

1 ARIZONA DEPARTMENT OF WATER RESOURCES
2 BEFORE THE DIRECTOR

3 IN RE: SUBSEQUENT ACTIVE)
4 MANAGEMENT AREA: WILLCOX) FINDINGS, DECISION AND
5 GROUNDWATER BASIN,) ORDER
6 GRAHAM AND COCHISE)
7 COUNTIES)

8 Pursuant to Arizona Revised Statute (“A.R.S.”) § 45-414, the Director of the
9 Arizona Department of Water Resources (“Director”) issues findings and his decision
10 to designate the Willcox Groundwater Basin, in Graham and Cochise Counties
11 (“Basin”), Arizona as a subsequent Active Management Area (“AMA”) on the grounds
12 set forth herein.

13 **BACKGROUND**

14 **I. Director’s Order Initiating Designation Proceedings**

15 On September 26, 2024, the Arizona Department of Water Resources (“ADWR”
16 or “Department”) held an informal public meeting to present hydrologic and regulatory
17 information, accept public comments, and answer questions regarding the possible
18 initiation of procedures to designate the Basin as a subsequent AMA. The information
19 presented by the Department at the September 26 meeting is incorporated into the record
20 for this matter. Public comments were accepted until 5:00PM on October 4, 2024. On
21 October 21, 2024, the chief hydrologist for the Department provided a memorandum
22 (“Technical Memo”) describing the hydrologic information on file regarding the Basin,
23 including the information presented at the public meeting.¹ The Technical Memo is
24 hereby incorporated by reference. Based on hydrologic evidence and public comments

25 ¹ [Technical Memorandum regarding Groundwater Conditions in the Willcox Basin](#), October 21, 2024, to Thomas Buschatzke, Director, ADWR, from Ryan Mitchell, Chief Hydrologist, ADWR.

1 received, on October 23, 2024, the Director issued an Order to Initiate Proceedings
2 (“Initiation Order”) and an Order for a Hearing.

3 **II. Notice of Initiation of Proceedings, Public Hearing and Comment Period**

4 On October 23rd and October 30th, 2024, the Department published notice of the
5 Initiation Order in both the *Sierra Vista Herald Review* and the *Eastern Arizona Courier*.
6 The Department held a public hearing pursuant to A.R.S. § 45-413 in Willcox, Arizona,
7 on November 22, 2024. At the hearing, the Department presented factual data related to
8 hydrologic conditions in the Basin. Specifically, the Department presented water level
9 measurements that the Department collected from monitoring wells in the Basin, land
10 subsidence data, and earth fissure maps and photos. The Department also received oral
11 comments and evidence at the public hearing and accepted written comments and
12 evidence until 11:59 PM on November 22, 2024.

13 During the public hearing on November 22, 2024, 38 people provided oral
14 comments and evidence. The Department also received 423 written comments and
15 evidence. Commentors included Arizona legislators, a county supervisor for a county
16 outside the Basin, agricultural users, ranchers, vintners, and residents of the Basin. The
17 Director has considered all comments and evidence submitted. Where particular
18 comments or evidence are relevant to a specific Finding made by the Director, the
19 comments are discussed in the “Findings” section below.

20 **FINDINGS**

21 1. The boundaries of the proposed active management area encompass the entire
22 Willcox Groundwater Basin. The Basin is generally located in the northern Sulfur
23 Springs Valley and is the entire surface watershed area that contributes to Willcox Playa,
24 plus the upper watersheds of Leslie Creek and Rucker Canyon that lie east of the
25 Swisshelm Mountains in the Whitewater Draw watershed.

1 2. The only dependable water source in the Basin is groundwater, which is used for
2 agricultural, industrial, domestic, and municipal water supply.

3 3. ADWR relied on empirical data when reviewing aquifer depletion throughout the
4 Basin. Groundwater in the Willcox Basin is unregulated, meaning users are not required
5 to measure, meter, or report actual water use. Therefore, water level trends over time are
6 used to determine if the aquifer system is in balance, i.e., the inflows into the aquifer
7 system are approximately equal to the outflows.

8 4. ADWR collected data from 52 active wells that it measures at regular intervals
9 (“index wells”) in the Willcox Basin. Additionally, since 1990, ADWR has conducted
10 six basin sweeps in the Basin, where 4,627 additional well measurements were taken.
11 More information related to the data collecting and testing done by ADWR can be found
12 in the Technical Memo. ADWR compiled groundwater statistical data, including water
13 level change statistics from 2000 to 2020 for each of the 51 groundwater basins in
14 Arizona, within ADWR Open File Report No. 20.

15 5. The Willcox Groundwater Basin is documented as showing significant declines
16 in ADWR Open File Report No. 20, with a median water level decline of 53.55 feet over
17 the 20-year period.

18 6. Over the same 20-year period, ADWR data shows multiple index wells with
19 significantly greater water level changes, including 3 index wells with water level
20 declines of greater than 90 feet and one index well with a water level decline of 141.9
21 feet, or an average of 7.095 feet per year.

