

APACHE CO. SUPERIOR COURT
FILED

DOCKETED

MAY 29 1991

GLOCK 11:20 AM
RICHARD D. LUPKE, CLERK
--Spencer--

033-56-ABC-27

LAW OFFICES OF
APKER, APKER, HAGGARD & KURTZ, P.C.

A PROFESSIONAL CORPORATION

PARK ONE

2111 EAST HIGHLAND AVENUE, SUITE 230

PHOENIX, ARIZONA 85016

AREA CODE 602 TELEPHONE 381-0085

Jerry L. Haggard #002667

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA

IN AND FOR THE COUNTY OF APACHE

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

No. 6417

OBJECTIONS OF PHELPS
DODGE CORPORATION TO
SILVER CREEK FINAL
HYDROGRAPHIC SURVEY
REPORT

Descriptive Summary: Objections of Phelps Dodge Corporation to
Silver Creek Final Hydrographic Survey Report.

Statement of Claimant Nos.: 39-84534 through 39-84542.

Number of Pages: 9

Date of Filing: May 29, 1991

Phelps Dodge Corporation hereby submits its attached
Objections to the Silver Creek Final Hydrographic Survey Report.

. . .

. . .

. . .

. . .

. . .

. . .

. . .

1 RESPECTFULLY SUBMITTED this 29th day of May, 1991.

2 APKER, APKER, HAGGARD & KURTZ, P.C.

3
4 By Jerry L. Haggard
5 Jerry L. Haggard
6 211 East Highland, Suite 230
7 Phoenix, Arizona 85016
8 Attorneys for Phelps Dodge
9 Corporation

8 Copy of the Objections of
9 Phelps Dodge Corporation
10 to Silver Creek Final
11 Hydrographic Survey Report
12 mailed this 29th day of
13 May, 1991 to all parties on
14 the Court-Approved mailing
15 list:

13 Jerry L. Haggard

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
IN AND FOR THE COUNTY OF APACHE

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

No. 6417

RECOMMENDED FORM
FOR OBJECTIONS TO THE
Hydrographic Survey Report for the
Silver Creek Watershed

Please file a separate objection for each watershed file report. Objections to information contained in Volumes 1 & 2 can be stated on one objection form. Objections must be written. Use of this form is suggested. Objections must be received on or before May 29, 1991.

This Objection is directed to Watershed File Report No. 033- _____ - _____
(please insert no.)

OBJECTOR INFORMATION

Objector's Name: F. J. Menzer
Objector's Address: 4521 State Highway 666
Morenci, AZ 85540-9795
Objector's Telephone No.: (602) 865-4521, Ext. 267
Objector's Watershed File Report No. (if the Objector's claimed water rights are located within the Silver Creek Watershed): 033- 56 - ABC - 027
Or Objector's Statement of Claimant No. (if the Objector's claimed water rights are located outside the Silver Creek Watershed): 39- _____

STATEMENT OF THE OBJECTION

The following are the main categories of the typical watershed file report (not all watershed file reports have all these categories). Please check the category(ies) of the watershed file report to which you object, and state the reason for the objection on the following page.

Categories are listed with individual objections included herein.

Please check appropriate box(es)

- 1. I object to the description of Land Ownership
- 2. I object to the description of Applicable Filings and Decrees
- 3. I object to the description of DWR's Analysis of Filings and Decrees
- 4. I object to the description of the Diversions for the claimed water right(s)
- 5. I object to the description of the Uses for the claimed water right(s)
- 6. I object to the description of Reservoirs used for the claimed water right(s)
- 7. I object to the description of Shared Uses & Diversions for the claimed water right(s)
- 8. I object to the PWR (Potential Water Right) Summary of the claimed water right(s)
- 9. I object to the description of Quantities of Use for the claimed water right(s)
- 10. I object to the Explanation provided for the claimed water right(s)
- 11. Other Objections (please state volume number, page number and line number for each objection)

(PLEASE DETACH CAREFULLY)

The reason for my objection is as follows (please number your objections to correspond to the boxes checked above; please attach supporting information and additional pages as necessary):

CATEGORY NUMBER

11

Objection No. 1
Volume 1, Pages 19-20

Phelps Dodge objects that the characterization of the holdings in the federal water cases are included. It is appropriate to list the citations of the cases as some of those on which federal water law is based. However, characterizing the holdings can lead to erroneous impressions as to the

I hereby make this Objection on this 23rd day of May, 1991.

Signature and Date on Page 8 of Comments
Signature of Objector

FOR: Phelps Dodge Corporation
(If in a representative capacity)

STATE OF ARIZONA
COUNTY OF GREENLEE

VERIFICATION
(Must be completed by Objector)

I declare under penalty of perjury that I am a claimant in this proceeding; that I have read the contents of the foregoing Objection and know the contents thereof; and that the information contained in the foregoing Objection is true based on my own personal knowledge, except for those portions of the Objection which are indicated as being known to me on information and belief and, as to those portions, I believe them to be true.

