

SAN PEDRO ALLIANCE

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Bisbee, AZ 85603

September 20, 2023

Director Tom Buschatzke
Arizona Department of Water Resources
1110 West Washington Street
Phoenix, AZ 85007
Email: rbuschatzke@azwater.gov
Phone: 602-771-8426

Dear Director Buschatzke,

RE: PETITION for a RULE to DESIGNATE the UPPER SAN PEDRO BASIN as an ACTIVE MANAGEMENT AREA under Title 45, Section 412 of the 1980 Groundwater Management Act.

EXECUTIVE SUMMARY

Groundwater use in the Upper San Pedro Basin exceeds an amount necessary to preserve the existing supply of groundwater for future needs.

When the use of groundwater exceeds an amount necessary to preserve the existing supply of groundwater for future needs, designation of an Active Management Area (“AMA”) is an option to remedy this situation pursuant to [A.R.S. 45-412](#).

A.R.S. 45-412 states that the Arizona Department of Water Resources (“ADWR”) “director may designate an area ... if the director determines that any of the following exists: 1. Active management practices are necessary to preserve the existing supply of groundwater for future needs.”

With this correspondence, the San Pedro Alliance, a coalition of local, regional, Arizona, national and international member organizations petitions ADWR to adopt a rule pursuant to A.R.S. 45-412 and [A.R.S. 41-1033](#) (Petition for a rule or review of an agency practice) to designate the Upper San Pedro Basin as an AMA to preserve the Basin’s existing supply of groundwater for future needs.

BACKGROUND

[Five AMAs have been designated in Arizona](#), the Prescott, Phoenix, Pinal, Santa Cruz and Tucson AMAs according to ADWR’s website. One more AMA, the [Douglas AMA](#) was designated on December 1, 2022.

The primary goals of some of the AMAs are different. Phoenix, Prescott, and Tucson AMAs have as their primary goal “safe-yield,” where “no more groundwater is being withdrawn than is being replaced annually.”

The Pinal AMA has as its primary goal, “to preserve that economy for as long as feasible, while considering the need to preserve groundwater for future non-irrigation uses.”

The Santa Cruz AMA has as its primary goal “to maintain a safe-yield condition in the AMA and to prevent local water table from experiencing long-term declines.”

The Douglas AMA has as its primary goal “to support the general economy and welfare of water users in the basin by reducing the rate of aquifer depletion by an amount established in the first management plan and by additional reductions established in each subsequent management plan every 10 years thereafter.”

Two earlier Petitions have been filed with ADWR requesting designation of an Upper San Pedro Basin AMA, one by the Sierra Club in September 1984, and [one by the San Pedro Alliance on October 10, 2000](#).

ADWR rejected both of these petitions, the first [on June 16, 1988](#), and the second [on March 9, 2005](#).

While ADWR’s [reason for denial in 1988](#) of AMA designation for the Upper San Pedro Basin was somewhat defensible based on the lack of definitive proof at the time that the withdrawal of groundwater in the Upper San Pedro Basin was already exceeding an amount necessary to preserve the existing supply of groundwater for future needs.

But this was not the case in 2005.

In 2005, ADWR’s reason for denial was disingenuous. It was purely political.

By 1988, warnings of water problems in the Sierra Vista area were already known.

In fact, these warnings have been known since March 18, 1974.

On March 18, 1974, the [Arizona Water Commission reported in a study](#) requested by the U.S. Army Corps of Engineers (“ACOE”) “to prepare a special report evaluating the adequacy of Fort Huachuca’s water supply based upon the Commission’s regional studies”:

“The studies to date also indicate the impacts of the large withdrawals for Alternative population levels III and IV from the Fort’s present well field on the water resource are unacceptably severe as the aquifer underlying this well field as well as that under the adjacent portion of Sierra Vista probably would be dewatered by 2060..

The model predicts reductions in the aquifer discharge to the rivers ranging from 20 percent to about 50 per cent for the four runs. This would reduce base flows as well as and probably reduce the water supply available to phreatophytic vegetation along portions of the San Pedro and Babocomari Rivers...”

