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DISTRICT COURT-SRBA
TWIN FALLS CO., IDAHO
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REPORT REGARDING CLAIM TO WATER RIGHT NO. 36-00003A

In Re SRBA

Twin Falls County Civil Case No. 39576

Sub-Case No. 36-00003A

Report to the SRBA District Court

Prepared by the Idaho Department of Water Resources

Karl J. Dreher, Director

David B. Shaw, Adjudication Bureau Chief

David R. Tuthill Jr., Acting Adjudication Bureau Chief

July 1, 1996

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REPORT REGARDING CLAIM TO WATER RIGHT NO. 36-00003A

The Director of the Idaho Department of Water Resources (IDWR) submits this report regarding claim to water right no. 36-00003A in response to the request of Special Master Haemmerle, pursuant to Idaho Code §42-1412(4) and the court's Order Re: Contested Claims for Amounts Claimed in Excess of .02 CFS. This report was prepared under the supervision of Karl J. Dreher, Director, David B. Shaw, the Adjudication Bureau Chief, and David R. Tuthill Jr., the Acting Adjudication Bureau Chief for IDWR. The following persons assisted in the preparation of the following portions of this report:

David B. Shaw, Adjudication Bureau Chief, reviewed and verified this Report Regarding Claim to Water Right No. 36-00003A. Mr. Shaw reviewed and verified IDWR's Report Regarding Quantification of Small Domestic and Stockwater Rights, which is incorporated by reference herein. The Affidavit of David B. Shaw describes Mr. Shaw's education and work experience, and is incorporated by reference herein. Mr. Shaw also reviewed IDWR's Report Regarding Evaluation of Irrigation Diversion Rates, described below.

Jeff Peppersack, Adjudication Engineer, prepared and verified IDWR's Report Regarding Evaluation of Irrigation Diversion Rates, which is incorporated by reference herein. The Affidavit of Jeff Peppersack describes Mr. Peppersack's education and work experience, and is incorporated by reference herein. Mr. Peppersack also reviewed IDWR's Report Regarding Consumptive Use for Irrigation in the Hagerman Area, described below.

David R. Tuthill Jr., Acting Adjudication Bureau Chief, prepared IDWR's Report Regarding Consumptive Use for Irrigation in the Hagerman Area, which is incorporated by reference herein. Mr. Tuthill also reviewed this Report Regarding Claim To Water Right No. 36-00003A. The Affidavit of David R. Tuthill Jr. describes Mr. Tuthill's education and work experience, and is incorporated by reference herein.

Marci S. Sterling, Adjudication Engineer, prepared and verified Appendix B, which describes the application of IDWR's methodology for evaluation of irrigation diversion rates to claim no. 36-00003A. Appendix B is attached hereto and incorporated by reference herein. The Affidavit of Marci S. Sterling describes Ms. Sterling's education and work experience, and is incorporated by reference herein.

Steven C. Clelland, Senior Water Resource Agent, investigated and prepared the preliminary recommendation for claim no. 36-00003A, and prepared Appendix C. The Affidavit of Steven C. Clelland describes Mr. Clelland's education and work experience, and is incorporated by reference herein. The affidavit also includes a general description of his investigation of claims in the Hagerman area. The Affidavit

of Steven C. Clelland Regarding Claim No. 36-00003A describes Mr. Clelland's investigation of the quantity of this water right; it is attached hereto and incorporated herein by reference.

I. INVESTIGATION AND RECOMMENDATION OF CLAIMS GENERALLY

IDWR's general methodology for the investigation and recommendation of claims is described in Appendix A, which is incorporated herein by reference.

II. WATER RIGHT NO. 36-00003A

As noted in Appendix A, IDWR's general methodology for the investigation and recommendation of claims includes a further review of water right recommendations to which an objection is filed. As a result of further information obtained during this review, IDWR has prepared a revised recommendation of right no. 36-00003A, which is set forth in Appendix D. The revised recommendation shows both the original text from the Director's Report for Reporting Area 3 (Basin 36) and the revised recommendation, with deleted text shown in an overstrike format and new text underlined. The revisions to each element and the basis for those revisions is described below.

A. Basis of Claim

Claim no. 36-00003A was filed with IDWR by Edna M. Rea on August 4, 1988.¹ The claim is to a portion of one of three rights decreed to the New International Mortgage Bank in the *New International Mortgage* decree, entered in 1932.² The water rights decreed to the bank are numbered in IDWR's files as water right nos. 36-00001, 36-00002, and 36-00003. The first two rights are to water from Riley Creek, the third is to water from Billingsley Creek. All were decreed for use on the same lands, and all were decreed for irrigation "and for domestic and other purposes thereon." Water right nos. 36-00001 and 36-00002 were claimed by and recommended to Buckeye Farms, Inc.³ Portions of right no. 36-00003 were claimed

¹ The original notice of claim is currently located in the files of the SRBA District Court, attached to IDWR's response to the claimant's objection.

² *New International Mortgage Bank v. Idaho Power Co., et al.*, Equity No. 1602 (D.S.Id. 1932), at pp. 3-4.

³ Objections were filed to both 36-00001 and 36-00002; SF5s have been filed and the special master has issued preliminary special master's reports in both subcases.

by and recommended to various claimants (some of which recommendations are contested), and are further described below.

B. Name and Address of Claimant

The name and address of the claimant set forth in the claimant's motion for summary judgment is the same as recommended in the director's report.

C. Source of Water

The source of water set forth in the claimant's motion for summary judgment is Billingsley Creek. The source of water is described in the director's report as Billingsley Creek tributary to Snake River.

The director's report includes the body of water to which the source of the right is tributary for each water right in the director's report, except for rights to ground water. IDWR adopted this standard for the description of the source of water rights because there are so many instances, sometimes in the same administrative basin, where different surface water sources bear the same name.⁴

D. Date of Priority

The priority date set forth in the claimant's motion for summary judgment is the same as recommended in the director's report.

E. Point of Diversion

The point of diversion set forth in the claimant's motion for summary judgment is the same as recommended in the director's report.

F. Purpose of Use

The purposes of use stated on the notice of claim were irrigation and stockwater. The purposes of use recommended in the director's report include both of the claimed purposes of use. The objection sought to add domestic as a purpose of use. The claimant's motion for summary judgment no longer seeks to add

⁴ IDWR relied upon the following in reaching its conclusion: Idaho Code §42-1411(2) (which provides that the director shall determine the source of the right to the extent the director deems appropriate to define and administer water rights acquired under state law).

domestic, but now seeks to add wildlife, recreation, aesthetics, and "diversion system maintenance."⁵

The description of the purposes of use of this right in the decree is ambiguous in that it describes the purposes of use for the three New International Mortgage Bank rights as irrigation "and domestic and other purposes," rather than specifically identifying each purpose of use for each right.⁶ IDWR's investigation confirmed the use of water for irrigation and stockwater purposes, as further described below in the sections addressing quantity and place of use. Neither the claimant nor IDWR's investigation has yielded information that would confirm the beneficial use of water for the other purposes listed in the motion, either pursuant to the right as originally appropriated or as currently used.⁷ Such information is necessary not only to confirm the use but to quantify the amount of water beneficially used for that purpose.

G. Quantity of Water Used

The notice of claim states a quantity of 1.60 cfs for irrigation, 0.04 cfs for stockwater, and a total quantity of 1.60 cfs. The quantity recommended in the director's report is 0.41 cfs for irrigation, 0.02 cfs for stockwater during the irrigation season and 0.17 cfs outside the irrigation season, and a total quantity of 0.41 cfs. The objection does not state the quantity claimed. The claimant's motion for summary

⁵ The filing fee for claims other than small domestic and stockwater claims consists of a flat \$50.00 fee, plus a variable fee of \$1.00 per acre for any claimed irrigation use, plus a per cfs variable fee for other claimed purposes of use. The filing fee for small domestic and stockwater rights is \$25.00; no filing fee is required for portions of rights for small domestic and stockwater uses. The filing fee paid for this claim was limited to the purposes of use claimed in the notice of claim, and no filing fee was paid for the stockwater portion. Filing fees are set forth in Idaho Code §42-1414 and IDWR's Adjudication Rules, IDAPA 37.03.01 *et seq.*

⁶ IDWR relied upon the following in reaching its conclusion: *Morgan v. Udy*, 58 Idaho 670, 79 P.2d 295 (1938) (a water right decree that omitted the description of the point of diversion necessarily determined the point of diversion but was ambiguous as to its location).

⁷ IDWR relies upon the following in reaching this conclusion: Idaho Code §42-1427 (which allows an ambiguity in a prior decree or license to be resolved based on current beneficial use); the statement of the Presiding Judge that this section "cannot change or exceed the previously decreed or recorded element of the decreed or licensed right" nor "be used to claim an expansion of use beyond the beneficial use existing at the time the right was originally memorialized in a decree or license," Revised Memorandum Decision and Order on Basin-Wide Issue 4, dated May 17, 1995, at page 9; and the statement of the Presiding Judge that, "the purpose of use is defined by the intentional application of water to an intended beneficial use of water," Memorandum Decision and Order Re: Basin-Wide Issue 5, dated April 26, 1996, at page 8.

REPORT REGARDING CLAIM TO WATER RIGHT NO. 36-00003A

judgment states a total quantity of 1.6 cfs, but does not state a quantity for each purpose of use.

1. Splits of Water Right No. 36-00003

As noted above, various portions of right no. 36-00003 were claimed by and recommended to various claimants. The splits are listed below. The first column shows the quantity claimed; the second column shows the quantity recommended in the director's report. The quantity listed under other is further described in the table. Water rights listed with an asterisk are contested.

<u>Right no.</u>	<u>Claim</u>	<u>Report</u>	<u>Other</u>	
36-00003A*	1.60	0.41	0.45	Amount under other is from revised recommendation included with this report.
36-00003B*	7.16	5.00		This subcase is assigned to S.M. Dolan.
36-00003C*	0.30	0.30	0.30	Summary judgment motion shows same total quantity as recommended.
36-00003D	0.24	0.24	0.24	Uncontested, so amount under other is same as claim/report.
36-00003E*	0.20	0.20	0.20	Summary judgment motion shows same total quantity as recommended.
36-00003F*	0.80	0.80	0.80	Summary judgment motion shows same total quantity as recommended.
36-00003G*	0.40	0.12		Trial has been held before S.M. Dolan; preliminary master's report is pending.
36-00003H*	12.0	8.37	11.9	Amount under other is amount from SF5 and preliminary master's report.
36-00003J*	4.00	0.46		IDWR has received a notice of change in ownership splitting this right into K, M and L. This right is part of the group for which 706 reports are due 09/01/1996.
Total	26.70	15.9	19.47	

The quantity decreed for right no. 36-00003 in the *New International Mortgage* decree is 20 cfs. The total quantity of water claimed in all claims based on the decree is 26.70 cfs, which exceeds the decreed amount of the water right by 6.70 cfs. For this reason, IDWR previously proposed that contested water rights in the Hagerman area be grouped by ditch for scheduling purposes to facilitate resolution of quantity issues for those rights. IDWR recommended a total of 15.9 cfs pursuant to the various claims to portions of right no. 36-00003; 19.47 cfs of the total 20 cfs decreed has been allocated among the claimants to these rights as a result of further proceedings in the various subcases.

The decreed place of use of this right contains 1342.8 acres. Using the decreed rate of diversion and the decreed place of use, the per acre rate of diversion is approximately 0.015 cfs per acre. The claimant's lands as described in the deed attached to the motion for summary judgment contain 40 acres. These 40 acres are

within the decreed place of use. Based on the description of the claimant's lands in the deed, the claimant's proportionate share of water right no. 36-00003 is approximately 0.6 cfs.⁸ (As noted below in section I, however, this right is used for the irrigation of only 13 acres.)

