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**IN THE SUPERIOR COURT OF THE STATE OF ARIZONA  
IN AND FOR THE COUNTIES OF MARICOPA AND APACHE**

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

**W-1, W-2, W-3, and W-4 (Consolidated)  
and  
CV 6417**

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

**REPORT OF THE SPECIAL MASTER  
ON AMENDMENTS TO THE  
WATERSHED BOUNDARY MAP AND  
SEQUENCING FOR FUTURE  
HYDROGRAPHIC SURVEY REPORT  
DEVELOPMENT**

**CONTESTED CASE NAME:** *In re HSR Sequencing*  
**REPORT INVOLVED:** Arizona Department of Water Resources *Future Report Recommendations – In re General Stream Adjudication*, May 2023.  
**DESCRIPTIVE SUMMARY:** Final Report pursuant to Ariz. R. Civ. P. 53, with Findings of Facts and Conclusions of Law concerning amendments to the watershed boundary map, boundaries for hydrographic survey reports, and the optimal sequence of completing hydrographic survey reports. Objections to the Final Report shall be filed with the Clerk of the Court for Apache County Superior Court AND the Clerk of the Court for Maricopa County Superior Court on or before **September 23, 2024**.  
**NUMBER OF PAGES:** 43 (including attachments)  
**DATE OF FILING:** March 25, 2024

Pursuant to Arizona Revised Statutes section 45-256(A), the Arizona Department of Water Resources (“ADWR”) is the General Stream Adjudication Court’s technical advisor and is statutorily tasked with providing “technical assistance” regarding hydrology, geology, modeling, or other technical expertise

1 within the agency. It is the Court’s responsibility, however, to manage the timeline of  
2 the General Stream Adjudication (“Adjudication”) cases and set the schedules for the  
3 preparation of technical reports. The resources of all parties must be considered as the  
4 Court moves the Adjudication to completion.

5 After a February 22, 2023, order from the Water Master requesting input from  
6 ADWR regarding the next phase of Hydrographic Survey Reports (“HSR”),<sup>1</sup> ADWR  
7 presented the Court with recommendations and a revised map of Arizona watershed  
8 boundaries.<sup>2</sup> Most notably, this revised map divided an area that had historically been  
9 entirely within the Lower Gila River Watershed, into four separate watersheds: Lower  
10 Gila/Agua Fria, Salt River, Middle Gila, and the Verde Rivers. This area includes the  
11 bulk of the Phoenix Metropolitan area (“Metro Phoenix”),<sup>3</sup> including service areas for  
12 at least a dozen domestic and irrigation water providers for the area.

13 Significant objections to the map revisions were presented to the Water Master  
14 during a June 23, 2023, status conference. Briefs were requested from interested  
15 parties and oral arguments subsequently scheduled for January 2024. This report  
16 provides a summary of ADWR’s recommendations and map revisions, objections to  
17 the recommendations and revisions, and proposed actions for the Court to move the  
18 Adjudication forward.

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22 <sup>1</sup> A Hydrographic Survey Report is the result of ADWR’s investigation on all  
23 permitted, claimed, and actual uses within a specified area, the HSR investigation  
24 boundary. An HSR provides the Court with summaries of the existing information  
related to a potential water right, and recommendations for proposed attributes related  
to the investigated water rights.

25 <sup>2</sup> See W1–W4, Order for Technical Report (Feb. 22, 2023); W1–W4, ADWR  
26 Future Report Recommendations (“Future HSR Report”) (May 25, 2023).

27 <sup>3</sup> For the purposes of this report, Metro Phoenix consists of the Cities of  
28 Apache Junction, Avondale, Chandler, Glendale, Goodyear, Mesa, Peoria, Phoenix,  
Scottsdale, Tempe, Tolleson, and the Towns of Gilbert and Queen Creek.

1 **I. BACKGROUND**

2 **A. Gila River System**

3 The Court has issued several pretrial orders (“PTO”) in the adjudication. In  
4 1986 the Court issued a Pretrial Order (“Gila PTO No. 1”) for the General  
5 Adjudication of the Gila River System and Source (“Gila Adjudication”) and directed  
6 the preparation of a series of HSRs in the consolidated Gila Adjudication along with a  
7 schedule of dates. The Gila PTO No. 1 estimated all HSRs for the Gila Adjudication  
8 to be completed by the end of 1991, with the original schedule as follows:

- 9       ▪ Gila Pre-Trial Order No. 1 (May 30, 1986)
- 10       ▪ San Pedro Subwatershed (January 1987)
- 11       ▪ Upper Salt Subwatershed (July 1987)
- 12       ▪ Verde Subwatershed (July 1989)
- 13       ▪ Upper Gila Subwatershed (July 1990)
- 14       ▪ Agua Fria Subwatershed (January 1991)
- 15       ▪ Lower Gila Subwatershed (July 1991)
- 16       ▪ Salt River Project, Buckeye Irrigation District, Roosevelt Water  
17       Conservation District (July 1991)
- 18       ▪ Salt River Valley Municipalities (July 1991)
- 19       ▪ Santa Cruz Subwatershed and Tucson Metropolitan Area (July 1991)

20 Most HSRs were expected to be completed by 1991; however, only the first HSR, San  
21 Pedro River Watershed, was finished. A preliminary HSR for the Upper Salt River  
22 Watershed was also completed in 1991. Due to the focus of the Adjudication on  
23 subflow technical development, as well as other resource constraints, the final HSR  
24 for the Upper Salt River Watershed was never prepared. To date, the only HSR in the  
25 Gila Adjudication that has been completed is the San Pedro HSR.

26 The Gila PTO No. 1 also directed preparation of HSRs for the following Indian  
27 Reservations in the Gila River basin: White Mountain Apache Reservation, Tonto  
28 Apache Reservation, Camp Verde Reservation, Prescott Yavapai-Apache

1 Reservation, Fort McDowell Indian Reservation, San Carlos Apache Indian  
2 Reservation, Salt River Pima Maricopa Indian Reservation, Gila River Indian  
3 Reservation, “Gila Bend Papago Indian Reservation,” “Other Papago Reservations,”  
4 and the Yaqui Reservation. Since the issuance of Gila PTO No. 1, settlements have  
5 been reached for White Mountain Apache Reservation, Prescott Yavapai-Apache  
6 Reservation, Fort McDowell Indian Reservation, San Carlos Apache Indian  
7 Reservation, Salt River Pima Maricopa Indian Reservation, and the Gila River Indian  
8 Reservation.<sup>4</sup>

9 In 2005, after almost 20 years and only one HSR completed in the Gila  
10 Adjudication, the Court issued an order that addressed the preparation of subflow<sup>5</sup> and  
11 *de minimis*<sup>6</sup> reports for the Gila Adjudication, and the sequence in which they were to  
12 be prepared. This 2005 order gave no hard deadlines, only a relative order for which  
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14 <sup>4</sup> See White Mountain Apache Tribe Water Rights Quantification Act of  
15 2010, Pub. L. No. 111-291, 124 Stat. 3064; White Mountain Apache Water Rights  
16 Quantification Settlement Judgment and Decree (December 18, 2014); Yavapai-  
17 Prescott Indian Tribe Water Rights Settlement Act of 1994, Pub. L. No. 103-434,  
18 108 Stat. 4526; Fort McDowell Indian Community Water Rights Settlement Act of  
19 1990, P.L. 101-628; San Carlos Apache Tribe Water Rights Settlement Act of  
20 1992, Pub. L. No. 102-575, 106 Stat. 4740. Salt River Pima-Maricopa Indian  
21 Community Water Rights Settlement Act of 1988, Pub. L. No. 100-512, 102 Stat.  
22 2549; Gila River Indian Community Water Rights Settlement Act of 2004, Pub. L.  
23 No. 108-451, 118 Stat. 3499. The Tohono O’odham also have a settlement;  
24 however, this tribe was not listed separately in the Gila PTO. See Tohono  
25 O’odham Settlement Agreement, Southern Arizona Water Rights Settlement Act of  
26 1982, Pub. L. No. 97-293, 96 Stat. 1274; Arizona Water Rights Settlements  
27 Amendments Act of 2004, Pub. L. No. 108-451, 118 Stat. 3536.

28 <sup>5</sup> “Subflow” has been defined by the Arizona Supreme Court as “those waters  
which slowly find their way through the sand and gravel constituting the bed of the  
stream, or the lands under or immediately adjacent to the stream, and are themselves a  
part of the surface stream.” *Southwest Cotton*, 39 Ariz. at 96, 4 P.2d at 380, (Ariz.  
1935).

<sup>6</sup> A *de minimis* technical report is an investigation and evaluation by ADWR  
recommending that certain rights be considered *de minimis* and summarily  
adjudicated.

1 watersheds should be investigated:<sup>7</sup>

- 2       ▪ San Pedro River
- 3       ▪ Verde River
- 4       ▪ Upper Gila River
- 5       ▪ Upper Salt River
- 6       ▪ Upper Agua Fria River
- 7       ▪ Lower Gila River
- 8       ▪ Upper Santa Cruz River

9       Most recently, ADWR has been working in the Verde River Watershed and has  
10 prepared two proposed subflow zone delineation reports - one for the mainstem<sup>8</sup> of  
11 the Verde River and a second for the remainder<sup>9</sup> of the Verde River system. ADWR  
12 has also completed a technical report concerning potential *de minimis* uses in the  
13 Verde River Watershed.<sup>10</sup> Preliminary HSRs for the Verde River Subwatersheds are  
14 scheduled to be completed in 2026–2029.<sup>11</sup>

15

16       **B. Little Colorado River System**

17       In 1987, the Court issued a separate pretrial order (“LCR PTO No. 1”) in the  
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19       <sup>7</sup> W1-11-232, Order Re: Report of the Special Master on the Arizona  
20 Department of Water Resources’ Subflow Technical Report, San Pedro River  
21 Watershed and Motion for Approval of Report (September 28, 2005).

22       <sup>8</sup> W1-106, Subflow Zone Delineation Report for Verde River Mainstem &  
Sycamore Canyon (December 2021).

23       <sup>9</sup> W1-106, Subflow Zone Delineation Report for the Remainder of the Verde  
24 River Watershed (April 2023)

25       <sup>10</sup> W1-106, Technical Report Concerning *De Minimis* Domestic, Stockpond,  
and Stock and Wildlife Watering Uses in The Verde River Watershed (August 2022).

26       <sup>11</sup> The Verde River Watershed is currently scheduled to be completed in three  
27 phases based upon five subwatersheds: Verde Canyon, Sycamore Subwatershed by  
28 March 2026; Lower Verde Valley Subwatershed by September 2027; Little Chino  
Subwatershed and Big Chino Subwatershed both by March 2029.

1 General Adjudication of the Little Colorado River (“LCR”) System and Source  
2 (“LCR Adjudication”) that provided the sequence in which HSRs would be prepared  
3 for certain watersheds and for Indian reservations in northeastern Arizona. In  
4 accordance with the LCR PTO No. 1, an HSR was prepared for the Silver Creek  
5 Subwatershed in 1991. A final report concerning potential *de minimis* uses in the  
6 Silver Creek Subwatershed was approved by the Court in April 2023.<sup>12</sup> ADWR will  
7 deliver a technical report about the subflow zone for the Silver Creek Subwatershed in  
8 2026.

9 Subsequent orders amended the HSRs to be prepared for Indian Lands,<sup>13</sup> and  
10 an HSR was completed in 2015 for the Hopi Reservation. After a lengthy trial, a  
11 Final Report was filed by the Special Master on May 25, 2022, however the Court has  
12 not ruled on the report yet. ADWR has also completed Phase I (historic, present, and  
13 future stockponds, stock and wildlife watering, and domestic, commercial, municipal,  
14 and industrial uses) of the Navajo Reservation HSR in December 2019, and is in the  
15 process of completing Phase II (cultural, tribal, recreational, fish, wildlife,  
16 conservation, mining and heavy industrial or commercial water uses) with a planned  
17 completion date of July 25, 2025, for the final HSR.

