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9 IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
10 IN AND FOR THE COUNTY OF MARICOPA AND
11 THE COUNTY OF APACHE

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

15 W-1, W-2, W-3, W-4
16 (Consolidated)

17 CV 6417

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

22 (Assigned to the Honorable
23 Eddward P. Ballinger, Jr.)

24 ARIZONA DEPARTMENT
25 OF WATER RESOURCES'
MEMORANDUM
CONCERNING AN
UPDATE OF THE SAN
PEDRO RIVER
WATERSHED HSR

26 CONTESTED CASE: None.

27 HSR INVOLVED: San Pedro River Watershed HSR.

28 DESCRIPTIVE SUMMARY: The Arizona Department of Water Resources hereby
29 files its memorandum concerning an update of the San Pedro River Watershed HSR.

30 NUMBER OF PAGES: 15.

31 DATE OF FILING: October 15, 2008.

1 **Introduction**

2 By Minute Entry dated August 14, 2008, Judge Ballinger directed the Arizona
3 Department of Water Resources (Department) to file, on or before October 15, 2008, a
4 memorandum concerning an update of the 1991 San Pedro River Watershed
5 hydrographic survey report (HSR). The Court's Order was entered following a July
6 17, 2008 joint progress hearing concerning the Department's adjudication work in both
7 the Gila River adjudication and the Little Colorado River (LCR) adjudication.

8 The joint progress hearing was scheduled by Minute Entry dated February 4,
9 2008 in which the Court directed the Department to update the San Pedro River
10 Watershed HSR (San Pedro HSR) as a whole. Comments by some of the parties
11 during the July 17, 2008 hearing also suggested that the San Pedro HSR should be
12 completely redone. Minute Entry at 3. As a result, the Court directed the Department
13 as follows:

14 IT IS FURTHER ORDERED that the Arizona Department of Water
15 Resources shall file, on or before October 15, 2008, a memorandum
16 setting forth the Department's view as to the estimated delay and other
17 consequences that would accompany an order directing that ongoing
18 work in the San Pedro Watershed shall be undertaken with respect to the
19 entire watershed as discussed during the recent hearing on the
20 Department's July 11, 2008 report.

21 Minute Entry at 4.

22 On or before September 30, 2008, interested parties were permitted to file
23 written comments concerning the Department's July 11, 2008 progress report
24 (Progress Report), which had been filed for the convenience of the Court and the
25 parties in advance of the July 17, 2008 joint progress hearing. The Department

1 received two written comments, one from SRP¹ and the other from the Sierra Vista
2 Parties.²

3 The Department first will discuss the ramifications of updating the San Pedro
4 HSR on a watershed-wide basis. Then, it will respond to the recently filed written
5 comments, some of which address issues that are similar to those raised orally during
6 the July 17, 2008 hearing.

7 8 **San Pedro HSR Update**

9 In its Progress Report, the Department set forth a plan for updating the San
10 Pedro HSR that would allow certain matters to be adjudicated without waiting for all
11 of the necessary data and hydrologic models to be available for the entire watershed.
12 The Department still believes that this approach is preferable. It would advance the
13 adjudication, use resources efficiently, and avoid stale data.

14 If, as has been suggested, the San Pedro HSR were redone for the entire
15 watershed, the Department believes that a costly and unproductive delay would result.
16 The Department estimates that it would take *at least* six years to completely update the
17 San Pedro HSR, and virtually all of the Department's adjudication resources would be
18 dedicated to that effort alone. During that time, claims that were analyzed in the San
19 Pedro HSR, and to which objections already have been filed, would not be adjudicated
20 but would continue to grow even staler. Also, the Department would not have
21 sufficient resources to undertake work on other adjudication matters, such as
22 identifying the subflow zone in other watersheds, or preparing HSRs or technical

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24 ¹ SRP consists of the Salt River Project Agricultural Improvement and Power District and Salt River Valley
Water Users' Association.

