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11 **IN THE SUPERIOR COURT OF THE STATE OF ARIZONA**
12 **IN AND FOR THE COUNTY OF MARICOPA**

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

17 W-1 (Salt)
18 W-2 (Verde)
19 W-3 (Upper Gila)
20 W-4 (San Pedro)
21 (Consolidated)

22 Contested Case No. W1-106

23 **ARIZONA DEPARTMENT OF WATER
24 RESOURCES' COMMENTS ON SRP's
25 MOTION FOR PARTIAL SUMMARY
26 JUDGMENT REGARDING IMPACT
OF USES FOR SUMMARY
ADJUDICATION DETERMINATION
(THORSON FACTOR 3)**

Assigned to the Hon. Scott Blaney

Referred to Special Master Sherri Zendri

CONTESTED CASE NAME: *In re Subflow Technical Report, Verde River Watershed*

HSR INVOLVED: None

DESCRIPTIVE SUMMARY: The Arizona Department of Water Resources hereby provides comments in response to SRP's Motion for Partial Summary Judgment regarding impact of small water uses in the Verde River watershed.

1 **NUMBER OF PAGES:** Twelve

2 **DATE OF FILING:** May 31, 2024

3 In August of 2022, the Arizona Department of Water Resources (“ADWR”) filed
4 its Technical Report on *De Minimis* Domestic, Stockpond, and Stock and Wildlife
5 Watering Uses in the Verde River watershed (“*De Minimis* Report”). On April 12, 2024,
6 the Salt River Valley Water Users’ Association and the Salt River Project Agricultural
7 Improvement and Power District (collectively, “SRP”) filed three separate motions
8 seeking partial summary judgment on three of the four “Thorson Factors”¹ used to
9 determine whether a particular category of uses is *de minimis* and eligible for summary
10 adjudication. These comments address the impact of small uses on the available water
11 supply in the Verde River watershed, which is the subject of SRP’s motion on “Thorson
12 Factor 3.”²

13

14 **I. Summary of Positions**

15 SRP acknowledges that the impacts of stock and wildlife watering uses should be
16 calculated using ADWR’s estimates of the extent of those uses but measured against
17 SRP’s water availability values.³ As ADWR stated in its comments to SRP’s Motion for
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19 ¹ The four “Thorson Factors” used previously by Special Master Thorson in determining
20 whether a particular category of water uses is *de minimis* and eligible for summary
21 adjudication are 1) the amount of water available in the watershed, 2) the number of uses
22 being considered for summary adjudication, 3) the impacts of those uses on the available
23 water supply, and 4) the costs and benefits of a complete, rather than summary,
24 adjudication of the uses. Memorandum Decision, Findings of Fact, and Conclusions of
25 Law for Group 1 Cases Involving Stockwatering, Stockponds, and Domestic Uses, filed
26 November 14, 1994 in Contested Case No. W1-11-19, In re Sands Group of Cases (W1-
11-19) and Other Related Cases (Consolidated) at 12.

² See Salt River Project’s Motion for Partial Summary Judgment Regarding Impact of
Uses For Summary Adjudication Determination (Thorson Factor 3) filed April 12, 2024.

³ *Id.* at 4.

1 Summary Judgment on Thorson Factor 1 (water availability),⁴ SRP did not provide the
2 Court with a complete representation of surface water in the Verde River watershed but
3 instead provided an unreasonably conservative estimate of water availability that does not
4 quantify already-present consumptive uses. Therefore, SRP’s estimates should be rejected
5 by the Court and those estimates should not be used to measure impacts for each category
6 of uses.

7 SRP also argues that the “undisputed facts” show that impact of each self-supplied
8 domestic use is 1.0 AFA as “a matter of law” because “the parties stipulated to 1.0 acre-
9 feet annually (“AFA”) for purposes of the assumed impact” and domestic users will
10 receive 1.0 AFA for a domestic water right if *de minimis* procedures are implemented.⁵
11 The parties stipulated that 1.0 AFA would be used for purposes of the impact calculation
12 *in ADWR’s analysis*, not that 1.0 AFA would be ultimately assigned to each domestic use
13 if certain domestic uses are found to be *de minimis*;⁶ furthermore, the “stipulation”
14 occurred before any of the parties’ experts had submitted expert reports and given
15 opinions on actual domestic use in the Verde River watershed.⁷

16 As ADWR noted in the *De Minimis* Report, individual domestic water uses in the
17 Verde River watershed are likely much lower than 1.0 AFA.⁸ ADWR’s role, in authoring
18 the *De Minimis* Report, like all technical reports, was to 1) follow the direction of the

20 ⁴ADWR’s Comments on SRP’s Motion for Summary Judgment Regarding Water
21 Availability for Summary Adjudication (Thorson Factor 1) filed May 31, 2024 at 6.

