

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
IN AND FOR THE COUNTY OF MARICOPA

IN RE THE GENERAL ADJUDICATION
OF ALL RIGHTS TO USE WATER IN THE
GILA RIVER SYSTEM AND SOURCE

W-1, W-2, W-3, W-4 (Consolidated)
Contested Case No. W1-103

**ORDER DENYING STATE LAW
PARTIES' REQUEST TO EXTEND
DEADLINE FOR COMMENTS TO
ADWR INITIAL SUBFLOW
DEPLETION TEST REPORT;
SETTING STATUS CONFERENCE;
VACATING DEADLINES**

HSR INVOLVED: San Pedro River Watershed Hydrographic Survey Report.
DESCRIPTIVE SUMMARY: Order denying State Law Parties' Request to Extend Deadline for
Comments to ADWR Initial Subflow Depletion Test Report, scheduling a status conference on
January 11, 2019 and vacating existing deadlines for comments and status conference.
NUMBER OF PAGES: 6
DATE OF FILING: December 20, 2018

On December 6, 2018, Arizona Department of Water Resources (ADWR) filed an Initial
Subflow Depletion Test Report (Report). At this point, before the parties expend time and

1 resources consulting with experts and filing comments, a status conference is warranted to allow
2 for a discussion of the Report and determine the best course of action to further the general
3 adjudication of water rights in the San Pedro River watershed.

4
5 **A. The Two-Step Cone of Depression Test**

6 Wells, and water pumped from wells, are included in this adjudication when the wells
7 pump subflow. Wells located within the boundaries of a subflow zone are presumed to pump
8 subflow and the owners of those wells bear the burden of proving that a well is not pumping
9 subflow. *In re the General Adjudication of All Rights to Use Water in the Gila River System and*
10 *Source*, 198 Ariz. 330, ¶6, 335, 9 P.3d 1069, 1074 (2000) (“*Gila River IV*”). A well located
11 outside the lateral boundaries of the subflow zone will also be included in this adjudication when
12 the cone of depression developed by the well extends into the subflow zone and drawdown from
13 the well measurably affects the volume of surface flow and subflow. *Id.* at 343, ¶38, 9 P.3d at
14 1082.

15 Arizona Department of Water Resources identifies two stages that must be completed with
16 respect to wells located outside of the boundaries of the subflow zone: (1) identification of those
17 wells subject to the court’s jurisdiction; and, (2) determination of the impact of the pumping on the
18 subflow and streamflow. According to ADWR, the first step contributes to the production of a
19 tabulation of water rights within the watershed for purposes of a decree and the second step is
20 necessary to properly administer and enforce the final decree. *Arizona Department of Water*
21 *Resources’ Notice of Filing Response to Comments on Proposed Cone of Depression Test*, filed
22 May 12, 2017, p. 3. To advance the first stage, ADWR proposed cone of depression test
23 methodologies to serve as what the parties labelled as the “Jurisdictional Test”. During this past
24 year, an evidentiary hearing was held with respect to the methodology to identify the wells subject
25 to the court’s jurisdiction and a final report was issued on November 14, 2018.¹ On December 6,
26

27
28 ¹ Objections to the final report to be heard and decided by Judge Brain are due on January 14, 2019.

1 2018, ADWR filed its Initial Subflow Depletion Test Report that described the results of its
2 investigations regarding the development of a test to determine the impact of pumping on subflow
3 and streamflow.

4 5 **B. ADWR Initial Subflow Depletion Test Report**

6 Consistently with its earlier position, ADWR stated in the Report that two tests must be
7 applied to wells located outside the subflow boundary. It expanded its description of the proposed
8 use of the first cone of depression test, the Jurisdictional Test, by advising that ADWR would
9 create potential water rights (PWR) for a well that satisfied the Jurisdictional Test and the well
10 would be subject to the adjudication to determine the nature, extent, and relative priority of the
11 potential water right.² Building upon its investigation that generated the Small Wells Analysis
12 Report submitted on August 30, 2018³, ADWR also proposed that wells determined to create less
13 than a 0.1 foot drawdown would be classified as Excluded Wells and not included in future
14 hydrographic survey reports. These statements indicate that ADWR views the first test from the
15 standpoint of its obligation under A.R.S. §45-256 to prepare a technical report the includes
16 ADWR's investigation of claims filed by claimants seeking water rights and recommendations
17 with respect to water right characteristics. As to the second test, i.e., the subflow depletion test
18 that is the subject of the Report, ADWR stated that a test to determine the extent to which a well's
19 pumping impacts subflow and streamflow is necessary to properly administer and enforce a decree.
20 In contrast to the motivation for the first test, this test appears to stem from ADWR's
21 responsibilities to enforce water rights included in a final decree.

22
23
24 ² It further opined that the well owners would be entitled to dispute ADWR's
25 determinations by providing evidence that the well at issue would not cause a 0.1 foot drawdown at
the subflow zone boundary using steady-state modeling. *Report* at 3.

26 ³ The Small Wells Report recommended the formation of two buffer zones that would
27 eliminate a class of small wells from further analysis and exclude them from the adjudication
28 generally based on the distance between the well location and the boundaries of the subflow zone.
See ADWR Small Wells Analysis Report at 10.