18 In 2018, ADWR was ordered to prepare an HSR for the Lower Little Colorado  
19 River Subwatershed, referenced as the “Winslow Subwatershed” in the LCR PTO No.  
20 1. ADWR filed a *de minimis* report in July 2019 for the Lower Little Colorado River  
21 Subwatershed that was approved by the Court on May 25, 2021. However, in

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22 <sup>12</sup> A final report was initially filed by the Special Master after the issuance of  
23 the HSR. CV6417-33-9005, Memorandum Decision (Apr. 20, 1994). The Court did  
24 not rule on the final report. A second report by the Special Master was filed on  
25 August 23, 2022, and the Court ruled on that report. CV6417-33-9005R, Report of  
26 the Special Master on Silver Creek Summary Proceedings (Aug. 23, 2022); CV6417-  
33-9005, Minute Entry (Apr. 18, 2023).

27 <sup>13</sup> CV6417, Minute Entry at 8–9 (October 16, 2001); CV6417-300, Order  
28 Requesting Technical Assistance at 6–8 (Dec. 28, 2016); CV6417-300, Order  
Requesting Technical Assistance at 2–3 (Dec. 21, 2018).

1 September 2021, ADWR filed a motion stating that it could not recommend water  
2 uses for most of the water users in the subwatershed in the absence of an approved  
3 subflow zone due to the number of proposed water uses potentially within a subflow  
4 zone. The due date for the filing of a preliminary HSR for the Lower Little Colorado  
5 River Subwatershed was vacated and ADWR directed to prepare a technical report for  
6 the subflow zone for the Lower Little Colorado Watershed. This subflow report will  
7 be filed by September 5, 2025. No date is currently set for the completion and filing  
8 of the preliminary HSR for the Lower Little Colorado River Subwatershed.

9 Starting with the Verde River Watershed, and for all future watersheds, the  
10 subflow zone delineation and proposed summary procedures for water uses that can  
11 be considered *de minimis* will be completed prior to the HSR completion. This  
12 change is to ensure that as soon as HSRs are published, the Court can begin the  
13 process of resolving contested cases. Many issues have arisen in both San Pedro and  
14 Silver Creek because of delayed adjudication while waiting for subflow delineations,  
15 and *de minimis* procedures. However, this succession for the reports requires  
16 significant advance planning for ADWR to complete the technical reports, and the  
17 Court to resolve any objections to those reports, before an HSR can be prepared and  
18 distributed.

## 19 20 **II. CURRENT ADWR RECOMMENDATIONS**

21 On January 18, 2023, a Status Conference was held in the Gila Adjudication to  
22 address the next HSR that should be undertaken by ADWR once all Verde River  
23 reports are completed. During that conference, it was proposed that ADWR should  
24 prepare technical reports concerning potential *de minimis* uses and the subflow zones  
25 in the Upper Salt River, Upper Gila River, and the Upper Little Colorado River  
26 Watersheds, and further suggested that ADWR file all the reports simultaneously.  
27 Such a simultaneous filing would be a considerable effort for the agency; therefore, an  
28 order was issued February 22, 2023, requesting input from ADWR to:

1            “[F]ile by May 26, 2023, a report that addresses the amount of time required by  
2 ADWR and the expected cost that would normally be payable to a third party to  
3 prepare a subflow zone report for separate reports for Upper Salt River, Upper Gila  
4 River, and the Upper Little Colorado River Watershed. The report shall also estimate  
5 the costs and time to prepare a joint report, or three separate reports filed  
6 simultaneously with respect to the subflow zones for the three watersheds. Arizona  
7 Department of Water Resources shall provide its recommendations as to the most  
8 efficient method to complete the technical reports and HSRs for the Upper Salt River,  
9 Upper Gila River, and the Upper Little Colorado River Watershed.”<sup>14</sup>

10            On May 26, 2023, ADWR filed the *Future Report Recommendations – In re*  
11 *General Stream Adjudication* report (“Report”) addressing the amount of time  
12 required, and the expected cost, to prepare a separate subflow zone report for each of  
13 the Upper Salt River, Upper and Middle Gila River, and the Upper Little Colorado  
14 River Watersheds. Rough estimates to complete the various report types are:<sup>15</sup>

- 15            ▪ Subflow delineation – 1.5 to 2 years
- 16            ▪ *De minimis* evaluation – 1.5 to 2 years
- 17            ▪ Preliminary HSR – 3 to 4 years
- 18            ▪ Final HSR – 1 year (at least 6 months after the 6 months comment period)

19            ADWR did not recommend a simultaneous issuance of the subflow zone  
20 reports for the Upper Salt River, Upper and Middle Gila River, and the Upper Little  
21 Colorado River Watersheds. ADWR maintains such report work must occur in series,  
22 stating that neither the Arizona State Geologic Survey (“AZGS”)<sup>16</sup> nor ADWR  
23 currently has the capacity to work on more than one subflow report at a time without  
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25            <sup>14</sup> See W1–W4, Order for Technical Report (Feb. 22, 2023).

26            <sup>15</sup> See W1–W4, Future HSR Report at 10–11 (May 25, 2023).

27            <sup>16</sup> AZGS performs mapping research and assists ADWR with subflow  
28 delineations.



1 significantly impacting other work.<sup>17</sup> Instead, ADWR made eight other  
2 recommendations summarized here:<sup>18</sup>

3  
4 **A. Deadlines**

5 Because of potential year-to-year budget fluctuations as well as improvements  
6 within the Adjudication process, ADWR recommends the Court set deadlines for  
7 reports no more than 10 years into the future.<sup>19</sup> The agency further clarified that year-  
8 to-year budget fluctuations as well as improvements within the Adjudication process  
9 offer too many variables for accurate long-term planning and scheduling. There were  
10 no objections to this recommendation by any parties.

11  
12 **B. Lower Little Colorado River Subwatershed**

13 ADWR recommends completing a preliminary HSR for the Lower Little  
14 Colorado River Subwatershed by June 30, 2028, and the final HSR for the Lower  
15 Little Colorado River Subwatershed to be filed by June 29, 2029.<sup>20</sup>

16 ADWR completed the *de minimis* report in July 2019 and is currently working  
17 on a subflow report which is due September 2025. A preliminary HSR has not been  
18 ordered yet, however ADWR has been using a tentative June 2028 date for workload  
19 scheduling. There are 5,909 SOC's in the Lower Little Colorado River Watershed<sup>21</sup>.

20  
21 **C. San Pedro River Watershed**

22 The existing subflow zone report completed in 2015 does not cover the entire  
23

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24 <sup>17</sup> Future HSR Report at 10–11.

25 <sup>18</sup> *Id.* at 9.

26 <sup>19</sup> *Id.* at 10.

27 <sup>20</sup> *Id.*

28 <sup>21</sup> *Id.* at 8.

1 San Pedro Watershed. As such, ADWR recommends preparing a subflow zone report  
2 due September 2029 for the remainder of the San Pedro River Watershed that includes  
3 major and minor tributaries not included in the original subflow report.<sup>22</sup> There are  
4 13,547 SOCs in the San Pedro Watershed.<sup>23</sup>

5  
6 **D. Upper Little Colorado River**

7 ADWR recommends the Court address the Upper Little Colorado River  
8 Subwatershed immediately after the Lower LCR, claiming there may be “significant  
9 benefit” in finishing the full adjudication of the Little Colorado River System, because  
10 it would “restrict the adjudication to one court system, reducing complexity and  
11 cost.”<sup>24</sup> A *de minimis* report on uses supplied by wells was filed in 1994, however it  
12 was never addressed by the Court, and thus would require significant update since it  
13 does not meet current *de minimis* guidelines and procedures. There are no other  
14 Adjudication related reports for the Upper Little Colorado River Subwatershed.

15 ADWR recommends completion of any additional *de minimis* reports the Court  
16 deems necessary for the Upper Little Colorado River Subwatershed by September 27,  
17 2030, and completion of a subflow zone report for the Upper Little Colorado River  
18 Subwatershed by March 2031. ADWR further recommends that the Court plan for  
19 the preliminary HSR for the Upper Little Colorado River Subwatershed no earlier  
20 than March 2036 with the final HSR no earlier than March 2037.<sup>25</sup> There are 6,060  
21 SOCs in the Upper Little Colorado River Subwatershed.<sup>26</sup>

22 The City of Flagstaff commented on these recommendations and proposed  
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24 <sup>22</sup> *Id.* at 10.

25 <sup>23</sup> *Id.* at 8.

26 <sup>24</sup> *Id.* at 10.

27 <sup>25</sup> *Id.* at 11.

28 <sup>26</sup> *Id.* at 8.

1 combining the Upper and Lower LCR into a single subflow report and postponing  
2 Phase II of the Navajo adjudication trial until the combined report is completed.<sup>27</sup>  
3 This proposal was universally rejected by parties including the United States (“U.S.”),  
4 several tribes, and the Little Colorado River Coalition,<sup>28</sup> all of whom correctly pointed  
5 out that a subflow delineation is irrelevant to determining the federal reserved water  
6 rights that are pivotal to the Navajo claims in both Phase I and Phase II of the Navajo  
7 adjudication.

### 8 9 **E. Verde River Watershed**

10 ADWR recommends a completion deadline for the Verde Canyon  
11 Subwatershed HSR by September 2032 and thus finishing out the investigation of the  
12 Verde River Watershed. The Verde River Watershed has been subdivided for the  
13 purposes of completing HSRs into five subwatersheds: Big Chino, Little Chino,  
14 Sycamore, Lower Verde Valley, and Verde Canyon.<sup>29</sup> The Verde Canyon  
15 Subwatershed is the furthest downstream on the river. To date, there is no deadline set  
16 for the Verde Canyon Subwatershed preliminary HSR.

17 There are 25,240 SOCs in the entire Verde River Watershed. Currently,  
18 ADWR intends to address non-Indian federal reserved water rights in the HSR in  
19 which they are located but recommends that Indian federal reserved water rights  
20 claims be addressed in separate HSRs. Two of the four tribal reservations in the Verde  
21 River Watershed must be addressed in an HSR, the Yavapai-Apache Reservation and  
22  
23

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24 <sup>27</sup> W1–W4 and CV6417, Flagstaff’s Comments on the Department’s Future  
25 Report Recommendations at 2 (Sept. 1, 2023).

26 <sup>28</sup> The Little Colorado River Coalition is comprised of 22 small municipalities,  
water districts, irrigation districts, and ranches within the Little Colorado River Basin.

27 <sup>29</sup> *See supra* note 2. The Court has issued HSR deadlines for all Verde River  
28 Subwatersheds except Verde Canyon Subwatershed.

1 the Tonto Apache Reservation.<sup>30</sup>

2 Both the Yavapai-Apache Nation and the Tonto Apache Tribe object to  
3 ADWR’s recommendation. In addition to noting that the February 22, 2023, Order  
4 did not call for any recommendations regarding the Verde, the Yavapai-Apache  
5 Nation pointed to a March 4, 2020, minute entry where the schedule for the Verde  
6 River was previously decided. W1-106, Minute Entry at 7 (March 4, 2020). While the  
7 United States (“U.S.”) also objected to separate tribal HSRs, the U.S. did propose a  
8 separate “Wild and Scenic” Verde River HSR.<sup>31</sup>

9 ADWR responded to the U.S. proposal of a separate HSR, that the claims on  
10 the wild and scenic portion of the river are not substantial enough to justify the time  
11 and expense of producing an individual HSR.<sup>32</sup> ADWR believes it is most  
12 appropriate to address all rights within a watershed or subwatershed together to  
13 minimize noticing requirements and confusion for small claimants who would have to  
14 object to multiple HSRs if the U.S. claims were analyzed separately.<sup>33</sup>

15  
16 **F. Salt River Watershed**

17 The Upper Salt River Preliminary HSR that was completed in 1991 is now  
18 thirty years old and only includes the upper portion of the watershed. There has not  
19

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20 <sup>30</sup> The four tribal reservations in the Verde River Watershed are the Yavapai  
21 Prescott Indian Tribe, the Yavapai-Apache Nation, the Fort McDowell Yavapai  
22 Nation, and the Tonto Apache Tribe. The Fort McDowell Yavapai Nation and the  
23 Yavapai Prescott Indian Tribes both have water rights settlements and do not need to  
be addressed in an HSR.

