

# Legislature plans to address groundwater crisis in rural Arizona

By Ian James and Rob O'Dell, Arizona Republic

Jan. 14, 2020

<https://www.azcentral.com/story/news/local/arizona-environment/2020/01/14/arizona-legislature-bills-rural-groundwater-rules-overpumping-aquifers/4454833002/>

State legislators plan to tackle widespread problems of groundwater overpumping in rural Arizona this session, proposing bills that would make it easier to limit well-drilling in farming areas where residents have asked for help from the state to safeguard their dwindling water supplies.

At least four bills have been filed or are planned to strengthen groundwater rules and oversight in rural areas where there are no limits on pumping and where water levels have fallen dramatically. More bills are expected to be introduced in the coming days.

The proposals follow an investigation by The Arizona Republic that revealed how unregulated pumping by expanding megafarms has been draining groundwater in rural areas, while homeowners and farming towns have been left with mounting costs as wells run dry.

The bills have come from both Republicans and Democrats, and the Legislature's leadership has signaled interest. Republican House Speaker Rusty Bowers said last week that he is concerned about the problem of groundwater overdraft and expects there will be new water legislation this year.

"We're really facing a groundwater crisis. We're seeing water tables dropping around the state," said Rep. Kirsten Engel, a Tucson Democrat who introduced three bills focusing on groundwater in unregulated rural areas.

The four bills announced so far would:

- Require large commercial wells to have meters installed to monitor water use statewide.
- Allow rural areas to opt in to metering wells in groundwater basins that counties declare to be threatened.
- Expand existing rules to require all developers of subdivisions statewide to be certified as having an adequate 100-year water supply, instead of just in urban areas.
- Change rules for creating "irrigation non-expansion areas" (INA) to make it easier to limit well drilling.

## Tracking the water pumped from wells

Under Engel's bill regarding INAs, state water regulators would gain the ability to look at projected future water use — not just current water use — in deciding whether to create a new "irrigation non-expansion area," where the state would prohibit farms from irrigating additional acreage.

Engel wants to see the state require meters on all nonexempt wells statewide, including in areas where pumping isn't regulated, to track how much water is being used, and by which large corporate farming operations.

"That's got to be step one to find out... how much water is being used, by what entities and what kind of impact that is having on the aquifer," Engel said. "If we're really seeing large drops in the water table in certain areas, then I think we have to consider, do we want to put some restrictions on groundwater pumping in those areas?"

Without changes to the groundwater rules, she said, household well owners and small businesses could eventually face an "economic hit" in rural areas.

"We're essentially looking at potentially giving over our groundwater to bigger corporate entities who can afford to dig these very deep wells. So, it's really the economic survival of homeowners and small businesses," Engel said.

Engel cited The Republic's reporting for bringing to light the problems some well owners are confronting in areas where groundwater levels are dropping, and for documenting the growing footprint of out-of-state companies and investment funds that have set up vast farms in Arizona to grow hay, corn, pistachios and other crops.

"Many of us have been talking about those articles. I've had constituents write me, talk to me after meetings about those articles," Engel said. "I think what your reporting has shown is that not having any regulation at all has left us very vulnerable to overuse of our groundwater, and we're seeing the impacts of that."

The Republic's six-part series featured an analysis of water-level records for more than 33,000 wells, including some records going back more than 100 years. The analysis showed that water levels in nearly a fourth of the wells in Arizona's monitoring program have dropped more than 100 feet since they were drilled, a loss that experts say is probably irrecoverable.

The series also revealed that the number of newly drilled wells has been accelerating and that the largest drops in groundwater have occurred in farming areas where there are no limits on pumping.

### **Bills would overhaul 1980 legislation**

Arizona established its system of regulating groundwater under the 1980 Groundwater Management Act, which established managed areas with limits on pumping and well-drilling in Phoenix, Tucson, Prescott and Pinal County. Other areas of the state were left without groundwater regulations.

Kathy Ferris, who helped draft the state's original groundwater law, said if the bills are approved, they would be the most significant changes for rural areas since the law was adopted in 1980.