Following up on the March 18, 1974, Arizona Water Commission report, on March 29, 1974, [ACOE, itself, warned of Fort Huachuca's water problem](#) in "Report on Water Supply, Fort Huachuca and Vicinity":

"Two significant cones of depression have developed in the area due to pumping in the Fort Huachuca-Sierra Vista area and the Huachuca City area, which includes the former community of Huachuca Vista...The depression cone in the Fort Huachuca-Sierra Vista area is centered about the military post well field and appears to extend for approximately 4 miles...the cone of depression is approximately 1.5 miles wide. ...

Heavy pumping in the Huachuca Vista area has apparently reversed the direction of ground-water flow along the reach of the Babocomari River for several miles downstream from Huachuca City..."

And by 1981, the United States Council on Environmental Quality, in their publication, ["Desertification of the United States,"](#) says,

"Groundwater in the Fort Huachuca-Sierra Vista area, the Basin's major urban area, has dropped 30 feet in the past 25 years. [FN264] Four wells operated by the Bella Vista Water Company, which serves part of Sierra Vista, have experienced declines ranging from 30 to 46 feet since 1973. [FN265] The area faces "potentially severe water supply problems." The overdraft situation "could effectively exhaust the nearby aquifer by the year 2020." [FN266]

The environmental consequences of groundwater overdraft, though not so dramatic as the economic consequence, are also worth noting. Scientist Susan Jo Keith, who has studied the problem in Arizona, observes that the innocuous-looking modern well, particularly found in large numbers, is a very effective agent of both surface and subsurface environmental change in arid lands." [FN267]

One of the most obvious consequences is the drying up of perennial streams and rivers where they are in "hydraulic contact" with the groundwater that is being overdrafted. [FN268] For example, the Santa Cruz River ran dry in the 1930s because of "the advent of deep-well turbines which are capable of pumping water in excess of the recharge rate." [FN269] The upper San Pedro River could run dry – just as the Santa Cruz did – in the years ahead if massive groundwater overdrafting continues." [FN270]

By 2005, when ADWR denied AMA designation for the Upper San Pedro Basin, the fact was no longer deniable that withdrawal of groundwater in the Upper San Pedro Basin was already exceeding an amount necessary to preserve the existing supply of groundwater for future needs.

In fact, by 2003, the overdrafting of the aquifer had gotten so bad, that in order to avoid the likely downsizing of Fort Huachuca in the 2005 Base Realignment and Closure round, the Upper San Pedro Partnership [promised to "balance the area's water deficit by 2011."](#) The Upper San Pedro Partnership includes the City of Sierra Vista and Cochise County,

But facts, law and science did not influence ADWR's [March 9, 2005, denial of our October 10, 2000, Petition](#) to create an Upper San Pedro Basin AMA. ADWR's March 9, 2005, decision was made purely based on political cowardice.

With its March 9, 2005, denial, ADWR stated in its decision-accompanying "[Upper San Pedro Basin Active Management Area Review Report](#)" that "[b]ecause there are sufficient groundwater supplies in the USP Basin to meet the future needs of municipal, industrial and agricultural water users, the director has determined that AMA practices are not necessary."

In this Review Report, ADWR added to the "future needs" language of A.R.S. 45-412, the additional wording, "the future needs **of municipal, industrial and agricultural water users**" (emphasis added) from A.R.S. 45-561.

ADWR's addition of the language "of municipal, industrial, and agricultural water users," is consistent with [A.R.S. 45-561 definition of "industrial use"](#) as "a non-irrigation use of water not supplied by a city, town or private water company..."

