

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE STATE OF IDAHO,
IN AND FOR THE COUNTY OF TWIN FALLS

IN RE THE GENERAL ADJUDICATION
OF RIGHTS TO THE USE OF WATER FROM
THE SNAKE RIVER BASIN WATER SYSTEM.

CIVIL CASE NUMBER: 39576

Ident. Number: **A36-00006**
Date Received: 8/ 5/1988
Receipt No: S001311
Received By: _____

AMENDED

NOTICE OF CLAIM TO A WATER RIGHT
ACQUIRED UNDER STATE LAW

AMENDED

1. Name: WILLIAM STRANGE 208-837-4767
Address: 923 PIONEER RD
HAGERMAN ID 83332
AND/OR
Name: LOUISE STRANGE 208-837-4767
Address: 923 PIONEER RD
HAGERMAN ID 83332

2. Date of Priority: APR 1, 1885

3. Source: BILLINGSLEY CREEK Trib. to: SNAKE RIVER

4. Point of Diversion:

Township	Range	Section	1/4 of	1/4 of	1/4	Lot	County
07S	13E	11	NW	SW	NE		GOODING

5. Description of diverting works:
HEADGATE & SANDS DITCH, GRAVITY IRRIGATION

6. Water is used for the following purposes:

Purpose	From	To	C.F.S	(or)	A.F.A.
IRRIGATION	04/01	10/15	3.500		
IRRIGATION	10/16	03/31	3.500		
WILDLIFE	01/01	12/31	3.500		
AESTHETIC	01/01	12/31	3.500		
RECREATION	01/01	12/31	3.500		
STOCKWATER	01/01	12/31	3.500		

7. Total Quantity Appropriated is:
3.500 C.F.S. (and/or) A.F.A.

8. Total consumptive use is Acre Feet Per Annum.

9. Non-irrigation uses:
STOCK: 50 HEAD; WILDLIFE, RECREATION, AESTHETICS: 2 PONDS 3 AC EA

10. Place of Use:

Township	Range	Section	1/4 of	1/4	Lot	Use	Acres
07S	13E	10	SE	SE	5	IRR	9.0
Section Acres							9.0
		11	SW	SW		IRR	12.0
Section Acres							12.0
		14	NW	NW		IRR	28.0
			NW	NW		WILDLF	
			NW	NW		REC	
			NW	NW		AES	
Section Acres							28.0
		15	NE	NE	1	IRR	39.0
			NE	NE	1	WILDLF	
			NE	NE	1	REC	
			NE	NE	1	AES	
			NW	NE	2	IRR	24.0
			NE	NW	3	IRR	5.0
Section Acres							68.0
Total Acres							117.0

11. Place of use in counties: GOODING

12. Do you own the property listed above as place of use? YES

13. Other Water Rights Used:
A36-00007

14. Remarks:

USE IS CLAIMED FOR ALL THE LAND I OWN THAT IS SOUTH OF THE
BARLOGI DITCH.

12/9/97, DJ: CLAIM AMENDMENT FILED AND FEE PAID 12/8/97. FEES
FOR ADDITIONAL USES COVERED UNDER RECEIPT S020752.

NON-IRRIGATION SEASON IRRIGATION USEAGE FOR IRRIGATION SYSTEM
MAINTENANCE.

15. Basis of Claim: DECREED

Case Number:

Court :

Decree date: 3/22/1932

NEW INTERNATIONAL MORTGAGE BA
Decree Plaintiff

IDAHO POWER COMPANY
vs Decree Defendant

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

IN RE THE GENERAL ADJUDICATION
OF RIGHTS TO THE USE OF WATER FROM
THE SNAKE RIVER BASIN WATER SYSTEM

CIVIL CASE NUMBER: 39576

Ident. Number 312-00006

Date Received

Receipt Number 5020752

1250

RECEIVED

DEC 08 1997

Department of Water Resources
Boise, Idaho

Amended
**NOTICE OF CLAIM
TO A
WATER RIGHT
ACQUIRED UNDER STATE LAW**

Please type or print clearly

1. Name of Claimant (s) William Strange, Phone (208) 837-4767Mailing Address 923 Pioneer Rd. Hagerman, ID Zip 833322. Date of Priority (Only one (1) per claim) April 1, 18853. Source of water supply (a) Billingsley Creek
which is tributary to (b) Snake River4. a. Location of existing point of diversion is: Township 7S Range 13E Section 11.
NW 1/4 of SW 1/4 of NE 1/4, Govt. Lot, — B.M., County of Gooding

Additional points of diversion if any: _____

b. If instream flow, beginning point of claimed instream flow is:

Township _____ Range _____ Section _____, _____ 1/4 of _____ 1/4 of _____ 1/4,

Govt. Lot _____ B.M., County of _____

ending point is: Township _____ Range _____ Section _____, _____ 1/4 of _____ 1/4 of _____
_____ 1/4, Govt. Lot _____ B.M., County of _____5. Description of existing diversion works (Dams, Reservoirs, Ditches, Wells, Pumps, Pipelines, Headgates, Etc),
including the dates of any changes or enlargements in use, the dimensions of the diversion works as
constructed and as enlarged and the depth of each well. diversion from BillingsleyCreek through headgate and measuring device into Sands Ditch.

(both dates are inclusive) (cfs) (acre feet)

For Stock purposes from 1/1 to 12/31 amount 3.5 or _____

7. Total quantity claimed (a) 3.5 (cfs) and/or (b) _____ (acre feet)

8. Total consumptive use claimed is _____ acre feet per annum.

9. Non-irrigation uses; describe fully (eg. Domestic: Give number of households served; Stockwater: Type and number of livestock Etc.) S: 50 head cattle; WRA: 2 pond of about 3 acres each.

10. Description of place of use:

- a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.
- b. If water is used for other purposes, place a symbol of use (example: D for Domestic) in the corresponding place of use below. See instructions for standard symbols.

[illegible]

Total number of acres irrigated 117 Acres

11. In which county (ies) are lands listed above as place of use located? Gooding

12. Do you own the property listed above as place of use? Yes X No
If your answer is No, describe in Remarks below the authority you have to claim this water right.

13. Describe any other water rights used at the same place and for the same purposes as described above.

14. Remarks:

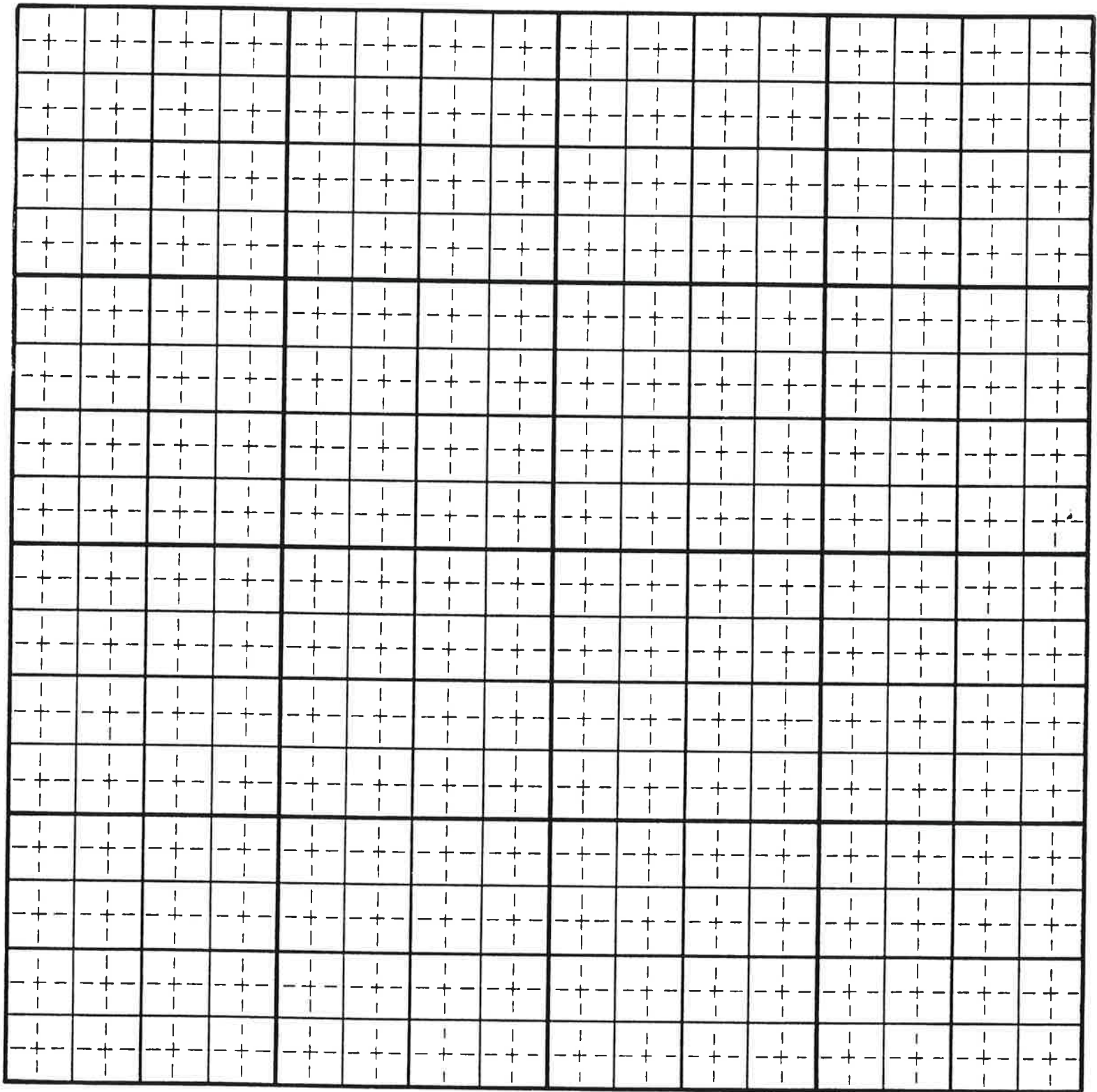
strange

36.00006

Map of Project: show clearly the point of diversion, place of use, section number, township, and range number.

Scale: 2 inches equals 1 mile

See attached aerial



Last Name Strange

Ident No. 36-00006

Copies: White-State, Yellow-Claimant

15. Basis of Claim (check one) Beneficial Use _____ Posted Notice _____ License _____ Permit _____
Decree X

If applicable provide IDWR Water Right Number 36-00006

Court _____ Case Number _____ Decree Date March 22, 1932

Plaintiff vs Defendant New Int'l Mortgage Bank v. Idaho Power Co.

16. Signature (s)

(a.) By signing below, I/We acknowledge that I/We have received, read, and understand the form entitled "How you will receive notice in the Snake River Basin Adjudication." (b.) I/We do _____ do not _____ wish to receive and pay a small annual fee for monthly copies of the docket sheet.

Number of attachments _____

For Individuals: I do solemnly swear or affirm that the statements contained in the foregoing document are true and correct.

Signature of Claimant (s) Patrick D. Brown for claimant Wm. Strange Date 12/2/97

Date _____

For Organizations: I do solemnly swear or affirm that I am _____

of _____ Title _____, that I have signed the foregoing
Organization

document in the space below as _____ of _____
Title Organization

and that the statements contained in the foregoing document are true and correct.

Signature of Authorized Agent _____

Title and Organization _____ Date _____

State of Idaho/or _____)
County of Twin Falls) SS.

Subscribed and sworn (or affirmed) before me this 2nd day of December 1997

SEAL

Notary Public Leann L. McMillan

Residing at Jerome, Id.

My Commission Expires 8/24/2001

Please Print Name

17. Notice of Appearance:

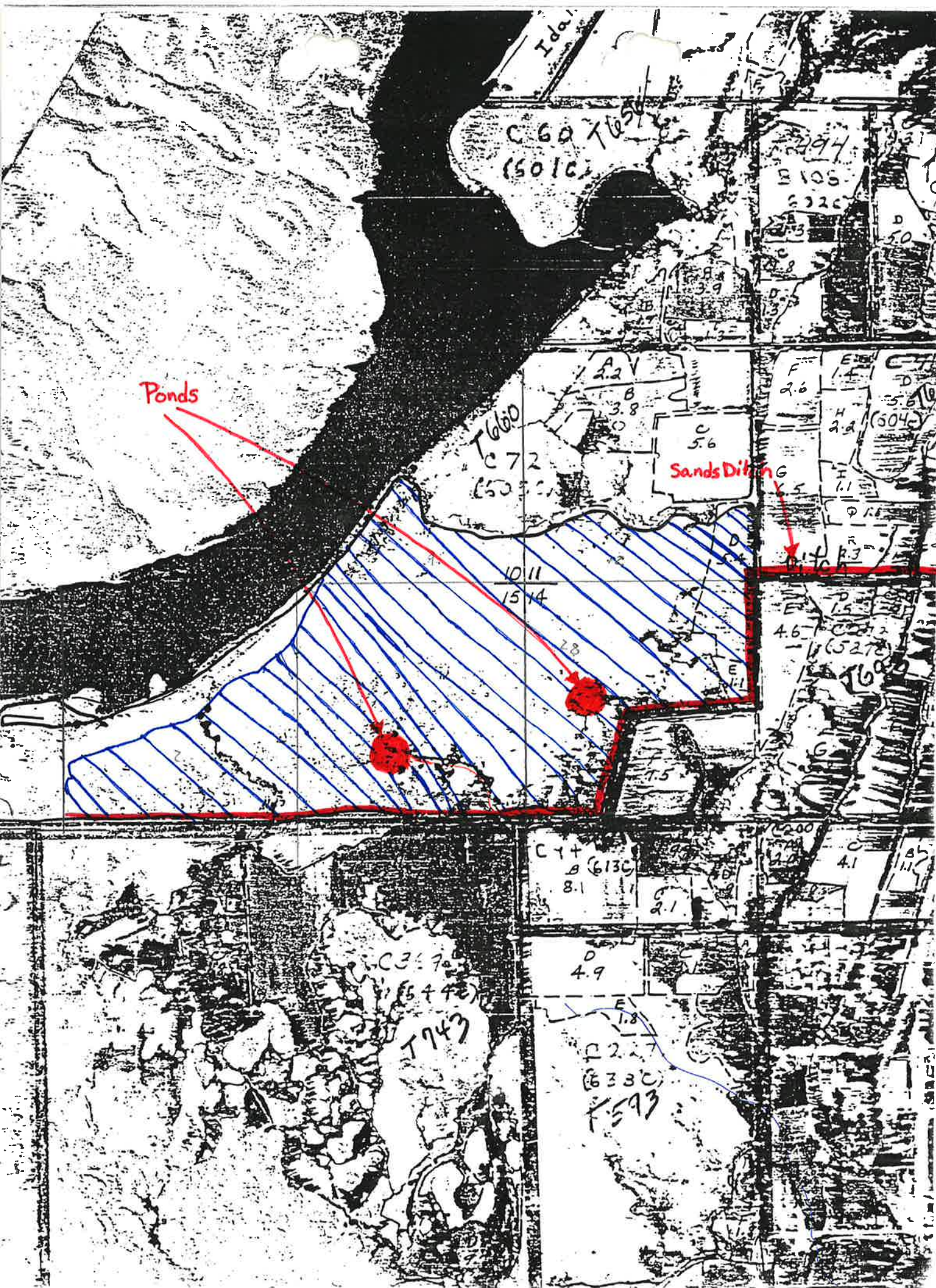
Notice is hereby given that I, Patrick D. Brown, Heppworth, Lezami will be acting as attorney at law on behalf of the claimant signing above, and that all notices required by law to be mailed by the director to the claimant signing above should be mailed to me at the address listed below.

Signature [Signature]

Address 133 Shoshone St. N., P.O. Box 389, Twin Falls, ID 83303-0389

Date 12/2/97

Last Name Strange Ident. Number 36-00006



36-00006436-00007

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That I, William Strange, of Hagerman, County of Gooding, State of Idaho, have made, constituted and appointed and by these presents do make, constitute and appoint Patrick D. Brown of the law firm of Hepworth, Lezamiz & Hohnhorst, Chld. of Twin Falls, Idaho, as power of attorney,

Said attorney is to act in my name, place and stead, and for my use and benefit in regard to all matters involving my ownership, or the adjudication thereof, of water rights pursuant to claim(s) filed in the Snake River Basin Adjudication, Civil Case No. 39576, Fifth Judicial District, State of Idaho.

My attorney is specifically authorized to execute all necessary or proper documents on my behalf in regard to the adjudication of the above mentioned water rights or claim(s), and to negotiate, compromise, or settle all matters relating to the Snake River Basin Adjudication.

This Power of Attorney shall remain in full force and effect until written notice of its revocation or notice of my death is received by any party relying upon this document.

This Power of Attorney shall be not be affected by my disability. It is my intent that this Power of Attorney shall continue in full force and effect in the event of my incapacity.

I further provide that photocopies of this Power of Attorney are to be given equal dignity, full effect, and recognition as if it were the original.

POWER OF ATTORNEY - 1

DEC- 8-87 MON

HEPWORTH LEZANIZ & HCHNH

FAX NO. 200.75 1E

P.03

WITNESS my hand this 8th day of December, 1997.

William Strange
William Strange

STATE OF IDAHO)
County of Gooding) ss.

On this 8th day of December, 1997, before me, the undersigned, a notary public in and for said county and state, personally appeared William Strange known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal this day and year in this certificate first above written.

Robert J. [Signature]
NOTARY PUBLIC FOR IDAHO
Residing at: Hayden, Id.
My Commission Expires, 5-11-2003

(61503pcw)llm

POWER OF ATTORNEY - 2

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

IN RE THE GENERAL ADJUDICATION
OF RIGHTS TO THE USE OF WATER FROM
THE SNAKE RIVER BASIN WATER SYSTEM

CIVIL CASE NUMBER: 39576

Ident. Number 31e-00006

Date Received

Receipt Number 5020752

Amended
**NOTICE OF CLAIM
TO A
WATER RIGHT
ACQUIRED UNDER STATE LAW**

DEC 08 1997

RECEIVED
DEC 11 1997
Department of Water Resource
Southern Region

Please type or print clearly

1. Name of Claimant (s) William Strange, Phone (208) 837-4767Mailing Address P.O. Box 387 Hagerman, ID Zip 833322. Date of Priority (Only one (1) per claim) April 1, 18853. Source of water supply (a) Billingsley Creek
which is tributary to (b) Snake River4. a. Location of existing point of diversion is: Township 7S Range 13E Section 11,
NW 1/4 of SW 1/4 of NE 1/4, Govt. Lot, — B.M., County of Gooding

Additional points of diversion if any: _____

b. If instream flow, beginning point of claimed instream flow is:

Township _____ Range _____ Section _____, _____ 1/4 of _____ 1/4 of _____ 1/4,

Govt. Lot _____ B.M., County of _____

ending point is: Township _____ Range _____ Section _____, _____ 1/4 of _____ 1/4 of _____
_____ 1/4, Govt. Lot _____ B.M., County of _____5. Description of existing diversion works (Dams, Reservoirs, Ditches, Wells, Pumps, Pipelines, Headgates, Etc),
including the dates of any changes or enlargements in use, the dimensions of the diversion works as
constructed and as enlarged and the depth of each well. diversion from BillingsleyCreek through headgate and measuring device into Sands Ditch.

6. Water is claimed for the following purposes:

(both dates are inclusive)

(cfs)

(acre feet)

For Irrigation purposes from irrigation season amount 3.5 or _____
 For irrigation Maintenance purposes from 1/1 to 12/31 amount 3.5 or _____
 For Wildlife, Recreation & Aesthetics purposes from 1/1 to 12/31 amount 3.5 or _____
 For Stock purposes from 1/1 to 12/31 amount 3.5 or _____

7. Total quantity claimed (a) 3.5 (cfs) and/or (b) _____ (acre feet)

8. Total consumptive use claimed is _____ acre feet per annum.

9. Non-irrigation uses; describe fully (eg. Domestic: Give number of households served; Stockwater: Type and number of livestock Etc.) S: 50 head cattle; WRA: 2 pond of about 3 acres each.

10. Description of place of use:

- If water is for Irrigation, indicate acreage in each subdivision in the tabulation below.
- If water is used for other purposes, place a symbol of use (example: D for Domestic) in the corresponding place of use below. See instructions for standard symbols.

TWP	RNG	SEC	NE 1/4				NW 1/4				SW 1/4				SE 1/4				Totals
			NE1/4	NW1/4	SW1/4	SE1/4	NE1/4	NW1/4	SW1/4	SE1/4	NE1/4	NW1/4	SW1/4	SE1/4	NE1/4	NW1/4	SW1/4	SE1/4	
7S	13E	10																9	
7S	13E	11											12						
7S	13E	14						28											
7S	13E	15	39	24			5												
7S	13E	14						WRA											
7S	13E	15	WRA																

Total number of acres irrigated 117 Acres

11. In which county (ies) are lands listed above as place of use located? Gooding

12. Do you own the property listed above as place of use? Yes X No _____
 If your answer is No, describe in Remarks below the authority you have to claim this water right.

13. Describe any other water rights used at the same place and for the same purposes as described above.
 _____ or None ()

14. Remarks:

Strange

36-00006

Scale: 2 inches equals 1 mile

see attached aerial

A large grid of 16x16 squares, each containing a small crosshair pattern. The grid is composed of 16 columns and 16 rows of squares. Each square contains a small crosshair pattern, which is a central point with four lines extending outwards to the edges of the square, forming a cross shape. The lines are thin and black, and the squares are separated by thin black borders. The overall pattern is a uniform grid of these crosshair symbols.

Strange

36-00006

Copies: White-State, Yellow-Claimant

15. Basis of Claim (check one) Beneficial Use _____ Posted Notice _____ License _____ Permit _____
Decree X

If applicable provide IDWR Water Right Number 36-00006

Court _____ Case Number _____ Decree Date March 22, 1932

Plaintiff vs Defendant New Int'l Mortgage Bank v. Idaho Power Co.

16. Signature (s)

(a.) By signing below, I/We acknowledge that I/We have received, read, and understand the form entitled "How you will receive notice in the Snake River Basin Adjudication." (b.) I/We do _____ do not _____ wish to receive and pay a small annual fee for monthly copies of the docket sheet.

Number of attachments _____

For Individuals: I do solemnly swear or affirm that the statements contained in the foregoing document are true and correct.

Signature of Claimant (s) [Signature] for claimant Wm. Strange Date 12/2/97
Date _____

For Organizations: I do solemnly swear or affirm that I am _____

of _____ Title _____, that I have signed the foregoing

document in the space below as _____ Organization _____ of _____ Title _____ Organization _____

and that the statements contained in the foregoing document are true and correct.

Signature of Authorized Agent _____

Title and Organization _____ Date _____

State of Idaho/or _____)
County of Twin Falls) SS.

Subscribed and sworn (or affirmed) before me this 2nd day of December 1997

SEAL

Notary Public Leann L. McMillan

Residing at Jerome, Id.

My Commission Expires 8/24/2001

Please Print Name

17. Notice of Appearance:

Notice is hereby given that I, Patrick D. Brown, Hepworth, Lezanie will be acting as attorney at law on behalf of the claimant signing above, and that all notices required by law to be mailed by the director to the claimant signing above should be mailed to me at the address listed below.

Signature [Signature]

Address 133 Shoshone St. N., P.O. Box 389, Twin Falls, ID 83303-0389

Date 12/2/97

Last Name Strange Ident. Number 36-00006



IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE STATE OF IDAHO,
IN AND FOR THE COUNTY OF TWIN FALLS

IN RE THE GENERAL ADJUDICATION
OF RIGHTS TO THE USE OF WATER FROM
THE SNAKE RIVER BASIN WATER SYSTEM.

CIVIL CASE NUMBER: 39576

Ident. Number: A36-00006
Date Received: 8/05/1988
Receipt No: 5061311
Received By: g

COPY
FOR YOUR FILES
DO NOT RETURN

**NOTICE OF CLAIM TO A WATER RIGHT,
ACQUIRED UNDER STATE LAW**

1. Name: WILLIAM STRANGE 208-837-4767
Address: P. O. BOX 387
HAGERMAN, ID 83332

AND/OR

Name: LOUISE STRANGE 208-837-4767
Address: P. O. BOX 387
HAGERMAN, ID 83332

2. Date of Priority: APR 01, 1885

3. Source: BILLINGSLEY CREEK Trib. to: SNAKE RIVER

4. Point of Diversion:

Township	Range	Section	1/4 of	1/4 of	1/4	Lot	County
07S	13E	11	NW	SW	NE		GOODING

5. Description of diverting works:
HEADGATE & SANDS DITCH, GRAVITY IRRIGATION

6. Water is used for the following purposes:

Purpose	From	To	C.F.S.	(or)	A.F.A.
IRRIGATION	04/01	10/15	3.500		

7. Total Quantity Appropriated is:
3.500 C.F.S. (and/or) 472.00 A.F.A.

8. Total consumptive use is 354.0 Acre Feet Per Annum.

9. Non-irrigation uses:

10. Place of Use:

Township	Range	Section	1/4 of	1/4	Lot	Use	Acres
07S	13E	10	SE	SE	5	IRR	9.0
Section Acres							9.0
		11	SW	SW		IRR	12.0
Section Acres							12.0
		14	NW	NW		IRR	28.0
Section Acres							28.0
		15	NE	NE	1	IRR	39.0
			NW	NE	2	IRR	24.0
			NE	NW	3	IRR	5.0
Section Acres							68.0
Total Acres							117.0

11. Place of use in counties: GOODING

12. Do you own the property listed above as place of use? YES

13. Other Water Rights Used:
36-0007

14. Remarks:
USE IS CLAIMED FOR ALL THE LAND I OWN THAT IS SOUTH OF THE
BARLOGI DITCH.

15. Basis of Claim: DECREED
Case Number:
Court :
Decree date: 3/22/1932

NEW INTERNATIONAL MORTGAGE BAN
Decree Plaintiff

vs

IDAHO POWER COMPANY
Decree Defendant

16. Signature(s)

(a.) By signing below, I/We acknowledge that I/We have received, read and understand the form entitled "How you will receive notice in the Snake River Basin Adjudication." (b.) I/We do _____ do not X wish to receive and pay a small annual fee for monthly copies of the docket sheet.

Number of attachments: 1

For Individuals:

I/We do solemnly swear or affirm that the statements contained in the foregoing document are true and correct.

Signature of Claimant(s): *Jim Strang* Date: 8-5-88
_____ Date: _____

State of Idaho)
County of Twin Falls) SS.

Subscribed and sworn (or affirmed) before me this 5th day
of Aug 19 88 *[Signature]*
Notary Public

Seal

Residing at Kimberly, Id.
My Commission Expires 10/30/92

A36-00003B	A36-00003C	A36-00003E	A36-00003F	A36-00003G	A36-00003J	A36-00006	A36-00007	A36-00008	A36-00021B
A36-00022	A36-00023	A36-00033F	A36-00034B	A36-00035J	A36-00039C	A36-00039D	A36-00039E	A36-00039J	A36-00039M
A36-00039N	A36-00041A	A36-00041C	A36-00042A	A36-00048A	A36-00049	A36-00050D	A36-00051D	A36-00055AF	A36-00055BC
A36-00060	A36-00061	A36-00062	A36-00063	A36-00064B	A36-00068	A36-00069	A36-00070	A36-00071A	A36-00075
A36-00077C	A36-00079	A36-00086C	A36-00089A	A36-00090A	A36-00090F	A36-00092	A36-00094A	A36-00096A	A36-00097
A36-00098	A36-00099	A36-00100	A36-00101	A36-00103C	A36-00103F	A36-00106	A36-00108A	A36-00108B	A36-00110A
A36-00110B	A36-00111A	A36-00111B	A36-00112A	A36-00112B	A36-00113H	A36-00113J	A36-00119	A36-00120	A36-00121
A36-00123A	A36-00123E	A36-00133	A36-00134A	A36-00134C	A36-00135B	A36-00135C	A36-00141	A36-00192	A36-02002
A36-02038	A36-02169	A36-04091	A36-04142	A36-04260	A36-07071	A36-07081	A36-07089	A36-07092A	A36-07142
A36-07142A	A36-07172	A36-07229	A36-07233	A36-07346	A36-07658	A36-07875	A36-08099	A36-08317	A36-10055
A36-10119	A36-10120	A36-10140	A36-10141	A36-10168	A36-10231	A36-10249	A36-10283	A36-10283B	A36-10405
A36-10520	A36-10906	A36-15166	A36-15168	A36-15240	A36-15463				

TOTAL RECORDS IN SELECTION FILE: 116

MICROFILMED
OCT 11 1994

RECEIVED
FEB 10 1993
Department of Water Resources

1 HEPWORTH, NUNGESTER & LEZAMIZ,
2 CHARTERED
3 133 Shoshone St. North
4 P.O. Box 389
5 Twin Falls, ID 83303-0389
6 Telephone: (208)734-7510
7 Attorneys for Claimant
8 (PPK\HAGERMAN.NOA\lmr)
9

10
11
12
13 IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
14 STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS
15

16 * * * * *

17 In Re the General Adjudication)
18 of Rights to the Use of Water) Case No. 39576
19 from the Snake River Basin)
20 Water System)
21

22 The State of Idaho, ex rel.)
23 R. Keith Higginson in his)
official capacity as director) NOTICE OF APPEARANCE
of the Idaho Department of)
Water Resources,)
Petitioner,)
vs.)
United States; State of Idaho;)
and all claimants to the use)
of water from the Snake River)
Basin Water System,)
Respondents.)
* * * * *

PLEASE BE NOTIFIED that the firm of Hepworth, Nungester
& Lezamiz, Chartered, hereby appears on behalf of Hagerman Water

NOTICE OF APPEARANCE - 1



Hepworth,
Nungester,
& Lezamiz

MICROFILMED
OCT 11 1994

1 Users, Inc. and its individual members:

2	Anderson, Anita G.	A36-00050D
	Babington Lynn J. & Kathy	A36-00003C
3	Banbury Pipe Co., Inc.	A36-10906
	Banbury Pipe Co., Inc.	A36-02038
4	Big Bend Irrigation & Mining Co.	A36-00192
	Big Bend Irrigation & Mining Co.	A36-00133
	Big Spring Water User's Assoc.	A36-00022
5	Big Springs Water User's Assoc.	A36-00023
	Big Springs Water User's Assoc.	A36-15166
6	Blastock, Alma E.	A36-00108B
	Bolduc, Mark E.	A36-00103C
7	Boyer, Dale E. & Elaine M.	A36-00079
	Brailsford, Robert H.	A36-04260
	Brooks, Allen L. & Andree	A35-00060
8	Brooks, Allen L. & Andree	A36-07346
	Bybee, Gertrude B. Owsley	A36-00042A
9	Bybee, Gertrude B. Owsley	A36-00041C
	Candy, Walter W. & Margaret	A36-00135B
10	Candy, Walter W. & Margaret	A36-00134A
	Clouser, Doris H. & John F.	A36-00090A
11	Clouser, Doris H. & John F.	A36-00089A
	Crandlemire, Roger C. & George C.	A36-00113H
12	Crandlemire, Roger C. & George C.	A36-00112B
	Crandlemire, Roger C. & George C.	A36-00111B
	Crandlemire, Roger C. & George C.	A36-00113J
13	Crandlemire, Roger C. & George C.	A36-00110B
	Crandlemire, Roger C.	A36-00134C
14	Crandlemire, Roger C.	A36-00135C
	Crandlemire, Roger C.	A36-10140
15	Crandlemire, Roger C.	A36-10141
	DeVries, Abraham & Hermina	A36-00055AF
16	Dice, Philip F. & Judith A.	A36-00041A
	Dice, Philip F. & Judith A.	A36-10405
	Erwin, Frank C. & Peggy	A36-00092
17	Fleming, Michael J. & Paul F.	A36-00064B
	Flint, William E. and Vera C.	A36-00110A
18	Flint, William E. and Vera C.	A36-00111A
	Flint, William E. and Vera C.	A36-00112A
19	Flint, William E. and Vera C.	A36-10168
	Fuell, Keith L. & Jolene	A36-00086C
20	Gardner, Barbara & Robert B.	A36-00003B
	Gardner, Barbara	A36-00003J
21	Gisler, Harry R.	A36-00021B
	Gisler, Bradley	A36-00077C
	Glauner, Frank L. & Joan	A36-00039E
22	Grigg, Mattie P. & Golden T.	A36-10283B
	Gustafson Family Trust/Gustafson	A36-00033F
23	Ivan J. & Lucille co-trustees	
	Hagerman Gun Club	A36-00100



Hepworth,
Nungester,
& Lezamiz

MICROFILMED

OCT 11 1994

1	Hagerman Gun Club	A36-00099
	Hagerman Gun Club	A36-07233
2	Hagerman Gun Club	A36-07172
	Hagerman Gun Club	A36-10249
3	Hagerman Water Users Assoc.	A36-15168
	Jensen, Alice	A36-00055BC
	Johnson, Ira L. & Huguetta M.	A36-07142
4	Joint Hagerman School Dist 233	A36-15463
	Jones, John W., Jr.	A36-00068
5	Jones, John W., Jr.	A36-00069
	Jones, John W., Jr.	A36-07071
6	Jones, John W., Jr.	A36-00070
	Kipp, Rudy B. & Elberta M.	A36-10119
7	Kipp, Rudy B. & Elberta M.	A36-10120
	Kipp, Rudy B. & Elberta M.	A36-07658
	Kiser, John & Karl Woodall & Sons, Inc	A36-00071A
8	Kiser, John & Karl Woodall & Sons, Inc	A36-00075
	Korbis, George J. & Nellie W.	A36-00039N
9	Laughlin, Craig J. & Rita D.	A36-7089
	Laughlin, Craig J. & Rita D.	A36-00051D
10	Littlefair, Larry & Tara	A36-0121
	Littlefair, Larry & Tara	A36-10055
11	Littlefair, Larry & Tara	A36-00119
	Littlefair, Larry & Tara	A36-00120
12	Lloyd, Cleave C.	A36-04142
	Lloyd, Cleave C.	A36-00003G
	McFaddan, Dan H. & Irma R.	A36-2169
13	McFaddan, Dan H. & Irma R.	A36-00048A
	McFaddan, Dan H. & Irma R.	A36-00049
14	Morris, Howard & Rhonda	A36-00063
	Morris, Howard & Rhonda	A36-00061
15	Morris, Howard & Rhonda	A36-00062
	Mueller, Manfred	A36-00035J
16	Norwood Subdivision/ Ruby Springs Water Company	A36-15240
	Potter, Mark B. & Susan H.	A36-07092A
17	Rawson, Frank S. & Carol A.	A36-00039J
	Reese, Bruce W. & LaRose A.	A36-00123A
18	Reese, Bruce W. & LaRose A.	A36-04091
	Rue, James O. & Beverly Jane	A36-10231
19	Shaffer, Roger	A36-07142A
	Simcoe, Doyt H. & Roxie J.	A36-00034B
20	Simpson, Michael, on behalf of Josephine Simpson Estate	A36-00003F
21	Simpson, Michael, on behalf of Josephine Simpson Estate	A36-0123E
	Strange, Wm. (Penelope Turner-remainder man)	A36-0096A
22	Strange, Wm. (Penelope Turner-remainder man)	A36-00006
	Strange, Wm. (Penelope Turner-remainder man)	A36-00007
23	Veendaal, Dick J.	A36-00008
	Veendaal, Dick J.	A36-00108A
		A36-00039C



Hepworth,
Nungester,
& Lezamiz

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OCT 11 1994

1	Vernon, Edith L.	A36-00003E
	Walmsley, Fred J. & Susan K.	A36-00039D
2	Ward, John P. & Rush, Ruth E.	A36-00094-A
	Ward, John P. & Rush, Ruth E.	A36-00090F
3	Watkins, Paul E. & Inez S.	A36-00106
	Watkins, Paul E. & Inez S.	A36-08099
4	Wiens, M.J., Jr.	A36-07229
	Wiens, M.J., Jr.	A36-07081
	Wiens, M.J., Jr.	A36-80317
5	Wiens, M.J., Jr.	A36-00098
	Wiens, M.J., Jr.	A36-00097
6	Wiens, M.J., Jr.	A36-02002
	Wiens, M.J., Jr.	A36-00101
7	Wiens, M.J., Jr.	A36-00141
	Wiens, M.J., Jr.	A36-10520
	Woolley, Max J. & Blanche	A36-00039M
8	Ya-Ta-Hay Investments, Inc.	A36-10283A
	Ya-Ta-Hay Investments, Inc.	A36-07875
9	Zink, Basil Lester & Myrle Hyde	A36-00103F

10 the respondents in the above-entitled action, as counsel of record
 11 for said Hagerman Water Users, Inc. and said individuals.

12 DATED This 9 day of February, 1993.

13 HEPWORTH, NUNGESTER & LEZAMIZ

14
 15 By Patrick D. Brown
 16 PATRICK D. BROWN
 Attorneys for Respondents

17
 18 CERTIFICATE OF MAILING

19 The undersigned, a resident attorney of the State of
 20 Idaho, with offices at 133 Shoshone St. North, P.O. Box 389, Twin
 21 Falls, Idaho 83303, and one of the attorneys for the respondents
 22 in this matter, certifies that she caused to be mailed a copy of
 23 the above and foregoing NOTICE OF APPEARANCE on the 9 day of



MICROFILMED
 OCT 11 1994

1 February, 1993, to:

2 Snake River Adjudication
3 District Court
4 P.O. Box 27070
5 Twin Falls, ID 83303-0126

6 Clive Strong
7 Chief Natural Resources Division
8 Office of Attorney General
9 Statehouse
10 Room 210
11 Boise, Idaho 83720

12 David Shaw
13 Adjudications Bureau Chief
14 Department of Water Resources
15 1301 North Orchard
16 Boise, Idaho 83706

17 United States Department of Justice
18 Environment and Natural Resources Division
19 550 West Fort Street, Box 33
20 Boise, ID 83734

21 
22 Patrick D. Brown



Hepworth,
Nungester,
& Lezamiz

NOTICE OF APPEARANCE - 5

MICROFILMED
OCT 11 1994

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE STATE OF IDAHO,
IN AND FOR THE COUNTY OF TWIN FALLS

IN RE THE GENERAL ADJUDICATION
OF RIGHTS TO THE USE OF WATER FROM
THE SNAKE RIVER BASIN WATER SYSTEM.

CIVIL CASE NUMBER: 39576

Ident. Number: A36-00006
Date Received: 8/05/1988
Receipt No: 5061311
Received By: [Signature]

NOTICE OF CLAIM TO A WATER RIGHT,
ACQUIRED UNDER STATE LAW

1. Name: WILLIAM STRANGE 208-837-4767
Address: P. O. BOX 387
HAGERMAN, ID 83332

AND/OR
Name: LOUISE STRANGE 208-837-4767
Address: P. O. BOX 387
HAGERMAN, ID 83332

2. Date of Priority: APR 01, 1885

3. Source: BILLINGSLEY CREEK Trib. to: SNAKE RIVER

4. Point of Diversion:

Township	Range	Section	1/4 of	1/4 of	1/4 of	Lot	County
07S	13E	11	NW	SW	NE		GOODING

5. Description of diverting works:
HEADGATE & SANDS DITCH, GRAVITY IRRIGATION

6. Water is used for the following purposes:

Purpose	From	To	C.F.S.	(or)	A.F.A.
IRRIGATION	04/01	10/15	3.500		

7. Total Quantity Appropriated is:
3.500 C.F.S. (and/or) 472.00 A.F.A.

8. Total consumptive use is 354.0 Acre Feet Per Annum.

9. Non-irrigation uses:

10. Place of Use:

Township	Range	Section	1/4 of	1/4	Lot	Use	Acres
07S	13E	10	SE	SE	5	IRR	9.0
						Section Acres	9.0
		11	SW	SW		IRR	12.0
						Section Acres	12.0
		14	NW	NW		IRR	28.0
						Section Acres	28.0
		15	NE	NE	1	IRR	39.0
			NW	NE	2	IRR	24.0
			NE	NW	3	IRR	5.0
						Section Acres	68.0
						Total Acres	117.0

11. Place of use in counties: GOODING

12. Do you own the property listed above as place of use? YES

13. Other Water Rights Used:
36-0007

14. Remarks:
USE IS CLAIMED FOR ALL THE LAND I OWN THAT IS SOUTH OF THE
BARLOGI DITCH.

15. Basis of Claim: DECREED
Case Number:
Court :
Decree date: 3/22/1932

NEW INTERNATIONAL MORTGAGE BAN
Decree Plaintiff

vs IDAHO POWER COMPANY
Decree Defendant

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MICROFILMED

JAN 20 1993

16. Signature(s)

(a.) By signing below, I/We acknowledge that I/We have received, read and understand the form entitled "How you will receive notice in the Snake River Basin Adjudication." (b.) I/We do _____ do not X wish to receive and pay a small annual fee for monthly copies of the docket sheet.

Number of attachments: 1

For Individuals:

I/We do solemnly swear or affirm that the statements contained in the foregoing document are true and correct.

Signature of Claimant(s): Jim Strange Date: 8-5-88

Date: _____

State of Idaho)
County of Twin Falls) SS.

Subscribed and sworn (or affirmed) before me this 5th day
of Aug 19 88 Quentin
Notary Public

Seal

Residing at Kimberly, Id.
My Commission Expires 6/30/92

C. 60716
(501C)

494
B 106
6226

T 660
C 72
65050

10	11
15	14

POOR ORIGINAL

F 2.6 E 1.4 C 5.6
H 2.2 (504s)

A hand-drawn sketch of a ditch cross-section. The ditch is labeled "Ditch" on the left. The width of the ditch at the bottom is labeled "2.3". The depth of the ditch is labeled "6.5". The top width of the ditch is labeled "1.1". The slope of the ditch is labeled "1:1". The ditch is shown in a plan view, with a dashed line indicating the centerline. The ditch is located near a road, which is labeled "R" on the right. The ditch is also labeled "G" at the top left.

4.6-1 (5278)

CY+
B (613C)
8.1

4.9

$E = 1.8$
 $P = 2.27$
 $(633^\circ C)$
 $T = 593$

200
4.1
1.1

C3: 70
1544

T 743

IDWR'S RESPONSE TO ANSWER, AFFIRMATIVE DEFENSES AND PRAYER FOR
RELIEF OF CLAIMANT

This portion of the response addresses the multi-page attachment to the objection (hereinafter "the attachment"), wherein the claimant admits or denies all sections of Parts I, II, and III of the director's report, asserts 27 affirmative defenses, and alleges a prayer for relief. The attachment contains the following sections, corresponding to the various sections of the director's report:

- (1) I. GENERAL RESPONSE
- (2) II. DESCRIPTIVE SUMMARY, (first unnumbered page of Part I of the director's report)
- (3) III. TABLE OF CONTENTS (second and third unnumbered pages of Part I of the director's report)
- (4) IV. 1. INSTRUCTIONS FOR USING THIS REPORT PART I (page 1 of Part I of the director's report)
- (5) IV. 2. SCOPE OF THE ADJUDICATION (pages 1-3 of Part I of the director's report)
- (6) IV. 3. PURPOSE OF THIS REPORT PART I (pages 3-4 of Part I of the director's report)
- (7) V. 1. BOUNDARIES OF BASIN (pages 4-6 of Part I of the director's report)
- (8) V. 2. WATER SOURCES (page 6 of Part I of the director's report)
- (9) V. 3. DEVELOPMENT OF WATER USE (pages 6-9 of Part I of the director's report)
- (10) VI. GENERAL PROVISIONS 1-8 APPLY TO ALL WATER RIGHTS IN BASIN 36 (page 9 of Part I of the director's report)
- (11) VI. General Provision 1. EFFECT OF ADJUDICATION (page 9 of Part I of the director's report)
- (12) VI. General Provision 2. GENERAL ADMINISTRATIVE PROVISIONS (pages 9-10 of Part I of the director's report)
- (13) VI. General Provision 3. CONJUNCTIVE ADMINISTRATION (page 10 of Part I of the director's report)
- (13) VI. General Provision 4. ADMINISTRATION OF GROUND WATER RIGHTS (page 10 of Part I of the director's report)
- (14) VI. General Provision 5. ADMINISTRATION OF BASIN 36 RELATIVE TO THE SNAKE RIVER (page 10 of Part I of the director's report)
- (15) VI. General Provision 6. ADMINISTRATION OF SMALL DOMESTIC AND STOCK WATER RIGHTS (page 11 of Part I of the director's report)
- (16) VI. General Provision 7. MEASURING DEVICES AND CONTROL

MICROFILMED
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- WORKS (page 11 of Part I of the director's report)
- (17) VI. General Provision 8. FIRE FIGHTING PURPOSES (page 11 of Part I of the director's report)
 - (18) VI. General Provision 9. CONSUMPTIVE USE (page 12 of Part I of the director's report)
 - (19) VI. GENERAL PROVISION 10 APPLIES TO ALL WATER RIGHTS IN BASIN 36 SHOWN WITH DOMESTIC USE AS A PURPOSE OF USE (page 12 of Part I of the director's report)
 - (20) VI. General Provision 10. DOMESTIC USE (page 12 of Part I of the director's report)
 - (21) VI. GENERAL PROVISION 11 APPLIES TO ALL WATER RIGHTS IN BASIN 36 SHOWN WITH STOCK WATER USE AS A PURPOSE OF USE (page 13 of Part I of the director's report)
 - (22) VI. General Provision 11. STOCK WATER USE (page 13 of Part I of the director's report)
 - (23) VI. GENERAL PROVISIONS 12-16 APPLY TO ALL WATER RIGHTS IN BASIN 36 SHOWN WITH IRRIGATION AS A PURPOSE OF USE (page 13 of Part I of the director's report)
 - (24) VI. General Provision 12. IRRIGATION USE (pages 13-14 of Part I of the director's report)
 - (25) VI. General Provision 13. DIVERSION VOLUME FOR IRRIGATION (page 14 of Part I of the director's report)
 - (26) VI. General Provision 14. CONSUMPTIVE USE FOR IRRIGATION (pages 14-15 of Part I of the director's report)
 - (27) VI. General Provision 15. AMOUNT OF COMBINED WATER RIGHTS FOR IRRIGATION (page 15 of Part I of the director's report)
 - (28) VI. General Provision 16. DIVERSION RATES IN EXCESS OF .02 CFS PER ACRE (pages 15-16 of Part I of the director's report)
 - (30) VI. 17. INSTRUCTIONS FOR USE OF LIST OF RECOMMENDED WATER RIGHTS (pages A-i through A-iii of Part I of the director's report)
 - (31) VI. 18. IDAHO DEPARTMENT OF WATER RESOURCES RECOMMENDED WATER RIGHTS ACQUIRED UNDER STATE LAW (pages A-1 through B-25 of Part I of the director's report)
 - (32) DIRECTOR'S REPORT FOR REPORTING AREA 3 (BASIN 36), (DIRECTOR'S REPORT PART II)
 - (33) DIRECTOR'S REPORT FOR REPORTING AREA 3 (BASIN 36), (DIRECTOR'S REPORT PART III)

The attachment also contains part VIII, AFFIRMATIVE DEFENSES (pp. 20 through 28) and a PRAYER FOR RELIEF (untitled, p. 28).

In response to each of the items enumerated above IDWR responds that pursuant to Section 4 a.(2)(c) of SRBA Administrative Order 1, Rules of Procedure, IDWR generally denies each and every allegation, if any, contained in each enumerated portion of the attachment. IDWR affirmatively responds that neither SRBA Administrative Order 1, Rules of Procedure, nor Title 42, Chapter 14, Idaho Code, make provision for IDWR to affirm, amplify, or otherwise respond to the claimant's admissions, or to deny the claimant's denials, and that IDWR therefore does not believe that it is required to do so. Title 42, Chapter 14, Idaho Code solely defines the content and scope of the director's report. It is to contain a description of the water system and is to provide a recommendation as to each water right claimed and as to those matters necessary for administration of those water rights. Therefore, the content and scope of the objection is limited to those same matters. The attachment to the present objection asserts or otherwise raises matters not directly addressing the elements of the water right as recommended, the description of the water system, or the general provisions. Rather, the attachment raises broad issues as to the constitutional, statutory and administrative efficacy of the entire adjudication process. All such issues should be raised by means of motions to designate basinwide issues and similar procedural vehicles specifically designed to provide for basinwide notice and participation. They should not be permitted to divert the focus of any individual subcase away from the issues directly connected to the elements of the water right and the administration thereof. Therefore, because the attachment to the present objection is not within the scope of the statutory purpose of an objection it should be stricken.