J. Meyer for Phelps Dodge
Signature of Objector

SUBSCRIBED AND SWORN to before me this 23rd day of May, 1991.

Linda M. Stacy
Notary Public for the State of Arizona
Residing at 128 Sunflower, Morenci, AZ
My commission expires March 16, 1993

(SEAL)

CERTIFICATE OF MAILING

(Must be completed if you object to another Claimant's watershed file report. Does not need to be completed if you file an Objection to your own watershed file report or to information contained in Volumes 1 or 2 of the Hydrographic Survey Report.)

I hereby certify that a copy of the foregoing Objection was served upon the following Claimant(s) by mailing true and correct copies thereof on the 23rd day of May, 1991, postage prepaid and addressed as follows:

Name: Please see Appendix A attached hereto
Address:

J. Meyer
(Signature of Objector or person mailing in Objector's behalf)

Objections must be filed with the Clerk of the Superior Court in and for Apache County, Apache, County Courthouse, P. O. Box 365, St. Johns, AZ 85936, on or before May 29, 1991. This means that the Objection must be received at the Clerk's office no later than 5:00 p.m. on Wednesday, May 29, 1991.

6417-033- 0060

Objection No. 1, Category No. 11
Volume 1, Pages 19-20 (Continued)

extent to which the decisions control federal water law in all circumstances. For example, without further explanation, characterizing Arizona v. California as establishing the practicably irrigable acreage ("PIA") method of quantifying reserved rights can lead to the erroneous impression that PIA is the standard to be applied in all cases. Similarly, the characterization of Cappert v. United States as holding that "federal reserved rights can be protected from infringement by junior users of groundwater" over-simplifies the holding and implies that the stated principle would be applicable to all situations involving federal reserved rights (whatever they may be) and groundwater (whatever it may be).

6417-033- 0061

Objection No. 2, Category No. 11
Volume 1, Page 255, Paragraph 1

In reference to agreements with downstream water rights interests, Phelps Dodge in a letter dated September 14, 1989 provided to the Department, agreements with the Arizona Game and Fish Commission regarding Show Low Lake dated April 24, 1951, Supplemental Agreement dated August 18, 1955, and Supplemental Indenture dated October 11, 1963. Copies of these agreements were again provided in the Phelps Dodge comments on the preliminary HSR submitted in March 1990, as Attachments 2, 3 and 4. Attachment 5 of that package was a Phelps Dodge agreement with Show Low Irrigation Company dated March 20, 1954 regarding operation of the outlet works of Jaques Dam as may be necessary to release downstream the flows of Show Low Creek entering the reservoir whether consisting of normal flows or water released from upstream reservoirs.

Objection No. 2, Category No. 11
Volume 1, Page 255, Paragraph 1 (Continued)

Phelps Dodge objects to the statement that ". . . the criteria that define the rates of inflow and outflow, the applicable periods of year, and who has entered into the agreements are not known. Efforts by DWR to obtain complete information as to these agreements have not been successful to date."

It is Phelps Dodge's position that all pertinent agreements that control the operation of the reservoir and releases therefrom, have been provided. Phelps Dodge does not have any record of, nor do we recall having received, any subsequent inquiries from the DWR regarding the interpretation of these agreements. Phelps Dodge objects to being characterized as being uncooperative in this matter and is concerned regarding the department's apparent lack of analysis and investigation of the agreements provided.

6417-033- 0062

Objection No. 3, Category No. 11
Volume 1, Page 127

In the DWR's August 21, 1990 response (Comment #3) to Phelps Dodge's March 30, 1990 comments on the preliminary HSR, the department agreed that the last sentence on this page would be changed to make reference to industrial purposes. This change was not made.

6417-033- 0063

Objection No. 4, Category No. 11
Volume 1, Page 129

In the DWR's August 21, 1990 response (Comment #4) to Phelps Dodge's March 30, 1990 comments on the preliminary HSR, the department decided to

Objection No. 4, Category No. 11
Volume 1, Page 129 (Continued)

report the area and capacity of Show Low Lake as 186 acres and 6,176 acre feet, respectively. The capacity listed in Table 3-13 on this page should have been changed to 6,176 acre feet from 6,000 acre feet.

6417-033- 0064
Objection No. 5, Category No. 11
Volume 1, Page 251, Paragraph 3

In the DWR's August 21, 1990 response (Comment #6) to Phelps Dodge's March 30, 1990 comments on the preliminary HSR, the department agreed to use a 67,000 acre foot capacity for Horseshoe Reservoir. This change was not made.