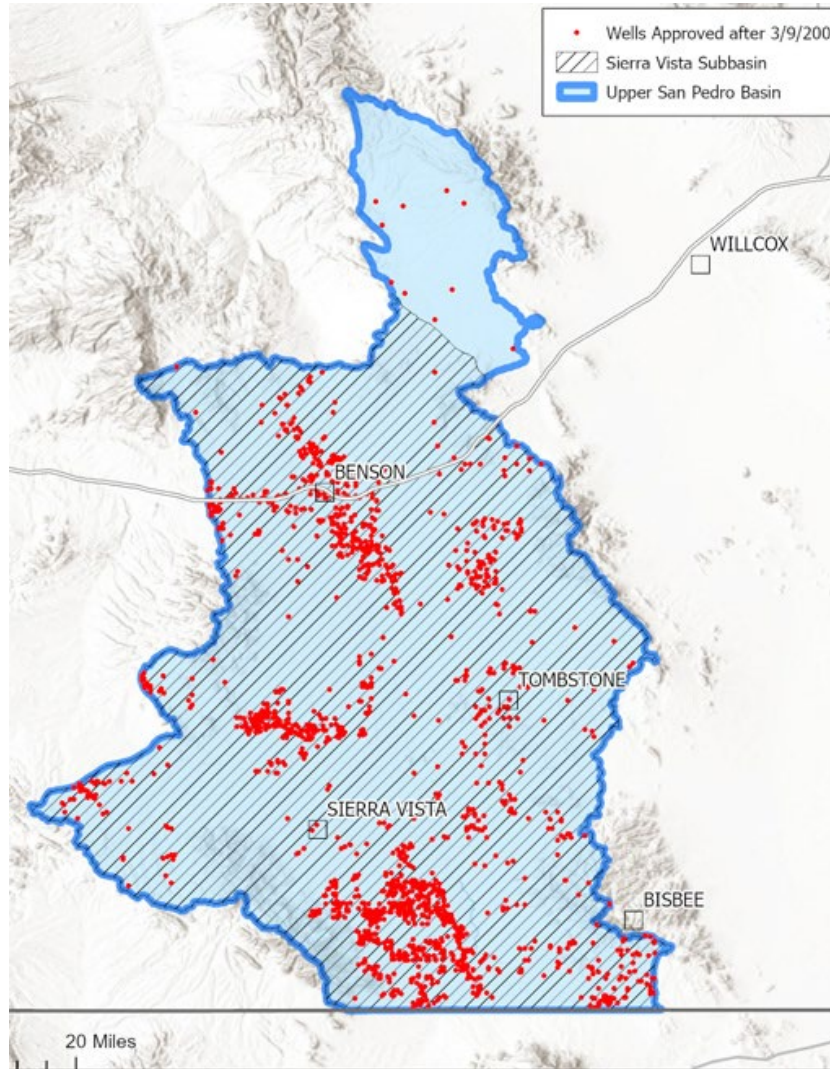
But ADWR's March 9, 2005, Petition denial completely ignored the "elephant in the room."

The "elephant in the room" here is the fact that the federal government not only uses groundwater, but, as even ADWR recognized on April 3, 1992, [the federal government is the largest single user of water in the Upper San Pedro Basin](#).

ADWR's March 9, 2005, Petition denial ignores the facts that (1) [the federal government has a congressionally assigned right](#) to Upper San Pedro Basin water, that (2) the federal government's use of water merits protection consistent with ADWR's statutory duty to "preserve the existing supply of groundwater for future needs," and (3) that the federal government's use of water is "a non-irrigation use of water not supplied by a city, town or private water company..." as acknowledged in ADWR's [Review Report](#) accompanying its March 9, 2005, Petition denial, and as defined by A.R.S. 45-561.

Since ADWR's March 9, 2005, Petition denial, much new information has become available further compelling designation of an Upper San Pedro Basin AMA to fulfill ADWR's A.R.S. 45-412 route "to preserve the existing supply of groundwater for future needs."

This new information includes the fact that ADWR, itself, has continued to assure that the existing supply of groundwater will not be preserved for future needs by [approving 1,858 more wells from March 9, 2005 to September 11, 2023](#):



ADWR’s ongoing contribution antithetical to ADWR’s A.R.S. 45-412 ability “to preserve the existing supply of groundwater for future needs” was documented on December 5, 2019, by the Arizona Republic in “It’s one of Arizona’s most precious rivers, Hundreds of new wells may leave it running dry.” In this article, [the Arizona Republic reports](#) that ADWR had approved 8,765 wells in the Upper San Pedro Basin by 2017.