However, in the event that the court should determine that all or part of the attachment is properly within the scope of the objection, IDWR further responds as follows:

IDWR affirmatively responds that all statements within the director's report are properly included therein pursuant to Title 42, Chapter 14, Idaho Code, and in particular pursuant to Idaho Code §§ 42-1411 and 42-1412(8); and that the provisions of the Idaho Rules of Civil Procedure regarding pleadings are inapplicable to the extent that they are in conflict with the statutory requirements. Therefore IDWR denies all allegations directed at the contents of the director's report.

As to the enumerated portions of the attachment addressing the listings of recommended water rights, abstracts of federal reserved water right claims, or negotiated agreements, other than the individual recommendation that is the subject of this objection, IDWR responds that such claims or agreements are not brought before this court by this objection.

Responding to the 27 affirmative defenses asserted in the attachment, IDWR generally denies each and every affirmative defense asserted. IDWR further responds that affirmative defense numbers 1, 2, 4, 5, 10, 11, 12, 18, and 22, asserting various violations of civil or constitutional rights, fail to comply with the requirements I.R.C.P. 9(b) providing that in all averments of violation of civil or constitutional rights the factual circumstances constituting such violation must be stated with particularity. Accordingly, IDWR asserts that those affirmative defenses should be stricken.

In response to that portion of the multi-page attachment to the objection wherein the claimant asserts a prayer for relief, IDWR responds as follows:

1. IDWR denies that the director's report asserts any claims against the claimant; rather, the director's report contains only the recommendation of the director as to how the claimant's water right should be decreed and administered.
2. IDWR denies that the claimant is entitled to have the water right decreed as claimed unless in the director's report the water right has been recommended as claimed.
3. IDWR denies that any acts upon its part constitute the taking of private property for which just compensation should be allowed and awarded.
4. IDWR denies that the claimant is entitled to recover court costs and reasonable attorney fees.
5. IDWR denies that the claimant by this objection has raised any claims against IDWR entitling such claimant to any relief other than the eventual judicial determination and decree of the various elements of the claimant's water right, if any, and of those related matters necessary to describe and administer that water right.

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

Case No. 39576

PARTIAL DECREE PURSUANT TO
I.R.C.P. 54(b) FOR

Water Right 36-00006

200 NOV 27 PM 2:40

FILED
TWIN FALLS, IDAHO

NAME AND ADDRESS: PENELOPE F TURNER
PO BOX 387
HAGERMAN, ID 83332

SOURCE: BILLINGSLEY CREEK TRIBUTARY: SNAKE RIVER

QUANTITY: 3.50 CFS

THE PORTION OF THIS RIGHT IN EXCESS OF 1.08 CFS FOR
IRRIGATION IS SUBORDINATED TO ALL WATER RIGHTS WITH PRIORITY
DATES EARLIER THAN DECEMBER 31, 1999.

THE QUANTITY OF WATER UNDER THIS RIGHT FOR STOCKWATER USE
SHALL NOT EXCEED 13,000 GALLONS PER DAY.

PRIORITY DATE: 04/01/1885

THE PORTION OF THIS RIGHT FOR WILDLIFE USE IS SUBORDINATED
TO ALL WATER RIGHTS WITH PRIORITY DATES EARLIER THAN DECEMBER 31,
1999.

POINT OF DIVERSION: T07S R13E S11 NWSWNE Within Gooding County

PURPOSE AND PERIOD OF USE:	PURPOSE OF USE	PERIOD OF USE	QUANTITY
	Irrigation	02-15 TO 11-30	3.50 CFS
	Stockwater	01-01 TO 12-31	0.03 CFS
	Wildlife	01-01 TO 12-31	3.50 CFS

THE WILDLIFE USE UNDER THIS RIGHT IS SUBORDINATED TO ALL
WATER RIGHTS WITH PRIORITY DATES EARLIER THAN DECEMBER 31, 1999.

THE IRRIGATION USE UNDER THIS RIGHT IN EXCESS OF 1.08 CFS
IS SUBORDINATED TO ALL WATER RIGHTS WITH PRIORITY DATES EARLIER
THAN DECEMBER 31, 1999.

PLACE OF USE: Irrigation T07S R13E S11 NWNW 19.0 Within Gooding County
21.0 Acres Total SWSW 2.0

Stockwater Within Gooding County
Same as Irrigation

Wildlife Within Gooding County
Same as Irrigation

OTHER PROVISIONS NECESSARY FOR DEFINITION OR ADMINISTRATION OF THIS WATER RIGHT:

THE QUANTITY OF WATER DECREED FOR THIS WATER RIGHT FOR
STOCKWATER USE IS NOT A DETERMINATION OF HISTORICAL BENEFICIAL
USE.

0.08 CFS OF THE UNSUBORDINATED IRRIGATION PORTION OF THIS
RIGHT IS LIMITED TO USE FOR CONVEYANCE LOSSES IN THE DELIVERY
OF THIS RIGHT.

THE SUBORDINATED PORTIONS OF THIS WATER RIGHT SHALL NOT BE
ASSERTED, DELIVERED, MONORED, USED, ENFORCED, EFFECTIVE OR
OTHERWISE RECOGNIZED AS VALID IF IT WOULD CAUSE OR REQUIRE
EITHER DIRECTLY OR INDIRECTLY, CURTAILMENT OF, INJURY TO, OR
MITIGATION FROM ANY WATER RIGHTS WITH PRIORITY DATES EARLIER
THAN DECEMBER 31, 1999. THE SUBORDINATIONS SHALL RUN WITH AND

SRBA Partial Decree Pursuant to I.R.C.P. 54(b) (continued)

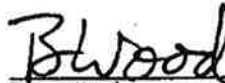
OTHER PROVISIONS (continued)

BE PERPETUAL SERVITUDES UPON THIS WATER RIGHT AND THE ASSOCIATED LANDS, INCLUDING ANY NEW LANDS TO WHICH ALL OR ANY PORTIONS OF THIS WATER RIGHT IS TRANSFERRED.

THIS PARTIAL DECREE IS SUBJECT TO SUCH GENERAL PROVISIONS NECESSARY FOR THE DEFINITION OF THE RIGHTS OR FOR THE EFFICIENT ADMINISTRATION OF THE WATER RIGHTS AS MAY BE ULTIMATELY DETERMINED BY THE COURT AT A POINT IN TIME NO LATER THAN THE ENTRY OF A FINAL UNIFIED DECREE. I.C. SECTION 42-1412(6).

RULE 54(b) CERTIFICATE

With respect to the issues determined by the above judgment or order, it is hereby CERTIFIED, in accordance with Rule 54(b), I.R.C.P., that the court has determined that there is no just reason for delay of the entry of a final judgment and that the court has and does hereby direct that the above judgment or order shall be a final judgment upon which execution may issue and an appeal may be taken as provided by the Idaho Appellate Rules.



Barry Wood
Administrative District Judge
Presiding Judge of the
Snake River Basin Adjudication

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.: 36-00006

Case 39576

STANDARD FORM 5

STIPULATED ELEMENTS
OF A WATER RIGHT

This form is used to report the stipulated elements of one water right acquired under state law and/or one federal reserved water right. Submission of this form will not automatically result in the issuance of a partial decree. The Presiding Judge or Special Master will conduct any hearing necessary to determine whether the facts, data, expert opinions and law support the issuance of a partial decree for the water right.

The parties agree that the Snake River Basin Adjudication Court has jurisdiction of the parties and subject matter to enter a partial decree for this water right; that they have been served with sufficient process, according to the law; and that they have appeared, prosecuted, and defended their positions with regard to this water right dispute.

The parties and IDWR agree and stipulate that the elements of this water right should be decreed as described in the attached Recommendation. The parties and IDWR have further indicated their concurrence by initialling each of the attached pages.


Patrick D. Brown

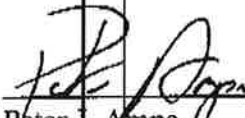
6/5/00
Date

Attorney for William Strange, Louise Strange
and Penny Turner


Michael C. Creamer

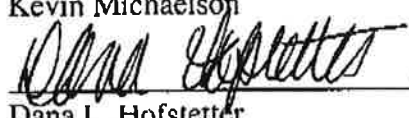
5/22/00
Date

Givens Pursley LLP
Attorney for Cranney Bros., Doug Grant and
Kevin Michaelson


Peter J. Ampe

5/23/00
Date

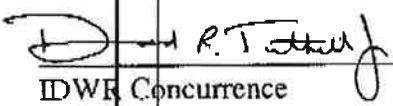
Deputy Attorney General, State of Idaho
Attorney for Idaho Department of Fish &
Game


Dana L. Hofstetter

5/23/00
Date

Beeman and Hofstetter, P.C.

Attorney for North Snake Ground Water
District


IDWR Concurrence

8/30/00
Date

IDAHO DEPARTMENT OF WATER RESOURCES

RECOMMENDED WATER RIGHTS ACQUIRED UNDER STATE LAW

Right Number: 36-00006

Name and Address: William Strange
Louise Strange
Penny Turner
P.O. Box 387
Hagerman ID 83332

Source: BILLINGSLEY CREEK

Tributary: SNAKE RIVER

Quantity: 3.50 CFS

THE PORTION OF THIS RIGHT IN EXCESS OF 1.08 CFS FOR IRRIGATION IS SUBORDINATED TO ALL WATER RIGHTS WITH PRIORITY DATES EARLIER THAN DECEMBER 31, 1999.

THE PORTION OF THIS RIGHT FOR WILDLIFE USE IS SUBORDINATED TO ALL WATER RIGHTS WITH PRIORITY DATES EARLIER THAN DECEMBER 31, 1999.

THE QUANTITY OF WATER UNDER THIS RIGHT FOR STOCKWATER USE SHALL NOT EXCEED 13,000 GALLONS PER DAY

Priority Date: 04/01/1885

Point of Diversion: T07S R13E S11 NWSWNE

Within GOODING County

Purpose and

Period of Use:

Purpose of Use

Period of Use

Quantity

IRRIGATION

02/15 - 11/30

3.50 CFS

STOCKWATER

01/01 - 12/31

0.03 CFS

WILDLIFE

01/01 - 12/31

3.50 CFS

THE WILDLIFE USE UNDER THIS RIGHT IS SUBORDINATED TO ALL WATER RIGHTS WITH PRIORITY DATES EARLIER THAN DECEMBER 31, 1999.

THE IRRIGATION USE UNDER THIS RIGHT IN EXCESS OF 1.08 CFS IS SUBORDINATED TO ALL WATER RIGHTS WITH PRIORITY DATES EARLIER THAN DECEMBER 31, 1999.

S:\CLIENTS\3915\34\36-00006 Water Right Description2.wpd

Place of Use: IRRIGATION
T07S R13E S11

SWSW 2

NWNW 19

Within GOODING County

21 ACRES TOTAL

THE PLACE OF USE FOR STOCKWATER AND WILDLIFE IS THE SAME AS THE PLACE OF USE FOR IRRIGATION.

Other Provisions Necessary For Definition or Administration of This Water Right:

THE SUBORDINATED PORTIONS OF THIS WATER RIGHT SHALL NOT BE ASSERTED, DELIVERED, HONORED, USED, ENFORCED, EFFECTIVE OR OTHERWISE RECOGNIZED AS VALID IF IT WOULD CAUSE OR REQUIRE, EITHER DIRECTLY OR INDIRECTLY, CURTAILMENT OF, INJURY TO, OR MITIGATION FROM ANY WATER RIGHTS WITH PRIORITY DATES EARLIER THAN DECEMBER 31, 1999. THE SUBORDINATIONS SHALL RUN WITH AND BE PERPETUAL SERVITUDES UPON THIS WATER RIGHT AND THE ASSOCIATED LANDS, INCLUDING ANY NEW LANDS TO WHICH ALL OR ANY PORTIONS OF THIS WATER RIGHT IS TRANSFERRED.

0.08 CFS OF THE UNSUBORDINATED IRRIGATION PORTION OF THIS RIGHT IS LIMITED TO USE FOR CONVEYANCE LOSSES IN THE DELIVERY OF THIS RIGHT.

THIS PARTIAL DECREE IS SUBJECT TO SUCH GENERAL PROVISIONS NECESSARY FOR THE DEFINITION OF THE RIGHTS OR FOR THE EFFICIENT ADMINISTRATION OF THE WATER RIGHTS AS MAY BE ULTIMATELY DETERMINED BY THE COURT AT A POINT IN TIME NO LATER THAN THE ENTRY OF A FINAL UNIFIED DECREE. SECTION 42-1412(6) IDAHO CODE.

THE QUANTITY OF WATER DECREED FOR THIS WATER RIGHT FOR STOCKWATER USE IS NOT A DETERMINATION OF HISTORICAL BENEFICIAL USE.

Explanatory Material: BASIS OF CLAIM - DECREE
WATER IS DELIVERED THROUGH SANDS DITCH
STOCKWATER, 75 RANGE CATTLE

Handwritten signatures and initials:
MC, DCH, DR, RB

S:\CLIENTS\3915\34\36-00006 Water Right Description2.wpd

CERTIFICATE OF SERVICE

I certify that on 8-30, 2000, I mailed and/or delivered the original and copies of this Standard Form 5, to the following interested parties, in the manner indicated and addressed as follows:

1. Original to:

Clerk of the District Court
Snake River Basin Adjudication
253 Third Avenue North
P.O. Box 2707
Twin Falls, ID 83303-2707

☐ Overnight Mail
☐ Regular Mail
☐ Hand-Delivered
☒ Facsimile

2. Copies to:

IDWR Document Repository
P.O. Box 83720
Boise, ID 83720-0098

☐ Overnight Mail
☐ Regular Mail
☒ Hand-Delivered
☐ Facsimile

Dana Hofstetter
Beeman Hofstetter
P.O. Box 1427
Boise, ID 83701-1427

☐ Overnight Mail
☒ Regular Mail
☐ Hand-Delivered
☐ Facsimile

Patrick D. Brown
Law Offices
109 S. Adams
Jerome, ID 83338

☐ Overnight Mail
☒ Regular Mail
☐ Hand-Delivered
☐ Facsimile

Michael C. Creamer
Givens Pursley, LLP
P.O. Box 2720
Boise, ID 83701-2720

☐ Overnight Mail
☒ Regular Mail
☐ Hand-Delivered
☐ Facsimile

Peter J. Ampe
Office of the Attorney General
State of Idaho
P.O. Box 44449
Boise, ID 83711-4449

☐ Overnight Mail
☐ Regular Mail
☒ Hand-Delivered
☐ Facsimile

Sandy Egbert
Signature of person or attorney mailing the form

STANDARD FORM 5 - STIPULATED ELEMENTS OF A WATER RIGHT



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

TRANSMITTAL COVER SHEET

FAX NUMBER: (208) 327-5400

DATE: 8-11-00

TO: STEVE CLELLAND

FROM: NICK SPENCER

DOCUMENT DESCRIPTION: STRANGE SF-5S

COVER SHEET + 9 PAGES

CONTACT: 327-7930 IF YOU DO NOT RECEIVE ALL THE PAGES.

THANK YOU!

**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

Case 39576

Subcase No.: 36-00006

STANDARD FORM 5

**STIPULATED ELEMENTS
OF A WATER RIGHT**

This form is used to report the stipulated elements of one water right acquired under state law and/or one federal reserved water right. Submission of this form will not automatically result in the issuance of a partial decree. The Presiding Judge or Special Master will conduct any hearing necessary to determine whether the facts, data, expert opinions and law support the issuance of a partial decree for the water right.

The parties agree that the Snake River Basin Adjudication Court has jurisdiction of the parties and subject matter to enter a partial decree for this water right; that they have been served with sufficient process, according to the law; and that they have appeared, prosecuted, and defended their positions with regard to this water right dispute.

The parties and IDWR agree and stipulate that the elements of this water right should be decreed as described in the attached Recommendation. The parties and IDWR have further indicated their concurrence by initialing each of the attached pages.


Patrick D. BrownAttorney for William Strange, Louise Strange
and Penny Turner6/5/00
Date
Peter J. AmpeDeputy Attorney General, State of Idaho
Attorney for Idaho Department of Fish &
Game5/23/00
Date
Michael C. Creamer

Givens Pursley LLP

Attorney for Cranney Bros., Doug Grant and
Kevin Michaelson5/22/00
Date
Dana L. Hofstetter

Beeman and Hofstetter, P.C.

Attorney for North Snake Ground Water
District5/23/00
Date

IDWR Concurrence

Date

IDAHO DEPARTMENT OF WATER RESOURCES

RECOMMENDED WATER RIGHTS ACQUIRED UNDER STATE LAW

Right Number: 36-00006

Name and Address: William Strange
Louise Strange
Penny Turner
P.O. Box 387
Hagerman ID 83332

Source: BILLINGSLEY CREEK

Tributary: SNAKE RIVER

Quantity: 3.50 CFS

THE PORTION OF THIS RIGHT IN EXCESS OF 1.08 CFS FOR IRRIGATION IS SUBORDINATED TO ALL WATER RIGHTS WITH PRIORITY DATES EARLIER THAN DECEMBER 31, 1999.

THE PORTION OF THIS RIGHT FOR WILDLIFE USE IS SUBORDINATED TO ALL WATER RIGHTS WITH PRIORITY DATES EARLIER THAN DECEMBER 31, 1999.

THE QUANTITY OF WATER UNDER THIS RIGHT FOR STOCKWATER USE SHALL NOT EXCEED 13,000 GALLONS PER DAY

Priority Date: 04/01/1885

Point of Diversion: T07S R13E S11 NWSWNE

Within GOODING County

Purpose and

Period of Use:

Purpose of Use

Period of Use

Quantity

IRRIGATION

02/15 - 11/30

3.50 CFS

STOCKWATER

01/01 - 12/31

0.03 CFS

WILDLIFE

01/01 - 12/31

3.50 CFS

THE WILDLIFE USE UNDER THIS RIGHT IS SUBORDINATED TO ALL WATER RIGHTS WITH PRIORITY DATES EARLIER THAN DECEMBER 31, 1999.

THE IRRIGATION USE UNDER THIS RIGHT IN EXCESS OF 1.08 CFS IS SUBORDINATED TO ALL WATER RIGHTS WITH PRIORITY DATES EARLIER THAN DECEMBER 31, 1999.

Place of Use: IRRIGATION
T07S R13E S11

SWSW 2 NWNW 19

Within GOODING County

21 ACRES TOTAL

THE PLACE OF USE FOR STOCKWATER AND WILDLIFE IS THE SAME AS THE PLACE OF USE FOR IRRIGATION.

Other Provisions Necessary For Definition or Administration of This Water Right:

THE SUBORDINATED PORTIONS OF THIS WATER RIGHT SHALL NOT BE ASSERTED, DELIVERED, HONORED, USED, ENFORCED, EFFECTIVE OR OTHERWISE RECOGNIZED AS VALID IF IT WOULD CAUSE OR REQUIRE, EITHER DIRECTLY OR INDIRECTLY, CURTAILMENT OF, INJURY TO, OR MITIGATION FROM ANY WATER RIGHTS WITH PRIORITY DATES EARLIER THAN DECEMBER 31, 1999. THE SUBORDINATIONS SHALL RUN WITH AND BE PERPETUAL SERVITUDES UPON THIS WATER RIGHT AND THE ASSOCIATED LANDS, INCLUDING ANY NEW LANDS TO WHICH ALL OR ANY PORTIONS OF THIS WATER RIGHT IS TRANSFERRED.

0.08 CFS OF THE UNSUBORDINATED IRRIGATION PORTION OF THIS RIGHT IS LIMITED TO USE FOR CONVEYANCE LOSSES IN THE DELIVERY OF THIS RIGHT.

THIS PARTIAL DECREE IS SUBJECT TO SUCH GENERAL PROVISIONS NECESSARY FOR THE DEFINITION OF THE RIGHTS OR FOR THE EFFICIENT ADMINISTRATION OF THE WATER RIGHTS AS MAY BE ULTIMATELY DETERMINED BY THE COURT AT A POINT IN TIME NO LATER THAN THE ENTRY OF A FINAL UNIFIED DECREE. SECTION 42-1412(6) IDAHO CODE.

THE QUANTITY OF WATER DECREED FOR THIS WATER RIGHT FOR STOCKWATER USE IS NOT A DETERMINATION OF HISTORICAL BENEFICIAL USE.

Explanatory Material: BASIS OF CLAIM - DECREE
WATER IS DELIVERED THROUGH SANDS DITCH
STOCKWATER, 75 RANGE CATTLE

Handwritten signatures and initials:
MCC
Dkt
RB

COPY

2000 FEB -4 PM 2:08

DISTRICT COURT-SRBA
TWIN FALLS CO., IDAHO
FILED

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

Case No. 39576

) NOTICE OF COMPLETED
) ADMINISTRATIVE PROCEEDINGS

) Water Rights 36-00006, 36-00007
) and 36-00008

IDWR has completed the following Administrative Proceeding:

- ☐ Change of Address
- ☒ Substitution of Party
- ☐ I.C. 42-222 Transfer

SUBSTITUTION OF PARTY

Does the change in "ownership" result in a splitting of the water
right claimed? ☐ Yes ☒ No

If yes, does the split involve an I.C. 42-222 transfer? ☐ Yes ☐ No

Water Right(s): 36-00006, 36-00007 and 36-00008

NOTICE OF COMPLETED
ADMINISTRATIVE PROCEEDING
2/3/2000

36-00006, 36-00007 and 36-00008

PAGE 1

From (Claimant/Seller):

Name of Claimant: LOUISE STRANGE
WILLIAM STRANGE
Address: 923 PIONEER RD
HAGERMAN ID 83332
Phone: (208) 837-4767

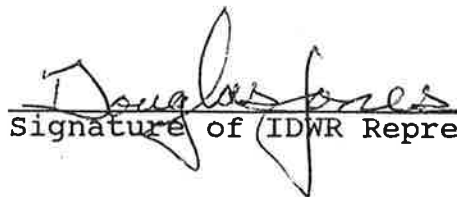
To (Claimant/Purchaser):

Name of Claimant: PENELOPE F TURNER
Address: 923 PIONEER RD
HAGERMAN ID 83332
Phone: (208) 837-4767

IDWR certifies that it has completed its investigation into the changes to the elements of the water rights listed above as set forth in the attached Amended Director's Reports for said water rights. No other changes have been made to the elements of these water rights except as set forth above.

IDWR has served copies of the Notice of Completed Administrative Transfer and Amended Director's Reports(s) on the claimant(s), prior claimants(s) and all parties in the subcases affected, if any, as reflected on the attached certificate of mailing.

DATED: February 3, 2000



Signature of IDWR Representative

CERTIFICATE OF MAILING

I certify that on 2/4/2000 I mailed the original and copies of this form to the following persons, postage prepaid and addressed as follows:

1. Original to:
Clerk of the District Court
Snake River Basin Adjudication
253 Third Avenue North
P.O. Box 2707
Twin Falls, Idaho 83303-2707
2. One Copy to:
Claimant/Seller for Substitution of Party or attorney of record:

LOUISE STRANGE
WILLIAM STRANGE
923 PIONEER RD
HAGERMAN ID 83332
3. One Copy to:
Claimant/Purchaser for Substitution of Party or attorney of record:

PATRICK D BROWN PC
109 S ADAMS
JEROME ID 83338
4. One Copy to:
Each party in the subcase, or attorney of record:

PATRICK D BROWN PC
109 S ADAMS
JEROME ID 83338

PATRICK D BROWN
812 SHOSHONE ST E
TWIN FALLS ID 83301

LOUISE STRANGE
PO BOX 387
HAGERMAN ID 83332
5. One Copy to:
Chief, Natural Resources Division
Office of the Attorney General
P.O. Box 44449
Boise, Idaho 83711-4449

NOTICE OF COMPLETED
ADMINISTRATIVE PROCEEDING
2/3/2000

36-00006, 36-00007 and 36-00008

PAGE 3

6. One Copy to:
United States Dept. of Justice
Environment & Natural Resource Div.
550 West Fort Street, MSC 033
Boise, ID 83724



Signature of person or attorney mailing the form

AJ5856NP

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

DATE: FEB-3-2000

PAGE: A-1

RIGHT NUMBER: 36-00006

NAME & ADDRESS: PENELOPE F TURNER
923 PIONEER RD
HAGERMAN ID 83332

SOURCE: BILLINGSLEY CREEK TRIBUTARY: SNAKE RIVER

QUANTITY: 1.08 CFS

THE APPROPRIATOR IS ENTITLED TO THE QUANTITY OF WATER DESCRIBED FOR STOCK WATER PURPOSES AT A POINT OF MEASUREMENT WHERE THE DELIVERY DITCH ENTERS THE PLACE OF USE DESCRIBED, SO LONG AS THE QUANTITY DIVERTED AT THE POINT OF DIVERSION DOES NOT CONSTITUTE UNREASONABLE WASTE.

THE QUANTITY OF WATER UNDER THIS RIGHT FOR STOCKWATER USE SHALL NOT EXCEED 13,000 GALLONS PER DAY.

PRIORITY DATE: 04/01/1885

POINT OF DIVERSION: T07S R13E S11 NWSWNE Within GOODING County

PURPOSE AND

PERIOD OF USE:	PURPOSE OF USE	PERIOD OF USE	QUANTITY
	IRRIGATION	02-15 11-30	1.08 CFS
	STOCKWATER	01-01 12-31	0.03 CFS

PLACE OF USE: IRRIGATION Within GOODING County
T07S R13E S11 SWSW 2
S14 NWNW 19
21 ACRES TOTAL

STOCKWATER Within GOODING County
T07S R13E S11 SWSW
S14 NWNW

OTHER PROVISIONS NECESSARY FOR DEFINITION OR ADMINISTRATION OF THIS WATER RIGHT:

THE QUANTITY OF WATER DECREED FOR THIS WATER RIGHT FOR STOCKWATER USE IS NOT A DETERMINATION OF HISTORICAL BENEFICIAL USE.

THIS PARTIAL DECREE IS SUBJECT TO SUCH GENERAL PROVISIONS NECESSARY FOR THE DEFINITION OF THE RIGHTS OR FOR THE EFFICIENT ADMINISTRATION OF THE WATER RIGHTS AS MAY BE ULTIMATELY DETERMINED BY THE COURT AT A POINT IN TIME NO LATER THAN THE ENTRY OF A FINAL UNIFIED DECREE, SECTION 42-1412(6) IDAHO CODE.

EXPLANATORY MATERIAL: BASIS OF CLAIM - DECREE

AJ5856NP

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

DATE: FEB-3-2000
PAGE: A-2

RIGHT NUMBER: 36-00006 (CONT)

EXPLANATORY MATERIAL: (CONT)

WATER IS DELIVERED THROUGH THE SANDS DITCH.

AJ5857NP

IDAHO DEPARTMENT OF WATER RESOURCES
CLAIMS/RIGHTS NOT RECOMMENDED

DATE: FEB-3-2000
PAGE: B-1

W.R. NUMBER

NAME & ADDRESS

CLAIM DISPOSITION

REASON

36-00007

TURNER, PENELOPE F
923 PIONEER RD
HAGERMAN ID 83332

DISALLOWED

RECOMMENDED AS RIGHT NO. 36-00006.

AJ5856NP

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

DATE: FEB-3-2000
PAGE: A-3

RIGHT NUMBER: 36-00008

NAME & ADDRESS: PENELOPE F TURNER
923 PIONEER RD
HAGERMAN ID 83332

SOURCE: BILLINGSLEY CREEK TRIBUTARY: SNAKE RIVER

QUANTITY: 0.9 CFS

THE APPROPRIATOR IS ENTITLED TO THE QUANTITY OF WATER DESCRIBED FOR STOCK WATER PURPOSES AT A POINT OF MEASUREMENT WHERE THE DELIVERY DITCH ENTERS THE PLACE OF USE DESCRIBED, SO LONG AS THE QUANTITY DIVERTED AT THE POINT OF DIVERSION DOES NOT CONSTITUTE UNREASONABLE WASTE.

THE QUANTITY OF WATER UNDER THIS RIGHT FOR STOCKWATER USE SHALL NOT EXCEED 13,000 GALLONS PER DAY.

PRIORITY DATE: 04/01/1880

POINT OF DIVERSION: T07S R13E S11 SESENW Within GOODING County

PURPOSE AND

PERIOD OF USE:	PURPOSE OF USE	PERIOD OF USE	QUANTITY
	IRRIGATION	02-15 11-30	0.9 CFS
	STOCKWATER	01-01 12-31	0.03 CFS

PLACE OF USE: IRRIGATION Within GOODING County
T07S R13E S11 SWSW 21
21 ACRES TOTAL

STOCKWATER Within GOODING County
T07S R13E S10 Lot 5 (SESE)
S11 SWSW

OTHER PROVISIONS NECESSARY FOR DEFINITION OR ADMINISTRATION OF THIS WATER RIGHT:

THE QUANTITY OF WATER DECREED FOR THIS WATER RIGHT FOR STOCKWATER USE IS NOT A DETERMINATION OF HISTORICAL BENEFICIAL USE.

THIS PARTIAL DECREE IS SUBJECT TO SUCH GENERAL PROVISIONS NECESSARY FOR THE DEFINITION OF THE RIGHTS OR FOR THE EFFICIENT ADMINISTRATION OF THE WATER RIGHTS AS MAY BE ULTIMATELY DETERMINED BY THE COURT AT A POINT IN TIME NO LATER THAN THE ENTRY OF A FINAL UNIFIED DECREE, SECTION 42-1412(6) IDAHO CODE.

EXPLANATORY MATERIAL: BASIS OF CLAIM - DECREE

AJ5856NP

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

DATE: FEB-3-2000
PAGE: A-4

RIGHT NUMBER: 36-00008 (CONT)

EXPLANATORY MATERIAL: (CONT)

WATER IS DELIVERED THROUGH THE BARLOGI DITCH.
STOCKWATER, 75 RANGE CATTLE

JAN 07 2000

Department of Water Resources
Southern RegionSTATE OF IDAHO
IDAHO DEPARTMENT OF WATER RESOURCES

NOTICE OF CHANGE OF WATER RIGHT OWNERSHIP

Please print or type. Attach pages with additional information. Instructions are on the back of this page.
Incomplete forms will be returned.

1. Water Right No(s).: 36-00006, 36-00007 & 36-00008
Adjudication Claim No(s).: SRBA#39576
2. The following REQUIRED information must be submitted with this form:
 - A. A copy of the most recent DEED, TITLE POLICY, CONTRACT OF SALE or other legal document indicating your ownership of the property and water rights or claims in question, WITH ATTACHED LEGAL DESCRIPTION.
AND
 - B. PLAT OF PROPERTY or SURVEY MAP for parcel of ten acres or less. (These are usually attached to your deed or on file with the county.)
OR
 - C. For water rights or adjudication claims involving ten or more irrigated acres, a USDA Farm Service Agency AERIAL PHOTO with irrigated acres outlined and point(s) of diversion clearly marked.
3. Name and Address of Former Owner/Claimant William Strange
923 Pioneer Rd, Hagerman ID 83332
4. New Owner/Claimant(s) Penelope F. Turner
Name Connector (Check one): ☐ and, ☐ or, ☐ and/or
New Mailing Address 923 Pioneer Road
City, State and ZIP Code Hagerman ID 83332
New Telephone Number (208) 837-4767
5. Date you acquired the property 12/05/91
6. If you have acquired only a portion of the former owner's property, IDWR may need to split the water right(s) or adjudication claim(s). If this applies, describe in detail your portion of each water right or adjudication claim in the spaces below. If necessary, attach additional pages.
Number of acres you irrigate NA Number and type of stock _____
Diversion rate in CFS _____ Number of homes _____ Other uses _____
If a water right or adjudication claim is being split and you are not sure how to identify your portion of the original right or claim, please contact the nearest IDWR office for assistance.
7. Signature of New Owner or Claimant(s) Penelope F. Turner
Penelope F. Turner
(Corporations or other organizations must submit a list of directors and/or officers demonstrating authority to sign form.)
8. For Snake River Basin Adjudication Claims: Please attach a Notice of Appearance completed by your attorney, if you wish IDWR to correspond with him or her for all matters related to your claims..

36-00007-T15, R1B, Sec 15 NENW Lot 3 not conveyed. Record changed anyway due to disallowed status of claim. 1/19/2000

WARRANTY DEED

For Value Received WILLIAM STRANGE
P.O. BOX 387
HAGERMAN, ID 83332

Hereinafter called the Grantor, hereby grants, bargains, sells and conveys unto
PENELOPE F. TURNER
P.O. BOX 387
HAGERMAN, ID 83332

Hereinafter called the Grantee, the following described premises situated in GOODING County, Idaho,
to-wit:

TOWNSHIP 7 SOUTH, RANGE 13, EAST OF THE BOISE MERIDIAN

Section 10: Lot 5;
Section 11: SW $\frac{1}{4}$ SW $\frac{1}{4}$, EXCEPTING THEREFROM the following described
parcel of land:

Beginning at the Northeast corner of the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of said
Section 11; Running thence South 345 feet; Thence West 377 feet;
Thence North 345 feet; Thence East 377 feet to THE POINT OF BEGINNING.

Section 14: NW $\frac{1}{4}$ NW $\frac{1}{4}$, EXCEPTING THEREFROM the following described
parcel of land:

Beginning at the Southeast corner of the NW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 14,
aforesaid; Thence North 626 feet; Thence South 85° 45' West, 717 feet;
Thence South 13° 45' West, 585 feet to the South line of said NW $\frac{1}{4}$ NW $\frac{1}{4}$
of said Section 14; Thence East along said South line 840 feet, more
or less, to THE PLACE OF BEGINNING.

Section 15: Lots 1 and 2;

TOGETHER WITH the tenements, hereditaments, and appurtenances
thereto belonging or anyway appertaining, including all water rights
and ditch rights appurtenant thereto, including but not limited to,
229 inches in Sands Ditch and 100 inches in Barlogi Ditch.

EXCEPTING AND RESERVING in the Grantor a LIFE ESTATE in the
above described property.

SITUATE IN GOODING COUNTY, STATE OF IDAHO.

TO HAVE AND TO HOLD, the said premises, with their appurtenances unto the said Grantee
and to the successors heirs and assigns of the Grantee forever. The Grantor does hereby covenant to
and with the said Grantee, that the Grantor is the owner in fee simple of said premises; that they are
free from all incumbrances except as above described and that Grantor will warrant and defend the
same from all lawful claims whatsoever.

Dated: December 5th, 1991.

William Strange

William Strange

STATE OF IDAHO, COUNTY OF GOODING

On this 5th day of December, 1991,
before me, a notary public in and for said State, per-
sonally appeared WILLIAM STRANGE

known to me to be the person whose name is
subscribed to the within instrument, and acknowledged
to me that he executed the same

Notary Public

Residing at Gooding, Idaho
Commission expires 5-27-92

147029

STATE OF IDAHO COUNTY OF GOODING

Filed for record at the request of Penny Turner
5 min. past 10 o'clock A M. this 5

of Dec, 1991 4:30
JOHN A. MYERS Recorder

By Albata Sells Deputy

PATRICK D. BROWN, P.C.
LAW OFFICES

January 5, 2000

RECEIVED
JAN 07 2000
Department of Water Resources
Southern Region

IDWR Southern Region
1341 Fillmore St., Suite 200
Twin Falls, ID 83301

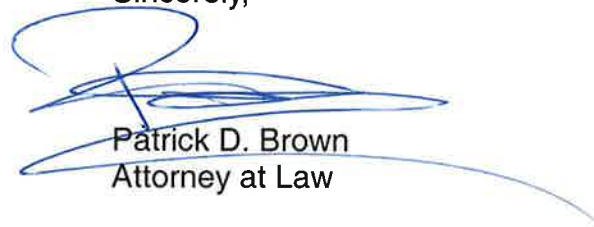
RE: NOTICE OF CHANGE OF WATER RIGHT OWNERSHIP
36-00006, 36-00007 & 36-00008

Dear sir:

Enclosed is the completed Notice of Change of Water Right Ownership completed by Penelope F. Turner for the above-referenced water rights. Attached to the Notice is a copy of the Warranty Deed granting ownership to Ms. Turner.

If you require further documentation, please let me know. Thank you for your attention to this matter.

Sincerely,



Patrick D. Brown
Attorney at Law

pdb/tf
enc. (2)
cc: Penny Turner



State of Idaho

DEPARTMENT OF WATER RESOURCES

1341 Fillmore Street, Suite 200, Twin Falls, ID 83301-3380

Phone: (208) 736-3033 FAX: (208) 736-3037

SOUTHERN REGION

February 4, 2000

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

PATRICK D BROWN
109 S ADAMS
JEROME ID 83338

RE: SRBA Claim(s) 36-00006, 36-00007, 36-00008

Dear Counselor:

Please find the enclosed copy of the Notice of Completed Administrative Proceeding, which the department has filed with the SRBA Court regarding the above referenced claims. You have received this notice pursuant to SRBA Court Administrative Order 11 requiring IDWR to report to the court and interested parties any pending changes to adjudication claims in basins for which a Director's Report has been filed with the court.

Please contact this office if you have any questions about the notice or the administrative process.

Sincerely,

Trish Fawcett
Technical Record Specialist

RECEIVED

DEC 02 1999

Department of Water Resources
Southern Region

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

Case No. 39576

) NOTICE OF COMPLETED
) ADMINISTRATIVE PROCEEDINGS

) Water Rights 36-00006, 36-00007
) and 36-00008

IDWR has completed the following Administrative Proceeding:

- ☒ Change of Address
☐ Substitution of Party
☐ I.C. 42-222 Transfer

CHANGE OF ADDRESS

Name of Claimant: WILLIAM STRANGE
New Address: 923 PIONEER RD
HAGERMAN ID 83332
Phone: (208) 837-4767

Claimant's Water Rights: 36-00006, 36-00007 and 36-00008

The Claimant has filed Objections or Responses to the following water
rights: 36-00006, 36-00007 and 36-00008

NOTICE OF COMPLETED
ADMINISTRATIVE PROCEEDING
8/20/1999

36-00006, 36-00007 and 36-00008

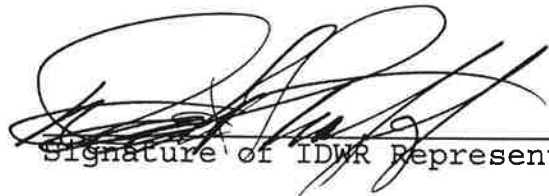
PAGE 1

IDWR certifies that it has completed its investigation into the changes to the elements of the water rights listed above as set forth in the attached Amended Director's Reports for said water rights. No other changes have been made to the elements of these water rights except as set forth above.

IDWR has served copies of the Notice of Completed Administrative Transfer and Amended Director's Reports(s) on the claimant(s), prior claimants(s) and all parties in the subcases affected, if any, as reflected on the attached certificate of mailing.

DATED:

10/06/99



Signature of IDWR Representative

CERTIFICATE OF MAILING

I certify that on 11-5-99 I mailed the original
and copies of this form to the following persons, postage prepaid
and addressed as follows:

1. Original to:
Clerk of the District Court
Snake River Basin Adjudication
253 Third Avenue North
P.O. Box 2707
Twin Falls, Idaho 83303-2707
2. One Copy to:
Each party in the subcase, or attorney of record:

PATRICK D BROWN
PARKER WARR & BROWN LLP
812 SHOSHONE ST EAST
TWIN FALLS ID 83301

WILLIAM STRANGE
923 PIONEER RD
HAGERMAN ID 83332
3. One Copy to:
Chief, Natural Resources Division
Office of the Attorney General
P.O. Box 44449
Boise, Idaho 83711-4449
4. One Copy to:
United States Dept. of Justice
Environment & Natural Resource Div.
550 West Fort Street, MSC 033
Boise, ID 83724


Signature of person or attorney mailing the form

IDAHO DEPARTMENT OF WATER RESOURCES
RECOMMENDED WATER RIGHTS ACQUIRED UNDER STATE LAWDATE: SEP-30-1999
PAGE: A-1

RIGHT NUMBER: 36-00006

NAME & ADDRESS: LOUISE STRANGE
WILLIAM STRANGE
923 PIONEER RD
HAGERMAN ID 83332

SOURCE: BILLINGSLEY CREEK

TRIBUTARY: SNAKE RIVER

QUANTITY: 1.08 CFS

THE APPROPRIATOR IS ENTITLED TO THE QUANTITY OF WATER DESCRIBED FOR STOCK WATER PURPOSES AT A POINT OF MEASUREMENT WHERE THE DELIVERY DITCH ENTERS THE PLACE OF USE DESCRIBED, SO LONG AS THE QUANTITY DIVERTED AT THE POINT OF DIVERSION DOES NOT CONSTITUTE UNREASONABLE WASTE.

THE QUANTITY OF WATER UNDER THIS RIGHT FOR STOCKWATER USE SHALL NOT EXCEED 13,000 GALLONS PER DAY.

PRIORITY DATE: 04/01/1885

POINT OF DIVERSION: T07S R13E S11

NWSWNE

Within GOODING County

PURPOSE AND
PERIOD OF USE:PURPOSE OF USE
IRRIGATION
STOCKWATERPERIOD OF USE
02-15 11-30
01-01 12-31QUANTITY
1.08 CFS
0.03 CFS

PLACE OF USE:

IRRIGATION
T07S R13E S11
S14
21 ACRES TOTALWithin GOODING County
SWSW 2
NWNW 19STOCKWATER
T07S R13E S11
S14Within GOODING County
SWSW
NWNW

OTHER PROVISIONS NECESSARY FOR DEFINITION OR ADMINISTRATION OF THIS WATER RIGHT:

THE QUANTITY OF WATER DECREED FOR THIS WATER RIGHT FOR STOCKWATER USE IS NOT A DETERMINATION OF HISTORICAL BENEFICIAL USE.

EXPLANATORY MATERIAL: BASIS OF CLAIM - DECREE
WATER IS DELIVERED THROUGH THE SANDS DITCH.

William Strange

Patrick D. Brown, P.C.
109 South Adams
Jerome, ID 83338
Telephone: (208) 644-1967
Fax: (208) 644-1970
Idaho State Bar #4413

RECEIVED

OCT 22 1999

Department of Water Resources

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

Case No. 39576

) Subcase No.: 36-00006, 36-00007
) and 36-00008
)
)
)
)
)
)

NOTICE OF SUBSTITUTION
OF COUNSEL

PLEASE TAKE NOTICE that Patrick D. Brown, P.C. appears as counsel of record for the Claimant and will substitute in the place of Parker, Warr, & Brown, L.L.P. Patrick D. Brown will remain as the primary attorney for the Claimant.

DATED this 18th day of October, 1999.



PATRICK D. BROWN
Attorney at Law

CERTIFICATE OF SERVICE

The undersigned, a resident attorney of the State of Idaho, with offices at 109 South Adams, Jerome, ID 83338, and attorney for the claimant in this matter, certifies that on the 18th day of October, 1999, he served a true and correct copy of the foregoing document by the method indicated below, and addressed to the following:

Beeman & Hofstetter
608 W. Franklin St.
P. O. Box 1427
Boise, ID 83701-1427

☐ U.S. Mail
☒ Hand Delivered
☐ Overnight Mail
☐ Telecopy (Fax)

Michael C. Creamer
Givens Pursley
277 North 6th Street, Suite 200
P.O. Box 2720
Boise, ID 83701-2720

☐ U.S. Mail
☒ Hand Delivered
☐ Overnight Mail
☐ Telecopy (Fax)

Idaho Dept. of Water Resources
Document Depository
P. O. Box 83720
Boise, ID 83701-0098

☒ U.S. Mail
☐ Hand Delivered
☐ Overnight Mail
☐ Telecopy (Fax)

Chief, Natural Resources
Office of the Attorney General
P.O. Box 4449
Boise, ID 83711-4449

☐ U.S. Mail
☒ Hand Delivered
☐ Overnight Mail
☐ Telecopy (Fax)



Patrick D. Brown

RECEIVED

AUG 16 1999

Department of Water Resources

Department of Water Resources
1301 North Orchard Street
Boise, Idaho 83720-0098

RE: Your letter of August 3.

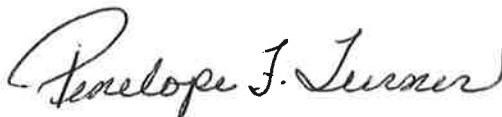
Dear Ms. Sherman:

Enclosed is the letter you enclosed for our change of address.

Please note that the ranch is now in both my father's name (William Strange) and mine (Penelope F. Turner). We have told you before that Louise Strange passed away several years ago. This information was given to your attorney at our last meeting along with a copy of the "Warranty Deed". Our attorney is also filing a "Notice Of Change Of Water Right Ownership".

The address that you show on Pioneer Road is correct we have been using that address since we came back to Idaho almost three years ago.

Sincerely,



Penelope F. Turner

36-00006
 -00007
 -00008
 -10353

8-18-99 Called
Ms. Turner & explained
process, including NEAP,
then P.D. She was
very friendly. Told
me Pat Brown is no
longer at Parker, Warr & Brown
but moving to Jerome.

- 10



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

RECEIVED

AUG 16 1999

Department of Water Resources

August 3, 1999

DIRK KEMPTHORNE
GOVERNOR

KARL J. DREHER
DIRECTOR

WILLIAM STRANGE
LOUISE STRANGE
923 PIONEER RD
HAGERMAN ID 83332

RE: Snake River Basin Adjudication (SRBA)
Water Rights #36-00006, 36-00007, 36-00008, & 36-10353

Dear Water Right Holders: *records changed, NCAP prepared. cc: W.A. 8-18-99*

Mail recently sent to you was returned to us by the Postal Service. They also advised us your address has changed to the above address. We have enclosed the returned mail.

Although we have reached you at the address above, we need your written confirmation this is your correct mailing address before we can change our records.

Please sign your name at the bottom of this letter and return it to this office. Make corrections to your name and address if necessary before returning this letter, list any other water rights you have, and return this letter by August 16, 1999. Thank you for your help.

If your mail delivery address changes in any form, please contact us in writing so we can update our records. Be sure to list your water right numbers.

If there has been a change in ownership of the property connected with the water right referenced above, please call this office toll-free at 1/800-451-4129 to obtain a form to make this required change to the water right record.

Sincerely,

Sally
Sally Sherman

Technical Records Specialist
Adjudication Bureau

SS:region
Enclosure:

Returned Mail

#####

The address is correct as shown above or as otherwise changed.

Penelope J. Turner
Claimant Signature

208-831-4767
Telephone No.

RECEIVED

AUG 27 1999

Department of Water Resources
Southern Basin

RECEIVED

AUG 17 1999

Department of Water Resources

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)

Case No. 39576)

A. Subcase 36-00006

STANDARD FORM 1a

OBJECTION TO IRRIGATION SEASON
AND/OR CONJUNCTIVE MANAGEMENT
GENERAL PROVISIONS

B. NAME AND ADDRESS OF PERSON OBJECTING

William Strange

Name: Penelope F. TurnerAddress: 923 Pioneer RoadHagerman, Idaho 83332Daytime Phone: (208) 837-4767

Name & address of attorney, if any:

Patrick D. Brown812 Shoshone StreetTwin Falls, Idaho 83301C. CLAIMANT OF WATER RIGHT AS LISTED IN
SUPPLEMENTAL DIRECTOR'S REPORTName: William StrangePenelope F. TurnerAddress: 923 Pioneer RoadHagerman, Idaho 83332

D. ELEMENTS OBJECTED TO:

8. Period (Irrigation Season) of Use

Should be: See Attachment

12. General Provision

Number: _____ Reported in Basin: _____

Comments: _____

E. REASONS SUPPORTING OBJECTION: (if you have additional reasons, please attach to this form)

This standard form is for the sole purpose of objecting to the Director's supplemental recommendations on irrigation season of use and general provisions. This form may not be used to object to any other elements of your water right.