In this instance, the deed purports to convey 1.6 cfs of right no. 36-00003 from a predecessor of the claimant to the claimant. IDWR does not have information indicating whether or how this portion of right no. 36-00003 came to be appurtenant to the claimant's lands. IDWR did not previously request this information from the claimants of the portions of right no. 36-00003 because the total amount IDWR found to be beneficially used under all the claimed portions of right no. 36-00003 did not exceed the decreed 20.00 cfs.⁹

2. Quantity for each purpose of use

The director's report includes a quantity for each purpose of use in addition to the total quantity. This information is appropriate and necessary to indicate whether and to what extent the total quantity or any portion of the total quantity is used for multiple purposes, or whether and to what extent the total quantity is allocated among the listed purposes of use. For example, if a claimant diverted one cfs through a hydropower facility and then used that same water for irrigation, the amount for each purpose of use would be 1 cfs, with a total diversion rate of 1 cfs. If a claimant diverted one cfs, but used one-half in a hydropower facility and the other half for irrigation, the amount for each purpose of use would be 0.5 cfs, with a total diversion rate of 1 cfs.

Omission of a quantity for each purpose of use would result in ambiguities in the definition of the right that could result in enlargements in use that would result in expansion of the right and injury to other water users. In the example above, assume the claimant who used one-half of a 1 cfs right in a hydropower facility and the other half for irrigation decided to start using the full cfs in a hydropower facility,

⁸ IDWR relied on the following in reaching its conclusion: *Koon v. Empey*, 40 Idaho 6, 231 P. 1097 (1924) (a conveyance of land conveys the appurtenant right absent express provision to the contrary); *Crow v. Carlson*, 107 Idaho 461, 690 P.2d 916 (1984) (division of tract of land to which water is appurtenant works a division of the water right in the same proportion as the land is divided, absent express provision to the contrary.)

⁹ IDWR does not require all claimants to submit information showing a "chain of title" demonstrating ownership of all or part of a previously decreed or licensed right in its investigation of the claims. Generally, IDWR requires information as to ownership as part of the investigation of claims only where there are competing claims to the same water right.

followed by use of the full cfs for irrigation. If the hydropower use were a year-round use, then the use of the irrigation half outside the irrigation season for hydropower use would result in injury to junior water users outside the irrigation season who were previously subject to a prior use of one-half cfs who are now subject to a prior use of 1 cfs. In addition, if the half cfs formerly used only for hydropower were also used for irrigation, junior water users during the irrigation season would be injured by the use of this half cfs for a more consumptive purpose.¹⁰

3. Quantity for irrigation

As noted above, the director's report recommended a quantity of 0.41 cfs for irrigation. This includes 0.26 cfs (0.02 cfs per acre) for the on-farm diversion requirement (the amount of water needed at the place of use), and 0.15 cfs for conveyance losses (an additional amount of water needed at the point of diversion to deliver the amount needed at the place of use). IDWR has conducted further analysis of the quantity for irrigation due to further information IDWR received subsequent to its original analysis. Based on this further analysis, IDWR recommends a quantity of 0.45 cfs for irrigation. This includes 0.30 for the on-farm diversion requirement (0.023 cfs per acre) and 0.15 cfs for conveyance losses.

IDWR's methodology for investigating and recommending claims to water for irrigation in excess of 0.02 cfs per acre is described in IDWR's Report Regarding Evaluation of Irrigation Diversion Rates.¹¹ The application of that methodology to this claim is described in Appendix B. Neither the claimant nor IDWR's investigation has yielded information which would confirm beneficial use of a greater quantity for irrigation.

As described in Appendix B, the application of IDWR's methodology for evaluation of irrigation diversion rates resulted in the recommendation of an additional 0.15 cfs for conveyance losses. IDWR determined the total conveyance losses for the ditch through which this right is delivered, and allocated that total among the various rights to water delivered through the same ditch. Further information as to other rights delivered through the same ditch is provided in subsection 5 below.

¹⁰ This further quantification is provided pursuant to Idaho Code §42-1411(2)(c) (which provides for IDWR to determine the quantity of water used to the extent the director deems appropriate to define and administer the water right).

¹¹ IDWR relied upon the following in reaching its conclusions: Idaho Code §42-220 (which provides that no license or decree will be issued confirming a right to more than 0.02 cfs per acre for irrigation unless it can be shown that a greater amount is necessary) and Idaho Code §42-1402 (which limits the amount of water allotted by a decree to the amount of water beneficially used).

4. Quantity for stockwater

As noted above, IDWR recommended 0.02 cfs for stockwater during the irrigation season, and 0.17 cfs for stockwater outside the irrigation season. The 0.17 cfs for stockwater use outside the irrigation season includes 0.02 cfs for stockwater use (the same quantity recommended during the irrigation season) and an additional 0.15 cfs for conveyance losses (which is included in the quantity recommended for irrigation during the irrigation season). In addition, the recommendation includes a further description of non-irrigation uses, which states: STOCKWATER, 19 RANGE CATTLE.

This right was claimed for 0.04 cfs for stockwater for 19 head of range cattle. IDWR recommended 0.02 cfs based on its guidelines for quantity for stockwater use. 0.02 cfs is the standard for 0-50 head of range cattle. The guidelines for quantity for stockwater use are described in IDWR's Report Regarding Quantification of Small Domestic and Stockwater Rights. The basis for the additional amount recommended for conveyance losses is described in Appendix B. Neither the claimant nor IDWR's investigation has yielded information which would confirm beneficial use of a greater quantity for stockwater.

The director recommends the following as an alternative method to describe the quantity of water used for stockwater purposes, which has been used in the recommendation of other claims to water rights in the test basins. First, the diversion rate for stockwater would be described as 0.02 cfs, based on the IDWR's standard for 0-50 head of range cattle (omitting the additional 0.15 cfs for conveyance losses). The quantity element would also include the following language:

THE APPROPRIATOR IS ENTITLED TO THE AMOUNT OF WATER DESCRIBED HEREIN FOR STOCKWATER PURPOSES AT A POINT OF MEASUREMENT WHERE THE DELIVERY DITCH ENTERS THE PLACE OF USE DESCRIBED HEREIN.

THE PORTION OF THIS RIGHT FOR STOCKWATER PURPOSES MAY BE DIVERTED SO LONG AS THE AMOUNT OF WATER DIVERTED AT THE POINT OF DIVERSION FOR STOCKWATER PURPOSES DOES NOT CONSTITUTE UNREASONABLE WASTE AND DOES NOT CONFLICT WITH THE PUBLIC INTEREST, AS DETERMINED BY THE DIRECTOR.

Generally, a water right is measured at the point of diversion. The first sentence above provides for measurement at the place of use. Pursuant to this language, the claimant may divert at the point of diversion whatever quantity is

necessary to provide 0.02 cfs at the place of use, subject to the total quantity of 0.45 cfs.

Although a water right is generally measured at the point of diversion, there are some exceptional circumstances where quantification at the point of diversion is so difficult that a decree or license will expressly provide for measurement of the right at another location. Where a decree or license provides for measurement of the right at another location, the claimant may divert at the point of diversion the amount necessary to deliver the decreed or licensed quantity at the point of measurement.

IDWR has used this alternative method to describe quantity for stockwater use where an irrigation ditch with substantial conveyance losses that carries a relatively large amount of water for irrigation pursuant to numerous water rights during the irrigation season is used to deliver a relatively small amount of water for a number of small stockwater rights outside the irrigation season.

In such circumstances, determining a reasonable efficiency for the delivery of stockwater outside the irrigation system is difficult, because the relative efficiencies of the conveyance loss during the irrigation season and outside the irrigation season are markedly different. For example, in the present case, where the on-farm requirement for irrigation is 0.30 cfs, and the total amount recommended for irrigation is 0.45, then the additional amount recommended for conveyance losses (0.15 cfs) is one-half the amount actually needed at the place of use. Outside the irrigation season, where the amount of water needed for stock at the place of use is 0.02 cfs, and the total amount recommended for stockwater is 0.17 cfs, then the additional amount recommended for conveyance losses (0.15 cfs) is more than 7 times the amount actually needed at the place of use. Determination of an appropriate allocation of the total conveyance loss on the ditch among the various water rights on the ditch is also more difficult outside the irrigation season, because not all rights on the ditch include stockwater outside the irrigation season, and those claimants who do have such rights do not necessarily have stock every winter or divert water for stock throughout the winter. When the total amount of water needed at the places of use for all stockwater uses on the ditch is then compared to the total conveyance loss on the ditch, the conveyance loss may be tens of times the amount of water needed at the places of use.

Using this alternative method of quantification in these circumstances, the amount of water reasonably needed for irrigation becomes the outside limit of the amount of water reasonably needed for stockwater. This allows the water users on the ditch to continue to use a large irrigation ditch for the delivery of small stockwater rights outside the irrigation season. At the same time, however, it leaves a great deal

of opportunity for waste. Therefore, if the exceptional step is taken to quantify the right at the place of use, then exceptional steps must also be taken to prevent unreasonable waste in the exercise of those rights. For this reason, where the recommendation provides for quantification of the stockwater portion of the right at the place of use, the second sentence in the language stated above is also included, which expressly notes the authority of the director to administer distribution of water for stockwater uses so as to prevent unreasonable waste. Although this additional language is a statement of existing law, it is appropriate and necessary to define and administer the water rights so that the quantification of stockwater at the place of use is not later construed to be a conclusive determination of the reasonableness of the amount of water diverted at the point of diversion under any and all circumstances.¹²

Finally, as previously noted above, the director's report includes a further description of non-irrigation uses by number and type of head which is not included in the claimant's motion for summary judgment. This language is appropriate and necessary regardless of whether the quantity for stock is described as originally recommended in the director's report or whether the quantity is described using the alternative method described above. The further description of non-irrigation uses is based in part on the notice of claim. Additional information as to the basis for the further description of non-irrigation uses is set forth in IDWR's Report Regarding Quantification of Small Domestic and Stockwater Rights. As part of Basin Wide Issue 12, however, IDWR has proposed that the further description of non-irrigation uses be rephrased as: THE QUANTITY FOR NON-IRRIGATION USE IS LIMITED TO THE AMOUNT OF WATER BENEFICIALLY USED FOR: STOCKWATER, 19 RANGE CATTLE. The basis for this rephrasing is also described in IDWR's Report Regarding Quantification of Small Domestic and Stockwater Rights.¹³

¹² IDWR relies upon the following in reaching its conclusion: Idaho Code §42-1411(2), which provides that IDWR shall determine the quantity of water used to the extent the director deems *appropriate and proper* to define and administer water rights acquired under state law, and Idaho Code §42-1412(6), which provides that the decree shall contain or incorporate a statement of each element of a water right as stated in section 42-1411, as contrasted with language later in section 42-1412 providing for the inclusion of general provisions to the extent *necessary* to define and administer water rights.

¹³ Special Master Haemmerle has issued his recommendation regarding Basin Wide Issue 12; a motion by the United States for reconsideration is pending.

5. Quantity for other purposes

As to the quantity for other purposes of use stated in the claimant's motion for summary judgment, neither the claimant nor IDWR's investigation has yielded information that would confirm the beneficial use of water for other purposes, as noted in section F above. Therefore, IDWR does not have information that would confirm the quantity used for the other purposes.

6. Other rights delivered through same ditch

As noted in Appendix B, IDWR determined the total conveyance losses for the ditch through which this right is delivered, and allocated that total among the various rights to water delivered through the same ditch. For this reason, IDWR previously proposed that contested water rights in the Hagerman area be grouped by ditch for scheduling purposes to facilitate resolution of quantity issues for those rights. Water right 36-00003A is delivered through the Buckeye ditch. Appendix C is a schematic which shows the water rights delivered through the Buckeye ditch, and which includes a variety of information as to the water rights listed.

