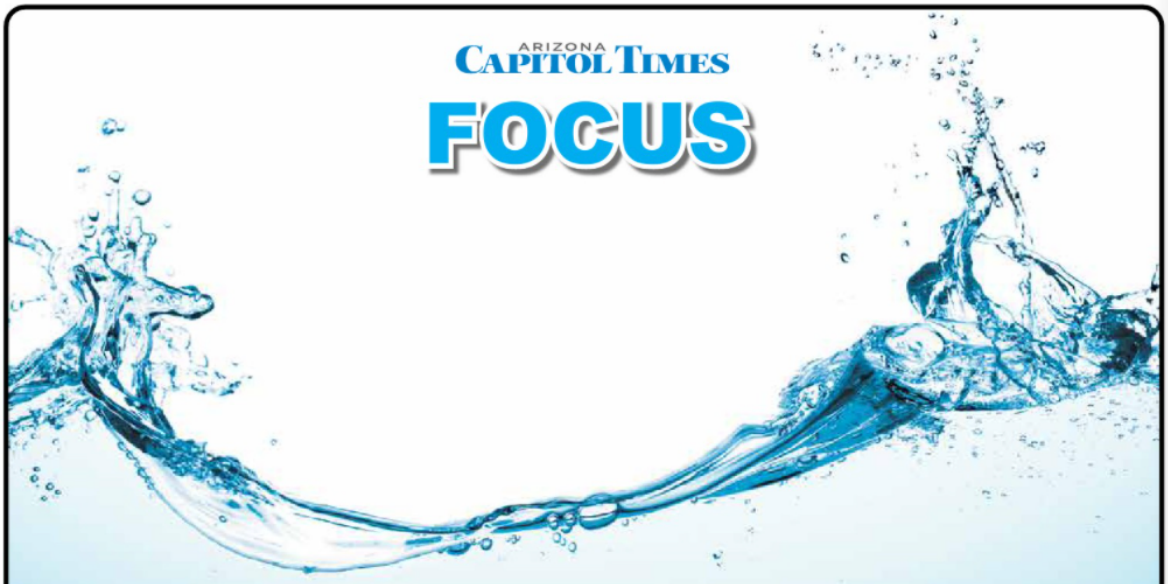

WATER

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Empowering tribes can help address drought

By Hannah Downey

Amelia Flores, chairwoman of the Colorado River Indian Tribes, recently wrote: "The Colorado River Indian Tribes have been the stewards of the river since long before the dams were built, and the settlers entered the basin."

The group of four tribes located primarily in western Arizona has significant rights to Colorado River water. But as Flores added, even as water levels on the river are drastically low, it is illegal for the tribes to lease water to off-reservation users.

Federal law prohibits many Native American tribes from leasing their water off reservation. The policy is outdated because, first and foremost, tribes deserve the autonomy to do with their water as they please. And giving them the option to market their water off reservation — if they choose to do so — would unlock a new source of revenue and allow them to invest proceeds in better water infrastructure, farming technologies, or other priorities. Moreover, tribal water marketing would benefit cities and other potential trade partners that face increasing uncertainty over water supply as drought and aridification threaten the Colorado River Basin.

Nominally, reservation treaties signed in centuries past granted water rights to Native American tribes. Those treaties, however, did not quantify the tribal rights or establish them in a meaningful way. Some tribes have successfully quantified their water rights through negotiated settlements or court decrees, but that water cannot be traded to off-reservation users. While other water rights holders are able to sell their share of water to other users, tribes are prohibited from marketing their water unless they've received ad hoc congressional approval.


Downey

The Jicarilla Apache Nation, for instance, can lease or sell its water due to the terms of a 1992 settlement. Recently the tribe announced it will lease up to 20,000 acre-feet of water each year to the state of New Mexico over the next decade, a deal reached in conjunction with the Nature Conservancy. It will bolster the state's water supplies and improve endangered species habitat along the San Juan River.

Those sorts of benefits, however, remain out of reach for many tribes and their potential trading partners throughout the Colorado River Basin. A recent report published by the Property and Environment Research Center notes that federal barriers to tribal water marketing force various tribes to forgo an estimated $563 million to $1.3 billion each year, or between $3,200 and $7,300 per reservation resident. The barriers also mean that water often remains trapped in low-value, low-efficiency activities such as flood irrigation.