If you have evidence that the recommendations on irrigation season of use and/or conjunctive management adversely affect other elements of your water right, please contact the Snake River Basin Adjudication at 208-736-3011. A deputy clerk of the court will inform you of how to proceed.

F. VERIFICATION (Must be Completed)

State of Idaho)
County of Gooding)ss.

Penelope Fay Turner, duly sworn, upon oath, deposes and says:
(Name of person filing objection)

That I am the party/claimant filing this objection, as defined by I.C. §§ 42-1401A(1) and (6) or that I am the attorney for the party/claimant objecting and that I have read this objection, know its contents and believe that the statements are true to the best of my knowledge.

Penelope F. Turner
(Signature of person filing objection)

Subscribed and sworn to before me on: 8-13-99

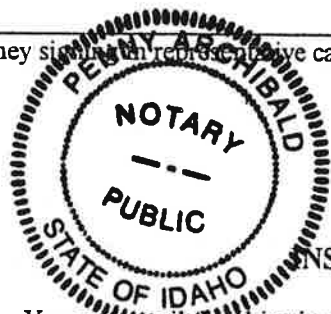
Penny Archibald
Notary Public

for State of Idaho

Residing at: Wendell Idaho

My Commission Expires: 12-2-99

(Attorney signing in representative capacity)



INSTRUCTIONS FOR MAILING

You must ~~mail~~ file the objection to the Clerk of the Court. **FAX filings will not be accepted.** You must also send a copy to all the parties listed below in the Certificate of Mailing.

G. CERTIFICATE OF MAILING

I certify that on August 13, 1999, I mailed the original and copies of this objection, including all attachments, to the following persons:

1. Original to:

Clerk of the District Court
Snake River Basin Adjudication
253 Third Avenue North
PO Box 2707
Twin Falls, ID 83303-2707

2. One copy to the claimant of the water right at the following address:

William Strange
Name: Penelope F. Turner
Address: 923 Pioneer Road
Hagerman, Idaho 83332

3. Copies to:

IDWR Document Depository
PO Box 83720
Boise, ID 83720-0098

Chief, Natural Resources Division
Office of the Attorney General
State of Idaho
PO Box 44449
Boise, ID 83711-4449

United States Department of Justice
Environment and Natural Resource Division
550 West Fort Street, MSC 033
Boise, ID 83724

Signature of Objector or attorney

**ATTACHMENT TO: OBJECTION TO IRRIGATION SEASON AND/OR CONJUNCTIVE
MANAGEMENT GENERAL PROVISIONS**

We have no argument with the dates of the irrigation season as listed. BUT we do not want the water turned off at the end of the season. The water needs to continue running in the ditches to the river for the purpose of filling the ponds for wildlife, maintaining the ditches themselves, watering of livestock in the back portions of the property, and the esthetic value of the water running through our lawn and garden.

RECEIVED

AUG 17 1999

Department of Water Resources

Expert Witness Report

SRBA Case No 39576

Subcases 36-00006, 36-00007, 36-00008

William Strange

C.E. Brockway P.E. PhD.

Brockway Engineering P.L.L.C.

The property owned by William Strange lies in the SW1/4, SW1/4 Sec 11. T7S R13E. It consists of parcels irrigated from the Barlogi Ditch from Billingsley Creek (36-00008) and the Sands Ditch (36-00006, 36-00007). Examination of aerial photos including 1987, 1993, and 1997 color aerial photos from the FSA, USDA NRCS soils maps and farm maps, and IDWR shape files for the farm, the minimum irrigated area includes 24.9 acres from the Sands Ditch and 25.00 acres irrigated from the Barlogi Ditch for a total of 49.9 acres. There are two large ponds and numerous smaller depressions filled for wildlife, recreation and aesthetics from each ditch.

The eastern part of the farm is irrigated with furrow irrigation on sandy soils. Soil samples taken in April 1998 and analyzed by Stukenholtz Laboratory of Twin Falls Idaho indicate that the soils are loamy sands with sand content of 76%. Soil permeability and infiltration rates are high, up to 20 in./hr. USDA NRCS soil classifications include Fathom (FAB), Bahem (DEB) and soils interspersed in lava flows (394). Irrigation on the western part of the farm includes areas between lava outcrops and non-contiguous areas. Ditches are present throughout the area and considerably more area has been irrigated in the past than is currently irrigated. The irrigation method applicable to the western part of the farm is flooding which is inherently difficult and requires high flow rates to cover the area.

Based on interviews with Mr. Turner, irrigation has historically utilized 12 or 24 hour sets. Sometimes the irrigator would set 6 hour sets to wet-up the furrows, let the set sit for 6 hours and then re-set the furrows. This decreases the infiltration rate and advance time

so that the water will flow across the field in a shorter time. On the flood irrigated areas, dams were set in the ditches to divert to irrigable areas.

The duty of water on these lands is in excess of 0.02 cfs/acre(1 miner's inch/acre). In order to estimate the irrigation requirement for the farm, and analysis using procedures developed by Hubble Engineering for the Idaho Department of Water Resources was utilized. The procedures were incorporated in a computer program developed by C.W. Robison P.E. which has been reviewed by IDWR and utilized previously in numerous 'excess flow analyses'. Analyses were performed separately for the area irrigated from the Barlogi Ditch and from the Sands Ditch. Input data sets and computer output for each analysis are included in Appendix A to this report. NRCS soils data and laboratory soils analysis are also included in Appendix A.

Farm delivery requirement(duty of water) was calculated using set times and furrow flows as reported or appropriate for the run lengths(field length) and soil types. Project irrigation diversion requirements were calculated for the analysis period utilizing the Bliss weather data set modified for Hagerman and utilizing an 80% probability level of crop consumptive use. Calculations were also performed for the peak period consumptive use.

Estimated irrigation requirements using the Hubble approach or any other method are sensitive to irrigation management procedures. Irrigation efficiency and water requirements are very sensitive to the length of time water is left on the field(set time) and the discharge that is set in each furrow, either from siphon tubes or cutouts. Furrow infiltration rates are highly variable due to soil property variability, slope inconsistencies, antecedent moisture conditions, and crop litter in the furrow. Irrigator's judgement as to how long to leave water on the field or how 'strong' to set the tubes varies from person to person. Estimates of irrigation requirements are therefor best utilized to provide a guideline as to the range of expected requirements rather than to precisely determine what flows early irrigators should have used.

For the area irrigated from the Sands Ditch(24.9 acres) the estimated base peak project diversion requirement is 2.90inches/acre(1.44 cfs) and the analysis period (average)

irrigation requirement is 2.50 inches/acre(1.25 cfs). This assumes approximately 50% alfalfa and 50% pasture in the four major fields.

A sensitivity analysis was performed to show the effect on calculated irrigation water requirements if the irrigator chooses different set times or furrow flows. That analysis is shown in Appendix A. The furrow flow rates were varied from 80% to 160% of the base furrow flow and the set time was calculated for 12, 18, and 2 hours. The table in Appendix A shows that the required peak project diversion rate from the Sands Ditch could vary from 1.24 to 4.07 cfs or 2.49 to 8.18 miner' inches per acre.

The Sands Ditch diverts from Billingsley Creek and traverses approximately 3900 feet to the Wm. Strange diversion. Using the Worstell method of estimating seepage loss(Hubble Report) and the 3900 ft reach length, 10 ft average width, and a seepage factor of 2.0 as used by IDWR, the estimated seepage in the Sands Ditch to the Strange diversion is 0.99 cfs.

The diversion from the Sands ditch to the William Strange property is a 12 inch diameter pipe which flows west to the center point of a ditch running north and south along the head of irrigated fields. On April 29, 1998 the flow through the pipe was measured by current metering the discharge in the ditch flowing north and the ditch flowing south and summing the two measurements. Data for that measurement is shown in Appendix B. The total measured flow was 4.35 cfs. This measurement shows that the capacity of the diversion system is more than adequate to provide the estimated maximum diversion requirement to the lands irrigated from the Sands Ditch.

Lands irrigated from the Barlogi Ditch (36-00008) were estimated from aerial photos and IDWR shape files(GIS maps) at 25.0 acres in 4 major fields or irrigated areas. The Hubble analysis utilizing reported set times and assuming approximately 64 percent alfalfa and 36 percent pasture indicates a peak period diversion requirement of 2.37 inches/acre (1.19 cfs) and an irrigation requirement with 80% consumptive use probability of 2.07 inches/acre(1.03 cfs). The sensitivity analysis for the irrigation requirement on the 36-00008 lands shows possible irrigation requirements from 1.27 in/acre(.63 cfs) to 4.5 inches/acre(2.25 cfs).

The Barlogi Ditch transports water from Billingsley Creek approximately 3310 feet to the head of the Strange property. Seepage loss in the 2330 ft section of the Barlogi ditch from Billingsley Creek to the Watkins diversion has been measured using the installed flume and weir at 0.61 cfs. Prorating this measured loss to the 3310 ft of Barlogi Ditch from Billingsley Creek to the Strange property yields a loss of 0.87cfs. An April 27, 1998, the flow in the Barlogi Ditch as measured by the 20.5 inch weir below the Watkins diversion was 2.2 cfs.

Discharge from the Sands Ditch and the Barlogi Ditch can be diverted through ditches for irrigation or for enhancement of open water and habitat in ponds on the east side of the property. The ponds are not full during the entire year and can be filled directly from ditches. These ponds include wetlands vegetation and wildfowl were observed on April 29, 1998 during a field visit. The ponds do not serve as irrigation storage. Aerial photos show ponds and wet areas throughout the eastern part of the farm. Numerous wetlands on the property are delineated on the National Wetlands Inventory Maps shown in Appendix C. These areas are classified as palustrine, emergent or shrub-shrub, seasonally flooded wetlands.

The two wildlife ponds fed from the Sands Ditch have an estimated total area of 2.3 acres and the two ponds fed from the Barlogi Ditch have a combined area of about 0.6 acres. During hot summer days, recreational ponds can become oxygen depleted during the night time due to oxygen demand from high levels of vegetation and algae. A reasonable turnover time or exchange of fresh water is required to maintain reasonable oxygen levels and prevent eutrophication. A rule of thumb for ideal turnover or exchange time is 24 hours. Based on this criteria, the discharge required for the Sands Ditch ponds with an average depth of 4 feet would be 4.67 cfs. For the two Barlogi Ditch ponds with an average depth of 3 feet, the discharge required for 24 hour turnover would be 0.89 cfs.

Based on the irrigation requirements analysis, the duty of water under 37-00006 and 37-00007 from the Sands Ditch, excluding transmission loss in the Sands Ditch, is 2.90 in/acre(1.44 cfs); however, depending on irrigation management levels, crop selection, or local weather conditions, the irrigation requirement could be over 8 in/acre. On-field

duty of water under 37-00008 from the Barlogi Ditch is estimated at 2.37 in/acre(1.19 cfs) on the 25.0 irrigated acres. However, irrigation management variation could require up to 4.5 in/acre(2.25 cfs). Transmission losses in the Barlogi Ditch from Billingsley Creek to the Wm. Strange property are estimated at 0.87 cfs.

Ponds on the Wm. Strange farm can be fed directly from the Sands Ditch and Barlogi Ditches and are not dependent on irrigation return flow or subsurface return flow. The ponds and habitat, vegetation and soils are classified as wetlands

The SRBA claimed discharge of 2.0 cfs under 37-00008 is within the range of expected irrigation requirements for the 25.0 acres irrigated from the ditch. The estimated Barlogi Ditch loss of 0.87 cfs down to the Strange diversion is reasonable and justifiable. Based on the farm irrigation requirement and the Barlogi Ditch loss, the estimated diversion requirement at Billingsley Creek is 2.06 cfs ($1.19+0.87$). Depending on the level of irrigation management on these fields, the irrigation diversion requirement could be as high as 3.12 cfs.

The SRBA claimed discharge of 4.58 cfs under 37-00006 and 37-00007 is within the range of expected irrigation requirements for the 24.9 irrigated acres. The estimated Sands Ditch loss of 0.99 cfs as determined by the Worstall method and used by IDWR is reasonable. Based on the farm irrigation requirement and the Sands Ditch loss, the estimated base diversion requirement at Billingsley Creek is 2.43 cfs. However, depending of the level of irrigation management, the irrigation diversion requirement could be as high as 5.06 cfs.

Maintenance of the viability of the wildlife ponds depends on the amount of fresh water available. Any diverted water in excess of irrigation requirements can be beneficially used for pond enhancement.

APPENDIX A

Irrigation Water Requirements Analysis

Version 1.25

1999-03-28 @ 17:32:12

W. Strange (Sands Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

PROJECT IRRIGATION DIVERSION REQUIREMENTS
SUMMARY

Total Irrigated Area: 24.90 acres

Based on analysis period irrigation requirement

Max Project Diversion: 1.25 cfs(2.501 mi/ac)

Based on analysis period peak consumptive use

Peak Project Diversion: 1.44 cfs(2.896 mi/ac)

W. Strange (Sands Ditch) Excess Flow Analysis - Hagerman
 Brockway Engineering and C. W. Robison
 No canal/lateral/ditch losses
 hagerman.cir

	1	4	2	2	0		
	0.8						
Effective Div.	0.	0.000	0.	0	0.	0.00	
FURROW FLD.1	48.	12.	3.0	250.	.020		
FURROW FLD.2	48.	24.	5.0	550.	.020		
FURROW FLD.3	48.	12.	3.0	280.	.010		
FURROW FLD.4	48.	12.	3.0	220.	.010		
FAB	2.0	1.14	2.28	3.42	4.56	5.70	
394	2.0	1.88	1.88	1.88	1.88	1.88	
Alfalfa Hay	50.0	2.5	.10				
Pasture	50.0	2.5	.10				
1							
Alfalfa Hay	4.1	8.0	0.0	0.0			
Pasture	0.0	0.0	0.0	0.0			
2							
Alfalfa Hay	0.0	0.0	0.0	0.0			
Pasture	0.0	0.0	7.9	4.9			
Effective Div.	1.0	1.0					

W. Strange (Sands Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

****SENSITIVITY ANALYSIS****

Run Date: 03-28-1999
Base file: strang-s.dat

PEAK PROJECT DIVERSION IN CFS
Furrow flow in FRACTION OF BASE. Set time in HOURS.

		Set time		
F Flow	12	18	24	
0.80	1.24	1.86	2.48	
1.00	1.27	1.91	2.55	
1.20	1.53	2.29	3.05	
1.40	1.78	2.67	3.56	
1.60	2.04	3.05	4.07	

PEAK PROJECT DIVERSION IN MINER'S INCHES PER ACRE
Furrow flow in FRACTION OF BASE. Set time in HOURS.

		Set time		
F Flow	12	18	24	
0.80	2.49	3.73	4.98	
1.00	2.56	3.83	5.11	
1.20	3.07	4.60	6.13	
1.40	3.58	5.37	7.16	
1.60	4.09	6.13	8.18	

Irrigation Water Requirements Analysis
Version 1.00
1999-03-28 @ 17:32:12

W. Strange (Sands Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Crop Water Requirements Datafile: hagerman.cir
Probability Level for Analysis: 80.0
Number of Canal/Lateral Segments: 1
Number of Irrigation Methods: 4
Number of Soil Types: 2
Number of Crops: 2
Number of Analysis Periods: 8

CANAL/LATERAL INFORMATION

#	Name	Upstream Segment	Length miles	Width feet	F-Area sq-ft	Seepage	Method
1	Effective Div.	0	.00	.0	.0	Specified S=	.00 cfs/mi

IRRIGATION SYSTEM INFORMATION

Name	Assumed Efficiency	Set Time	Run Flow	Slope-Furrows Length	Width-Others
FURROW FLD.1	48.0	12.	3.0	250.	.020
FURROW FLD.2	48.0	24.	5.0	550.	.020
FURROW FLD.3	48.0	12.	3.0	280.	.010
FURROW FLD.4	48.0	12.	3.0	220.	.010

SOILS INFORMATION

Name	Intake Family	Water Holding Capacity				
		1ft	2ft	3ft	4ft	5ft
FAB	2.0	1.14	2.28	3.42	4.56	5.70
394	2.0	1.88	1.88	1.88	1.88	1.88

CROP SYSTEM INFORMATION

Name	Allowable Deficit	Furrow Spacing	Roughness
Alfalfa Hay	50.0	2.500	.100
Pasture	50.0	2.500	.100

Irrigation Water Requirements Analysis

Version 1.00

1999-03-28 @ 17:32:12

W. Strange (Sands Ditch) Excess Flow Analysis - Hagerman

Brockway Engineering and C. W. Robison

No canal/lateral/ditch losses

CROP DISTRIBUTION FOR FAB					by Irrigation System
Crop	Total	01	02	03	04
Alfalfa Hay	12.1	4.1	8.0	.0	.0
Pasture	.0	.0	.0	.0	.0

CROP DISTRIBUTION FOR 394					by Irrigation System
Crop	Total	01	02	03	04
Alfalfa Hay	.0	.0	.0	.0	.0
Pasture	12.8	.0	.0	7.9	4.9

Irrigation System Key

01 - FURROW FLD.1

02 - FURROW FLD.2

03 - FURROW FLD.3

04 - FURROW FLD.4

Project/Farm Irrigation Water Requirement Analysis
Version 1.00

Crop Irrigation Requirements (mm/day)

Datafile: hagerman.cir

Title: Bliss Consumptive Use (Allen and Brockway) Adjusted to Hagerman

INPUT DATA

	Total	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Alfalfa Hay									
Root Depth	.0	.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Mean CU	1087.0	.00	3.52	6.58	7.62	7.19	5.60	3.84	1.34
Mean IR	1007.0	.00	3.05	5.94	6.99	7.03	5.46	3.60	1.02
Std Dev CU	30.0	.00	.29	.46	.41	.21	.25	.27	.12
Std Dev IR	54.0	.00	.57	.77	.89	.37	.51	.49	.39
Pasture									
Root Depth	.0	.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Mean CU	1090.0	.00	3.49	5.47	6.73	6.81	5.73	4.52	3.07
Mean IR	1015.0	.00	3.04	4.89	6.16	6.67	5.58	4.28	2.73
Std Dev CU	29.0	.00	.29	.38	.36	.20	.25	.32	.27
Std Dev IR	51.0	.00	.55	.67	.80	.34	.50	.53	.51

Project/Farm Irrigation Water Requirement Analysis
Version 1.00

Crop Requirements (in/day)
Crop Rooting Depths (ft)

BASED ON NORMAL DISTRIBUTION

Adjusted Crop Water Requirements for 80.0% probability level
Total Mar Apr May Jun Jul Aug Sep Oct

Alfalfa Hay									
---CU---	43.8	.000	.148	.274	.314	.290	.229	.160	.057
---IR---	41.4	.000	.139	.259	.305	.289	.232	.158	.053
Root Depth		.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pasture									
---CU---	43.9	.000	.147	.228	.277	.275	.234	.189	.130
---IR---	41.7	.000	.138	.215	.269	.274	.236	.186	.124
Root Depth		.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0

CU Peak to Ave Ratio vs Application Depth Curve (11 pts)

App.Depth(in)	.61	1.06	1.51	2.12	2.73	3.63	4.54	5.60	6.36
	6.96	7.57							
Peak:Average	1.154	1.138	1.123	1.108	1.092	1.077	1.061	1.046	1.038
	1.031	1.023							

Irrigation Water Requirements Analysis
Version 1.00
1999-03-28 @ 17:32:12

W. Strange (Sands Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Allowable Soil Water Deficit -- inches
80.0 Percent Probability Level of IR

Crop	SOIL CATAGORY: FAB							
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Alfalfa Hay	.00	2.85	2.85	2.85	2.85	2.85	2.85	2.85
Pasture	.00	1.14	1.14	1.14	1.14	1.14	1.14	1.14

Crop	SOIL CATAGORY: 394							
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Alfalfa Hay	.00	.94	.94	.94	.94	.94	.94	.94
Pasture	.00	.94	.94	.94	.94	.94	.94	.94

Irrigation Water Requirements Analysis

Version 1.00

1999-03-28 @ 17:32:12

W. Strange (Sands Ditch) Excess Flow Analysis - Hagerman

Brockway Engineering and C. W. Robison

No canal/lateral/ditch losses

Peak Consumptive Use based on Peak:Mean(ASWD)

80.0 Percent Probability Level of CU

SOIL CATAGORY: FAB

Crop	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Alfalfa Hay	--	.161	.299	.342	.316	.249	.174	.062
Pasture	--	.167	.259	.314	.312	.265	.214	.147

SOIL CATAGORY: 394

Crop	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Alfalfa Hay	--	.169	.313	.358	.331	.261	.183	.065
Pasture	--	.168	.260	.316	.314	.267	.215	.148

Irrigation Water Requirements Analysis
Version 1.00
1999-03-28 @ 17:32:12

W. Strange (Sands Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Irrigation System Analysis FOR SOIL FAB

Irrigation System Efficiency Analysis: FURROW FLD.1
Furrow Irrigation-> 12.Hours @ 3.0gpm on 250.ft @ .020ft/ft
CROP Mar Apr May Jun Jul Aug Sep Oct
Alfalfa Hay --- 51.4 51.4 51.4 51.4 51.4 51.4 51.4

Note the following symbol meanings
@@@ = Water did not reach end of furrow
* = End-of-Furrow application insufficient

On-Farm Diversion Requirements -- miner inches/ac
With a 80.0 percent probability level

Based on analysis period irrigation requirement

CROP Mar Apr May Jun Jul Aug Sep Oct
Alfalfa Hay .000 .568 1.060 1.245 1.181 .947 .645 .217

Based on analysis period peak consumptive use

CROP Mar Apr May Jun Jul Aug Sep Oct
Alfalfa Hay .000 .659 1.221 1.395 1.291 1.018 .713 .252

Irrigation Water Requirements Analysis
Version 1.00
1999-03-28 @ 17:32:12

W. Strange (Sands Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Irrigation System Analysis FOR SOIL FAB

Irrigation System Efficiency Analysis: FURROW FLD.2
Furrow Irrigation-> 24.Hours @ 5.0gpm on 550.ft @ .020ft/ft
CROP Mar Apr May Jun Jul Aug Sep Oct
Alfalfa Hay --- 33.9 33.9 33.9 33.9 33.9 33.9 33.9

Note the following symbol meanings
@@@ = Water did not reach end of furrow
* = End-of-Furrow application insufficient

On-Farm Diversion Requirements -- miner inches/ac
With a 80.0 percent probability level

Based on analysis period irrigation requirement

CROP Mar Apr May Jun Jul Aug Sep Oct
Alfalfa Hay .000 .860 1.605 1.886 1.789 1.435 .978 .329

Based on analysis period peak consumptive use

CROP Mar Apr May Jun Jul Aug Sep Oct
Alfalfa Hay .000 .999 1.849 2.114 1.955 1.542 1.080 .383

Irrigation Water Requirements Analysis

Version 1.00

1999-03-28 @ 17:32:12

W. Strange (Sands Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Irrigation System Analysis FOR SOIL 394

Irrigation System Efficiency Analysis: FURROW FLD.3
Furrow Irrigation-> 12.Hours @ 3.0gpm on 280.ft @ .010ft/ft
CROP Mar Apr May Jun Jul Aug Sep Oct
Pasture --- 19.0 19.0 19.0 19.0 19.0 19.0 19.0

Note the following symbol meanings

@@@ = Water did not reach end of furrow

* = End-of-Furrow application insufficient

On-Farm Diversion Requirements -- miner inches/ac
With a 80.0 percent probability level

Based on analysis period irrigation requirement

CROP Mar Apr May Jun Jul Aug Sep Oct
Pasture .000 1.525 2.374 2.975 3.028 2.613 2.058 1.375

Based on analysis period peak consumptive use

CROP Mar Apr May Jun Jul Aug Sep Oct
Pasture .000 1.857 2.879 3.497 3.470 2.954 2.382 1.640

Irrigation Water Requirements Analysis
Version 1.00
1999-03-28 @ 17:32:12

W. Strange (Sands Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Irrigation System Analysis FOR SOIL 394

Irrigation System Efficiency Analysis: FURROW FLD.4
Furrow Irrigation-> 12.Hours @ 3.0gpm on 220.ft @ .010ft/ft
CROP Mar Apr May Jun Jul Aug Sep Oct
Pasture --- 14.9 14.9 14.9 14.9 14.9 14.9 14.9

Note the following symbol meanings
@@@ = Water did not reach end of furrow
* = End-of-Furrow application insufficient

On-Farm Diversion Requirements -- miner inches/ac
With a 80.0 percent probability level

Based on analysis period irrigation requirement

CROP Mar Apr May Jun Jul Aug Sep Oct
Pasture .000 1.941 3.022 3.786 3.854 3.325 2.619 1.751

Based on analysis period peak consumptive use

CROP Mar Apr May Jun Jul Aug Sep Oct
Pasture .000 2.363 3.664 4.451 4.417 3.760 3.031 2.087

Irrigation Water Requirements Analysis
Version 1.25
1999-03-28 @ 17:32:12

W. Strange (Sands Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Overall Project On-Farm Diversion Requirement

With a 80.0% Water Requirement Probability Level

Based on analysis period irrigation requirement

CROP	Total	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
	ac-ft				miners	inches	per ac.		
Alfalfa Hay	109.	.000	.761	1.420	1.669	1.583	1.270	.865	.291
Pasture	258.	.000	1.684	2.622	3.286	3.345	2.885	2.272	1.519
*Entire Project	367.	.000	1.236	2.038	2.500	2.488	2.100	1.589	.922

Based on analysis period peak consumptive use

CROP	Total	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
	arces				miners	inches	per ac.		
Alfalfa Hay	12.	.000	.884	1.636	1.871	1.730	1.365	.955	.338
Pasture	13.	.000	2.051	3.180	3.862	3.832	3.262	2.630	1.811
*Entire Project	25.	.000	1.484	2.430	2.895	2.811	2.340	1.816	1.095

Irrigation Water Requirements Analysis
Version 1.25
1999-03-28 @ 17:32:12

W. Strange (Sands Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Fraction of Soil Type Area served by Canal/Lateral Segment

Canal\Soil Class	01	02
Effective Div.	1.000	1.000

Table Soil Type Key

01 - FAB	02 - 394
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Irrigation Water Requirements Analysis
Version 1.25
1999-03-28 @ 17:32:12

W. Strange (Sands Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Canal/Lateral Discharge Summary
(cubic feet per second)

Canal/Lateral	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Effective Div.	**** Seepage Rate: .00 cfs/mi or .00 cfs ****							

Based on analysis period irrigation requirement

DS Delivery	.0	.0	.0	.0	.0	.0	.0	.0
On-Farm Div.	.0	.6	1.0	1.2	1.2	1.0	.8	.5
Seepage Loss	.0	.0	.0	.0	.0	.0	.0	.0
US Div. Req.	.0	.6	1.0	1.2	1.2	1.0	.8	.5

Based on analysis period peak consumptive use

DS Delivery	.0	.0	.0	.0	.0	.0	.0	.0
On-Farm Div.	.0	.7	1.2	1.4	1.4	1.2	.9	.5
Seepage Loss	.0	.0	.0	.0	.0	.0	.0	.0
US Div. Req.	.0	.7	1.2	1.4	1.4	1.2	.9	.5

Project/Farm Irrigation Water Requirement Analysis
Version 1.00

Crop Irrigation Requirements (mm/day)

Datafile: hagerman.cir

Title: Bliss Consumptive Use (Allen and Brockway) Adjusted to Hagerman

INPUT DATA

	Total	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Alfalfa Hay									
Root Depth	.0	.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Mean CU	1087.0	.00	3.52	6.58	7.62	7.19	5.60	3.84	1.34
Mean IR	1007.0	.00	3.05	5.94	6.99	7.03	5.46	3.60	1.02
Std Dev CU	30.0	.00	.29	.46	.41	.21	.25	.27	.12
Std Dev IR	54.0	.00	.57	.77	.89	.37	.51	.49	.39
Pasture									
Root Depth	.0	.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Mean CU	1090.0	.00	3.49	5.47	6.73	6.81	5.73	4.52	3.07
Mean IR	1015.0	.00	3.04	4.89	6.16	6.67	5.58	4.28	2.73
Std Dev CU	29.0	.00	.29	.38	.36	.20	.25	.32	.27
Std Dev IR	51.0	.00	.55	.67	.80	.34	.50	.53	.51

Project/Farm Irrigation Water Requirement Analysis
Version 1.00

Crop Requirements (in/day)
Crop Rooting Depths (ft)

BASED ON NORMAL DISTRIBUTION

Adjusted Crop Water Requirements for 80.0% probability level
Total Mar Apr May Jun Jul Aug Sep Oct

				Alfalfa Hay						
---CU---	43.8	.000	.148	.274	.314	.290	.229	.160	.057	
---IR---	41.4	.000	.139	.259	.305	.289	.232	.158	.053	
Root Depth		.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	

				Pasture						
---CU---	43.9	.000	.147	.228	.277	.275	.234	.189	.130	
---IR---	41.7	.000	.138	.215	.269	.274	.236	.186	.124	
Root Depth		.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	

CU Peak to Ave Ratio vs Application Depth Curve (11 pts)

App.Depth(in)	.61	1.06	1.51	2.12	2.73	3.63	4.54	5.60	6.36
	6.96	7.57							
Peak:Average	1.154	1.138	1.123	1.108	1.092	1.077	1.061	1.046	1.038
	1.031	1.023							

Irrigation Water Requirements Analysis
Version 1.00
1999-03-28 @ 18:10:44

W. Strange (Barlogi Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Allowable Soil Water Deficit -- inches
80.0 Percent Probability Level of IR

	SOIL CATAGORY:	FAB							
Crop	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Alfalfa Hay	.00	2.85	2.85	2.85	2.85	2.85	2.85	2.85	
Pasture	.00	1.14	1.14	1.14	1.14	1.14	1.14	1.14	

	SOIL CATAGORY:	DEB							
Crop	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Alfalfa Hay	.00	4.30	4.30	4.30	4.30	4.30	4.30	4.30	
Pasture	.00	1.90	1.90	1.90	1.90	1.90	1.90	1.90	

	SOIL CATAGORY:	394							
Crop	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Alfalfa Hay	.00	.94	.94	.94	.94	.94	.94	.94	
Pasture	.00	.94	.94	.94	.94	.94	.94	.94	

Irrigation Water Requirements Analysis

Version 1.00

1999-03-28 @ 18:10:44

W. Strange (Barlogi Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Peak Consumptive Use based on Peak:Mean(ASWD)
80.0 Percent Probability Level of CU

	SOIL CATAGORY:	FAB							
Crop	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Alfalfa Hay	--	.161	.299	.342	.316	.249	.174	.062	
Pasture	--	.167	.259	.314	.312	.265	.214	.147	

	SOIL CATAGORY:	DEB							
Crop	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Alfalfa Hay	--	.158	.292	.334	.309	.244	.171	.060	
Pasture	--	.164	.254	.308	.306	.260	.210	.145	

	SOIL CATAGORY:	394							
Crop	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	
Alfalfa Hay	--	.169	.313	.358	.331	.261	.183	.065	
Pasture	--	.168	.260	.316	.314	.267	.215	.148	

Irrigation Water Requirements Analysis
Version 1.00
1999-03-28 @ 18:10:44

W. Strange (Barlogi Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Irrigation System Analysis FOR SOIL FAB

Irrigation System Efficiency Analysis: FURROW FLD.1
Furrow Irrigation-> 12.Hours @ 9.0gpm on 760.ft @ .020ft/ft
CROP Mar Apr May Jun Jul Aug Sep Oct
Alfalfa Hay --- 52.1 52.1 52.1 52.1 52.1 52.1 52.1

Note the following symbol meanings
@@@ = Water did not reach end of furrow
* = End-of-Furrow application insufficient

On-Farm Diversion Requirements -- miner inches/ac
With a 80.0 percent probability level

Based on analysis period irrigation requirement

CROP Mar Apr May Jun Jul Aug Sep Oct
Alfalfa Hay .000 .560 1.046 1.228 1.165 .935 .637 .214

Based on analysis period peak consumptive use

CROP Mar Apr May Jun Jul Aug Sep Oct
Alfalfa Hay .000 .651 1.205 1.377 1.274 1.005 .703 .249

Irrigation Water Requirements Analysis
Version 1.00
1999-03-28 @ 18:10:44

W. Strange (Barlogi Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Irrigation System Analysis FOR SOIL DEB

Irrigation System Efficiency Analysis: FURROW FLD.2
Furrow Irrigation-> 24.Hours @ 7.0gpm on 650.ft @ .020ft/ft
CROP Mar Apr May Jun Jul Aug Sep Oct
Alfalfa Hay --- 43.2 43.2 43.2 43.2 43.2 43.2 43.2

Note the following symbol meanings
@@@ = Water did not reach end of furrow
* = End-of-Furrow application insufficient

On-Farm Diversion Requirements -- miner inches/ac
With a 80.0 percent probability level

Based on analysis period irrigation requirement

CROP Mar Apr May Jun Jul Aug Sep Oct
Alfalfa Hay .000 .675 1.260 1.481 1.405 1.127 .768 .258

Based on analysis period peak consumptive use

CROP Mar Apr May Jun Jul Aug Sep Oct
Alfalfa Hay .000 .767 1.420 1.623 1.501 1.184 .829 .294

Irrigation Water Requirements Analysis
Version 1.00
1999-03-28 @ 18:10:44

W. Strange (Barlogi Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Irrigation System Analysis FOR SOIL 394

Irrigation System Efficiency Analysis: FURROW FLD.3
Furrow Irrigation-> 24.Hours @ 3.0gpm on 500.ft @ .020ft/ft
CROP Mar Apr May Jun Jul Aug Sep Oct
Pasture --- 17.0 17.0 17.0 17.0 17.0 17.0 17.0

Note the following symbol meanings
@@@ = Water did not reach end of furrow
* = End-of-Furrow application insufficient

On-Farm Diversion Requirements -- miner inches/ac
With a 80.0 percent probability level

Based on analysis period irrigation requirement

CROP Mar Apr May Jun Jul Aug Sep Oct
Pasture .000 1.708 2.659 3.332 3.392 2.926 2.304 1.540

Based on analysis period peak consumptive use

CROP Mar Apr May Jun Jul Aug Sep Oct
Pasture .000 2.080 3.225 3.917 3.887 3.308 2.667 1.836

Irrigation Water Requirements Analysis
Version 1.25
1999-03-28 @ 18:10:44

W. Strange (Barlogi Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Overall Project On-Farm Diversion Requirement

With a 80.0% Water Requirement Probability Level

Based on analysis period irrigation requirement

CROP	Total ac-ft	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
			----- miners inches per ac. -----						
Alfalfa Hay	117.	.000	.618	1.153	1.354	1.285	1.031	.702	.236
Pasture	184.	.000	1.708	2.659	3.332	3.392	2.926	2.304	1.540

*Entire Project	301.	.000	1.010	1.695	2.066	2.043	1.713	1.279	.706

Based on analysis period peak consumptive use

CROP	Total arces	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
			----- miners inches per ac. -----						
Alfalfa Hay	16.	.000	.709	1.312	1.500	1.388	1.094	.766	.271
Pasture	9.	.000	2.080	3.225	3.917	3.887	3.308	2.667	1.836

*Entire Project	25.	.000	1.202	2.001	2.370	2.287	1.891	1.451	.835

Irrigation Water Requirements Analysis
Version 1.25
1999-03-28 @ 18:10:44

W. Strange (Barlogi Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Fraction of Soil Type Area served by Canal/Lateral Segment

Canal\Soil Class	01	02	03
Effective Div.	1.000	1.000	1.000

Table Soil Type Key

01 - FAB

02 - DEB

03 - 394

Irrigation Water Requirements Analysis
Version 1.00
1999-03-28 @ 18:10:44

W. Strange (Barlogi Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Irrigation System Analysis FOR SOIL FAB

Irrigation System Efficiency Analysis: FURROW FLD.1
Furrow Irrigation-> 12.Hours @ 9.0gpm on 760.ft @ .020ft/ft
CROP Mar Apr May Jun Jul Aug Sep Oct
Alfalfa Hay --- 52.1 52.1 52.1 52.1 52.1 52.1 52.1

Note the following symbol meanings
@@@ = Water did not reach end of furrow
* = End-of-Furrow application insufficient

On-Farm Diversion Requirements -- miner inches/ac
With a 80.0 percent probability level

Based on analysis period irrigation requirement

CROP Mar Apr May Jun Jul Aug Sep Oct
Alfalfa Hay .000 .560 1.046 1.228 1.165 .935 .637 .214

Based on analysis period peak consumptive use

CROP Mar Apr May Jun Jul Aug Sep Oct
Alfalfa Hay .000 .651 1.205 1.377 1.274 1.005 .703 .249

Irrigation Water Requirements Analysis
Version 1.00
1999-03-28 @ 18:10:44

W. Strange (Barlogi Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Irrigation System Analysis FOR SOIL DEB

Irrigation System Efficiency Analysis: FURROW FLD.2
Furrow Irrigation-> 24.Hours @ 7.0gpm on 650.ft @ .020ft/ft
CROP Mar Apr May Jun Jul Aug Sep Oct
Alfalfa Hay --- 43.2 43.2 43.2 43.2 43.2 43.2 43.2

Note the following symbol meanings
@@@ = Water did not reach end of furrow
* = End-of-Furrow application insufficient

On-Farm Diversion Requirements -- miner inches/ac
With a 80.0 percent probability level

Based on analysis period irrigation requirement

CROP	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Alfalfa Hay	.000	.675	1.260	1.481	1.405	1.127	.768	.258

Based on analysis period peak consumptive use

CROP	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Alfalfa Hay	.000	.767	1.420	1.623	1.501	1.184	.829	.294

Irrigation Water Requirements Analysis
Version 1.00
1999-03-28 @ 18:10:44

W. Strange (Barlogi Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Irrigation System Analysis FOR SOIL 394

Irrigation System Efficiency Analysis: FURROW FLD.3
Furrow Irrigation-> 24.Hours @ 3.0gpm on 500.ft @ .020ft/ft
CROP Mar Apr May Jun Jul Aug Sep Oct
Pasture --- 17.0 17.0 17.0 17.0 17.0 17.0 17.0

Note the following symbol meanings
@@@ = Water did not reach end of furrow
* = End-of-Furrow application insufficient

On-Farm Diversion Requirements -- miner inches/ac
With a 80.0 percent probability level

Based on analysis period irrigation requirement

CROP Mar Apr May Jun Jul Aug Sep Oct
Pasture .000 1.708 2.659 3.332 3.392 2.926 2.304 1.540

Based on analysis period peak consumptive use

CROP Mar Apr May Jun Jul Aug Sep Oct
Pasture .000 2.080 3.225 3.917 3.887 3.308 2.667 1.836

Irrigation Water Requirements Analysis
Version 1.25
1999-03-28 @ 18:10:44

W. Strange (Barlogi Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Overall Project On-Farm Diversion Requirement

With a 80.0% Water Requirement Probability Level

Based on analysis period irrigation requirement

CROP	Total ac-ft	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
				-----	miners	inches	per ac.	-----	
Alfalfa Hay	117.	.000	.618	1.153	1.354	1.285	1.031	.702	.236
Pasture	184.	.000	1.708	2.659	3.332	3.392	2.926	2.304	1.540

*Entire Project	301.	.000	1.010	1.695	2.066	2.043	1.713	1.279	.706

Based on analysis period peak consumptive use

CROP	Total arces	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
				-----	miners	inches	per ac.	-----	
Alfalfa Hay	16.	.000	.709	1.312	1.500	1.388	1.094	.766	.271
Pasture	9.	.000	2.080	3.225	3.917	3.887	3.308	2.667	1.836

*Entire Project	25.	.000	1.202	2.001	2.370	2.287	1.891	1.451	.835

Irrigation Water Requirements Analysis
Version 1.25
1999-03-28 @ 18:10:44

W. Strange (Barlogi Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Fraction of Soil Type Area served by Canal/Lateral Segment

Canal\Soil Class	01	02	03
Effective Div.	1.000	1.000	1.000

Table Soil Type Key

01 - FAB

02 - DEB

03 - 394

Irrigation Water Requirements Analysis
Version 1.25
1999-03-28 @ 18:10:44

W. Strange (Barlogi Ditch) Excess Flow Analysis - Hagerman
Brockway Engineering and C. W. Robison
No canal/lateral/ditch losses

Canal/Lateral Discharge Summary
(cubic feet per second)

Canal/Lateral	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Effective Div.	**** Seepage Rate: .00 cfs/mi or .00 cfs ****							

Based on analysis period irrigation requirement

DS Delivery	.0	.0	.0	.0	.0	.0	.0	.0
On-Farm Div.	.0	.5	.8	1.0	1.0	.9	.6	.4
Seepage Loss	.0	.0	.0	.0	.0	.0	.0	.0
US Div. Req.	.0	.5	.8	1.0	1.0	.9	.6	.4

Based on analysis period peak consumptive use

DS Delivery	.0	.0	.0	.0	.0	.0	.0	.0
On-Farm Div.	.0	.6	1.0	1.2	1.1	.9	.7	.4
Seepage Loss	.0	.0	.0	.0	.0	.0	.0	.0
US Div. Req.	.0	.6	1.0	1.2	1.1	.9	.7	.4

Strange
Estimate of Sands Ditch Loss-Worstell method

$$S = .0667 * I * W$$

S=seepage loss cfs/mile

I= seepage rate ft/day

W=Top width of water surface ft

Length from Billingsley Creek to Diversion	3900 ft	IDWR
Estimated average width=	10 ft	IDWR
Seepage Rate	2 ft/day	IDWR
Estimated seepage loss	1.334 cfs/mile	
Estimated loss in reach	0.99 cfs	

Pond areas-Strange Property

Map Scale 1 in.=600 ft 1 square= 0.08264 acres

From Sands Ditch From Barlogi Ditch

	squares	acres	squares	acres
Pond 1	17	1.40	2.3	0.19
Pond 2	11	0.91	4.8	0.40

Est. Depth	4	3 ft
Est. Volume	9.26	1.76 acre feet

Target turnover time	24	24 hours
Req'd discharge	4.67	0.89 cfs

88

W. Strange
87.00048



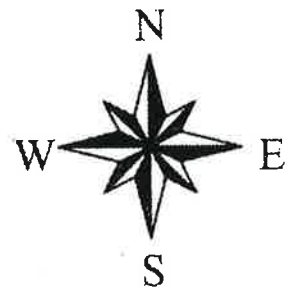
Barter, 7-51

36-00006, 36-00007 SANDS DITCH
36-00008 BARLOGI DITCH



660 0 660 Feet

TNS 7S, RNG 13E
SEC 11, SWSW & SEC. 14, NWNW



⊙ Recommended Point of Diversion

RECOMMENDED Place of use



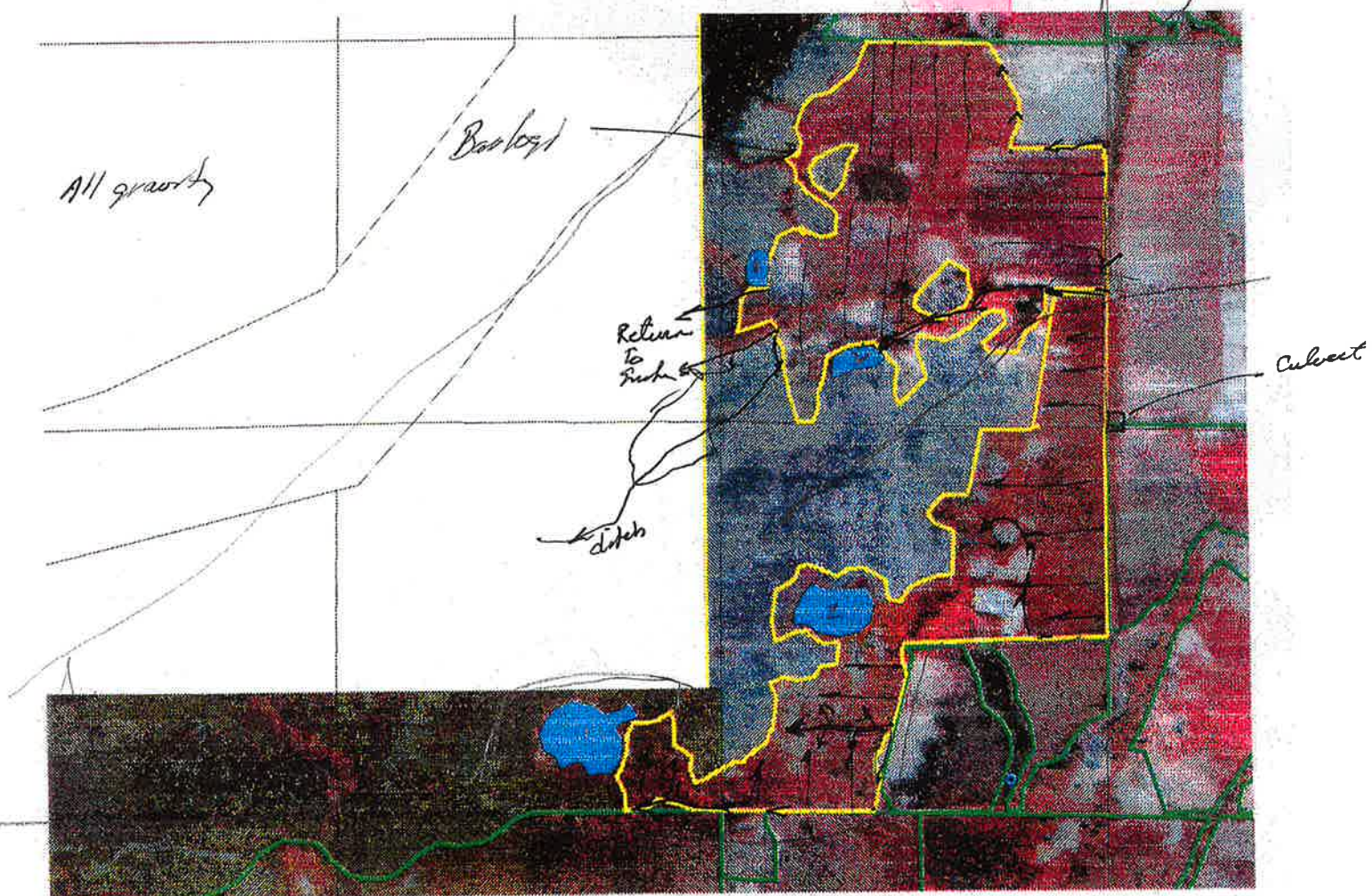
Section lines



Quarter/Quarter Lines

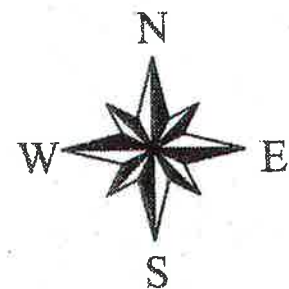
GIS PLACE OF USE PRESENTATION
1987 and/or 1988 NAPP PHOTOGRAPHY
DATE: JANUARY 22, 1998
BY: STEVE CLELLAND

36-00006, 36-00007 SANDS DITCH
36-00008 BARLOGI DITCH



660 0 660 Feet

TNS 7S, RNG 13E
SEC 11, SWSW & SEC. 14, NWNW



⊙ Recommended Point of Diversion

RECOMMENDED Place of use

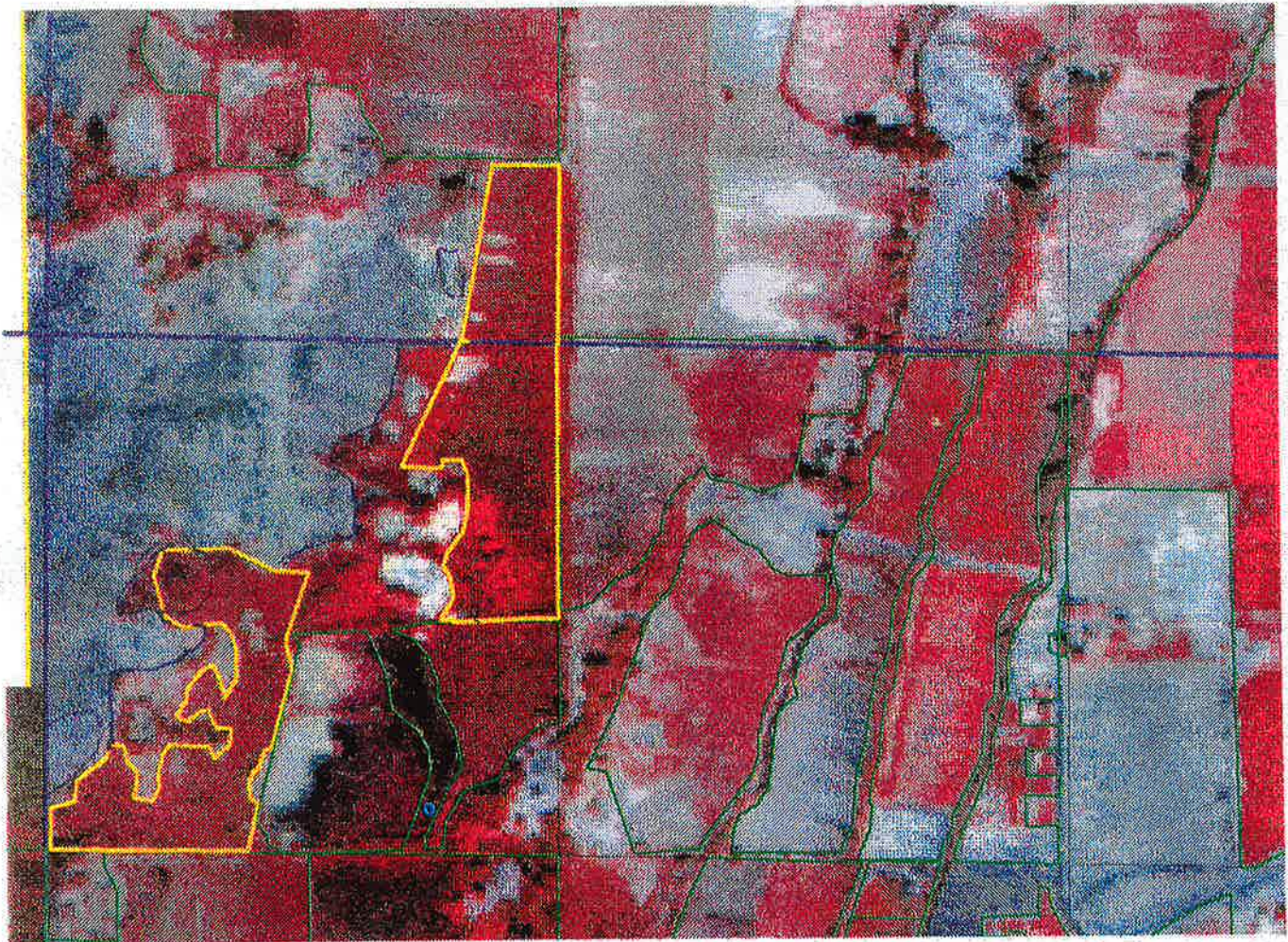
Section lines

Quarter/Quarter Lines

GIS PLACE OF USE PRESENTATION
1987 and/or 1988 NAPP PHOTOGRAPHY
DATE: JANUARY 22, 1998
BY: STEVE CLELLAND

36-00006

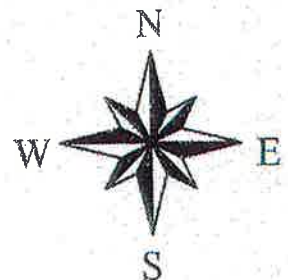
WILLIAM & LOUISE STRANGE



660 0 660 Feet

*notes per
field exam
confirming added
acres. 1/14/98
sa*

TNS 7S, RNG 13E, SEC 11,
SW1/4SW1/4 & NW1/4NW1/4



⊙ Recommended Point of Diversion

□ Recommended Place of use

— Section lines

□ Quarter/Quarter Lines

GIS PLACE OF USE PRESENTATION
1987 and/or 1988 NAPP PHOTOGRAPHY
DATA ENTRY OCTOBER 16, 1997
BY KELLY K CHRISTENSEN

Scale 1" = 555.8'

Wa. House N-00006, 0007



STUKENHOLTZ LABORATORY, INC.