7. Total quantity

As noted above, the director's report recommended 0.41 cfs for irrigation, 0.02 cfs for stockwater within the irrigation season and 0.17 cfs for stockwater outside the irrigation season, for a total quantity of 0.041 cfs. As also noted above, this report recommends 0.45 cfs for irrigation, and 0.02 cfs for stockwater to be measured at the place of use, resulting in a total quantity of 0.45 cfs. As these numbers demonstrate, the quantity for irrigation and the quantity for stockwater is not additive; in other words, of the total amount recommended, all may be used for irrigation, or a portion may be used for irrigation and a portion for stockwater. This is consistent with the manner in which rights for irrigation and stockwater are used, where livestock water from the irrigation system; it is also the manner in which this water right was claimed.

H. Period of Year Water is Used for Each Purpose of Use

1. Irrigation

Both the notice of claim and director's report state a period of use of 3/15 to 11/15 for irrigation. The claimant's objection states a period of use of 1/1 to 12/31. The claimant's motion for summary judgment states the period of use as "the

irrigation season.” The *New International Mortgage* decree does not state a period of use for irrigation.

The recommended season of use is consistent with season of use standards for irrigation developed by IDWR for various climatic regions throughout the state, which are based on a 75% chance of a 24 degree Fahrenheit frost. In addition, the director’s report included general provision 12b, which allowed use of water for irrigation outside the season of use stated in the description of the individual right subject to certain conditions. In the Memorandum Decision and Order Re: Basin-Wide Issue 5, the Presiding Judge concluded that general provision 12 is not necessary and would not be decreed. This decision further provided that “all decrees for irrigation in the SRBA shall set the period of use as the “irrigation season.” Order, pp. 15-16. The district court denied a subsequent motion for permission to appeal the decision. Pending any further proceedings on the decision, any further statement of the basis for IDWR’s recommendation as to the season of use for irrigation appears to be unnecessary.

2. Stockwater

The notice of claim states a period of use 1/1 to 12/31 for stockwater. The claimant’s motion for summary judgment states the period of use as year-round, which is for all intents and purposes the same as recommended in the director’s report, which included a quantity for stockwater both within and outside the irrigation season.

3. Other purposes

As to the season of use for other purposes of use stated in the claimant’s motion for summary judgment, neither the claimant nor IDWR’s investigation has yielded information that would confirm the beneficial use of water for other purposes, as noted in section F above. Therefore, IDWR does not have information that would confirm the season of use for the other purposes.

I. Legal Description of the Place of Use

1. Irrigation

The legal description under item 8 in the claimant’s motion for summary judgment is the same as the legal description of the place of use for irrigation recommended in the director’s report. The number of acres following the legal description is the same as the number of irrigated acres per 40-acre subdivision recommended in the director’s report; both list the number of irrigated acres as 13.

2. Stockwater

The legal description of the place of use for stockwater recommended in the director's report is the same quarter-quarter section (40-acre tract) as the place of use for irrigation. The recommended place of use for stockwater is the same as the claimed place of use, and the claimant did not object to the recommended place of use for stockwater. In the claimant's motion for summary judgment, the claimant asserts that stockwater is used in the same quarter section where there are irrigated acres. Neither the claimant nor IDWR's investigation has yielded information that would confirm the beneficial use of water for stockwater purposes pursuant to this right on the other three quarter-quarter sections within the quarter section.

3. Other purposes

As to the legal description of the place of use for other purposes of use stated in the claimant's motion for summary judgment, neither the claimant nor IDWR's investigation has yielded information that would confirm the beneficial use of water for other purposes, as noted in section F above. Therefore, IDWR does not have information that would confirm the place of use for the other purposes.

J. Annual Volume of Consumptive Use

The notice of claim states an annual volume of consumptive use of 39 AFY, or 3.0 AFY per irrigated acre. The annual volume of consumptive use recommended in the director's report is the same. The claimant's objection contests the recommended consumptive use, but does not state an amount. The claimant's motion for summary judgment states an amount of 58.5 AFY, or 4.5 AFY per acre. The Affidavit of Charles E. Brockway, submitted by the claimant in support of the motion for summary judgment, states "that 3.75 acre feet per acre per annum is the amount of consumptive use that is reasonable [in the Hagerman area] based upon a yield of ten tons [of alfalfa] per acre." Applying this standard, the total annual consumptive use volume would be 48.75 AFY.

IDWR developed standards for annual volume of consumptive use for the various climatic areas throughout the state. The standard for the area in which the claimant's place of use is located is 3.0 AFY. IDWR's recommendation is based on this standard. The development of IDWR's standards for annual volume of consumptive use is described in IDWR's Report Regarding Evaluation of Irrigation Diversion Rates. IDWR has conducted further analysis of the annual volume of consumptive use based on further information IDWR received subsequent to its

original analysis. The further analysis is described in IDWR's Report Regarding Consumptive Use for Irrigation in the Hagerman Area. Based on this further analysis, IDWR recommends an annual volume of consumptive use of 3.5 AFY per acre, for a total of 45.5 AFY for this right.

In response to the request of the Presiding Judge, the director filed an Amended Director's Report for Reporting Area 3 (Basin 36), which substantially reduced the number of general provisions in the director's report. Attachment 2 to the amended report explains the changes made to the general provisions, and further explains the changes to the list of recommended rights necessitated by the changes to the general provisions. The amended report deleted General Provision 14, which established that the recommended consumptive use is for the irrigation portion of the right only. As a result, the description of the annual volume of consumptive use for this right should contain the following language:

THE CONSUMPTIVE USE VOLUME IS ONLY FOR THE IRRIGATION PORTION OF THIS RIGHT.¹⁴

K. Conditions on the Exercise of the Right and Other Necessary Matters

The recommendation of this right in the director's report includes the following remarks:

WATER IS DELIVERED THROUGH THE BUCKEYE DITCH.
0.15 CFS OF THIS RIGHT IS LIMITED TO USE FOR CONVEYANCE LOSSES IN DELIVERY OF THIS RIGHT.

The claimant's objection seeks deletion of the conveyance loss remark. The claimant's motion for summary judgment seeks deletion of both remarks.

In response to the request of the Presiding Judge, the director filed an Amended Director's Report for Reporting Area 3 (Basin 36), which substantially reduced the number of general provisions in the director's report. Attachment 2 to the amended report explains the changes made to the general provisions, and further explains changes to the list of recommended rights necessitated by the changes to the general provisions. The amended report deleted General Provision 16, which set forth certain provisions as to conveyance losses. The conveyance loss remark in the

¹⁴ IDWR relied upon the following in reaching its conclusion: Idaho Code §42-1401A (Supp. 1996) (which provides that the determination of the annual volume of consumptive use for all uses of water other than irrigation need not be decreed unless reported in the director's report).

description of the individual right was a corollary to the general provision. As a result, the remark in the description of this right as to conveyance losses is no longer necessary. (Deletion of the remark does not change IDWR's recommendation as to the quantity for this right.)

In response to the request of the Presiding Judge, IDWR submitted IDWR's Report for September 19, 1995 Status Conference. In this report, IDWR indicated that it had reviewed its use of remarks in the description of the individual water right, both to address concerns identified by the court, and to separate explanatory material from material the Director recommends be included in the decree of water rights pursuant to the 1994 amendments to the adjudication statute.¹⁵ The remark identifying the common name of the ditch through which the water right is delivered is explanatory material.

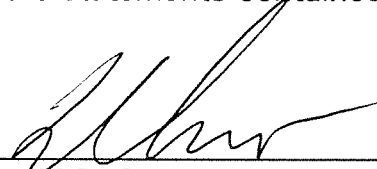
¹⁵ See Idaho Code §42-1411 (which addresses the form and content of director's reports).

REPORT REGARDING CLAIM TO WATER RIGHT NO. 36-00003A

State of Idaho)
) ss.
County of Ada)

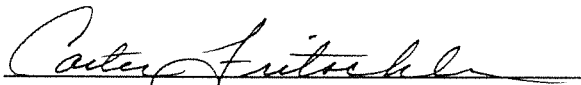
David B. Shaw, being first duly sworn, upon oath, deposes and says:

That I am the Adjudication Bureau Chief for IDWR, that I have read the foregoing report, know its contents, and that the statements contained therein are true to the best of my knowledge and belief.



David B. Shaw

Subscribed and sworn to before me this 1st day of July, 1996.

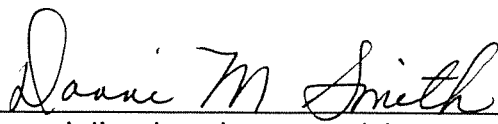


Notary Public for Idaho
Residing at: Kuna, Id
My commission expires: 3-21-2000

Certificate of Service

I certify that on the 1st day of July, 1996, I hand-delivered copies of the foregoing document, including all attachments to the following:

Patrick D. Brown
133 Shoshone St North
Twin Falls, ID 83303



Person delivering document(s)

APPENDIX A

A. INVESTIGATION AND RECOMMENDATION OF CLAIMS GENERALLY

To promote the accuracy and consistency of water right decrees, and to minimize the burden on the court and the claimants in a water right adjudication, the state has made the specialized expertise of IDWR available through IDWR's investigation and reporting function.¹

The resources the state has made available for this function, however, are limited. IDWR has the duty to conduct a reasonable investigation within the spending authority granted by legislative appropriation. Those resources are not sufficient for IDWR to exhaustively investigate each and every potentially relevant fact regarding each and every claim and to make a conclusive determination of the water right. Rather, IDWR reviews the claim and the information already available to IDWR, and conducts such further investigation as is reasonable to determine whether there is sufficient information to support recommendation of the water right to be decreed.

To make the most efficient use of the available resources, IDWR must make determinations as to what is a reasonable level of investigation for various classes of claims prior to making a recommendation to the court regarding any particular claim. IDWR has employed two primary mechanisms to identify a reasonable level of investigation. First, the statutes set criteria and IDWR has developed standards for various types of uses, requiring less information to support a claim to water within those standards and more information to support a claim outside those standards. Second, IDWR has adopted a "tier" approach, identifying classes of claims which for various reasons merit further investigation.

Generally, with claims based on beneficial use², IDWR conducts a "licensing type" field exam, which includes confirmation of the source, point(s) of diversion, purpose(s) of use, place(s) of use, and an examination of the water delivery system and the quantity of water beneficially used. IDWR also contacts the claimant to obtain information supporting the priority date claimed. This level of examination is conducted because there has been no prior administrative or judicial

¹ Idaho Code §§ 42-1410 and 42-1411.

² Water rights based on beneficial use are sometimes referred to as constitutional rights or grandfather rights.

confirmation of the existence and extent of a water right based on beneficial use.³

Generally, for water rights that have been previously confirmed by license or decree, IDWR begins its examination by comparing the claim to information already available to IDWR. Other information includes, for example, IDWR's decree files; license, permit and transfer files; remotely sensed data, including Landsat imagery of irrigated acres and aerial photography; watermaster reports; applicable laws and IDWR's interpretation of those laws in light of the water resource policies of the state; etc. If there are discrepancies between the claim and information already available to IDWR, IDWR conducts further investigation to resolve the discrepancy, which generally includes a field exam and/or contacting the claimant for further information. Thus, where there has been a prior judicial or administrative confirmation of the existence and extent of a water right, IDWR uses information already available to IDWR to limit its review to issues identified by its discrepancy analysis.

Finally, IDWR uses both the court-ordered notice of error process⁴ and the statutory objection process to identify claims which merit further review. If this further review yields new information that supports a different description of the water right, then IDWR will revise its recommendation (in the case of a notice of error) or submit a supplemental director's report or offer a standard form 5 (in the case of an objection), consistent with the new information.⁵

Further information as to IDWR's standards and procedures for the investigation and recommendation is set forth in IDWR's Claim Investigation Manual, Field Examiner's Handbook, Administrative Memorandums, and

³ IDWR conducts a more summary investigation of beneficial use claims limited to domestic and/or stockwater use up to 0.24 cfs.