25 ² The Sierra Vista Parties consist of Bella Vista Water Company, Inc.; Pueblo Del Sol Water Company; and the
City of Sierra Vista.

1 assessments of settlements for Indian lands.³ The Department believes that restricting
2 its resources to just one watershed for six years *or longer* would result in unnecessary
3 delay, and be an inefficient use of resources that would adversely impact both the Gila
4 River adjudication and LCR adjudication.

5 One of the keys to progress in any adjudication is the organization of contested
6 cases by the Court and the Special Master after objections have been filed to an HSR.
7 In the San Pedro River Watershed, contested cases have been organized based on
8 common legal and/or factual issues, such as *de minimis* uses and water uses on federal
9 and state lands; and, for large water users, such as St. David Water Association and
10 Pomerene Domestic Water Users' Association, which are located in the Benson
11 subwatershed. Also, several contested cases have been organized for federal claims
12 including Public Water Reserve (PWR) No. 107 springs, and the Coronado National
13 Memorial (Coronado), the Saguaro National Monument (Saguaro), Fort Huachuca, the
14 San Pedro Riparian National Conservation Area (SPRNCA), and Powers Garden. The
15 Special Master is also considering the organization of a contested case involving
16 federal claims for the Aravaipa Canyon Wilderness Area. At the outset of each of
17 these federal cases, the claimants have been required to update their claims. It is
18 anticipated that a similar process would be used in future contested cases.

19 Some of the contested cases in the San Pedro River Watershed have settled,
20 which has resulted in partial decrees for the Coronado, Saguaro and the PWR 107
21 claims. However, even though a contested case may settle, technical assistance from
22 the Department may still be required. In the *PWR 107* case, at the request of the
23

24 ³ Claims have not yet been adjudicated for the Navajo Nation, Pascua Yaqui Tribe, San Carlos Apache Tribe,
25 San Juan Southern Paiute Tribe, Tonto Apache Tribe, White Mountain Apache Tribe, and Yavapai-Apache
Nation.

1 Special Master, the Department prepared two reports, one of which addressed San
2 Carlos Apache Reservation boundary issues that impacted the claims, and one which
3 verified water rights abstracts agreed upon by the settling parties. In the Fort
4 Huachuca and SPRNCA cases, legal issues are currently before the Special Master,
5 and technical assistance from the Department may be requested in the future. It is
6 important for the Department to have resources available to assist with these contested
7 cases as necessary. These contested cases, and others that may be organized, should
8 not have to await the completion of another HSR for the entire San Pedro River
9 Watershed.

10 The Department's recommended approach will result in progress in the near
11 future for certain contested cases, while other data is updated on a watershed-wide
12 basis. As previously reported, basically there are five steps that must be undertaken in
13 order to update the 1991 San Pedro HSR. These steps involve: (1) mapping the
14 subflow zone for the San Pedro River; (2) preparing water right abstracts for existing
15 and new *de minimis* uses; (3) preparing WFRs for new uses with recommended water
16 right attributes; (4) conducting cone of depression tests for existing and new wells;⁴
17 and (5) updating existing watershed file reports (WFRs) with new information and
18 recommended water rights attributes. The Department believes that some of these
19 steps should be done for the entire watershed, while others could be done on a
20 subwatershed basis.

21 Subflow Zone Report. For the entire San Pedro River Watershed, the
22 Department is completing a subflow zone map and technical report that will be issued
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25 ⁴ "Existing" refers to those water uses that were reported in the 1991 San Pedro HSR, and "new" refers to those
water uses that were not reported in the 1991 San Pedro HSR.

1 by the end of March 2009. The parties will then have 180 days in which to file
2 objections to the report.

