

SUPERIOR COURT OF ARIZONA  
MARICOPA COUNTY

February 27, 2025

CLERK OF THE COURT  
A. Parmar  
Deputy

SPECIAL WATER MASTER  
SHERRI ZENDRI

In Re The General Adjudication of  
All Rights to Use Water in the Gila  
River System and Source  
W-1, W-2, W-3, W-4 (Consolidated)

FILED: March 6, 2025

In re: Subflow Technical Report, San Pedro River Watershed  
Contested Case No. W1-103

**MINUTE ENTRY**

Courtroom 301 – Central Court Building

10:03 a.m. This is the time set for a Status Conference to discuss any final recommendations for the improvement of the Groundwater Flow Model before Special Water Master Sherri Zendri.

The following parties/attorneys appear virtually through Court Connect:

- Mark McGinnis and Mike Foy on behalf of Salt River Project (“SRP”)
- Jenny Winkler on behalf of the City of Chandler
- Kevin Crestin and Eric Wilkins on behalf of the Arizona State Land Department (“ASLD”)
- Rhett Billingsley on behalf of American Smelting and Refining Company (“ASARCO”)
- Merrill C. Godfrey on behalf of the Gila River Indian Community (“GRIC”)
- Emmi Blades, Mark Widerschein and Marisa Hazell on behalf of the United States Department of Justice, Environment and Natural Resources

- Sean Hood and Nyla Knox on behalf of Freeport Minerals Corporation, their expert groundwater modeler, Dr. Amy Hudson, is present to observe as well
- Brian Heiserman and Garrett Perkins on behalf of the City of Cottonwood, St. David Irrigation District, Gila Valley Irrigation District and Franklin Irrigation District
- John Burnside and William Staudenmaier on behalf of Arizona Public Service (“APS”) and BHP Copper, their technical experts, Dr. Colin Kikuchi and Mark Cross, are present to observe as well
- Phillip Londen and Elias Ancharski on behalf of Arizona Water Company
- Susan Montgomery and Robyn Interpreter on behalf of the Yavapai Apache Nation and observing for the Pascua Yaqui Tribe
- Joe Sparks, Laurel A. Herrmann and Jana L. Sutton on behalf of the San Carlos Apache Tribe, Alexander Ritchie, Attorney General or the San Carlos Apache Tribe is present to observe as well
- Nicole Klobas on behalf of the Arizona Department of Water Resources (“ADWR”) with Jerry Shi and Emily LoDolce of ADWR’s modeling section
- Candace French on behalf of the Navajo Nation
- Steve Wene on behalf of the City of Safford
- Charles Cahoy on behalf of the City of Phoenix
- Michael Rolland on behalf of the Cities of Avondale, Glendale, Mesa, Scottsdale and Tempe
- Alexandra Arboleda on behalf of the City of Tombstone
- Jay Lee on behalf of the Tonto Apache Tribe

A record of the proceedings is made digitally in lieu of a court reporter.

The Court informs the parties that it did not grant ADWR’s Motion to Continue because it does not expect the parties to reach any absolute resolution today and appreciates that ADWR was able to have some parties attend today’s hearing.

Counsel Klobas informs the Court that she is general counsel for ADWR and clarifies they are represented by counsel today.

The Court calls for any additional comments, concerns or rebuttal to ADWR’s Addendum filed February 14, 2025 (the “Addendum”).

Counsel Heiserman addresses the Court. He would like an opportunity to review the revised model and model report and how the comments from the parties are addressed. He would also like another opportunity to provide further comments on the revised model and model report.

The Court affirms that the parties will have at least one more opportunity to provide their comments to the revised model and model report.

Counsel Heiserman further addresses the Court. Depending on the timeline for the additional work, he believes it may be helpful for ADWR to provide interim status updates

so the parties' technical consultants may weigh in/provide feedback. He notes that ADWR sought guidance/information from the Court and believes it may be helpful for the Court to develop a procedure for how that guidance will be developed and delivered to ADWR.

The Court indicates that once all the parties have had an opportunity to voice their comments, it will address timelines, procedures and interim updates.

Counsel McGinnis addresses the Court. His comments are similar to Counsel Heiserman's comments. He also has concerns with the timelines and has input on the five substantive issues that ADWR has sought guidance on. He notes that the demonstration portion in the original model only had two wells and believes more wells would be helpful. He has a similar concern with the Addendum response in that he would like to review how the comments are addressed in ADWR's revised report and model.

Counsel Burnside addresses the Court. He states that his comments are similar to Counsel Heiserman's and Counsel McGinnis'. He notes that a series of comments were provided on the draft Addendum but cannot be in a position to confirm whether the concerns have been addressed without seeing the revised report and model. He agrees that status updates with opportunity for their experts to provide feedback would be helpful. As well as procedures for the Court to provide guidance to ADWR.