⁴ The notice of error process, as originally conceived and implemented, was limited to disagreements between the claimant and IDWR as to fairly straight-forward "errors", such as clerical errors or other readily verifiable matters. Based on its experience in the test basins, IDWR has subsequently recommended that the notice of error process be expanded to address any type of perceived error, as well as to address disagreements between claimants.

⁵ This "tiered" approach to determining a reasonable level of investigation is embodied in the statutory framework for water right adjudications. See §42-1410 (which provides for the discretion of the director in determining the level of IDWR's investigation, and allows but does not require the agency to conduct hearings), and §42-1412 (which authorizes IDWR to submit supplemental reports, and authorizes the court or the parties to request further investigation by IDWR in contested subcases). The tiered approach embodied in the statutory framework promotes efficiency and minimizes the burden on the court and the claimants by providing a report/objection process to identify disputed matters, and reserving the highest level of investigation for disputed matters.

Adjudication Memorandums.⁶

B. METHODOLOGY TO DETERMINE IRRIGATED ACREAGE

The area of irrigated acreage can be determined by information obtained from scaled and non-scaled photographs of the place of use supplied by one of several U.S. government agencies. The use of aerial photography by the U.S. government dates back to 1937, when the U.S. Department of Agriculture, Agricultural Stabilization and Conservation Service (ASCS, now known as the Farm Service Agency, or FSA) began photographing selected counties of the United States on a repetitive basis. This coverage continues today and aerial photos are used by the ASCS (FSA) to figure acreage planted on farms for purposes of managing farm programs. Photos used by IDWR typically include: ASCS photos and 35 mm color slides⁷; NAPP photos⁸; ortho-photoquads⁹; and U2

⁶ These documents set forth general standards and procedures and do not address all possible exceptions to the general standards and procedures. In addition, as a result of its experience in the test basins, statutory changes, judicial decisions, etc., IDWR has identified refinements and revisions to its standards and procedures for the investigation and recommendation of claims that have not yet been included in these documents.

⁷ Both the photos and slides are high oblique and vertical aerial photography. The ASCS photos are scaled and have selected features, such as roads, section lines, ditches, and field acreage superimposed on them by the ASCS. The color slides are simply color slides frequently taken with hand-held 35mm equipment. IDWR staff typically obtain copies (which are not scaled) of maps for lands claimed as the place of use during the investigation of the claims, either from the claimant or from the local ASCS office. Color slides may also be checked-out from the local ASCS office as needed; IDWR sometimes obtains the color slides as they are discarded by the local ASCS office.

⁸ NAPP (National Aerial Photography Program) photos are all color-infrared aerial photography. IDWR obtained coverage for most of the Snake River Basin, including all of the test basins; the photos are primarily from flights during 1987 and 1988, though some are from 1986 or 1989. The date of the flight is shown on the photo. NAPP photography is available from the U.S. Geological Survey Earth Resources Observation Systems (EROS) data center in Sioux Falls, South Dakota.

⁹ The full name for an ortho-photoquad is "orthographic photograph quadrangle." These are black and white photoimages prepared from aerial photographs that have been rectified to eliminate image displacement due to terrain relief that cover a systematically subdivided area of latitude and longitude. IDWR obtained coverage for most of the Snake River Basin, including all the test basins; the photos are primarily from flights during the 1970's. The date of the flight is shown on the quad sheet. Most of the orthophotos were obtained from the U.S. Geological Survey National Cartographic Information Center (NCIC) in Menlo Park, California. In some areas, maps were not available from U.S.G.S. but were available from other agencies, such as the United States Department of Agriculture, Forest Service.

aerial photos¹⁰.

A photographic "scale," like a map scale, is an expression that states that one unit of distance on a photograph represents a specific number of units of actual ground distance.

$$S = \text{Photo scale} = \frac{\text{Photo distance}}{\text{Ground distance}} = \frac{d}{D}$$

The scale may be expressed as unit equivalents, representative fractions, or ratios. For example, if 1 mm on a photo represents 25 m on the ground, the scale of the photo can be expressed as 1 mm = 25 m (unit equivalents), or 1/25,000 (representative fraction), or 1:25,000 (ratio).

The photo(s) used by IDWR personnel have varying scales. The ASCS photographs have map features drawn in by the ASCS. These photos are stated to be "not to scale," but do include the field acreage as determined by ASCS written on the places of use. NAPP photography is at a nominal scale of 1:40,000; U2 aerial photography is at a nominal scale of 1:120,000; and ortho-photoquads have a scale of 1:24,000.

To determine the area used, IDWR staff employed various transparent overlays, known as grid templates. These templates are available at most blueprint supply stores. One type consists of lines forming rectangles or squares of known area in the same scale that is utilized in the scaled photograph. The grid is placed over a scaled photograph and the area of a ground unit is estimated by counting grid units that fall within the unit to be measured.

Another commonly used grid is the dot grid, which is composed of uniformly spaced dots on a transparent overlay. The grid is placed over the photograph and the dots falling within the region to be measured are counted. The value assigned to each dot is dependent on the scale of the photograph. First, the number of acres per centimeter (or other measuring unit) is computed. This figure is then divided by the number of dots per measuring unit on the grid to obtain the acreage represented by each dot. For instance, a square 3.4 cm on each side containing 640 dots will cover 160 acres on a photo with a nominal

¹⁰ These photos are color-infrared aerial photography obtained by the National Aeronautics and Space Administration (NASA) Airborne Instrumentation Research Project, and available from EROS. IDWR obtained coverage of most of the southern portion of the Snake River Basin, most of which was flown in 1977. In addition, because the State of Idaho was part of an ongoing project with NASA to photograph selected areas, photography from various areas in various years is also available. The date of the flight is shown on the photo.

scale of 1:24000; 640 dots divided by 160 acres equals 4 dots to the acre, thus 1 dot equals 0.25 acres.

Because of its simplicity, the grid system is a practical method to determine the size of irrigated areas; it nonetheless requires some training and experience to be used effectively.

For non-scaled photos, such as the ASCS 35 mm photos, IDWR did not directly make acreage determinations. Instead, these photos were used to confirm whether the place of use and amount of irrigated acreage had changed for that year according to common landmarks visible in the photographs.

APPENDIX B

EVALUATION OF IRRIGATION DIVERSION RATE

WATER RIGHT NUMBER: 36-00003A

INTRODUCTION

This water right was recommended in the Director's Report with a diversion rate of 0.41 cfs. A portion of that total amount was recognized as the on-farm diversion requirement, and the remaining amount as conveyance loss. Based on IDWR's methodology to evaluate irrigation diversion rates, the quantity required on-farm was recommended as 0.26 cfs, or 0.02 cfs per acre for 13 acres, with an additional 0.15 cfs for conveyance loss. The total, 0.41 cfs, is equivalent to a total per acre rate of diversion of approximately 0.032 cfs per acre.

Because IDWR has received new information and has refined the methodology since the time of the original analysis of irrigation diversion requirement, a revised analysis has been completed. The revised analysis is based upon information already contained in the claim file and the new information detailed in this report. An expanded explanation of the methodology used is contained in the report entitled Report Regarding Evaluation of Irrigation Diversion Rates, dated July, 1996. Hereinafter, that report will be referred to as IDWR's Methodology Report.

Several factors must be considered when determining the necessity of an irrigation diversion rate greater than 0.02 cfs per acre. Those factors are crop types, irrigated acres, types of irrigation systems used, evapotranspiration estimates, field application efficiencies, and conveyance loss. These items are discussed in the following paragraphs, along with the results of the analysis.

IRRIGATED ACRES/CROPS

The property described on the claim as the place of use was found to have 13 acres of irrigated land. The 13 irrigated acres include 6 acres of alfalfa and 7 acres of pasture. As shown in Figure 1 of the Attachments, the 6 acres of alfalfa consist of a rectangular shaped field at the north end of the property bounded on the east by the Buckeye Ditch and on the north by a road, while the other 7 acres border the southern edge of the alfalfa field and extend south to the Buckeye Ditch and west to another road. The fields are irrigated using a corrugation system.¹

¹Information as to crop types and irrigation method was verbally provided by Mrs. Verl Bell, the claimant's daughter-in-law, to IDWR Senior Agent Steve Clelland on July 13, 1992.

EVAPOTRANSPIRATION

Evapotranspiration is the amount of water evaporated from the soil plus the amount used by a crop during crop growth. IDWR's estimate used for evapotranspiration (ET) for the Hagerman area has been refined since the original analysis of required diversion rate was completed. Originally, the monthly consumptive irrigation requirements for the Bliss weather station were used, based on consumptive irrigation data estimated by Allen and Brockway². IDWR has since obtained information allowing adjustments to the values that more accurately represent conditions in the Hagerman area. This process is outlined in the section of IDWR's Methodology Report titled EVAPOTRANSPIRATION (CROP CONSUMPTIVE USE) and the resulting ET values are summarized in Table 1 of the Attachments.

The ET values used in calculations for alfalfa are shown under the column titled ETR (reference ET) in the table. The reference ET, rather than the alfalfa ET, is used when analyzing alfalfa because the effects of cuttings are not entirely accounted for in the alfalfa ET values. Thus, the reference ET gives a better representation of the ET rates for alfalfa that are likely to occur during the peak water use period. The ET values used for pasture are shown under the column titled PAST in the same table as the one described above. For each month of the irrigation season, the values in the row titled 80PCT ET are used. This represents the 80th percentile value for ET. The reasoning behind the use of these particular ET numbers is further explained in the EVAPOTRANSPIRATION section of IDWR's Methodology Report.

FIELD APPLICATION EFFICIENCY

In order to calculate the field application efficiency, several elements must first be considered. Among these elements are the slope, approximate furrow lengths, furrow spacings, and set time for each field. Additionally, the soil information described below is necessary.

Soil Information

Some data unique to each soil type are required for the analysis, including the management allowed deficit (MAD) and intake family. The MAD is based on the maximum soil moisture deficit which will not cause the crop to exceed its stress point. Intake family is a classification of soils with similar water intake rate characteristics. The Natural Resources Conservation Service (NRCS), formerly Soil Conservation Service (SCS), compiles soil surveys describing the various soil types within the state and the locations where those soils may be found. The procedure used to determine the value of MAD and intake family using SCS data is described in the sections of IDWR's Methodology Report titled NET IRRIGATION APPLICATION and IRRIGATION

²Allen, R.G. and C.E. Brockway, Appendix E (unpublished)

APPLICATION SYSTEMS. In order to use the correct values for MAD and intake family, it is necessary to determine the worst-case significant soil for each field if more than one soil type is present in that field.

There are two different soil types on the property described as the place of use for this water right. These soils are Kecko Fine Sandy Loam - Hardpan Substratum (KEB) and Kecko Fine Sandy Loam (KOB). The alfalfa field consists entirely of one soil type, KOB, while the pasture is approximately 70% KOB and 30% KEB. Based on aerial photography³, the pasture appears to be divided by a small ditch running generally northwest to southeast. The soils map supplied by SCS indicates that the pasture on the east side of the ditch consists wholly of the soil type KOB, while the pasture on the west side is entirely KEB. For this reason, the pasture area is analyzed as two separate fields with different soil types. Figure 1 shows the layout of the soil types as they relate to the location of the fields described by this claim.

For the land having soil type KOB, there is a field where alfalfa is grown and another area where pasture is grown. Thus, an MAD value for KOB must be known for both alfalfa and pasture. The MAD for alfalfa is 2.89 inches and the MAD for pasture is 1.99 inches. For the land having soil type KEB, the only crop grown is pasture, so an MAD value for KEB must be known. That value is 2.24 inches. The MAD values are provided in Tables 2 and 3 of the Attachments. These tables were created using a spreadsheet developed by IDWR to simplify calculations to determine MAD and intake family.