3 De Minimis Uses. While the subflow zone report is being finalized and under
4 review by the parties and the court, the Department proposes to commence the
5 summary adjudication process approved by the Court in 2002 for all existing *de*
6 *minimis* uses that meet the *Sands* criteria for certain small domestic, stockpond and
7 stockwatering uses.⁵ As approved by the Court, the Department proposes to prepare
8 an inventory of *de minimis* uses that were part of the *Sands* case and submit that
9 inventory to the litigants for the correction of errors. For other existing *de minimis*
10 uses that meet the *Sands* criteria, but that were not part of the *Sands* case, the
11 Department proposes to prepare abstracts of proposed water rights that would be
12 incorporated into the Special Master's catalog, which would then be open to
13 examination and the filing of limited objections. The abstracts would be based on the
14 water right characteristics and uniform quantification standards described in the *Sands*
15 case, and any objections based on quantity would not be addressed. The Department is
16 ready to implement these summary adjudication procedures. However, before the
17 Department addresses new *de minimis* uses under *Sands*, or other types of new "non-
18 domestic" *de minimis* uses that were not considered in *Sands*, the Department will
19 require further direction from the Court.⁶

20 New Water Uses. During the same time, the Department also proposes to
21 identify new water uses, including those involving wells, throughout the entire
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23 ⁵ On September 26, 2002, the Court approved, in large part, a November 14, 1994 Memorandum Decision of the
24 Special Master Thorson, as modified on February 23, 1995, which described summary adjudication procedures
25 for existing *de minimis* uses that either were part of the *Sands* case or which met the same criteria. See *In re*
Sands Group of Cases (W1-11-19).

⁶ The Special Master concluded that non-domestic *de minimis* uses should not be organized into a contested case
until the sublow zone is mapped. See Special Master's February 16, 2006 report at 11.

1 watershed. As discussed further below, this information is essential so that appropriate
2 notice of future proceedings in the watershed may be provided, and new wells may be
3 identified for cone of depression analyses. The Department also proposes to
4 investigate these new uses and develop WFRs, which would be included in a
5 Supplemental Final San Pedro HSR as required by the Court's September 28, 2005
6 subflow order.⁷ Thereafter, additional contested cases could be organized.

7 Cone of Depression Analyses. Once the subflow zone receives final court
8 approval, the Department would be able to conduct cone of depression analyses for
9 claims involving both existing and new wells.⁸ These analyses would be conducted
10 first in the Sierra Vista subwatershed where the U.S. Geological Survey already has
11 completed a numerical model, and then in other subwatersheds as numerical models
12 become available.⁹

13 The cone of depression analyses may require a year or more for each
14 subwatershed. Even where a numerical model is already available, the Department
15 still would need to obtain additional well completion and pumping information, and
16 determine the precise location of each well. Also, it should be noted that, even with
17 numerical models, a methodology has not been established to quantify the percentage
18 of withdrawals from a particular well that is appropriable water, and it may be

21 ⁷ This requirement is found at Recommendation 36.F. of the Special Master's July 16, 2004 subflow report,
22 which was approved by the Court at page 42 of its subflow order.

23 ⁸ The Department believes that it is necessary to redo the analyses of existing wells. The information in the San
24 Pedro HSR was based on the 50%/90 day subflow test that was rejected by the Arizona Supreme Court in *In re*
25 *the General Adjudication of All Rights to Use Water in the Gila River System and Source*, 175 Ariz. 382, 857
P.2d 1236 (1993). These analyses need to be completely revised based on the Court's September 28, 2005
subflow order.

⁹ In its 2002 *Sands* order, the Court indicated that cone of depression analyses would also be required for *de*
minimis wells to determine whether they are within the Court's jurisdiction. See Order at 4.

1 necessary for the Department to develop a test case to obtain input from the parties and
2 the Court regarding appropriate quantification methodologies.

3 After the cone of depression analyses are completed, they would be included in
4 WFRs for either existing uses or new uses. As described above, WFRs for new uses
5 will be included in the Court ordered Supplemental Final San Pedro HSR. As
6 described below, updated WFRs for existing uses will be included in supplemental
7 contested case HSRs.