"If you are measuring and requiring to report your withdrawals to the department, we will start to get a much better handle on how much groundwater is being pumped and what actions are

necessary to protect the groundwater that remains,” said Ferris, a senior research fellow at Arizona State University’s Kyl Center for Water Policy.

Ferris said if the Legislature gives the Department of Water Resources the authority to look at future water demands in creating new irrigation non-expansion areas, “they will be able to stop the prolific expansion of corporate agriculture, industrial agriculture in some of these threatened groundwater basins.”

“That is a huge fix for some of these areas,” Ferris added. “But it has to be done soon because otherwise more land will just come into cultivation.”

Rep. Regina Cobb, R-Kingman, is set to introduce a bill that would allow a county to declare a groundwater basin at risk and create a new “rural management area.” They would then ask the director of the Arizona Department of Water Resources to require meters on wells in that basin and conduct groundwater monitoring studies there.

“Every county has different water needs,” Cobb said. “There’s different things happening in each county. They are just a little bit different.”

Cobb said right now one of the few tools available in rural areas like Mohave County is to form a regulated “active management area” like the urban areas of the state. But residents and farmers don’t want something that restrictive, she said.

The only other remedy is to create an emergency INA, which was denied to Mohave County in 2016. The state ruled that not enough water had been pumped out of the aquifer. ADWR Director Tom Buschatzke said the law only allows him to look at water pumping that occurred in the past and not prospective pumping from large corporate farms.

“This allows us to do something in between,” Cobb said of her bill. “I think we need more tools than this, but this is one of the tools.”

Cobb said that Engel’s bill to meter all the wells in the state is going to face opposition because there are a lot of rural areas that “do not want any metering or monitoring.” Meanwhile, Cobb said her approach will allow rural areas to opt-in.

“If you feel you need it, then do it,” she said. “We’re not forcing everybody to do this.”

Cobb said she supports Engel’s bill to change the INA rules to allow for the director to look at potential future pumping when limiting drilling in an area.

“I’m 100 percent supportive of that,” Cobb said.

### **Support growing for changes**

Bowers said last week that he expects there will be water legislation during this session. The House speaker told The Associated Press he is troubled about groundwater supplies, especially the depletion of aquifers through overpumping.

“I am very concerned about overdrafting,” Bowers told the AP. But he said he doesn’t have enough facts to propose legislation just yet.

Cobb said she was happy to hear Bowers' comments. "I know he feels we need to do it. I just didn't know if he was ready to jump into it right now," Cobb said. "It was refreshing to hear him say that."

Gov. Doug Ducey briefly discussed water issues during his State of the State speech on Monday. He touted Arizona's signing of a three-state deal last year to take less water from the dwindling Colorado River in an effort to boost the level of Lake Mead.

"We will continue to protect Lake Mead, the Colorado River, groundwater, and our ag jobs," Ducey said. "We need a strategic ongoing effort to turn Arizona into the international capital for water innovation."

Ducey didn't elaborate on his thoughts about groundwater and farming in rural areas. He has voiced support for agriculture as a key industry for the state.

During a visit to Yuma last month, Ducey said: "There is enough water for all of our people right now." He said it "can support the growth that we enjoy."

"What I want to make certain is that we're doing the proper planning and policies so that that can continue into the future," Ducey said.

State water regulators previously proposed some of the same measures that have popped up in the bills this year. In 2017, the Department of Water Resources suggested legislation that would give the agency the ability to project water availability decades into the future when making decisions on limiting irrigation. The package of proposals also called for metering of wells outside managed areas.

But the department couldn't get any legislators to take up the bills that year.

Ferris said there seems to be a lot more interest in tackling groundwater in the Legislature now.

"I think that that's being motivated an awful lot by media coverage of areas where we know we have severe problems and where nothing is getting done," Ferris said. "There's more awareness on legislators' parts, and I think there's some agitation going on by citizens in some of those areas."