On some reservations, there is little incentive to boost farming efficiency by adopting water-conserving technologies, because many tribes would be unable to market the saved water to municipalities, conservationists, or other interested trading partners. If those tribes could market their water, then they could conceivably use the revenues to invest in better water infrastructure, more efficient irrigation systems, or whatever other priorities they may have.

In December, Arizona Senators Mark Kelly and Kyrsten Sinema introduced legislation that would allow the Colorado River Indian Tribes to lease water off reservation. While that effort should be lauded as it would empower those four tribes, it would apply only to them.

An even better alternative to such a piecemeal approach would be for Congress to uniformly grant tribes the authority to market their water as they please. Reforming tribal water rights would do more than just give tribes the autonomy they deserve and an additional source of revenue. It would also benefit communities, farmers, businesses and other water-dependent entities that seek more flexibility and resiliency given the extreme drought and record temperatures.

Tribal nations deserve to manage their water rights as they so choose. Congress should uniformly give tribes the option to lease their water rights to other water users. This needed improvement would strengthen tribal sovereignty over resources while also providing more water options in the drought-stricken West.

— Hannah Downey is the policy director at the Property and Environment Research Center in Bozeman, Montana.

AZ could use drought technology that helped Israel

By Seth M. Siegel

After two decades of drought, communities and industries across Arizona are grappling with the reality of less water. The Colorado River simply doesn't deliver the bounty that it once did.

That means thinking differently about our state's most precious natural resource: water.

Fortunately, this work is already underway. Long-term water security featured prominently in Governor Ducey's State of the State Address last month in which he committed $1 billion in state funds to "secure Arizona's water future for the next 100 years." A proposed desalination project with Mexico looms largest among efforts to boost water supplies, but it seems clear that augmentation alone won't be enough. Benefits from desalination won't arrive for years. Meanwhile, continued drought will only heighten the shared challenge Arizona faces.

If Arizona is going to prepare for the future and protect its way of life, it is imperative that the most be made of every drop. That means – in tandem with augmenting supplies via desalination and other efforts – solutions that promote conservation, recycling and reuse, and smart water management must be pursued. In particular, with more than 70% of nearly every state's fresh water now being used to grow food, efficiencies in agricultural irrigation have enormous potential.

Our company – known as N-Drip – may serve as an example of what is possible. By utilizing gravity-powered micro drip as an alternative to traditional flood irrigation, Arizona farmers are able to reduce water use by half or more. N-Drip technology has been proven in hot, arid climates around the world, and was first developed in Israel, which, decades ago, faced a water crisis similar to the one Arizona confronts now.


Siegel

In Arizona, despite the hot climate and the often sandy soil, there are about 850,000 flood irrigated acres – and millions more found in Arizona's southwestern neighbors. With N-Drip's benefits confirmed in trials at the University of Arizona and by the Central Arizona Project (CAP), it's a certainty that nearly all crops currently found in Arizona can be grown with much less water.

If Arizona were to employ this technology on just a fraction of those flood-irrigated Arizona fields growing alfalfa, citrus, cotton, and corn, among other crops, at a minimum, hundreds of thousands of acre-feet could be conserved as soon as the coming growing season. An approach like this could make the difference between fields left fallow and those planted and harvested, supporting not only a multi-billion dollar part of Arizona's economy, but also a rural culture and way of life.

In his State of the State speech, Governor Ducey noted Israel as a model for how Arizonans might look at their water future. What made Israel a great success in water wasn't tied to any single solution – neither desalination nor irrigation techniques like N-Drip alone – but to an all-of- the-above approach.

Such integrative solutions require society to come together to solve its water scarcity problems. And finding the right solutions to Arizona's water challenges requires active participation and a commitment to sustainable solutions from local, state, federal and tribal leaders, as well as the agricultural, business, philanthropic, and academic communities. It demands all of society working together to identify and implement a mix of near-term and long-term solutions.

At a time when politics often divides neighbors and families, unity around water policies has the potential to unite Arizonans around a common goal. Water-focused unity also offers the opportunity to innovate and show tens of millions of people in the Southwest how we can do more with less.

— Seth M. Siegel, author of "Let There Be Water: Israel's Solution for a Water-Starved World," is chief sustainability officer of N-Drip.