8 Existing Water Uses. The Department proposes to update existing WFRs
9 (those to which objections have already been filed), when the Court or the Special
10 Master is ready to take up those claims as part of a contested case to ensure that the
11 data does not become stale once again. These updated WFRs will include the
12 Department's recommended water right attributes.

13 This approach provides a framework within which existing claims and
14 objections can be addressed for a limited set of factual issues through the organization
15 of contested cases without waiting for an update of the entire San Pedro HSR. For
16 those contested cases that settle, the Department's technical assistance may be
17 requested to examine a discrete set of proposed water rights abstracts. For those that
18 do not settle, the Court or the Special Master may request that the Department prepare
19 a supplemental contested case HSR, such as the one that the Department prepared for
20 Phelps Dodge's claims to Show Low Lake.¹⁰ That contested case was organized as
21 part of the Silver Creek Watershed HSR, and the supplemental contested case HSR
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24 ¹⁰ See *In re Phelps Dodge (Show Low Lake)*, Civil No. 6417-033-0060. The corporate name for Phelps Dodge
25 Corporation is now Freeport-McMoRan Corporation.

1 included the Department's recommended water right attributes. It is noteworthy that
2 this process was undertaken without updating the entire Silver Creek Watershed HSR.

3 Any supplemental contested case HSR would be subject to comprehensive
4 noticing procedures that are described by Court Order dated February 9, 2004. These
5 procedures are very similar to those used for a watershed HSR, and involve a 180-day
6 objection period and direct notice of the filing of a supplemental contested case HSR,
7 which would be sent to the following: all claimants in the Gila River adjudication;¹¹
8 claimants and non-claimants within the San Pedro River watershed;¹² objectors to the
9 San Pedro HSR, the court-approved mailing list; and the contested case mailing list. A
10 120-day pre-filing notice also would be provided to claimants and non-claimants in the
11 affected subwatershed, the contested case mailing list and the court-approved mailing
12 list. Under these procedures, the Department further would be required to make the
13 supplemental contested case HSR available for inspection and purchase, and provide
14 general notice by publication and on the Department's web site.

15 The approach described above accomplishes several important steps that will
16 advance this adjudication. It allows the Department to proceed with discrete tasks that
17 will lead to resolution of contested cases, complete the *de minimis* summary
18 adjudication process approved by this Court, identify new water users within the
19 watershed, and prepare updated WFRs. In addition, after the subflow zone technical
20 report receives final court approval, the Department will be able to conduct cone of
21 depression tests by subwatershed as numerical models become available.

23 ¹¹ Notice to all claimants in the Gila River adjudication would be provided upon the filing of the 1st supplemental
24 contested case HSR in the San Pedro River Watershed, and would be provided thereafter only to those claimants
25 who opt in for notice of subsequent supplemental contested case HSRs.

¹² Identifying new uses in the watershed, as described above, is essential so that appropriate notice may be given
under these procedures.

1 **SRP Comments**

2 SRP agrees that an adjudication-wide approach should not be followed, and
3 suggests instead that the San Pedro HSR be updated on a subwatershed basis, with the
4 Sierra Vista Subwatershed first. SRP argues that a subwatershed approach would
5 result in “demonstrable progress” because each of the five steps would be completed
6 there. The Department submits that the subwatershed HSR approach has many of the
7 same limitations as an update of the entire watershed.

8 A subwatershed approach could conceivably allow WFRs involving new water
9 uses, including cone of depression analyses, to be presented in a subwatershed HSR so
10 that objections could be filed without waiting for a Supplemental Final San Pedro HSR
11 to be completed as currently required by the Court. However, if the resulting
12 contested cases were limited to a subwatershed, then other claims in the watershed
13 with common legal and/or factual issues would not necessarily be considered at the
14 same time, resulting in inefficiencies. Also, this approach could slow down the
15 supplemental contested case procedures for existing WFRs.