24 <sup>31</sup> The National Wild and Scenic Rivers System was created by Congress in  
25 1968 to preserve certain rivers with outstanding natural, cultural, and recreational  
values in a free-flowing condition. There are approximately 40.5 total river miles  
designated as either wild or scenic within the Verde River Mainstem.

26 <sup>32</sup> W1–W4 and CV6417, Arizona Department of Water Resources’  
27 Consolidated Response to Comments at 4 (“ADWR Response”) (Sept. 29, 2023).

28 <sup>33</sup> *Id.* at 4.

1 been a final HSR issued for the Upper Salt River Watershed and there is neither a  
2 subflow zone nor a *de minimis* report for any portion of the Salt River Watershed.  
3 ADWR recommends a *de minimis* report for the Salt River Watershed no sooner than  
4 March 2033, and that a subflow zone report for the Salt River Watershed no sooner  
5 than September 2034.<sup>34</sup>

6 This recommendation was based upon a May 2023 revised boundary for the  
7 Salt River Watershed that ADWR provided. This proposed boundary is considerably  
8 different from the current boundary, extending the Salt River Watershed much further  
9 westward through most of the Phoenix Metro area. Previously, only the upper reach  
10 of the Salt River Watershed was outlined, while the lower portion of the Salt River  
11 Watershed (what lies below the confluence with the Verde River) was included within  
12 the Lower Gila River Watershed. There are 10,756 SOCs in the entire Salt River  
13 Watershed.<sup>35</sup>

#### 14

15 **G. Upper and Middle Gila Watersheds**

16 ADWR has not completed any Adjudication related reports for the Upper Gila  
17 River and Middle Gila River Watersheds and recommends a *de minimis* report for the  
18 Upper and Middle Gila Watersheds no earlier than June 2034, and a subflow zone  
19 report for the two watersheds no earlier than June 2036.<sup>36</sup> Because of the relatively  
20 small number of SOCs involved, ADWR recommends that the Upper and Middle Gila  
21 River Watersheds be addressed together. There are 9,970 SOCs in the Upper Gila  
22 River Watershed and 5,457 SOCs in the Middle Gila River Watershed, for a  
23 combined total of 15,427 SOCs.<sup>37</sup>

24

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25 <sup>34</sup> W1–W4 and CV6417, Future HSR Report at 11 (May 25, 2023).

26 <sup>35</sup> *Id.* at 11.

27 <sup>36</sup> *Id.* at 11.

28 <sup>37</sup> *Id.* at 8.

1           There were several objections to this recommendation on the grounds the  
2 Adjudication Court is bound by the Globe Equity Decree and does not have  
3 jurisdiction in the Upper Gila River Watershed.<sup>38</sup> The Globe Equity Decree  
4 (“Decree”) is a consent decree in the United States District Court for the District of  
5 Arizona, dated June 29, 1935, and entered in *United States of America v. Gila Valley*  
6 *Irrigation District*.<sup>39</sup> The Decree settled all parties’ rights to the Gila River Mainstem  
7 waters from the New Mexico-Arizona border to the confluence of the Gila and Salt  
8 Rivers.<sup>40</sup> Commenters to ADWR’s recommendation claim that the United States  
9 District Court for the District of Arizona, by way of the Globe Equity  
10 Commissioner,<sup>41</sup> exert exclusive jurisdiction over Upper Gila Mainstem, therefore  
11 there is nothing to adjudicate and the Court must merely “incorporat[e] the Decree  
12 into the final state [water rights] decree.”<sup>42</sup>

13           This is not a universal opinion of the Court’s jurisdiction with respect to the  
14 Decree. Other parties commented that the Adjudication does have jurisdiction,  
15 drawing a distinction between the District Court’s jurisdiction to interpret and enforce  
16 the Decree, from the Adjudication Court’s jurisdiction to delineate the subflow zone  
17 for the Upper Gila Mainstem, noting that subflow is a decidedly state law construct  
18 regarding what is considered appropriable water in Arizona.<sup>43</sup>

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21           <sup>38</sup> The United States objected, joined by the Gila River Indian Community and  
22 the San Carlos Apache Tribe.

23           <sup>39</sup> CV31-59-TUC-SHR, Globe Equity Decree (D. Ariz. 1935)

24           <sup>40</sup> In re the General Adjudication of All Rights to Use Water in the Gila River  
System and Source, 212 Ariz. 64, 67–69 (2006).

25           <sup>41</sup> *Id.*

26           <sup>42</sup> W1–W4 and CV6417, United States Response to Comments at 13 (October 2,  
2023).

27           <sup>43</sup> W1–W4 and CV6417, Freeport Minerals Corporation’s Response at 23  
28 (Sept. 29, 2023).

1           **H.     San Pedro River Watershed**

2           The final recommendation from ADWR proposes the Court seek input on  
3 whether a second HSR for the San Pedro River watershed is appropriate and  
4 necessary. ADWR stated there may be more efficient ways to address uses that began  
5 after the Final HSR was issued in 1991 than a second HSR, however the Report did  
6 not expand on what that might look like.<sup>44</sup> The United States commented it holds  
7 public domain allotments (related to the San Carlos Reservation) that will need to be  
8 filed and adjudicated as part of San Pedro II and recommended ADWR create a  
9 separate HSR. There are 13,547 SOCs in the San Pedro River watershed.<sup>45</sup>

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11 **FINDING OF FACT #1** - ADWR and AZGS do not have the capacity to complete  
12 three HSRs simultaneously.

13 **FINDING OF FACT # 2** – The average time to complete an HSR is 4 to 6 years.

14 **FINDING OF FACT #3** – The existing subflow delineation for the San Pedro  
15 Watershed does not include the entire watershed.

16 **FINDING OF FACT # 4** – An approximate total of 15,000 SOCs per an area is  
17 manageable for ADWR in a single HSR.

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19 **III.    UPDATED WATERSHED MAP**

20           In addition to the eight recommendations, ADWR provided the Court with  
21 proposed revisions to the current map of HSR investigation areas. According to the  
22 Report, ADWR reviewed the current map as part of the workload analysis requested  
23 by the Court.<sup>46</sup> The current map generally follows what the United States Geological  
24 Survey (“USGS”) has determined to be the state's current watershed boundaries. The

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<sup>44</sup> Future HSR Report at 11.

27           <sup>45</sup> *Id.*

28           <sup>46</sup> *Id.* at 2.

1 exception was the Phoenix Metro area, where political boundaries were used instead  
2 of hydrologic boundaries, presumably so that the claims of Salt River Valley  
3 municipalities and water providers would be analyzed within a single HSR. To date,  
4 HSR investigation boundaries coincide with watershed boundaries, except for some  
5 tribal and federal reservations. Consequently, changes to the watershed boundaries  
6 are presumed to be changes to HSR investigation boundaries. The current map of  
7 HSR investigation areas can be found in the Attachments to this report at Figure 1.

### 9 **A. USGS Hydrological Units and Code System**

10 A “watershed” is an area of land where all the streams and local rainfall drain  
11 to a common outlet such as a reservoir, or a point along a stream channel. The  
12 watershed consists of both surface and groundwater. Watershed boundaries depend  
13 on the outflow point; all the land that drains water to the outflow point is within the  
14 watershed for that outflow location.<sup>47</sup> Larger watersheds contain many smaller  
15 subwatersheds. To provide clarity, the USGS has created a hierarchy of “hydrological  
16 units” (“HU”) that are identified and delineated areas of surface drainage. The  
17 drainage areas are delineated to nest in a multilevel, hierarchical arrangement with  
18 successively smaller hydrologic units delineated based on surface features. The  
19 hydrologic unit code (“HUC”) is the numerical identifier of a specific hydrologic unit  
20 or drainage area consisting of a two-digit sequence for each specific level within the  
21 delineation hierarchy.<sup>48</sup> The proposed map depicts the Adjudication watersheds as  
22 USGS 3<sup>rd</sup> level HUs and thus a 6-digit code:

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25 <sup>47</sup> *Watersheds and Drainage Basins*, USGS (March 20, 2024),  
26 [https://www.usgs.gov/special-topics/water-scienceschool/science/watersheds-and-](https://www.usgs.gov/special-topics/water-scienceschool/science/watersheds-and-drainage-basins#overview)  
[drainage-basins#overview](https://www.usgs.gov/special-topics/water-scienceschool/science/watersheds-and-drainage-basins#overview).

27 <sup>48</sup> See USGS, Federal Standards and Procedures for the National Watershed  
28 Boundary Dataset at 8 (“Standards”) (2013).



- Little Colorado - 150200
- Verde - 150601
- Salt - 150602
- Santa Cruz - 150503
- San Pedro - 150502
- Middle Gila - 150501
- Upper Gila - 150400
- Lower Gila-Agua Fria - 150701
- Lower Gila - 150702

The proposed map, filed by ADWR in May 2023, can be found in the Attachments to this report at Figure 2.

Current guidance from the USGS directs that all HU boundaries shall be defined solely by topography and hydrologic features rather than administrative or political boundaries.<sup>49</sup> Therefore, ADWR proposed revisions to the current map to reflect the accurate USGS 6-digit HU boundaries. These proposed revisions do not modify boundaries in the San Pedro River or Verde River Watersheds nor any in the Little Colorado River Adjudication Basin. The proposed revisions also do not cause an issue for previously filed SOCs. When ADWR investigates claimed water uses, it relies on the “actual location of the point(s) of diversion and place(s) of use, not necessarily what was claimed by the claimant.”<sup>50</sup>

Each successively nested HU level consists of two-digit additional numbers. An 8-digit HU may in some instances be a more manageable boundary for HSR investigations. An example within the Verde River Watershed can be found in the Attachments to this report at Figure 3.

The standardized 8-digit HUs are used in both national and state programs to ensure consistency in data reporting amongst agencies. The various subwatersheds

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<sup>49</sup> USGS dataset guidance is very clear that “existing hydrologic unit data that include boundaries delineated solely by use of administrative or political boundaries will not be certified as meeting these guidelines until the hydrologic units are revised based on topography, surface-water flow, and hydrologic features.” USGS, Federal Guidelines, Requirements, and Procedures for the National Watershed Boundary Dataset at 7 (2009).

<sup>50</sup> W1–W4 and CV6417, Future HSR Report at 2 (May 25, 2023).

1 ADWR recommends for HSRs generally follow the 8-digit HU boundaries.<sup>51</sup> The  
2 current map does not follow these subwatershed boundaries and as a result extends the  
3 Lower Gila Watershed northward, around the west side of the Verde River  
4 Watershed, beyond Maricopa County boundary, and the Salt River Watershed extends  
5 no further west than Fountain Hills.

6 The May 2023 map revisions, following USGS guidance, propose the  
7 following changes:

- 8 • Extending the Salt River Watershed westward.
- 9 • Extending the Middle Gila River Watershed northwestward.
- 10 • Beginning the Lower Gila River Watershed just east of the western edge  
11 of the Maricopa Co. boundary.
- 12 • Extending the Agua Fria River Watershed southward, renaming it “Lower  
13 Gila-Agua Fria,” and wrapping it around the western side of the Phoenix  
14 Metro Area.
- 15 • Extending the Upper Santa Cruz River Watershed northward.

16 Figures 4 and 5, included in the Attachments to this report, show the current  
17 map and the map proposed in May 2023 in relation to many of the water service areas  
18 affected by the changes.<sup>52</sup>

19 ADWR did not make any recommendations regarding the Lower Gila  
20 Watershed, as they were not asked for any. However, the map revisions greatly  
21 expanded the Agua Fria Watershed, which was previously just north of the Lower  
22 Gila Watershed, and ADWR did make recommendations regarding Agua Fria  
23 Watershed, which ADWR renamed to “Lower Gila River-Agua Fria River  
24

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25 <sup>51</sup> ADWR has divided the Verde Watershed in to five subwatersheds for the  
26 purposes of more manageable HSRs. However, the USGS maps only three 8-digit  
HUs (subwatersheds) for the Verde River.