21 ⁵ SRP Motion, *supra* note 2, at 3.

22 ⁶ See March 10, 2022 Minute Entry at 5, “The Court inquires of all counsel: Is there any
23 party appearing today who has an objection to using a one acre foot standard **for the**
24 **purposes of calculation of whether domestic water uses in the Verde Watershed are**
de minimis? No objections having been made; question number three is deemed moot.”
(emphasis added).

25 ⁷ *Id.* The status conference was held on March 3, 2022. Parties’ initial disclosures
statements were filed October 27, 2023.

26 ⁸ ADWR’s *De Minimis* Report at 16.

1 Court; and 2) provide scientific information the Court can rely upon when making its
2 determination. Although ADWR felt that using 1.0 AFA per domestic use was a
3 comfortable overestimate for purposes of its calculations and would likely be an
4 appropriate volume of water to assign to potentially *de minimis* domestic uses in the
5 watershed, the Court is not bound by ADWR’s recommendation, SRP’s recommendation,
6 or the quantity of water assigned to these uses in the San Pedro River watershed if the
7 Court finds that a different volume of water is appropriate. Ultimately, the Court has the
8 authority to make the decision on whether to qualify some uses as *de minimis* and what
9 the appropriate quantity of water assigned to those uses may be – this is a power that rests
10 solely with the Court and cannot be relinquished to the parties or to ADWR.

11 SRP further incorrectly asserts that it is “undisputed” that 1) the impacts of all uses in
12 the two subwatersheds upstream of the Paulden gage should be measured at Paulden, 2)
13 the impacts of uses in the four subwatersheds upstream of the Camp Verde gage should be
14 measured at Camp Verde, and 3) that the impacts of uses in all five subwatersheds
15 upstream of Tangle Creek should be measured at Tangle Creek.⁹ SRP’s proposal that the
16 impacts of upstream uses must be measured at all three gages separately is an attempt to
17 achieve the highest possible impact calculation at each gage because the smaller the area
18 being analyzed, the greater the impact any one use is going to have on the water that is
19 passing a particular gage.¹⁰

20 ADWR agreed with the third of these proposals, that the impacts of uses in all five
21 subwatersheds upstream of Tangle Creek could be measured at Tangle Creek but
22 acknowledged that measurements reflected at the Tangle Creek gage is the volume of

23 ⁹ *Id.* at 4.

24 ¹⁰ Hadder Dep. 242:23- 243:1, February 27, 2024; and ADWR’s *De Minimis* Report at 33,
25 “ADWR’s estimate of water demand and supply were both calculated using an extremely
26 conservative approach that overestimated demand and underestimated supply, which
becomes even more significant when broken down into subwatersheds.”

1 water that is left over after all beneficial uses have occurred.¹¹ ADWR acknowledged that
2 looking solely at the measurements at the Tangle Creek gage is essentially “double-
3 counting” because the water for every use has been removed from the system by the time
4 the water is measured at the Tangle Creek gage and then ADWR is estimating the impacts
5 of the cumulative self-supplied domestic demand a second time against the volume of
6 water left over and passing the gage.¹² Although ADWR does not dispute that
7 considering all available data from all relevant gages is important, measurements of water
8 flowing past the gage after all beneficial uses have occurred is not the equivalent of the
9 quantity of surface water in the watershed or specifically the quantity attributable to
10 domestic uses, stockpond uses, or stock and wildlife watering uses; therefore, the impacts
11 of those uses should not be measured solely against the volume of remaining water
12 flowing past the gage.¹³

13 In summary, SRP’s position is that the impact of domestic uses should be measured by
14 converting 1.0 AFA per use to a monthly water consumption and then measuring that
15 monthly water consumption against median June streamflow volumes at the Paulden,
16 Camp Verde, and Tangle Creek gages.¹⁴ This proposal is designed to result in the highest
17 possible impact calculations¹⁵ and to make it unlikely that the Court will be able to find
18 that domestic uses have a *de minimis* impact of the water supply anywhere in the Verde
19 River watershed.

