

WATER

AZ could use drought technology that helped Israel

By: **Seth 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.

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.



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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.

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