There are two procedures described in the section of IDWR's Methodology Report entitled IRRIGATION APPLICATION SYSTEMS for determining intake family. The alternative procedure is considered a refinement for some soil conditions and is used where available. The furrow intake family for KEB was found by one procedure to be 0.55 and by the alternative procedure to be 0.70. Because the alternative procedure provided a more representative value, 0.70 was chosen for analysis. Since the alfalfa was analyzed with only soil type KOB, the furrow intake family for that soil, 0.55, was used. These intake families are also shown in Tables 2 and 3.

Field Slope

Field slopes were determined based on USGS topographic maps. An estimate

³Photos used are all color-infrared aerial photography. They were obtained through projects coordinated by the federal government, including the National Aerial Photography Program (NAPP) and the National Aeronautics and Space Administration (NASA) Airborne Instrumentation Research Project.

NAPP photo used is: Photo No. 419-59, dated 6/25/1987.

NASA photos used are: Photo No. 6134, Flight No. 75-131, FSR 706, dated 6/8/1975; Photo No. 2471, Flight No. 77-134, FSR 1049, dated 10/8/1977; Photo No. 3472, Flight No. 80-152, FSR 1462, dated 9/17/1980; and Photo No. 2314, Flight No. 83-095, FSR 1760, dated 6/7/1983.

of the average slope from top end to bottom end of furrows was calculated for each field. To calculate these slopes, it was necessary to make a determination as to the direction of furrows. Those determinations were based on the available aerial photography and information in the claim file, where available. The field slopes of both the alfalfa field and the west pasture were estimated to be 1 percent, and the slope of the east pasture was estimated at 1.5 percent.

Furrow Lengths

The furrow lengths were determined using the same topographic maps and aerial photos. If fields appeared to have a rectangular shape, an average length was used. If fields did not appear to have consistent furrow lengths throughout, several furrow lengths were evaluated for that field. For instance, furrow lengths for the pasture area on the east side of the property were scaled from the map to vary from approximately 150 feet to 550 feet. The furrow lengths for the west pasture and the alfalfa were scaled to be approximately 300 feet and 680 feet, respectively.

Use of cross-ditches or gated pipe to reduce the furrow length is an alternative irrigation practice which will improve the efficiencies of fields with high intake rate soils if set times and inflow rates are adjusted appropriately. This alternative is not considered reasonable if it would result in furrow lengths less than 300 feet. A length of 300 feet is considered by IDWR to be a minimum practical length for farm cultivation practices.

Furrow Spacing/Set Times

When the system efficiencies were calculated, 30 inch furrow spacings were used. In addition, both 8 hour and 12 hour set times were analyzed and compared.⁴ Although the actual practice for these fields is to use 12 hour set times, 8 hour set times were also examined to determine whether that change would significantly increase the overall efficiency of the system. Eight hour set times are considered acceptable irrigation practices which can be used during the peak water use period to improve application efficiencies.

Results

Field application efficiencies are estimated using a computer program developed by SCS for use with furrow irrigation and provided with the Hubble Report⁵. Efficiencies less than 15 percent or greater than 70 percent are outside the practical

⁴These furrow spacings and set times were based on information provided in a 1992 telephone conversation with Mrs. Bell, at which time she stated that the furrow spacings were 30 inches and the set times were 12 hours.

⁵The Hubble Report is a common name given to a pair of reports developed for IDWR in July, 1990 by Hubble Engineering, Inc. and Associated Earth Sciences, Inc. entitled "Guidelines for the Evaluation of Irrigation Diversion Rates" and "Evaluation Workbook for Irrigation Diversion Rates".

limits of the program. In cases where efficiency is estimated to be greater than 70 percent, an efficiency of 70 percent is used. In addition, the program does not recognize erosive flows or furrow carrying capacities. The limiting erosive flow is dependent on the slope of a particular field and must be calculated for each field. In this case, the limiting erosive flow for the east pasture would be 27 gpm and the limiting erosive flow for both the west pasture and the alfalfa field would be 40 gpm. The practical carrying capacity limit of corrugations is 10 gpm. The term identified in the program as design application is equivalent to the MAD, as determined above. Refer to the section FIELD APPLICATION EFFICIENCY in IDWR's Methodology Report for more information regarding the methodology used in determining field application efficiency.

The pasture on the east side of the ditch has a somewhat irregular shape, with furrow lengths varying from 150 feet on one end of the field to 550 feet on the other. For this reason, several furrow lengths between 150 feet and 550 feet were evaluated in order to develop an overall efficiency for the field. An analysis based on splitting the field to create shorter furrow lengths was not necessary, since it would result in furrows shorter than 300 feet throughout the field, which are below the limits set by IDWR. Set times of 8 and 12 hours were considered, and an irrigation method using 8 hour set times using appropriate inflow rates resulted in an optimum efficiency overall. The efficiencies estimated for all the furrow lengths were averaged to obtain an efficiency for the field as a whole. As explained above, those efficiency calculations greater than 70 percent were reduced to 70 percent in determining the average. The overall efficiency was found to be 69 percent. The results of these calculations are shown in Table 4 of the Attachments, which depicts the computer output generated by the SCS program.

The furrows for the west pasture are less than 600 feet in length. Splitting that pasture for analysis purposes would result in furrow lengths less than 300 feet. Therefore, the full furrow length was considered for that field. Set times of 8 and 12 hours were considered, and an irrigation method using 8 hour set times provided a substantially better efficiency. For this pasture, the SCS program computed an efficiency of 73 percent for the 8 hour set time and 48 percent for the 12 hour set time. Therefore, an efficiency of 70 percent was used.

For the alfalfa, efficiency estimates were made for full furrow lengths of 680 feet and also for 340 foot lengths, to determine which of those alternatives produced a more reasonable efficiency. In addition, set times of both 8 hours and 12 hours were analyzed. Twelve hour set times resulted in substantially better efficiencies than 8 hour set times, regardless of whether 680 foot or 340 foot lengths were used. In both cases, this was due to the fact that there is more runoff using the 8 hour set times, because of the higher inflow rates required to apply the design application in 8 hours. If a lower inflow rate is used, it takes longer to apply the design application, which results in less runoff and a greater efficiency. The optimum field application

efficiency for 8 hour set times was 61 percent with 680 foot furrow lengths; for 12 hour set times, the optimum efficiency was computed to be 85 percent with 340 foot furrow lengths. Thus, a value of 70 percent was used. See Table 4 for results.

ON-FARM IRRIGATION DIVERSION REQUIREMENT

The on-farm irrigation diversion requirement is the amount of water needed on the farm itself to provide adequate water to the crop(s) being grown. The procedure used to determine that amount is described in detail in the section of IDWR's Methodology Report titled ON-FARM IRRIGATION REQUIREMENT. The results of that procedure are provided in Table 5 of the Attachments. Table 5 was created using a spreadsheet developed by IDWR which utilizes the information detailed above and calculates the irrigation diversion requirement. The resulting maximum diversion rate requirement for the entire 13 acres was determined to be 0.30 cfs, or 0.023 cfs per acre.

CONVEYANCE LOSS

When water is conveyed through an earthen delivery ditch, a certain portion of the total flow is lost through seepage into the ground. The method used to estimate seepage losses is referred to as the Worstall method, which is further explained in the CONVEYANCE LOSS section of IDWR's Methodology Report. The Worstall method relies on the characteristics of the soil, the ditch width, and the ditch length to estimate the actual seepage losses of the ditch. IDWR has developed a spreadsheet which calculates the total conveyance loss estimate on a ditch and prorates that loss among the reaches of the ditch based on the total amount of water removed from each reach of the ditch and the location of each reach.

In the original analysis of conveyance loss for the Buckeye Ditch, delivery locations were identified along the entire ditch. In some cases, more than one right is supplied from a single reach of the ditch. The total conveyance loss estimate for all water use from that reach of the ditch was calculated using the spreadsheet based upon the Worstall method. If there were found to be multiple users removing water from the same reach of the ditch, the conveyance loss estimate for that reach was divided equally among those users. This approach was used along the entire length of the Buckeye Ditch.

It would not be practical or meaningful for IDWR to re-evaluate the conveyance loss attributable to this right for two primary reasons. First, because the Worstall method does not depend on total flow in a ditch, but rather the top width of the water surface and the ditch length, the total conveyance loss estimate for the ditch would not change even if the determinations of individual water rights were to vary from IDWR's recommendations. The only change might be the allocation of the total conveyance loss among the individual water rights. However, not all of the water

rights on the ditch are contested, and of those that are contested, not all are presently before the special master. In addition, no historical method for allocation of conveyance loss exists to use as a basis for distribution of conveyance losses for water rights along this ditch. For all these reasons, the recommended conveyance loss amount remains at 0.15 cfs.

IRRIGATION DIVERSION REQUIREMENT

The total irrigation diversion requirement is the sum of the on-farm irrigation diversion requirement and the conveyance loss. For this right, the total amount is 0.30 cfs + 0.15 cfs, or 0.45 cfs.

REFERENCES

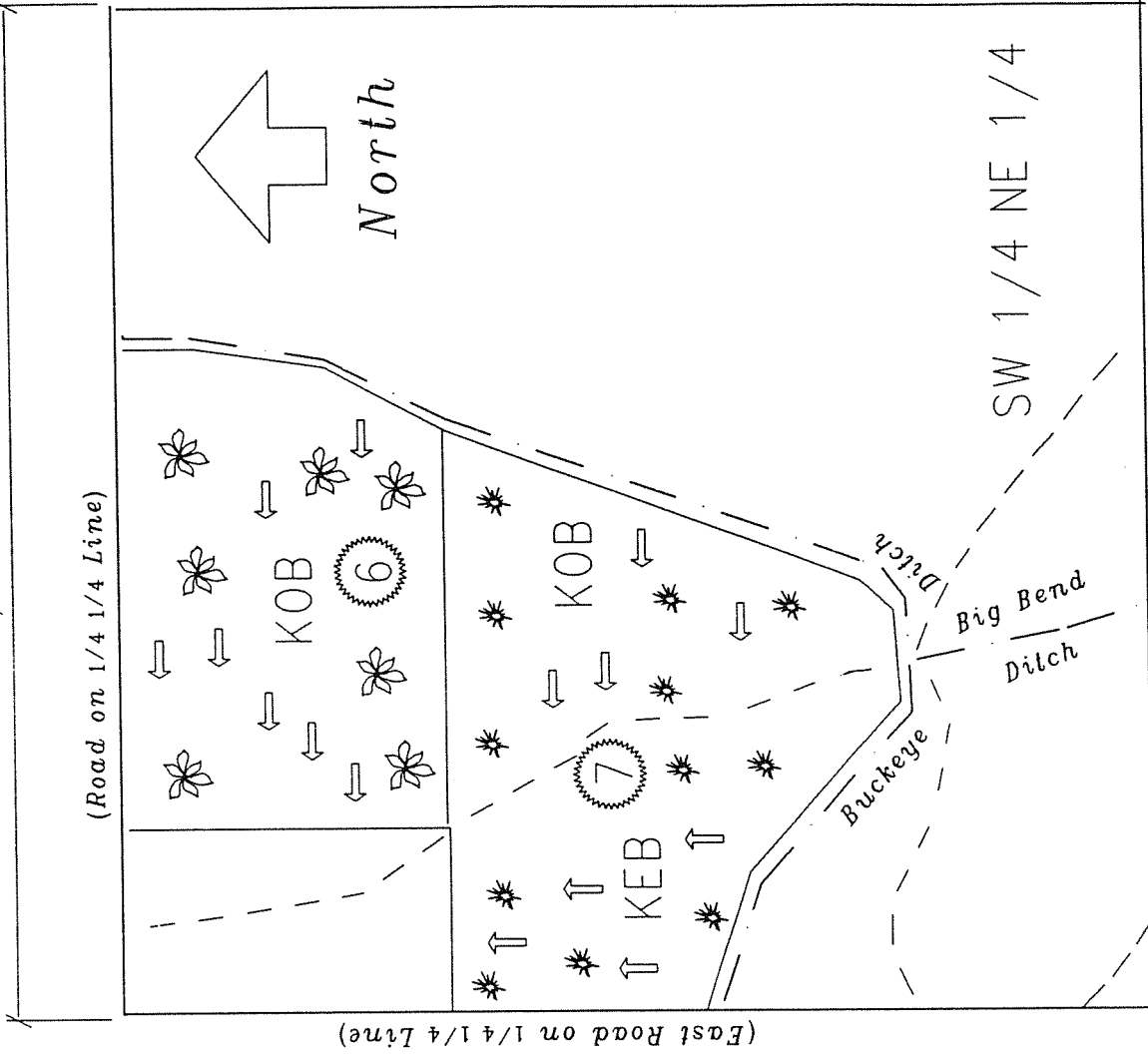
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- National Aerial Photography Program, Color-infrared aerial photography, Flight dates June 25, 1987, August 1, 1988.
- Soil Conservation Service (now Natural Resources Conservation Service) - Gooding, Idaho office, 1992, Unpublished soil survey data.