16 In addition, the subwatershed approach would not obviate the need to provide
17 notice of a subwatershed HSR at least to all claimants and non-claimants throughout
18 the entire San Pedro River watershed. In order to provide this notice, all new water
19 users in the watershed need to be identified, which is part of the process recommended
20 by the Department.

21 Furthermore, even if the Department were to start with the Sierra Vista
22 subwatershed, as suggested by SRP, the Department estimates that it would take at
23 least three years to do a subwatershed HSR there due to the relatively large number of
24 water uses, and existing claims that already have been filed. Also, in order for a
25 subwatershed HSR to be completed, final Court approval of the subflow zone would

1 be required, all of the existing claims must be amended as necessary, and the
2 procedures for conducting cone of depression analyses need to be in place.

3 The subwatershed approach has several limitations. Instead, the Department
4 believes that the San Pedro HSR should be updated using a combination of a
5 watershed and subwatershed approach, as described above.

6 Regarding *de minimis* uses, SRP basically agrees with the Department's
7 position. Before any standards are established for new "non-domestic" *de minimis*
8 uses, *i.e.*, those types of uses that were not addressed in *Sands*, additional technical
9 information would be necessary.

10 Regarding the models required to do steady-state cone of depression analyses,
11 SRP contends that the Department does not require a numerical model, and may
12 instead use an analytical model. The Department believes that is preferable to use a
13 numerical groundwater model to conduct steady-state cone of depression analyses for
14 three reasons. First, use of an analytical groundwater model for steady-state analyses
15 requires idealized hydrologic conditions that generally do not occur in the watershed.
16 Many of the simplifying assumptions needed to run an analytical model to steady state
17 are not necessary in a numerical model. Second, although an analytical model might
18 be useful for steady-state analyses under limited circumstances and could be more
19 quickly developed, numerical models would still have to be developed to address the
20 range of hydrologic conditions that exist in the watershed. It is not clear to ADWR
21 that hydrologic conditions in the other subwatersheds are any less complex than those
22 encountered in the Sierra Vista area. Third, a numerical model currently exists for the
23 Sierra Vista Subwatershed. Use of a numerical model is therefore preferred to ensure
24 consistency in methodology and allow for comparison of model results, and address
25 the hydrologic complexities in the watershed.

1 **Sierra Vista Parties' Comments**

2 The Sierra Vista Parties contend that the San Pedro HSR needs to be updated in
3 its entirety for several reasons. First, the Sierra Vista Parties maintain that *existing*
4 WFRs and objections thereto should not be organized into contested cases because the
5 Department has not recommended water right attributes for each water right or use
6 investigated as required by the 1995 amendments to the general adjudication statutes.
7 See A.R.S. § 45-256(B). These parties further maintain that the entire San Pedro HSR
8 must be supplemented so that objections can be filed to the Department's
9 recommended water right attributes by not only existing claimants, but also by new
10 claimants, prior to the organization of contested cases. These arguments fail to
11 acknowledge that the supplemental contested case procedures described above already
12 address these concerns, and have been implemented successfully in the supplemental
13 contested case HSR that the Department prepared for Phelps Dodge's claims to Show
14 Low Lake.

15 Under the supplemental contested case procedures already approved by the
16 Court, the Department would recommend water right attributes for existing claims and
17 uses, including any necessary cone of depression analyses, and these attributes would
18 be subject to objection. The Department proposes to recommend water right attributes
19 for all existing water claims and uses as part of updating the existing WFRs. These
20 updated WFRs would be included in supplemental contested case HSRs that are
21 subject to comprehensive noticing requirements and a new objection period. Because
22 notice of the supplemental contested case HSRs must be provided, *inter alia*, to all
23 claimants in the Gila River adjudication and to water users, claimants and non-
24 claimants alike, within the watershed, new claimants will have the opportunity to file
25 objections to updated WFRs for existing uses. This process is designed to advance the

1 adjudication of *existing* claims and avoid the delay inherent in updating the entire San
2 Pedro HSR as suggested by the Sierra Vista Parties.