22 7. Over multiple decades, water level trends in the Basin have shown widespread
23 decline, with at least one well showing a decline of 402 feet over the last 69 years.

24 8. Excessive groundwater mining and declining water levels have caused multiple
25 wells in the Basin to go dry. The Department has attempted to measure water levels in
29 wells that previously had water and have gone dry in the last 10 years.

1 9. The rate of decline has increased over time. As the widespread decline in water
2 levels indicates, the aquifer system's outflows far exceed its inflows. If current rates of
3 groundwater withdrawal continue or increase and recharge rates do not change,
4 groundwater level declines will continue to worsen.

5 10. Active management practices are necessary to preserve the existing supply of
6 groundwater for future needs.

7 11. Since 1969, over 11.5 feet of land subsidence has been observed in the Willcox
8 Basin using interferometric synthetic aperture radar ("InSAR") satellites.

9 12. Additionally, 48.76 miles of earth fissures in the Willcox Basin have been
10 mapped through the Arizona Geological Survey ("AZGS"). These earth fissures have
11 already damaged roads, fences, and other property in the Basin.

12 13. Land subsidence has been measured at an increasing rate year over year.

13 14. Land subsidence is predominantly inelastic and non-recoverable, permanently
14 reducing the aquifer's storage capacity.

15 15. If left unaddressed, water level declines, land subsidence, and earth fissuring
16 would continue to worsen at an accelerating rate.

17 16. The Basin satisfies the criteria in A.R.S. § 45-412(A)(1) ("Active management
18 practices are necessary to preserve the existing supply of groundwater for future needs."
19 and (2) ("Land subsidence or fissuring is endangering property or potential groundwater
20 storage capacity.") for designation as a subsequent AMA.

21 17. The following is a summary of the substantive comments received and the
22 Department's responses thereto:

23 a. Comment: The proposal for local initiation to designate the Willcox AMA
24 was on the ballot during the 2022 election cycle and did not pass local
25 election.

Response: The Arizona legislature established two separate paths to
designating subsequent AMAs. The legislature provided authority for local

1 initiation of designation of an AMA on petition by ten percent of the
2 registered voters residing within the boundaries of the proposed AMA, to be
3 voted upon pursuant to the general election laws of this state. A.R.S. § 45-
4 415. The legislature also vested independent authority to initiate designation
5 procedures with the Director if the criteria in A.R.S. § 45-412(A) are met.
6 Nothing in statute prevents the Director from designating a basin as an AMA
7 based on the results of an election.

- 8 b. Comment: Several commenters stated concerns that local input will not be
9 taken into consideration during the creation of an AMA.

10 Response: ADWR received and considered local input prior to making the
11 decision to designate the Willcox Basin an AMA. After designation of an
12 AMA, ADWR continues to receive and consider input from local
13 stakeholders throughout the process of developing the management goal and
14 management plans.

- 15 c. Comment: Several Commenters stated their property was damaged through
16 land subsidence and fissures.

17 Response: Hydrologic data collected by ADWR corroborates property
18 damage from subsidence and fissures throughout the Basin.

- 19 d. Comment: Several Commenters stated that their wells are rapidly depleting
20 and running dry, leading to a significant concern over water availability.

21 Response: Hydrologic data collected by ADWR corroborates depletion of the
22 water table causing some wells in the Basin to run dry.

- 23 e. Comment: Several Commenters stated that the wells examined by ADWR
24 were too small of a sample size to reach conclusions regarding the entire
25 Basin.

Response: As discussed above in Finding No. 4, as well as the Technical
Memo, ADWR collected evidence through 52 index wells in the Basin and

1 through 4,627 additional well measurements. In addition, outside of well data,
2 there is ample evidence of land subsidence and land fissuring in the Basin.

- 3 f. Comment: Several Commenters stated that property owners have the rights to
4 water beneath their land and that ADWR does not have the authority to
5 regulate their water use.

6 Response: Through the 1980 Groundwater Management Act, the legislature
7 vested ADWR with the authority to designate subsequent AMAs to protect
8 and preserve groundwater resources. A.R.S. § 45-412. The Arizona Supreme
9 Court has held that landowners do not own the groundwater under their land;
10 they own the right to use groundwater subject to state law.² Property owners
11 who have legally withdrawn and used groundwater within the Basin prior to
12 the initiation of designation procedures according to the criteria in statute will
13 be able to apply for grandfathered groundwater rights. A.R.S. §§ 45-462; 45-
14 476; 45-477.01.

- 15 g. Comment: The designation of an AMA would not fix the current groundwater
16 issues; rather, it would preserve existing irrigation.

17 Response: In addition to limiting new uses of groundwater, the designation of
18 an AMA will also lead to the adoption of a management plan that includes
19 measures for reducing groundwater withdrawals. A.R.S. § 45-569(B).