20 As ADWR stated in its comments to SRP’s Motion on Thorson Factor 1 (water
21 availability), determining impact for a particular category of water use involves looking at
22 the total amount of surface water that exists in the watershed, estimating how much of that

23 ¹¹ ADWR’s *De Minimis* Report at 10 and 32.

24 ¹² *Id.* and Hadder Dep. 302:9 -303:25, February 27, 2024.

25 ¹³ Hadder Dep. 293:14-17, February 27, 2024.

26 ¹⁴ SRP Motion at 6.

¹⁵ Case Dep. 41:14 -42:15.

1 water is attributable to the category of uses, and determining whether the percentage of
2 water being used for those purposes is *de minimis*.¹⁶ ADWR provided gage
3 measurements and indicated that the amount of available water measured at the gages is a
4 significant underestimate of the volume of water that is likely available in the Verde River
5 watershed.¹⁷ SRP's position that the measurements at each gage are the equivalent of the
6 amount of water available, and that impacts should be calculated only against those
7 measurements that occur in June, provides an inaccurate estimate of the volume of surface
8 water available in the watershed. This proposal should be rejected by the Court, and the
9 Motion should be denied.

11 II. Summary Judgment Standard

12 Rule 56 of the Ariz. R. Civ. P. authorizes this Court to grant summary judgment
13 when there is no genuine dispute as to any material fact and the moving party is entitled to
14 judgment as a matter of law.¹⁸ Accordingly, the moving party must establish that no such
15 issue remains for trial, even if the evidence is viewed in the light most favorable to the
16 non-moving party. *Thompson v. Better-Bilt Aluminum Prod. Co., Inc.*, 171 Ariz. 550, 558,
17 832 P.2d 203, 211 (1992). Additionally, this Court is authorized to grant summary
18 judgment for a non-moving party, grant summary judgment on grounds not raised by a
19 party or consider summary judgment on its own after identifying for the parties material
20 facts that may not be genuinely in dispute. Ariz. R. Civ. P. 56(f).

25 ¹⁶ ADWR's Comments, *supra* note 4, at 4-5.

26 ¹⁷ ADWR's *De Minimis* Report at 10 and 32.

¹⁸ Ariz. R. Civ. P. 56 (a).

1 As a threshold matter, ADWR is not a party to the general stream adjudication.¹⁹
2 ADWR serves as technical advisor to the Court.²⁰ Therefore, ADWR offers these
3 comments regarding the motion for the Court’s consideration.

4 **A. The impact of each self-supplied domestic use is likely less than 1.0 AFA, and**
5 **the Court should determine the appropriate quantity attributable to each use.**

6 SRP argues that there is no rational basis for attributing a quantity other than 1.0 AFA
7 to each domestic use in the Verde River watershed. However, SRP’s expert, Andrew
8 Case, stated during his deposition that 1.0 AFA per self-supplied domestic use is
9 conservative.²¹ Mr. Case’s statement is consistent with the data he reviewed and
10 presented in his expert report which shows that among 14 different water suppliers in the
11 Verde River watershed, the annual water use per household is typically less than 1.0 AFA
12 and very often less than 0.54 AFA.²² These quantities are also consistent with the per-
13 person and per-household volumes cited by ADWR in its *De Minimis* Report:

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15 ADWR’s estimated domestic demand for the entire Verde River watershed is likely
16 a significant overestimate because a per household use of 1.00 AFA was assumed. The
17 United States Bureau of Reclamation (USBR) estimates that one person uses about
18 0.18 AFA of water, or approximately 0.54 AFA per household (assuming three people
19 per household). The USGS estimates approximately 0.12 AFA of water per person, or
20 0.36 AFA per household per year. The Environmental Protection Agency (EPA)
21 estimates that Arizonans use between 126 and 150 gallons of water per person per day,
which converts to between 0.14 and 0.17 AFA per person or 0.51 AFA per household
per year. ADWR’s estimate of water use per household includes use inside the home

22 ¹⁹ See Order With Regard To The Fifth Set of Issues Submitted for Decision filed in the
23 Gila River adjudication on July 27, 1989, W-1, W-2, W-3, W-4.