ATTACHMENTS

T. 7 S., R. 13 E.
 Section 27
 Gooding County

FIGURE 1

1/4 MILE



Legend:

⇌ Furrow Direction

KOB Soil Type

--- Soil Type Division Line

--- Ditch

— 1/4 1/4 Line

7 Irrigated Acres

★ Pasture

✿ Alfalfa

Water Right No. 36-00003A

Table 1

80th Percentile values of monthly ET estimated for
the Hagerman Valley adjusted from the Bliss Station
(mm/day)

	MO	ETR	ALFH.	BEANS	F.CRN	SILGE	S.CRN	PEAS	POTAT	SBEET	SGRAN	WGRAN	PAST.	VEGES
AVE ET	4	5.28	3.30					1.60	1.58	1.58	1.65	4.82	3.27	
TMP ADJ	4	5.68	3.55					1.72	1.70	1.70	1.77	5.18	3.52	
ALT ADJ	4	5.75	3.59					1.74	1.72	1.72	1.80	5.25	3.56	
STDD ET	4	0.47	0.29					0.14	0.14	0.14	0.15	0.43	0.29	
ADJ STDD	4	0.80	0.49					0.24	0.24	0.24	0.26	0.73	0.49	
80PCT ET	4	6.42	4.01					1.94	1.92	1.92	2.01	5.86	3.97	
AVE ET	5	6.79	6.29	2.04	2.04	2.04	2.04	3.85	2.19	2.04	5.11	6.79	5.23	2.07
TMP ADJ	5	7.18	6.65	2.16	2.16	2.16	2.16	4.07	2.31	2.16	5.40	7.18	5.53	2.19
ALT ADJ	5	7.27	6.73	2.18	2.18	2.18	2.18	4.12	2.34	2.18	5.47	7.27	5.60	2.21
STDD ET	5	0.49	0.46	0.15	0.15	0.15	0.15	0.28	0.16	0.15	0.37	0.49	0.38	0.15
ADJ STDD	5	0.80	0.75	0.25	0.25	0.25	0.25	0.46	0.26	0.25	0.61	0.80	0.62	0.25
80PCT ET	5	7.94	7.37	2.39	2.39	2.39	2.39	4.51	2.56	2.39	5.98	7.94	6.12	2.42
AVE ET	6	8.41	7.32	3.26	3.66	3.66	3.53	6.82	5.77	3.91	8.39	8.41	6.47	4.40
TMP ADJ	6	8.82	7.68	3.42	3.84	3.84	3.70	7.15	6.05	4.10	8.80	8.82	6.79	4.62
ALT ADJ	6	8.93	7.77	3.46	3.89	3.89	3.75	7.24	6.13	4.15	8.91	8.93	6.87	4.67
STDD ET	6	0.47	0.41	0.18	0.21	0.21	0.20	0.38	0.32	0.22	0.47	0.47	0.36	0.25
ADJ STDD	6	1.27	1.11	0.49	0.57	0.57	0.54	1.03	0.86	0.59	1.27	1.27	0.97	0.68
80PCT ET	6	10.00	8.71	3.87	4.36	4.36	4.20	8.11	6.85	4.65	9.98	10.00	7.69	5.24
AVE ET	7	8.54	6.94	7.37	7.68	7.68	7.47	2.99	7.17	8.14	7.05	6.80	6.57	6.57
TMP ADJ	7	8.89	7.22	7.67	7.99	7.99	7.78	3.11	7.46	8.47	7.34	7.08	6.84	6.84
ALT ADJ	7	9.00	7.31	7.77	8.09	8.09	7.87	3.15	7.56	8.58	7.43	7.17	6.92	6.92
STDD ET	7	0.26	0.21	0.23	0.24	0.24	0.23	0.09	0.22	0.25	0.22	0.21	0.20	0.20
ADJ STDD	7	0.58	0.47	0.51	0.53	0.53	0.51	0.20	0.49	0.56	0.49	0.47	0.44	0.44
80PCT ET	7	9.49	7.71	8.20	8.54	8.54	8.30	3.32	7.97	9.05	7.84	7.56	7.30	7.30
AVE ET	8	7.18	5.41	4.97	6.63	6.63	6.38		5.57	7.06	1.47	1.32	5.53	5.72
TMP ADJ	8	7.50	5.65	5.19	6.92	6.92	6.66		5.82	7.37	1.53	1.38	5.77	5.97
ALT ADJ	8	7.59	5.72	5.25	7.01	7.01	6.74		5.89	7.46	1.55	1.40	5.84	6.05
STDD ET	8	0.33	0.25	0.23	0.30	0.30	0.29		0.26	0.32	0.07	0.06	0.25	0.26
ADJ STDD	8	0.70	0.53	0.49	0.64	0.64	0.62		0.55	0.68	0.15	0.13	0.53	0.55
80PCT ET	8	8.18	6.17	5.66	7.54	7.54	7.26		6.35	8.04	1.68	1.50	6.29	6.51
AVE ET	9	5.60	3.67	0.77	4.19	4.19			3.29	4.86			4.32	3.83
TMP ADJ	9	5.90	3.87	0.81	4.42	4.42			3.47	5.12			4.55	4.04
ALT ADJ	9	5.97	3.92	0.82	4.47	4.47			3.51	5.19			4.61	4.09
STDD ET	9	0.41	0.27	0.06	0.31	0.31			0.24	0.36			0.32	0.28
ADJ STDD	9	0.66	0.43	0.10	0.50	0.50			0.39	0.58			0.52	0.45
80PCT ET	9	6.53	4.28	0.90	4.89	4.89			3.84	5.67			5.04	4.47
AVE ET	10	3.73	1.26		1.04					2.48			2.88	
TMP ADJ	10	4.02	1.36		1.12					2.67			3.10	
ALT ADJ	10	4.07	1.37		1.13					2.70			3.14	
STDD ET	10	0.35	0.12		0.10					0.24			0.27	
ADJ STDD	10	0.47	0.16		0.14					0.32			0.36	
80PCT ET	10	4.46	1.51		1.25					2.98			3.45	

ET and standard deviation data (AVE ET and STDD ET) for Bliss weather station taken from Appendix E (unpublished) of Brockway, C.E., and R.G. Allen, 1983, Estimating Consumptive Irrigation Requirements for Crops in Idaho, Idaho Water and Energy Resources Research Institute.

Adjustments to standard deviation (ADJ STDD) based on Allen & Brockway Report, pp. 18, and Allen, R.G., and J.L. Wright, 1983, Variation Within Measured and Estimated Consumptive Use Requirements, Proceedings of the Irrigation and Drainage Specialty Conference of the American Society of Agricultural Engineers, Jackson Hole, Wyoming, July 20-22, 1983, pp. 1-12.

Temperature adjustment (TMP ADJ) based on temperature differences between Bliss and Hagerman and temperature sensitivity of ET estimates given in Brockway, C.E., G.S. Johnson, J.L. Wright, and A.L. Coiner, 1985, Remote Sensing for Irrigated Crop Water Use - Phase 1, Water Resources Research Institute, pp. 101-107.

Altitude adjustment (ALT ADJ) based on Doorenbos, J., and W.O. Pruitt, 1977, Crop Water Requirements, Food and Agriculture Organization of the United Nations, p. 59.

80th percentile ET values (80PCT ET) calculated based on Walpole, R.E., and R.H. Meyers, 1985, third edition, PROBABILITY AND STATISTICS FOR ENGINEERS AND SCIENTISTS, New York: Macmillan Publishing Company, pp. 132-144 and 574.

Table 2

SOIL CHARACTERISTICS initials: MS date: 04/15/96

Soil Type = Kecko Fine Sandy Loam *KEB*

Source of Soils Data = Printout From State SCS Office

soil depth (inches)		AWC (in/in)		PH		organic (%)		soil depth (ft)	AWC (inches)	intake family	
lower	upper	lower	upper	lower	upper	lower	upper			flood	furrow
0	14	0.1	0.12	6.6	7.3	0.5	1	1	1.32	2	0.55
14	27	0.12	0.16					2	2.94		
27	46	0.1	0.15					3	4.49		
46	61							4	5.74	alternate	
								5	5.74	method	
										3	0.7

Management Allowed Deficit (MAD)

crop	root depth (ft)	stress point	MAD (inches)
alfalfa (hay or seed)	5	0.5	2.87
corn (field or silage)	4	0.5	2.87
grain (winter or spring)	4	0.5	2.87
pasture (or grass hay)	3	0.5	2.24
other (enter below)			

For definition of terms, refer to the sections called NET IRRIGATION APPLICATION and IRRIGATION APPLICATION SYSTEMS of the IDWR report titled Report Regarding Evaluation of Irrigation Diversion Rates, dated July, 1996.

Table 3

SOIL CHARACTERISTICS initials: JP date: 11/23/92

Soil Type = KOB + KOC FSL
Source of Soils Data = SCS - GOODING

soil depth (inches)		AWC (in/in)		PH		organic (%)		soil depth (ft)	AWC (inches)	intake family	
lower	upper	lower	upper	lower	upper	lower	upper			flood	furrow
0	9	0.12	0.14	7.4	8.4	1	2	1	1.59	2	0.55
9	21	0.13	0.15					2	3.08		
21	60	0.03	0.12					3	3.98		
								4	4.88	alternate	
								5	5.77	method	
										2	0.55

Management Allowed Deficit (MAD)

crop	root depth (ft)	stress point	MAD (inches)
alfalfa (hay or seed)	5	0.5	2.89
corn (field or silage)	4	0.5	2.44
grain (winter or spring)	4	0.5	2.44
pasture (or grass hay)	3	0.5	1.99
other (enter below)			
beets	5	0.5	2.89
mint	3	0.5	1.99
beans	2	0.4	1.23
potatoes	3	0.35	1.39

For definition of terms, refer to the sections called NET IRRIGATION APPLICATION and IRRIGATION APPLICATION SYSTEMS of the IDWR report titled Report Regarding Evaluation of Irrigation Diversion Rates, dated July, 1996.