- 20 h. Comment: Several Commenters stated their concern that the designation of
21 an AMA will adversely impact the growth and economic development of the
22 wine industry within the Willcox Basin as well as discourage innovation
23 within the industry.

24 Response: Absent active management within the Basin, continued aquifer
25 depletion will threaten the ability of the existing wine industry and other

² Town of Chino Valley v. City of Prescott, 131 Ariz. 78, 82 (1981).

1 existing groundwater users to maintain a supply of groundwater for their
2 operations, which would have a substantial negative economic impact.
3 Additional land subsidence and fissuring will also continue to damage
4 property, which will have negative effects on the local economy, and reduce
5 aquifer storage capacity, which will limit opportunities to improve
6 groundwater conditions in the long term.

- 7 i. Comment: Several Commenters stated their support of the AMA with concern
8 about extensive agricultural water usage in the Willcox Basin.

9 Response: Management strategies such as conservation and efficiency
10 requirements for all non-exempt groundwater users, including agricultural
11 users, will be implemented as part of active management of the Basin.

- 12 j. Comment: Several Commenters stated that the designation of an AMA places
13 limits on irrigation expansion but does not place conservation requirements
14 on non-irrigation groundwater users, such as municipal and industrial users.

15 Response: After designation of a subsequent AMA, the Director must adopt
16 a management plan, which will include conservation programs for both
17 irrigation and non-irrigation uses of groundwater, including municipal and
18 industrial uses. A.R.S. § 45-569.

- 19 k. Comment: Several Commenters stated that the designation of an AMA is not
20 necessary and that the Director should designate the Basin as an Irrigation
21 Non-Expansion Area (“INA”).

22 Response: The Director may designate an INA only if the establishment of an
23 active management area pursuant to Arizona Revised Statutes section 45-412
24 is not necessary. A.R.S. § 45-432(A). Based on the information available to
25 the Department and the evidence presented at the public hearing, the Willcox

1 Groundwater Basin satisfies the criteria for designation of a subsequent
2 AMA. Therefore, designation of an INA would not be appropriate.

- 3 1. Comment: Several Commenters stated that only a subbasin should be
4 designated as an AMA, rather than the entire Basin.

5 Response: Pursuant to Arizona statute, subsequent AMAs may include more
6 than one groundwater basin but shall not be smaller than a groundwater basin
7 or include only a portion of a groundwater basin. The Director does not have
8 authority to designate a subbasin as a subsequent AMA. A.R.S. § 45-412(B).
9 Further, the Willcox Basin does not contain subbasins.

10 DIRECTOR'S DECISION

11 In consideration of the Findings set forth above, the Director has determined that the
12 Willcox Groundwater Basin, as described in Finding No. 1 above and depicted in the
13 map attached hereto as Exhibit A, meets the following criteria for designation of a
14 subsequent AMA set forth in A.R.S. § 45-412(A):

- 15 1. Active management practices are necessary to preserve the existing supply of
16 groundwater for future needs; and
17 2. Land subsidence or fissuring is endangering property or potential
18 groundwater storage capacity.

19 As a result, the Willcox Groundwater Basin shall be designated as an AMA.

20 ORDER

21 IT IS HEREBY ORDERED:
22

- 23 1. That a notice of the above Findings and Decision shall be published once
24 each week for two consecutive weeks in a newspaper of general circulation in both
25 Cochise and Graham Counties.

1 2. These Findings, Decision, and Order shall become effective upon the
2 second publication described in Order No. 1 above.

3 3. The Director shall file a true copy of a map identifying the lands included
4 in the AMA with the offices of the Cochise and Graham County Recorders.

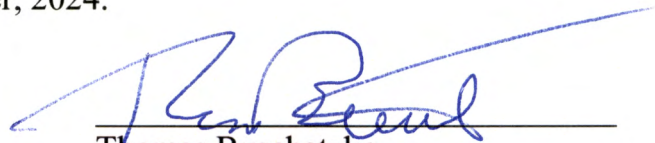
5 4. The prohibition on the irrigation of new acres pursuant to A.R.S. § 45-416
6 and the Initiation Order will remain in effect permanently.

7 5. Pursuant to A.R.S. § 45-604(A), any person who withdraws groundwater
8 from a non-exempt well for irrigation use and each person withdrawing more than ten
9 acre-feet of groundwater per year from a non-exempt well for non-irrigation use within
10 the boundaries of the AMA shall use a water measuring method and device approved by
11 the Director. An approved measuring device must be installed by March 31, 2025. A list
12 of approved measuring methods and devices can be found in A.A.C. [R12-15-903](#).

13 6. Each person withdrawing groundwater from a non-exempt well shall file
14 an annual water withdrawal and use report on a form prescribed by the Director no later
15 than March 31 of each calendar year. The first annual report for this AMA shall be filed
16 on or before March 31, 2026.

17 This Decision is subject to rehearing, review, and judicial review as provided in
18 A.R.S. § 45-414(B).

19 DATED this 19th day of December, 2024.

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22 Thomas Buschatzke
23 Director
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