6417-033- 0065
Objection No. 6, Category No. 11
Volume 1, Page 251

The dates in the third sentence of Paragraph 4 should be 1954 and 1989, rather than 1953 and 1987, to conform to the Table 4-1 reference.

6417-033- 0066

| Objection No. | Objection Directed to Watershed File Report No. | Category No. | Objection |
|---------------|---|--------------|---|
| | | | Reason |
| 7 | 33-56-DAB-001 | 1,8,9 | Phelps Dodge objects to Filing Nos. 39-0088150, 33-0094845, and 4A-000118 to the extent that diversions are removed from the primary Billy Creek channel and not returned to Billy Creek in the area of the fish hatchery facilities. |

6417-033- 0067

| | | | |
|---|-----------|-------|--|
| 8 | 33-56-057 | 1,8,9 | Phelps Dodge objects to Filing Nos. 39-0084116 and 39-0087216 to the extent that diversions are in excess of the valid rights and priorities associated with the diversions. |
|---|-----------|-------|--|

6417-033 0068

| | | | |
|---|-----------|-------|--|
| 9 | 33-56-072 | 1,8,9 | Phelps Dodge objects to Filing Nos. 39-0084116 and 39-0087216 to the extent that diversions are in excess of the valid rights and priorities associated with the diversions. |
|---|-----------|-------|--|

6417-033- 0069

| | | | |
|----|-----------|--|--|
| 10 | 33-56-074 | | As between Show Low Irrigation Company and Phelps Dodge Corporation, the rights of Phelps Dodge to store water in Show Low Reservoir are governed by a March 20, 1954 Agreement. By not objecting to any specific water uses by Show Low Irrigation Company, Phelps Dodge does not waive its rights under the agreement. |
|----|-----------|--|--|

6417-033- 0070

| | | | |
|----|----------------|-------|--|
| 11 | 33-56-ACAA-001 | 1,8,9 | Phelps Dodge objects to Filing No. 39-0091644 to the extent that diversions are in excess of the valid rights and priorities associated with the diversions. Although DV001 is assigned an apparent first use date of 1891, the diversion point at 33-56-ADBB- 001-SR005 has an apparent first use date of 1953. |
|----|----------------|-------|--|

6417-033- 0071

| Objection No. | Objection Directed to Watershed File Report No. | Category No. | Objection |
|------------------|---|-----------------|---|
| | | | Reason |
| 12 | 33-56-007 | 1,8,9 | Phelps Dodge objects to Filing Nos. 39-0086831 and 39-0086832 to the extent that diversions are in excess of the valid rights and priorities associated with the diversions. Although DV001 is assigned an apparent first use date of 1907, the diversion point at 33-56-ACAD-002-SR001 has an apparent first use date of 1953. |

6417-033- 0072

| | | | |
|----|-----------|-------|--|
| 13 | 33-51-107 | 1,8,9 | Phelps Dodge objects to Filing No. 39-0088816 to the extent that diversions are in excess of the valid rights and priorities associated with the diversions. |
|----|-----------|-------|--|

| | | | |
|---|--|--|---|
| 1 | | | Phelps Dodge objects to Filing No. 39-0081226 to the extent that 13,000.00 AFA are stored in Lone Pine Dam Reservoir with a priority of 1878. Phelps Dodge objects to Filing No. 39-088816 to the extent that 19,162.50 AFA are stored in Lone Pine Dam Reservoir and Schoens Lake with a priority of 1878. Although Lone Pine Dam Reservoir was constructed in 1936, it has not held water of this quantity and is under order by ADWR to leave the outlet works open at all times. Schoens Dam was constructed in 1986. |
|---|--|--|---|

6417-033- 0073

| | | | |
|----|-----------|-------|--|
| 14 | 33-51-014 | 1,8,9 | Phelps Dodge objects to Filing Nos. 39-0080957 and 39-0082168 to the extent that diversions are in excess of the valid rights and priorities associated with the diversions. |
|----|-----------|-------|--|

6417-033-0074

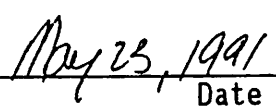
| Objection No. | Objection Directed to Watershed File Report No. | Category No. | Objection |
|---------------|---|--------------|---|
| | | | Reason |
| 15 | 33-51-BAC-007 | 1 | Phelps Dodge objects to Filing No. 39-0088816 to the extent that 19,162.50 AFA are stored in Schoens Lake with a priority of 1896. Schoens Dam was constructed in 1986. |