24 ²⁰ Arizona Revised Statutes § 45-256.

25 ²¹ Case Depo. 47:16-21.

26 ²² LRE’s “Expert Comments on ADWR Technical Report re: “De Minimis” Domestic
Uses in the Verde River Watershed” filed October 2023 at 18; Attachments A and B to
ADWR Notice of Providing Document filed March 1, 2024.

1 as well as allocating water for up to half of an acre of outside landscaping or
2 gardening. ADWR's use estimate also accounts for older homes with significantly less
3 efficient appliances than would be seen in newer homes. Thus, ADWR believes 1.00
4 AFA is a reasonable allotment of domestic water use per household.

5 ADWR's *De Minimis* Report at 16.

6 As compared to the San Pedro River watershed, the average house size in the Verde
7 River watershed is lower. Yavapai County reports an average of 2.3 people per
8 household,²³ while there is an average of 3 people per household in the San Pedro;
9 therefore, domestic use in the Verde River watershed is likely to be lower. Additionally,
10 domestic water users in rural areas often use less water than those in urban areas because
11 they often have less disposable income and are more inclined to conserve water.²⁴

12 While ADWR felt that using 1.0 AFA per domestic use was a comfortable
13 overestimate for purposes of its demand calculations and would likely be an appropriate
14 volume of water to assign to potentially *de minimis* domestic uses in the watershed,
15 ADWR was very clear that 1.0 AFA per domestic use is an overestimate.²⁵ The Court is
16 not bound by ADWR's recommendation, SRP's recommendation, or the quantity of water
17 previously assigned to domestic uses in the San Pedro River watershed if the Court finds
18 that a different volume of water is appropriate. The Court has the authority to make its
19 own findings based on the technical expertise ADWR provides or input from the parties,
20 and is able to consider the scientific facts and realities on the ground at the time the Court
21 makes a decision. The Court is not bound by findings made in the past regarding domestic
22 water use, which is a fact-based inquiry, and instead can ensure its findings reflect actual
23 contemporary consumptive use patterns if it finds it appropriate. *Stare decisis*, in this
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25 ²³ Cook Depo. 392:15-393:10, February 27, 2024.

26 ²⁴ *Id.* at 398:20-25.

²⁵ ADWR's *De Minimis* Report at 16; Cook Dep. 360:18-361:4, February 27, 2024.

1 context, applies to loyalty to past courts' legal analysis, not the factual specifics of a
2 wholly different watershed investigated thirty years ago.

3 **B. The cumulative impact of a particular category of uses should be measured**
4 **against the total quantity of surface water available in the watershed.**

5 SRP's position is that the impact of domestic uses should be measured by converting
6 1.0 AFA per use to a monthly water consumption and then measuring that monthly water
7 consumption against median June streamflow volumes at the Paulden, Camp Verde, and
8 Tangle Creek gages.²⁶ This proposal is designed to result in the highest possible impact
9 calculations²⁷ and to make it unlikely that the Court will be able to find that domestic uses
10 have a *de minimis* impact of the water supply anywhere in the Verde River watershed.

11 As ADWR stated in its comments to SRP's Motion on Thorson Factor 1 (water
12 availability), the ideal way to conduct an impact analysis would be to look at the total
13 amount of surface water available in the watershed, estimate how much of that water is
14 attributable to domestic uses, and determine whether the percentage of water being used
15 for domestic purposes in the watershed is *de minimis*.²⁸ ADWR provided gage
16 measurements to estimate the water availability, resulting in a significant underestimate of
17 the volume of water that is actually available in the watershed.²⁹ SRP's position that the
18 measurements at each gage are the equivalent of the amount of water available, and that
19 impacts should be calculated only against those measurements that occur in June, is an
20 even less accurate estimate of the volume of surface water available in the watershed.

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²⁶ SRP Motion at 6.

25 ²⁷ Case Dep. 41:14- 42:15.

26 ²⁸ ADWR's Comments, *supra* note 4, at 4-5.

²⁹ ADWR's *De Minimis* Report at 10 and 32.