*Have a tip? Reach reporter Ian James at [ian.james@arizonarepublic.com](mailto:ian.james@arizonarepublic.com) or 602-444-8246.*

*Follow him on Twitter: @ByIanJames*

*Contact reporter Rob O'Dell at 602-444-4465 or [rob.odell@arizonarepublic.com](mailto:rob.odell@arizonarepublic.com). Follow him on Twitter: @robodellaz*

*Environmental coverage on [azcentral.com](http://azcentral.com) and in The Arizona Republic is supported by a grant from the Nina Mason Pulliam Charitable Trust. Follow The Republic environmental reporting team at [environment.azcentral.com](http://environment.azcentral.com) and @azcenvironment on Facebook, Twitter and Instagram.*

# Arizona lawmakers call for measuring groundwater pumping in rural areas

By Ian James, Arizona Republic

Jan. 16, 2020

<https://www.azcentral.com/story/news/local/arizona-environment/2020/01/16/lawmakers-push-bills-measuring-groundwater-pumping-rural-arizona/4483191002/>

Both Republicans and Democrats are backing measures in the Legislature that would enable Arizona to start measuring how much groundwater is pumped in unregulated rural areas where aquifers have been rapidly declining.

Rep. John Kavanagh, R-Fountain Hills, introduced a bill this week that would give the state's top water regulator the authority to require that measuring devices be installed on wells, and to require annual reports on water use. The bill would allow the state to require metering of wells in an area if the director of the Arizona Department of Water Resources "determines it necessary for water management purposes."

Kavanagh said he thinks the change is crucial to begin to address problems of excessive pumping in parts of the state where there are no rules limiting how much water is extracted.

"You already have people's wells going dry, which is a tragedy. And you have some commercial operations that are pumping who knows how much water out," Kavanagh said. "We need to know what's going on."

Fellow Republican Rep. Regina Cobb of Kingman is set to introduce a bill that would allow a county to declare a groundwater basin at risk and ask the Department of Water Resources to require meters on wells.

Democratic lawmakers have two other bills that would go further by requiring meters to be installed on large wells statewide.

At least six bills have been filed or are planned to strengthen groundwater rules and oversight in rural areas where there are no limits on pumping and where water levels have fallen dramatically.

The proposals follow an investigation by The Arizona Republic that revealed how unregulated pumping by expanding megafarms has been draining groundwater in rural areas, while homeowners and farming towns have been left with mounting costs as wells run dry.

## **Without data, state is 'willfully blind'**

Kavanagh said his proposal would be an initial step, and he would like to see bigger changes in the state's groundwater rules.

“I believe the entire state should be an ‘active management area.’ But it’s not. I think we need to move in that direction,” Kavanagh said. “I believe everybody should have their current water supply protected from encroachment and draining by others, and I believe that anybody who wants to build a house or even a business should have assurance from the government that they’ll have a long-term water supply.”

Arizona established its system of regulating groundwater under the 1980 Groundwater Management Act, which created “active management areas” with limits on pumping and well-drilling in Phoenix, Tucson, Prescott and Pinal County. Other areas across the state were left unregulated.

Kavanagh said his legislation would enable state officials to collect data to make decisions on groundwater.

“Because to not collect the data is to stay willfully blind and watch Arizona go over a water cliff,” Kavanagh said. “My bill is simply trying to prevent willful blindness and force people to look at the impending tragedy that’s approaching.”

He said that’s why he limited the proposal to getting more information about how much water is being pumped, and by which entities.

“I think when the information is made known to everybody, it will be easy to do the reforms,” he said.

The steps that might come next aren’t clear, but Kavanagh said he thinks they could range from limiting the expansion of irrigated farmlands to halting the drilling of new wells or the issuing of more building permits in areas where the data show there isn’t sufficient water.

### **Measuring flows critical for future**

Sen. Victoria Steele, D-Tucson, said she will introduce a bill within the next week that requires measuring of groundwater pumping from wells all in unregulated areas throughout the state.

The requirement would apply to parts of Arizona outside active management areas and “irrigation non-expansion areas.” Small wells that pump 35 gallons a minute would be exempt from the requirement.

“We have to know how much is being taken out and how much we have left,” Steele said. “We absolutely must know. We cannot protect our groundwater supplies if we’re allowed to pump to depletion.”