1 Thus, the issues that should be addressed at a status conference include:

- 2
- 3 1) Should formal proceedings be initiated to evaluate ADWR's proposal to create
- 4 buffer zones as described in the Small Wells Analysis; and
- 5 2) Whether the Subflow Depletion Test has any application in the adjudication prior
- 6 to the entry of a decree. If not, are there reasons that ADWR's resources should
- 7 be used to develop this test or should resources be focused on those tasks
- 8 necessary to the issuance of a decree.
- 9

10 C. The Subflow Depletion Test

11 Arizona Department of Water Resources used the existing MODFLOW model prepared

12 by the United States Geological Survey (USGS) for the Sierra Vista subwatershed with the

13 Zonebudget program developed by the USGS to begin the development of a Subflow Depletion

14 test. Based on the results of its modelling, ADWR made two critical findings. First, flow from

15 the subflow to the aquifer remains relatively constant in the presence of pumping from a

16 hypothetical well as shown by the lower overlapping lines in figure 5 prepared by ADWR, copied

17 below. Figure 5 also illustrates ADWR's test results that pumping from the hypothetical well

18 causes a greater

19 reduction in the

20 water flowing from

21 the aquifer to the

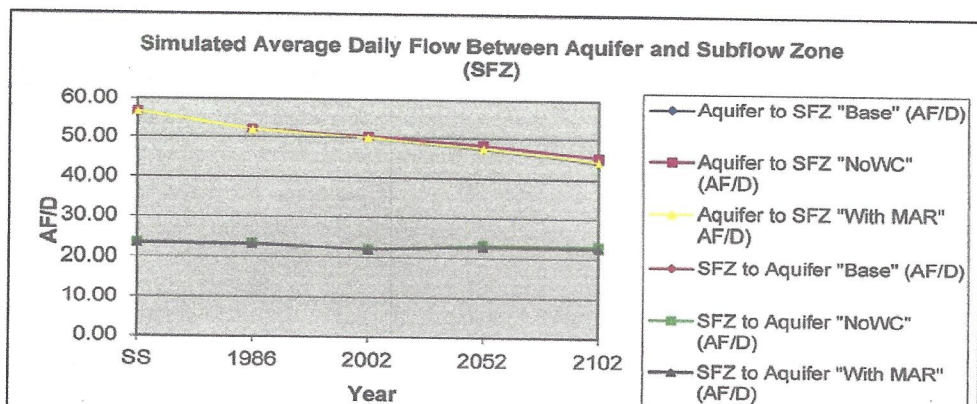
22 subflow zone

23 (shown by the

24 descending upper

25 two lines) than it

26 does on the amount



27 **Figure 5** Simulated Average Daily Flow Between Subflow Zone (SFZ) and Regional

28 Aquifer Steady State (SS) to 2102

of water flowing from the subflow zone to the aquifer (the lower overlapping lines).

1 The second critical finding made by ADWR was that flow patterns near the subflow zone
2 were significantly altered due to pumping causing water to flow into the subflow zone as well as
3 out of the subflow zone. It also listed the problems of isolating the impacts of pumping on the
4 subflow zone among a group of wells. In addition, ADWR reached both a general conclusion that
5 flow from the subflow zone may not be measurable until after senior appropriable surface water
6 rights have been impacted and a series of more specific conclusions about the model set forth in
7 Appendix 4 to the Report.

8 Accordingly, additional issues to be addressed at a status conference include:

- 9 1) Whether the parties should be given time to develop proposed tests that could be
10 submitted to ADWR for review and comment.
11 2) Whether ADWR should be given additional time to test and quantify model
12 sensitivity to runoff.
13

14 No party is expected to engage in any briefing in advance of the status conference. Instead,
15 the parties should be prepared to present their positions on issues listed above and any additional
16 issues they regard as significant regarding the proposed Subflow Depletion Test and the
17 determination of the cone of depression test contemplated in *Gila IV* that shows “that the well’s
18 cone of depression extends into the subflow zone and is depleting the stream.” 198 Ariz. at 343,
19 ¶40, 9 P.3d at 1082. The purpose of the status conference is to identify the key issues that must be
20 resolved to implement an efficient and fair process with respect to wells located outside the
21 boundaries of the subflow zone.
22

23 For good cause shown,

24 **IT IS ORDERED** setting a status conference for January 11, 2019 at 8:30 a.m. in the
25 Superior Court of Arizona, Central Court Building, Courtroom 301, 201 West Jefferson Street,
26
27
28

1 Phoenix, AZ 85003-2202. Arizona Department of Water Resources is requested to provide a brief
2 presentation of its Subflow Depletion Test Report at the status conference.

3
4 Instructions for telephonic participation:

5 Dial: 602-506-9695 (local)


6 1-855-506-9695 (toll free long distance)

7 Dial Collaboration (conference) Code 357264#

8 **IT IS FURTHER ORDERED** vacating the January 18, 2019 deadline for the parties to
9 file initial comments, the February 22, 2019 date for ADWR to file its responses to the comments
10 and the March 7, 2019 status conference.
11

12
13
14
15 
16 Susan Ward Harris
17 Special Master
18

19
20 A copy of this order is mailed to all
21 persons listed on the Court approved
22 mailing list (Court) for Contested Case
No. W1-103.

23 
24 Barbara Brown
25

26
27
28