27 <sup>52</sup> W1–W4 and CV6417, Salt River Project’s Comments on ADWRs Future  
28 Report Recommendations at Exhibits 5 and 6 (Sept. 1, 2023)

1 Watershed.” ADWR has not completed any Adjudication related reports for the  
2 Lower Gila River-Agua Fria River Watershed. Based upon the revised watershed  
3 boundaries for the Lower Gila River-Agua Fria River Watershed, ADWR further  
4 recommended that the Lower Gila River-Agua Fria Watershed be broken up into four  
5 subwatersheds for the purposes of HSRs. No proposed dates for completion were  
6 provided.

7 The watershed boundary changes, and the resulting presumed HSR  
8 investigation area changes, were objected to by most of water providers in the  
9 Phoenix Metro area. As stated in a filing by a group of affected cities,<sup>53</sup> “the Cities’  
10 claims would need to be separately analyzed and adjudicated for every watershed in  
11 which their service areas sit, thereby creating the risk of not only conflicting HSR’s  
12 but conflicting rulings.”<sup>54</sup> In some cases, the water providers’ service areas were  
13 divided among four different watersheds. Given ADWRs estimate of five years to  
14 complete an HSR, that would lock some water providers into litigation for decades.

15 This sentiment was echoed by the City of Phoenix, calling the “trifurcation” of  
16 the City’s service area unworkable due to water rights that may be used anywhere  
17 within the City’s service area;<sup>55</sup> the City of Chandler, claiming this approach “would  
18 result in duplicate efforts, piecemeal litigation, and increased time and expense for  
19 both the parties and the Court,”<sup>56</sup> and SRP, stating the divided water service areas  
20 would “at best cause piecemeal litigation of numerous claims spread across various  
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22 <sup>53</sup> The “Cities” filed combined comments from the cities of Avondale,  
23 Glendale, Mesa, Scottsdale, and Tempe.

24 <sup>54</sup> W1–W4 and CV6417, Cities’ Filing of the Current Service Area Maps and  
Comments on Future Report Recommendations at 8 (Sept. 1, 2023).

25 <sup>55</sup> W1–W4 and CV6417, City of Phoenix’s Filing of Its Current Water Service  
26 Area Map and Comments on Methods to Adjudicate claims of Water Systems that  
Span Multiple Watersheds at 5-6 (Sept. 1, 2023).

27 <sup>56</sup> W1–W4 and CV6417, City of Chandler’s Comments on ADWR’s Future  
28 Report Recommendations at 2 (Sept. 1, 2023).

1 HSRs, and would almost certainly result in substantial duplication an waste of the  
2 Court’s and the parties’ time and resources.”<sup>57</sup>

3 SRP was in fact the first to object to the map, providing four alternatives for  
4 discussion at the June 26, 2023, status conference. The most popular suggestion with  
5 all parties was “Option 1,” which proposed a “Salt River Valley” HSR that would  
6 include “all of the Salt and Verde River storage claims and all of the claims for rights  
7 to use stored water and normal flow from the Salt and Verde Rivers in the Valley.”<sup>58</sup>  
8 ADWR objected to this proposal stating that “it would result in many small water  
9 users being noticed in multiple watersheds and facing the difficult chose of which  
10 watershed the should (or have enough resources to) litigate in when defending their  
11 water rights.”<sup>59</sup>

12 Hydrologic units in some areas of the country have been subdivided in 10-  
13 digit, 12-digit, and even as small as 16-digit HUs. This report focuses on the 10-digit  
14 HUs. The standardized 10-digit (5<sup>th</sup> level) HUs are less commonly used in national  
15 and state data reporting, however, like the other hydrologic units, the 10-digit HUs are  
16 defined along natural hydrologic breaks based on land surface and surface water flows  
17 and has a single flow outlet.<sup>60</sup> The Court requested ADWR provide a map with the  
18 10-digit HUs to evaluate how further subdividing subwatershed could be used to  
19 develop a hydrologically sound boundary around the Phoenix Metro area. ADWR  
20 provided the map in mid-February 2024, and it can be found in the Attachments to  
21 this report as Figure 6.

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23 <sup>57</sup> W1–W4 and CV6417, Salt River Project’s Comments on ADWR’s Future  
24 Report Recommendations at 7 (Sept. 1, 2023).

25 <sup>58</sup> *Id.* at 8

26 <sup>59</sup> W1–W4 and CV6417, Arizona Department of Water Resources’  
27 Consolidated Response to Comments at 8 (“ADWR Response”) (Sept. 29, 2023).

28 <sup>60</sup> *See* USGS, Federal Standards and Procedures for the National Watershed  
Boundary Dataset at 8 (“Standards”) (2013).

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**FINDING OF FACT #5** – The USGS HUCs are used for multiple federal and state programs to provide nationally consistent hydrologic delineations.

**FINDING OF FACT #6** – USGS HUC boundaries are based solely on topographic and hydrologic features and do not consider administrative or political boundaries.

**FINDING OF FACT #7** - The current map does not accurately reflect the USGS watershed boundaries near and around Metro Phoenix.

**FINDING OF FACT #8** – The May 2023 proposed map meets the USGS technical requirements of using hydrologic and topographic boundaries only to accurately define watershed areas.

**FINDING OF FACT #9** – Under the current map, most of the Metro Phoenix water providers would have their rights adjudicated as part of the Lower Gila Watershed.

**FINDING OF FACT #10** – Under ADWR’s May 2023 proposed map, some of the Metro Phoenix water providers would have their rights adjudicated within multiple different watersheds.

**FINDING OF FACT #11** – The proposed map delineates the various watersheds that make up the Gila and Little Colorado River Basins according to the USGS 6-digit HUs for Arizona.

**FINDING OF FACT #12** – 8-digit and 10-digit HUs subdivide the 6-dgit watersheds into successively smaller discrete hydrologic areas.

**B. Legal Requirements for Scientific Accuracy**

ADWR reported that the agency “found it scientifically appropriate to use the USGS’s HU system to identify watershed boundaries and classify stream systems when preparing technical reports for the Court.”<sup>61</sup> ARS § 45-256(A) supports this position by requiring that ADWR, as part of the technical assistance provided to the

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<sup>61</sup> W1–W4 and CV6417, Future HSR Report at 2 (May 25, 2023).

1 court, shall “[i]dentify the hydrological boundaries of the **river system and source.**”

2 The “river system and source” is defined at 45-(7) as “all water appropriable under  
3 section 45-141 and all water subject to claims based on federal law.” A detailed  
4 definition is finally provided with 45-141 where all appropriable water means “all  
5 sources, flowing in streams, canyons, ravines or other natural channels, or in definite  
6 underground channels, whether perennial or intermittent, flood, waste or surplus  
7 water, and of lakes, ponds and springs on the surface.” Given the breadth of water  
8 sources ADWR is charged to map, referring to a national database of such expertise is  
9 well within the discretion of the agency as the expert; especially as the USGS  
10 database provides documented, confirmable standards, that can be referenced by  
11 anyone.

12  
13 **CONCLUSION OF LAW #1** – ADWR has a statutory responsibility to present the  
14 Court with accurate hydrological information.

#### 15 16 **IV. HSR DEVELOPMENT**

##### 17 **A. Boundary Considerations**

18 The term “hydrologic survey report” is never used in section 45-256(B).  
19 Rather, the statute refers to technical assistance supplied to the Court “in summary  
20 form on a claim-by-claim basis in a report prepared by the director.”<sup>62</sup> This report is  
21 the HSR.

22 There is no legal requirement in the statute that an HSR investigation area  
23 **must** be based upon a watershed. The Rules for Proceedings before the Special  
24 Master (“Rules”) define an HSR as “that report prepared by DWR pursuant to  
25 Arizona Revised Statutes Annotated Section 45-256 and pretrial orders in both  
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<sup>62</sup> Ariz. Rev. Stat. § 45-256(B)

1 adjudications.”<sup>63</sup> Unfortunately, the definition goes on to state an HSR is “an  
2 examination of water rights claims filed in a watershed or in behalf of a reservation,  
3 water uses in the watershed or reservation, and the hydrographic features of the  
4 watershed or reservation.”<sup>64</sup> This additional language creates confusion by seemingly  
5 creating a limitation that is not supported by the statute. Additionally, neither any  
6 Gila PTO, nor any LCR PTO, specifically require the alignment of an HSR with a  
7 watershed. In fact, the initial schedule in the Gila PTO No. 1 did include HSRs titled  
8 “Salt River Project, Buckeye Irrigation District, Roosevelt Water Conservation  
9 District,” and “Salt River Valley Municipalities” suggesting an intent by the early  
10 Court to address the Phoenix Metro Area as a unit separate from any assigned  
11 watershed.<sup>65</sup>

12 Moreover, language in Gila PTO No. 5 and LCR PTO No. 6 expressly  
13 contemplates HSRs that do not follow watershed boundaries. Both orders recognize  
14 that an HSR may be completed for “a watershed or for an Indian or federal  
15 reservations, or any *portion* of such watershed or reservations as specified by the  
16 Court.”<sup>66</sup>

17 ADWR claims if an HSR does not follow watershed boundaries, water users  
18 will have to respond to an additional HSR and keep track of an additional proceeding  
19 in order to defend their rights.<sup>67</sup> However, as ADWR proposes to complete HSRs  
20 based upon 8-digit HU subwatershed in some areas, this is already a possibility.  
21 Furthermore, the watershed where a claimant’s right is adjudicated is based upon the  
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24 <sup>63</sup> See Rules of Proceedings Before Special Master § 1.12.

25 <sup>64</sup> *Id.*

26 <sup>65</sup> W1–W4, Pretrial Order No. 1 at 30–31 (May 29, 1986)

27 <sup>66</sup> W1–W4, Pretrial Order No. 5 at 2 (March 29, 2000); CV 6417, Pretrial  
Order No. 6 at 2 (July 26, 2000) (emphasis added).

28 <sup>67</sup> See generally W1–W4, ADWR Response (Sept. 29, 2023).

1 point of diversion of the water, not the place of use.<sup>68</sup>

2 ADWR also expressed concern during the June 23, 2023, status conference  
3 about attempting subflow and *de minimis* evaluations if a non-watershed boundary is  
4 used to delineate an HSR investigation area. The water accounting for any tributary  
5 or river mainstem is an approximation at best. It is certainly understandable that an  
6 arbitrary study area based upon an administrative boundary could reduce accuracy  
7 even more. However, there is no requirement that an investigation area must follow  
8 the boundaries of the 6-digit HU watershed. As an example, to better handle the  
9 investigations in the LCR, ADWR used the 8-digit HU subwatersheds to create more  
10 manageable study areas. The agency combined several 8-digit HU subwatersheds to  
11 create the Upper LCR and the Lower LCR. Both *de minimis* and subflow  
12 investigations have been recommended by ADWR based upon the subdivided Upper  
13 and Lower LCR so the agency is already developing alternative hydrologic  
14 boundaries for some investigations.

15  
16 **CONCLUSION OF LAW #2** – The intent of the General Stream Adjudication in  
17 PTO No. 1 was to adjudicate the rights of the major water providers in the Phoenix  
18 Metro area in a single HSR.

19 **CONCLUSION OF LAW #3** - Gila PTO No. 1 contemplated a Salt River Valley  
20 HSR(s).

21 **CONCLUSION OF LAW #4** – Gila PTO No. 5 and LCR PTO No. 6 contemplate  
22 HSRs that do not follow watershed or federal reservation boundaries.

23 **CONCLUSION OF LAW #5** – A *de minimis* or subflow investigation area does not  
24 need to follow the boundaries of a 6-digit HU watershed so long as it does follow  
25 some rational hydrologic boundary.

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26 <sup>68</sup> See Rules of Proceedings Before Special Master § 5.01[2]. However, where  
27 a point of discharge is a reservoir, the rule does not necessarily apply. See 6417-33-  
28 0060, Order at 2 fn. 1 (March 12, 2003);



1 **CONCLUSION OF LAW #6** - An HSR is defined in the Rules based upon  
2 watershed.

3 **CONCLUSION OF LAW #7** - An HSR is not required to follow the same  
4 boundaries as a watershed.