P.O. BOX 353 ADDISON AVENUE EAST 208-734-3050
TWIN FALLS, ID 83303-0353 1-800-759-3050

SOIL TEXTURE ANALYSES

208/734-2580
/000-0000

BROCKWAY ENGINEERING
CHARLES BROCKWAY
706 SUNRISE BLVD. N
TWIN FALLS ID 83301

Report No. :13770/13771
Account No. : 687
Date Received :4/30/98
Date Reported :5/01/98

Sampled for: BROCKWAY ENGINEERING

Sample ID: STRANGE FARM

REPORT NO.	SAMPLE ID.	SOIL TEXTURE
13770	STRANGE FARM	LOAMY SAND % SAND 76.0, % SILT 13.2, % CLAY 10.8
13771	T WOODHEAD GRAPE FIELD 2	LOAM % SAND 44.0, % SILT 35.2, % CLAY 20.8

Supervised by: Dr. Dale Stukenholtz

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DTB

DEB Bahem very fine sandy loam, 0 to 4 percent slopes

COMPOSITION

Bahem soil - 80 percent

Inclusions - 20 percent

BAHEM SOIL

Positions on landscape: basalt plains

Elevation: 3200 to 3500 feet

Climatic data: (average annual)

* precipitation - about 9 inches

* air temperature - about 50 degrees F.

* frost free period - about 115 days

Typical profile:

0 to 11 inches - brown or pale brown very fine sandy loam

11 to 41 inches - very pale brown or white silt loam or very fine sandy loam

41 to 60 inches - very pale brown loamy very fine sand

Depth class: very deep (60 inches or more)

Drainage class: well drained

Permeability: moderate

Available water capacity: moderate; 6 to 9 inches

Potential rooting depth: 60 inches or more

Runoff: slow

Hazard of erosion:

by water - slight

by wind - moderate

INCLUDED AREAS

Contrasting inclusions:

Ticeska very fine sandy loam on convex positions and Taunton

very fine sandy loam on the same positions as Bahem

Similar inclusions:

Chijer very fine sandy loam occurring on 0 to 2 percent slopes

INTERPRETATIVE GROUPS

Capability classification:

IIE irrigated, VIE nonirrigated

Abbreviated version-subject to change.

FAB Fathom loamy fine sand, 1 to 4 percent slopes

COMPOSITION

Fathom soil - 85 percent

Inclusions - 15 percent

FATHOM SOIL

Positions on landscape: toe slopes of basalt escarpments

Elevation: 2700 to 3000 feet

Climatic data: (average annual)

precipitation - about 9 inches

air temperature - about 50 degrees F.

frost free period - about 130 days

Typical profile:

0 to 7 inches - brown loamy fine sand

7 to 20 inches - brown loamy fine sand

20 to 61 inches - pale brown loamy fine sand

Depth class: very deep (more than 60 inches)

Drainage class: excessively drained

Permeability: rapid

Available water capacity: low; 3 to 6 inches

Potential rooting depth: 60 or more inches

Runoff: very slow

Hazard of erosion:

by water - none

by wind - severe

INCLUDED AREAS

Contrasting inclusions:

Walco fine sand on convex positions

Similar inclusions:

Fathom fine sand and Declo fine sandy loam and Kecko fine sandy loam in concave positions and a very small area of fathom soils with surface stones.

INTERPRETATIVE GROUPS

Capability classification:

3E irrigated, and 6E nonirrigated

Abbreviated version-subject to change.

394 Starbuck-Lava flows complex, 2 to 20 percent slopes

COMPOSITION

Starbuck soil - 50 percent
Lava flows - 30 percent
Inclusions - 20 percent

STARBUCK SOIL

Positions on landscape: depressions on basalt plains

Elevation: 4000 to 4600 feet

Climatic data: (average annual)

- * precipitation - about 10 inches
- * air temperature - about 47 degrees F.
- * frost free period- about 95 days

Typical profile:

0 to 3 inches - brown very cobbly silt loam
3 to 12 inches - brown or yellowish brown silt loam
12 inches - basalt

Depth class: shallow (10 to 20 inches)

Drainage class: well drained

Permeability: moderate

Available water capacity: very low; 0 to 3 inches

Potential rooting depth: 10 to 20 inches

Runoff: slow to rapid

Hazard of erosion: by water - slight to severe

LAVA FLOW

Lava flows consist of barren flows of basalt associated with recent volcanic activity typified by the Craters of the Moon National Monument. Pressure ridges, fissures, and sinkholes are common features.

INCLUDED AREAS

Contrasting inclusions:

Kecko fine sandy loam in depressions, Vining fine sandy loam on sideslopes, and a soil similar to Starbuck that is less than 10 inches deep to basalt.

INTERPRETATIVE GROUPS

Capability classification:

VIs nonirrigated

Abbreviated version-subject to change.

PHYSICAL PROPERTIES OF SOILS
Brockway

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodability index" apply only to the surface layer)

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
14: Bahem-----	0-11	8-18	1.40-1.50	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.43	0.43	5	3	86
	11-41	10-18	1.30-1.45	0.60-2.00	0.14-0.19	Low	0.0-0.5	0.49	0.49			
	41-60	0-8	1.45-1.55	2.00-6.00	0.09-0.12	Low	0.0-0.5	0.37	0.37			
31: Chijer-----	0-17	5-8	1.40-1.60	>20.00	0.07-0.09	Low	0.6-1.0	0.17	0.17	3	2	134
	17-43	8-18	1.35-1.55	0.60-2.00	0.10-0.18	Low	0.0-0.5	0.49	0.49			
	43-60	---	---	---	---		---	---	---			
32: Chijer-----	0-10	8-18	1.30-1.50	0.60-2.00	0.10-0.12	Low	0.6-1.0	0.24	0.24	3	3	86
	10-51	8-18	1.35-1.55	0.60-2.00	0.10-0.18	Low	0.0-0.5	0.49	0.49			
	51-55	8-13	1.35-1.55	0.60-2.00	0.10-0.12	Low	0.0-0.5	0.24	0.28			
	55-61	---	---	---	---		---	---	---			
53: Ephrata-----	0-5	10-17	1.30-1.50	2.00-6.00	0.10-0.14	Low	0.5-1.0	0.32	0.37	3	3	86
	5-26	10-17	1.25-1.50	2.00-6.00	0.10-0.15	Low	0.0-0.5	0.37	0.43			
	26-61	0-8	1.55-1.75	>20.00	0.03-0.06	Low	0.0-0.5	0.15	0.20			
55: FAB Fathom-----	0-7	0-5	1.40-1.60	6.00-20.00	0.09-0.10	Low	0.6-0.9	0.20	0.20	5	2	134
	7-61	0-5	1.40-1.60	6.00-20.00	0.09-0.10	Low	0.0-0.5	0.20	0.20			
56: Fathom-----	0-7	0-5	1.40-1.60	6.00-20.00	0.09-0.10	Low	0.6-0.9	0.20	0.20	5	2	134
	7-61	0-5	1.40-1.60	6.00-20.00	0.09-0.10	Low	0.0-0.5	0.20	0.20			
59: Fathom-----	0-7	0-5	1.40-1.60	6.00-20.00	0.09-0.10	Low	0.6-0.9	0.20	0.20	5	2	134
	7-61	0-5	1.40-1.60	6.00-20.00	0.09-0.10	Low	0.0-0.5	0.20	0.20			
Kudlac-----	0-3	20-25	1.15-1.25	0.20-0.60	0.14-0.16	Low	0.5-1.0	0.43	0.43	5	4L	86
	3-60	25-35	1.50-1.65	0.00-0.06	0.12-0.16	Moderate	0.0-0.5	0.43	0.43			
Anchustequi----	0-7	20-27	1.30-1.40	0.60-2.00	0.13-0.15	Low	1.0-2.0	0.43	0.43	5	6	48
	7-60	5-35	1.25-1.45	0.20-20.00	0.07-0.19	Moderate	0.0-1.0	0.37	0.37			

PHYSICAL PROPERTIES OF SOILS
Brockway

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodability index" apply only to the surface layer.)

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
14: <i>DEB</i> Bahem-----	0-11	8-18	1.40-1.50	0.60-2.00	0.13-0.17	Low	1.0-2.0	0.43	0.43	5	3	86
	11-41	10-18	1.30-1.45	0.60-2.00	0.14-0.19	Low	0.0-0.5	0.49	0.49			
	41-60	0-8	1.45-1.55	2.00-6.00	0.09-0.12	Low	0.0-0.5	0.37	0.37			
31: Chijer-----	0-17	5-8	1.40-1.60	>20.00	0.07-0.09	Low	0.6-1.0	0.17	0.17	3	2	134
	17-43	8-18	1.35-1.55	0.60-2.00	0.10-0.18	Low	0.0-0.5	0.49	0.49			
	43-60	---	---	---	---		---	---	---			
32: Chijer-----	0-10	8-18	1.30-1.50	0.60-2.00	0.10-0.12	Low	0.6-1.0	0.24	0.24	3	3	86
	10-51	8-18	1.35-1.55	0.60-2.00	0.10-0.18	Low	0.0-0.5	0.49	0.49			
	51-55	8-13	1.35-1.55	0.60-2.00	0.10-0.12	Low	0.0-0.5	0.24	0.28			
	55-61	---	---	---	---		---	---	---			
53: Ephrata-----	0-5	10-17	1.30-1.50	2.00-6.00	0.10-0.14	Low	0.5-1.0	0.32	0.37	3	3	86
	5-26	10-17	1.25-1.50	2.00-6.00	0.10-0.15	Low	0.0-0.5	0.37	0.43			
	26-61	0-8	1.55-1.75	>20.00	0.03-0.06	Low	0.0-0.5	0.15	0.20			
55: Fathom-----	0-7	0-5	1.40-1.60	6.00-20.00	0.09-0.10	Low	0.6-0.9	0.20	0.20	5	2	134
	7-61	0-5	1.40-1.60	6.00-20.00	0.05-0.10	Low	0.0-0.5	0.20	0.20			
56: Fathom-----	0-7	0-5	1.40-1.60	6.00-20.00	0.09-0.10	Low	0.6-0.9	0.20	0.20	5	2	134
	7-61	0-5	1.40-1.60	6.00-20.00	0.09-0.10	Low	0.0-0.5	0.20	0.20			
59: Fathom-----	0-7	0-5	1.40-1.60	6.00-20.00	0.09-0.10	Low	0.6-0.9	0.20	0.20	5	2	134
	7-61	0-5	1.40-1.60	6.00-20.00	0.09-0.10	Low	0.0-0.5	0.20	0.20			
Kudlac-----	0-3	20-25	1.15-1.25	0.20-0.60	0.14-0.16	Low	0.5-1.0	0.43	0.43	5	4L	86
	3-60	25-35	1.50-1.65	0.00-0.06	0.12-0.16	Moderate	0.0-0.5	0.43	0.43			
Anchustequi----	0-7	20-27	1.30-1.40	0.60-2.00	0.13-0.15	Low	1.0-2.0	0.43	0.43	5	6	48
	7-60	5-35	1.25-1.45	0.20-20.00	0.07-0.19	Moderate	0.0-1.0	0.37	0.37			

PHYSICAL PROPERTIES OF SOILS--Continued
Brockway

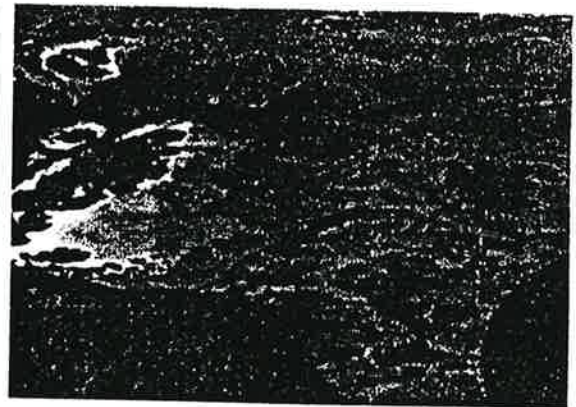
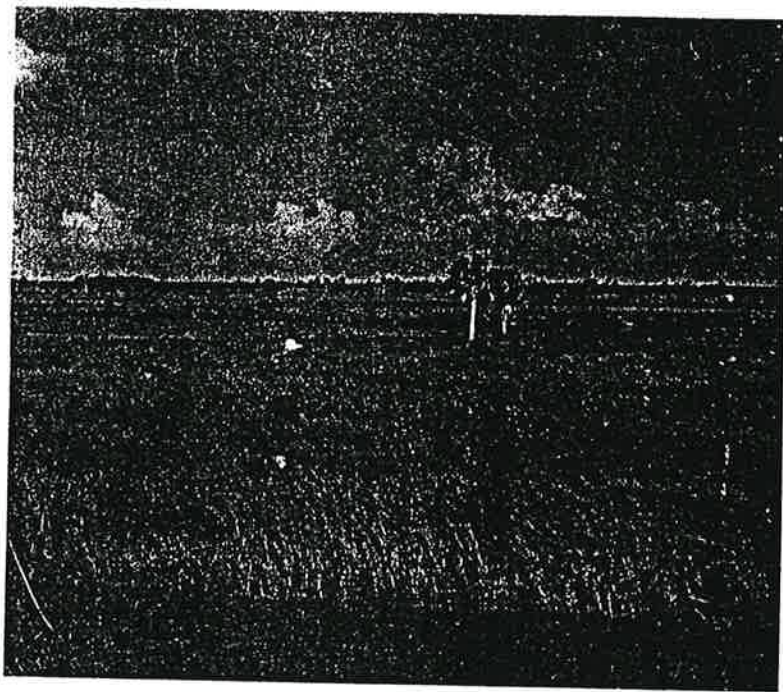
Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Shrink- swell potential	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
	In	Pct	g/cc	In/hr	In/in		Pct					
60:												
Fathom-----	0-9	0-5	1.45-1.65	6.00-20.00	0.06-0.08	Low	0.5-1.0	0.10	0.10	3	1	220
	9-22	0-5	1.40-1.60	6.00-20.00	0.07-0.10	Low	0.0-0.5	0.10	0.10			
	22-42	0-5	1.40-1.60	6.00-20.00	0.07-0.10	Low	0.0-0.5	0.10	0.10			
	42-52	2-10	1.35-1.55	6.00-20.00	0.09-0.12	Low	0.0-0.5	0.20	0.20			
	52-60	---	---	---	---		---	---	---			
Taunton-----	0-16	5-12	1.40-1.60	6.00-20.00	0.09-0.11	Low	0.5-1.0	0.10	0.10	2	2	134
	16-29	10-18	1.25-1.45	0.60-2.00	0.11-0.18	Low	0.0-0.5	0.37	0.43			
	29-59	---	---	---	---		---	---	---			
	59-63	---	---	---	---		---	---	---			
66:												
Fluvaquents----	0-7	10-15	1.35-1.50	0.60-2.00	0.14-0.16	Low	1.0-4.0	0.24	0.24	5	8	---
	7-60	10-20	1.30-1.55	0.60-6.00	0.10-0.17	Low	Q 5-1.0	0.20	0.20			
Histic												
Endoaquolls----	0-11	---	0.65-1.00	0.60-2.00	0.22-0.25	Low	60-85	---	---	---	8	---
	11-60	8-18	1.35-1.55	0.60-6.00	0.12-0.16	Low	10-20	0.20	0.20			
180: 344												
Lava Flows.												
Starbuck-----	0-3	10-14	1.25-1.45	0.60-2.00	0.10-0.13	Low	0.7-2.0	0.15	0.49	1	8	---
	3-12	14-18	1.30-1.50	0.60-2.00	0.16-0.18	Low	0.0-0.5	0.37	0.37			
	12-22	---	---	---	---		---	---	---			
206:												
Rock Outcrop.												
Vining-----	0-6	6-15	1.35-1.55	2.00-6.00	0.10-0.14	Low	0.7-1.0	0.20	0.24	2	3	86
	6-24	7-18	1.40-1.60	2.00-6.00	0.09-0.12	Low	0.0-0.5	0.20	0.32			
	24-28	---	---	---	---		---	---	---			
Kecko-----	0-5	3-8	1.40-1.60	6.00-20.00	0.08-0.10	Low	0.5-1.0	0.10	0.10	5	2	134
	5-40	10-18	1.25-1.50	2.00-6.00	0.13-0.15	Low	0.0-0.5	0.24	0.24			
	40-61	5-10	1.35-1.60	2.00-6.00	0.03-0.12	Low	0.0-0.5	0.10	0.10			

Guidelines for the Evaluation of Irrigation Diversion Rates

**State of Idaho
Department of Water Resources
1301 North Orchard Street
Boise, Idaho 83720**

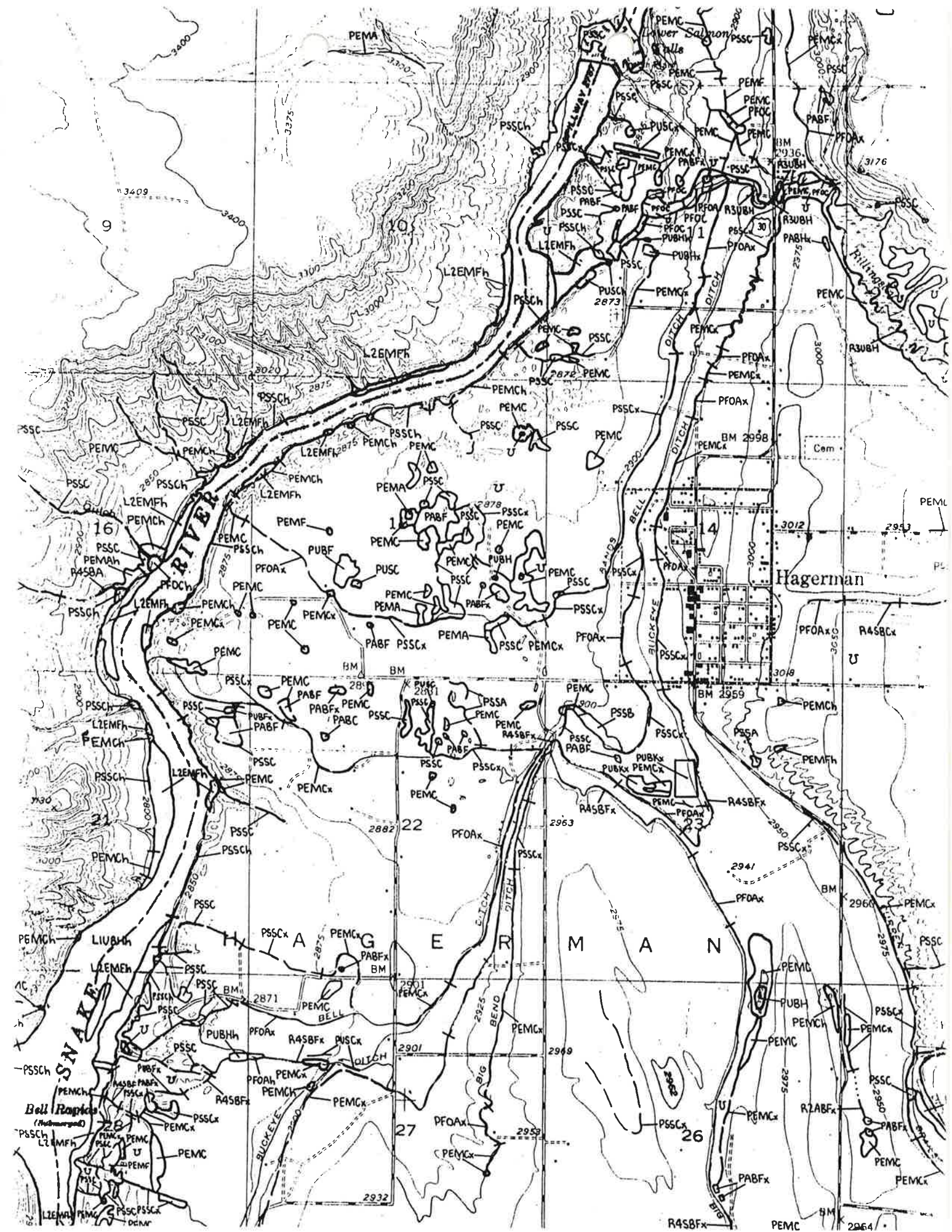
**Prepared by Hubble Engineering, Inc.
and
Associated Earth Sciences
7025 Emerald
Boise, Idaho 83704**

Classification of Wetlands and Deepwater Habitats of the United States



Fish and Wildlife Service

U.S. Department of the Interior



CURRENT METER CALCULATIONS

Strange Farm-Hagerman

LOCATION: Strange Farm North Outlet from Sands Ditch
 DATE: 4/29/98
 HYDROGRAPHER: C. E. Brockway
 METER: Pygmy
 MEASUREMENT NO.: 1

TIME START: "4/29/1998 1245
 TIME END: "4/29/1998 1300
 GAUGE START: NA
 GAUGE END: NA
 Ditch north from stand pipe
 Earthen ditch

SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	V SECT.	DELTA AREA	DELTA Q	SUM Q
1	0.9	0.20	0		50	1.000	0.00	NM	0.00	0.00	0.00	0.00
2	1.1	0.92	62		50	1.000	1.24	NM	1.24	0.11	0.07	0.07
3	1.3	1.06	94		50	1.000	1.88	NM	1.88	0.20	0.31	0.38
4	1.6	1.10	95		50	1.000	1.90	NM	1.90	0.32	0.61	0.99
5	2.0	1.05	95		50	1.000	1.90	NM	1.90	0.43	0.82	1.81
6	2.3	1.04	65		50	1.000	1.30	NM	1.30	0.31	0.50	2.31
7	2.4	0.80	30		50	1.000	0.60	NM	0.60	0.09	0.09	2.40
8	2.6	0.70	0		50	1.000	0.00	NM	0.00	0.15	0.05	2.44

AVG. VEL. 1.51 FPS
 AREA 1.62 SQ FT
 DISCHARGE 2.44 CFS

*CALIBRATION

FOR N(REV/T)< 0.68 V= 1.00 *N+ 0
 FOR N(REV/T)> 0.68 V= 1.00 *N+ 0

LOCATION: Strange Farm South Outlet from Sands Ditch
 DATE: 4/29/98
 HYDROGRAPHER: C. E. Brockway
 METER: Pygmy
 MEASUREMENT NO.: 2

TIME START: "4/29/1998 1310
 TIME END: "4/29/1998 1325
 GAUGE START: NA
 GAUGE END: NA
 Ditch south from stand pipe
 earthen ditch

SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	V SECT.	DELTA AREA	DELTA Q	SUM Q
1	1.0	0.00	0		50	1.000	0.00	NM	0.00	0.00	0.00	0.00
2	1.3	0.43	21		50	1.000	0.42	NM	0.42	0.06	0.01	0.01
3	1.6	0.72	49		50	1.000	0.98	NM	0.98	0.17	0.12	0.13
4	2.0	0.74	56		50	1.000	1.12	NM	1.12	0.29	0.31	0.44
5	2.5	0.79	56		50	1.000	1.12	NM	1.12	0.38	0.43	0.87
6	3.0	0.75	61		50	1.000	1.22	NM	1.22	0.39	0.45	1.32
7	3.5	0.72	50		50	1.000	1.00	NM	1.00	0.37	0.41	1.73
8	4.0	0.39	12		50	1.000	0.24	NM	0.24	0.28	0.17	1.90
9	4.5	0	0		50	1.000	0.00	NM	0.00	0.10	0.01	1.91

AVG. VEL. 0.94 FPS
 AREA 2.04 SQ FT
 DISCHARGE 1.91 CFS

Total Discharge = sum of south and north ditches=

4.35 cfs

CURRENT METER CALCULATIONS

Strange Farm-Hagerman

LOCATION: Strange Farm North Outlet from Sands Ditch
DATE: 4/29/98
HYDROGRAPHER: C. E. Brockway
METER: Pygmy
MEASUREMENT NO.: 1

TIME START: "4/29/1998 1245
TIME END: "4/29/1998 1300
GAUGE START: NA
GAUGE END: NA
Ditch north from stand pipe
Earthen ditch

SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	V SECT.	DELTA AREA	DELTA Q	SUM Q
1	0.9	0.20	0		50	1.000	0.00	NM	0.00	0.00	0.00	0.00
2	1.1	0.92	62		50	1.000	1.24	NM	1.24	0.11	0.07	0.07
3	1.3	1.06	94		50	1.000	1.88	NM	1.88	0.20	0.31	0.38
4	1.6	1.10	95		50	1.000	1.90	NM	1.90	0.32	0.61	0.99
5	2.0	1.05	95		50	1.000	1.90	NM	1.90	0.43	0.82	1.81
6	2.3	1.04	65		50	1.000	1.30	NM	1.30	0.31	0.50	2.31
7	2.4	0.80	30		50	1.000	0.60	NM	0.60	0.09	0.09	2.40
8	2.6	0.70	0		50	1.000	0.00	NM	0.00	0.15	0.05	2.44

AVG. VEL. 1.51 FPS
AREA 1.62 SQ FT
DISCHARGE 2.44 CFS

*CALIBRATION

FOR N(REV/T)< 0.68 V= 1.00 *N+ 0
FOR N(REV/T)> 0.68 V= 1.00 *N+ 0

LOCATION: Strange Farm South Outlet from Sands Ditch
DATE: 4/29/98
HYDROGRAPHER: C. E. Brockway
METER: Pygmy
MEASUREMENT NO.: 2

TIME START: "4/29/1998 1310
TIME END: "4/29/1998 1325
GAUGE START: NA
GAUGE END: NA
Ditch south from stand pipe
earthen ditch

SECT.	DIST.	DEPTH	REV .6-.2	REV .8	TIME SEC	ANG. CORR.	V1	V2	V SECT.	DELTA AREA	DELTA Q	SUM Q
1	1.0	0.00	0		50	1.000	0.00	NM	0.00	0.00	0.00	0.00
2	1.3	0.43	21		50	1.000	0.42	NM	0.42	0.06	0.01	0.01
3	1.6	0.72	49		50	1.000	0.98	NM	0.98	0.17	0.12	0.13
4	2.0	0.74	56		50	1.000	1.12	NM	1.12	0.29	0.31	0.44
5	2.5	0.79	56		50	1.000	1.12	NM	1.12	0.38	0.43	0.87
6	3.0	0.75	61		50	1.000	1.22	NM	1.22	0.39	0.45	1.32
7	3.5	0.72	50		50	1.000	1.00	NM	1.00	0.37	0.41	1.73
8	4.0	0.39	12		50	1.000	0.24	NM	0.24	0.28	0.17	1.90
9	4.5	0	0		50	1.000	0.00	NM	0.00	0.10	0.01	1.91

AVG. VEL. 0.94 FPS
AREA 2.04 SQ FT
DISCHARGE 1.91 CFS

Total Discharge = sum of south and north ditches=

4.35 cfs

80 75 70 60

LOCATION Strange Farm - Outlet from South Ditch - South Outlet
South Ditch $\approx$ 30' d.s. from Stand #2

1:10 pm

.80	.75	.70	.60
-----	-----	-----	-----

- | | | |
|-------------------|---------------------------|------|
| 1 = HOFF 551 | 6 = NEYRPIC MIG. BLUE (4) | 11 = |
| 2 = DAVID WHITE | 7 = NEYRPIC MIG. RED (6) | 12 = |
| 3 = HOFF 183-3 | 8 = NEYRPIC CABLE | 13 = |
| 4 = HOFF 183-4 | 9 = OTT - 47966 | 14 = |
| 5 = OTT - 446 (1) | 10 = HOFF 557 | 15 = |

REMARKS _____

DISCHARGE MEASUREMENT - CURRENT METER

PARTY CEB METER Pigmy

LOCATION Strange farm - Outlet from Sands Ditch
North ditch

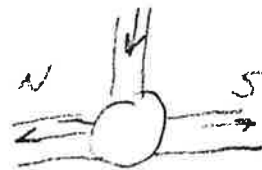
LOCATION (numeric) METER CODE DATE 04/29/98 NUMBER SECTIONS GAGE

Pigmy 12:45pm

SEC. #	DISTANCE	DEPTH	REV. 6 or .2	REV. 0.8	TIME (sec.)	ANGLE CORRECTION
01	0.9	0.2	-8			
02	1.1	.92	62		50	1.0
03	1.3	1.06	94			
04	1.6	1.10	95			
05	2.0	1.05	95			
06	2.3	1.04	65			
07	2.4	0.80	30			
08	2.6	0.70	-8			
09						
10						
11						
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25						

METER CODES

- | | | |
|-------------------|---------------------------|------|
| 1 = HOFF 551 | 6 = NEYRPIC MIG. BLUE (4) | 11 = |
| 2 = DAVID WHITE | 7 = NEYRPIC MIG. RED (6) | 12 = |
| 3 = HOFF 183-3 | 8 = NEYRPIC CABLE | 13 = |
| 4 = HOFF 183-4 | 9 = OTT - 47966 | 14 = |
| 5 = OTT - 446 (1) | 10 = HOFF 557 | 15 = |



REMARKS 10 south ditch ~ 30' d's of stand pipe

IRRIGATION WATER DIVERSION REQUIREMENTS PROGRAM

by
Clarence W. Robison

INTRODUCTION

The rate and volume water requirements for an irrigation diversion are driven by three aspects of crop production: crop consumptive use, leaching of soil salts, and frost protection. The primary aspect is to supply the crop's consumptive use requirements. Losses associated with the inefficiency of irrigation applications systems typically meet the leaching requirements. There have been many studies quantifying the amount of water consumed by individual crops and procedures for estimating the usage from weather or climatic data. These procedures are explained in many irrigation texts and engineering reference materials such as Jensen, et al.¹ The State of Idaho Department of Water Resources commissioned a study with the University of Idaho evaluated the methods of estimating consumptive use and irrigation requirements for the various agricultural crops produced in the state. The study recommended the FAO-Blaney-Criddle method for estimates of crop consumptive use for the state.² Utilization of the crop consumptive use estimates and the associated cropped areas will not yield the required diversion rate to irrigate those crops. The required diversion rates and volumes will depend on the soil characteristics, the irrigation application and delivery system, and system management.

For the purposes of water allocation, some have suggested that the crop with the highest annual consumptive irrigation requirement should determine the diversion rate and volume under a mono cropping assumption. This would yield conservative estimates of the potential diversion requirements; but, are unrealistic. For long term profitability, agriculture requires crop rotations to maintain land productivity and product quality. Secondly, mean consumptive use or irrigation requirement would reflect a diversion rate and volume that would be inadequate fifty percent of the time. Therefore, the program uses crop patterns in conjunction with soil and on farm management practices for project areas.

A computer program was developed to estimate the peak and annual diversion requirements for an irrigated area. The program computes rate and volume requirements for an irrigated area given information describing the area. The procedure requires information describing the irrigation and delivery systems, the soils, and the crops. The program does not estimate or compute crop consumptive use or irrigation requirement. The program uses this data in conjunction with soils and irrigation system information. The procedure used by the program is similar to that described by the Hubble Report, "Guidelines for the Evaluation of Irrigation Diversion Rates."³ The program consists of four major areas: water requirements, application requirements, system efficiencies, and distribution losses.

The following definitions are offered to assist in clarifying the procedures used in the program.

Consumptive Use (*cu*): The amount of water transpired by an activity growing crop plus the amount water evaporated from the soil surface and foliage occupying the area around the growing crop. Typically expressed as a depth per time (mm/day or in/day).

Consumptive Irrigation Requirement (*cir*): The amount of irrigation water required to meet the consumptive use of a crop after accounting for natural precipitation. It typically has the units of depth per time (in/day).

Available Water Holding Capacity (*awhc*): The amount of water held by the soil profile after draining. It typically has the units of depth per unit depth (in/foot).

Allowable Soil Moisture Depletion (*asmd*): The amount of soil moisture which can be depleted from the root zone before the crop suffers stress which would impact crop yield and quality. It typically is a percentage or fraction of the available water holding capacity.

Irrigation Application Depth (*iad*): The amount of water required to replenish the soil moisture in the crop root zone to holding capacity. (in)

Irrigation Return Period (*irp*): The time between irrigations (days).

Irrigation Application Efficiency: The percentage of applied irrigation water stored in the root zone and used by the crop to satisfy crop consumptive use. It is typically a percentage.

METHODS

Irrigation Application Depth

The purpose of irrigation is to supply the crop with its water requirements and any leaching requirements based on the soils and irrigation water. Each irrigation should replenish the soil moisture in the crops root zone. The amount of soil moisture to be replenished by irrigation is the irrigation application depth. The soil moisture capacity, crop rooting depth, and allowable soil moisture depletion for a crop determines the application depth.

$$iad_{crop\ soil} = asmd_{crop} * arzsm_{crop\ soil} \dots\dots\dots [1]$$

where:

$iad_{crop\ soil}$ Irrigation application requirement, depth

$asmd_{crop}$ Allowable soil moisture depletion, fraction.

$arzsm_{crop\ soil}$ Available root zone soil moisture, depth.

The program computes the available root zone soil moisture from the soil moisture profile given by the user and the crop rooting depth using a linear interpolation procedure. For example a soil moisture capacity curve for a Bruneau area soil is shown in Figure 1. The program expects the cumulative soil moisture for 0 to 5 feet by 1 foot intervals. If the soil profile does not extend six feet in depth, the portion beyond the end of the profile should be treated as a soil without any moisture holding capability.

The user supplies the rooting depth over the season and allowable soil moisture deficit for each crop. For perennial crops (alfalfa, pasture grasses, and orchards) the crop rooting depth changes from year to year. The user should select a rooting depth typical of average crop age. Table 1 summarizes typical rooting depths for

Table 1. Rooting depths and allowable soil moisture depletion for various crops.^{3,4,5}

Crop	Rooting Depth	Time to Reach	Allowable Depletion
Alfalfa	4 - 5ft	-- Perennial --	50-60%
Dry Beans	2 - 2.5 ft	50 days after planting	40-50%
Clover	2 - 3 ft	-- Perennial --	40-50%
Corn	3 - 4 ft	10 days after tasseling	50%
Corn, Sweet	2.5 - 3 ft	10 days after tasseling	40%
Grapes	3 ft	-- Perennial --	65%
Hops	5 ft		50%
Mint	2 - 3ft		40-50%
Onions	1.5 ft		30%
Orchard	5 - 6 ft	-- Perennial --	50-65%
Potatos	2 - 3 ft	80 days after planting	30-40%
Pasture/Turf	2 - 3 ft	-- Perennial --	50-60%
Peas	2 - 3 ft		50%
Small Grains	3 - 4 ft	heading	50-60%
Sugar Beets	2 - 5 ft	10-60 days after planting	50%

various crops. For example, a mature alfalfa hay crop typically has a rooting depth of 4 feet with an allowable soil moisture depletion of 50 percent which would result in an irrigation application depth of 2.75 inches for the soil shown in Figure 1.

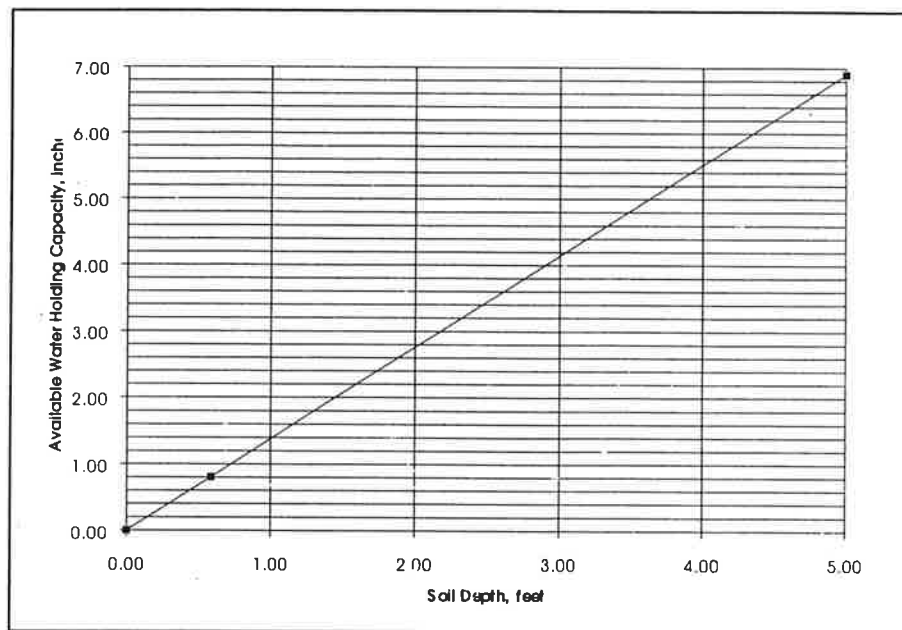


Figure 1. Available soil moisture versus for a Bruneau area soil.

Crop Water Requirements

The program requires crop consumptive use and irrigation requirement data in conjunction with a user specified probability level for meeting the crop needs. Allen and Brockway³ prepared consumptive irrigation requirements for various areas of the State of Idaho based upon the FAO Blaney-Criddle method of estimating crop evapotranspiration. The numbers in their report reflect the mean (average) consumptive irrigation requirements based upon the weather data available for the area. Thus, their published number reflects that fifty percent of the time the actual requirement will be greater than that published. In determination of an irrigation water right or permit, the mean requirement is probably not adequate. Irrigated farm operators would prefer an estimate that is met more than fifty percent of the time. The program combines the consumptive use and irrigation requirement with the published standard deviations and a risk level specified by the user. The current version of the program assumes that the consumptive uses and irrigation requirements are normally distributed.

Peak Consumptive Use

The peak diversion rate for a system is associated with a peak daily consumptive use. The daily consumptive use is also associated with the irrigation return period or irrigation application depth. The higher the soil moisture holding capacity, longer irrigation return intervals, the peak consumptive use approaches the monthly consumptive use. In determining the peak consumptive for a crop, the monthly consumptive reported by Allen and Brockway³ is first adjusted for the level or risk assuming a normal distribution according to the following formula⁶:

$$cu_{crop} = cu_{crop} + std_{cu} * z \dots\dots\dots [2]$$

where:

cu_{crop} Crop consumptive use associated with a level of risk.

cu_{crop} Published crop monthly mean consumptive use.

std_{cu} Published standard deviation of the crop consumptive use.

z Standardized normalized variate associated with a given probability.

The consumptive use is then adjusted for the irrigation return interval period by the irrigation application depth for the crop. The procedure use for adjusting the consumptive use is outlined in Jensen².

$$pcu_{crop\ soil} = cu_{crop} * f(iad_{crop\ soil}) \dots\dots\dots [3]$$

where:

$pcu_{crop\ soil}$ Peak crop consumptive use associated with a level of risk.

$f(iad_{crop\ soil})$ Function relating allowable soil moisture depletion for crop on a soil and monthly
.....consumptive use to peak consumptive use, Figure 6.6, page 223, Jensen².

The function yields values of x.xx, x.xx, and x.xx for allowable depletions of x.xx, x.xx, and x.xx inches respectively.

Irrigation Requirement

The monthly and annual diversion requirement (volume) is based on the crop irrigation requirement. To adjust the published mean daily irrigation requirement for the level of risk the following formula is applied:

$$cir_{crop} = \overline{cir_{crop}} + std_{cr} * z \dots\dots\dots [4]$$

where:

cir_{crop} Consumptive irrigation requirement associated with a level of risk.

$\overline{cir_{crop}}$ Published mean consumptive irrigation requirement.

std_{cr} Published standard deviation of the consumptive irrigation requirement.

z Standardized normalized variate associated with a given probability.

For example, the mean alfalfa hay consumptive irrigation requirement for June is 0.25 inches per day⁷ in the Bruneau area with a standard deviation of 0.04. Thus, the requirement associated with the 80 percent risk level (is not exceeded eighty percent of time) is 0.28 inches per day (12 percent increase).

Soil Infiltration and Intake Families

The analysis of irrigation system efficiency requires an estimate of the infiltration rate for the soil. The methods that will be used to determine system efficiency are based on the USDA - NRCS (SCS) intake family infiltration. The cumulative infiltration function is expressed as:

$$F_n = aT_n^b + c \dots\dots\dots [5]$$

where:

T_n time for infiltration, minutes

F_n cumulative infiltration, inches, for time

a, b, c infiltration coefficients associated with an intake family.

There are two intake families. The first intake family is referred to as the flood intake family and the second is referred as the furrow intake family. The flood intake family is used in border irrigation system analysis and the second is used in furrow and corrugate irrigation systems analysis. The two families are related to each other by the following equation⁸:

$$frw_{family} = 0.28 + 0.14 * fld_{family} \dots\dots\dots [6]$$

where:

fld_{family} flood intake family

frw_{family} furrow intake family

Infiltration coefficients based on the intake family are computed based upon the standard equations published by the USDA-NRCS. The coefficients for the flood intake family are computed with the following equation:

$$a = \left(\frac{fld_{family} + 3.1877}{339.06} \right)^{0.71638} \dots\dots\dots [7]$$

$$b = \left(\frac{fld_{family} + 1.8572}{238.32} \right)^{0.06862} \quad \text{for } fld_{family} < 5.14 \dots\dots\dots [8]$$

$$b = \left(\frac{fld_{family} - 2.5696}{237890} \right)^{0.021171} \quad \text{for } fld_{family} \geq 5.14$$

The infiltration coefficients associated with the furrow intake family are computed with the following equations:

$$a = \left(\frac{frw_{family} + 0.166281}{47.467904} \right)^{0.716378} \dots\dots\dots [9]$$

$$b = \left(\frac{frw_{family} - 0.02}{33.364573} \right)^{0.06862} \quad \text{for } frw_{family} < 1.0 \dots\dots\dots [10]$$

$$b = \left(\frac{frw_{family} - 0.639737}{33304.67292} \right)^{0.021171} \quad \text{for } frw_{family} \geq 1.0$$

Also associated with the furrow intake families are coefficients describing the irrigation water advance through the furrow to the end of the field. These coefficients are usually determined with the following equations:

$$f = 2321 + 5.8653 * fwr_{family} \dots\dots\dots [11]$$

$$g = 4.4685 * 10^{-4} + 0.0015764 * fwr_{family} \dots\dots\dots [12]$$

Irrigation System Application Efficiency

The on farm irrigation diversion requirement has to reflect losses in the application of the irrigation water on the field where the crop is grown. There are many various methods of applying irrigation water: furrow, border, sprinkler, flood, etc. Each of the methods have their advantages and disadvantages and efficiencies. Typically, the largest factor influencing each application method efficiency is the irrigator which is difficult to quantify. The current version of the program has provisions to handle furrow irrigation, level border irrigation, handline - wheel-line sprinkler irrigation, center pivot irrigation, and contour ditch (wild flooding).

Contour Ditch

The program computes irrigation efficiencies for the contour ditch (wild flooding) method of irrigation by a simple mass balance. The user is expected to enter information regarding the length of run, typical flow rate and associated ditch length (field width) irrigated per set, and the time associated with set. The application efficiency is computed with the following equation:

$$AE = \frac{iad * fl * sw}{12 * Q * T_{set} * 3600} * 100 \dots\dots\dots [13]$$

where:

AE application efficiency, percent

Q typical flow rate, cfs.

T_{set} set time, hours.

fl field run length, feet

sw set width, feet

No checks are performed to applicability of the method, nor, adequate distribution. The user is advised to refer to local NRCS design guidelines for reasonable efficiencies. For example, on moderately smooth topography conditions and a net irrigation application depth of 3 inches, the USDA NRCS (SCS) has estimated efficiencies for contour ditch irrigation⁸ as shown in Table 2.