Table 4

	INTAKE FAMILY	DESIGN APPLIC. Inches	FURROW SLOPE Ft/Ft	FURROW SPACING Feet	FURROW LENGTH Feet	INFLOW RATE Gpm	APPROXIMATE INFLOW TIME Hours	ADVANCE TIME Minutes	GROSS	NET	DEEP PERC. In.	IRRIGATION EFFICIENCY %		
									IRRIGATION APPLICATION Inches	IRRIGATION APPLICATION Inches				RUNOFF Inches
are	0.55	1.99	.015	2.50	550	4.5	12	77.2	3.78	3.26	0.34	1.45	52.65	
	0.55	1.99	.015	2.50	550	5.0	8	67.7	2.80	2.41	0.21	0.60	71.07	—
	0.55	1.99	.015	2.50	450	3.5	12	67.6	3.59	3.16	0.27	1.33	55.38	
	0.55	1.99	.015	2.50	450	4.0	8	56.9	2.74	2.37	0.22	0.52	72.69	—
	0.55	1.99	.015	2.50	350	2.5	12	59.4	3.30	3.04	0.13	1.18	60.31	
	0.55	1.99	.015	2.50	350	3.0	8	46.3	2.64	2.31	0.22	0.43	75.38	—
	0.55	1.99	.015	2.50	250	2.0	12	36.2	3.70	3.02	0.60	1.11	53.84	
	0.55	1.99	.015	2.50	250	2.0	8	36.2	2.46	2.22	0.16	0.31	80.77	—
	0.55	1.99	.015	2.50	150	1.0	12	28.4	3.08	2.81	0.21	0.88	64.61	) —
	0.55	1.99	.015	2.50	150	1.5	8	16.6	3.08	2.20	0.84	0.25	64.61	
are	0.70	2.24	.010	2.50	300	3.0	12	51.8	4.62	4.01	0.45	1.93	48.49	
	0.70	2.24	.010	2.50	300	3.0	8	51.8	3.08	2.89	0.02	0.82	72.73	*
ifa	0.55	2.89	.010	2.50	680	5.5	12	130.6	3.74	3.28	0.10	0.74	77.34	
	0.55	2.89	.010	2.50	680	10.5	8	60.2	4.76	2.92	1.66	0.21	60.77	
	0.55	2.89	.010	2.50	340	2.5	12	76.8	3.40	3.07	0.15	0.36	85.08	*
	0.55	2.89	.010	2.50	340	7.5	8	23.3	6.79	2.89	3.84	0.07	42.54	

Average efficiency for east pasture : $70 + 70 + 70 + 70 + 65 = 68.92\%$

Use of this program and input requirements are described in the FIELD APPLICATION EFFICIENCY section of the IDWR report titled Report Regarding Evaluation of Irrigation Diversion Rates, dated July, 1996.

Table 5

FIELD IRRIGATION REQUIREMENT

initials: MS Claimant = Rea

date: 06/25/96 Weather Station = Bliss/Hagerman

crop	acres	irrig. system (%)	irrig. eff.	Monthly ET (mm/day)					AVE IR season (mm/yr)		net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season oct (mm/yr)
				mar	apr	may	jun	jul	aug	sep				oct	mar	apr	may	jun	jul	aug	
crop																					
alfh past	6	cor	70		6.42	7.94	10	9.49	8.18	6.53	4.46	2.89	1.09	6.7	10.00	12.36	15.57	14.78	12.74	10.17	6.94
	4	cor	69		3.97	6.12	7.69	7.3	6.29	5.04	3.45	1.99	1.11	5.9	6.39	9.85	12.37	11.74	10.12	8.11	5.55
	3	cor	70		3.97	6.12	7.69	7.3	6.29	5.04	3.45	1.99	1.11	5.9	6.30	9.70	12.19	11.58	9.97	7.99	5.47

Summary 13

8.03 10.98 13.81 13.10 11.29 9.03 6.18

Peak Gross Irrigation Application (mm/day) = 13.81
 On-Farm Irrigation Requirement (cfs/acre) = 0.023
 Total On-Farm Irrigation Requirement (cfs) = 0.30
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

State of Idaho)
) ss.
County of Ada)

Marci S. Sterling, being first duly sworn, upon oath, deposes and says:

That I am an Engineer for the Adjudication Bureau of IDWR, that I prepared the foregoing appendix, know its contents, and that the statements contained therein are true to the best of my knowledge and belief.

Marci S. Sterling
Marci S. Sterling

Subscribed and sworn to before me this 15th day of July, 1996.

J. Sherman
Notary Public for Idaho
Residing at: Boise ID
My commission expires: 11-14-1998

64B- OBJ.- Flavel- 9/10/1884

Brown
claim- irr.- 4.52 for 31 ac.
stock- incidental
rec'd- irr.- 0.72 for 19 ac.
D.R. = 0.56
C.L. = 0.16

**BUCKEYE
DITCH**
(lower)

3E- OBJ.- Vargo- 9/10/1884

HUBBLE
(Brown, atty.)
claimed- irr.- 0.20 for 10 ac.
rec'd- irr.- 0.20 for 5 ac.
D.R. = 0.20

OBJ.- Lord- 9/10/1884

va. atty.)
cd- no record found
irr.- 0.40 for 20 ac.
irr.- 0.12 for 3 ac.
C.L. = 0.03

OBJ.- Simcoe- 9/10/1884

va. atty.)
cd- no record found
irr.- 0.40 for 9 ac.
D.R. = 0.34
C.L. = 0.06

OBJ.- Brown- 3/30/1884

BLE
cd- irr.- 2.40 for 40 ac.
stock- 0.05 (125 range)
irr.- 1.05 for 40 ac.
stock- 0.05 summer
0.24 winter
C.L. = 0.19
D.R. = 0.86

OBJ.- Peterson- 3/30/1884

d- irr.- 2.40 for 34 ac.
irr.- 0.87 for 34 ac.
C.L. = 0.19

OBJ.- Babington- 9/10/1884

va. atty.)
cd- irr.- 0.30 for 10 ac.
irr.- 0.30 for 10 ac.
C.L. = 0.10

OBJ.- Simcoe- 9/10/1884

va. atty.)
cd- irr.- 0.80 for 40 ac.
irr.- 0.80 for 40 ac.

35E- OBJ.- Brown- 9/10/1884

AMNESTY
claimed- 3/8/1902
irr.- 0.24 for 8 ac.
rec'd- irr.- 0.10 for 3 ac.
C.L. = 0.04
(combined with 34E)
(8 ac. place of use)

35G- no obj. (Vargo)- 9/10/1884

claimed- 3/8/1902
irr.- 0.02 for 0.5 ac.
rec'd- dom.- 0.02

35C- no obj. (Hoffman)- 9/10/1884

claimed- 9/4/1884
dom.- 0.02
rec'd- dom.- 0.02

91A no obj. (Ellston)- 9/10/1884

HUBBLE
claim- irr.- 0.64 for 16 ac.
rec'd- irr.- 0.64 for 12 ac.
D.R. = 0.64

91B- no obj. (Fobes)- 9/10/1884

HUBBLE
claimed- irr.- 0.16 for 4 ac.
rec'd- irr.- 0.16 for 4 ac.
D.R. = 0.13
C.L. = 0.03

108M- Messersmith/Bothwell- 9/10/1884

HUBBLE
claimed- no records found
rec'd- irr.- 2.95 for 53.2
D.R. = 2.81
C.L. = 0.41

108N- Brooks- 9/10/1884

HUBBLE
claimed- irr.- 0.06 for 2.3
rec'd- irr.- 0.16 for 2.3
D.R. = 0.15
C.L. = 0.01

108L- Gridlev- 9/10/1884

HUBBLE
claimed- irr.- 1.46 for 3 ac.
rec'd- irr.- 0.17 for 3 ac.
D.R. = 0.16
C.L. = 0.01

35H- no obj. (Drage)- 9/10/1884

claimed- records not found
rec'd- irr.- 0.20 for 5 ac.
C.L. = 0.10

87- no obj. (Peterson)- 3/30/1884

HUBBLE
claimed- irr.- 2.40 for 31 ac.
rec'd- irr.- 2.40 for 31 ac.
D.R. = 1.55
C.L. = 0.35

35B- OBJ.- Sturtevant- 9/10/1884

claimed- irr.- 0.60 for 13 ac.
rec'd- irr.- 0.30 for 13 ac.
C.L. = 0.04

3A- OBJ.- Rea- 9/10/1884

(Brown, atty.)
claimed- irr.- 1.60 for 13 ac.
stock- 0.04 (19 range)
rec'd- irr.- 0.41 for 13 ac.
stock- 0.02 summer
0.17 winter
C.L. = 0.15

3K- no obj. (Gardner)- 9/10/1884

(Brown, atty.)
claimed- irr.- 0.71 for 10 ac.
rec'd- record not found

3L- no obj. (Babington)- 9/10/1884

(Brown, atty.)
claimed- irr.- 1.97 for 27.5 ac.
stock- 0.04
fish- 4.00
rec'd- record not found

3M- no obj. (Simcoe)- 9/10/1884

(Brown, atty.)
claimed- irr.- 1.32 for 18.5 ac.
rec'd- record not found

3B- OBJ.- Kingston- 9/10/1884

(Brown)
claimed- irr.- 7.16 for 129 ac.
stock- 0.05 (200 range)
fish- 7.16
rec'd- irr.- 5.00 for 129 ac.
stock- 0.05 summer
1.80 winter
D.R. = 3.25
C.L. = 1.75

3D- no obj. (Harrison)- 9/10/1884

HUBBLE
claimed- irr.- 0.24 for 10 ac.
rec'd- irr.- 0.24 for 2 ac.
D.R. = 0.24

3H- OBJ.- Buckeye Farms- 9/10/1884

(Rosholt, atty.)
claimed- irr.- 12.0 for 445
rec'd- irr.- 3.37 for 224
C.L. = 3.89
(combined with I)

BUCKEYE DITCH (upper ditch)

2A- OBJ. (Shokal)- 1/2/1891
 claimed- irr.- 1.64 for 37.8 ac.
 rec'd- irr.- 0.25 for 12 ac.
 C.L. = 0.01

371B- go obj. (Martin/King)- 11/17/1972
 claimed- irr.- 0.60
 rec'd- irr.- 0.96
 fish- 0.60
 stock- 0.96

271A- OBJ. (Shokal)- 11/17/1972
 claimed- irr.- 2.23
 rec'd- irr.- 3.68
 fish- 2.23
 stock- 3.68

39K- go obj. (Easterday)- 1/2/1891
 claimed- irr.- 0.20 for 13 ac.
 stock- 0.02 (25 range)
 rec'd- irr.- 0.20 for 13 ac.
 stock- 0.02 (25 range)

no obj. (Howard)- 9/10/1884
 HUBBLE
 claimed- irr.- 0.40 for 3.5 ac.
 rec'd- irr.- 0.34 for 3.5 ac.
 D.R. = 0.33
 C.L. = 0.01

no obj. (Beutler)- 9/10/1884
 HUBBLE
 claimed- irr.- 0.12
 rec'd- irr.- 0.03

OBJ. (White)- 9/10/1884
 HUBBLE
 claimed- irr.- 0.04 for 1.1 ac.
 rec'd- irr.- 0.04 for 1.1 ac.
 C.L. = 0.01

no obj. (Moore)- 9/10/1884
 HUBBLE
 claimed- irr.- 0.04 for 0.7 ac.
 rec'd- irr.- 0.04 for 0.5 ac.
 D.R. = 0.04

OBJ. (Miller)- 9/20/1884
 HUBBLE
 claimed- irr.- 0.20 for 4.3 ac.
 rec'd- irr.- 0.15 for 4.3 ac.
 D.R. = 0.14
 C.L. = 0.01

no obj. (Veenendaal)- 9/10/1884
 HUBBLE
 claimed- irr.- 0.10 for 1.7 ac.
 stock- incidental
 rec'd- irr.- 0.10 for 1.7 ac.
 D.R. = 0.10

no obj. (Fetter)- 9/10/1884
 HUBBLE
 claimed- irr.- 0.20 for 3.3 ac.
 stock- 0.02 summer
 stock- 0.03 winter
 rec'd- irr.- 0.20 for 3.3 ac.
 stock- 0.02 summer
 stock- 0.03 winter
 D.R. = 0.20
 C.L. = 0.01

no obj. (Moore)- 9/10/1884
 HUBBLE
 claimed- irr.- 1.00 for 20 ac.
 rec'd- irr.- 0.51 for 11 ac.
 D.R. = 0.50
 C.L. = 0.01

82B- no obj. (McKenzie)- 1/2/1891
 HUBBLE
 claimed- irr.- 0.12 for 3 ac.
 rec'd- irr.- 0.12 for 3 ac.
 D.R. = 0.12

82C- no obj. (Martin)- 4/1/1910
 HUBBLE
 claimed- irr.- 2.0 for ?
 rec'd- irr.- 0.12 for 7 ac.