3 The Sierra Vista Parties also claim that the entire San Pedro HSR must be
4 updated because it does not include *new* water uses within the watershed. As
5 described above, the Department proposes to identify and prepare WFRs for *new* water
6 uses, including cone of depression analyses. These WFRs would be included in a
7 Supplemental Final San Pedro HSR as required by the Court, and would be subject to
8 an objection period.

9 The Sierra Vista Parties further argue that the San Pedro HSR is inaccurate
10 because it was completed before important judicial decisions were entered concerning
11 subflow, federal reserved water rights, the precedential impact of the Globe Equity
12 decision, and the Gila River Indian Community water rights settlement. Similar
13 comments were made orally at the July 17, 2008 hearing. The Department believes
14 that the impact of these judicial decisions will be addressed as necessary as part of
15 supplemental contested case HSRs or a Supplemental Final San Pedro HSR.

16 Regarding *de minimis* uses, the Sierra Vista Parties generally agree with the
17 Department's proposed approach. However, these parties believe that the Department
18 should prepare a catalogue of new *de minimis* uses based on the definition of *de*
19 *minimis* uses set forth in the *Sands* case. In its Progress Report, the Department
20 recognized that this was a possible alternative. However, as previously indicated, it is
21 not clear to the Department whether such an approach would be consistent with prior
22 decisions of the Special Master and the Court. Accordingly, the Department still
23 believes that clarification from the Court is necessary.

24 The Sierra Vista Parties further maintain that the Department should prepare a
25 technical report that would evaluate the cumulative quantifiable impact on the subflow

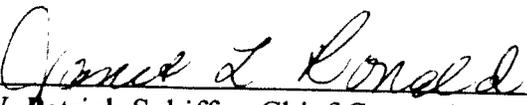
1 zone of both existing and new *de minimis* uses before the Court determines how the
2 Department should proceed. The Department submits that such a technical report
3 might be helpful, but only after the subflow zone receives final Court approval,
4 objections are filed to *de minimis* WFRs, and appropriate contested cases are
5 organized.

6
7 **Conclusion**

8 The Department believes that there is general agreement about the five steps
9 that need to be taken to update the San Pedro HSR. However, the debate appears to
10 turn on when the data must be updated, and in what format that data must be presented
11 before claims may be adjudicated by the Court. As discussed above, the Department
12 discounts the suggestion that all of the data must be updated during the same time
13 frame and then presented in another HSR due to the resulting delay and inefficient use
14 of resources that such an approach would cause, not to mention the fact that all of the
15 necessary numerical models have not yet been developed for cone of depression
16 analyses, and much of the data would again become stale. Instead, the San Pedro HSR
17 should be updated using both a subwatershed and watershed approach as
18 recommended by the Department.

19 **DATED** this 15th day of October 2008.

20 ARIZONA DEPARTMENT OF WATER RESOURCES

21 
22 _____
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1 **ORIGINALS** of the foregoing
2 sent by 1st class mail on the 15th day of
3 October 2008 to:

4 Clerk of the Superior Court
5 Maricopa County
6 Attn: Water Case
7 601 W. Jackson Street
8 Phoenix, AZ 85003

9 Clerk of the Superior Court
10 Apache County
11 Attn: Water Case
12 P.O. Box 365
13 St. Johns, AZ 85936

14 **COPIES** of the foregoing
15 sent by 1st class mail on the 15th day
16 of October 2008 to:

17 Honorable Eddward Ballinger, Jr.
18 Judge of the Superior Court
19 Northeast Regional Court Center
20 18380 N. 40th Street, Courtroom 112
21 Phoenix, AZ 85032

22 Special Master George A. Schade, Jr.
23 Maricopa County Superior Court
24 201 W. Jefferson, CCB 5B
25 Phoenix, AZ 85003-2205

All parties on the Court-approved mailing list
for Case No. W-1, W-2, W-3 and W-4 (Consolidated) and
Case No. 6417.