5  
6 **B. Notice Requirements**

7 Arizona Revised Statutes section 45-256(H) requires ADWR to “give notice to  
8 each water claimant that the preliminary [HSR] is available for inspection and  
9 comment.” The statute is unclear as to whether “each water claimant” refers to the  
10 HSR study boundary, or the adjudication river system (basin).

11 Section 2.C of PTO No. 5 in the Gila Adjudication and PTO No. 6 in the LCR  
12 Adjudication require that, for a preliminary HSR, ADWR must “send a copy of the  
13 court notice [filed with the Clerk of the Court] by first class mail to those persons  
14 included on the court-approved mailing list and to each claimant and non-claimant  
15 water user in the geographic area covered by the preliminary HSR.”<sup>69</sup>

16 Sections 5.C and 5.D respectively require that for a final HSR, ADWR  
17 “publish the press release on its internet web site and in newspapers of general  
18 circulation throughout the . . . adjudication area” and must “send a copy of the  
19 objection notice [to be filed with the Clerk of the Court] by first class mail to those  
20 persons included on the court-approved mailing list, to each claimant and non-  
21 claimant water user in the geographic area covered by the preliminary HSR, and to  
22 every other claimant in the . . . adjudication.”<sup>70</sup>

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26 <sup>69</sup> W1–W4, Pretrial Order No. 5 at 2 (March 29, 2000) at 2; CV 6417, Pretrial  
Order No. 6 at 2, (March 29, 2000).

27 <sup>70</sup> W1–W4, Pretrial Order No. 5 at 2 (March 29, 2000); CV 6417, *Pretrial*  
28 *Order No. 6* at 5 (March 29, 2000).

1 **CONCLUSION OF LAW #8** – the PTOs for both the Gila and the LCR  
2 Adjudications require notice of a preliminary HSR only within the geographic area  
3 covered by the HSR.

4 **CONCLUSION OF LAW #9** – the PTOs for both the Gila and the LCR  
5 Adjudications require notice of a final HSR to all claimants within the adjudication  
6 basin that a particular HSR is located within.

7 **CONCLUSION OF LAW #10** – The issuance of a non-watershed HSR will not  
8 increase the burden on ADWR of providing notice of preliminary or final HSRs so  
9 long as the boundary remains within a single Adjudication basin.

10

11 **C. Hydrographic Survey Report Contents**

12 Parties were asked to comment on the minimum information needed for an  
13 HSR to discern if there was any way to reduce the HSR development timeframe. The  
14 parties referenced the requirements found in both the Gila and the LCR PTOs, as well  
15 as the Rules, and had few if any comments regarding the HSR contents, and certainly  
16 no complaints or objections that would warrant suggestions for change HSR contents  
17 at this time.

18 ADWR’s most recent HSR was the Navajo preliminary HSR, filed July 2023.  
19 Because this HSR is for a single claimant, it is structured differently than an HSR for  
20 multiple claimants. ADWR’s next HSR for multiple claimants will be the Sycamore  
21 Canyon Subwatershed of the Verde River. The agency has asked the Court to refrain  
22 from proposals regarding contents of HSRs until after the next Verde River  
23 subwatersheds are published and the public can review the revised format.

24

25 **CONCLUSION OF LAW #11** - HSR contents are adequately outlined in PTO and  
26 the Rules.

27

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1 **V. THE SPECIAL MASTER’S RECOMMENDATIONS.**

2 **A. Updating the Rules Before the Special Master in accordance with this**  
3 **report.**

4 The Rules of Proceedings Before the Special Master are currently undergoing a  
5 review and update to bring them in line with updates to the Arizona Rules of Civil  
6 Procedure. As part of that update, this report recommends the following additional  
7 updates:

- 8 ■ Update the definitions for “HSR,” “watershed,” “subwatershed,” “basin,”  
9 and “river system.”
- 10 ■ Add a definition for “hydrologic unit.”
- 11 ■ Clarify HSR notice requirements in accordance with Gila and LCR PTOs

12  
13 **B. Approving ADWR’s proposed May 2023 watershed map as a**  
14 **hydrological reference.**

15 It is important for the Court to be working with the best hydrological data  
16 possible and to ensure that water is being accounted for in the proper watershed. The  
17 science of hydrology, however, does not have to interfere with the management  
18 necessities of a significant number of water claims. This report recommends the  
19 Court approve the map submitted by ADWR on May 25, 2023, as a hydrological  
20 reference for the Adjudications.

21 The current map should remain available, however it should be renamed “Map  
22 of Historical Hydrographic Survey Area Boundaries.” The current map is not an  
23 accurate map of the watershed boundaries and should not be named as such.

24 Additionally, the hydrological reference map should include the 8-digit and 10-  
25 HUs, as well as the various subwatershed delineations that do not align with the 8-  
26 digit HUs. To the extent possible, all subwatersheds should be aligned with 8-digit  
27 HUs. The USGS recognizes only three 8-digit HUs within the Verde River: Big  
28 Chino-Wiliamson Valley, Upper Verde, and Lower Verde. The additional ADWR-

1 identified subwatersheds of Little Chino and Sycamore Canyon are included in what  
2 the USGS notes as the Upper Verde or HU 15060202. While these distinctions may  
3 not mean much to the general public, the clarity is important to state and federal  
4 natural resource managers who are following the adjudication. As ADWR has made  
5 the case for the importance of following the USGS hydrologic boundaries, the  
6 boundaries should be honored throughout the adjudication. Nonetheless, ADWR may  
7 continue its investigation of the Verde River watershed without strictly adhering to  
8 the 8-digit HU boundaries if the agency feels the investigations are too far along to  
9 make such a change practical. In such a case, all relevant reports should explain how  
10 the ADWR-chosen subwatersheds differ from the USGS 8-digit HU subwatersheds  
11 and why.

12  
13 **C. Revising of current HSR-area map to reflect hydrological and case**  
14 **management concerns: The “Salt River Valley HSR.”**

15 As presented herein, there is no legal requirement that an HSR investigation  
16 area must follow any particular watershed boundary. To that end, this report proposes  
17 development of an HSR that encompasses the service areas of the municipal water  
18 providers and irrigation districts within the Phoenix Metropolitan Area – the “Salt  
19 River Valley HSR.” This recommendation is in line with the recommendations from  
20 most of the commenters who felt trying to adjudicate these service areas across  
21 multiple HSRs tied to watershed boundaries would be impractical and ultimately  
22 unfair to those with limited resources to apply to the adjudication process.

23 The biggest challenge with such a recommendation is establishing an easily  
24 identifiable and defensible boundary. Simply referencing the boundary areas  
25 suggested by the Gila PTO No. 1 or developing an HSR investigation area based upon  
26 water service area boundaries did not create sufficiently defensible definitions for the  
27 HSR investigation boundary. Arbitrary investigation boundaries based upon  
28 administrative border potentially bisect hydrologic units at irregular locations,

1 significantly increasing the difficulty in developing sound technical *de minimis*  
2 recommendations and subflow zone delineations. This report proposes combining the  
3 10-digit HUs that encompass the Phoenix Metro municipal water providers, irrigation  
4 districts, and the Salt River and Fort McDowell Indian Reservations into the Salt  
5 River Valley HSR, as depicted in Figure 7 and found in the Attachments to this  
6 report.

7       The use of 10-digit HUs as boundary lines should alleviate concerns with arbitrary  
8 lines by developing the boundary using a scientifically valid hydrologic delineation.  
9 However, to ensure that all the appropriate data is available, this report further  
10 recommends that completion of the Valley HSR occur after the contributing  
11 watersheds have been fully investigated for subflow and *de minimis*.

12       When a preliminary HSR is publicly noticed, all claimants within the “affected  
13 area” are given notice. With an easily identifiable boundary, notice for a preliminary  
14 HSR in a proposed Valley HSR would remain only within the 10-digit HU areas.  
15 When a final HSR is publicly noticed, the entire adjudication basin would be noticed.  
16 A proposed Valley HSR would remain entirely within the Gila adjudication basin;  
17 therefore, the notice requirements would be no different.

18       ADWR had also expressed concern that if there are multiple HSRs within a  
19 watershed, the multiple notices would be confusing to parties, and force them get  
20 involved in multiple adjudications. While this is always a concern and something the  
21 Court spends a lot of time working to improve, an HSR that covers multiple  
22 watersheds will bring no more confusion and/or additional work than multiple  
23 subwatershed HSRs within a single larger watershed, such as is planned for the Verde  
24 and Agua Fria Watersheds. Furthermore, including all Salt River Valley  
25 municipalities one HSR would minimize splitting of water rights claims and prevent  
26 objectors from having to file multiple objections for the same water right.

27       ADWR claims in footnote 9 of the Report, “there are better ways to address  
28 multi-basin water uses [than a “Valley HSR”]. ADWR suggests that if the parties and

1 the Court feel that it would be more efficient to address particular rights in the Verde  
2 Canyon and Upper Salt River Subwatersheds at the same time, then those could be  
3 addressed together during the contested case phase.” This suggestion, however, fails  
4 to acknowledge the length of time between such HSRs (at a minimum greater than 5  
5 years under the currently proposed schedule). A great number of the challenges the  
6 Adjudication has endured the last few decades have been a result of completed HSRs  
7 that sat idle for years before contested cases were reviewed. It is precisely for this  
8 reason that HSRs will no longer be completed until after subflow, *de minimis*, or any  
9 other technical considerations are completed. This report does not recommend we  
10 delay adjudication of a completed HSR.

11  
12 **D. Establishing the relative sequence of watershed investigation and**  
13 **reporting.**

14 ADWR’s recommendations do not deviate dramatically from the relative order  
15 of watershed investigations outlined in the Gila and LCR PTOs and multiple  
16 commenters stated long reliance and planning based upon the 1986 listing and  
17 requested the Court maintain the relative order. The minor changes to the priority of  
18 the watersheds that were included in the 2005 Order were for subflow and *de minimis*  
19 reports only and do not change the Gila PTO No. 1 sequence. None of the  
20 commenters provided any compelling reasons to change the relative order of priority  
21 for investigating watersheds, therefore the Special Master recommends following the  
22 relative order priority to the extent practicable. To the extent ADWR is not able to  
23 work on the Gila Adjudication and the LCR Adjudication simultaneously, this report  
24 recommends completing the LCR Adjudication before the Salt River and Upper/  
25 Middle Gila River Watersheds to allow for plenty of time to resolve any jurisdictional  
26 issues.

27 ADWR suggested setting “a tentative order and timing for reports” beyond the  
28

1 10-year planning horizon.<sup>71</sup> Table 1, found in the Attachments to this report, lists the  
2 relative priority of watershed reports, however no dates beyond the ten-year planning  
3 horizon are proposed.

4  
5 **CONCLUSION OF LAW #12** – ADWR should follow the relative sequence shown  
6 in Table 1 for the preparation of the reports listed there.

7  
8 **E. Addressing ADWR recommendations**

9 The initial question presented to ADWR was merely whether the agency could  
10 reasonably complete the Upper Salt River, Upper Gila River, and the Upper Little  
11 Colorado River Watershed HSRs simultaneously. The response, very simply, is “no.”  
12 While the effort that went into the extended answer regarding individual resource  
13 needs for each report is greatly appreciated, it must also be recognized that  
14 considerable extra effort was expended by numerous additional parties because of  
15 ADWR’s additional, tangential recommendations. Since the proposals and the parties’  
16 comments have been filed in the record, the Court has an obligation to respond. All  
17 proposed dates are summarized in Table 1.

18  
19 **CONCLUSION OF LAW #13** – Because there are too many variables for accurate  
20 planning and scheduling, the Court should not set deadlines for ADWR reports more  
21 than 10 years into the future. (ADWR recommendation #1)

22 a. ADWR’s recommendation regarding the Salt River Watershed HSR are  
23 outside the 10-year planning window so no dates are recommended in  
24 this report. (ADWR recommendation #6)

25 b. ADWR recommendations regarding a *de minimis* report for the Upper  
26 and Middle Gila are outside the 10-year planning window so no dates

27  
28 

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<sup>71</sup> W1–W4 and CV6417, Future HSR Report at 15 (May 25, 2023).