108H- no obj. (Jones)- 9/10/1884
 HUBBLE
 claimed- irr.- 0.12 for 3 ac.
 stock- 0.02 (10 range)
 rec'd- irr.- 0.12 for 3 ac.
 stock- 0.02 summer
 stock- 0.03 winter
 D.R. = 0.12
 C.L. = 0.01 winter

108C- no obj. (Myers)- 9/10/1884
 HUBBLE
 claimed- irr.- 0.30 for 5 ac.
 stock- 0.02
 rec'd- irr.- 0.07 for 2 ac.
 stock- 0.02 summer
 stock- 0.03 winter
 C.L. = 0.01

48B- no obj. (Robinson)- 11/4/1885
 AMNESTY PRESUMPTION
 claimed- irr.- 0.18 for 2.0 ac.
 rec'd- irr.- 0.06 for 2.0 ac.

765B- go obj. (Kipp)- 11/16/1976
 (Brown, atty)
 claimed- irr.- 0.04 (1 home)
 rec'd- irr.- 0.04 (1 home)

65 OBJ.- Beckstead/Coates- 9/10/1884
 HUBBLE
 claimed- irr.- 0.70 for 35.4 ac.
 rec'd- irr.- 0.18 for 7.5 ac.
 C.L. = 0.01
 D.R. = 0.17

103C- OBJ.- Bolduc- 9/10/1884
 HUBBLE
 AMNESTY- 142-1425
 (Brown, atty)
 claimed- irr.- 0.04 for 2 ac.
 rec'd- irr.- 0.04 for 0.5 ac.
 D.R. = 0.04

103E- no obj. (Robinson)- 9/10/1884
 AMNESTY/PRESUMPTION
 claimed- (65)- irr.- 0.70 for 35.4
 rec'd- aesthetic 0.07 (stream & pond)
 C.L. = 0.01
 (claimed as 65; split)

103F- OBJ.- Zink- 9/10/1884
 (Brown, atty)
 claimed- irr.- 0.40 for 3.5 ac.
 rec'd- irr.- 0.34 for 3.5 ac.
 D.R. = 0.33
 C.L. = 0.01

108D- no obj. (Blandford)- 9/10/1884
 HUBBLE
 claimed- irr.- 0.14 for 2 ac.
 rec'd- irr.- 0.14 for 2 ac.
 D.R. = 0.14

108G- no obj. (Tussey)- 9/10/1884
 HUBBLE
 claimed- irr.- 0.02 for 1 ac.
 rec'd- irr.- 0.02 for 1 ac.

15463- OBJ.- Hagerman School Dist.- 10/12/1954
 (Brown, atty.)
 claimed- irr.- 0.20 for 4.0 ac.
 rec'd- irr.- 0.14 for 4.5 ac.

108J- no obj. (Easterday)- 9/10/1884
 Amnesty/Presumption
 claimed- record not found
 rec'd- irr.- 0.50 for 8 ac.
 stock- 0.02 summer (15 range)
 stock- 0.08 winter

112A- OBJ.- Flint- 1/2/1891
 HUBBLE
 (Brown, atty)
 claimed- irr.- 0.30 for 12
 rec'd- irr.- 0.31 for 12
 D.R. = 0.31

112B- OBJ.- Crandlemire- 1/2/1891
 HUBBLE
 (Brown, atty)
 claimed- irr.- 1.20 for 40
 stock- incidental
 rec'd- irr.- 0.43 for 13
 D.R. = 0.43

39E- OBJ.- Glauber- 1/2/1891
 (Brown, atty)
 claimed- irr.- 0.04 for 1
 rec'd- irr.- 0.03 for 1

39F- OBJ.- Bolduc- 1/2/1891
 (Brown, atty)
 claimed- irr.- 0.12 for 1
 rec'd- irr.- 0.03 for 1

39G- no obj. (McFadden)- 1/2/1891
 HUBBLE
 claimed- irr.- 0.10 for 1
 stock- 0.02 (6 ran)
 rec'd- irr.- 0.04 for 1
 stock- 0.02 (6 bec)

39H- no obj. (Roeser)- 1/2/1891
 HUBBLE
 claimed- irr.- 0.23 for 2
 rec'd- dom.- 0.04 (1 bec)

39J- OBJ.- Potter- 1/2/1891
 (Brown, atty)
 claimed- irr.- 0.08 for 2
 stock- 0.02 (2 bec)
 aesthetic 0.20 (3 ponds)
 rec'd- dom.- 0.04 (1 bec)

39L- no obj. (Evans)- 1/2/1891
 HUBBLE
 claimed- irr.- 0.12 for 1
 rec'd- irr.- 0.03 for 1

39M- OBJ.- Woolley- 1/2/1891
 (Brown)
 claimed- stock- 0.02 (1 bec)
 irr.- 0.04 for 1
 aesthetic 0.12 (open str)
 rec'd- dom.- 0.04 (1 bec)

39N- OBJ.- Korbis- 1/2/1891
 (Brown, atty)
 claimed- irr.- 0.04 for
 stock- 0.02 (2 bec)
 aesthetic 0.12 (open str)
 rec'd- dom.- 0.04 (1 bec)

39P- OBJ.- Bothwell- 1/2/1891
 (Brown, atty)
 claimed- irr.- 0.04 for
 stock- 0.02 (2 bec)
 aesthetic 0.14 (open str)
 rec'd- dom.- 0.04 (1 bec)

39B- no obj. (Beck)- 1/2/1891
 HUBBLE
 claimed- irr.- 0.12 for
 rec'd- irr.- 0.03 for

39C- OBJ.- Veenendaal- 1/2/1891
 (Brown, atty)
 claimed- irr.- 0.23 for
 rec'd- irr.- 0.06 for

39D- OBJ.- Walmsley- 1/2/1891
 (Brown, atty)
 claimed- irr.- 0.26 for
 stock- 0.01 (10 bec)
 rec'd- irr.- 0.06 for
 stock- 0.01 (10 bec)

IDAHO DEPARTMENT OF WATER RESOURCES
RECOMMENDED WATER RIGHTS ACQUIRED UNDER STATE LAW

DATE: JUN-29-1996
PAGE: A-1

FROM: SOURCE: BILLINGSLEY CREEK TRIBUTARY: SNAKE RIVER

JMBER: 36-00003A

D ADDRESS: EDNA M REA
BOX 543
WENDELL ID 83355

BILLINGSLEY CREEK TRIBUTARY: SNAKE RIVER

Y: 0.45 CFS
~~0.41 CFS~~

THE QUANTITY FOR NON-IRRIGATION USE IS LIMITED TO THE AMOUNT BENEFICIALLY
USED FOR: STOCKWATER, 19 RANGE CATTLE

Y DATE: 09/10/1884

F DIVERSION: T07S R13E S11 SESENE Within GOODING County

AND

OF USE:	PURPOSE OF USE	PERIOD OF USE	QUANTITY
	IRRIGATION	<u>Irrigation Season</u>	<u>0.45 CFS</u>
		03/13 11/13	0.41 CFS
	STOCKWATER	<u>01-01 12-31</u>	<u>0.02 CFS</u>
		03/13 11/13	
	STOCKWATER	11/16 03/14	0.17 CFS

THE APPROPRIATOR IS ENTITLED TO THE AMOUNT OF WATER DESCRIBED
HEREIN FOR STOCK WATER PURPOSES AT A POINT OF MEASUREMENT WHERE
THE DELIVERY DITCH ENTERS THE PLACE OF USE DESCRIBED HEREIN.

THE PORTION OF THIS RIGHT FOR STOCK WATER PURPOSES MAY BE
DIVERTED SO LONG AS THE AMOUNT OF WATER DIVERTED AT THE POINT OF
DIVERSION FOR STOCK WATER PURPOSES DOES NOT CONSTITUTE
UNREASONABLE WASTE AND DOES NOT CONFLICT WITH THE PUBLIC
INTEREST, AS DETERMINED BY THE DIRECTOR.

F USE: IRRIGATION Within GOODING County
T07S R13E S27 SWNE 13.0
13.0 ACRES TOTAL

STOCKWATER Within GOODING County
T07S R13E S27 SWNE

TIVE USE: 45.5 AFY
~~39.0 AFY~~

NP

IDAHO DEPARTMENT OF WATER RESOURCES
RECOMMENDED WATER RIGHTS ACQUIRED UNDER STATE LAW

DATE: JUN-29-1996

PAGE: A-2

03A (CONT.)

THE CONSUMPTIVE USE VOLUME REPORTED IS ONLY FOR THE IRRIGATION
PORTION OF THIS WATER RIGHT.

MATTERS NECESSARY FOR DEFINITION OR ADMINISTRATION OF THIS WATER RIGHT:

WATER IS DELIVERED THROUGH THE BUCKEYE DITCH.
0.175 CFS OF THIS RIGHT IS LIMITED TO USE FOR CONVEYANCE
LOSSES IN DELIVERY OF THIS RIGHT.

ATORY MATERIAL: BASIS OF CLAIM - DECREE

WATER IS DELIVERED THROUGH THE BUCKEYE DITCH.

ALAN G. LANCE

Attorney General

State of Idaho

CLIVE J. STRONG

Deputy Attorney General

Chief, Natural Resources Division

BRENT KING

CHARLES L. HONSINGER

Deputy Attorneys General

Department of Water Resources

P.O. Box 83720

Boise, ID 83720-0098

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IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT

OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

In Re SRBA	)	Subcase No. 36-00003A
	)	
Case No. 39576	)	AFFIDAVIT OF STEVE CLELLAND
	)	REGARDING CLAIM NO. 36-00003A
_____	)	

STATE OF IDAHO	)
	) ss.
County of Twin Falls	)

I, STEVE CLELLAND, being first duly sworn on oath, depose and state as follows:

A. IDENTIFICATION OF AFFIANT

My name is Steve Clelland, and I am a Senior Water Resource Agent with the Idaho Department of Water Resources (IDWR).

1. My work address is Idaho Department of Water Resources (IDWR), Southern

Regional Office, 222 Shoshone St. East, Twin Falls, ID 83301-6105. I reside in

Twin Falls, Idaho.

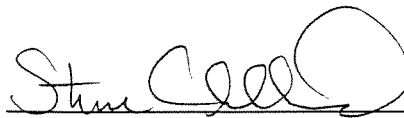
2. My educational background and work history both outside and within IDWR are detailed in my Affidavit of Steve Clelland as to the Investigation of Claims in the Hagerman Area.

B. INVESTIGATION OF CLAIM NO. 36-00003A

As part of my duties as a senior water rights agent, I conducted an investigation into the crop types grown on the land pursuant to claim no. 36-00003A, and the irrigation method by which claim no. 36-00003A is delivered. The pertinent details of that investigation are as follows:

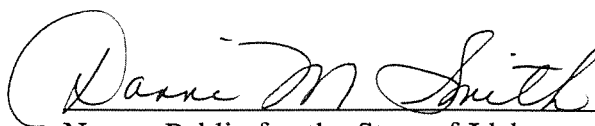
1. On July 13, 1992, Mrs. Verl Bell, the daughter-in-law of the claimant, Mrs. Edna Rea, called to discuss a field exam in progress on her property. I used this opportunity to question her about irrigation practices on land to which water right no. A36-00003A is appurtenant.
2. During the discussion, Mrs. Bell indicated that six acres of the area irrigated by the above claimed right were planted in alfalfa; the remaining portion of the tract irrigated by claim no. A36-00003A was pasture.
3. During that discussion, Mrs. Bell also indicated that both the tract planted with alfalfa and the tract used as pasture are irrigated using corrugations.

DATED this 1st day of July, 1996.



STEVE CLELLAND

SUBSCRIBED AND SWORN to before me this 1st day of July, 1996.



Notary Public for the State of Idaho

Residing at: Boise

My commission expires: 12-5-2000