Table 2. Efficiency of Contour Ditch Irrigation, Percent

Flood Intake Family	Land Slope (Percent)				
	1 - 2	2 - 4	4 - 8	8 - 16	16 - 32
0.1	8	5	4	3	2
0.3	21	15	11	8	5
0.5	26	18	13	9	6
1.0	54	38	39	20	13
1.5	55	55	39	28	15
2.0	53	55	50	37	25
3.0	52	55	58	52	35

Furrow Irrigation

The program utilizes procedures outlined in Chapter 5, Section 15 Irrigation, of the USDA NRCS (SCS) National Engineering Handbook⁹ to evaluate the furrow irrigation system efficiency. The program does not attempt to determine the optimum furrow inflow; however, it attempts to estimate the efficiency of the system based on the supplied system management. The equations utilized are the equivalent intake depth equation and the time of advance equation.

$$AE = \frac{1.039 * iad * fw * fl}{q * T_{set}} \quad [14]$$

where

AE irrigation application efficiency, percent
 iad gross irrigation application depth, inches
 fw furrow spacing, feet
 fl furrow spacing, feet
 q furrow inflow, gpm
 T_{set} set time, minutes

To evaluate the adequacy of the irrigation, the amount of water infiltrated at the end of the furrow must be determined. This requires computing the infiltration opportunity time at the end of the furrow and then computing the amount infiltrated.

$$T_o = T_{set} - T_{adv} \quad [15]$$

where

T_o infiltration opportunity time at end of furrow, minutes
 T_{adv} advance time for water to reach end of furrow, minutes

$$T_{adv} = \frac{fl}{f} e^{\frac{g * fl}{q * S^{0.5}}} \quad [16]$$

where

f, g soil furrow intake family advance coefficients
 S furrow slope, feet/feet

If the opportunity time, T_o , is less than zero, then the end of field was not irrigated. If the opportunity time is greater than zero, then the amount infiltrated at the furrow end is estimated with the following equation:

$$F_o = \frac{[a * T_o^b + c]}{fw} * \left(0.269 * \left(\frac{q * n}{S^{0.5}} \right)^{0.425} + 0.746 \right) \quad [17]$$

where

F_o infiltrated depth at the furrow end, inches
 a, b, c soil furrow intake family infiltration coefficients
 n Manning's roughness coefficient for furrow or corrugation.

If the end of furrow infiltrated depth, F_o , is less than the desired irrigation application depth (iad), then the furrow end was not adequately irrigated.

Border Irrigation

Border irrigation systems consist of level or gradient borders with or without end stops. The current version of the program does compute efficiency for level and gradient borders without end stops. The equations for estimating border irrigation efficiency are based on inflow rates per unit width. The unit inflow rate is estimated from the following equation and assumes that the entire border is irrigated with the specified flow.

$$q_u = Q / W \quad \text{[18]}$$

where

q_u flowrate per unit width, ft²/sec

Q border inflow rate, cfs

W border width, feet

The program assumes that level borders have slopes less than 0.4 percent (0.004 ft/ft) while gradient borders have slopes 0.4 percent or greater. For level borders the recession time (lag time), T_L , is zero. For gradient borders the recession time is estimated from the following equation:

$$T_L = \frac{0.0897 * q_u^{0.2} * n^{1.2}}{S_o^{0.5}} \quad \text{[19]}$$

where

S_o border strip slope, ft/ft

n Mannings roughness coefficient

The time, T_n , required to infiltrate the desired application depth, iad , is estimated from the flood intake family infiltration function:

$$T_n = \left(\frac{iad - c}{a} \right)^{1/b} \quad \text{[20]}$$

where

T_n infiltration opportunity time, minutes

iad desired infiltration depth, inches

a, b, c flood intake family coefficients

The adequacy of border irrigation is determined by comparing the irrigation set with the time of application. The set time should be greater than or equal to the required application time. The required application time is estimated by:

$$T_s \geq T_a = T_n - T_L \quad \text{[21]}$$

where

T_s set (inflow) time, minutes

T_a required application time, minutes

The efficiency is estimated by the following equation:

$$AE = \frac{iad * L}{7.2 * q_u * T_s} \quad \text{[22]}$$

where

AE irrigation application efficiency, percent

L border length, feet

Sprinkler Irrigation

Irrigation efficiencies with sprinkler systems are usually between 60 and 90 percent. Table 3 shows typical efficiencies for various sprinkler systems. For center pivot and linear move systems efficiencies are not estimated, these are expected to be specified in the input dataset. For the other systems the program estimates the efficiency from lateral spacings and lengths (area), set time, and lateral flowrates using the following equation:

Table 3. Sprinkler System Irrigation Efficiencies

Sprinkler System Type	Efficiency Range
Hand Move	60 - 85%
Solid Set	60 - 90%
Side Roll	60 - 85%
Linear Move	80 - 90%
Center Pivot	75 - 88%

$$AE = \frac{1039 * iad * L * W}{Q * T} \quad [23]$$

where

AE irrigation application efficiency, percent

Q lateral inflow rate, gallons per minute

T set time, hours

L lateral line length, feet

W spacing between lateral risers, feet

iad irrigation application depth, inches

Irrigation Delivery System Losses

There are losses associated with canals and laterals which delivery the irrigation water from the source to the farm, field, were it is applied. The are several methods for determining the seepage loss from a channel. These include field measurement of the loss or estimation with a seepage formula. Three estimation methods are incorporated into the program: the Mortiz, Etchverry, and Wortstell seepage formulas. These formulas are as follows:

$$S_m = 0.2 * C * \sqrt{Q/V} \quad [24]$$

where

S_m Mortiz seepage loss estimate, cfs/mile

C factor representing canal (lateral) seepage characteristic, ft/day

Q canal (lateral) discharge, cfs

V canal (lateral) velocity, ft/sec

$$S_e = K * i * \sqrt{Q/V} \quad [25]$$

where:

S_e Etchverry seepage loss estimate, cfs/mile

K canal shape constant

i canal (lateral) seepage intensity, ft/day

Q canal (lateral) discharge, cfs

V canal (lateral) velocity, ft/sec

$$S = 0.0667 * i * W \quad [26]$$

where:

S_w Wortstell seepage loss estimate, cfs/mile

i canal (lateral) seepage intensity, ft/day

W canal (lateral) water surface top width, ft

In the methods where a discharge is required for estimating the seepage loss, the downstream flow and any diversions are combined for the discharge. Regardless of how the seepage estimate is determined, the seepage loss for a canal, lateral, segment is computed by:

$$loss_s = S_l * length_l \dots\dots\dots [27]$$

where:

$loss_l$ conveyance loss for lateral (canal), cfs

S_l lateral (canal) seepage rate, cfs/mile

$length_l$ lateral (canal) segment length, miles

On Farm/Field Delivery Requirements

For each time step associated with the consumptive use data, the on farm, field, irrigation delivery requirement is determined from estimated irrigation system application efficiencies, crop requirements and areas of each crop, soil, and irrigation system combination. The peak delivery requirement is computed by:

$$ofpr_{crop,soil,system} = \frac{cu_{crop}}{AE_{crop,soil,system}} * area_{crop,soil,system} \dots\dots\dots [28]$$

where:

$ofpr$ on farm, field, peak delivery rate for given crop, soil, and irrigation system, ac-in/day

cu peak crop consumptive use for given risk level, inches/day

AE irrigation efficiency for given crop, soil, and irrigation system combination, percent

$area$ area associated with given crop, soil, and irrigation system, acres

The delivery volume for the time period associated with the crop water use data is determined from the following equation:

$$ofdr_{crop,soil,system} = \frac{cir_{crop}}{AE_{crop,soil,system}} * area_{crop,soil,system} \dots\dots\dots [29]$$

where:

$ofdr$ on farm, field, diversion volume for given crop, soil, and irrigation system, ac-in/day

cir crop irrigation requirement for given risk level, inches/day

AE irrigation efficiency for given crop, soil, and irrigation system combination, percent

$area$ area associated with given crop, soil, and irrigation system, acres

Aggregation

The program does not compute requirements on an individual field or farm basis. Instead, the program computes requirements on each combination of crop, soil, and irrigation system for each consumptive use time period. Once the on farm, field, requirement is determined; the program aggregates the peak diversion rate and period diversion volume based on the soil types for each time period.

$$fpr_{soil} = \sum_{crop} \sum_{system} ofpr_{crop,soil,system} \dots\dots\dots [30]$$

where

$ofpr$ on farm, field, peak delivery rate for given crop, soil, and irrigation system, ac-in/day

fpr on farm, field, peak delivery rate for a soil classification, ac-in/day

$$fdr_{soil} = \sum_{crop} \sum_{system} ofdr_{crop,soil,system} \dots\dots\dots [31]$$

where

$ofdr$ on farm, field, diversion volume for given crop, soil, and irrigation system, ac-in/day

fdr on farm, field, diversion volume for a soil classification, ac-in/day

To translate aggregated on farm, field, requirements to the point of diversion; the program expects for each defined lateral segment the percentage of each soil type served by it and the lateral segment which supplies it with water. A lateral segment is not required to serve any soil type or any down stream lateral segment. For example in figure x, lateral segments are shown as numbered line segments and soils are shown as lettered areas. Lateral segment number 1 only delivers water to lateral segment number 2. The area defined as soil a is serviced by lateral segments 2 and 3. Lateral segment 3 delivers water to two lateral segments in addition to delivering water to a portion of soil a. Lateral segment 6 delivers water to lateral segment 7 and delivers water to a portion of soils e and c and all of soil d. Starting with the downstream segments, the program applies the following formula to determine the inflow into each lateral segment.

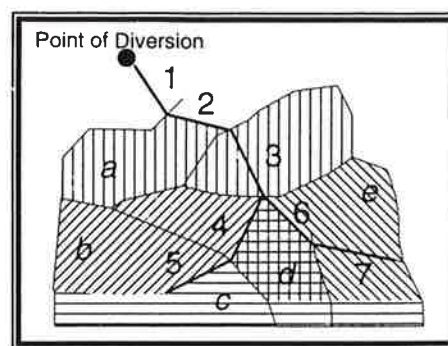


Figure x. Soils and Laterals Representation.

$$Q_i = \sum Q_d + \sum_{\text{soil}} psl_{i,\text{soil}} * fdr_{\text{soil}} h_{\text{loss}} \dots \dots \dots [32]$$

where

- Q_i require inflow into lateral segment i,
- Q_d downstream lateral delivery requirements for segment i
- $psl_{i,\text{soil}}$ percent of soil classification served by segment i.

PROGRAM IMPLEMENTATION

The methods describe in the preceeding section were implemented in a FORTRAN program. The listing of the program is found in Appendix A. The program uses dynamic allocation of array space and thus requirements for running the program will depend on the amount of detail required to describe the irrigated area. The program was compiled using the Microsoft FORTRAN PowerStation Version 1 compiler.

PROGRAM OPERATION

The program is configured to operate on matrixes describing the various cropping, soil, and irrigation system patterns for each consumptive use period. The program utilizes two input data files. The first data file is unique for the system, area, which irrigation diversion requirements are being determined for. The file contains crop, soil, and irrigation system mixtures and characteristics. Also, the file contains the data describing the delivery system network of canals and laterals. The second data file describes the crop water use data and rooting depth data as a function of time. This file is not unique to a system, it should describe the crop water use and rooting depths for a climatic region and may be used with other system analyses within the same climatic region. The two files are linked via the crop names found within the two files. The second file may contain more crops than the first file; however, each crop specified in the first file must be defined in the second file.

Regional Crop Water Use Data File

The regional crop water use data file is constructed from published information on crop water use such as Allen and Brockway³. The file contains several data areas of which five are repeated for each crop and vary throughout the irrigation season. The first area is simple documentation. The second area describes the relationship between the mean use value in the data set and an estimated peak use due soil moisture holding capacity. The five data areas specific to the crops are found next for each crop. Finally, the end of data is signal by a single record with the contents "END OF FILE" as the last record. The format of the data file is describe in Table x. The first record of the data file is an alphanumeric record for documenting the crop water use data. It suggested that the source of the data be included in the descriptive title. The next record indicates the number of points used to describe the mean to peak usage relationship. Record three contains irrigation application depths and record four contains peak to mean ratios associated with the depths. The fifth record identifies the water use periods that are represented by the data. Records 6 through 11 describe the data for a specific crop which is identified in record 6. An example data file is shown in Figure x.

System Definition File

Table x. Regional Crop Water Use Data File Format

Line	Format	Description
1	A80	Data set descriptive title
2	2I5	Number of mean to peak values followed by number of water use periods for the crops
3	10X,11F6.0	
4	10X,11F6.0	
5	10X,11A6	Water Use Period Descriptors
6	A15	Crop Name for next 5 records
7	15X,11F6.2	Crop rooting depth by period, feet
8	15X,11F6.2	Consumptive Use, in/day/period
9	15X,11F6.2	Irrig. Requirement, in/day/period
10	15X,11F6.2	Consumptive Use standard dev.
11	15X,11F6.2	Irrig. Requirement standard dev
Repeat Line 6 through 11 for remaining crops.		
LAST	A15	END-OF-FILE

Bruneau Consumptive Use from Allen and Brockway 83															
11	8														
App. Depth	15.38	26.92	38.46	53.85	69.23	92.31	115.4	142.3	161.5	176.9	192.3				
Peak to M	1.154	1.138	1.123	1.108	1.092	1.077	1.061	1.046	1.038	1.031	1.023				
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total						
Alfalfa Hay															
Root Depth	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00							
MEAN CU	2.72	6.08	7.23	6.98	5.36	3.43	1.20	1011.							
MEAN IR	2.18	5.62	6.39	6.79	5.16	3.17	0.94	926.0							
STDEV CU	0.26	0.66	0.44	0.28	0.25	0.27	0.10	29.0							
STDEV IR	0.48	0.66	0.98	0.32	0.64	0.44	0.31	57.0							
Alfalfa Seed															
Root Depth	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00							
MEAN CU	3.26	5.90	7.27	6.20	3.23	1.68	0.59	861.0							
MEAN IR	2.69	5.45	6.42	6.01	3.05	1.44	0.34	778.0							
STDEV CU	0.31	0.38	0.44	0.25	0.15	0.13	0.05	25.0							
STDEV IR	0.53	0.65	0.98	0.29	0.51	0.33	0.28	52.0							
Dry Beans															
Root Depth	0.00	0.50	1.00	1.75	2.50	0.00	0.00								
MEAN CU	1.97	4.39	7.93	3.27											
MEAN IR	1.67	3.79	7.75	3.13											
STDEV CU	0.13	0.26	0.32	0.15											
STDEV IR	0.34	0.68	0.34	0.45											
Field Corn															
Root Depth	0.00	0.75	1.50	3.00	3.00	3.00	3.00								
MEAN CU	1.97	3.61	7.72	6.58	4.05	1.05	767.0								
MEAN IR	1.64	2.96	7.52	6.37	3.79	0.80	709.0								
STDEV CU	0.13	0.22	0.31	0.30	0.31	0.08	23.0								
STDEV IR	0.37	0.68	0.34	0.70	0.48	0.08	42.0								
Silage Corn															
Root Depth	0.00	0.75	1.50	3.00	3.00	3.00	3.00								
MEAN CU	1.97	3.61	7.72	6.58	4.05										
MEAN IR	1.64	2.96	7.52	6.37	3.79										
STDEV CU	0.13	0.22	0.31	0.30	0.31										
STDEV IR	0.37	0.68	0.34	0.70	0.48										
Potatoes															
Root Depth	0.50	1.00	2.00	2.00	2.00	2.00	2.00								
MEAN CU	1.49	2.58	6.40	7.13	5.32	2.66									
MEAN IR	1.12	2.31	5.81	6.98	5.16	2.48									
STDEV CU	0.14	0.17	0.39	0.29	0.24	0.21									
STDEV IR	0.31	0.34	0.74	0.50	0.52	0.37									
Sugar Beets															
Root Depth	0.50	1.50	3.00	3.00	3.00	3.00	3.00								
MEAN CU	1.49	2.00	4.82	4.52	6.88	4.51	2.23					935.0			
MEAN IR	1.00	1.66	4.12	4.32	6.66	4.24	1.96					857.0			
STDEV CU	0.14	0.13	0.29	0.35	0.32	0.35	0.18					24.0			
STDEV IR	0.39	0.37	0.78	0.37	0.73	0.52	0.36					50.0			
Spring Grain															
Root Depth	0.50	1.50	3.00	3.00	3.00	3.00	3.00								
MEAN CU	0.76	1.76	5.77	6.26	5.42	1.02									
MEAN IR	0.48	1.32	5.39	7.49	5.12	1.02									
STDEV CU	0.09	0.17	0.37	0.50	0.23	0.05									
STDEV IR	0.29	0.37	0.59	0.96	0.25	0.34									
Winter Grain															
Root Depth	1.00	1.50	3.50	3.50	3.50	3.50	3.50								
MEAN CU	1.34	4.71	6.56	8.27	5.63	1.13									
MEAN IR	1.03	4.14	6.13	7.43	5.47	0.99									
STDEV CU	0.16	0.45	0.43	0.50	0.23	0.05									
STDEV IR	0.35	0.63	0.67	1.01	0.26	0.36									
Pasture															
Root Depth	2.00	2.00	2.00	2.00	2.00	2.00	2.00								
MEAN CU	2.84	5.05	6.37	6.61	5.49	4.16	2.90					1024.			
MEAN IR	2.32	4.64	5.60	6.43	5.29	3.90	2.61					944.0			
STDEV CU	0.27	0.33	0.38	0.27	0.25	0.32	0.23					26.0			
STDEV IR	0.48	0.57	0.88	0.30	0.63	0.49	0.40					53.0			
Orchard															
Root Depth	5.00	5.00	5.00	5.00	5.00	5.00	5.00								
MEAN CU	2.16	4.31	6.85	7.30	6.06	4.43	2.30					1024.			
MEAN IR	1.66	3.92	6.06	7.11	5.86	4.17	2.03					943.0			
STDEV CU	0.21	0.28	0.41	0.30	0.28	0.34	0.19					27.0			
STDEV IR	0.43	0.52	0.92	0.33	0.66	0.51	0.36					54.0			
END OF FILE															

Figure x. Example Regional Crop Water Use Data File

Figure x. Example Regional Crop Water Use Data File

The irrigated area system definition file defines the physical characteristics of the area and the irrigation management features, and the cropping information. The file contains several different data areas. The overall format specification for the individual records in the file are listed in Table xx and an example data file is shown in figure xx. The first data area is simple documentation of the data file. It consists of three alpha-numeric records. The second data area defines the number of irrigation systems, the number of crops, the number of soil types, and the number canal (lateral) segments and the risk level associated with the analysis.

The third data area of the file supplies the physical information concerning the canal -- lateral distribution system. For each later segment information describing the segment is given. The lateral segments must be entered starting at with the furthest downstream segment. The last segment entered should be the canal should be the one associated with the point of diversion. The numbering of the segments corresponds to the order they are entered in the data file. Currently, there are four options for seepage loss computations. The options are identified by numerical values of LMETHD. The first method associated with a value of 0 for LMETHD assumes a measured loss. This measured loss is entered as FAC1. The second method associated with a LMETHD value of 1 is based on the Moritz equation. The program uses the FAC1 value as the Moritz seepage coefficient C and assumes that it has the units of feet per day. The third method associated with a LMETHD value of 2 is based on the Etchverry formula. With this method, FAC1 is assumed to be i (ft/day) and FAC2 equals the Etchverry K value. The last method associated with a LMETHD value of 3 uses the Worstell method where LFAC1 equals the seepage factor i (ft/day). This data area starts with record 5 and ends when all the lateral segments have been defined. Line A shown in Table x.x describes the format associated with each lateral segment record.

The next data area describes the various irrigation systems used in the area of interest. For each irrigation system, a record with the format shown in Table x.x for line B should be found in the data area. The first three characters of the irrigation system name control how the program computes the application efficiency. Currently, the program handles furrow (FUR), gradient border (BOR), contour ditch (___), sprinkler (SPR), and center pivot (PIV) irrigation systems. The estimated efficiency is only used with the center pivot irrigation system. The remaining data elements depend on the type of irrigation system specified. For furrow irrigation systems the estimated

Table xx. System Definition File Format Specifications.

Line	Format	Description
1,2,3	A80	Dataset documentation, title, etc.
4	415,F5.0	NSEG,NSYS,NSOIL,NCROP,RISK
A	A15,7F5.2	Canal/Lateral Information Name -- 15 character identifier UPSEG -- Upstream segment number LENGTH -- Length of segment (miles) WIDTH -- Top width of segment (feet) XFAREA -- Cross sections flow area (sq. ft) LMETHD -- Method of seepage loss computation CFAC1 -- Factor associated with seepage comp. CFAC2 -- Facotr associated with seepage comp
B	A15,6F5.2	Irrigation System Information Name -- Irrigation System Name and Code ESTEFF -- Estimated system efficiency, % SETIME -- Set time, hours FLOW -- Inflow, gpm LENGTH -- length associated with system, feet SFAC1 -- System dependent factor SFAC2 -- System dependent factor
C	A15,7F5.2	Soil Information Name -- Soil Classification Identifier INFAM -- NRCS Flood Intake Family AWHC1 -- Water holding capacity 0 -- 1 ft, inches AWHC2 -- Water holding capacity 0 -- 2 ft, inches AWHC3 -- Water holding capacity 0 -- 3 ft, inches AWHC4 -- Water holding capacity 0 -- 4 ft, inches AWHC5 -- Water holding capacity 0 -- 5 ft, inches AWHC6 -- Water holding capacity 0 -- 6 ft, inches
D	A15,9F5.2	Crop Information Name -- Crop Identifier (Linkage to CU Data) ADEF -- Allowable soil moisture depletion, % FUR -- Furrow spacing, ft NROF -- Mannings roughness coefficient
E	A80	Consumptive Use File Descriptor
F.1	I5	Soil Classification Position (Section C)
F.2	A15,10F5.1 15X,10F5.1	Crop Area Mix for soil specified in F.1 CNAME -- Crop Identifier Area.1 -- Crop Area using Irrig.Sys. 1 for soil Area.2 -- Crop Area using Irrig.Sys. 2 for soil Area.3 -- Crop Area using Irrig.Sys. 3 for soil ... Area.N -- Crop Area using Irrig.Sys. N for soil
G	A15,10F5.1	Soil Classification service by lateral segments LName -- Lateral Segment Identifier Frac.1 -- Fraction of soil class 1 served by lateral Frac.2 -- Fraction of soil class 2 served by lateral Frac.3 -- Fraction of soil class 3 served by lateral ... Frac.N -- Fraction of soil class N served by lateral

efficiency is not used. The next three elements: SETIME, FLOW, and LENGTH, describe individual furrow characteristics of set time, furrow inflow, and furrow length. The furrow slope is given as SFAC1. The data element identified as SFAC2 is not used for furrow systems. For gradient border irrigation systems, the first data element, ESTEFF, is not used. The next three elements (SETIME, FLOW, and LENGTH) describe the individual border strip characteristics of inflow time (set time), inflow rate, and border length. The data elements SFAC1 and SFAC2 describe the border width and border slope respectively. Contour ditch or wild flooding irrigation methods do not utilize the ESTEFF data element. The next three data elements refer to contour ditch characteristics based the length of ditch used during an irrigation set. For sprinkler irrigation systems which are not linear move or center pivots; the first data element is not used and the remaining element describe a sprinkler lateral line. The spacing between laterals is given as SFAC1. SFAC2 is not used. For center pivot and linear move systems, the program assumes that the application efficiency is readily known and is entered as the first data element.

Following the irrigation system specification, the next data area (Line C, Table x.x) characterizes the various soil classifications within the area of interest. For each soil class there should be a record corresponding to Line C in the data file and there should also be NSOIL records. Each soil classification should be given an identifier followed by the USDA-NRCS flood intake family number and the available water holding capacity of the soil in one foot intervals to 6 feet. If the soil depth is less than 6 feet the user should still enter values which reflect no additional water holding capacity.

The fifth data area which follows the soils information is the cropping information. For each crop grown in the area of interest there should be a record corresponding to Line D from Table x.x. The crop identifier used must be the same identifier used in the water requirements data file. The additional elements of allowable depletion, furrow spacing, and roughness coefficient should reflect local cropping practices.

The next data record specifies the water requirements data file descriptor. The data file descriptor may or may not contain the path specification depending on the users's installation and file storage procedures.

Up to this point, the data file has been defining the individual characteristics of lateral segments, soils, irrigation systems, and crops. The remainder of the data file specifies the mix of crops, irrigation systems, soils and how the lateral segments serve the irrigated area. First for each soil classification found in the fifth data area, the area for each crop under an irrigation system is specified in blocks. The first data record (Line F.1, Table x.x) of the block identifies the soil classification record position with the soils definition area. It is followed by a record (Line F.2, Table x.x) for each crop grown within the system identifying the number of acres grown under each irrigation system. The areas should correspond to the order in which the irrigation systems were

```

Bruneau Buckaroo Ditch Irrigation Water Diversion Requirements
Brockway Engineering -- C.E. Brockway and C.W. Robinson
Dataset Created 12/29/94 -- Modified 4/20/96
bruneau.dat
3      5      11      3
.80
Hutch. to End      2.0 2.37 7.50 12.0 0.00 .784
Jones to Hutch      3.0 4.53 9.00 13.0 0.00 .784
Div. to Jones      0.0 4.57 10.0 14.5 0.00 .784
SPRINKLER      80.0 24.0 165.1320. .50.
FURROW .5%      40.0 24.0 12.01320. .005
FURROW 1.%      40.0 24.0 12.01320. .010
FURROW 2.%      40.0 24.0 12.01320. .020
FURROW 4.%      40.0 24.0 12.01320. .040
Map Unit 10      2.0 1.40 2.80 4.15 5.50 6.90 6.90
Map Unit 11      2.0 1.80 2.92 4.04 5.50 7.00 7.00
Map Unit 12      1.2 2.40 4.80 7.20 9.50 11.7 11.7
Map Unit 50      1.9 1.75 3.55 4.30 4.85 5.40 5.40
Map Unit 60      1.4 1.85 3.40 5.00 6.55 7.90 7.90
Map Unit 65      1.5 2.22 4.40 6.60 8.65 10.8 10.8
Map Unit 70      1.4 2.25 4.65 7.05 9.05 11.1 11.1
Map Unit 71      1.5 2.30 4.50 6.60 8.80 10.8 10.8
Map Unit 96      1.6 1.48 2.85 4.20 5.60 7.00 7.00
Map Unit 100      2.0 1.50 2.90 4.30 5.80 7.40 7.40
Map Unit 101      2.2 1.20 2.30 3.40 4.60 5.70 5.70
Alfalfa Hay      60.0 2.50 0.10
Silage Corn      50.0 2.50 0.04
Spring Grain      50.0 2.50 0.04
00001      !      Map Unit 10      -- 205
Alfalfa Hay      0. 0. 184. 0. 0.
Silage Corn      0. 0. 8. 0. 0.
Spring Grain      0. 0. 13. 0. 0.
00002      !      Map Unit 11      -- 832
Alfalfa Hay      0. 0. 745. 0. 0.
Silage Corn      0. 0. 35. 0. 0.
Spring Grain      0. 0. 52. 0. 0.
00003      !      Map Unit 12      -- 144
Alfalfa Hay      0. 129. 0. 0. 0.
Silage Corn      0. 6. 0. 0. 0.
Spring Grain      0. 9. 0. 0. 0.
00004      !      Map Unit 50      -- 76
Alfalfa Hay      0. 0. 0. 68. 0.
Silage Corn      0. 0. 0. 3. 0.
Spring Grain      0. 0. 0. 5. 0.
00005      !      Map Unit 60      -- 545
Alfalfa Hay      0. 488. 0. 0. 0.
Silage Corn      0. 23. 0. 0. 0.
Spring Grain      0. 34. 0. 0. 0.
00006      !      Map Unit 65      -- 650
Alfalfa Hay      0. 0. 0. 582. 0.
Silage Corn      0. 0. 0. 27. 0.
Spring Grain      0. 0. 0. 41. 0.
00007      !      Map Unit 70      -- 153
Alfalfa Hay      0. 0. 0. 137. 0.
Silage Corn      0. 0. 0. 6. 0.
Spring Grain      0. 0. 0. 10. 0.
00008      !      Map Unit 71      -- 128
Alfalfa Hay      70 0. 0. 45. 0.
Silage Corn      0. 0. 0. 5. 0.
Spring Grain      0. 0. 0. 8. 0.
00009      !      Map Unit 96      -- 39
Alfalfa Hay      0. 0. 35. 0. 0.
Silage Corn      0. 0. 2. 0. 0.
Spring Grain      0. 0. 2. 0. 0.
00010      !      Map Unit 100      -- 330
Alfalfa Hay      0. 0. 0. 295. 0.
Silage Corn      0. 0. 0. 14. 0.
Spring Grain      0. 0. 0. 21. 0.
00011      !      Map Unit 101      -- 11
Alfalfa Hay      0. 0. 0. 0. 9.
Silage Corn      0. 0. 0. 0. 1.
Spring Grain      0. 0. 0. 0. 1.
Hutch. to End      0.333 .333 .333 .333 .333 .333 .333 .333 .333
Jones to Hutch      0.333 .333 .333 .333 .333 .333 .333 .333 .333
Div. to Jones      0.334 .334 .334 .334 .334 .334 .334 .334 .334

```

Figure xx. System Definition Data File

defined. If there are five irrigation systems defined there should be five areas specified for the crop. Again, the crop record is repeated until all the crop areas have been defined for the soil and the data block is repeated for all the soil types.

The last data area, identifies the irrigated areas served by each lateral segment. Each lateral segment requires a record corresponding to Line G in Table x.x in the data file. The sequence of the data records must correspond to the sequence in definition area. The record contains the lateral segment identifier followed by the percentage of each soil classification area served by the lateral segment. The percentages must be in the order which the soils were defined.

Program Output

The output from the program consists of the input data sets, the computed crop requirements based on the risk level specified, the on field (farm) application requirements for each crop, irrigation system, and soil type, a summary of the on field (farm) application requirements for the entire area, the flow and loss characteristics associated with each lateral segment for delivery of the on field (farm) application requirements, and a summary diversion requirements for the irrigated area including losses associated with the canal -- lateral distribution network.

¹Jensen, M. E., et al., 1980. Design and Operation of Farm Irrigation Systems, an ASAE Monograph. American Society of Agricultural Engineers, St. Joseph, Michigan 49085.

²Allen, R. G. and C. E. Brockway, 1983. "Estimating Consumptive Irrigation Requirements for Crops in Idaho", Research Technical Completion Report. Idaho Water and Energy Resources Research Institute, University of Idaho, Moscow, Idaho 83843.

³_____, 1991. "Guidelines for the Evaluation of Irrigation Diversion Rates", Hubble Engineering, Inc. and Associated Earth Sciences, 7025 Emerald, Boise, Idaho 83704.

⁴Trimmer, W. L. and H. J. Hansen, 1986. "Irrigation Scheduling", A Pacific Northwest Extension Publication, PNW 288. Oregon State University Extension Service, University of Idaho Cooperative Extension Service, and Washington State University Cooperative Extension Service.

⁵Larsen, Dorrel C. 1989. "Evapotranspiration Checkbook Method of Irrigation Scheduling for Surface Irrigators", in Proceedings 1989 Energy Efficient Irrigation Practices Handbook. University of Idaho Cooperative Extension Service, Moscow, Idaho 83843

⁶Kennedy, J. B. and A. M. Neville, 1976. Basic Statistical Methods for Engineers and Scientists, Second Edition. IEP, A Dun-Donnelley Publisher, New York, New York 10019.

⁷Allen, R. G. and C. E. Brockway, 1983. "Estimating Consumptive Irrigation Requirements for Crops in Idaho Appendix F", Research Technical Completion Report. Idaho Water and Energy Resources Research Institute, University of Idaho, Moscow, Idaho 83843.

⁸_____, 1970. Irrigation Guide for Southern and Southeastern Idaho. U. S. Department of Agriculture, Soil Conservation Service, Boise, Idaho.

⁹_____, 1984. National Engineering Handbook, Section 15 IRRIGATION, Chapter 5, Furrow Irrigation. United States Department of Agriculture, National Resource Conservation Service, Washington, D. C.

APPENDIX A

Project/Farm Irrigation Water Requirements Program
by Clarence W. Robison, PE
Initial Coding 15JUL94

Purpose: To compute the diversion volume and rate of water required to irrigate a specified crop distribution on a mix of soil types with various irrigation methods and delivery system at a specified probability level to meet crop water usage and leaching requirements.

Methodology: The Hubble report, Guidelines for the evaluation irrigation diversion rates, is used as the basis for the program. The produce outline by Hubble Engineering involves the following processes.

- Step 1 -- Collect acreage data on crop-soil-system distribution mix.
- Step 2 -- Referencing Allen and Brockway collect CU/IR data for area.
- Step 3 -- Apply level of risk probability based stdev of CU/IR
- Step 4 -- CU by AGAE Nomograph Figure 6.

Version 1.00 Initial Development

- 1.20 Add Peak ET to Mean ET Ratio as a function of App Depth.
Compute peak diversion requirements based on CU
- Compute seasonal diversion requirements based on IR

Version 1.25 Added Contour Ditch Method Evaluation as outlined by the Hubble Report

```

PROGRAM      IRWTRREQ
INTEGER      NCANAL, NIRSYS, NSOILS, NCROPS, NPERID
INTEGER      NP2R
CHARACTER*72 ATITLE(3), DUMTIT
CHARACTER*32 ANDATE, TSTAMP
CHARACTER*72 CUFIL
CHARACTER*15 CRNAME(15), SLNAME(15), ISNAME(15), CLNAME(15)
CHARACTER*15 CRNAME[ALLOCATABLE](:),
              SLNAME[ALLOCATABLE](:),
              ISNAME[ALLOCATABLE](:),
              CLNAME[ALLOCATABLE](:)
CHARACTER*6  PRNAME(13)
CHARACTER*6  PRNAME[ALLOCATABLE](:)
REAL         CRDIST[ALLOCATABLE](:,:,:)
REAL         CRSOIL[ALLOCATABLE](:,:)
REAL         CRINFO[ALLOCATABLE](:,:)
REAL         ISINFO[ALLOCATABLE](:,:)
REAL         SLINFO[ALLOCATABLE](:,:)
REAL         CLINFO[ALLOCATABLE](:,:)
REAL         CRPUSE[ALLOCATABLE](:,:,:)
REAL         ETPAPP[ALLOCATABLE](:)
REAL         ETPRAT[ALLOCATABLE](:)
REAL         ETP2ND[ALLOCATABLE](:)
REAL         ADEFCT[ALLOCATABLE](:,:,:)
REAL         PEAKCU[ALLOCATABLE](:,:,:)
REAL         APPEFF[ALLOCATABLE](:,:,:)
REAL         DIVREQ[ALLOCATABLE](:,:,:)
REAL         PEAKRQ[ALLOCATABLE](:,:,:)
REAL         CRPSUM[ALLOCATABLE](:)
INTEGER      I, J, K, L, FORCE
INTEGER      ERR !, FLG
INTEGER*2    FUREFF, BOREFF, SPREFF, CONEFF
LOGICAL      STRNCMP
REAL         CUPROB, X
EXTERNAL     TSTAMP

```

```

C
C *** Start things off with opening message.
WRITE(*,*) ' Project/Farm Irrig. Water Requirements'
WRITE(*,*) ' Clarence Robison, PE'
WRITE(*,*) ' Version 1.25'
WRITE(*,*) ' irwtrreq [-i:input] [-o:output]'
write(*,*) ' '
CALL STARTS

C
C *** Ok. Files have been opened -- time to proceed.
FORCE = 0
ANDATE = TSTAMP()
READ(5,10) ATITLE
WRITE(6,20) ' ',ANDATE,ATITLE

C
C *** Read in the filenames containing the cu/ir data
READ(5,10) CUFIL
OPEN(7,FILE=CUFILE,STATUS='OLD',IOSTAT=ERR)
IF( ERR.NE.0 ) THEN
  WRITE(6,999) 'I/O Error:',ERR,' Opening '//CUFILE
  WRITE(*,999) 'I/O Error:',ERR,' Opening '//CUFILE
  WRITE(*,10) ' Program terminating'
  STOP
ENDIF
READ(7,10) DUMTIT
READ(7,21) NP2R, NPERID
ALLOCATE( PRNAME(NPERID+1), STAT=ERR )
READ(7,10) DUMTIT
READ(7,10) DUMTIT
READ(7,30) (PRNAME(I),I=1,NPERID)
CLOSE(7,STATUS='KEEP')

C
C *** Read control info -- Number of classifications
READ(5,21) NCANAL,NIRSYS,NSOILS,NCROPS,FORCE
READ(5,22) CUPROB
WRITE(6,23) CUFIL,CUPROB*100.0,NCANAL,NIRSYS,NSOILS,NCROPS,NPERID

C
C *** Now, allocate memory category names, info., and data
ALLOCATE(
C #      CLNAME(NCANAL),
C #      ICNAME(NIRSYS),
C #      SLNAME(NSOILS),
C #      CRNAME(NCROPS),
C #      CRPSUM(NCROPS),
C #      ETPAPP(NP2R),
C #      ETPRAT(NP2R),
C #      ETP2ND(NP2R),
C #      ISINFO(NIRSYS,5),
C #      SLINFO(NSOILS,6),
C #      CRINFO(NCROPS,3),
C #      CLINFO(NCANAL,9),
C #      CRDIST(NIRSYS,NCROPS,NSOILS),
C #      CRSOIL(NCROPS,NSOILS),
C #      CRPUSE(NCROPS,NPERID+1,3),
C #      ADEFCT(NPERID,NCROPS,NSOILS),
C #      DIVREQ(NPERID,NCROPS,NSOILS,NIRSYS),
C #      PEAKRQ(NPERID,NCROPS,NSOILS,NIRSYS),
C #      PEAKCU(NPERID,NCROPS,NSOILS),
C #      APPEFF(NPERID,NCROPS,NSOILS,NIRSYS),STAT=ERR)
IF(ERR.NE.0) THEN
  WRITE(*,13) 'MEM Error:',ERR,' allocating data space'
  GOTO 9000
ENDIF

C
C *** Read in category names and info -- same order as limits
C Canal/Lateral Info --
C      name, upseg, length, width, area, type, fac1, fac2
DO 1000 I=1,NCANAL
  DO J=1,12
    CLINFO(I,J) = 0.0
  ENDDO
  1000 READ(5,25) CLNAME(I),(CLINFO(I,J),J=1,7)
C      irrsys ass.eff set.time flow.gpm length width slope

```

```

DO 1010 I=1,NIRSYS
1010 READ(5,25) ISNAME(I), (ISINFO(I,J),J=1,6)
C soil intake.fam awc.1 awc.2 awc.3 awc.4 awc.5
DO 1020 I=1,NSOILS
1020 READ(5,25) SLNAME(I), (SLINFO(I,J),J=1,6)
C crop all.def fur spa fur.rough
DO 1030 I=1,NCROPS
1030 READ(5,25) CRNAME(I), (CRINFO(I,J),J=1,3)
C
C *** Write out Catagory Information
C Canal/Lateral Info
WRITE(6,32)
DO 1100 I=1, NCANAL
L = CLINFO(I,5)
K = CLINFO(I,1)
IF( L.EQ.0 ) WRITE(6,33) I,CLNAME(I),K, (CLINFO(I,J),J=2,4),
# 'Specified S=',CLINFO(I,6), 'cfs/mi'
IF( L.EQ.1 ) WRITE(6,33) I,CLNAME(I),K, (CLINFO(I,J),J=2,4),
# 'Moritz C=',CLINFO(I,6), 'ft/day'
IF( L.EQ.2 ) WRITE(6,33) I,CLNAME(I),K, (CLINFO(I,J),J=2,4),
# 'Etchverry i=',CLINFO(I,6), 'ft/day K=',
# CLINFO(I,7)
IF( L.EQ.3 ) WRITE(6,33) I,CLNAME(I),K, (CLINFO(I,J),J=2,4),
# 'Worstell i=',CLINFO(I,6), 'ft/day'
IF( L.LT.0 OR L.GT.3 ) WRITE(6,13) CLNAME(I),I,
# 'Error: Unknown Seepage Method'
1100 CONTINUE
C
C *** Irrigation System Information.
WRITE(6,35)
DO 1110 I=1,NIRSYS
IF( STRNCMP(ISNAME(I)(1:3), 'PIV') ) THEN
K = 1
WRITE(6,37) ISNAME(I), (ISINFO(I,J),J=1,K)
ELSEIF( STRNCMP(ISNAME(I)(1:3), 'FUR') ) THEN
K = 5
WRITE(6,36) ISNAME(I), (ISINFO(I,J),J=1,K)
ELSEIF( STRNCMP(ISNAME(I)(1:3), 'CON') ) THEN
K = 5
WRITE(6,36) ISNAME(I), (ISINFO(I,J),J=1,K)
IF( ISINFO(I,3)/ISINFO(I,5)/4.488 .GT. 1.0 ) THEN
WRITE(6,11) 'Warning: Q >= 1cfs/100ft'
ENDIF
ELSE
K = 5
WRITE(6,37) ISNAME(I), (ISINFO(I,J),J=1,K)
ENDIF
1110 CONTINUE
WRITE(6,40)
DO 1120 I=1,NSOILS
1120 WRITE(6,42) SLNAME(I), (SLINFO(I,J),J=1,6)
WRITE(6,45)
DO 1130 I=1,NCROPS
1130 WRITE(6,46) CRNAME(I), (CRINFO(I,J),J=1,3)
C
C *** Read crop mix by soil by crop by system
DO 1200 K=1,NSOILS
READ(5,50) L
DO 1200 J=1,NCROPS
1200 READ(5,52) (CRDIST(I,J,L),I=1,NIRSYS)
C
C *** OUTPUT CROP DISTRIBUTION
DO J=1,NCROPS
CRPSUM(J)=0.0
ENDDO
WRITE(6,20) CHAR(12),ANDATE,ATITLE
DO 1230 K=1,NSOILS
WRITE(6,54) SLNAME(K) ' by Irrigation System', (I I=1,NIRSYS)
DO 1220 J=1,NCROPS
CRSOIL(J,K) = 0.0
DO 1210 I=1,NIRSYS
1210 CRSOIL(J,K) = CRSOIL(J,K) + CRDIST(I,J,K)
CRPSUM(J) = CRPSUM(J) + CRSOIL(J,K)

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1220 WRITE(6,56) CRNAME(J),CRSOIL(J,K), (CRDIST(I,J,K),I=1,NIRSYS)
1230 WRITE(6,10) ' '
WRITE(6,57)
WRITE(6,58) (I,ISNAME(I),I=1,NIRSYS)
C
C *** Ok, crop irrig reqs data
CALL IRREQP(CRPUSE,CUFIL, CUPROB, CRNAME, NCROPS, PRNAME, NPERID,
NP2R,ETPAPP,ETPRAT)
C
C *** Ok, Now determine Allowable deficit for each crop and soil.
WRITE(6,20) CHAR(12),ANDATE,ATITLE
WRITE(6,60) 'Allowable Soil Water Deficit -- inches',CUPROB*100.0,
# 'IR'
DO 1400 K=1,NSOILS
WRITE(6,62) SLNAME(K), (PRNAME(I),I=1,NPERID)
CALL COMADF(NPERID,NCROPS,NSOILS,CRINFO,SLINFO,CRPUSE,
# ADEFCT,K,CRNAME)
1400 CONTINUE
C
C *** Compute Peak Consumptive Use Requirement
WRITE(6,20) CHAR(12),ANDATE,ATITLE
WRITE(6,60) 'Peak Consumptive Use based on Peak:Mean(ASWD)',
# CUPROB*100., 'CU'
C
C *** FIRST PERFORM SPLINE FIT ON THE PEAK ET TO APP,DEP CURVE
CALL SPLINE(ETPAPP,ETPRAT,NP2R,1.0E31,1.0E31,ETP2ND)
DO 1500 K=1,NSOILS
WRITE(6,62) SLNAME(K), (PRNAME(I),I=1,NPERID)
DO 1480 J=1,NCROPS
WRITE(6,65) CRNAME(J)
DO 1460 I=1,NPERID
IF(CRPUSE(J,I,2).LE.0) THEN
PEAKCU(I,J,K) = 0
WRITE(6,66) ' --'
ELSE
CALL SPLINT(ETPAPP,ETPRAT,ETP2ND,NP2R,ADEFCT(I,J,K),X)
PEAKCU(I,J,K) = CRPUSE(J,I,3)*X
WRITE(6,67) PEAKCU(I,J,K)
ENDIF
1460 CONTINUE
1480 WRITE(6,10) ' '
1500 CONTINUE
C
C *** Proceed with Irrigation Application Efficiency Analysis
DO 3000 L=1,NSOILS
DO 2000 K=1,NIRSYS
C *** Loop for excluding printouts associated with zero acres
zero = 0.0
DO J=1,NCROPS
zero = zero + crdist(k,j,1)
ENDDO
IF( zero .le. 0.001) goto 1900
WRITE(6,20) CHAR(12),ANDATE,ATITLE
WRITE(6,70) 'Irrigation System Analysis',SLNAME(L)
WRITE(6,72) ISNAME(K)
IF( ISNAME(K)(1:3).EQ.'FUR' ) THEN
WRITE(6,80) (ISINFO(K,J),J=2,5)
WRITE(6,79) '**CROP**', (PRNAME(I),I=1,NPERID)
DO J=1,NCROPS
IF( CRDIST(K,J,L).LE.0.0 ) THEN ! No crop
ELSE
WRITE(6,65) CRNAME(J)
DO I=1,NPERID
IF( ADEFCT(I,J,L).GT.0.0 ) THEN
ERR=PUREFF(ADEFCT(I,J,L), ISINFO(K,5), CRINFO(J,2),
ISINFO(K,4), ISINFO(K,3), CRINFO(J,3), ISINFO(K,2),
SLINFO(L,1), EFF )
IF( ERR.EQ.-1 ) THEN
WRITE(6,83) '###'
APPEFF(I,J,L,K) = ISINFO(K,1)
ELSEIF( ERR.EQ.1 ) THEN
APPEFF(I,J,L,K) = EFF
WRITE(6,82) EFF, ' '

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ELSE
  APPEFF(I,J,L,K) = EFF
  WRITE(6,82) EFF, ' '
ENDIF
IF(FORCE,NE,0,AND,APPEFF(I,J,L,K),LE,ISINFO(K,1)) THEN
  DIVREQ(I,J,L,K)=CRDIST(K,J,L)/ISINFO(K,1)*100.0
  *CRPUSE(J,I,2)
  PEAKRQ(I,J,L,K)=CRDIST(K,J,L)/ISINFO(K,1)*100.0
  *PEAKCU(I,J,L)
ELSE
  DIVREQ(I,J,L,K)=CRDIST(K,J,L)/APPEFF(I,J,L,K)*100.0
  *CRPUSE(J,I,2)
  PEAKRQ(I,J,L,K)=CRDIST(K,J,L)/APPEFF(I,J,L,K)*100.0
  *PEAKCU(I,J,L)
ENDIF
ELSE
  APPEFF(I,J,L,K) = 0.0
  DIVREQ(I,J,L,K) = 0.0
  PEAKRQ(I,J,L,K) = 0.0
  WRITE(6,83) ' --- '
ENDIF
ENDDO
WRITE(6,10) ' '
ENDIF
ENDDO
WRITE(6,10) ' '
WRITE(6,84) 'Note the following symbol meanings'
WRITE(6,84) '   @@@ = Water did not reach end of furrow'
WRITE(6,84) '   * = End-of-Furrow application insufficient'
ELSEIF( ISNAME(K)(1:3).EQ.'BOR' ) THEN
  WRITE(6,85) (ISINFO(K,J),J=2,5)
  WRITE(6,79) '**CROP**', (PRNAME(I),I=1,NPERID)
DO J=1,NCRCPS
  IF( CRDIST(K,J,L).LE.0.0 ) THEN ! No crop
  ELSE
    WRITE(6,65) CRNAME(J)
    DO I=1,NPERID
      IF( ADEFCT(I,J,L).GT.0.0 ) THEN
        ERR=BOREFF(ADEFCT(I,J,L),ISINFO(K,2),ISINFO(K,3),
          ISINFO(K,4),ISINFO(K,5),EFF )
        IF( ERR.EQ.1 ) THEN
          APPEFF(I,J,L,K) = EFF
          WRITE(6,82) EFF, ' '
        ELSE
          APPEFF(I,J,L,K) = EFF
          WRITE(6,82) EFF, ' '
        ENDIF
      IF(FORCE,NE,0,AND,APPEFF(I,J,L,K),LE,ISINFO(K,1)) THEN
        DIVREQ(I,J,L,K)=CRDIST(K,J,L)/ISINFO(K,1)*100.0
        *CRPUSE(J,I,2)
        PEAKRQ(I,J,L,K)=CRDIST(K,J,L)/ISINFO(K,1)*100.0
        *PEAKCU(I,J,L)
      ELSE
        DIVREQ(I,J,L,K)=CRDIST(K,J,L)/APPEFF(I,J,L,K)*100.0
        *CRPUSE(J,I,2)
        PEAKRQ(I,J,L,K)=CRDIST(K,J,L)/APPEFF(I,J,L,K)*100.0
        *PEAKCU(I,J,L)
      ENDIF
    ENDIF
  ELSE
    APPEFF(I,J,L,K) = 0.0
    DIVREQ(I,J,L,K) = 0.0
    PEAKRQ(I,J,L,K) = 0.0
    WRITE(6,83) ' --- '
  ENDIF
ENDDO
WRITE(6,10) ' '
ENDIF
ENDDO
WRITE(6,10) ' '
WRITE(6,84) '   * = Insufficient application '
ELSEIF( ISNAME(K)(1:3).EQ.'SPR' ) THEN
  WRITE(6,86) (ISINFO(K,J),J=2,5)
  WRITE(6,79) '**CROP**', (PRNAME(I),I=1,NPERID)
DO J=1,NCRCPS
  IF( CRDIST(K,J,L).LE.0.0 ) THEN ! No crop
  ELSE
    WRITE(6,65) CRNAME(J)
    DO I=1,NPERID
      IF( ADEFCT(I,J,L).GT.0.0 ) THEN
        ERR=SPREFF(ADEFCT(I,J,L),ISINFO(K,2),ISINFO(K,3),
          ISINFO(K,4),ISINFO(K,5),EFF )
        IF( ERR.EQ.1 ) THEN
          APPEFF(I,J,L,K) = EFF
          WRITE(6,82) EFF, ' '
        ELSE
          APPEFF(I,J,L,K) = EFF
          WRITE(6,82) EFF, ' '
        ENDIF
      IF(FORCE,NE,0,AND,APPEFF(I,J,L,K),LE,ISINFO(K,1)) THEN
        DIVREQ(I,J,L,K)=CRDIST(K,J,L)/ISINFO(K,1)*100.0
        *CRPUSE(J,I,2)
        PEAKRQ(I,J,L,K)=CRDIST(K,J,L)/ISINFO(K,1)*100.0
        *PEAKCU(I,J,L)
      ELSE
        DIVREQ(I,J,L,K)=CRDIST(K,J,L)/APPEFF(I,J,L,K)*100.0
        *CRPUSE(J,I,2)
        PEAKRQ(I,J,L,K)=CRDIST(K,J,L)/APPEFF(I,J,L,K)*100.0
        *PEAKCU(I,J,L)
      ENDIF
    ENDIF
  ELSE
    APPEFF(I,J,L,K) = 0.0
    DIVREQ(I,J,L,K) = 0.0
    PEAKRQ(I,J,L,K) = 0.0
    WRITE(6,83) ' --- '
  ENDIF
ENDDO
WRITE(6,10) ' '
ENDIF
ENDDO
WRITE(6,10) ' '
WRITE(6,84) '   * = Insufficient application '
ELSEIF( ISNAME(K)(1:3).EQ.'CON' ) THEN
  WRITE(6,87) ISINFO(K,2),ISINFO(K,3),ISINFO(K,5),ISINFO(K,4)
  WRITE(6,79) '**CROP**', (PRNAME(I),I=1,NPERID)

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```

DO J=1,NCRCPS
  IF( CRDIST(K,J,L).LE.0.0 ) THEN ! No crop
  ELSE
    WRITE(6,65) CRNAME(J)
    DO I=1,NPERID
      IF( ADEFCT(I,J,L).GT.0.0 ) THEN
        ERR=CONEFF(ADEFCT(I,J,L),ISINFO(K,2),ISINFO(K,3),
          ISINFO(K,4),ISINFO(K,5),EFF )
        IF( ERR.EQ.1 ) THEN
          APPEFF(I,J,L,K) = EFF
          WRITE(6,82) EFF, ' '
        ELSE
          APPEFF(I,J,L,K) = EFF
          WRITE(6,82) EFF, ' '
        ENDIF
      IF(FORCE,NE,0,AND,APPEFF(I,J,L,K),LE,ISINFO(K,1)) THEN
        DIVREQ(I,J,L,K)=CRDIST(K,J,L)/ISINFO(K,1)*100.0
        *CRPUSE(J,I,2)
        PEAKRQ(I,J,L,K)=CRDIST(K,J,L)/ISINFO(K,1)*100.0
        *PEAKCU(I,J,L)
      ELSE
        DIVREQ(I,J,L,K)=CRDIST(K,J,L)/APPEFF(I,J,L,K)*100.0
        *CRPUSE(J,I,2)
        PEAKRQ(I,J,L,K)=CRDIST(K,J,L)/APPEFF(I,J,L,K)*100.0
        *PEAKCU(I,J,L)
      ENDIF
    ENDIF
  ELSE
    APPEFF(I,J,L,K) = 0.0
    DIVREQ(I,J,L,K) = 0.0
    PEAKRQ(I,J,L,K) = 0.0
    WRITE(6,83) ' --- '
  ENDIF
ENDDO
WRITE(6,10) ' '
ENDIF
ENDDO
WRITE(6,10) ' '
WRITE(6,84) '   * = Insufficient application '
ELSEIF( ISNAME(K)(1:3).EQ.'SPR' ) THEN
  WRITE(6,86) (ISINFO(K,J),J=2,5)
  WRITE(6,79) '**CROP**', (PRNAME(I),I=1,NPERID)
DO J=1,NCRCPS
  IF( CRDIST(K,J,L).LE.0.0 ) THEN ! No crop
  ELSE
    WRITE(6,65) CRNAME(J)
    DO I=1,NPERID
      IF( ADEFCT(I,J,L).GT.0.0 ) THEN
        ERR=SPREFF(ADEFCT(I,J,L),ISINFO(K,2),ISINFO(K,3),
          ISINFO(K,4),ISINFO(K,5),EFF )
        IF( ERR.EQ.1 ) THEN
          APPEFF(I,J,L,K) = EFF
          WRITE(6,82) EFF, ' '
        ELSE
          APPEFF(I,J,L,K) = EFF
          WRITE(6,82) EFF, ' '
        ENDIF
      IF(FORCE,NE,0,AND,APPEFF(I,J,L,K),LE,ISINFO(K,1)) THEN
        DIVREQ(I,J,L,K)=CRDIST(K,J,L)/ISINFO(K,1)*100.0
        *CRPUSE(J,I,2)
        PEAKRQ(I,J,L,K)=CRDIST(K,J,L)/ISINFO(K,1)*100.0
        *PEAKCU(I,J,L)
      ELSE
        DIVREQ(I,J,L,K)=CRDIST(K,J,L)/APPEFF(I,J,L,K)*100.0
        *CRPUSE(J,I,2)
        PEAKRQ(I,J,L,K)=CRDIST(K,J,L)/APPEFF(I,J,L,K)*100.0
        *PEAKCU(I,J,L)
      ENDIF
    ENDIF
  ELSE
    APPEFF(I,J,L,K) = 0.0
    DIVREQ(I,J,L,K) = 0.0
    PEAKRQ(I,J,L,K) = 0.0
    WRITE(6,83) ' --- '
  ENDIF
ENDDO
WRITE(6,10) ' '
ENDIF
ENDDO
WRITE(6,10) ' '
WRITE(6,84) '   * = Insufficient application '
ELSEIF( ISNAME(K)(1:3).EQ.'CON' ) THEN
  WRITE(6,87) ISINFO(K,2),ISINFO(K,3),ISINFO(K,5),ISINFO(K,4)
  WRITE(6,79) '**CROP**', (PRNAME(I),I=1,NPERID)

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43      ENDDO
44      WRITE(6,10) ' '
45      ENDDO
46      ENDDO
47      WRITE(6,10) ' '
48      WRITE(6,84) ' * = Insufficient application '
49      ELSEIF( ISNAME(K)(1:3).EQ.'PIV' ) THEN
50      WRITE(6,88)
51      WRITE(6,79) '**CROP** ', (PRNAME(I), I=1, NPERID)
52      DO J=1, NCROPS
53      IF( CRDIST(K,J,L).LE.0.0 ) THEN ! No crop
54      ELSE
55      WRITE(6,65) CRNAME(J)
56      DO I=1, NPERID
57      IF( ADEFCT(I,J,L).GT.0.0 ) THEN
58      EFF=ISINFO(K,1)
59      APPEFF(I,J,L,K) = EFF
60      WRITE(6,82) EFF, ' '
61      IF(FORCE.NE.0.AND.APPEFF(I,J,L,K).LE.ISINFO(K,1)) THEN
62      DIVREQ(I,J,L,K)=CRDIST(K,J,L)/ISINFO(K,1)*100.0
63      & *CRPUSE(J,I,2)
64      & PEAKRQ(I,J,L,K)=CRDIST(K,J,L)/ISINFO(K,1)*100.0
65      & *PEAKCU(I,J,L)
66      ELSE
67      DIVREQ(I,J,L,K)=CRDIST(K,J,L)/APPEFF(I,J,L,K)*100.0
68      & *CRPUSE(J,I,2)
69      & PEAKRQ(I,J,L,K)=CRDIST(K,J,L)/APPEFF(I,J,L,K)*100.0
70      & *PEAKCU(I,J,L)
71      ENDIF
72      ELSE