Steele cited The Republic's investigation for bringing to light the problems some well owners are confronting as large farms drill deep wells and as groundwater levels drop.

"In great part thanks to your great reporting, people are beginning to understand how dire the situation is, and that we have to do things differently," Steele said.

The Republic's six-part series featured an analysis of water-level records for more than 33,000 wells, including some records going back more than 100 years. The analysis showed that water levels in nearly a fourth of the wells in Arizona's monitoring program have dropped more than 100 feet since they were drilled, a loss that experts say is probably irrecoverable.

The investigation also documented the growing footprint of out-of-state companies and investment funds that have set up vast farms in Arizona to grow hay, corn, pistachios and other crops. The series revealed that the number of newly drilled wells has been accelerating and that the largest drops in groundwater have occurred in farming areas where there are no limits on pumping.

"I just see this as the single most important issue that we will deal with in Arizona for years to come," Steele said.

She said the 1980 Groundwater Management Act is a good piece of legislation, but it has a major hole that needs to be addressed.

"It doesn't work anymore," Steele said. "It's no longer adequate for today's reality."

As groundwater is depleted, Arizona is suffering losses that may not be recouped for thousands of years. The water in desert aquifers was laid down over millennia and represents the only water that many rural communities can count on as the Southwest becomes hotter and drier with climate change.

Rep. Kirsten Engel, a Tucson Democrat, has also introduced three bills focusing on groundwater in unregulated rural areas. One of her proposals, like Steele's upcoming bill, would require meters on all nonexempt wells statewide.

Under another bill, Engel wants to give state water regulators the ability to look at projected future water use — not just current water use — in deciding whether to create a new "irrigation non-expansion area," where the state would prohibit farms from irrigating additional acreage.

Engel also introduced legislation that would expand existing rules to require all developers of subdivisions statewide, instead of just in urban areas, to be state-certified as having an adequate 100-year water supply.

**Bills focus on what's possible for now**

Kavanagh said he would like to see those rules expanded statewide, but he doesn't think the legislation will pass. He would also like to see groundwater managed throughout the state as it is inside the active management areas, or AMAs. But he said there's no way such a change would make it through the Legislature now.

"That happens when all the wells start drying up," Kavanagh said.

Kavanagh said he's proposing to focus on what's possible for now, and thinks his bill strikes the right balance. If the legislation passes, Kavanagh said he expects that Director of Water Resources Director Tom Buschatzke would begin to require measuring of groundwater pumping in unregulated areas where his agency needs more data.

While Kavanagh's district is located in an AMA, he said he's concerned that the state may soon be "watching the horrors unfold in rural areas," with people increasingly suffering as water levels drops.

"The problems are already there. You already have people whose wells are going dry, who have to truck water to their homes," Kavanagh said. "Nobody should be at risk of having their lifetime investment, be it their home or their business, suddenly worth next to nothing because they have no water in the desert."

Alongside the bills that would strengthen the state's groundwater rules, another piece of legislation focuses on securing more funding and staff for the Arizona Department of Water Resources.

Rep. Rosanna Gabaldón, D-Sahuarita, introduced a bill that would give ADWR an additional \$6.1 million to hire more hydrologists, groundwater modelers and other staff.

Gabaldón noted that the department has had staffing cuts over the years. She pointed out that the agency is behind in preparing updated groundwater management plans for the AMAs.

"I'm hoping that they could bring in staff so they can complete those reports and be able to look at water use outside of the AMAs as well," Gabaldón said. "It's important that they have more staff so they can complete their tasks."

*Reach reporter Ian James at [ian.james@arizonarepublic.com](mailto:ian.james@arizonarepublic.com) or 602-444-8246. Follow him on Twitter: @ByIanJames*

*Environmental coverage on [azcentral.com](http://azcentral.com) and in The Arizona Republic is supported by a grant from the Nina Mason Pulliam Charitable Trust. Follow The Republic environmental reporting team at [environment.azcentral.com](http://environment.azcentral.com) and @azcenvironment on Facebook, Twitter and Instagram.*