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

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

W-1 (Salt)  
W-2 (Verde)  
W-3 (Upper Gila)  
W-4 (San Pedro)  
(Consolidated)

Contested Case No. W1-103

**ARIZONA DEPARTMENT OF WATER  
RESOURCES' MEETING REPORT**

Special Master Susan Ward Harris

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

**DESCRIPTIVE SUMMARY:** The Arizona Department of Water Resources (“ADWR” or “The Department”) provides its Meeting Report as requested by the Court in the Minute Entry Order dated February 28, 2019.

**NUMBER OF PAGES:** Six

**DATE OF FILING:** June 27, 2019

1 Pursuant to the Minute Entry Order dated February 28, 2019, ADWR hereby files  
2 its Meeting Report addressing the results of the meeting between ADWR, experts retained  
3 by the parties, and counsel for the parties appearing in this case.

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5 **MEETING DETAILS**

6 The meeting took place at the ADWR offices located at 1110 W. Washington  
7 Street, Phoenix, Arizona 85007 on June 11, 2019 at 9:00am. The following individuals  
8 were present at the meeting:

9

<b>Name</b>	<b>Entity or Party Represented</b>
10 Jeff Trembly	ADWR
11 Frank Corkhill	ADWR
12 Glen Buettner	ADWR
Lisa Dubas	ADWR
13 Jeff Inwood	ADWR
Keith Nelson	ADWR
Olga Hart	ADWR
14 Kimberly Parks	ADWR
Tom Murphy	Gila River Indian Community
15 Dr. Peter Mock	Gila River Indian Community
John Burnside	BHP Copper/Arizona Public Service
16 Bill Staudenmaier	BHP Copper/Arizona Public Service
17 Dr. Mark Cross	BHP Copper/Arizona Public Service
Kevin Crestin	Arizona State Land Department
18 Dr. Jesse Dickinson	United States Geological Survey
Mark McGinnis	Salt River Project
19 Jon Ford	Salt River Project
Sharon Morris	Salt River Project
20 Jonathan Charlton	Salt River Project
Hannah Woner	Salt River Project
21 Dave Colvin	Salt River Project
Jenny Winkler	City of Chandler
22 Sean Hood	Freeport Minerals
23 Dr. Amy Hudson	Freeport Minerals
Gretchen Erwin	City of Goodyear
24 Kurt Zeiler	Pueblo Del Sol/ City of Sierra Vista
Bill Sullivan	Pueblo Del Sol/ City of Sierra Vista
25 Jean Moran	United States
26 Yosef Negose	United States

1	Sonia Overholser	United States
	Chuck Cahoy	City of Phoenix
2	Steve Wene	Various clients
	Bill Anger	Cities of Avondale, Chandler, Glendale, Mesa, and Scottsdale
3	Alexandra Arboleda	Cities of Tempe, Flagstaff, and Tombstone
	Joe Sparks	San Carlos Apache Tribe
4	Michelle Van Quathem	City of Goodyear

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**MEETING OUTCOMES**

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8           The purpose of this meeting was for ADWR and the experts retained by the parties

9 in this case to discuss the Department’s proposed Subflow Depletion Test. The meeting

10 began with a brief presentation by Dr. Jesse Dickinson from the United States Geological

11 Survey (“USGS”) on the USGS groundwater flow model for the Sierra Vista

12 subwatershed. Dr. Dickinson provided an overview of the model, the purposes for which

13 it was created, and possible improvements that could be made to the model and also

14 answered questions from the group. At the conclusion of his presentation, Dr. Dickinson

15 left the meeting while the remaining parties discussed the Department’s proposed Subflow

16 Depletion Test.

17           Overall, the meeting was productive and several objectives and goals were

18 identified. When provided the opportunity, none of the parties expressed a concern that

19 ADWR had incorrectly summarized their comments on the Depletion Report. The parties

20 continue to agree that it is appropriate to use MODFLOW and Zonebudget to calculate

21 subflow zone depletion, and that subflow zone depletion can be calculated by comparing

22 the results of a model simulation that includes all pumping to a model simulation that

23 includes all pumping except the well or wells of interest. ADWR presented its progress in

24 updating well and recharge locations and pumping data and in combining the current eight

25 model transient simulations into a single simulation.

26

1 All parties present at the meeting agreed that if the existing USGS MODFLOW  
2 groundwater model is to be used as a tool for calculating subflow depletion, several  
3 updates should be made to the model.

4 **Items Agreed To By All Parties Present**

- 5 • Evaluate and potentially modify the existing model’s geologic structure using any  
6 new or previously omitted data
- 7 • As a technical matter, the Floodplain Holocene Alluvium (“FHA”) should be  
8 represented laterally and vertically in a manner that is consistent with the available  
9 data
- 10 • Create continuous layers across the model
- 11 • Use the streamflow routing package SFR2 to address surface water runoff in the  
12 model
- 13 • Use the existing USGS report on the watershed that identifies major ephemeral  
14 streams and tributaries
- 15 • Find balance between recharge at tributaries and general recharge
- 16 • Assess using an unstructured grid near the subflow zone boundary
- 17 • Use MODFLOW 6
- 18 • Use Newton Formulation of Modflow 2005, Modflow-NWT, and tighten closure  
19 criteria to address mass-balance errors
- 20 • Review time-step duration
- 21 • Goal to minimize the number of Zonebudget zones once the model is updated and  
22 recalibrated
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**Outstanding Areas of Disagreement**

The parties identified several legal issues that must be resolved before the model can be utilized for depletion analysis. Those issues are as follows:

- Should depletion analysis include reduction in flow to the subflow zone?
- What is the legal definition of the vertical extent of the subflow zone?
- What projection period should be used for future depletion analysis?

If this model is to be used pre-decree, another issue identified during the meeting was whether the amount of pumping put into the model will be the amount of actual pumping or the total amount of pumping assigned to the Potential Water Right. There was no agreement amongst the parties as to whether this was a significant issue to be resolved by the Court.

**NEXT STEPS**

ADWR hydrologists will develop a work plan to undertake these updates and modifications to the existing USGS SVS model. ADWR intends to extend the USGS SVS model into the Middle San Pedro River watershed northward to the Narrows<sup>1</sup> in fulfillment of its obligations under the Assured and Adequate Water Supply Program. ADWR estimates that the expansion, update, modification and recalibration of the USGS SVS model will take a minimum of three years to accomplish. During that time, ADWR will host periodic meetings with the parties and experts retained by the parties in this case to discuss ADWR’s progress and to allow an opportunity for the parties to offer suggestions.

The original of ADWR’s report is being filed with the Clerk and a copy is being posted to ADWR’s web site at: <https://new.azwater.gov/adjudications>.

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<sup>1</sup> The Narrows is a hard rock constriction in the San Pedro River Valley and marks the downstream end of the Benson subwatershed.

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**DATED** this 27<sup>th</sup> day of June, 2019.

ARIZONA DEPARTMENT OF WATER  
RESOURCES



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Kimberly R. Parks, Deputy Counsel  
Janet L. Miller, Deputy Counsel

**ORIGINAL** of the foregoing sent by  
first-class mail on June 27, 2019, to:

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

**COPIES** of the foregoing sent by  
first-class mail on June 27, 2019, to:

Special Master Susan Ward-Harris  
Maricopa County Superior Court  
Central Court Building  
201 West Jefferson Street, Suite 3A  
Phoenix, AZ 85003-2205

**COPIES** of the foregoing sent by first-class  
mail on June 27, 2019 to all parties on the  
court-approved mailing list for Contested Case  
No. W1-103.