Counsel Burnside relays specific concerns with model construction and calibration and notes the following: the values in the model for the vertical anisotropy of the subflow zone are unreasonably low, the hydraulic conductivity of the fine-grained unit of the basin fill is inconsistent with the conceptual model and physically unrealistic in certain areas, and the values for aquifer specific storage are unreasonably low. More generally, they feel the calibrated model and distribution within that model are inconsistent with the hydrogeologic conceptual model. He believes a review of the hydrogeologic conceptual model and review of the data in connection with that reassessment would be necessary. He notes that in their objection and in the comments, they emphasized that there were many wells where the hydrographs indicated that there was not a good correspondence of the measured and simulated trends in water levels. He didn't get the feeling from the Addendum that ADWR felt as strongly about the mismatch of simulated trends as they do and believes dialogue between ADWR and the parties would be helpful to ensure everyone is on the same page.

Counsel Hood addresses the Court. He joins and agrees generally with the broad comments of the prior attorneys as well as the more specific items that Counsel Burnside addressed. On page 4 of the Addendum, ADWR indicates some areas were excluded based on low permeability in response to Freeport's comments. They are concerned that the calibration in the areas along the mountain fronts are not matching.

He relays that their expert, Dr. Hudson, observed that more modern modelling code such as Python may be more user friendly than Fortran. He agrees that more information will be needed on the implementation of transient modeling as well the exclusion of erroneous calculation of tributary groundwater capture. With respect to item 12 on pages

13-15, they would prefer the model grid refinement approach and expresses concern with the alternative listed on page 15, simulating only the basin fill. On page 22, he notes that layers 3 and 4 continue to be lumped into layer 3 and continues to object to that. He expresses concern with the reliability of the approach detailed on pages 23-24 with respect to the model grid refinement. On pages 27-28, he notes there may be too much averaging among layers of hydraulic conductivity and opines that may be the explanation of the poor match between modeled results and observed data. With respect to pages 28-29, many comments were made regarding the evapotranspiration (“EVT”) values and believes it is important for the EVT values to be accurately captured. Dr. Hudson commented that the calibration statistics need to be improved and he does not believe that has been adequately addressed in the Addendum. He continues to object to ADWR’s reluctance towards adding additional layers, as relayed on page 48. He believes the suggestion outlined on item 25 on page 49 should be implemented if it will increase reliability.

Counsel Londen addresses the Court. He generally joins in Counsel Heiserman’s comments regarding timing and communication, as well as Counsel Burnside’s comments regarding transient modeling, calibration and status updates with input from their experts. He joins in Counsel Hood’s comments on the grid size issue. He notes that page 23 of the Addendum does not sufficiently address their comment on why ADWR selected 660 ft by 660 ft. He would like more information on if and how that analysis was done (was it based on model runs, would it increase accuracy, etc.). He agrees with Counsel Hood on using basin wide and whole model numbers. He thinks there should be particular calibration that occurs. He is pleased that ADWR will be providing the PEST files so they may analyze them once received. On page 40, he notes that they would like multiple model results so that they can choose which model results they can use for predictions moving forward.

Counsel Blades addresses the Court. They are pleased to see that ADWR is considering refining the model grid, addressing the EVT issues, inconsistencies with the conceptual model and recalibration. She mirrors the comments of others that they will have to review the revised model and report to see how these comments are addressed. They support the idea of a collaborative process moving forward.

Counsel Godfrey addresses the Court. He does not have specific concerns with ADWR’s responses to their comments and are generally pleased with the effort made by the department. He agrees that no model is perfect and adds that their primary concern is with timing.

Counsel Spark addresses the Court. He joins in many of the comments made by the US and GRIC. He provides historical context to the Court. He does not agree that there is any requirement for transient modeling for ADWR or the Court. He expresses concern regarding the timing of implementation and the effect it will have on others. He recommends for ADWR to take the reasonably justifiable basic changes to the model as it would be impossible to address all of the changing independent variables. He believes there should be adjustment for the mountain front recharge zone as that is where the hydrologic contribution to the flow of the river first enters the system. He believes a smaller cell size along the critical or sensitive areas may be more helpful. He believes it is the individual

claimant's obligation to prove that their wells are not in the subflow zone, not the Court or ADWR.

The Court addresses the parties regarding its thoughts and clarifies its expectations moving forward. The Court asks for a recommendation from the parties for a more collaborative effort between the parties' experts and ADWR. The Court adds that there were a number of comments in the Addendum regarding runtimes, the Court would like further clarification on what the current and estimated future runtimes are.

Mr. Shi addresses the Court regarding the runtimes. He states that the current runtime is approximately ten minutes, depending on how fast the computer is. He informs the Court that they can use another programming language if the Court would like but the reason why they use Fortran is because it is much faster than Python. He has seen C++ used but has never seen Python used for this type of model. In response to the four years being too long, he provides context of ADWR's work. This project was taken over around Summer of 2022, at which time all of the major contributors had already left the agency. Then in the middle of 2023, they received a Court order regarding the impact wells along the San Pedro River and had to update the model. This was finished and turned in in early 2024. He explains why it takes so much time to write and run the model. Mr. Shi adds that the department is open to interim updates and input from the other parties' experts. Many of the comments can be easily addressed or may be due to confusion, such as specific storage vs storativity. However, some things, such as adding more cells, are unrealistic due to budget and time. He believes many of these comments would be easier to address in person with the parties' experts.