1 Additionally, SRP's expert Andrew Case and ADWR agree that there is no way to
2 determine whether a well's pumping in June will have an immediate impact on the water
3 measured at the gage in June.³⁰

4 The median annual gage measurements provided by ADWR provide a closer estimate
5 of the surface water available than measurements of the volume of water that passes each
6 gage during the month of June. *See* ADWR's Comments in Response to SRP's Motion on
7 Thorson Factor 1. The impact of domestic uses on the surface water supply is less than the
8 impact estimated by ADWR.³¹ If the Court decides to use the measurements provided by
9 ADWR, it should do so with the understanding that the numbers provided by ADWR are a
10 significant underestimate of the quantity of surface water available in the watershed.

11 **C. Even if the Court finds that the cumulative impact of domestic uses is not *de***
12 ***minimis*, the Court can find that individual domestic uses have a *de minimis***
13 **impact on the surface water supply.³²**

14 In the San Pedro River watershed, Special Master Thorson determined that self-
15 supplied domestic uses when considered cumulatively did not have a *de minimis* impact,
16 but that individual domestic uses for single residences, when serving household purposes
17 and associated outdoor activities on adjoining land not exceeding (\leq) 0.2 acres, are *de*

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20 ³⁰ Hadder Dep. 203:17-20, February 26, 2024 and 313:7-22, February 27, 2024; Case
21 Dep. 37:6-23.

22 ³¹ Hadder Dep. 318:15-21, February 27, 2024.

23 ³² In each of its Motions for Summary Judgment, SRP has requested that the Court set a
24 briefing schedule on Thorson Factor 4 (costs and benefits). *See, e.g.,* SRP's Motion at 2.
25 SRP has also partially briefed this issue in its Motion for Partial Summary Judgment
26 Regarding Enforcement Against Summarily Adjudicated Uses filed February 23, 2024
and related Reply filed April 18, 2024. To ADWR's knowledge, the costs and benefits
analysis is typically left to the Court; however, to the extent that the Court is inclined not
to set a briefing schedule on Thorson Factor 4, ADWR offers these comments for the
Court's consideration.

1 *minimis*.³³ Special Master Thorson stated “What is important here is the convergence of
2 several key factors: the large number of uses, the small individual amounts of use, and the
3 relatively few benefits that would result from a detailed adjudication of these uses.”³⁴The
4 Court can make the same finding in the Verde River watershed.

5 6 **III. CONCLUSION**

7 For the foregoing reasons, the Motion should be denied. In its *De Minimis* Report,
8 ADWR *underestimated* the quantity of water in the Verde River watershed to be
9 281,336.14 AFA based on the median annual flow at the Tangle Creek gage. Both Harvey
10 Economics and ADWR *overestimated* the number of self-supplied domestic uses. Harvey
11 Economics found a total of 20,149 self-supplied domestic uses in the Verde River
12 watershed. Assigning 1.0 AFA to each of those uses to estimate demand results in 20,149
13 AFA of water per year attributable to domestic uses, or roughly 7.16% of the water supply
14 after all consumptive uses have occurred. Because the water availability figure was
15 underestimated and the number of uses was overestimated, the impact of domestic uses on
16 the actual surface water supply is likely to be significantly less whether looking at the
17 entire watershed or any of the subwatersheds. The Court could also find, based on the
18 facts, that each self-supplied domestic use *actually* uses less than 1.0 AFA of water, which
19 further reduces the impact calculation at the watershed or subwatershed level. ADWR
20 believes that the Court can resolve these issues on the briefs filed, expert reports, and the
21 deposition transcripts without the need for trial unless the Court needs additional
22 information.

23 _____
24 ³³ Conclusions of Law Nos. 23 and 24, Memorandum Decision, Findings of Fact, and
25 Conclusions of Law for Group 1 Cases Involving Stockwatering, Stockponds, and
26 Domestic Uses, filed November 14, 1994 in Contested Case No. W1-11-19, *In re Sands
Group of Cases (W1-11-19) and Other Related Cases (Consolidated)* at 33.

³⁴ *Id.* at 30.

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RESPECTFULLY SUBMITTED this 31st day of May, 2024.

ARIZONA DEPARTMENT OF WATER
RESOURCES



Kimberly R. Parks, Deputy Counsel
Karen J. Nielsen, Deputy Counsel

ORIGINAL of the foregoing sent by
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