6417-033-0075

| | | | |
|----|---------------|---|--|
| 16 | 33-51-CAB-001 | 1 | Phelps Dodge objects to Filing No. 39-0088816 to the extent that 19,162.50 AFA are stored in Lone Pine Dam Reservoir with a priority of 1896. Phelps Dodge objects to Filing No. 36-0081226 to the extent that 13,000.00 AFA are stored in Lone Pine Dam Reservoir with a priority of 1878. Although this reservoir was constructed in 1936, it has not held water of these quantities and is under order by ADWR to leave the outlet works open at all times. |
|----|---------------|---|--|



Signature



Date

FOR: Phelps Dodge Corporation

APPENDIX A

PHELPS DODGE CORPORATION OBJECTIONS
SILVER CREEK HSR

| <u>WFR #</u> | <u>Owner Name</u> | <u>Address</u> |
|---------------------------------|--|--|
| 33-56-DAB-001 | Arizona Game & Fish Department | 2222 W. Greenway Phoenix, AZ 85023 |
| 33-56-057 | Woodland Irrigation Co. | Rt. 1 Box 860 Lakeside, AZ 85929 |
| 33-56-072 | Pinetop-Woodland Irrigation Co. | P.O. Box 2727 Pinetop, AZ 85935 |
| 33-56-074 | Show Low Irrigation Co. | 51 S. White Mountain Rd. Show Low, AZ 85901 |
| 33-56-ACAA-001 33-51-CAB-001 | Forest Service - Apache Sitgreaves | P.O. Box 640 Springerville, AZ 85938 |
| 33-56-007 | Jack G. & V. Scott Peterson | P.O. Box 13 Lakeside, AZ 85929 |
| 33-51-107 | Silver Creek Irrigation District | P.O. Box 127 Snowflake, AZ 85937 |
| 33-51-014 | Gary & Elladene D. Feezor, | HC 32 Box 502 Show Low, AZ 85901 |
| | Bert D. & Gertrude Solomon | HC 32 Box 503 Show Low, AZ 85901 |
| 33-51-BAC-007 | Church of Jesus Christ - LDS c/o Real Estate Division | 50 E. North Temple Salt Lake City, UT 84150 |

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
IN AND FOR THE COUNTY OF APACHE

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

No. 6417

APACHE CO. SUPERIOR COURT
FILED

NO. _____ DOCKETED

MAY 28 1991

AT 9 O'CLOCK A.M.
RICHARD D. LUPKE, CLERK
DEPUTY

COPY

RECOMMENDED FORM
FOR OBJECTIONS TO THE
Hydrographic Survey Report for the
Silver Creek Watershed

Please file a separate objection for each watershed file report. Objections to information contained in Volumes 1 & 2 can be stated on one objection form. Objections must be written. Use of this form is suggested. Objections must be received on or before May 29, 1991.

=====
This objection is directed to Watershed File Report No. 033-56-ACAA-001
(Please insert no.)
=====

OBJECTOR INFORMATION

Objector's Name: Salt River Project
Objector's Address: Post Office Box 52025
Phoenix, Arizona 85072-2025
Objector's Telephone No: (602) 236-2210
Objector's Watershed File Report No. (If the Objector's claimed water rights are located within the Silver Creek Watershed):
033 - -

Or Objector's Statement of Claimant No. (if the Objector's claimed water rights are located outside the Silver Creek Watershed):
39- 82193 - 82206
39- 87343

=====
STATEMENT OF THE OBJECTION
=====

The following are the main categories of the typical watershed file report (not all watershed file reports have all these categories). Please check the category(ies) of the watershed file report to which you object, and state the reason for the objection on the following page.

- 1. I object to the description of LAND OWNERSHIP
- 2. I object to the description of APPLICABLE FILINGS AND DECREES
- 3. I object to the description of DWR's ANALYSIS OF FILINGS AND DECREES
- 4. I object to the description of the DIVERSIONS for the claimed water right(s)
- 5. I object to the description of the USES for the claimed water right(s)
- 6. I object to the description of RESERVOIRS used for the claimed water right(s)
- 7. I object to the description of SHARED USES & DIVERSIONS for the claimed water right(s)
- X 8. I object to the PWR (POTENTIAL WATER RIGHT) SUMMARY of the claimed water right(s)
- X 9. I object to the description of the QUANTITIES OF USE for the claimed water right(s)
- 10. I object to the EXPLANATION provided for the claimed water right(s)
- 11. Other Objections (please state volume number, page number and line number for each objection)

My reason for my objection is as follows (please number your objections to correspond to the lines listed above; please attach supporting information and additional pages as necessary).

SEE ATTACHMENT 1

I hereby make this objection on this 14th day of May, 1991.

