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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)
(Consolidated)

Contested Case No. W1-106

21 **ARIZONA DEPARTMENT OF WATER
22 RESOURCES' REQUEST FOR
23 DIRECTION AND CLARIFICATION
24 ON MAPPING RESERVOIRS FOR
25 THE SUBFLOW DELINEATION
26 REPORT**

Special Master Sherri Zendri

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

DESCRIPTIVE SUMMARY: The Arizona Department of Water Resources (“ADWR” or “Department”) hereby requests the Court’s direction on how to map reservoirs for the Department’s addendum to its 2021 and 2023 subflow delineation reports where inadequate imagery and data exists to map a reservoir based on predevelopment conditions, and further requests clarification regarding whether to map Willow Creek and the Willow Creek Reservoir.

1 **NUMBER OF PAGES:** Six

2 **DATE OF FILING:** July 10, 2024

3 In the Minute Entry filed on January 22, 2024, the Court requested that ADWR “
4 ... revise the subflow mapping to consider predevelopment conditions for the following
5 reservoirs: Watson Lake, Granite Basin Lake, Sullivan Lake, and Willow Creek
6 Reservoir” and ordered “that any parties possessing documentation or aerial imagery
7 regarding predevelopment conditions for the Upper Verde instream reservoirs noted
8 above shall provide such data, in a format that can be reasonably used by ADWR, by
9 February 23, 2024.”¹ In response to the Court’s order for parties to provide
10 documentation or imagery to ADWR, the Salt River Valley Water Users’ Association
11 and the Salt River Project Agricultural Improvement and Power District (collectively,
12 “SRP”) provided the following²:

- 13 1. Four aerial images from October 1940,
- 14 2. Topographic maps from 1892 and 1905,
- 15 3. Geologic mapping prepared by the Arizona Bureau of Mines, and;
- 16 4. A report from Medora H. Krieger that includes geologic mapping of the
17 relevant areas.

18
19 ADWR, in consultation with the Arizona Geologic Survey (“AZGS”) found that (1) the
20 documentation provided does not reflect predevelopment conditions and/or (2) the
21 documentation was not reasonably usable. While the Court did not set a deadline for
22 incorporating these revisions, ADWR requests the Court’s direction on how it should
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24 ¹ [Minute Entry for Oral Arguments held January 9, 2024](#), *In Re Subflow Technical Report,*
25 *Verde River Watershed*, Contested Case No. W1-106, January 22, 2024, PDF p. 7.

26 ² ADWR did not receive any other documentation or imagery in response to the Minute
Entry Order filed on January 22, 2024.

1 proceed when adequate imagery or data demonstrating predevelopment conditions is
2 unavailable. Included below is a synopsis of ADWR's review of each of the documents
3 provided and their deficiencies.

4 ***1. Aerial Images from October 1940³***

5 All reservoirs that would be subject to revised mapping based on the
6 predevelopment standard were completed before 1940, rendering the aerial imagery
7 irrelevant for predevelopment analysis. Watson Lake was created in 1915⁴ (25 years
8 before the aerial photographs), Sullivan Lake was created in 1935⁵ (five years before the
9 aerial photographs), and Granite Basin Lake was created in 1939⁶ (one year before the
10 aerial photographs).

11 ***2. Topographic Maps from 1892 and 1905⁷***

12 ADWR, in consultation with AZGS, has determined that topographic maps are not
13 reasonably usable for the geologic mapping performed when delineating the subflow
14 zone. Any use of topographic maps would require using the topography along the base of
15 bedrock slopes as a proxy for Holocene alluvial extent. This is problematic because even
16 if ADWR accepted this proxy and substituted the map for an actual examination, it would
17 still be unknown whether the flat areas shown on the map are Holocene river deposits,

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19 ³ The aerial images from October 1940 provided by SRP can be viewed at:
<https://infoshare.azwater.gov/docushare/dsweb/View/Collection-22814>.

20 ⁴ See "Watson Lake," Prescott Western Heritage Foundation, Inc.,
<https://www.visitwhc.org/watson-lake.html>.

21 ⁵ See Federal Emergency Relief Administration, *Lake constructed behind Sullivan Dam by*
the Emergency Relief Administration in Yavapai County, [98-3901.jpg], Arizona Memory
22 Project, <https://azmemory.azlibrary.gov/nodes/view/239438>.

23 ⁶ See United States Department of Agriculture Forest Service, *Recreational Fee*
Demonstration Program, April 4, 2003, p. 57,
24 [https://www.fs.usda.gov/passespermits/docs/accomps/wo-rpt-congress/fy02-ii-e-usda-fs-
25 accomp-of-program.pdf](https://www.fs.usda.gov/passespermits/docs/accomps/wo-rpt-congress/fy02-ii-e-usda-fs-
25 accomp-of-program.pdf).

26 ⁷ The topographic maps from 1892 and 1905 provided by SRP can be viewed at:
<https://infoshare.azwater.gov/docushare/dsweb/View/Collection-22815>.

1 weathered bedrock, or older sediment. Additionally, the contour interval and scale of old
2 topographic maps, such as those provided here, are coarse and imprecise, with many
3 assumptions made when drawing them (such as those mentioned above).