```

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COPY

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Associate Director - Idaho Water Resources Research Institute

Summary of education beyond high school:

Institution, Degree, Year

University of Idaho 1955-59, B.S.-Civil Engineering, 1959

California Institute of Technology 1959-60, M.S.- Civil Engineering, 1960

University of Colorado, Denver, Colorado, Management, 1963

University of Denver; Denver, Colorado, Civil Engineering, 1964

Utah State University, Ph.D.-Water Resources Engineering, 1977

Number of years service on this faculty: 32

Date of original appointment: 1965

Dates of advancement in rank:

Associate Research Professor: 1974

Professor-50% Agricultural Engineering, 50% Civil Engineering : 1978

Subjects and courses taught:

CE 500, CE 600, CE 502

Summary of academic experience:

University of Idaho - Research Professor - Civil and Agricultural Engineering, 1978-

University of Idaho - Associate Research Professor, Civil Engineering, 1974-78

University of Idaho - Assistant Research Professor, Civil Engineering, 1965-74

Boise College - Instructor in Engineering, 1961-63

Summary of other experience:

University of Idaho - USAID Pakistan Project on Irrigation Systems Management Research, 1984 -

U.S. Bureau of Reclamation - Hydraulic Research Laboratory, Denver, Colorado -
Hydraulic Research Engineer, 1963-65
U.S. Bureau of Reclamation - Boise, Idaho - Hydraulic Engineer, 1961-63
Converse Foundation Engineering, Inc. - Pasadena, California - Foundation Engineer,
1960-61
California Institute of Technology - Pasadena, California - Assistant Project
Engineer, U.S. Public Health Service Research Project, 1959-60

Consultant:

Twin Falls Canal Company - Twin Falls, Idaho - Hydrology and water use.
North Side Canal Company-Jerome, Idaho- Hydrology and water use
Micron Technology-Ground water and water supply
J.R. Simplot Company- Land disposal of processing waste, water supply, water rights
City of Twin Falls-Water supply and hydrology
Idaho Trout Processors-Hydraulics and water supply
Cedar Mesa Reservoir and Canal Co., Redding, California - Water management
consultant.
Clear Springs Trout Company, Buhl, Idaho - Water supply and distribution systems.
Idaho Power Company, Boise, Idaho - Relationships of groundwater and surface water
- Upper Snake River Basin - water right adjudication.
Idaho Department of Fish and Game - Evaluation of groundwater stream relationship
for litigation - Parma vicinity.
Blaine County, Idaho - Waste disposal systems for high density rural subdivisions.
Reynolds and West Reynolds Irrigation Districts - Irrigation water requirements,
systems analysis.
U.S. Bureau of Reclamation (was Maricopa County Water District) - Arizona. Flood
study.
Office of Technology Assessment - U.S. Congress - Irrigation Distribution Systems.
U.S. Department of Justice - Indian Water Rights
Montgomery Engineers - Ground-water quality evaluations
J.U.B. Engineers, Twin Falls, Idaho - Ground-water and hydraulics
Amalgamated Sugar Company, Idaho- Hydrology and waste disposal

Registered Professional Engineer: Idaho and Colorado

Special Awards or Honors:

Recipient of Bausch & Lomb Science Award
Member - Phi Beta Sigma, Freshman honorary, University of Idaho
Outstanding Freshman Engineer Award - University of Idaho, 1955
Member and secretary of Sigma Tau, National Engineering Honorary
Member and Vice-president of ASCE student chapter, University of Idaho
University of Idaho undergraduate scholarship 1957-58, 1958-59
Honorary Membership ASTM, 1959

Special Awards, cont'd.

U. S. Army National Defense Transportation Award, 1958
Distinguished Military Graduate - University of Idaho
Top Ten Graduating Senior - University of Idaho, 1959
No. 2 in graduating class of 889, University of Idaho, 1959
Representative of USBR Division of Research at 1963 Intergovernmental Training Program, Denver, 1964
Scholarship - University of Denver, Graduate School of Management, 1964
National Science Foundation Fellowship - Utah State University, 1967-68
Outstanding Young Engineer Award for Idaho, National Society of Professional Engineers, 1968
Engineer of the Year, 1997 American Society of Agricultural Engineers
Idaho Water Users Hall of Fame-1998

Membership in professional and scholarly organizations:

National Society of Professional Engineers, 1967 - present
Idaho Society of Professional Engineers, 1967 - present; President 1978
American Society of Civil Engineers - Irrigation & Drainage Division Committee
Chairman:
1) Operation and Maintenance of Irrigation and Drainage Systems, 1975-1981
2) Water Quality Committee, 1980-1984, Chairman
3) Task Committee on Guidelines for Erosion and Sediment Control in Irrigated Agriculture, 1980-1983, Chairman
4) Publications Committee, 1985-1992
Research Society of America
National Council of Examiners for Engineering and Surveying, 1981-1991
Idaho Board of Professional Engineers and Professional Land Surveyors, 1981-1991,
Chairman
American Water Resources Association

Offices held in such organizations:

National Society of Professional Engineers
Member - Young Engineers Committee, 1973-74
Chairman - Young Engineers Committee, 1975-77
Member - President's Committee on Board of Directors Organization, 1977
Member - Registration and Qualification for Practice Committee, 1979-81
Chairman - Registration and Qualification for Practice Committee, 1982-84
Member - Participating Organizations Liaison Committee to NCEE, 1982-84
Idaho Society of Professional Engineers
President, 1978
President, Magic Valley Chapter, 1970-71
Member - State Ethical Practices Committee, 1966, 1977
Member - State Intersociety Relations Committee, 1968
Member - State Nominating Committee, 1975-76

Offices Held, cont'd.

Member - Board of Directors, 1972-73

Member - Board of Directors, Past President Chairman - Nominating Committee, 1979

State Director - Representative for Idaho to NSPE, 1982-83

Nominating Committee for Idaho Board of Professional Engineers & Land Surveyors member.

American Society of Civil Engineers

Member - Operation and Maintenance of Distribution Systems Committee - Irrigation and Drainage Division, 1975-81

Chairman - Irrigation and Drainage Division, Operations and Maintenance Committee, 1977-79

Member - Water Quality Committee, Irrigation and Drainage Division, 1980-84

Chairman - Water Quality Committee, Irrigation and Drainage Division, 1982-84

Member - Task Committee on Water Measurement, 1980-83

Chairman - Task Committee on Guidelines for Erosion and Sediment Control in Irrigated Agriculture, 1984 - Present

Member - Publications Committee, 1985 - Present

Corresponding Member - ASCE Irrigation and Drainage Division Committee on Operation and Maintenance of Irrigation Systems

Reviewer - ASCE Irrigation and Drainage Division Committee on Publications

Idaho Board of Professional Engineers and Land Surveyors

Member, 1981 -

Vice Chairman, 1983-1984

Chairman, 1984 - 1986, 1990 - 1992

National Council of Engineering Examiners

Assistant Vice President, Western Zone

Member, Professional Examinations Advisory Committee

Member, Committee on Uniform Procedures and Legislative Guidelines, 1984

Member, Communications and Publications Committee, 1983

Member, Uniform Examinations and Qualifications Committee, 1984 - Present

Member, Committee on Examination Policies and Procedures, 1987 - Present

Member, Advisory Committee on Council Activities, 1986 - 1987

Assistant Vice President - Western Zone, 1986 - 1987

Member, Fundamentals Examination Review Committee, 1986 - Present

Scholarly and creative activity:

Research:

- Development of systems analysis procedures for optimization of irrigation system designs with environmental, physical, and social constraints.
- Evaluation of crop consumptive use, irrigation requirements, and methods of determining basin depletion from agricultural development.
- Systems analysis of water use to develop mathematical methods for studying complex groundwater-surface water systems - mathematical modeling of aquifers.
- Ground water quality and river system water quality evaluations for nutrient load determination and river system modeling.
- Development of guidelines for design of sediment removal facilities for on-farm and irrigation distribution system wasteways.
- Evaluation of attainable impacts on water quality of irrigation return flows due to implementation of best management practices for sediment and nutrient control.
- Evaluation of alternate energy sources for irrigation and municipal needs in Idaho.
- Analysis of operation and maintenance costs of water distribution systems and determination of the relationship of costs to known physical and organizational parameters and water use efficiency.
- Evaluation of the economic potential for use of geothermal hot water and steam in Idaho.
- Study of the movement of water from canals to local water tables under saturated and partially saturated conditions.
- Studies of the mechanisms of microbial action, sedimentation and soil-water-chemical interactions involved in natural sealing phenomenon in canals and reservoirs.
- Evaluation of irrigation management practices for sustained land disposal of geothermal fluids.
- Evaluation of practices and systems for controlling sediment and other pollutant losses from irrigated lands.
- Investigation of the response of aquifer systems to changes in recharge or withdrawal due to change in land use.
- Evaluation of procedures for estimating crop water requirements.
- Development of cost effective procedures and equipment for measurement of irrigation diversions and power use in open and closed systems.

Community services and other relevant activities:

- Member - Intermountain District Church of the Nazarene; Camps Board - 1976 - 1984; Board of Church Properties - 1976-79
- Member - Twin Falls City Planning and Zoning Commission 12/78-9/79
- Member - College of Southern Idaho Geothermal Energy Commission
- Member - Governor's Committee on Energy Use - 1980-81

Member - Idaho Technical Advisory Committee for Sediment in Surface Water
Chairman - Snake River Technical Advisory Committee - Idaho Legislative Council,
1983-85
Advisor - Governor's Snake River Advisory Committee - 1985
Member - Water Resources Foundation Board of Directors - 1985
Chairman - Idaho Technical Committee on Hydrology
Member - Idaho Department of Health & Welfare Sediment Criteria Committee
Member - Snake Plain Advisory Committee of Idaho Department of Health &
Welfare
Member - Idaho Water Users Water Quality Committee - 1980-
Member - INEL Dose Evaluation and Risk Assessment Committee
Member - Columbia River System Operations Review
Member - Mid Snake River Nutrient Management Advisory Committee
Member - Mid Snake River Irrigation Water Quality Coordination Committee
Technical Advisor - Middle Snake River Committee
Member - Liaison Committee, U.S. Geological Survey National Water Quality
Assessment Program, Snake River Basin.
Member - Snake River Studies Committee, Idaho Department of Water Resources
Member - City of Twin Falls Wellhead Protection Committee

Publications:

- Brockway, C.E. 1964. Progress Report - Investigation of a Seepage Meter Designed by the Agricultural Research Service -- Lower Cost Canal Lining Program. Bureau of Reclamation Hydraulic Branch HYD-529.
- Brockway, C.E. 1964. Flow Resistance Coefficients of Three Sizes of Cast-in-Place Concrete Pipe. Bureau of Reclamation Hydraulic Branch, HYD-533, 1964.
- Brockway, C.E. 1965. Investigation of the Effect of Turnout Geometry on the Registration Accuracy of a Propeller-Type Open Flowmeter. Bureau of Reclamation, HYD-545, 1965.
- Brockway, C.E. 1966. Groundwater Investigations and Canal Seepage Studies. Engineering Experiment Station, University of Idaho, Progress Report No. 1, 1966.
- Schuster, J.C. and C.E. Brockway. 1967. Investigation of a 4-Inch Magnetic Flowmeter. Bureau of Reclamation, HYD-574.
- Worstell, R.V. and C.E. Brockway. 1967. Estimating Seasonal Changes in Irrigation Canal Seepage. Presented at Spokane, Washington, October 20, 1967.
- Worstell, R.V. and C.E. Brockway. 1967. Groundwater Investigations and Canal Seepage Studies. Engineering Experiment Station, University of Idaho, Progress Report No. 2.

- Bloomsburg, G.L. and C.E. Brockway. 1968. Movement of Water from Canals to Groundwater Tables. Research Technical Completion Report, Idaho Water Resources Institute.
- Worstell, R.V. and C.E. Brockway. 1968. Field Evaluation of Seepage Measurement Methods. Presented at 2nd Seepage Symposium, Phoenix, Arizona, February 1968.
- Bondurant, J.A., C.E. Brockway, and R.V. Worstell. 1968. Plastic Casings for Soil Cores. Soil Science, Vol. 107, No. 1.
- Herbig, A.E. and C.E. Brockway. 1970. Operations and Maintenance Costs of Irrigation Distribution Systems. Proceedings, National Irrigation Symposium, Lincoln, Nebraska.
- Bondurant, J.A., C.E. Brockway, and R.V. Worstell. 1971. Systems Analysis of Irrigation Water Management in Eastern Idaho. Progress Report No. 1, University of Idaho Engineering Experiment Station.
- Brockway, C.E. 1971. What Does it Cost to Operate an Irrigation District?. Proceedings, Fifth Regional Water Users' Conference, Bakersfield, California.
- Bondurant, J.A., R.V. Worstell, and C.E. Brockway. 1972. Water Resources Management in the Upper Snake River Valley. Proceedings, Irrigation & Drainage Division, Specialty Conference, ASCE, Spokane, Washington.
- Nichols, C.R., C.G. Warnick, and C.E. Brockway. 1972. Geothermal Water and Power Resources Exploration and Development for Idaho. Research Technical Completion Report, University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Brockway, C.E. 1972. Estimating Irrigation Distribution System Operation and Maintenance Costs. Paper presented at the Annual Meeting, Pacific Northwest Region ASAE, Calgary, Alberta, Canada, October 10-12, 1972.
- Bondurant, J.A., R.V. Worstell, and C.E. Brockway. 1973. Implications of Changes in Water Management in the Upper Snake River Basin. Paper presented at the ASCE Water Resources Conference, Washington, D.C., January, 1973.
- Brockway, C.E. 1973. Investigation of Natural Sealing Effects in Irrigation Canals. Research Technical Completion Report, Project A-023-IDA, Idaho Water Resources Research Institute.
- Reese, D.L. and C.E. Brockway. Operation and Maintenance Costs on Irrigation Distribution Systems. Progress Report, University of Idaho, College of Engineering.

- de Sonnevile, Jos L.J. and C.E. Brockway. 1973. Systems Analysis of Irrigation Water Management in Eastern Idaho. Research Technical Completion Report, Project B-018-IDA. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Reese, David L., H.F. Mayland, and C.E. Brockway. 1973. Alternative Methods of Estimating Snow Water Parameters. Water Resources Research, Vol. 9, No. 5.
- Bondurant, J.A. and C.E. Brockway. 1974. Operation and Maintenance Costs on Irrigation Distribution Systems. Proceedings, VIIIth International Congress of Agricultural Engineering, Flevohof, Netherlands.
- Bondurant, J.A. and C.E. Brockway. 1974. Sediment Ponds Clean Irrigation Runoff Water. Idaho Farmer.
- Brockway, C.E. 1974. Water Resources of the Upper Snake River Basin. Proceedings, National Environmental Research Park Symposium, Idaho Falls, Idaho.
- Watts, F.J., C.E. Brockway, and A.E. Oliver. 1974. Analyses and Design of Settling Basins for Irrigation Return Flow. Research Technical Completion Report, Project A-042-IDA. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Warnick, C. and C.E. Brockway. 1974. Hydrology Support Study, A Case Study of Federal Expenditures on a Water and Related Land Resource Project. Boise Project, Idaho and Oregon Project C-4202. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Brockway, C.E. 1975. Energy Plant Siting Position Paper. Idaho Society of Professional Engineers, February, 1975 (member of Committee on Energy Plant Siting).
- Bondurant, J.A., M.J. Brown, and C.E. Brockway. 1975. Some Aspects of Sedimentation Pond Design. Proceedings, National Symposium on Urban Hydrology and Sediment Control, Lexington, Kentucky.
- Brockway, C.E. 1975. Issues Involved in Peoples Choices in Resources-Water. Idaho Academy of Science, Caldwell, Idaho.
- Brockway, C.E. 1975. Science in Idaho's Future. Idaho Academy of Science, Panel Symposium.
- Claiborn, B.A. and C.E. Brockway. 1975. Impact of Changes in Irrigation Water Management in Eastern Idaho. Research Technical Completion Report, Project A-

- 040-IDA. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Bondurant, J.A., C.E. Brockway, and M.J. Brown. 1976. Characterizing Irrigation Return Flow Streams. 7th U.S. Technical Conference and 10th ICID Congress.
- Brockway, C.E. 1977. Vegetative Buffer Strips for Sediment Retention in Irrigation Runoff. Proceedings, ASCE Irrigation and Drainage Division Specialty Conference on Water Management for Irrigation and Drainage, Reno, Nevada.
- Brockway, C.E. 1977. Sediment Ponds for Irrigation Return Flow and Potato Fresh Pack Effluent. Research Technical Completion Report, Project A-042-IDA. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Fitzsimmons, D.W., G.C. Lewis, J.R. Busch, G. M. McMaster and C. W. Berg. 1977. On-Farm Methods for Controlling Sediment and Nutrient Losses. Proceedings, National Conference on Irrigation Return Flow Quality Management, Fort Collins, Colorado.
- Brockway, C.E. 1977. Investigation of Natural Sealing Effects in Irrigation Canals. Ph.D. Dissertation, Utah State University.
- Brockway, C.E. and K.P. Grover. 1977. Water Management and Groundwater in the Henry's Fork-Upper Snake River Basin of Idaho. Research Technical Completion Report, ASCE Henry's Fork Project, Idaho Water Resources Research Institute.
- Bondurant, J.A., M.J. Brown and C.E. Brockway. 1977. Predicting Irrigation Return Flow Rates. ASAE-SW-192.
- Claiborn, Brent and C.E. Brockway. 1977. Predicting Attainable Irrigation Efficiencies. ASCE.
- Grover, K.P. and C.E. Brockway. 1978. Evaluation of Urbanization and Changes in Land Use on the Water Resources of Mountain Valleys. Research Technical Completion Report. Project B-038-IDA. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Robbins, C.W. and C.E. Brockway. 1978. Irrigation Water Salt Concentration Influences on Sediment Removal by Ponds. Soil Sci. Soc. Am. J. 42:478-481.
- Longley, T.S., C.E. Brockway, and E.C. Larsen. 1978. Low Energy Sprinkler Equipment. ASAE Annual Meeting, Spokane, Washington. PN-78-406.
- Brockway, C.E. 1978. Systems Analysis of Irrigation Water Use in Eastern Idaho. OWRT.

- Brockway, C.E. 1978. Alternative Irrigation Systems for Flood Damaged Irrigation Lands Below Teton Dam. Research Technical Completion Report, Idaho Water Resources Research Institute.
- Busch, J.R., R.G. Allen and C.E. Brockway. 1978. Irrigation Rehabilitation Plans in the Teton Flood Area. ASCE Convention and Exposition, Chicago, Illinois.
- Allen, R. G. , J. R. Busch, and C.E. Brockway. 1979. Optimal Irrigation Systems Subject to Available Resources Constraints. IX Congress CIGR 1979.
- Brockway, C.E. 1979. Relationship of Costs and Water-Use Efficiency for Irrigation Projects in Idaho. Research Technical Completion Report, University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Brockway, C.E. 1979. Effects of Changing Irrigation Efficiencies on Water Supplies. ASCE Irrigation and Drainage Division Specialty Conference. Albuquerque, New Mexico.
- Brockway, C.E. 1979. Snake Plain Aquifer Model Studies. Idaho's Water, September 1979. Vol. 6, No. 4.
- Brockway, C.E., editor. 1980. Manual on Operation and Maintenance of Irrigation and Drainage Districts, American Society of Civil Engineers, prepared by Committee on Operation and Maintenance of Irrigation and Drainage Division.
- Allen, R.G. and C.E. Brockway. 1980. Problems in Developing and Applying an Optimal Irrigation Plan. ASCE Journal of the Water Resources Planning and Management Division, Vol. 106, No. WR 1.
- Mayland, H.F. and C.E. Brockway. 1980. Frequency Analysis of Western Snow Data. Proceedings. 1980 ASCE Watershed Management Symposium, Boise, Idaho.
- Robison, C.W. and C.E. Brockway. 1980. Vegetal Filters for Controlling Sediment in Irrigation Return Runoff. Proceedings. 1980 ASCE Irrigation and Drainage Division Specialty Conference. Boise, Idaho.
- Busch, J.R. and C.E. Brockway. 1980. Systems Approach to Irrigation Planning Research. 1980 ASCE Irrigation and Drainage Specialty Conference, Boise, Idaho.
- Brown, M.J., C.E. Brockway, and J.A. Bondurant. 1981. Ponding Surface Drainage Water for Sediment and Phosphorus Removal. Transactions ASAE, Vol. 24, No. 6, pp. 1478-1481.

- Brockway, C.E. and R.G. Allen. 1982. Impact of the Energy Crisis on Irrigation and Drainage, Part IV: System Design and Management Practices to Reduce Energy Requirements and Consumption. Paper presented at the 9th Congress of the International Committee on Irrigation and Drainage, National Conference. Jackson, Mississippi.
- Everts, Chris and C.E. Brockway. 1982. Reducing Soil Losses with Filter Strips. Current Information Series No. 587. University of Idaho College of Agriculture. January 1982.
- Luttrell, S.P. and C.E. Brockway. 1982. Impacts of Individual on-site Sewage Disposal Facilities on Mountain Valleys - Phase I. Research Technical Completion Report. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Wells, R., C.E. Brockway, and J. R. Busch. 1983. Management, Maintenance and Operation of Pump Supplied Irrigation Resources Projects. Research Technical Completion Report. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Freeman, G., C.E. Brockway, and R.G. Allen. 1983. Management and Systems for Water and Energy Savings, Bruneau Proj, Idaho. Research Technical Completion Report. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Allen, R.G., C.E. Brockway, and J.L. Wright. 1983. Weather Station Siting and Consumptive Use Estimates. Journal of the Water Resources Planning and Management Division, American Society of Civil Engineers.
- Allen, R.G. and C.E. Brockway. 1983. Estimating Consumptive Irrigation Requirements for Crops in Idaho. Research Technical Completion Report. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Allen, R.G. and C.E. Brockway. 1983. Weather and Consumptive Use in the Bear River Basin, Idaho during 1982. Research Technical Completion Report. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Allen, R.G. and cb31983. Operation and Maintenance Costs and Water Use by Idaho Irrigation Projects. Proceedings of the 1983 Specialty Conference, Irrigation and Drainage Division, American Society of Civil Engineers, Jackson Hole, Wyoming.
- Allen, R.G. and C.E. Brockway. 1983. Estimating Consumptive Use on a Statewide Basis. Proceedings of the 1983 Specialty Conference, Irrigation and Drainage Division, American Society of Civil Engineers, Jackson Hole, Wyoming.

- Johnson, G.S. and C.E. Brockway. 1983. Users Manual for University of Idaho Ground-Water Flow Model and Recharge Program. Completion Report. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Johnson, G.S., C.E. Brockway, and S.P. Luttrell. 1984. Application of a Numerical Ground-Water Flow Model to the Mud Lake Area in Southeastern Idaho. Completion Report. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Johnson, G.S., C.E. Brockway, and S. Ramseyer. 1984. Water Resource References for the Snake River Basin Above Swan Falls. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Luttrell, S.P. and C.E. Brockway. 1984. Impacts of Individual On-Site Sewage Disposal Facilities on Mountain Valleys - Phase II - Water-Quality Considerations. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Robison, C.W., C.E. Brockway, C.W. Robbins, and G. S. Johnson. 1984. Evaluation of Irrigation Management Procedures for Geothermal Effluent. Completion Report, University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Fitzsimmons, D.W. and C.E. Brockway. 1984. Irrigation Systems Management Research Design. Final report submitted to USAID/Pakistan under contract no. 391-0467-C-00-4028 prepared by Research Definition Team in cooperation with Washington State University and Development Alternatives, Inc. University of Idaho, Moscow, ID. 354 p.
- Johnson, G.S., C.E. Brockway, J.L. Wright, and A.L. Coiner. 1984. Remote Sensing for Irrigated Crop Water Use Phase I. Technical Completion Report, Idaho Water Resources Research Institute, submitted to NASA-Ames Research Center.
- Johnson, G.S., C.E. Brockway, and A.L. Coiner. 1985. Evaluation of Methods for Estimation of Aquifer Recharge from Precipitation on Semi Arid Lands. Research Technical Completion Report. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Brockway, C.E. and G.S. Johnson. 1985. Calibration of the Snake Plain Aquifer ground-water flow model. Research Technical Completion Report. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Johnson, G.S., C.E. Brockway, and S.P. Luttrell. 1985. Ground-water model calibration for the Henry's Fork Recharge Area. Research Technical Completion Report. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.

- Brockway, C.E. 1986. Remote sensing for crop water use. Presented at Idaho Potato School January 29, 1986, Pocatello, Idaho.
- Robison, C.W. and C.E. Brockway. 1986. Modelling erosion and sedimentation in irrigation. Presented at ASCE Water Forum '86, at Long Beach, CA, August, 1986.
- Brockway, C.E. 1987. Swan Falls Data and Research Program Status Report by Idaho Technical Committee on Hydrology. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Brockway, C.E. and C.W. Robison. 1987. Evaluation of Closed Conduit Measuring Devices for Irrigation Diversions. Research Technical Completion Report. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Brockway, C.E. and C.W. Robison. 1987. Pump System Evaluation Using Microprocessor-Based Monitors. American Society of Agricultural Engineers, Paper No. 87-3502. Presented at the ASAE International Winter Meeting December 15-18, 1987, Chicago, IL, December 1987.
- Brockway, C.E. 1987. Report on "Evaluation of the Idaho-USGS Cooperative Water Data Collection Program". A Report to Ken Dunn, Director of the Idaho Department of Water Resources from the Idaho Technical Committee on Hydrology.
- Hill, R.W., C.E. Brockway, et al. 1987. Duty of Water Under Bear Rive Compact: Field Verification of Empirical Methods. Summer 1987 Progress Report to the Bear River Commission.
- Robison, C.W. and C.E. Brockway. 1987. Demonstration of Monitors for Pumping Stations. Research Technical Completion Report for the Idaho Department of Water Resources, Contract No. DWR-86-03-21-704-37. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- France, K.E. and C.E. Brockway. 1987. Flow measurement using ramped broad crested weirs. Research Technical Completion Report. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Robison, C.W. and C.E. Brockway. 1987. Demonstration of monitors for pumping stations. Research Technical Completion Report, contract no. DWR-86-03-21-704-37. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Brockway, C.E. and C.W. Robison. 1988. Development and Demonstration of Pump Station and Surface Diversion Monitor Systems for Water and Energy Efficiency Improvements. Research Technical Completion Report. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.

- Brockway, C.E. and C.W. Robison. 1988. Water Resources Data and Management Model for Beaver Creek, Camas Creek and Mud Lake Area of Eastern Idaho. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Hill, R.W., C.E. Brockway, R.D. Burman, L.N. Allen, and C.W. Robison. 1989. Field Verification of Empirical Methods for Estimating Depletion; Research Report 125; Utah Agricultural Experiment Station, Logan, Utah, Two Volumes.
- Brockway, C.E. 1989. Mud Lake Standing Operating Procedures. Draft operating procedures manual for Mud Lake Water Users and Water District 31.
- Robison, C.W., C.E. Brockway, T. Gray, and T. Henschied. 1990. Irrigation Water Allocation System for Bell Rapids Mutual Irrigation Company.
- Brockway, C.E., C.W. Robison and J.S. Kolar. 1991. Municipal Pump Monitor Demonstration Project. Final Report to the Idaho Department of Water Resources. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Hamilton, B. and C.E. Brockway. 1991. Effects of Non-Continuous Turnout Operation on the Aberdeen-Springfield Canal System. Research Technical Completion Report. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Sandoval, V.B. and C.E. Brockway. 1991. Ground-water Investigations for the Fremont-Madison Irrigation District, Southeastern Idaho. Research Technical Completion Report. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Sandoval, V.B. and C.E. Brockway. 1992. Water Rights Accounting on the Upper Snake River, Water District 01, Southeastern Idaho. Research Technical Completion Report. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID. In press.
- Brockway, C.E. and C.W. Robison. 1992. Middle Snake River Water Quality Study, Phase I: Final. Technical completion report submitted to Idaho Department of Health and Welfare, Division of Environmental Quality. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Brockway, C.E., C.W. Robison, G.S. Johnson. 1992. Evaluation of Water Quality in Shallow Ground-water Systems. Final Report to the Division of Environmental Quality, Contract No. 82-600945. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Robison, C.W. and C.E. Brockway. 1991. Operations Manual for Electronic Pumping System Monitors. Research Technical Completion Report. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.

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- Brockway, C.E. and C.W. Robison. 1992. Middle Snake River Water Quality for Kanaka and Boulder Rapids. Submitted to L.B. Industries. University of Idaho, Idaho Water Resources Research Institute, Moscow, ID.
- Brockway, C.E., H. Neibling, and C.W. Robison. 1993. Water Quality Project, Twin Falls and North Side Canal Companies Third and Fourth Quarterly Report, January 1, 1993 to June 30, 1993.
- Brockway, C.E. et al. 1993. Proposed Nutrient Management Plan for Middle Snake Irrigated Agriculture. Submitted to Idaho Department of Health and Welfare Division of Environmental Quality by the Mid Snake Irrigation Water Quality Coordination Committee.
- Carter, D.L., C.E. Brockway, and K.K. Tanji. 1994. Controlling Erosion and Sediment Loss from Furrow-Irrigated Cropland. Journal of Irrigation and Drainage Engineering, American Society of Civil Engineers. 119(6):975-988.
- Brockway, C.E. and A. Kahlown. 1994. Big Wood River-Silver Creek Hydrology Study. Quarterly Reports.
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MAR 11 1999

Department of Water Resources

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C-CAN Partners, John W. Jones, Jr., Hagerman
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APR 01 1999

Department of Water Resources
Southern Region

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

Case No. 39576

) Subcase Nos. 36-00006, 36-00007,
) 36-00008, 36-00022, 36-00023,
) 36-00047, 36-00068, 36-00069,
) 36-00099, 36-00100, 36-00106,
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ORDER DENYING MOTION IN LIMINE
re: NEW INTERNATIONAL
MORTGAGE DECREE

On March 8, 1999, this Court heard argument on the Motion in Limine concerning the New International Mortgage Decree filed by Respondents, Cranney Bros.', Kevin Michaelson, and Doug Grant. The Court ruled from the bench, denying the Motion in Limine. This Order memorializes the ruling.

The Court finds and concludes that the New International Mortgage Decree is not binding on nonparties to the Decree, such as the Movants, but that it does constitute evidence of legal rights to use water, and, provided it is offered with sufficient

COPY

foundation, it would be admissible as evidence at trial. *State of Idaho vs. Hagerman Water Right Owners, Inc.*, 130 Idaho 736, 947 P.2d 409 (1997).

IT IS THEREFORE ORDERED That the Motion in Limine is denied.

DATED This _____ day of March, 1999.

FRITZ X. HAEMMERLE
Special Master
Snake River Basin Adjudication

CERTIFICATE OF MAILING

I certify that a true and correct copy of ORDER DENYING MOTION IN LIMINE re: NEW INTERNATIONAL MORTGAGE DECREE was mailed on March ____, 1999, with sufficient first-class postage prepaid to the following:

Chief, Natural Resources
Office of the Attorney General
State of Idaho
PO Box 4449
Boise ID 83711-4449

Patrick D. Brown
PARKER, WARR & BROWN
812 Shoshone Street East
Twin Falls ID 83301

Director of IDWR
PO Box 83720
Boise ID 83701-2139

Jeffrey Fereday
GIVENS PURSLEY, LLP
PO Box 2720
Boise ID 83701-2720

Josephine P. Beeman
Dana L. Hofstetter
BEEMAN & HOFSTETTER, P.C.
PO Box 1427
Boise ID 83701-1427

John Marshall
Peter J. Ampe
Deputy Attorney General
PO Box 83720
Boise ID 83720-0010

Deputy Clerk

DISTRICT COURT-SRBA
TWIN FALLS CO., IDAHO
FILED

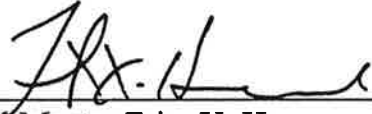
overnight mail delivery to ensure receipt by the Claimants no later than **5 p.m. on February 23, 1999.**

(3) **February 23, 1999, 5 p.m.** – Deadline for service of Claimants' Response Briefs. Claimants must serve their Response Briefs on all Respondents by overnight mail delivery to ensure receipt by the Respondents no later than **5 p.m. on February 24, 1999.**

(4) **March 1, 1999, 5 p.m.** – Deadline for service of all Reply Briefs.

(5) **March 8, 1999, 10 a.m.** – Hearing at the Snake River Basin Adjudication Courthouse in Twin Falls, Idaho on all summary judgment motions covered by this order.

ENTERED this 3 day of ^{March}~~February~~, 1999.



Special Master Fritz X. Haemmerle

RECEIVED

MAR 09 1999

Department of Water Resources

William Strange, Big Springs Water Users Assoc.,
C-CAN Partners, John W. Jones, Jr., Hagerman
Gun Club (Porter & Surbaugh), River Grove Farms, Inc.

PARKER, WARR & BROWN, LLP
Patrick D. Brown
812 Shoshone Street East
Twin Falls, ID 83301
Telephone: (208)735-8812

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 Nos. 36-00006, 36-00007,
	)	36-00008, 36-00022, 36-00023,
	)	36-00047, 36-00068, 36-00069,
Case No. 39576	)	36-00099, 36-00100, 36-00106,
	)	
	)	<u>MOTION TO COMPEL AND</u>
	)	<u>FOR SANCTIONS</u>
	)	

COME NOW, the Claimants in the above listed Subcases, and move the Court under I.R.C.P. 37(a) for Order Compelling Responses to Interrogatories and Requests for Production against each Respondent. The Claimants also move the Court for entry of an Order sanctioning the attorneys who signed the Interrogatory and Request for Production Responses pursuant to I.R.C.P. 11(a) and I.R.C.P. 37(a).

This Motion is supported by the Brief and the Affidavit of Counsel with the Interrogatory and Request for Production Responses being filed contemporaneously with this Motion.

COPY

Oral argument is requested.

Dated this 4th day of March, 1999.

PARKER, WARR & BROWN, LLP

By: 
Patrick D. Brown

CERTIFICATE OF SERVICE

The undersigned, a resident attorney of the State of Idaho, with offices at 812 Shoshone St. East, Twin Falls, Idaho 83301, and one of the attorneys for the claimants in this matter, certifies that on the 5th day of March, 1999, he served a true and correct copy of the foregoing document by the method indicated below, and addressed to the following:

Chief, Natural Resources
Office of the Attorney General
State of Idaho
P. O. Box 44449
Boise, ID 83711-4449

☒ U.S. Mail
☐ Hand Delivered
☐ Overnight Mail
☐ Telecopy (Fax)

Director of IDWR
P. O. Box 83720
Boise, ID 83701-2139

☒ U.S. Mail
☐ Hand Delivered
☐ Overnight Mail
☐ Telecopy (Fax)

Jeffrey Fereday
Givens Pursley, LLP
277 N. 6th St, Ste. 200
P. O. Box 2720
Boise, ID 83701-2720

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☐ Hand Delivered
☐ Overnight Mail
☐ Telecopy (Fax)

Josephine P. Beeman
Dana L. Hofstetter
Beeman & Hofstetter, P.C.
P.O. Box 1427
Boise, ID 83701-1427

☒ U.S. Mail
☐ Hand Delivered
☐ Overnight Mail
☐ Telecopy (Fax)

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AUG 31 1998

Department of Water Resources
Southern Region

Decreed
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AUG 26 1998

Department of Water Resources

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South
DJ

1998 AUG 24 PM 01:43
DISTRICT COURT - SRBA
TWIN FALLS CO., IDAHO
FILED

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) NOTICE SETTING SUBCASE
Case No. 39576) FOR SCHEDULING CONFERENCE
_____) SUBCASE NOS: SEE ATTACHED EXHIBIT A

The Scheduling Conference for this subcase will be
held as follows:

MONDAY, SEPTEMBER 21, 1998 at 10:00 AM
SRBA
DISTRICT COURT
253 3RD AVENUE NORTH
TWIN FALLS, ID

Parties and their attorneys, if any, shall attend the
Scheduling Conference and shall be prepared to discuss the
following matters:

1. Claimant representation and alignment of the parties;
2. Identification of the issues;
3. Admissions of facts and documents;
4. Amendment of pleadings, if required;
5. Discovery and discovery cut-off dates;
6. Expert witnesses, if planned;
7. Pre-trial conference dates;
8. Motions;
9. Settlement/alternative dispute resolution; and
10. Firm trial date.

DIRECTOR OF IDWR
PO BOX 83720
BOISE, ID 83720-0098

Page 1 8/24/98

(continued)

The date for the scheduling conference will not be changed unless a Stipulation to Reset is received by the court fourteen (14) days before the date of the scheduling conference. Parties who wish to change the date of the scheduling conference must do the following:

1. Contact the clerk of the SRBA Court and obtain alternative dates and times (208-736-3011).
2. Contact each party to the subcase(s) or their attorney, if any, and reach an agreement on the alternative date(s) and time(s) provided by the clerk.
3. Prepare a Stipulation to Reset the hearing. The hearing must be reset on one of the dates and times provided by the clerk. The stipulation must specify the date(s) and time(s) agreed to and must contain a statement that you have contacted each party or their attorney and that all have agreed on the alternative date(s) and time(s). The court will send a notice resetting the hearing.
4. If the parties cannot agree on one of the alternative dates and times provided by the clerk, the party wishing to change the date and time must file an Expedited Motion to Reset with the court at least 21 days prior to the scheduled hearing.

Dated: AUGUST 24, 1998

/S/ DEBBIE LASH
Deputy Clerk
Snake River Basin Adjudication

CERTIFICATE OF MAILING

I Certify that a true and correct copy of the NOTICE SETTING SUBCASE FOR SCHEDULING CONFERENCE was mailed on AUGUST 24, 1998, with sufficient first-class postage to the following:

IDAHO DEPT OF FISH & GAME

Represented by:
AMPE, PETER J
DEPUTY ATTORNEY GENERAL
PO BOX 44449
BOISE, ID 83711-4449
Phone: 208-334-2400

STATE OF IDAHO

Represented by:
CLIVE STRONG
OFFICE OF ATTORNEY GENERAL
STATE OF IDAHO
PO BOX 44449
BOISE, ID 83711-4449
Phone: 208-334-2400

NORTH SNAKE GROUND WATER DIST

Represented by:
DANA L. HOFSTETTER
BEEMAN & HOFSTETTER
608 WEST FRANKLIN STREET
PO BOX 1427
BOISE, ID 83701-1427
Phone: 208-388-8900

CRANNEY BROS

CRANNEY BROS.
DOUG GRANT
KEVIN MICHAELSON
Represented by:
JEFFREY C. FEREDAY
PO BOX 2720
BOISE, ID 83701
Phone: 208-342-6571

NORTH SNAKE GROUND WATER DIST

Represented by:
JOSEPHINE P. BEEMAN
BEEMAN & HOFSTETTER
608 WEST FRANKLIN STREET
PO BOX 1427
BOISE, ID 83701-1427
Phone: 208-388-8900

BANBURY PIPE CO., INC.