David C. Ricketts

Signature of Objector

FOR: Salt River Project

(if in a representative capacity)

STATE OF Arizona
COUNTY OF Maricopa

VERIFICATION

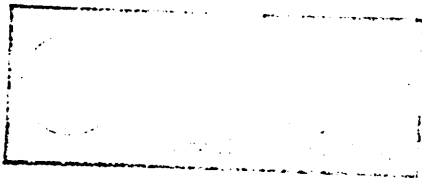
(Must be completed by Objector)

I declare under penalty of perjury that I am a claimant in this proceeding; that I have read the contents of the foregoing Objection and know the contents thereof; and that the information contained in the foregoing Objection is true based on my own personal knowledge, except for those portions of the Objection which are indicated as being known to me on information and belief and, as to those portions, I believe them to be true.

David C. Ricketts

Signature of Objector

SUBSCRIBED AND SWORN to before me this 14th day of May, 1991.



Margaret A. Sullivan

Notary Public for the State of Arizona

Residing at Maricopa County

My commission expires _____

CERTIFICATE OF MAILING

(Must be completed if you object to another Claimant's watershed file report. Does not need to be completed if you file an Objection to your own watershed file report or to information contained in Volumes 1 or 2 of the Hydrographic Survey Report.)

I hereby certify that a copy of the foregoing Objection was served upon the following Claimant(s) by mailing true and correct copies thereof on the 28th day of May, 1991 postage prepaid and addressed as follows:

Name: FS - APACHE-SITGREAVES

Address: P.O. BOX 640

SPRINGERVI, AZ 85938

David C. Ricketts

(Signature of Objector or person mailing in Objector's behalf)

Objections must be filed with the Clerk of the Superior Court in and for Apache County, Apache County Courthouse, P.O. Box 365, St. Johns, AZ 85936, on or before May 29, 1991. This means that the Objection must be received at the Clerk's office no later than 5:00 p.m. on Wednesday, May 29, 1991.

ATTACHMENT 1

WFR CATEGORY 8 - PWR SUMMARY

The Salt River Project objects to DWR's characterization of this diversion as a "Potential Water Right." For purposes of administration, a Watershed File Report should be maintained for these diversions. Moreover, each diversion should be assigned a quantity, as well as the priority date or dates associated with downstream Potential Water Rights (PWRs) for which the diversion constitutes a source of supply. The Watershed File Report for a diversion should also list all PWRs, along with their applicable Watershed File Report Nos., served by the diversion. The diversion itself, however, is not a water right, and should not be so designated in the Hydrographic Survey Report. (This objection applies to: DV001.)

WFR CATEGORY 9 - QUANTITIES OF USE

The Salt River Project objects to the quantities of use assigned to this Potential Water Right (PWR). The methods used by DWR for determining quantities of use for agricultural, recreational and other irrigation PWRs are inconsistent with the Arizona doctrine of prior appropriation; these methods are also technically inaccurate. For an additional discussion of the problems associated with DWR's methods of quantification for these types of PWRs, see the Salt River Project's Volume 1 objections to these methods, a copy of which is attached to this objection and incorporated herein by reference. (This objection applies to: IR001.)

* * * *

The Salt River Project objects to the failure of DWR to calculate a diversion rate for this Potential Water Right (PWR). All PWRs assigned a point or points of diversion should be assigned a separate diversion rate for each point of diversion. Diversion rates should be calculated at the point of diversion and should include transportation losses from the point of diversion to the place of use. (This objection applies to: IR001.)

* * * *

WFR CATEGORY 9 - QUANTITIES OF USE (continued)

The Salt River Project objects to the calculation of the maximum demand rate for this Potential Water Right (PWR) Diversion. DWR's method of calculating maximum demand rate relies upon principles which are inconsistent with Arizona law and, further, are technically inaccurate. The quantity associated with a diversion should be the capacity of the diversion facility or facilities, unless historic diversions indicate a different amount.

For an additional discussion of the problems with DWR's methods for quantification of Diversion PWRs, see the Salt River Project's Volume 1 objections on this issue, a copy of which is attached and incorporated herein by reference. (This objection applies to: DV001.)

**EXCERPT FROM
SALT RIVER PROJECT OBJECTIONS TO
VOLUME 1 OF THE SILVER CREEK HSR**

MAXIMUM DEMAND ESTIMATES

(page numbers refer to Volume 1)

Maximum Demand Rate

pp. A-25 through A-28

The Salt River Project objects to DWR's estimation method and results for maximum demand rates for diversions. Since these rates are based upon estimates of irrigation demand and efficiency, they are inaccurate as a result of the technical errors set forth below. The Salt River Project also objects to DWR's method since it relies upon principles that are inconsistent with Arizona law. A.R.S. § 45-141.(B) provides that "[b]eneficial use shall be the basis, measure, and limit to the use of water." Consistent with this legal standard, diversion rates should be based on actual maximum historic diversions or diversion capacity rather than estimates based upon averages.