4 ***3. Geologic Mapping Prepared by the Arizona Bureau of Mines from 1958⁸***

5 The bedrock map provided by SRP has a 1:375,000 scale with only lumped
6 surficial map units. Additionally, the map does not show anything other than bedrock
7 along the stretch of Granite Creek at Watson Lake, so it is not reasonably usable for
8 ADWR's purposes in delineating the subflow zone because, according to the criteria
9 listed in the 2017 Order, bedrock areas should be omitted from the subflow zone as
10 setbacks cannot be applied to bedrock.⁹ Furthermore, as previously stated, all reservoirs
11 that would be subject to revised mapping based on the predevelopment standard were
12 completed before 1940, rendering this geologic mapping from 1958 irrelevant for
13 predevelopment analysis.

14 ***4. Medora H. Krieger Report from 1965¹⁰***

15 While the Report prepared by Ms. Krieger is the most detailed of the documents
16 provided, it is still not reasonably usable because its focus is on regional geology and
17 bedrock relationships. While young deposits along streams are mentioned, they are not
18 the focus and are only shown along some channels. The information available in the
19 report from Ms. Krieger, though the most useful of the materials provided, would not
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21 ⁸ The geologic mapping prepared by the Arizona Bureau of Mines from 1958 provided by
22 SRP can be viewed at: <https://infoshare.azwater.gov/docushare/dsweb/Get/Document-94251/19580000%20AzBM%20Geologic%20Map%20-%20Yavapai%20County.pdf>.

23 ⁹ See [Order for Production of a Subflow Zone Delineation Technical Report for the Verde River Watershed](#), *In re Subflow Technical Report, Verde River Watershed*, W1-106,
24 November 27, 2017, p.3 (ordering that “[n]o setback assumptions shall be applied in
25 bedrock canyons”).

26 ¹⁰ The Medora H. Krieger Report from 1965 provided by SRP can be viewed at:
<https://infoshare.azwater.gov/docushare/dsweb/View/Collection-22816>.

1 change anything in the geologic mapping performed by AZGS and provided to ADWR
2 for its *Subflow Zone Delineation for the Remainder Of the Verde River Watershed* (“2023
3 Report”). Furthermore, as previously stated, all reservoirs that would be subject to
4 revised mapping based on the predevelopment standard were completed before 1940,
5 rendering this report from 1965 irrelevant for predevelopment analysis.

6 **5. Willow Creek and Willow Creek Reservoir**

7 ADWR seeks further clarification on whether it needs to map Willow Creek
8 Reservoir. ADWR intentionally did not map Willow Creek, or its instream reservoir, in
9 ADWR’s 2023 Report because ADWR classified the stream as ephemeral under
10 predevelopment conditions. ADWR would like to know if the Court intended to include
11 Willow Creek Reservoir as one of the reservoirs needing revisions in the Order within the
12 Minute Entry filed on January 22, 2024, despite Willow Creek itself not being mapped
13 initially. If so, ADWR seeks clarification on whether it should map only the Willow
14 Creek Reservoir¹¹ or if the Court is requesting ADWR to also map Willow Creek.

15 Based on the foregoing, ADWR requests clarification from the Court on how it
16 should proceed when it, in consultation with AZGS, finds that (1) the documentation of
17 reservoirs that exists does not reflect predevelopment conditions and/or (2) the
18 documentation is not reasonably usable. While this Request is being filed specific to the
19 above-detailed reservoirs in the Verde River Watershed, ADWR further requests that it
20 be able to apply the direction provided by the Court when it prepares future subflow
21 delineation reports in other watersheds.¹² In Arizona, it is unusual for comprehensive

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23 ¹¹ The Willow Creek Reservoir was created in 1939, one year prior to the provided
24 imagery. See Living New Deal, *Willow Lake – Prescott AZ*,
<https://livingnewdeal.org/sites/willow-lake-prescott-az/>.

25 ¹² In preparing to file the *Subflow Delineation Report for the Lower Little Colorado River*
26 due on September 5, 2025, ADWR has been unable to locate predevelopment imagery for
at least eleven reservoirs.

1 aerial imagery to be available prior to the 1940s, and detailed predevelopment geologic
2 analysis is typically only available for large federally funded reservoirs. Therefore, this
3 problem is likely to reappear in future subflow reports. The original of this Notice is
4 being filed with the Clerk and a copy is being posted to ADWR's website at:
5 <https://www.azwater.gov/adjudications>.

6 **DATED** this 10th day of July, 2024.

7 ARIZONA DEPARTMENT OF WATER
8 RESOURCES

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10 _____
11 Kimberly R. Parks, Deputy Counsel
12 Karen J. Nielsen, Deputy Counsel

13 ORIGINAL of the foregoing sent by first-class
14 mail on July 10, 2024, to:

15 Clerk of the Maricopa Superior Court
16 Attn: Water Case
17 601 W. Jackson Street
18 Phoenix, Arizona 85003

19 COPY of the foregoing sent by
20 first-class mail on July 10, 2024, to:

21 Special Master Sherri Zendri
22 Maricopa County Superior Court
23 Central Court Building
24 201 West Jefferson Street, Suite 3A
25 Phoenix, AZ 85003-2205

26 COPIES of the foregoing sent by first-class
mail on July 10, 2024, to all parties
on the court-approved mailing list for Contested
Case No. W1-106.