BIG SPRINGS WATER USERS ASSN
BIG SPRINGS WATER USERS ASSOC.
BOB PORTER
BOB PORTER, FRED SURBAUGH,
C-CAN CORPORATION
C-CAN PARTNERS
JOHN W. & DELORIS D. JONES
JOHN W. JR. JONES
JOINT HAGERMAN SCHOOL DIST 233
JOINT HAGERMAN SCHOOL DIST.
PAUL E. WATKINS
PAUL WATKINS
WILLIAM E. NORRIS
WILLIAM STRANGE

Represented by:
PATRICK D. BROWN
812 SHOSHONE ST. EAST
TWIN FALLS, ID 83303
Phone: 208-735-8812

A & B IRRIGATION DISTRICT

Represented by:
ROGER D LING
PO BOX 396
RUPERT, ID 83350
Phone: 208-436-4717

DALE E. BOYER

BOYER, ELAINE M.
PO BOX 232
HAGERMAN, ID 83332
Phone: 208-352-1152

JOHN W. JR. JONES

JONES, DELORIS
PO BOX 265
HAGERMAN, ID 83332

WALTER II & JUDY BONNING

PO BOX 360
HAGERMAN, ID 83332
Phone: 208-837-4578

DIRECTOR OF IDWR

PO BOX 83720
BOISE, ID 83720-0098

(Notice Setting Scheduling Conference)

(Certificate of mailing continued)

ALMA BLASTOCK
ROUTE 1, BOX 442
HAGERMAN, ID 83332

Exhibit A

Subcase Nos:

36-00006
36-00007
36-00008
36-00022
36-00023
36-00047
36-00068
36-00069
36-00070
36-00079
36-00099
36-00100
36-00106
36-00108B
36-02038
36-08099
36-15463

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APR 16 1998 4-14

Department of Water Resources

William Strange

PARKER, WARR & BROWN, LLP
Patrick D. Brown
812 Shoshone St. East
Twin Falls, ID 83301
Telephone: (208)735-8812

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MAY 01 1998

Department of Water Resource
Southern Region

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

..... R' ~ blank prefix
records modified 4-24-98
-R

In Re SRBA

)
) Subcase Nos. 36-00006, 36-00007
) and 36-00008
)

Case No. 39576

)
) NOTICE OF SUBSTITUTION
) OF COUNSEL
)

.....

TO: The above-entitled court and to the parties and their counsel:

YOU ARE HEREBY NOTIFIED that pursuant to the Rule 11(b)(1), I.R.C.P.,
Parker, Warr & Brown, LLP, 812 Shoshone Street East, Twin Falls, ID 83301, is hereby
substituted as counsel for Claimant, William Strange, in place of the firm of Hepworth,
Lezamiz & Hohnhorst, Chtd.

Dated this 13 day of April, 1998.

PARKER, WARR & BROWN, LLP

By: 

Patrick D. Brown
Attorneys for claimant

CERTIFICATE OF SERVICE

The undersigned, a resident attorney of the State of Idaho, with offices at 812 Shoshone St. East, Twin Falls, Idaho 83301, and one of the attorneys for the claimant in this matter, certifies that on the 13 day of April, 1998, he served a true and correct copy of the foregoing document by the method indicated below, and addressed to the following:

U.S. Dept. of Justice
Environment & Natural
Resources Division
550 W. Fort, MSC 033
Boise, ID 83724

☒ U.S. Mail
☐ Hand Delivered
☐ Overnight Mail
☐ Telecopy (Fax)

Chief, Natural Resources Div.
Office of the Attorney General
State of Idaho
P. O. Box 44449
Boise, ID 83711-4449

☒ U.S. Mail
☐ Hand Delivered
☐ Overnight Mail
☐ Telecopy (Fax)

Director of IDWR
P. O. Box 83720
Boise, ID 83701-2139

☒ U.S. Mail
☐ Hand Delivered
☐ Overnight Mail
☐ Telecopy (Fax)


Patrick D. Brown

(water/strangesubcounsel)

AJ0749NP
No. R36-00006

IDAHO DEPARTMENT OF WATER RESOURCES
ADJUDICATION CLAIM PROFILE REPORT
(REGIONAL)

DATE: 01/28/98
PAGE: 1

OWNER CODE	NAME & ADDRESS	PRIORITY DATE	WATER USE	USE PERIOD FROM TO	DIVERSION RATE	DIVERSION VOLUME
C	WILLIAM STRANGE	04/01/1885	IRRIGATION	03-15 11-15	1.08 CFS	
C	LOUISE STRANGE		STOCKWATER	01-01 12-31	0.03 CFS	
	PO BOX 387					
	HAGERMAN ID 83332					
	(208) 837-4767			TOTAL DIVERSION:	1.08 CFS	

Water Source: BILLINGSLEY CREEK

Tributary to: SNAKE RIVER

Stage: DECREED

Point(s) of Diversion: T07S R13E S11

NWSWNE

GOODING County

Place of use Legal Description for: IRRIGATION

				NE				NW				SW				SE								
T	R	S	:	NENE	NWNE	SWNE	SENE	:	NENW	NWNW	SWNW	SENW	:	NESW	NWSW	SWSW	SESW	:	NESE	NWSE	SWSE	SESE	:	SUM
			:	Lt	Ac	Lt	Ac	:	Lt	Ac	Lt	Ac	:	Lt	Ac	Lt	Ac	:	Lt	Ac	Lt	Ac	:	
07S	13E	11	:					:					:					:					:	2.0
07S	13E	14	:					:					:					:					:	19.0
																							TOTAL ACRES	21.0

Place of use Legal Description for: STOCKWATER

				NE				NW				SW				SE								
T	R	S	:	NENE	NWNE	SWNE	SENE	:	NENW	NWNW	SWNW	SENW	:	NESW	NWSW	SWSW	SESW	:	NESE	NWSE	SWSE	SESE	:	
			:	Lt	Ac	Lt	Ac	:	Lt	Ac	Lt	Ac	:	Lt	Ac	Lt	Ac	:	Lt	Ac	Lt	Ac	:	
07S	13E	11	:					:					:					:					:	
07S	13E	14	:					:					:					:					:	
																							S	

POU County: GOODING

Other Rights: NONE

Conditions of Approval:

- N01 - THE APPROPRIATOR IS ENTITLED TO THE QUANTITY OF WATER
- DESCRIBED FOR STOCK WATER PURPOSES AT A POINT OF MEASUREMENT
- WHERE THE DELIVERY DITCH ENTERS THE PLACE OF USE DESCRIBED, SO
- LONG AS THE QUANTITY DIVERTED AT THE POINT OF DIVERSION DOES NOT
- CONSTITUTE UNREASONABLE WASTE.
- N05 - THE QUANTITY OF WATER UNDER THIS RIGHT FOR STOCKWATER USE
- SHALL NOT EXCEED 13,000 GALLONS PER DAY.
- N08 - THE QUANTITY OF WATER DECREED FOR THIS WATER RIGHT FOR
- STOCKWATER USE IS NOT A DETERMINATION OF HISTORICAL BENEFICIAL
- USE.

Remarks: EXP WATER IS DELIVERED THROUGH THE SANDS DITCH.

Dates: Exam Made Date:

Verified Date:

Objection Filed Date:

Misc: Water District Number: 36A Field Inspection Flag:

per State C. 1/27/98

HAGERMAN

Surface Irrigation Diversion Rate Analysis Sheet

Based on Breakeven Requirement

WR#'s 36-00006,7

SOIL	SOIL AC.	% ROW	ROW AC.	FIR ROW	CFS ROW	% FOR.	FOR. AC.	FIR FOR.	CFS FOR.
FAB	10.58	33	3.49	0.053	0.185	67	7.09	0.028	0.199
KOB	0.02	33	0.01	0.035	0.000	67	0.01	0.026	0.000
394	10.36	33	3.42	0.079	0.270	67	6.94	0.050	0.347
TOTALS	20.96		6.92		0.455		14.04		0.546

$$\begin{array}{lcl}
 \text{REC. FIR} & \boxed{1.00^*} & \text{CFS} \\
 & \text{CL} = 0.08 \text{ CFS} & \\
 & \text{SIM} & \\
 & \boxed{1.001} & \text{CFS} \\
 & \times & \boxed{21} \text{ REC. AC.} \\
 & & \boxed{20.96} \text{ GIS AC.}
 \end{array}$$

DATE 1/27/98

INIT. 8

*ADD CONVEYANCE LOSS (IF APPLICABLE) FOR TOTAL IRRIGATION DIVERSION REQUIREMENT

DIVERSION CAPACITY OR LIC./DEC. AMOUNT MAY LIMIT



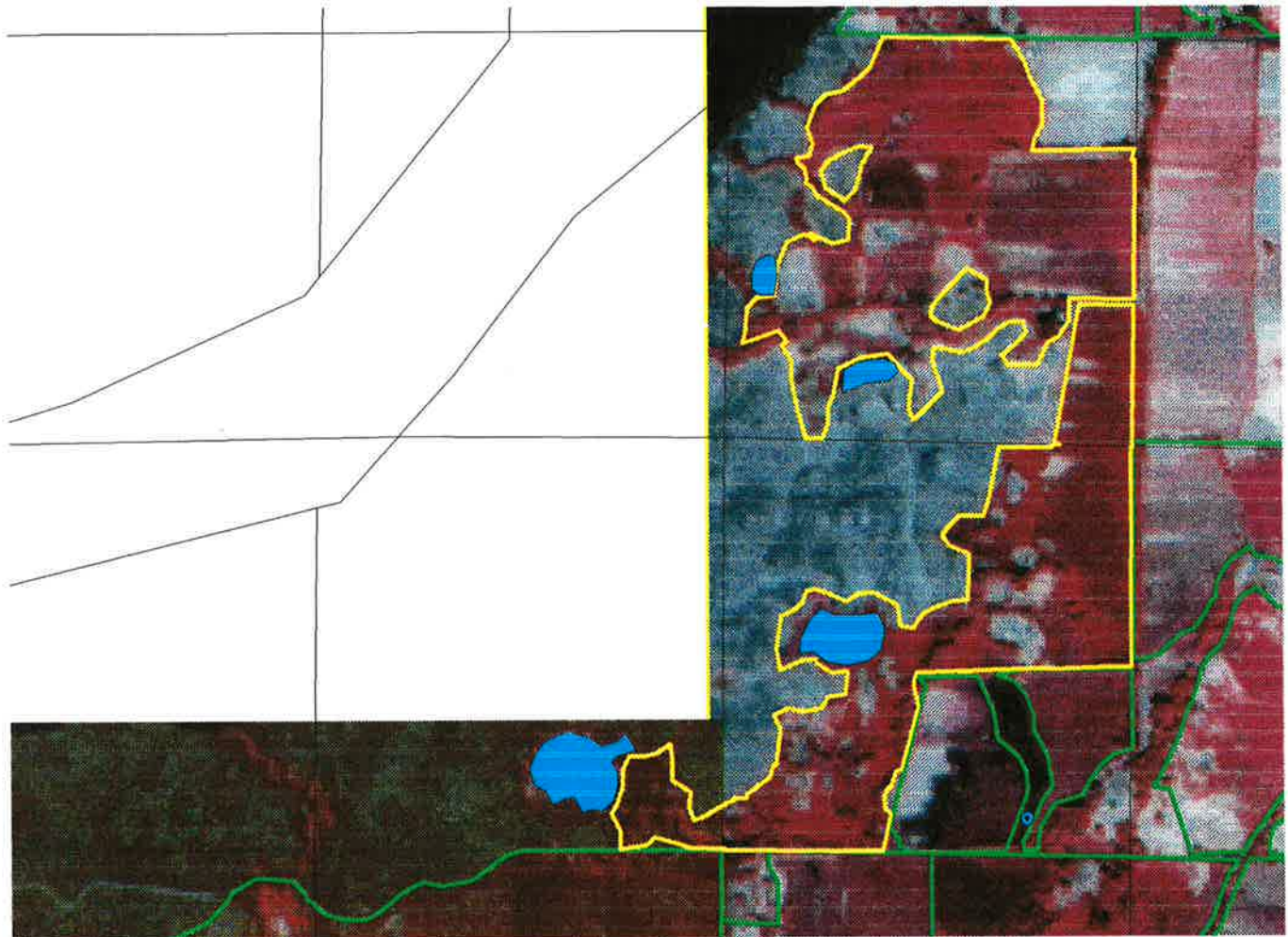
A36-00006

↑
North

OVERVIEW OF STRANGE PLACE
NAPP 1987 AAG9
1/27/98 scu

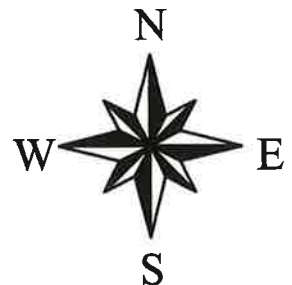
IDAHO DEPARTMENT OF WATER RESOURCES

**36-00006, 36-00007 SANDS DITCH
36-00008 BARLOGI DITCH**



660 0 660 Feet

**TNS 7S, RNG 13E
SEC 11, SWSW & SEC. 14, NWNW**



⊙ **Recommended Point of Diversion**

 **RECOMMENDED Place of use**

 **Section lines**

 **Quarter/Quarter Lines**

**GIS PLACE OF USE PRESENTATION
1987 and/or 1988 NAPP PHOTOGRAPHY
DATE: JANUARY 22, 1998
BY: STEVE CLELLAND**

SRBA FIELD EXAM REPORT

SRBA CLAIM: A36-00006 & A36-00007

EXAM DATE: JANUARY 16, 1998

IDWR AGENT: STEVE CLELLAND

ACCOMPANIED BY CLAIMANT: MR. TURNER

PURPOSE: This examination was made to investigate the amendments for additional uses filed by Pat Brown for the above named claimant. This visit was a follow-up to the exam made on 1/14/98 to gather information of the pipeline delivery from the Sands Ditch.

OBSERVATIONS & FINDINGS: I called the Turners on 1/15/98 to ask some questions on the pipeline that delivers water from the Sands Ditch. We agreed the system is not capable of delivering the decreed rate of 4.5 cfs and I was trying to determine the capacity of the system. They informed me the pipeline was installed 6/22/1981. They had 870 feet of 12 inch concrete installed according to their records. I was unable to estimate a flow rate based on this information alone and planned to view the ends of the pipeline system to better understand the system delivery when I returned to the area on January 16.

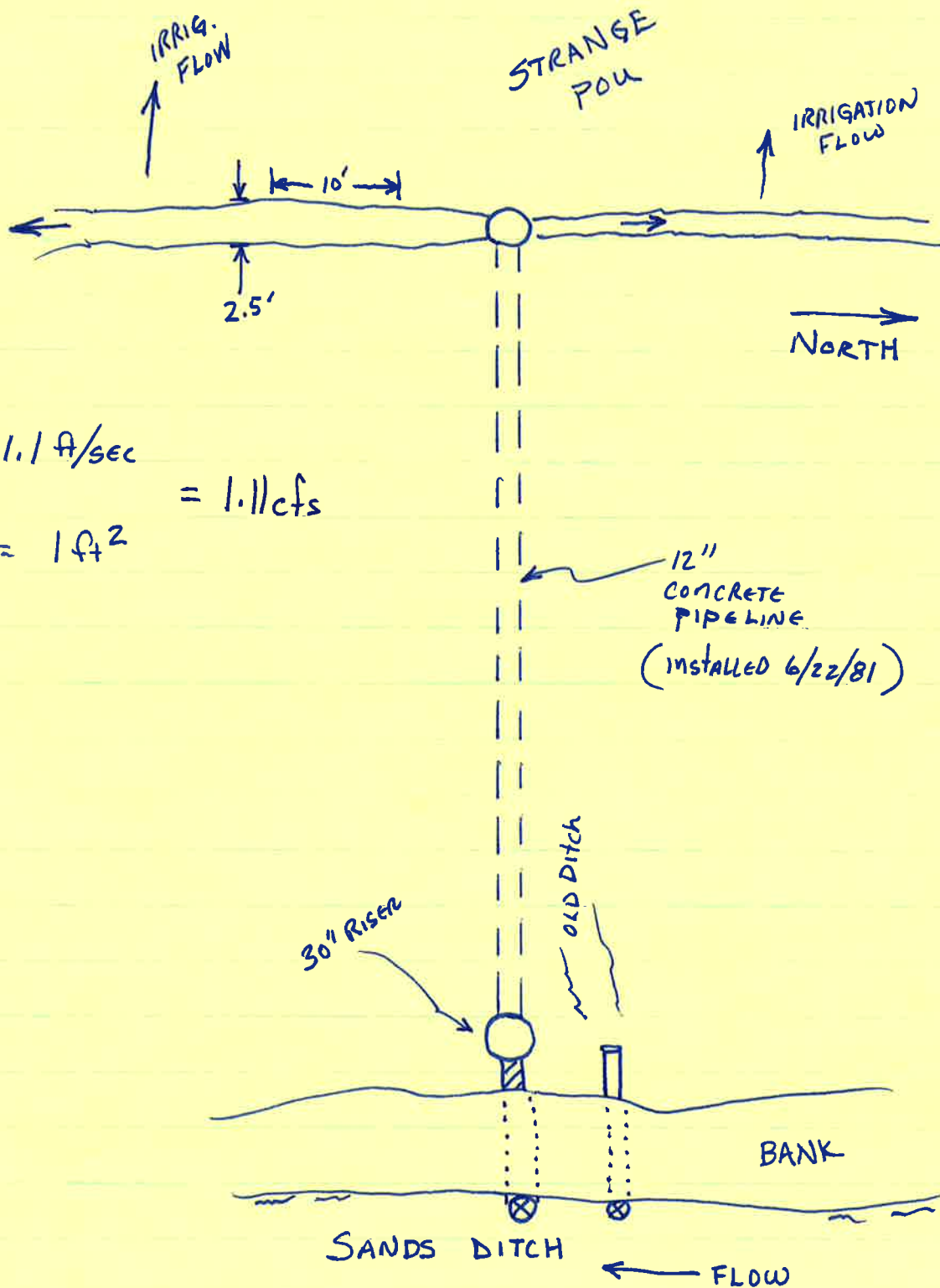
I inspected the headgate on the Sands Ditch but could not access the water flow to gather information needed to complete the pipeline calculations. I followed the pipeline to the riser on the Strange property and decided to measure the flow in the on-farm ditch. Using a tape measure and my stop watch, I estimated the flow in the ditch using the "orange peel" method. I also sketched the layout of the system for a more complete drawing when I returned to the office. I returned to my vehicle at the Martin place when Mr. Turner arrived to ask what I had found. He had asked if I didn't believe them about the pipe diameter. I explained my need for a flow estimate of the current flows. We sat in the blazer while I calculated the flow rate I had measured. It came to 1.11 cfs. (see details in sketch in file.) Mr. Turner stated that would not be sufficient water to irrigate his farm based on the discussions we had during the main exam.

Final recommendations will be described in the database record prepared after full legal review of my proposal is complete.

PREPARED BY SCC
ON 1/28/98
FILE(cvr:strange2-exam-report.wp)

36-00006 & 36-00007
SANDS DITCH delivery

1/16/98 EXAM
STEVE CLELLAND



$$Q = AV$$

$$V = 10' / 9 \text{ sec} = 1.1 \text{ ft/sec}$$

$$A = 2.5' \text{ width} \times 0.4' \text{ depth} = 1 \text{ ft}^2$$

$$= 1.1 \text{ cfs}$$

STRANGE Delivery Pipe

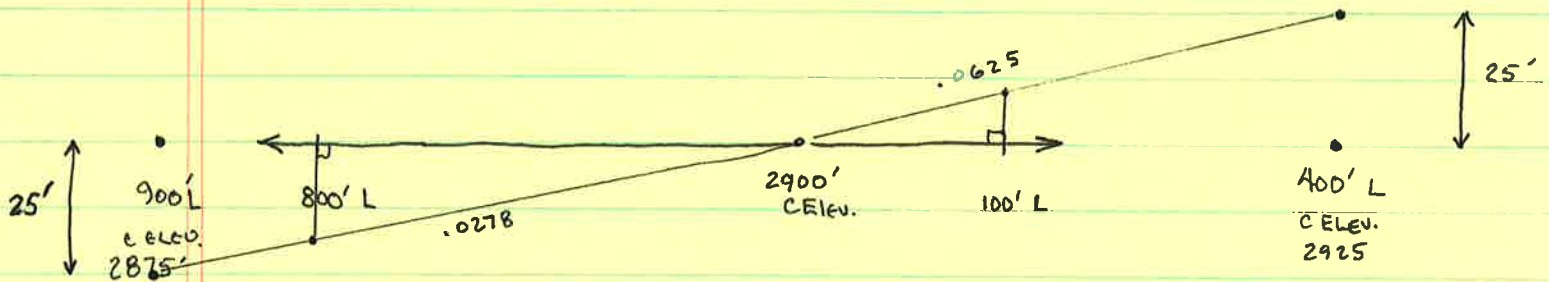
$$V = \frac{\sqrt{H}}{D \times 64.4} \quad \text{San 1/15/98}$$

$$4.5 \text{ cfs} = 2020 \text{ gpm}$$

Pipe from Sands Ditch
to field.

900' run 29' H

(100') Slope between Bell ditch & Sands ditch: $\frac{25'}{400'} = 0.0625$
(800') Slope between SANDS & Ditch: $\frac{25'}{900'} = 0.0278$



$$\frac{\pi}{800'} = \frac{.028'}{1'}$$

$$\pi = 22.4'$$

$$\frac{\pi}{100\text{ft}} = \frac{.06\text{ft/ft}}{1\text{ft}}$$

$$\pi = 6.25'$$

$$\frac{6.25'}{22.40'} = H$$
$$28.65' = H$$

SRBA FIELD EXAM REPORT

SRBA CLAIM: A36-00006, A36-00007 & A36-00008

EXAM DATE: JANUARY 14, 1998

IDWR AGENT: STEVE CLELLAND

ACCOMPANIED BY CLAIMANT: Mr. & Mrs. Turner for Mr. Strange
OBSERVED BY CHARLIE HONSINGER

PURPOSE: This examination was made to investigate the amendments for additional uses filed by Pat Brown for the above named claimant.

OBSERVATIONS & FINDINGS: I met with the Turners at the home of William Strange; Mrs. Turner is his daughter. I explained my purpose for being there was to investigate the recently added amendments. I added that since there is such a large discrepancy in the irrigated acreage claimed vs. recommended perhaps we should review that to be sure we were looking at the same property.

We started off by viewing the lands under the Barlogi Ditch, covered by right 36-00008. We walked north of the house area inside the pasture and headed due west to find the pond west of the pasture area. I was shown a pond and plotted it on the GIS map in the file. The other pond shown on the amended claim map was drawn in incorrectly by Pat Brown; Mr. Turner told me it lies on the other side of the Barlogi Ditch. We discussed and viewed the lands north and west of the pond - none of the land appeared irrigated nor did it have any method for irrigation. Mr. Turner agreed there was no irrigation from this point to the Snake River.

Mr. Turner led me west of the pond and then southwest until we crossed the Barlogi Ditch; he led me to a small depression in the lava ridges and pointed out a shallow ditch system. He told me this was once a field. There were no corrugates or ditches in the "field" but there was a ditch that curved around the eastern edge of the area. The vegetation was some grass and sagebrush 2-3 feet in height. I told him I could probably recommend something for this small plat of ground. He told me he irrigated it in 1997.

We headed almost straight east in search of the next pond area. The amended claim map showed no irrigation from the Barlogi Ditch being south of the Ditch; Mr. Turner said the map was not accurate as drawn. He identified small areas of irrigation south of the Barlogi Ditch as we walked easterly. Arriving at the next small pond, I noticed the water draining into a sink hole. Mr. Turner said the water flowing into these lava fields generally disappeared into sinkholes; that was a problem in getting the water to be delivered beyond the system as currently operating.

Next we walked to the south in search of the next pond that was supplied under the Sands Ditch system under rights 36-00006 & 7. The walk to the pond was across land covered mostly by lava pressure ridges and was not possible to be irrigated by either ditch system. This land was mapped out in the amended claim map as irrigated and I discussed this with Mr. Turner who agreed this area was not irrigated. Mr. Turner found the pond almost directly south of the last pond we had just observed. This pond was larger than

the last. In reviewing the GIS map in the file I showed Mr. Turner how the pond before us now appears to be in the same location as part of the place of use shown for irrigation. He told me this was the practice, to fill the pond in the winter months and during the summer months it was used as a pasture as the aerial photo shows.

We walked southwesterly to find the final pond as shown on the claim map. This pond appeared to be the largest in surface size of all four ponds. All ponds are quite shallow in depth; none appeared to be deeper than three feet at the deepest point with most of the ponds around the one foot depth. From this final pond I asked if any irrigation occurred to the west; from the pond to the Snake River. Mr. Turner told me no irrigation was done west of these ponds on the Sands Ditch system.

We viewed the irrigation along the southern border of the property and I agreed the irrigation was occurring; this was supported by the irrigation shown on the GIS photo-map.

From the point east of the third pond, we followed the far west edge of the irrigated property until we reached the corrals and barns south of the house. Mr. Turner and I discussed the irrigation observed on the ground with that shown in the GIS map. We concluded that the map was very accurate in identifying the acres under irrigation. I revised the GIS map, created in October 16, 1997 by Kelly Christensen, with hand written notations of lands that could be added to the total of the irrigated acres under the Sands Ditch system. (A map in the file 36-0006 & a map in 36-00008 were used for noting the changes agreed upon during this field exam.)

We returned to the house to discuss the possible outcomes of the observations made during this exam. Using the files and some rough estimates of acres I told Mr. Turner it appears that there will be an increase in the number of acres. We both agreed that the claimed amounts of irrigated acres were not accurate. Under the Barlogi Ditch system I estimated 20 acres and under the Sands Ditch system there will be about 20 acres also. Total for the entire farm about 40 acres. He was satisfied with that number.

Quantity was discussed at this time also. The Barlogi right 36-00008 was decreed for 2.0 cfs and claimed as such. An earlier exam of this day found the total Barlogi Ditch diversion to be 4.8 cfs, 2.8 cfs was being diverted to the end of Mr. Watkins' system under right 36-00106 and 36-08099. Based on these amounts there was 2.0 cfs available for this right at the head of the Barlogi Ditch. I asked Mr. Turner if he has ever measured the water at the Strange farm and he had not and knew of no other measurements except at the head of the ditch. I told him we would use the acres found from this exam in an analysis to determine the beneficial use necessary to irrigate based on the soils here. The common rates for the valley have been around 1.5-2 inches per acre, assuming the highest, 2 inches per acre, that would result in 40 inches for this right (0.80 cfs).

Quantity on the Sands ditch system would be similar and would be near 40 inches per acre with the same assumptions. The total of the two claims on the Sands ditch total 4.5 cfs. This is similar to the amount of water currently being delivered down the Barlogi Ditch. There does not appear to be a delivery system on the

Strange farm large enough to deliver that amount of water. The ditches observed during the exam were 2-2.5 feet wide and the Barlogi Ditch is 10-12 feet wide and much deeper than the farm ditches. Mr. Turner agreed they could not deliver that amount of water to the farm. The delivery from the Sands ditch travels across the neighbors farm through a pipeline and arrives in a concrete riser on the east side of the property at the section line between section 11 & 14. He didn't know the details of the pipeline system. (See second report on flow rates from Sands Ditch system dated 1/15/98.)

SUMMARY & RECOMMENDATIONS: In addition to the above stated findings of the irrigation portion to these rights I also told Mr. Turner the most likely recommendations for the amendments claimed.

SRBA CLAIM 36-00008 (Barlogi Ditch)

IRRIGATION: Revise the acres irrigated as noted on the field notes and as determined by GIS software. GIS maps updated 1/22/98 by me. Total acres for this right = 21.0 acres. Flow rate to be determined by Jeff Peppersack for this GIS shapefile.

IRRIGATION MAINTENANCE: Not recommended as a separate use. Portions of the conveyance loss of this right, if necessary, are included in the Irrigation use above.

WILDLIFE, RECREATION, AESTHETICS: Not recommended. All these uses are incidental to the Irrigation use as historically developed. The ditch system was built to deliver irrigation water. Permits may need to be filed to cover new uses recently developed during the non-irrigation season.

STOCKWATER: Recommended. 75 head of cattle require 0.03 cfs as per the charts in Water Law Handbook Appendix.

TOTAL QUANTITY: Irrigation rate as determined plus the Stockwater use rate.

I suggest adding the remark about "necessary flows to deliver the right," to stockwater uses under Condition Code N01.

SRBA CLAIMS 36-00006 & 36-00007 (SANDS DITCH)

IRRIGATION: Same as above in 36-00008. GIS acres = 21.0.

IRRIGATION MAINTENANCE: Not recommended - same as above.

WILDLIFE, RECREATION, AESTHETICS: Not recommended -same as above.

STOCKWATER: Recommended. Same 75 head as above but water is a different diversion system, same source, allow 0.03 cfs.

TOTAL QUANTITY: Same as above.

Final recommendations for each right will be described in the database record prepared after full legal review of my proposal is complete.

COMMUNICATION DOCUMENTATION

This form is to be used to document public record information requests regarding any SRBA claim or claims. The form may also be used to document IDWR communications requesting information regarding any SRBA claim or claims when the request is not made in writing or the claim verification report is not readily available to document the request. This form is to be filed in all relevant claim files or a central office file.

EXAMS FOR AMENDMENTS

PAT STILL HAS YET TO CONTACT MR. BILL JONES.

1998 JAN -5 PM 2:18

DISTRICT COURT - SRBA
TWIN FALLS CO., IDAHO

**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

Case No. 39576

**Water Rights: 36-00006, 36-00007
36-00008,**

**NOTICE OF ADMINISTRATIVE
PROCEEDING**

IDWR has received an application for an Administrative Proceeding for the above
water right(s).

The Administrative Proceeding contemplates a change in the water right(s) as indicated
below:

☐ Substitution of Party (waiting for documentation)

☐ Substitution of Party/Split Water Right

☒ Amended Claim:

☐ point of diversion ☐ place of use

☒ period of use ☒ nature of use

IDWR projects the Administrative Proceeding shall be completed no later than: April 1, 1998.

DATED: 1/2/98



Signature of IDWR Representative

CERTIFICATE OF MAILING

I certify that on 1-5, 1998, I mailed the original and copies of this form to the following persons, postage prepaid and addressed as follows:

1. Original to:
Clerk of the District Court
Snake River Basin Adjudication
PO Box 2707
Twin Falls ID 83303-2707
2. One copy to:
Claimant or attorney of record:
Patrick D. Brown
Hepworth Lezamiz & Hohnhorst
PO Box 389
Twin Falls ID 83303-0389
3. One copy each to:
Chief Natural Resources Division
Office of the Attorney General
PO Box 44449
Boise ID 83711-4449
4. One Copy to:
United States Dept of Justice
Environment & Natural Resource Div
550 West Fort Street MSC 033
Boise ID 83724



Signature of person or attorney mailing the form



State of Idaho

DEPARTMENT OF WATER RESOURCES

1341 Fillmore Street, Suite 200, Twin Falls, ID 83301-3380

Phone: (208) 736-3033 FAX: (208) 736-3037

January 5, 1998

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

PATRICK D BROWN
HEPWORTH LEZAMIZ AND HOHNHORST
PO BOX 389
TWIN FALLS ID 83303-0389

RE: SRBA Claim(s) 36-00006, 36-00007, 36-00008, 36-00022,
36-00023, 36-00047, 36-00068, 36-00069,
36-00106, 36-08099, 36-15463

Dear Mr. Brown:

Please find the enclosed copies of the Notices of Completed Administrative Proceeding which the department has filed with the SRBA Court regarding the above referenced claims. You have received this notice pursuant to SRBA Court Administrative Order 11 requiring IDWR to report to the court and interested parties any pending changes to adjudication claims in basins for which a Director's Report has been filed with the court.

Please contact this office if you have any questions about the notice or the administrative process.

Sincerely,

Trish Fawcett
Technical Records Specialist

/tf

cc: U.S. Dept. of Justice
Idaho Attorney General

L A W O F F I C E S

*Hepworth, Lezamiz
& Hohnhorst*

- Established 1952 -

December 5, 1997

TWIN FALLS OFFICE

John C. Hepworth
John T. Lezamiz
John C. Hohnhorst
Jeffrey J. Hepworth
Penelope Parker**
Eileen A. McDevitt*
Patrick D. Brown

Wm. L. Nungester
of Counsel

BOISE OFFICE

J. Charles Hepworth*
John J. Janis

*Member CA Bar
**Member UT Bar

Idaho Department of Water Resources
1341 Fillmore, Suite 200
Twin Falls, ID 83301-3380

RE: Amended Notices of Claims

Gentlemen:

Enclosed please find this firm's check in the amount of \$6,410.00 in payment of fees assessed on the following claims:

Paul and Inez Watkins, Claim No. 36-00106	\$1,175.00
C-CAN Partners, Claim No. 36-00047	590.00
William Strange, Claim No. 36-00006	1,750.00
William Strange, Claim No. 36-00007	540.00
William Strange, Claim No. 36-00008	1,000.00
John W. and Deloris Jones, Claim No. 36-00068	1,045.00
John W. and Deloris Jones, Claim No. 36-00069	310.00
Total fees	<u>\$6,410.00</u>

While I do not interpret Idaho Code § 49-1414 to allow us to be assessed for additional uses of the same volume of water, we are hereby submitting these payments under protest because you will not allow filing of the amended claims without the fees. We reserve all rights to challenge your interpretation and to recover excess amounts being paid, and reserve right to show have you has miscalculated the amounts.

Very truly yours,

HEPWORTH, LEZAMIZ & HOHNHORST,
CHARTERED



By: _____
Patrick D. Brown

HLH

Chartered

TWIN FALLS OFFICE

208-734-7510
Blick Building
133 Shoshone St. N.
P.O. Box 389
Twin Falls, ID 83303-0389
FAX-208-734-4115

Boise Office

208-343-7510
537 West Bannock
P.O. Box 2582
Boise, ID 83701-2582
FAX: 208-342-2927

PDB/llm
Enclosure
/1205IDWR.llm

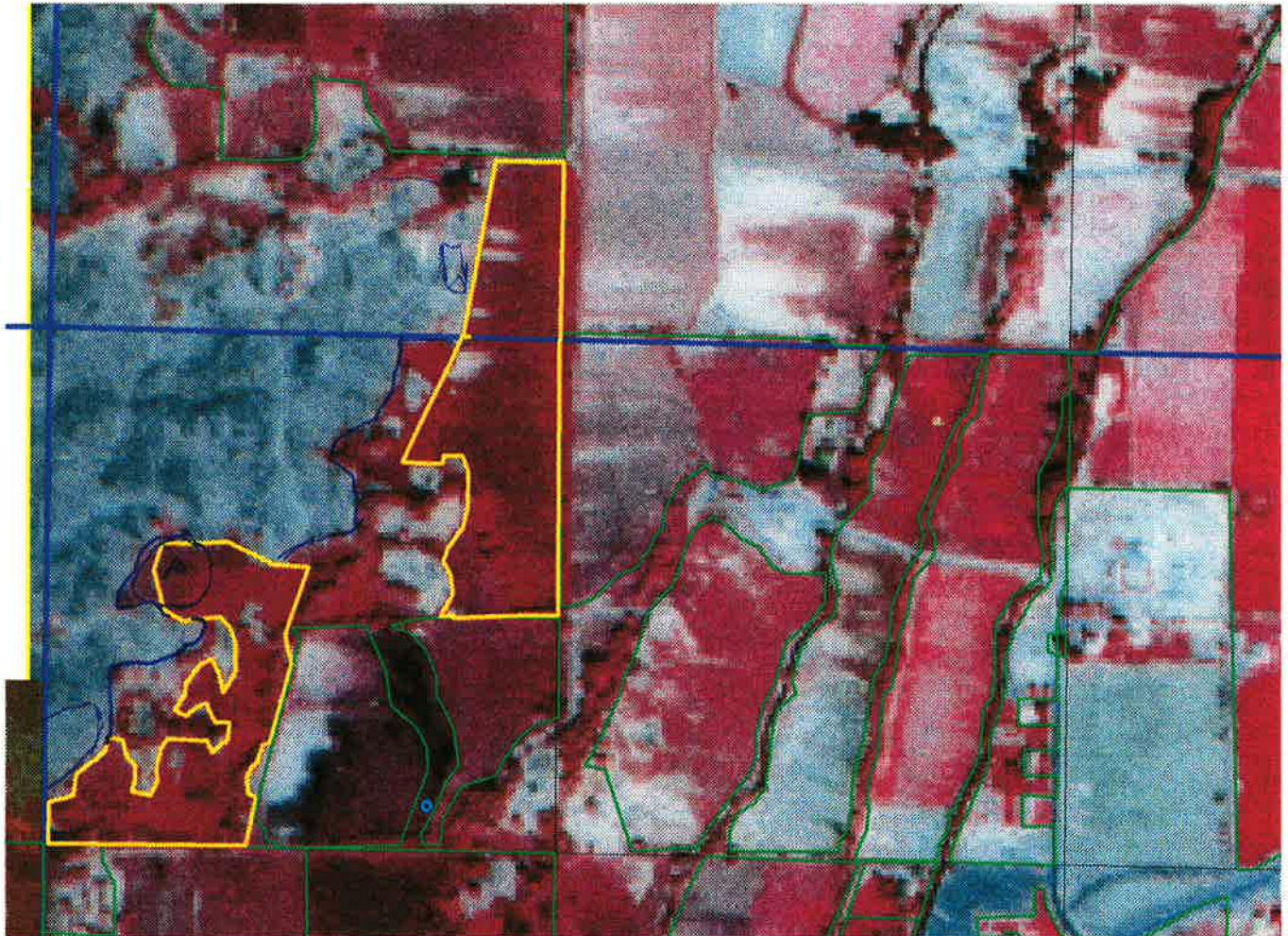
SUBCASE NO. 36-00006

	CLAIM (8/5/88)	AMENDED CLAIM	RECOMMENDATION	OBJECTION
NAME	William & Louise Strange	N/A	William & Louise Strange	XX William Strange & Penelope Turner
BASIS OF CLAIM	Decree		Decree	
SOURCE	Billingsley Creek		Billingsley Creek	
QUANTITY	3.50 cfs		.92 cfs	XX -requests as decreed
PRIORITY DATE	4/1/1885		4/1/1885	
PURPOSE OF USE	Irrigation		Irrigation	XX requests rrigation, stockwater, wildlife habitat and domestic as purposes of use.
PERIOD OF USE	4/1 - 10/15		3/15 - 11/15	XX - all uses 1/1 - 12/31
POINT OF DIVERSION	T07S R13E S11		T07S R13E S11	
PLACE OF USE	T07S R13E S10 T07S R13E S11 T07S R13E S14 T07S R13E S15 117 acres		T07S R13E S11 T07S R13E S14 13 acres	XX - include places of use for Strange Ranch Parcels.
remarks	"Use is claimed for all the land I own that is south of the Barlogi Ditch."		Water is delivered through the Sands Ditch. A diversion rate of 0.84 cfs at the field headgate is recommended for the place of use described above. 0.08 cfs of this right is limited to use for conveyance losses in delivery of this right.	XX strike all remarks after Sands Ditch.

IDAHO DEPARTMENT OF WATER RESOURCES

36-00006

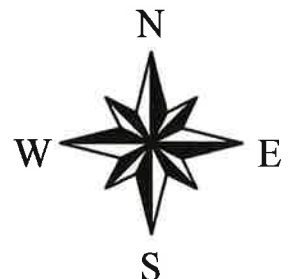
WILLIAM & LOUISE STRANGE



660 0 660 Feet

*notes per
field from
confirming added
acres.
1/14/98
SW*

TNS 7S, RNG 13E, SEC 11,
SW1/4SW1/4 & NW1/4NW1/4



⊙ Recommended Point of Diversion

 Recommended Place of use

 Section lines

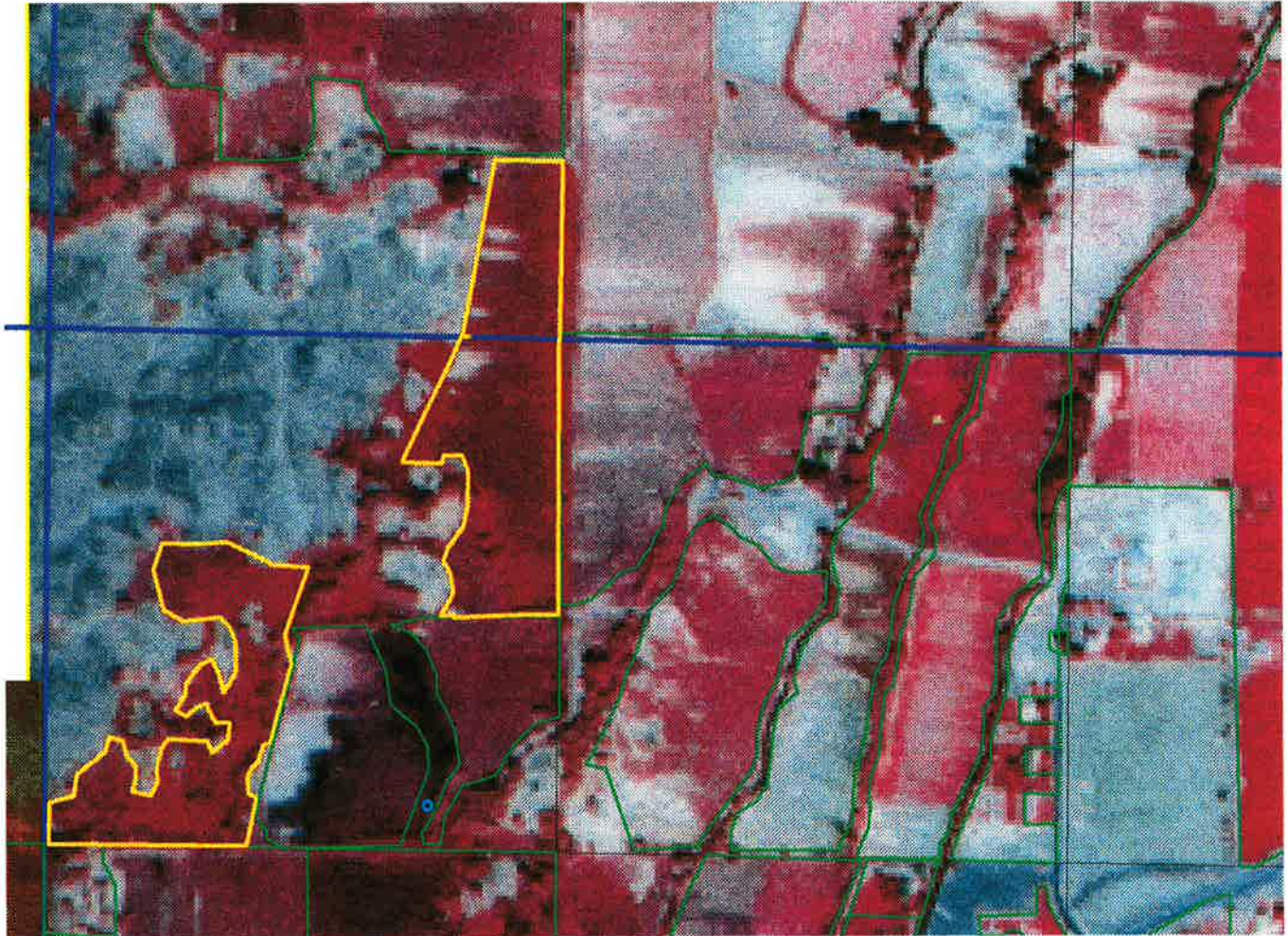
 Quarter/Quarter Lines

GIS PLACE OF USE PRESENTATION
1987 and/or 1988 NAPP PHOTOGRAPHY
DATA ENTRY OCTOBER 16, 1997
BY KELLY K CHRISTENSEN

IDAHO DEPARTMENT OF WATER RESOURCES

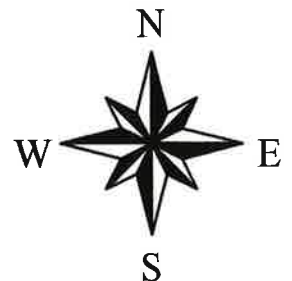
36-00006

WILLIAM & LOUISE STRANGE



660 0 660 Feet

TNS 7S, RNG 13E, SEC 11,
SW1/4SW1/4 & NW1/4NW1/4



⊙ Recommended Point of Diversion

 Recommended Place of use

 Section lines

 Quarter/Quarter Lines

GIS PLACE OF USE PRESENTATION
1987 and/or 1988 NAPP PHOTOGRAPHY
DATA ENTRY OCTOBER 16, 1997
BY KELLY K CHRISTENSEN

CLAIM NUMBERS 36-00006

DATE 10-16-97
AGENT ~~JK~~ KKC

TRANSFER NUMBER _____
OBJECTION FILED yes
TOTAL ACRES FROM RECOMMENDATION 13
GEOGRAPHIC INFO SYSTEM 12

RIGHT NO				NE				NW				SW				SE				
	TNS	RNG	SEC	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
RECOM	07S	13E	11											3						3
GIS														2.2						2.2
														2						2
RECOM	07S	13E	14					10												10
GIS								10.2												10.2
			revised acres					19.0												19
RECOM																				
GIS																				
RECOM																				
GIS																				

UPDATED Revised 1/22/98
B36-DBPOU.DBF see
B36-DBPOD.DBF _____

POLYGON # _____
POLYGON CREATED ON 604 () _____
ATTRIBUTES OF B36-POU.SHP () 10-16
ATTRIBUTES OF B36-POD.SHP (456) _____

* Added acres per Field Exam w/ Claimant.
Delivery thru Sands Ditch

SWSW + part NW NW - 584
part NW NW only - 583

add Pond shape file
2 Pond sizes: Sands D.
N: 0.9
S: 1.3

Due to Rectification it appears that the P/L extends across the Q/Q line, However, it does not. Discussed Shape file creation with Steve Clelland to determine ending boundary of Shape.