Relative Humidity

p. A-4, lines 23-25

The Salt River Project objects to DWR's failure to specify whether it used minimum relative humidity as specified in Food and Agricultural Organization (FAO) Paper 24. The Salt River Project also objects to DWR's use of relative humidity from Winslow when data for the Show Low, Snowflake and Snowflake 15W weather stations can be converted to mean minimum relative humidity through the use of the 6AM and 6PM estimates adjusted with the assistance of "Useful Arizona Climatic Graphs and Data, Series #7."

Wind

p. A-4, lines 26-32

The Salt River Project object's to DWR's use of wind travel data at a height of 2 feet (Snowflake #15) and windspeed data at a height of 10 meters (Winslow) without converting to a 2 meter height as required by FAO Paper 24.¹

Evapotranspiration for Pine Trees

p. A-6, Table A-2; p. A-10, Table A-4

The Salt River Project objects to DWR's reporting of inexplicably high evapotranspiration (consumptive use) values for pine trees as compared to all other crops. DWR has reported Christmas tree or pine tree consumptive use in its various management plans for Active Management Areas at about one-half of the value shown in Table A-2.

¹The wind travel data for Snowflake can be adjusted by use of the formula:

$$WT_2 = WR_{.61}(2/0.61)^{-2} = 1.27 WT_{.61}$$

The windspeed data for Winslow can be adjusted by use of the formula:

$$W_2 = W_{10}(2/10)^{-2} = 0.72 W_{10}$$

Pasture Peak Use

p. A-5, lines 30-31; p. A-7, Fig. A-1; p. A-8, Fig. A-2

The Salt River Project objects to DWR's reporting of pasture peak use that exceeds corn peak use. Corn peak use should be higher than pasture since it is taller and has a crop coefficient (kc) that is higher than that of pasture at peak use.

Effective Precipitation

p. A-9, lines 1-31

The Salt River Project objects to DWR's failure to report how it estimates effective precipitation during the non-growing season. The Salt River Project also objects to the use of a 3-inch rather than 4-inch depth of irrigation water application in its estimation of growing season effective precipitation for alfalfa. Furthermore, the Salt River Project objects to DWR's use of a 50 percent probability of precipitation, which results in an inadequate supply in one-half of the years. A 50 percent probability indicates that average effective precipitation is subtracted from crop consumptive use when DWR calculates the irrigation requirement. This means that in years of below-average precipitation, irrigation users would be unable to replace the lack of precipitation with additional irrigation water. The amount of precipitation that is available 80 percent of the time for field crops and 90 percent of the time for orchards and vegetables is appropriate.

Efficiency Estimates

pp. A-10 through A-13; pp. A-31 through A-65

The Salt River Project objects to DWR's estimates of efficiencies for water uses served by irrigation districts and major surface water diverters where average rates of diversion from a few measurements are used to calculate total deliveries and no consideration is given to supplemental supplies obtained by individual users. The Salt River Project also objects to the failure of DWR to include conveyance losses where appropriate in efficiency estimates in the "second procedure," which employs categories of systems.

**EXCERPT FROM
SALT RIVER PROJECT OBJECTIONS TO
VOLUME 1 OF THE SILVER CREEK HSR**

IRRIGATION QUANTITY ESTIMATES

(page numbers refer to Volume 1)

Introduction

The Salt River Project objects to DWR's estimation methods and results for irrigation water quantities for the following reasons:

First, there are several technical errors in DWR's calculation of crop consumptive use including estimates of relative humidity, wind, evapotranspiration (ET) for pine trees, pasture peak use and effective precipitation. Although these problems are relatively small, the effect of these errors is magnified since consumptive use is divided by irrigation efficiency to calculate the water duty for irrigated land.

Second, the efficiency estimates used by DWR are inappropriate for the reasons set forth below in that section of the objections. Again, the effect of even a small error in efficiency estimates can result in a larger error in the resulting water duty.

Third, the irrigation water duties computed by DWR are inaccurate as a result of the technical errors in consumptive use and efficiency estimates discussed above and, further, are inconsistent with Arizona water law. The "maximum annual" and "average efficient" quantification methods employed by DWR do not properly estimate actual historic beneficial use as required by statute.

These objections are more fully set forth in the following sections.

Relative Humidity

p. A-4, lines 23-25

The Salt River Project objects to DWR's failure to specify whether it used minimum relative humidity as specified in Food and Agricultural Organization (FAO) Paper 24. The Salt River Project also objects to DWR's use of relative humidity from Winslow when data for the Show Low, Snowflake and Snowflake 15W weather stations can be converted to mean minimum relative humidity through the use of the 6AM and 6PM estimates adjusted with the assistance of "Useful Arizona Climatic Graphs and Data, Series #7."