1 are recommended in this report. Additionally, any potential  
2 jurisdictional issues related to the Upper Gila need not be addressed  
3 until the planning horizon is more appropriate. (ADWR  
4 recommendation #7)

5 **CONCLUSION OF LAW #14**—Although the Court recognizes there is still work to  
6 be done in the San Pedro Watershed, the February 22, 2023, order did not request any  
7 recommendations regarding that watershed. Therefore, the Special Master makes no  
8 recommendation regarding the San Pedro Watershed at this time.<sup>72</sup> (ADWR  
9 recommendations #3 and #8)

10 **CONCLUSION OF LAW #15**—In keeping with the previously agreed upon relative  
11 order, ADWR should adhere to the following deadlines:

- 12 a. Upper Little Colorado River subflow zone report – September 30, 2028
- 13 b. New Upper Little Colorado River *de minimis* report – September 30, 2029
- 14 c. Upper and Lower Little Colorado River Preliminary HSR – June 30, 2030
- 15 d. Upper and Lower Little Colorado River Final HSR – June 29, 2031. (ADWR  
16 recommendation #4)

17 **CONCLUSION OF LAW #16**--Two out of the five 10-digit HUs within the Verde  
18 Canyon Subwatershed are proposed for investigation later as part of the Salt River  
19 Valley HSR. Therefore, the portion of the Verde Canyon that would be investigated  
20 in the near term would be much smaller and should be completed as part of the Lower  
21 Verde Subwatershed, with a preliminary HSR due September 30, 2027, and a final  
22 HSR due September 30, 2028.

23 **CONCLUSION OF LAW #17** – The Yavapai-Apache Reservation, the Tonto  
24 Apache Reservation, and any wild and scenic federal designation should be included  
25 in the Verde Canyon HSR. (ADWR recommendation #5)

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26 <sup>72</sup>In a separate proceeding, the Special Master will request a proposed plan from to  
27 address both the remaining subflow requirements and the additional SOCs received  
28 after issuance of the 1991 Final HSR.



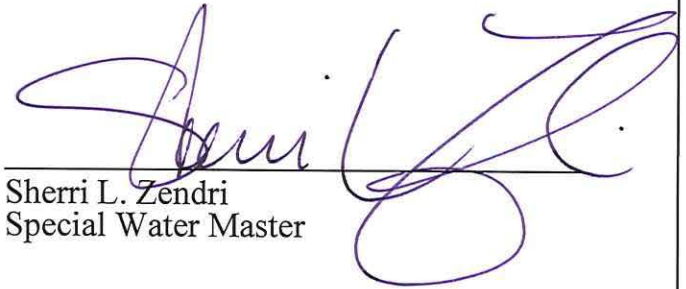
1 **VI. MOTION FOR ADOPTION OF SPECIAL MASTER'S REPORT**

2 The Special Master recommends adoption of the recommendations made in  
3 this report and moves the Court, under Ariz. R. Civ. P. 53(h), to adopt each  
4 recommendation.

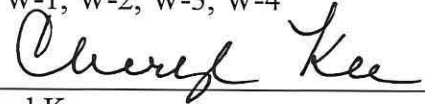
5  
6 **VII. PROCEDURE TO FILE WRITTEN OBJECTIONS TO THES REPORT**

7 Written objections to the Report must be filed on or before September 23,  
8 2024, with both the Clerk of the Apache County Superior Court and the Maricopa  
9 County Superior Court.

10  
11 DATED this 25th day of March 2024.

12  
13  
14  
15  
16  
  
Sherri L. Zendri  
Special Water Master

17 On March 25, 2024, the original of the  
18 foregoing was delivered to the Clerk of the Apache County  
19 Superior Court for filing and distributing a copy to all  
20 persons listed on the Court-approved mailing lists for Case  
21 No. CV 6417 and to the Clerk of the Maricopa County  
Superior Court for filing and distributing a copy to all  
persons listed on the Court-approved mailing list for Case  
No. W-1, W-2, W-3, W-4

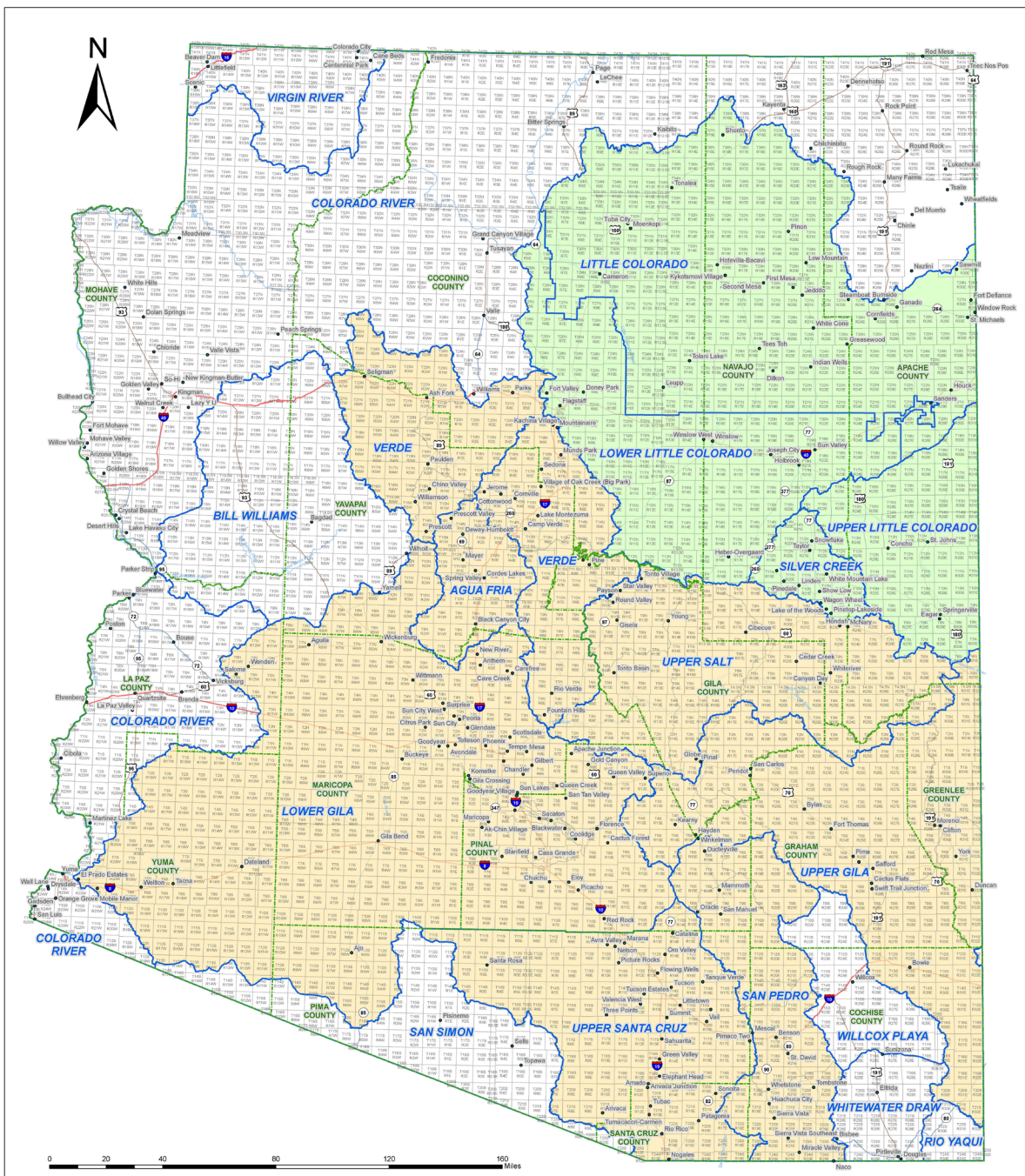
22   
23 Cheryl Kee

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# ATTACHMENTS

**FIGURE 1 – Current HSR-Area Map.**

[https://www.azwater.gov/sites/default/files/2024-02/ADJUD\\_Boundaries.pdf](https://www.azwater.gov/sites/default/files/2024-02/ADJUD_Boundaries.pdf)



**General Stream Adjudication Boundaries**

State of Arizona

Cities over 250 people\*

\* Some cities may not be visible in populated areas due to labeling.

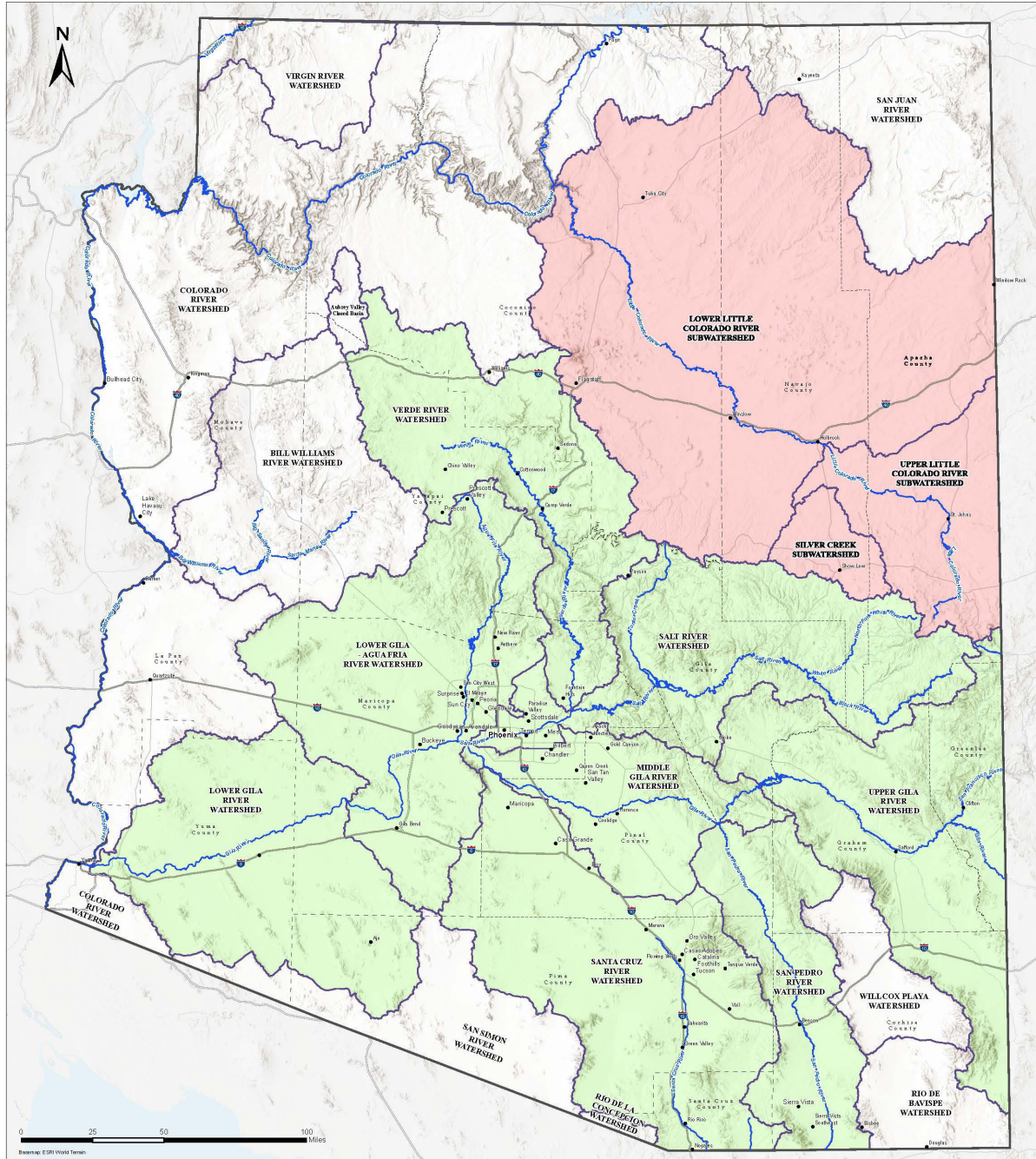
- Gila River Adjudication
- Little Colorado River Adjudication
- County
- Township/Range
- Watershed
- Interstate
- US Highway
- Stream or River
- State Highway