The Court notes that everyone seems to be in agreement with a collaborative effort and calls for suggestions/comments from the parties.

Counsel McGinnis addresses the Court regarding the proposal of the formation of a technical committee or collaborative process. He appreciates that there is a turnover in the department and believes a collaborative effort would help with continuity. He is supportive of the concept of a technical committee but wonders if it is beneficial for just the experts to attend these meetings or attorneys as well.

While the Court would not exclude attorneys from these proposed meetings, it would strongly encourage the parties to allow their technical experts to attend then report back so they are able to discuss these matters freely.

Counsel McGinnis suggests that the technical committee could meet more often then provide periodic meetings where they can report back to the attorneys.

Counsel Klobas affirms that the hydrologists are in agreement with that suggestion.

Counsel Londen addresses the Court. He supports Counsel McGinnis' suggestion but has questions about how the committee is formed and how many people would be on

it. He adds that he would not attend the meetings and would instead wait for the periodic updates as suggested by the Court.

The Court estimates that there are 8-10 experts. The Court appreciates that ADWR cannot make a model by committee but believes a discussion between the experts and ADWR will be helpful.

Counsel Heiserman addresses the Court. He is supportive of the idea. He believes it will be helpful for the experts to confer with ADWR regarding the mechanics of the model. However, he believes it would be helpful for the Court to give guidance where there is disagreement between positions and where a legal question intersects with the technical discussion.

Counsel Sparks addresses the Court. He is supportive of the idea but adds that the tribe has historically been unable to afford a technical expert and would like the opportunity to provide one. He doesn't think it would be appropriate for independent separate meetings with ADWR and believes it should be publicized where all the experts could meet together to avoid any clandestine meetings.

The Court addresses Counsel Sparks' suggestion for publicized meetings and reiterates that the technical experts should be able to discuss between themselves without attorneys.

Counsel Sparks clarifies that he was not suggesting that the attorneys should attend but would like the meetings available to all of the experts and not just the fixed group of experts that are currently involved.

The Court asks for input from the experts regarding the potential downsides of a larger group.

Counsel Hood addresses the Court. He supports the idea of a technical committee. He adds that their expert is on the East Coast and would likely attend meetings in person but would ask for the option for a remote appearance for at least some of the meetings.

The Court believes that accommodation could be made but asks for ADWR's input regarding whether they would like a set group of individuals or could they set periodic meetings where any expert may attend. The only requirement that the Court would like to impose is that the experts are able to speak freely.

Counsel Klobas addresses the Court. They believe a fixed committee may be more beneficial in order to maintain continuity. She adds that they will be able to accommodate hybrid/virtual meetings but for more important discussions would prefer in person meetings.

The Court addresses the parties regarding the next steps.

**IT IS ORDERED** that the parties shall file nominations for their expert on the committee, as well as a proposal for how often the committee should meet, and how often the committee will present updates to the Court/attorneys **by March 14, 2025**. The parties may submit group proposals.

Counsel Klobas addresses the Court. She believes it may be helpful to have a fixed schedule of meetings and reporting to the Court. However, she would like the department to have an opportunity to provide input as to whether the timing of the meetings should be changed to better accommodate the process and the parties.

The Court affirms that they will have input on the scheduling as the process moves forward. The Court notes that if the experts collaborate with ADWR, there will be more or less a joint report and less comments will have to be provided in the end due to their joint efforts. The Court asks the parties to keep this proposal in mind as a possible end goal.

The Court addresses the parties regarding the guidance that ADWR is seeking in its Addendum. The Court inquires if this issue can be tabled for the committee to address or if it will need to be addressed today.

Counsel McGinnis addresses the Court. He believes this can be put on the agenda of things for the technical committee to address at their first meeting.

Counsel Hood addresses the Court. He agrees with Counsel McGinnis.

The Court asks that the parties confer with their respective experts for what they believe the timeline should be so it may compare it with ADWR's timeline and attempt to provide a reasonable timeframe.

Counsel Klobas clarifies that with the implementation of a collaborative process, the timeline may be quicker.

**IT IS FURTHER ORDERED** that the parties shall file their experts' recommendations (regarding timing) and that will be added to the committee's agenda for their first meetings. They will then provide a stipulated timeframe to the Court and attorneys at their first report to the Court.

The Court will await the recommendations and provide the next hearing date by separate Court order. The Court calls for any additional comments or objections.

No objections or comments are stated.

11:45 a.m. Matter concludes.

A copy of this order is mailed to all persons listed on the Court-approved mailing list.