This huge total number of wells approved by ADWR cited in the Arizona Republic article comes from a September 12, 2019, ADWR report, “[Governor’s Water Augmentation, Innovation and Conservation Council.](#)”

Included in these ADWR approved wells is the [July 23, 2012, ADWR granting to a Sierra Vista developer permission](#) to remove groundwater for the building of [an additional 6,959 homes](#) requiring [a total annual groundwater demand of 4,870.39 acre-feet per year](#).

Confirmation of the extensive worsening of Upper San Pedro Basin aquifer overdrafting continues to be documented extensively since ADWR's March 9, 2005, Petition denial.

In 2010, a report was prepared by Fort Huachuca contractor, GeoSystems Analysis, Inc., titled "Calculation of Pumping-induced Baseflow and Evapotranspiration Capture Attributable to Fort Huachuca." This report [documented](#) that approximately 1.5 million ac-ft of groundwater had already been removed from the local aquifer by 2005.

Other hydrology studies documenting Upper San Pedro Basin aquifer overdrafting since ADWR's March 9, 2005, Petition denial include [Lacher \(2011\)](#), [Integrated Hydro \(2016\)](#), [USGS \(2017\)](#), [Eastoe \(2017\)](#), [Meixner \(2018\)](#), [Lacher \(2018\)](#), [Eastoe \(2018\)](#), [Integrated Hydro \(2019\)](#), [Eastoe \(2020\)](#), and [USGS \(2020\)](#).

In last Upper San Pedro Partnership ("USPP") report to Congress, "[Upper San Pedro Partnership Report for 2012](#)," released on May 21, 2014, the USPP finally admitted publicly that they had predictably failed in [promising to "balance the area's water deficit by 2011."](#)

The 2012, USPP report stated,

"the Partnership has fallen short of the goal set by Congress to achieve sustainable yield (defined by the Partnership as erasing the water budget deficit) by September 30, 2011."

The 2012, USPP report also noted a "[t]otal aquifer storage change" for in the Sierra Vista Sub-watershed of -5,100 acre-feet/year. In 2020, USGS subsequently produced an [updated Sierra Vista Sub-watershed water budget](#) finding a local deficit of -3,800 acre-feet/year.

In addition, on December 4, 2015, a "Final Community Master Plan and Development Plan" was filed in Benson for Vigneto, a development for an [additional 28,000 homes](#) solely dependent on groundwater pumping. This development alone will suck dry the St. David Cienega, a federal property also relying on "industrial use" of groundwater, "a non-irrigation use of water not supplied by a city, town or private water company..." completely consistent with A.R.S. 45-561.

CONCLUSION

Upper San Pedro Basin water consumption exceeds an amount necessary to preserve the existing supply of groundwater for future needs. This is not a disputable fact.

Neither are the facts disputable that,

1. the aquifers of the Upper San Pedro Basin continue to be overdrawn; that,

2. the federal government is the largest user of groundwater in the Upper San Pedro Basin, a fact that was completely ignored in ADWR's March 9, 2005, denial of our October 10, 2000, Petition; and that,
3. multiple other AMAs (Phoenix, Tucson, Prescott and Santa Cruz) have already been designated based on "safe-yield," where "no more groundwater is being withdrawn than is being replaced annually," and where water use in the Upper San Pedro Basin grossly violating this principle should have resulted in AMA designation in 2005.

The San Pedro Alliance files this Petition under authority granted by [A.R.S. 41-1033](#). A.R.S. 41-1033 grants the right to petition an agency for adoption of a rule. A.R.S. 41-1033 also requires that "...[w]ithin sixty days after submission of a petition, the agency shall either deny the petition in writing, stating its reasons for denial, initiate rule making proceedings... or...make a rule." (A.R.S. § 41-1033)

Because the pace of ADWR's Upper San Pedro Basin well approvals is increasingly foreclosing any ability to preserve the existing supply of groundwater for future needs, we trust that ADWR will designate the Upper San Pedro Basin as an AMA without delay.

If you have any questions, or if you require any further information, please do not hesitate contacting San Pedro Alliance Secretary Robin Silver, M.D. at email, rsilver@biologicaldiversity.org, or by phone, 602-799-3275.

Sincerely,



Robin Silver, M.D.
San Pedro Alliance Secretary

CC: Governor Katie Hobbs
Attorney General Kris Mayes