**PROTECTING ARIZONA'S WATER SUPPLIES for ITS NEXT CENTURY**

**FIGURE 2 – ADWR’s May 2023 Proposed HSR-Area Map.**

[https://www.azwater.gov/sites/default/files/2024-02/Adjudications\\_Subject\\_WS.pdf](https://www.azwater.gov/sites/default/files/2024-02/Adjudications_Subject_WS.pdf)



**Watersheds Subject to Adjudication**  
State of Arizona



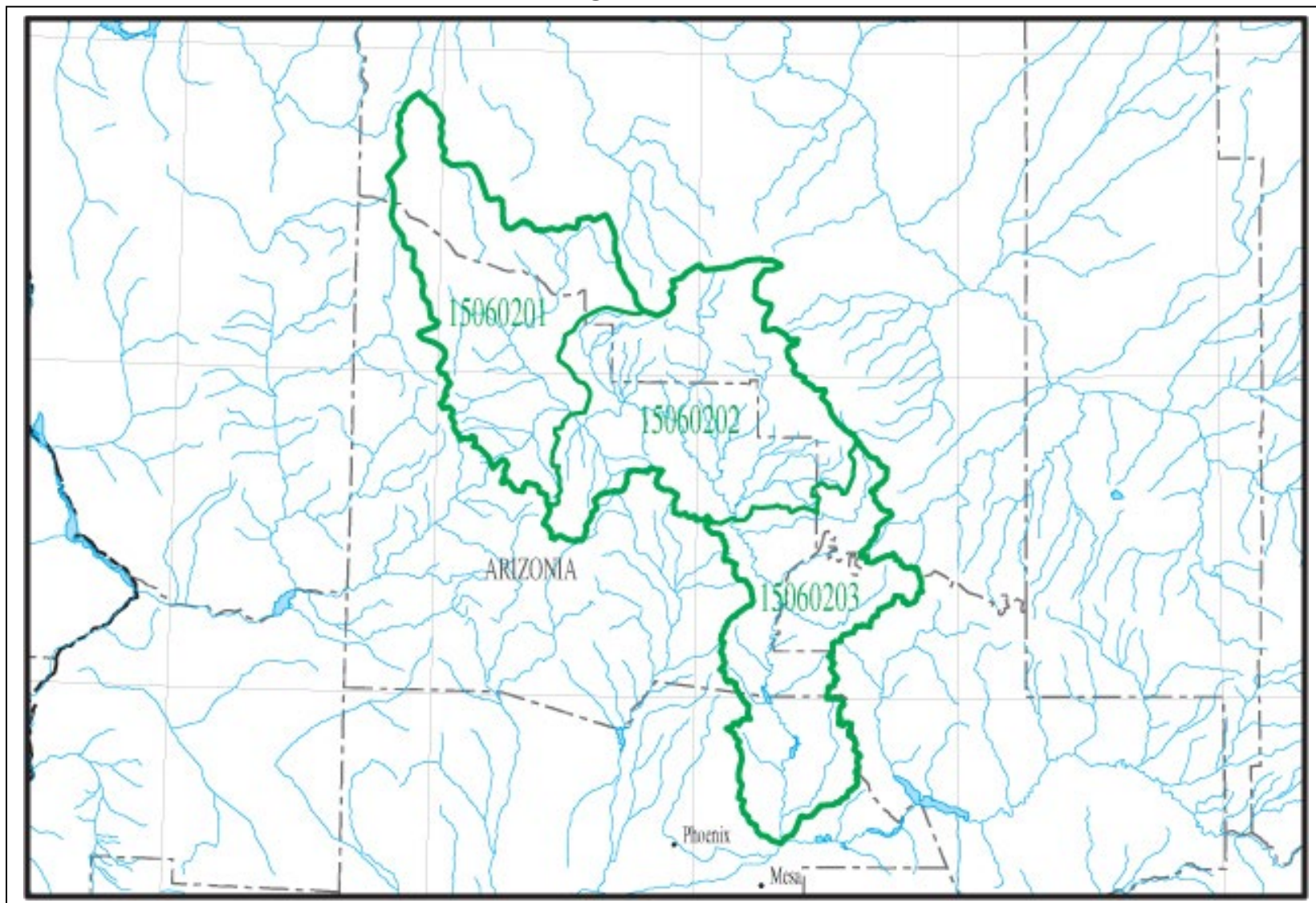
Protecting & Enhancing Arizona's  
Water Supplies For Current And  
Future Generations.

**Legend**

- Cities & Towns
- ~ Rivers & Streams
- Highways
- Adjudicated Watersheds
- Gila River Adjudication
- Little Colorado River Adjudication
- Counties
- Arizona Boundary

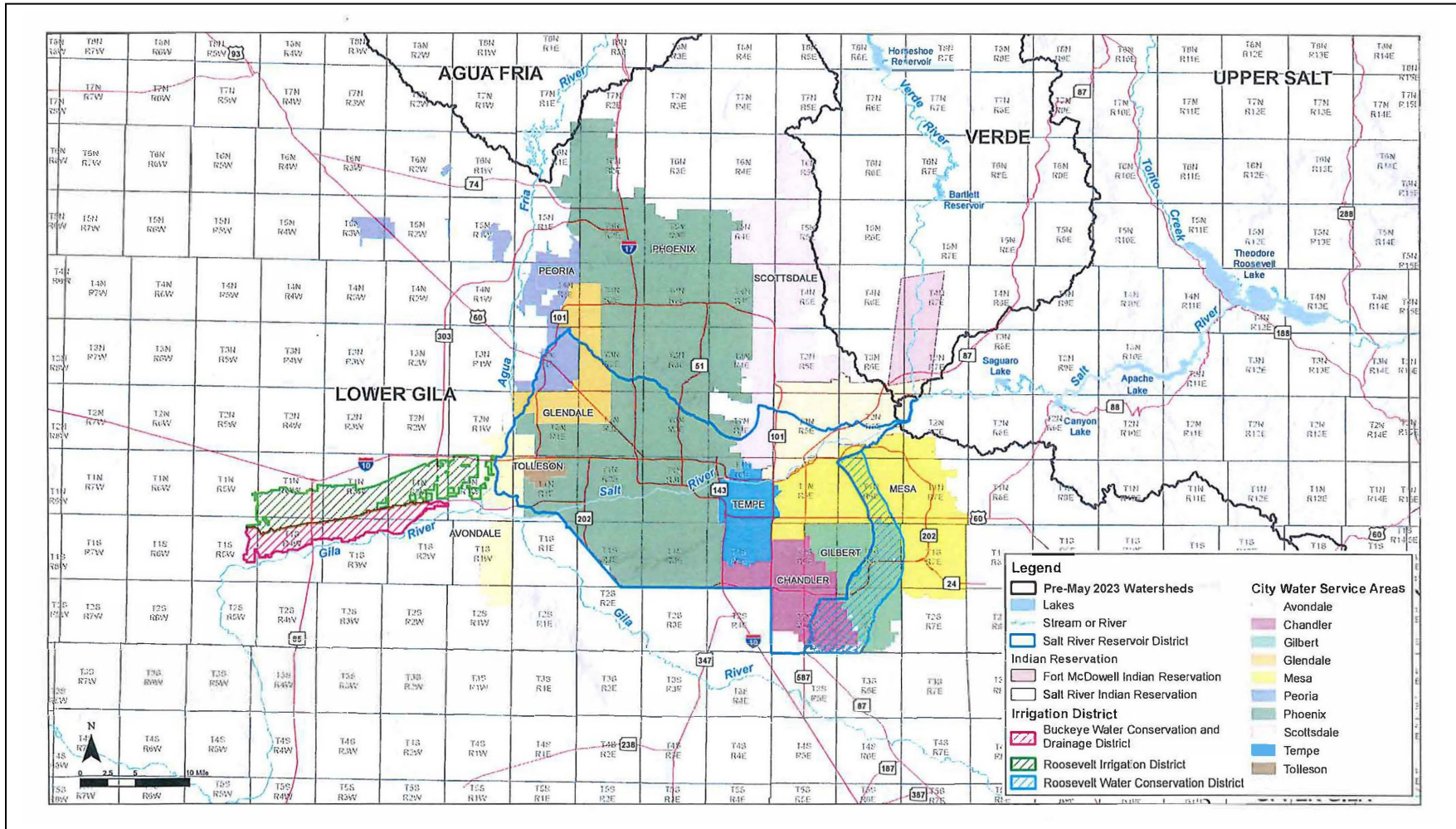
UNIVERSITY OF ARIZONA  
MAPS AND GIS CENTER  
ARIZONA STATE UNIVERSITY  
PHOENIX, ARIZONA 85024  
MAP DATE: 05/2023

**FIGURE 3 – 8-digit Subbasins of the Verde River**

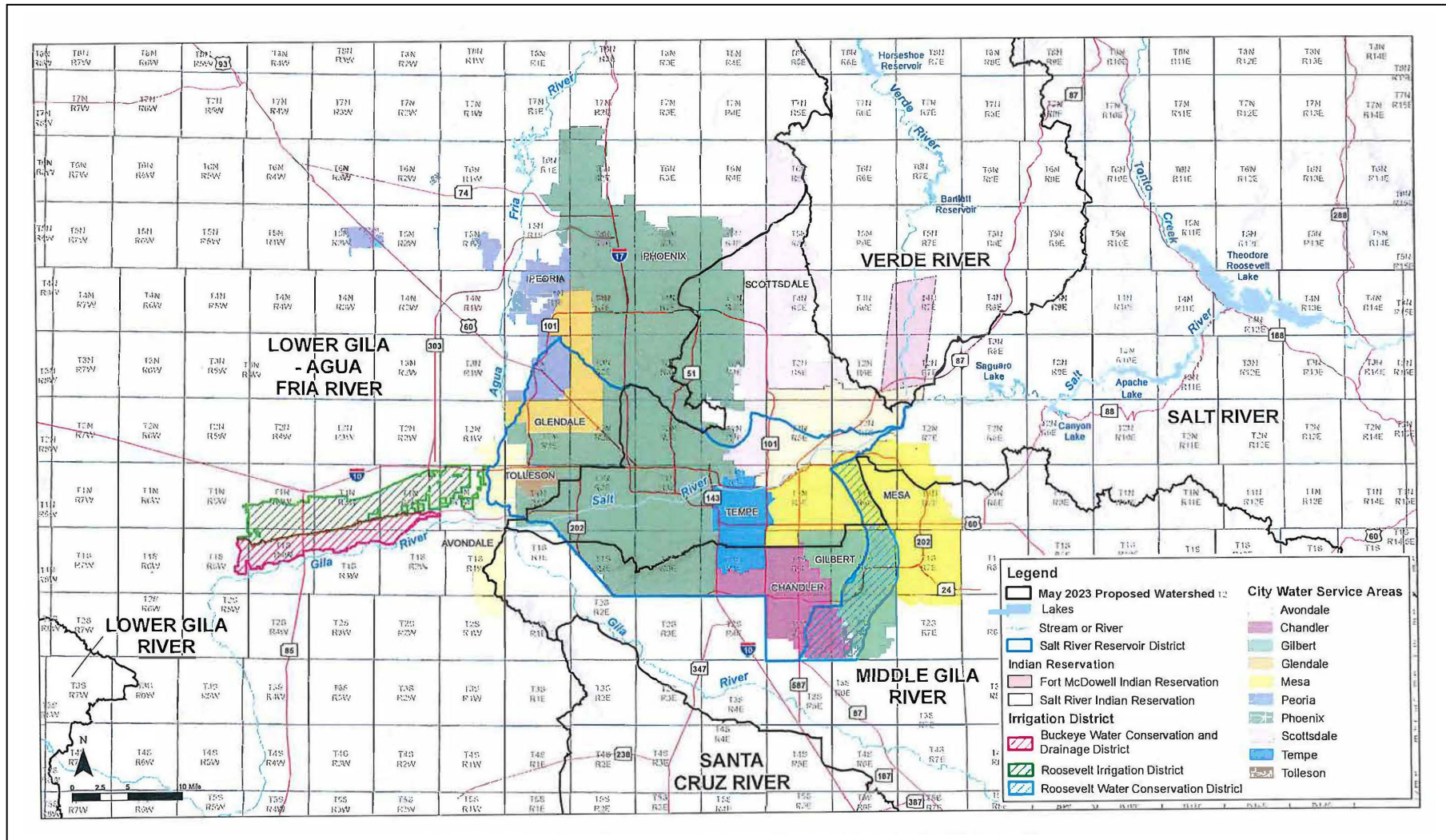


From the USGS website “Science in your Watershed,” <https://water.usgs.gov/wsc/acc/150602.html>