Wind

p. A-4, lines 26-32

The Salt River Project object's to DWR's use of wind travel data at a height of 2 feet (Snowflake #15) and windspeed data at a height of 10 meters (Winslow) without converting to a 2 meter height as required by FAO Paper 24.¹

¹The wind travel data for Snowflake can be adjusted by use of the formula:

$$WT_2 = WR_{.61}(2/0.61)^2 = 1.27 WT_{.61}$$

The windspeed data for Winslow can be adjusted by use of the formula:

$$W_2 = W_{10}(2/10)^2 = 0.72 W_{10}$$

Evapotranspiration for Pine Trees

p. A-6, Table A-2; p. A-10, Table A-4

The Salt River Project objects to DWR's reporting of inexplicably high evapotranspiration (consumptive use) values for pine trees as compared to all other crops. DWR has reported Christmas tree or pine tree consumptive use in its various management plans for Active Management Areas at about one-half of the value shown in Table A-2.

Pasture Peak Use

p. A-5, lines 30-31; p. A-7, Fig. A-1; p. A-8, Fig. A-2

The Salt River Project objects to DWR's reporting of pasture peak use that exceeds corn peak use. Corn peak use should be higher than pasture since it is taller and has a crop coefficient (kc) that is higher than that of pasture at peak use.

Effective Precipitation

p. A-9, lines 1-31

The Salt River Project objects to DWR's failure to report how it estimates effective precipitation during the non-growing season. The Salt River Project also objects to the use of a 3-inch rather than 4-inch depth of irrigation water application in its estimation of growing season effective precipitation for alfalfa. Furthermore, the Salt River Project objects to DWR's use of a 50 percent probability of precipitation, which results in an inadequate supply in one-half of the years. A 50 percent probability indicates that average effective precipitation is subtracted from crop consumptive use when DWR calculates the irrigation requirement. This means that in years of below-average precipitation, irrigation users would be unable to replace the lack of precipitation with additional irrigation water. The amount of precipitation that is available 80 percent of the time for field crops and 90 percent of the time for orchards and vegetables is appropriate.

Efficiency Estimates

pp. A-10 through A-13; pp. A-31 through A-65

The Salt River Project objects to DWR's estimates of efficiencies for water uses served by irrigation districts and major surface water diverters where average rates of diversion from a few measurements are used to calculate total deliveries and no consideration is given to supplemental supplies obtained by individual users. The Salt River Project also objects to the failure of DWR to include conveyance losses where appropriate in efficiency estimates in the "second procedure," which employs categories of systems.

Irrigation Water Duties

pp. 101 through 125; pp. A-3 through A-65

The Salt River Project objects to DWR's estimation of water duty under both the "maximum annual" and "average efficient" methods. In the absence of decreed rights, which must be accepted by the court in the absence of abandonment, Arizona law requires that the extent of an appropriative right be measured according to the quantity of water that the appropriator diverted for beneficial use since the time of the appropriation. A.R.S. § 45-141.(B) ("Beneficial use shall be the basis, measure and limit to the use of water"). Neither the "maximum annual" or "average efficient" quantification methods employed by DWR properly estimate actual historic beneficial use as required by law.

Maximum Annual Quantification

The Salt River Project objects to DWR's estimates of maximum annual water duty since inaccurate crop irrigation requirements, low consumptive use crops or overly high efficiency estimates are used to calculate maximum annual water duty. An accurate estimate of maximum annual water duty is essential since that value will closely approximate the quantity of actual historic beneficial use. This objection applies to all irrigation (IR) and most recreation (RC) PWRs.

In addition, the Salt River Project objects to DWR's failure to report maximum annual water duties at all for other (OT) and some recreation-related (RC) irrigation uses. The maximum annual water duties for these uses must be reported by DWR for consideration by the Master in determining entitlements.

Average Efficient Quantification

The Salt River Project objects to DWR's reporting of average efficient water duties in WFRs for irrigation uses since the methodology and results are inconsistent with Arizona law. In determining average efficient water duties, DWR uses the Arizona Groundwater Code Method of "areas of similar farming conditions" (ASFC). The ASFC method assigns a weighted average consumptive use requirement to the water duty equation based upon the types of crops recently grown by appropriators in a designated area. Historic information or records evincing an individual claimant's actual cropping patterns and the quantities of water actually used to cultivate such crops since the time of appropriation are not considered. The use of the ASFC method to calculate water entitlements is objectionable for the following reasons.

First, the ASFC concept is entirely inconsistent with Arizona's doctrine of prior appropriation, which requires that the extent of an appropriator's water right be measured according to actual, rather than average, water use. Under the prior appropriation doctrine, an appropriator who has grown alfalfa on his property historically is entitled to a water duty that will support alfalfa, regardless of the crops that he or his neighbors are currently growing. Under DWR's "averaging" approach, an appropriator in this situation would be assigned an apparent entitlement inadequate to meet his needs.