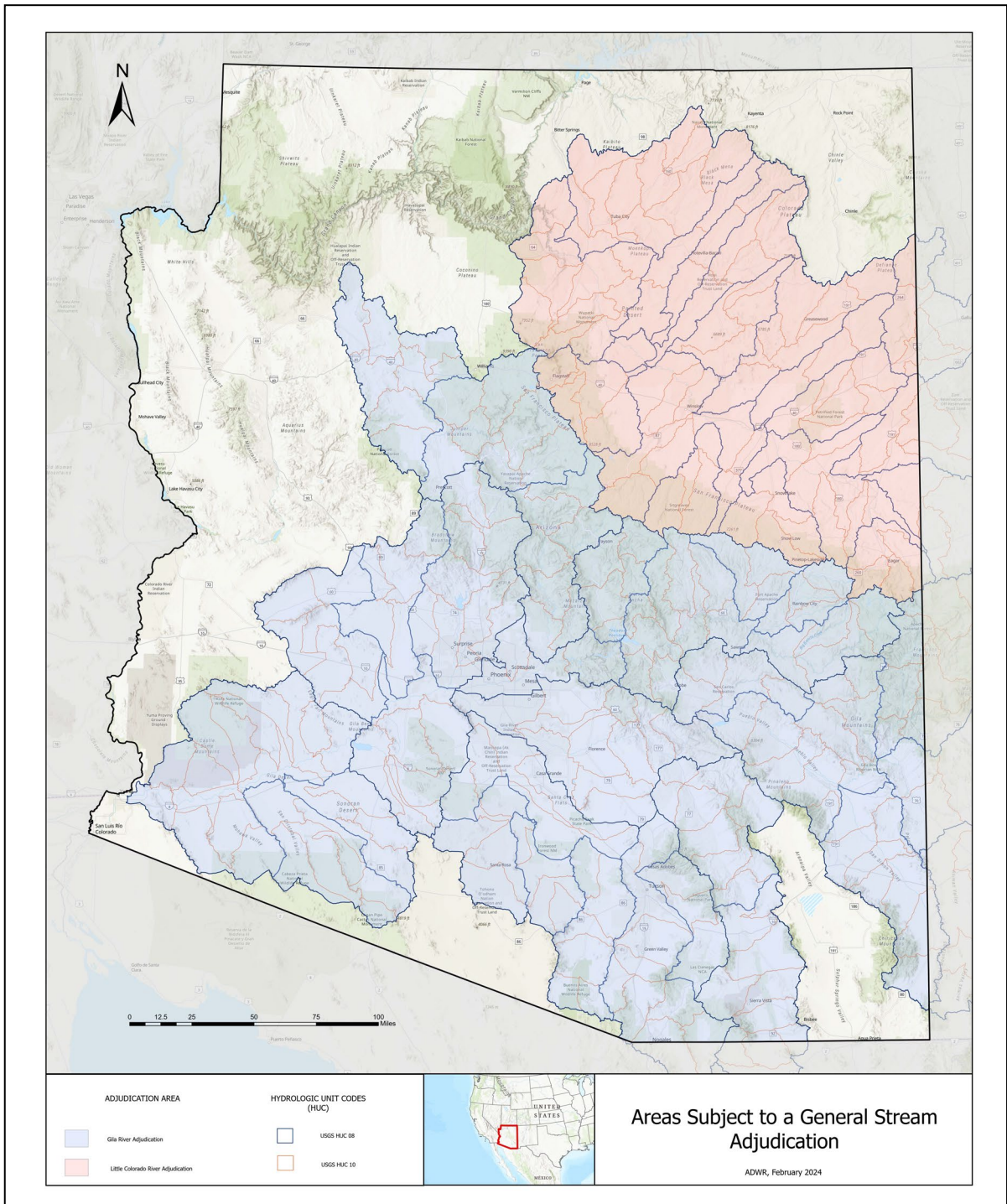
**FIGURE 4 – Service Areas Overlaid on Current HSR-Area Map**



**FIGURE 5 – Service Areas Overlaid on ADWR’s May 2023 Proposed HSR-Area Map**

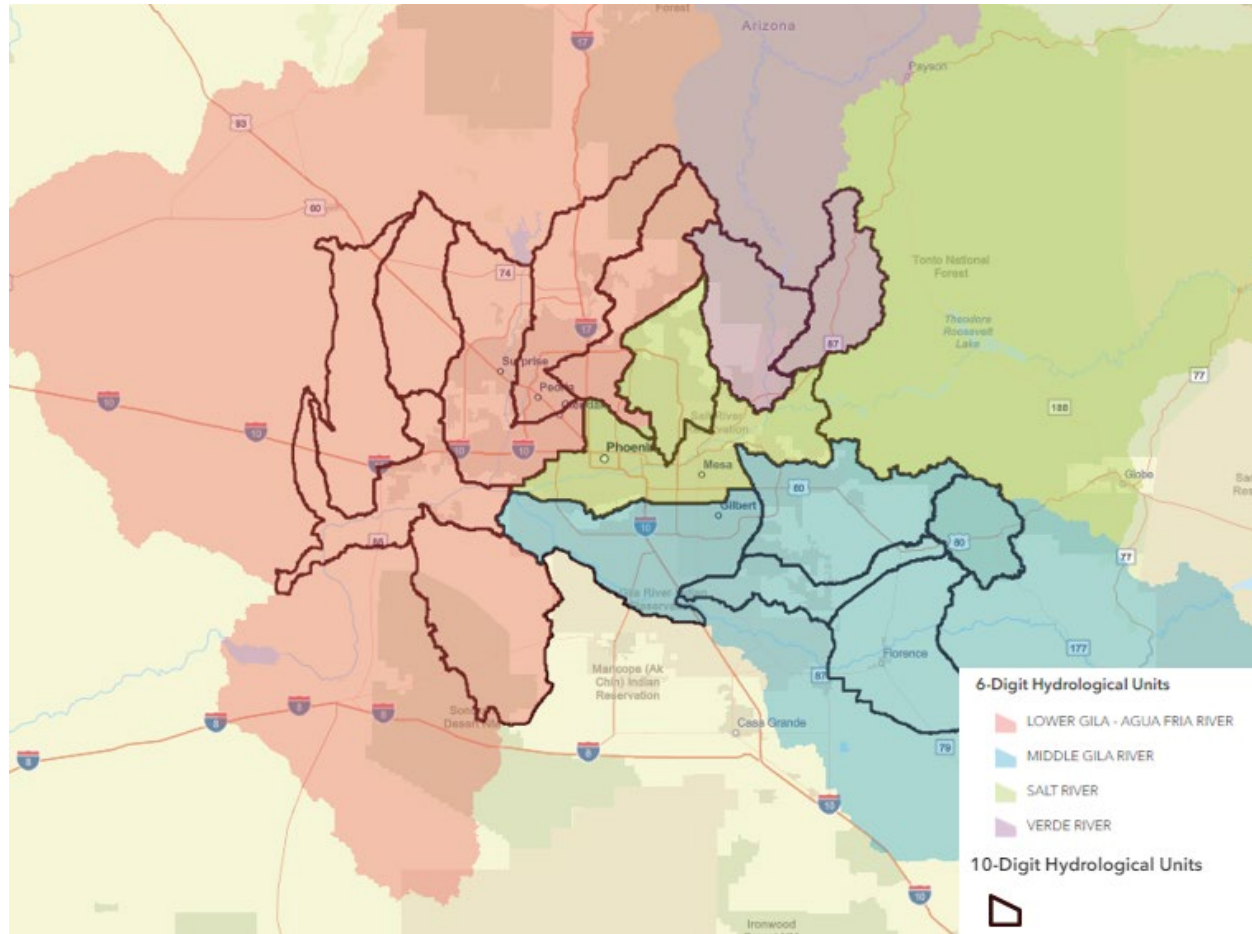


**FIGURE 6 – 10-digit Subbasins of the General Stream Adjudication**





**FIGURE 7 – Proposed Salt River Valley HSR Investigation Boundary**



**TABLE 1 – SUMMARY OF PROPOSED REPORT DEADLINES**

<b>Subwatershed (Basin)</b>	<b>Proposed deadline - Final HSR date</b>	<b>Comments</b>
San Pedro River (Gila)	NONE	The Court will address remaining subflow issues and post-HSR claims once other priorities are resolved.
Silver Creek (LCR)	Subflow – September 2026	
Navajo (LCR)	Navajo Phase II and III HSR – July 2024	See CV6417-300, Case Management Order (Mar. 21, 2022)
Verde River – Sycamore Canyon (Gila)	Subflow – IN REVIEW <i>De minimis</i> – IN REVIEW HSR – March 2027	See W1-106, Order re ADWR’s Request to Modify Schedule (Feb. 27, 2023).
Verde River – Verde Canyon (Gila)	Subflow – IN REVIEW <i>De minimis</i> – IN REVIEW HSR – Sept 2028	The two southern 10-digit HUs of the Verde Canyon subwatershed are recommended for inclusion in the Salt River Valley HSR. The Special Master recommends that the three northern 10-digit HUs of the Verde Canyon subwatershed be completed with the Lower Verde HSR.
Verde River – Lower Verde (Gila)	Subflow – IN REVIEW <i>De minimis</i> – IN REVIEW HSR – Sept 2028	
Verde River – Big Chino Wash (Gila)	Subflow – IN REVIEW <i>De minimis</i> – IN REVIEW HSR – March 2030	See W1-106, Order re ADWR’s Request to Modify Schedule (Feb. 27, 2023).
Verde River – Little Chino Wash (Gila)	Subflow – IN REVIEW <i>De minimis</i> – IN REVIEW HSR – March 2030	
Lower Little Colorado River (LCR)	Subflow - Sept 2025 HSR – June 2031	There are 2190 river miles for the Lower and 790 for the Upper LCR, therefore it is not reasonable to complete the subflow reports simultaneously.
Upper Little Colorado River (LCR)	Subflow - Sept 2028 <i>De minimis</i> – Sept 2029 HSR – June 2031	However, because the total number of SOC claims between the two subwatersheds is well below 15,000, the HSR reports should be combined.
Salt River (Gila)	Projected completion of reports is beyond the planning horizon.	<p>A preliminary HSR was completed but a final was never completed. Because so much time has passed a new preliminary HSR is necessary.</p> <p>This relative order will bring the Salt River HSR somewhat back in line with the PTO. While this may move the subflow report up with respect to the 2005 Order for subflow and <i>de minimis</i> reporting, that will provide the Court extra time to resolve any potential Gila jurisdictional issues.</p>

<b>Subwatershed (Basin)</b>	<b>Proposed deadline - Final HSR date</b>	<b>Comments</b>
Upper and Middle Gila River (Gila)	Projected completion of reports is beyond the planning horizon.	
Lower Gila - Agua Fria River (Gila)	Projected completion of reports is beyond the planning horizon.	Under the May 2023 proposed map this report is recommending for adoption, the Lower Gila - Agua Fria 6-digit HU watershed is distinct from the Lower Gila 6-digit HU watershed.
Lower Gila River (Gila)	Projected completion of reports is beyond the planning horizon	
Salt River Valley (Gila)	Projected completion of reports is beyond the planning horizon.	This HSR will encompass 10-digit HUs from the Salt, Agua Fria, Middle, and Lower Gila River subwatersheds. In order to properly evaluate the claims, the subflow and <i>de minimis</i> reports for those 4 subwatersheds will need to be completed. Therefore, this HSR is planned for completion after all the contributing watersheds have completed subflow and <i>de minimis</i> reporting.
Santa Cruz River (Gila)	Projected completion of reports is beyond the planning horizon.	