Additionally, under the ASFC concept, the efficiency of various irrigation methods is averaged between appropriators, thus further exacerbating the inadequate water duty for the appropriator who does not have a system with above-average efficiency.

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
IN AND FOR THE COUNTY OF APACHE

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

No. 6417 APACHE CO. SUPERIOR COURT

FILED

NO. _____ DOCKETED

MAY 29 1991

RECOMMENDED FORM
FOR OBJECTIONS TO THE
Hydrographic Survey Report for the
Silver Creek Watershed

Please file a separate objection for each watershed file report. Objections to information contained in Volumes 1 & 2 can be stated on one objection form. Objections must be written. Use of this form is suggested. Objections must be received on or before May 29, 1991.

T. _____ 1:45 P.M.
RECEIVED CLERK
SP

This Objection is directed to Watershed File Report No.

033- 56 - ACAA - 001
(please insert no.)

OBJECTOR INFORMATION

Objector's Name: Arizona State Land Department
Objector's Address: 1616 West Adams
Phoenix, Arizona 85007
Objector's Telephone No.: (602) 542-3500
Objector's Watershed File Report No. (if the Objector's claimed water rights are located within the Silver Creek Watershed):
033- _____ - _____ - _____

Or Objector's Statement of Claimant No. (if the Objector's claimed water rights are located outside the Silver Creek Watershed):
39- _____

STATEMENT OF THE OBJECTION

The following are the main categories of the typical watershed file report (not all watershed file reports have all these categories). Please check the category(ies) of the watershed file report to which you object, and state the reason for the objection on the following page.

Please check appropriate box(es)

- 1. I object to the description of Land Ownership
- 2. I object to the description of Applicable Filings and Decrees
- 3. I object to the description of DWR's Analysis of Filings and Decrees
- 4. I object to the description of the Diversions for the claimed water right(s)
- 5. I object to the description of the Uses for the claimed water right(s)
- 6. I object to the description of Reservoirs used for the claimed water right(s)
- 7. I object to the description of Shared Uses & Diversions for the claimed water right(s)
- 8. I object to the PWR (Potential Water Right) Summary of the claimed water right(s)
- 9. I object to the description of Quantities of Use for the claimed water right(s)
- 10. I object to the Explanation provided for the claimed water right(s)
- 11. Other Objections (please state volume number, page number and line number for each objection)

The reason for my objection is as follows (please number your objections to correspond to the boxes checked above; please attach supporting information and additional pages as necessary):

CATEGORY NUMBER

8 The state objects to DWR's determination that the PWR should be based on the amount of water used rather than the amount of water claimed where the use volume exceeds the claim volume or where the volume is not clearly stated on the claim.

I hereby make this Objection on this 28th day of May, 1991.

M. J. Daniels
STATE LAND COMMISSIONER

Signature of Objector

FOR: STATE OF ARIZONA (State Land Department)
(If in a representative capacity)

STATE OF ARIZONA
COUNTY OF MARICOPA

VERIFICATION
(Must be completed by Objector)

I declare under penalty of perjury that I am a claimant in this proceeding; that I have read the contents of the foregoing Objection and know the contents thereof; and that the information contained in the foregoing Objection is true based on my own personal knowledge, except for those portions of the Objection which are indicated as being known to me on information and belief and, as to those portions, I believe them to be true.

M. J. Daniels
STATE LAND COMMISSIONER

Signature of Objector

SUBSCRIBED AND SWORN to before me this 28th day of May, 1991.

(SEAL) 

Margaret L. Brocato
Notary Public for the State of ARIZONA
Residing at 1616 W. Adams, Phoenix, Arizona 85007
My commission expires _____

CERTIFICATE OF MAILING

(Must be completed if you object to another Claimant's watershed file report. Does not need to be completed if you file an Objection to your own watershed file report or to information contained in Volumes 1 or 2 of the Hydrographic Survey Report.)

I hereby certify that a copy of the foregoing Objection was served upon the following Claimant(s) by mailing true and correct copies thereof on the 29 day of May, 1991, postage prepaid and addressed as follows:

Name: FS - Apache-Sitgreaves
Address: P.O. Box 640
Springerville, Arizona 85938

Cynthia M. Chandler
(Signature of Objector or person mailing in Objector's behalf)

Objections must be filed with the Clerk of the Superior Court in and for Apache County, Apache, County Courthouse, P. O. Box 365, St. Johns, AZ 85936, on or before May 29, 1991. This means that the Objection must be received at the Clerk's office no later than 5:00 p.m. on Wednesday, May 29, 1991.