P/U CONFLICT yes () no (X)
P/D CONFLICT yes () no (X)
READY FOR DECREE yes () no ()
SENT FOR DECREE yes () no ()

R PROOF

CVR

MAPS

PHOTOS

MISC

MICROFILMED

OCT 11 1994

**WHERE AMENDED DIRECTOR'S REPORT FOR
BASIN 34 IS AVAILABLE FOR INSPECTION**

MOORE POST OFFICE, 321 MAIN STREET, MOORE
BUTTE COUNTY ASCS, 125 S WATER, ARCO
CUSTER COUNTY ASCS, 716 W CUSTER, MACKAY
CUSTER COUNTY CLERK'S OFFICE, CUSTER COUNTY
COURTHOUSE, 9TH & MAIN, CHALLIS
AUDITOR & RECORDER'S OFFICE, BUTTE COUNTY
COURTHOUSE, 248 W GRAND, ARCO
BIG LOST RIVER IRRIGATION DISTRICT OFFICE, 101 MAIN,
MACKAY
BIG LOST RIVER ELECTRIC CO-OP, 302 PINE, MACKAY

**WHERE AMENDED DIRECTOR'S REPORT FOR
BASIN 57 IS AVAILABLE FOR INSPECTION**

OWYHEE COUNTY ASSESSOR'S OFFICE, OWYHEE
COUNTY COURTHOUSE, MURPHY
U.S. POST OFFICE, MURPHY
U.S. POST OFFICE, 7 NORTH MAIN, HOMEDALE
U.S. POST OFFICE, MARSING
OWYHEE COUNTY ASCS, REICH STREET, MARSING
GEM IRRIGATION DISTRICT, 119 SOUTH FIRST, HOMEDALE
U.S. POST OFFICE, GRANDVIEW

**WHERE AMENDED DIRECTOR'S REPORT FOR
BASIN 36 IS AVAILABLE FOR INSPECTION**

A&B IRRIGATION DISTRICT, 11TH & E STREETS, RUPERT
DISTRICT COURT CLERK, BLAINE COUNTY COURTHOUSE,
202-2 AVE. S, HAILEY
DISTRICT COURT CLERK, BUTTE COUNTY COURTHOUSE,
248 W GRAND, ARCO
HAGERMAN POST OFFICE, 444 NORTH STATE, HAGERMAN
DISTRICT COURT CLERK, JEROME COUNTY COURTHOUSE,
300 N LINCOLN, JEROME
DISTRICT COURT CLERK, MINIDOKA COUNTY COURT
HOUSE, 8TH & G STREET, RUPERT
NORTHSIDE CANAL COMPANY, 921 N LINCOLN, JEROME
DISTRICT COURT CLERK, LINCOLN COUNTY COURT
HOUSE, 111 W S, SHOSHONE

**THIS IS AN IMPORTANT LEGAL NOTICE CONCERNING
YOUR WATER RIGHT CLAIMS IN THE SNAKE RIVER
BASIN ADJUDICATION**

OFFICES OF IDWR AND SRBA DISTRICT COURT

IDWR State Office, 1301 N. Orchard St., Statehouse Mail, Boise, ID 83720-9000;
(208) 327-7906, or toll-free (800) 451-4129.
IDWR Western Region, 2735 Airport Way, Boise, ID 83705-5082; (208) 334-2190.
IDWR Southern Region, 222 Shoshone St. East, Twin Falls, ID 83301-6602; (208) 736-3033.
IDWR Eastern Region, 900 N. Skyline, Ste. A, Idaho Falls, ID 83402-3653; (208) 525-7161.
SRBA DISTRICT COURT, P.O. Box 2707, 253 3rd Ave. North, Twin Falls, ID 83303-2707;
(208) 736-3011.

Idaho Department of Water Resources
P.O. Box 83720
Boise, Idaho 83720-0098

Presorted
First Class Mail
U.S. Postage Paid
Permit No. 1
Boise, ID

RECEIVED
JAN 08 1996

Department of Water Resources
Southern Region

36-00006
WILLIAM STRANGE
LOUISE STRANGE
PO BOX 387
HAGERMAN

MICROFILMED
DEC 04 1996

10 83332

RECEIVED

JAN 02 1996

Department of Water Resources

THIS IS AN IMPORTANT LEGAL NOTICE CONCERNING YOUR WATER RIGHT CLAIMS IN THE SNAKE RIVER BASIN ADJUDICATION

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	)	Case No. 39576
	)	NOTICE OF FILING AMENDED DIRECTOR'S
	)	FOR REPORTING AREAS 1, 2, AND 3
	)	(BASINS 34, 57 AND 36)

TO: ALL CLAIMANTS OF RIGHTS TO THE USE OF WATER IN REPORTING AREAS 1, 2 AND 3
(BASINS 34, 57 AND 36)

The Idaho Department of Water Resources has filed Amended Director's Reports for Reporting Areas 1, 2, and 3 (Basins 34, 57, and 36, also known as the test basins) with the SRBA District Court. One of the purposes of the Amended Reports is to conform the director's reports to the requirements of the adjudication statute, Title 42, chapter 14, Idaho Code, which was amended in 1994.

The Amended Reports amend the "preamble" to the director's reports, which include "general provisions." The general provisions apply to all water rights or certain classes of water rights, and are recommended to be included in the court's decree of water rights. The amendments significantly reduce the general provisions, and include some changes in the text of the remaining general provisions. The remainder of the preamble consists of explanatory material. The Amended Reports do not change the list of water rights in the report. IDWR will file amended reports at a later date that revise the list of water rights in the reports.

The SRBA District Court has entered an order granting the amendments to the Director's Report for Basin 57 in part. The order further provides that no additional objections to the remaining general provisions in the Basin 57 report will be allowed. The court has entered an order setting a hearing on the Amended Reports for Basins 34 and 36 on January 16, 1996, at 1:30 p.m., at the SRBA Courthouse. **The order provides that any party opposing the amendments to the report shall file with the court a notice and brief in opposition by 5:00 p.m. January 8, 1996;** any party wishing to file a response to the objections shall file their briefs prior to 5:00 p.m., January 15, 1996.

Some claimants have filed a motion asking the court to designate the general provisions as "Basin Wide Issue No. 5" for determination by the court. The court has entered an order designating the general provisions in Basin 57 as Basin Wide Issue No. 5. (One of the general provisions, concerning the Reynolds Creek Decree, was referred to the special master for Basin 57.) A hearing on the designation of general provisions in Basins 34 and 36 as part of Basin Wide Issue No. 5 will be held January 16, 1996, at 1:30 p.m. at the SRBA Courthouse.

The court's order also sets forth a schedule for the resolution of Basin Wide Issue No. 5. All parties to the SRBA who intend to participate must file with the SRBA District Court a notice of intent to participate by 5:00 p.m., January 5, 1996. The notice must state whether the party supports or opposes the inclusion of each general provision in the court's decree, and clearly and briefly explain their position. Briefs in support of the general provisions must be filed with the court by 5:00 p.m., January 26, 1996. Briefs in opposition to general provisions must be filed with the court by 5:00 p.m., February 9, 1996. Responsive briefs must be filed with the court by 5:00 p.m., February 16, 1996. A pretrial conference will be held at 9:00 a.m. on February 20, 1996, and hearing will be held at 9:00 a.m. on March 12, 1996, at the SRBA Courthouse.

A copy of each amended report is available for inspection at the locations listed on this notice. Copies of all or a portion of the amended reports and/or the court's orders are available from the offices of IDWR listed on this notice, subject to payment of costs of mailing and/or copying.

If you have questions about the SRBA, please call any office of IDWR listed in this notice; if you have questions concerning your rights and responsibilities as a claimant in the SRBA, please consult your attorney.

December 29, 1995
Karl J. Dreher
Director, Idaho Department of Water Resources

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

In Re the General Adjudication)
of the Rights to the Use of Water)
from the Snake River Basin)
Water System)

Case No. 36-00006 -0001

The State of Idaho, ex rel.)
R. Keith Higginson in his)
official capacity as Director)
of the Idaho Department of)
Water Resources,)

RESPONSE TO OBJECTION

Petitioner,)

vs.)

The United States; the State)
of Idaho; and all Claimants to)
the use of water from the Snake)
River Basin Water System,)

Respondents.)

I. GENERAL INFORMATION

1. Person responding to objection:

Name: R. KEITH HIGGINSON, DIRECTOR

Address: IDAHO DEPARTMENT OF WATER RESOURCES
P.O. BOX 44449
BOISE, ID 83711-4449

Briefly describe your interest in this water right:

IDWR is required to file a response to an objection to part
I of the director's report pursuant to I.C. section 42-1412(2).

(Over)

2. Person who filed objection:

Name: WILLIAM STRANGE
Address: PENELOPE TURNER
PO BOX 387
HAGERMAN ID 83332

3. If this response is filed by an attorney:

Attorney Name(s): NICHOLAS B. SPENCER
Attorney Address: DEPUTY ATTORNEY GENERAL(S)
IDAHO DEPARTMENT OF WATER RESOURCES
P.O. BOX 44449
BOISE, ID 83711-4449
Attorney Phone No.: (208) 327-7900

II. STATEMENT OF THE RESPONSE

1. ☒ Name and Address: I respond to the objection concerning the name and/or address of the owner of the water right.
3. ☒ Quantity: I respond to the objection concerning:
- 3a. ☒ The total quantity of water used in cubic feet per second.
7. ☒ Purposes of Use: I respond to the objection concerning the purpose(s) of use.
8. ☒ Period of Year: I respond to the objection concerning the period of year when water is used or is necessary for the purpose stated.
9. ☒ Place of Use: I respond to the objection concerning:
10. ☒ Consumptive Use: I respond to the objection concerning the annual volume of consumptive use.
11. ☒ Remarks: I respond to the objection concerning the "remarks" listed with the water right.

14. |X| Other: I respond to the objection concerning:

ALL MATTERS RAISED IN THE CLAIMANTS' ANSWER,
AFFIRMATIVE DEFENSES AND PRAYER FOR RELIEF.

REASONS SUPPORTING EACH BOX CHECKED

In response to Statement of the Objection item 1, and all allegations regarding this item, IDWR responds as follows: No notice of change of ownership has been filed with IDWR by the owner of the right as required by Idaho Code Sec. 42-1409(7). IDWR therefore lacks sufficient information to form a belief as to the truth of the matter asserted. Upon the filing of a notice of change of ownership, IDWR will correct the name and address of the owner of this water right accordingly. The claimant may also need to file a Standard Form 3 with the SRBA Court.

In response to Statement of the Objection items 3 and 3.a, and all allegations of the objection regarding those items, IDWR responds as follows: (1) it recommended the amount of water it determined was being beneficially used; (2) the claimant is not entitled to any amount greater than that which is beneficially used (Idaho Code Secs. 42-104 and 42-1402); (3) the recommendation of the director to the SRBA Court as to how the right should be decreed does not constitute a taking because it is simply a recommendation and not a final determination of the right; and (4) the eventual decree by the SRBA Court of the amount of water beneficially used, even if less than the amount previously decreed, will not constitute a taking because the right is limited to that amount beneficially used.

In response to Statement of the Objection item 7, and all allegations of the objection regarding that item, IDWR responds that it recommended the same purpose of use that was identified on the notice of claim and that was found when the claim was investigated. By identifying in the objection stockwater, domestic and wildlife as additional uses that the claimant did not list on the notice of claim, the claimant improperly seeks to use the objection process to amend the claim. A claimant must obtain leave of the court to amend a claim after a director's report is filed, just as a party must obtain leave of the court to file a late claim after the director's report is filed. Once leave of the court is granted, IDWR can investigate the amended claim and make an appropriate recommendation to the

(Over)

court.

In response to Statement of the Objection item 8, and all allegations of the objection regarding this item, IDWR responds as follows: The decree asserted by the claimant does not contain a period of use decreed for this water right. Idaho Code 42-1411(2)(g) requires the director to determine the period of use of each water right acquired under state law that is recommended in the director's report. IDWR has developed irrigation season of use standards for various climatic areas throughout the state based on a 75% chance of a 24 degree fahrenheit frost. The irrigation season of use cannot exceed the period in which water may be beneficially used. The period of the year during which this water right may be used is consistent with the standard irrigation season of use for the area in which the place of use of this water right is located. Water may be used for irrigation outside the standard season of use, subject to the conditions set forth in general provision 12b of the director's report.

In further response to this objection item, IDWR responds that it recommended a longer irrigation season of use than was claimed. By now seeking a longer irrigation season of use than was claimed and recommended, the claimant improperly seeks to use the objection process to amend the claim. A claimant must obtain leave of the court to amend a claim after a director's report is filed, just as a party must obtain leave of the court to file a late claim after the director's report is filed. Once leave of the court is granted, IDWR can investigate the amended claim and make an appropriate recommendation to the court.

In response to Statement of the Objection 9, and all allegations of the objection regarding those items, IDWR responds that the recommended water right accurately describes the place of use of the right. IDWR further responds that the claimant originally claimed 117 irrigated acres, but in the objection the claimant now claims 80 irrigated acres.

In response to Statement of the Objection item 10 and all allegations of the objection regarding this item, IDWR responds as follows: (1) The decree asserted by the claimant did not set an annual volume of consumptive use for this water right. (2) Idaho Code Sec. 42-1411(2)(i) requires the director to determine the annual volume of consumptive use for each water right acquired under state law and recommended in the director's report. (3) Idaho Code Sec. 42-1401A(2) provides that the quantification of consumptive use "is included as a rebuttable

presumption in a decree only for the purpose of transfers pursuant to section 42-222, Idaho Code"; therefore, the consumptive use recommended for this water right is included solely for use in future transfer proceedings. (4) The annual volume of consumptive use recommended for this right is 3 acre feet per acre. This is the maximum volume of water consumed by the most water consumptive crop (pasture) that can be grown in the area during the period of year when water is used for irrigation, as provided for by Idaho Code Sec. 42-1401A(2). (5) The recommendation of the director to the SRBA Court as to how the right should be decreed does not constitute a taking because it is simply a recommendation and not a final determination of the right. (6) The eventual decree by the SRBA Court of the amount of water beneficially used, even if less than the amount previously decreed, will not constitute a taking because the right is limited to that amount beneficially used.

In response to Statement of the Objection item 11, and all allegations of the objection regarding that item, IDWR responds that it has authority pursuant to Idaho Code Sec. 42-1411(2)(j) to include in its recommendations of water rights acquired under state law and recommended in the director's report "such other matters as are necessary to define the right." The remark or remarks objected to are necessary to adequately describe and define this water right.

In response to Statement of the Objection item 14, and all allegations of the objection regarding that item, see attached "IDWR's Response to Answer Affirmative Defenses and Prayer for Relief of Claimant".

In response to the sentence listed in Changes to the Director's Report, whereby the claimant attempts to "reserve the right to claim all purposes of use and quantities of use as shown by the evidence at trial," IDWR responds as follows: Insofar as this purported reservation of rights may constitute an attempt to reserve the right to amend at trial the claimant's notice of claim, the claimant improperly seeks to use the objection process to amend the claim. A claimant must obtain leave of the court to amend a claim just as a party must obtain leave of the court to file a late claim after the director's report is filed.

(Over)

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CHANGES TO THE DIRECTOR'S REPORT

The director proposes no changes to the description of this claim in the Director's Report.

☒ Check here if you are submitting documents. Please list each document by the title and number of pages. You may use additional pages if necessary:

	No. of Pages
Notice of Claim No. A36-00006	4
IDWR's Response to Answer, Affirmative Defenses and Prayer for Relief of Claimant	4

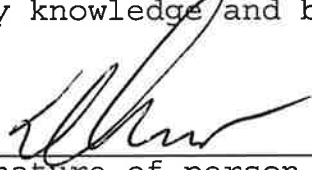
VERIFICATION (Must be Completed)

State of IDAHO

County of ADA

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

That R. Keith Higginson, in his official capacity as director of the Idaho Department of Water Resources, is a party to this proceeding, as defined by I.C. 42-1401A(1) and (7); that I am the Adjudication Bureau Chief for IDWR and am authorized by R. Keith Higginson, in his official capacity as director of IDWR, to verify this response; and that I have read the foregoing response, know its contents and that the statements contained therein are true to the best of my knowledge and belief.



Signature of person filing response

By:



(Attorney signing in
representative capacity)

Subscribed and sworn to before me this 30th day of August,
1993.



Notary Public for Idaho

Residing at: _____

My Commission expires _____

Danni Smith, Notary Public
Residing at Boise, Idaho
My Commission Expires December 5, 1994

(Over)

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CERTIFICATE OF MAILING

I hereby certify that on the 31st day of August, 1993, I mailed the original and copies of the foregoing response, including all attachments, to the following persons, by mailing the original and/or true and correct copies, postage prepared and addressed as follows:

1. Original to:

Clerk of the District Court
Snake River Basin Adjudication
253 Third Avenue North
P.O. Box 2707
Twin Falls, Idaho 83303-2707

2. One copy to the owner of the water right, and you must fill in the following information:

See No. 3

3. One copy to the party who filed the objection, or if represented by an attorney, to their attorney; and you must fill in the following information:

Name: HEPWORTH NUNGESTER & LEZAMIZ
Address: PATRICK D BROWN
& PENELOPE PARKER
PO BOX 389
TWIN FALLS ID 83303

4. One copy to:

United States Department of Justice
Environment and Natural Resource Division
550 West Fort Street, Box 33
Boise, Idaho 83734


Signature of Respondent or attorney
mailing on Respondent's behalf

RECEIVED

MAR 30 1993

Department of Water Resources
Adjudication Bureau

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

In Re the General Adjudication
of Rights to the Use of Water
from the Snake River Basin
Water System

Case No. A36-00006

(You must insert the
water right number you
are objecting to)

The State of Idaho, ex rel.
R. Keith Higginson in his
official capacity as Director
of the Idaho Department of
Water Resources,

OBJECTION

Petitioner,

vs.

The United States; the State
of Idaho; and all Claimants to
the use of water from the Snake
River Basin Water System,

36-00006 -0001/
93-04-0015

Respondents.

INSTRUCTIONS

This form must be used to file an objection to any water right recommended in the Director's Report. You may object to one water right per objection form. The water right number you are objecting to must be indicated above in the blank space following "Case No." To object to more than one water right, you must file a separate objection form for each. Forms may be obtained from the Idaho Department of Water Resources (IDWR), or you may copy or reproduce this blank form, as long as it is identical to the court's form. You must file your objection by the deadline shown in the notice that IDWR mailed to you. The objection must be received by the court on or before the deadline specified. Instructions for mailing this objection are found at Page 6, and must be strictly followed.

Any party physically filing 25 (twenty-five) or more objections must make an appointment with the Clerk of the Adjudication Court and arrange for an appointment to file multiple objections.

(Over)

OBJECTION - 1

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By filing an objection form, you are certifying that the objection is well-grounded in fact; is warranted by existing law or a good-faith argument for the extension, modification or reversal of existing law; and that it is not filed for any improper purpose, such as to harass, cause unnecessary delay or needless increase in the cost of litigation.

I. GENERAL INFORMATION

Please fill in the following information:

1. Person objecting:

Name: William Strange & Penelope Turner

Address: P. O. Box 387

Hagerman, Idaho 83332

Briefly describe your interest in this water right:

Priority date 4/1/1885

Water right decreed 3/22/32 pursuant to New

International Mortgage Bank v. Idaho Power

Company;

2. Owner of the water right:

Name: William Strange & Penelope Turner

Address: P. O. Box 387

Hagerman, Idaho 83332

3. If this objection is filed by an attorney:

Attorney Name: Patrick D. Brown & Penelope Parker

Attorney Address: Hepworth, Nungester & Lezamiz

P.O. Box 389, Twin Falls, ID 83303

Attorney Phone No.: (208) 734-7510

If filed by an attorney, notice of pending court proceedings will be sent to the attorney only.

II. STATEMENT OF THE OBJECTION

Please check each "box" which states your objection to the recommendation in the Director's Report.

1. ☒ Name and Address: I object to the name and/or address of the owner of the water right.
2. ☐ Source: I object to the source of water.
3. ☒ Quantity: I object to:
 - a. ☒ the total quantity of water used in cubic feet per second; or
 - b. ☐ the total quantity of water stored in acre-feet per year; or
 - c. ☐ the total quantity of water reserved for each and every purpose, including all present and future uses.
4. ☐ Priority Date: I object to the priority date.
5. ☐ Points of Diversion: I object to the legal description of the point(s) of diversion.
6. ☐ Instream Flow: I object to the legal description of the beginning and ending points of the instream flow.
7. ☒ Purpose(s) of Use: I object to the purpose(s) of use.
8. ☒ Period of Year: I object to the period of year when water is used or is necessary for the purpose stated.
9. ☒ Place of Use: I object to:
 - a. ☐ the legal description of the place of use; or
 - b. ☐ the number of irrigated acres within each forty (40) acre subdivision.
10. ☒ Consumptive Use: I object to the annual volume of consumptive use.
11. ☒ Remarks: I object to the "remarks" listed with the water right.

(Over)

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12. ☐ Water Right Recommendation: I object to:

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a. ☐ this water right being recommended at all; or

b. ☐ this water right not being recommended.

13. ☐ Description of Reservation: I object to the legal description of the reservation.

14. ☒ Other: I object to: See attached

REASONS SUPPORTING EACH BOX CHECKED

In the space following, you must state the reason(s) by number for each box checked. You may use additional pages if necessary.

See Page 7

CHANGES TO THE DIRECTOR'S REPORT

Specifically describe how you want the Director's Report to be changed. You may use additional pages if necessary.

See Page 7

Please note: You should attach copies of documents which support your objection. Note on each document the "box number" it supports.

☒ Check here if you are submitting documents. Please list each document by the title and number of pages. You may use additional pages if necessary.

See Hagerman Water Right Owners, Inc.'s

Compendium "A"

VERIFICATION (Must be Completed)

State of Idaho

County of ~~Twin Falls~~ Gooding

William Strange, being first duly
(Name of person filing objection)
sworn, upon oath, deposes and says:

That I am the person or entity filing this objection, that I am a water claimant or party in this proceeding, as defined by I.C. Sec 42-1401A(1) and (7), and that I have read the foregoing objection, know its contents and that the statements contained therein are true to the best of my knowledge and belief.

William Strange
Signature of person filing objection

By: [Signature]
(Attorney signing in
representative capacity)

Subscribed and sworn to before me this 19th day of April,
1993.

[Signature]
Notary Public for Idaho
Residing at: Hagerman, Idaho
My Commission Expires: 5-10-97

(Over)

INSTRUCTIONS FOR MAILING

You must mail the objection, including all attachments, to the Clerk of the Court. **FAX filings will not be accepted by the Clerk of the Court.** You must also send a copy to the owner of the water right, if other than yourself; to the Office of the Attorney General, State of Idaho; and to the United States Department of Justice, as set out below in the Certificate of Mailing. Finally, you must sign the Certificate of Mailing to show that you followed these steps.

CERTIFICATE OF MAILING

I hereby certify that on the 28 day of April, 1993, I mailed the original and copies of the foregoing objection, including all attachments, to the following persons, by mailing the original and/or true and correct copies, postage prepaid and addressed as follows:

1. Original to:

Clerk of the District Court
Snake River Basin Adjudication
253 Third Avenue North
P.O. Box 2707
Twin Falls, Idaho 83303-2707

2. One copy to the owner of the water right, and you must fill in the following information:

Owner name: William Strange & Penelope Turner

Owner's address: P. O. Box 387

Hagerman, Idaho 83332

3. One copy to:

Chief, Natural Resources Division
Office of the Attorney General
State of Idaho
P.O. Box 44449
Boise, Idaho 83711-4449

4. One copy to:

United States Department of Justice
Environment and Natural Resource Division
550 West Fort Street, Box 33
Boise, ID 83724



Signature of Objector or attorney
mailing on Objector's behalf

REASONS SUPPORTING EACH BOX CHECKED, page 4

Box 1 - See Paragraph 2, page 2 for correct name and/or address.

Box 3, 3a and 10 - IDWR recommends an amount less than decreed and/or beneficially used. A reduction in water right would constitute a taking.

Box 7 - Beneficially used for purposes set forth in notice of claim.

Box 8 - IDWR recommends a period of use less than decreed and/or beneficially used. A reduction in water right would constitute a taking.

Box 9 - Director's Report fails to accurately state the place of use.

Box 11 - This is beyond the statutory authority vested in the Director.

CHANGES TO DIRECTOR'S REPORT, page 4

Name change to ^{WILLIAM}~~Walter~~ Strange and Penelope Turner, water rights granted to Mrs. Turner by William Strange with rights of Life Estate retained by William Strange; Maximum quantity of water as decreed and/or beneficially used; usage for irrigation, stockwater, wildlife habitat and domestic; Period of use from 01/01 - 12/31; and place of use includes Strange Ranch parcels in Section 10, 11, 14 and 15 for a total of 80 acres; and Remarks: after "Sands Ditch" should be stricken.

Objectors reserve the right to claim all purposes of use and quantities of use as shown by the evidence at trial.

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Question 14., page 4, Other

I.

GENERAL RESPONSE

Except as specifically admitted herein, objectors deny each and every allegation contained in the Director's Report, any related or subsidiary pleadings, and/or any attachments thereto.

II.

DESCRIPTIVE SUMMARY

(DIRECTOR'S REPORT PART I)

(hereinafter DRP-I)

(DRP-I at first unnumbered page)

The objectors admit that Part I of the Director's recommendation contains some claims to water rights appropriated under state law from Reporting Area 3. The objectors deny all other averments because the objectors lack sufficient knowledge or information upon which to form a belief as to the truth of the averments.

III.

TABLE OF CONTENTS

(DRP-I at 2nd and 3rd unnumbered pages)

The objectors admit that the Table of Contents reflects the page numbers of the referenced sections and deny all other averments based upon the objectors' lack of sufficient knowledge or information upon which to form a belief as to the truth of the averments and because any averment, expressed or implied, is so

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indefinite that it prevents the objectors from knowing what would be admitted or denied.

IV.

INTRODUCTION

1. INSTRUCTIONS FOR USING THIS REPORT PART I. (DRP-I at page 1)

The objectors admit that Part I consists of seven sections; that the description of the water system includes a brief description of Reporting Area 3 and an illustration of the boundaries of the reporting area; that the water rights and the list of the recommended rights are grouped alphabetically by source and listed chronologically by priority date; that the rights or claims in the list of claims/rights not recommended are listed numerically by water right number; and that brief instructions are found at the beginning of the applicable sections. The objectors deny that any description or any implication that the description of the water system or the illustrations are true and accurate due to lack of knowledge or information regarding the truth of the averment; deny that the general provisions apply to all water rights or define or limit classes of water rights; and deny that the general provisions "will affect your water right," based upon insufficient knowledge or information upon which to form a belief as to the truth of the averments.

2. SCOPE OF THE ADJUDICATION. (DRP-I at page 1 - 3)

The objectors deny all averments in paragraph a., due to lack of sufficient knowledge or information upon which to form a belief as to the truth of the averments.

Regarding paragraph b., the objectors lack sufficient information or knowledge upon which to form a belief as to whether water rights which are not claimed in the adjudication will or will not exist upon entry of the court's decree and, therefore, deny such averment. The objectors admit that the court entered an order dated January 17, 1989, but presently lack sufficient knowledge to know whether any of the other averments concerning the court's order are true or accurate and, therefore, deny the same. The objectors deny that a right must be adjudicated before water may be distributed by the director. The objectors deny all other averments in paragraph b.

3. PURPOSE OF THIS REPORT PART I. (DRP-I at page 3 - 4)

The objectors admit that portion of the first sentence which states "This report contains the Director's recommendations to the SRBA District Court as to the nature and extent of water rights," but deny that such recommendations "are necessary for administration of water rights in Reporting Area 3," and further deny the Director has authority to "administer" such rights.

Regarding the second paragraph, the objectors admit that all water rights remain subject to the applicable law generally, but deny the remainder of the second paragraph.

Regarding the third paragraph of this section, the objectors deny all averments therein based upon lack of knowledge or information upon which to form a belief as to the truthfulness of the averments.

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v.

DESCRIPTION OF THE WATER SYSTEM: BASIN 36

1. BOUNDARIES OF BASIN. (DRP-I at pages 4 - 6)

Regarding the first paragraph of this section, the objectors deny all averments due to a lack of knowledge or information upon which to admit or deny.

Regarding the second, third and fourth paragraphs of this section, the objectors admit that as broad statements, those paragraphs are generally accurate but the statements are so broad and attenuated from any matter relevant to the objectors' water right that the objectors are unable to know what would be implicitly admitted or denied and therefore, deny the same.

With respect to the fifth paragraph of this section, the objectors lack sufficient knowledge or information upon which to form a belief as to the truth of any matter averred and, therefore, deny the averments.

2. WATER SOURCES. (DRP-I at page 6)

The objectors admit that the Snake River Plain Aquifer is the source of outflows of springs located along the Snake River Canyon Wall in the Hagerman Valley. The objectors presently lack sufficient knowledge or information upon which to form an opinion as to the truth of the other averments set out in this section and, therefore, deny the same.

3. DEVELOPMENT OF WATER USE. (DRP-I at pages 6 - 9)

The objectors admit that numerous factual and historical averments are set out in this section, which may be accurate, but

these objectors have no basis for knowing whether some or all of the averments are intended to relate to the objectors' claims and, thus, are prevented from knowing what would be admitted or denied. Therefore, the averments are denied.

VI.

GENERAL PROVISIONS

GENERAL PROVISIONS 1 - 8 APPLY TO ALL WATER RIGHTS IN BASIN 36.

(DRP-I at page 9)

The objectors deny that "General Provisions 1 - 8" apply to all water rights in Basin 36 as the statements are so broad and attenuated from any matter relevant to the objectors' water rights, that the objectors are unable to know what would be explicitly admitted or denied. The objectors also specifically deny that general provisions 1-8 apply to the objectors' right.

1. EFFECT OF ADJUDICATION. (DRP-I at page 9)

With respect to paragraph a., the objectors presently have no knowledge or information upon which to form a belief as to the truth of whether a future decree would supersede prior decrees, or whether unclaimed rights would cease to exist and, therefore, deny the same.

Regarding paragraph b., the objectors deny that the Director has any powers to administer water rights other than those specifically delegated by the Legislature of the State of Idaho, and which do not violate the objectors' state and federal constitutional rights, and therefore the averments are denied.

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2. GENERAL ADMINISTRATIVE PROVISIONS. (DRP-I at pages 9-10)

The objectors admit paragraphs a. and b.

3. CONJUNCTIVE ADMINISTRATION (DRP-I at page 10)

The objectors deny the conjunctive administration provisions based upon the objectors' lack of sufficient knowledge or information upon which to form a belief as to the truth of the averments and because any averment expressed or implied is so indefinite that it prevents the objectors from fairly understanding what would be admitted or denied. Additionally, the objectors deny that the Department of Water Resources has any statutory or regulatory authority for the "conjunctive administration" as therein described.

4. ADMINISTRATION OF GROUND WATER RIGHTS (DRP-I at page 10)

The objectors deny the averments within this section.

5. ADMINISTRATION OF BASIN 36 RELATIVE TO THE SNAKE RIVER (DRP-I at page 10)

The objectors admit that the springs are hydrologically interconnected with the Snake River Aquifer, but deny all other averments based upon the objectors' lack of sufficient information or knowledge upon which to form a belief as to the averments herein. The objectors additionally deny any said averments expressed or implied because the averments are so indefinite and generalized as to prevent the objectors from fairly understanding what would be admitted or denied.

6. ADMINISTRATION OF SMALL DOMESTIC AND STOCK WATER RIGHTS (DRP-I at page 11)

The objectors admit that part of the first sentence of subparagraph a. to the effect that "small domestic and stock water rights from surface water are not subject to administration," but deny the balance of said sentence and said paragraph.

The objectors admit the first sentence of paragraph b., and deny the balance of that paragraph because the criteria set forth therein ("if the director determines that administration is necessary") is so ambiguous, indefinite and uncertain that it prevents the objectors from knowing what would be admitted or denied, and by further reason of the fact that no statutory or regulatory authority exists conferring such sweeping and unlimited authority upon the Director or the Department.

The objectors deny the averments in paragraph c. as the averments are inaccurate and because the objectors lack sufficient knowledge or information upon which to form a belief as to the truth of the matters averred.

7. MEASURING DEVICES AND CONTROL WORKS (DRP-I at page 11)

The objectors deny all averments contained herein as such averments are based upon an indeterminate subjective standards which are so ambiguous and indefinite as to prevent the objectors from fairly knowing what would be admitted or denied. Additionally, no statutory or regulatory authority exists conferring such sweeping and unlimited authority upon the Director or the Department as is alleged in this paragraph.

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8. FIRE FIGHTING PURPOSES (DRP-I at page 11)

The objectors admit that subparagraph a. and subparagraph b. are generally accurate statements of present law, but deny the averments are in any way relevant to defining the objectors' right.

9. CONSUMPTIVE USE (DRP-I at page 12)

The objectors lack sufficient knowledge or information upon which to form a belief as to the truth of any matter averred and, therefore, deny the same.

GENERAL PROVISION 10 APPLIES TO ALL WATER RIGHTS IN BASIN 36 SHOWN WITH DOMESTIC USE AS A PURPOSE OF USE (DRP-I at page 12)

The objectors deny that "General Provision 10" applies to all water rights in Basin 36 shown with domestic use as a purpose of use as the statements are so broad and attenuated from any matter relevant to the objectors' water rights, that the objectors are unable to fairly understand what would be explicitly admitted or denied and, therefore, deny the same.

10. DOMESTIC USE (DRP-I at page 12)

The objectors deny that the definition of "domestic use" contained in paragraphs a., b., and c. is consistent or in conformity with the definition of such term for purposes of the Idaho Constitution, or statutory definition contained in I.C. Section 42-111 as now, or as heretofore in effect at relevant times. The objectors further deny that the limitations set forth therein exist, are in force, or apply or serve in any way to limit objectors' rights.

GENERAL PROVISION 11 APPLIES TO ALL WATER RIGHTS IN BASIN 36 SHOWN WITH STOCK WATER USE AS A PURPOSE OF USE. (DRP-I at page 13)

The objectors deny that "General Provision 11" applies to all water rights in Basin 36 shown with stock water use as a purpose of use as the statements are so broad and attenuated from any matter relevant to the objectors' water right, that the objectors are unable to fairly understand what would be admitted or denied and, therefore, deny the same.

11. STOCK WATER USE (DRP-I at page 13)

The objectors deny the averments herein as beyond the scope and applicability of the definition as provided by Idaho law as now, or as heretofore in effect at relevant times. The objectors further deny that the limitations set forth therein limit the objectors' right or are relevant to the right.

GENERAL PROVISIONS 12 - 16 APPLY TO ALL WATER RIGHTS IN BASIN 36 SHOWN WITH IRRIGATION AS A PURPOSE OF USE (DRP-I at page 13)

The objectors deny that "General Provisions 12 - 16" apply to all water rights in Basin 36 shown with irrigation as a purpose of use as the statements are so broad and attenuated from any matter relevant to the objectors' water right that the objectors are unable to fairly understand what would be admitted or denied.

12. IRRIGATION USE. (DRP-I at pages 13 - 14)

The objectors deny all averments based upon the objectors' lack of sufficient knowledge or information upon which to form a belief as to the truth of the averments and because

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prevent the objectors from fairly knowing what would be admitted or denied; because the standard utilized ("as determined by the director") is ambiguous, subjective and indefinite so as to prevent objectors from knowing what would be admitted or denied; and because it is both expressly and implicitly in excess of the power and authority conferred upon the State of Idaho, the Director or the Department by the Constitutions of the United States and State of Idaho, pertinent provisions of the Idaho Code or valid applicable regulations, if any, adopted by the Department in conformity with law. Therefore, the objectors deny the same.

13. DIVERSION VOLUME FOR IRRIGATION. (DRP-I at page 14)

The objectors admit that Figure 1 generally depicts certain lands in Basin 36; however, the objectors deny all other averments including that the amounts set forth are the maximum annual volume of water reasonably required at the field headgate for irrigation, either within Basin 36 in general, or upon objectors' real property in particular. The objectors additionally deny that the maximum annual volumes per acre set forth is that which is "reasonably required for irrigation unless a higher annual diversion volume is reasonably required due to conveyance losses, method of irrigation or field conditions;" because the standard utilized ("as determined by the director") is ambiguous, subjective and indefinite so as to prevent objectors from knowing what would be admitted or denied; and because it is both expressly and implicitly in excess of the power and authority conferred upon the State of Idaho, the Director or the Department

by the Constitutions of the United States and State of Idaho, pertinent provisions of the Idaho Code or valid applicable regulations, if any, adopted by the Department in conformity with law. Therefore, the objectors deny the same.

14. CONSUMPTIVE USE FOR IRRIGATION. (DRP-I at page 14 and 15)

The objectors admit that the recommended water rights contained within the Director's Report show only the irrigation use listed unless otherwise indicated in "Remarks." The objectors deny all other averments contained within this section, including the amount of maximum annual volume of consumptive use per acre in the northern and southern portions of the basin, all of which is beyond the scope of any power or authority vested in the Director or the Department, and contrary to fact; historical use; established, vested, decreed, licensed or permitted rights.

15. AMOUNT OF COMBINED WATER RIGHTS FOR IRRIGATION. (DRP-I at page 15)

The specific averments have no relationship to or basis in fact relating to the individual needs or rights of the objectors, and accordingly, objectors deny this section in its entirety. In addition, no statutory or regulatory authority exists conferring upon the Director, or the Department, the power to limit use and ownership of objectors' private property rights as alleged.

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16. DIVERSION RATES IN EXCESS OF .02 CFS PER ACRE. (DRP-I at page 15 - 16)

The objectors deny the averments contained in this section in its entirety.

17. INSTRUCTIONS FOR USE OF LIST OF RECOMMENDED WATER RIGHTS. (DRP-I at page A-i, A-ii and A-iii)

The objectors admit that each water right in the list of recommended water rights includes a description including right number, name and address, source, maximum quantity, consumptive use, priority date, point of diversion, purpose of use, period of use, place of use, basis of right and others. The objectors lack sufficient knowledge or information upon which to form a belief as to the truth of any matter averred in said descriptions other than that the descriptions allegedly include the Director's or Department's version of the facts as they relate to the matters identified. Objectors deny the accuracy of the substantive allegations or information set forth with regard to the objectors' right.

18. IDAHO DEPARTMENT OF WATER RESOURCES RECOMMENDED WATER RIGHTS ACQUIRED UNDER STATE LAW. (DRP-I, pages A-1 - B-25)

The objectors lack sufficient knowledge or information upon which to form a belief as to the truth of any matter averred in said recommended water rights other than those specific admissions contained in Questions 1 - 12 of the attached individual objection, and therefore deny the same.

DIRECTOR'S REPORT FOR REPORTING AREA 3 (BASIN 36)

(DIRECTOR'S REPORT PART II)

I.

Objectors do not understand the allegations, averments or contents of Part II of the Director's Report for Reporting Area 3 (Basin 36) to pertain or relate to objectors or their claims, and do not believe any response is required. To the extent a response is required, objectors deny the same in its entirety.

DIRECTOR'S REPORT FOR REPORTING AREA 3 (BASIN 36)

(DIRECTOR'S REPORT PART III)

I.

No report denominated as Part III of the Director's Report for Reporting Area 3 (Basin 36) has been filed, and accordingly objectors are unable to admit, deny or otherwise response to the same. Objectors do not understand that the contemplated subject matter of such Part III will relate or pertain to objectors or their claims, and no response is required in any case. To the extent any response is required, objectors deny the same in its entirety.

VIII.

AFFIRMATIVE DEFENSES

Pursuant to I.R.C.P. 8(c), objectors herewith state the following matters of affirmative defense or avoidance:

AFFIRMATIVE DEFENSE NO. 1

The objectors' water right is an incorporeal form of real property (as defined by Idaho Code Sections 7-703, 73-114, 55-101,

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and like statutes) protected by Section 14, Article 1, of the Idaho Constitution, and the Fifth Amendment to the United States Constitution, and allege that the actions of the Director in recommending, limiting and/or regulating said rights is an unconstitutional infringement upon and a taking of private property, without just compensation and violation thereof.

AFFIRMATIVE DEFENSE NO. 2

The adjudication authorization legislation, I.C. Section 42-1401, et seq., on its face and as applied by the Director and the Department constitutes an improper delegation of constitutional power and authority conferred upon the executive, legislative and/or judicial branches of government and as such violate the provisions governing separation of powers set forth in Article 2, Section 1, Idaho Constitution.

AFFIRMATIVE DEFENSE NO. 3

The procedure set forth in the adjudication authorization legislation, statutes, I.C. Section 42-1401, et seq., and any rules, regulations, procedures, policies or standards promulgated by the Director and/or the Department, if any, are vague and so lacking in reasonable specificity so as to render them impossible of reasonable comprehension, or consistent and meaningful application.

AFFIRMATIVE DEFENSE NO. 4

The procedures, rules, regulations, policies or standards, if any, adopted, implemented and applied by the Department and/or the Director violate the equal protection and due

process clauses of the Fourteenth Amendment, United States Constitution, and Article 1, Sections 2 and 13, Idaho Constitution.

AFFIRMATIVE DEFENSE NO. 5

The adjudication authorization legislation, Idaho Code Section 42-1401, et seq., and the actions of the Director and Department in recommending, limiting and/or regulating the objectors' water right constitutes a violation of 42 U.S.C. Section 1983.

AFFIRMATIVE DEFENSE NO. 6

The water right owned by the objectors is the subject of valid existing decrees issued by the Director and Department, which decrees are binding upon the State of Idaho, the Department and the Director. As a result, the State of Idaho, the Department and the Director are precluded by the doctrines of res judicata, collateral estoppel, judicial estoppel and the like from relitigating or questioning the validity, existence or priority of such right, and/or from taking any position in the Director's Report, or otherwise, which is inconsistent with such decrees.

AFFIRMATIVE DEFENSE NO. 7

The Director's recommendations are contrary to decreed rights, historical use and extent licenses and permits issued by the Department. There has been no forfeiture nor abandonment of the objectors' water rights, nor have the objectors' water rights been prescriptively or adversely possessed, nor have such decrees been vacated or such licenses and permits revoked.

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AFFIRMATIVE DEFENSE NO. 8

The Directors' Report fails to state a claim to the extent the same asserts a forfeiture, abandonment, prescriptive or adverse acquisition or loss, or loss resulting from estoppel, of the objectors' water right in the absence of any fact upon which forfeiture, abandonment, prescriptive or adverse acquisition for loss, or loss resulting from estoppel, may be based or asserted.

AFFIRMATIVE DEFENSE NO. 9

The objectors' water right is an incorporeal form of real property, as defined by Idaho Code Sections 7-703, 73-114, 55-101, and like statutes, and, as such, pursuant to Idaho Code Section 7-904, et. seq., the actions of the Director in attempting to limit, reduce and/or regulate such rights, and the assertion of some inconsistent proprietary ownership or right to use or control by the State of Idaho, constitutes an unauthorized and invalid taking of private property without the payment of just compensation, or compliance with statutory requirements, all in violation of Title 7, Chapter 7, Idaho Code.

AFFIRMATIVE DEFENSE NO. 10

The actions of the Director, the Department and their agents, servants and employees in recommending, limiting, reducing and/or regulating objector's water rights, either as alleged in the Director's Report or as in fact applied, violates objectors' rights as secured by Art. 1, Section 1; Art. 15, Sections 3, 4 and/or 5; and/or as otherwise provided in the Constitution of the State of Idaho.

AFFIRMATIVE DEFENSE NO. 11

The various allegations, statements and assertions contained in the Director's Report concerning the Department and/or the Director's position or intentions with regard to the adjudication, as well as the implementation of statutes and/or regulations, as well as the administration of water or management of water rights or claims to the beneficial uses of water, if implemented, constitute a violation of various provisions the United States and Idaho constitutions, and/or a violation of the letter, spirit and/or intent of various statutes enacted by the legislature, and/or constitute an exercise of purported authority or powers either in excess of those conferred by law, or in a manner inconsistent with those conferred by law, or both.

AFFIRMATIVE DEFENSE NO. 12

The individual recommendations relating to the specific water right of the objectors as set forth in the Director's Report are (1) not based upon substantial evidence and/or are not, in fact, the product of any reasonable, complete or accurate investigation as required by law; (2) are the product of arbitrary and capricious action on the part of the Department or the Director; (3) have been made in excess of the constitutional and statutory authority of the Department and the Director; (4) have been made upon an unlawful and invalid procedure; (5) are affected by various and sundry errors of law; and/or (6) are clearly erroneous in view of the reliable, probative and substantial evidence.

WICHOLMIST

AFFIRMATIVE DEFENSE NO. 13

The Director's Report is a pleading subject to the provisions of the Idaho Rules of Civil Procedure, including, but not limited to the requirement of I.R.C.P. 8(a)(1) that such pleadings contain a clear and plain statement of the facts, demonstrating an entitlement to relief. The Director's Report violates such provision.

AFFIRMATIVE DEFENSE NO. 14

The Director's Report fails to state a claim upon which relief may be granted.

AFFIRMATIVE DEFENSE NO. 15

The Director's Report is subject to, and must comply with, the requirements of Idaho Code Section 42-1411. The Director's Report does not comply with the requirements of the statute.

AFFIRMATIVE DEFENSE NO. 16

In conducting the investigation and compiling the Director's Report, the Department and the Director have not complied with the requirements of Idaho Code Section 42-1410.

AFFIRMATIVE DEFENSE NO. 17

In conducting the investigation and compiling the Director's Report, the Department and the Director have not complied with the requirements of Idaho Code Section 42-1416.

AFFIRMATIVE DEFENSE NO. 18

The procedures specified in the authorizing legislation and procedural rules promulgated in accordance therewith serve to

deny objectors due process of law in violation of Amendment Fourteen to the Constitution of the United States and Art. 1, Section 13, Idaho Constitution.

AFFIRMATIVE DEFENSE NO. 19

The "General Provisions" and "Other Statements" contained in the Director's Report, along with the Claims Investigation Manual, Adjudication Memoranda and other materials of a similar nature used or employed by the Department, the Director and/or their agents, servants and/or employees constitute rules and regulations which were required to be proposed, promulgated, adopted and approved in conformity with the Administrative Procedures Act and other applicable statutory provisions. The Department, Director and their agents, servants and employees have failed to comply with such requirements, and accordingly, the "General Provisions," "Other Statements", Claims Investigation Manual and the like are invalid, void and of no force or effect.

AFFIRMATIVE DEFENSE NO. 20

Neither the "General Conditions," the Claims Adjudication Manual, Adjudication Memoranda or other promulgations, adoptions, policies, or the like have been submitted to or approved by the Legislature as required by Idaho Code Section 67-5217.

AFFIRMATIVE DEFENSE NO. 21

The relief requested by the Department and the Director in the Director's Report are beyond and in excess of the subject matter jurisdiction of the Court.

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AFFIRMATIVE DEFENSE NO. 22

The actions of the Legislature, or the Department and the Director to enact, adopt, implement or enforce statutes, regulations, rules or policies subsequent to November 19, 1987, and to apply or enforce the same for the purpose of, or with the effect of recommending, diminishing or altering objectors' water rights, constitute a violation of Amendment Fourteen, United States Constitution; Art. 1, Section 13, Idaho Constitution; the SRBA authorization legislation; and Idaho Code Sections 73-101 and 73-106.

AFFIRMATIVE DEFENSE NO. 23

These proceedings are subject to the requirements and provisions of Idaho Code Sections 12-117, 12-121, 12-123 and I.R.C.P. 11, and the provisions of the private attorney general doctrine, and other related doctrines, and the Department, Director and State of Idaho are obligated to objectors for the payment and reimbursement of any and all reasonable costs or attorney fees incurred herein.

AFFIRMATIVE DEFENSE NO. 24

The Director's Report asserts what amounts to be a taking of private property by power of eminent domain as governed by Idaho Code Section 7-701 et seq., and as such, venue is therefore improper.

AFFIRMATIVE DEFENSE NO. 25

The Department and the Director are equitably estopped from seeking any reduction in the quantity, quality or priority of

objectors' water rights by virtue of prior statements, representations and actions of the Department, Director or their agents, servants and employees.

AFFIRMATIVE DEFENSE NO. 26

The Department and the Director are barred by laches and the applicable statutes of limitation, including, but not limited to, Idaho Code Sections 5-202, 5-203, 5-204, 5-206, 5-207, 5-208, 5-215, 5-218, 5-219(2), 5-224 and/or 5-241.

AFFIRMATIVE DEFENSE NO. 27

Objectors hereby reserve the right to assert any further affirmative defenses not expressly stated herein, but which subsequently become apparent.

WHEREFORE, the objectors pray for judgment as follows:

1. That the State of Idaho take nothing by reason of its Directors' Report, and that this action, and any claims asserted against objectors, be dismissed.
2. That a decree be entered adjudicating the existence, validity, amount and priority of objectors' water rights in accordance with objectors' claims.
3. That to the extent the acts of the Department or Director constitute a taking of objectors' property for public use, that objectors be allowed and awarded just compensation therefor.
4. That the objectors be allowed all costs of suit and reasonable attorney fees incurred herein.
5. For such further relief to which the Court finds objectors justly entitled.

MICROFILMED
OCT 11 1994

TO: J. J. J. J. J.
MICROFILMED

(WATER\21530ANS)



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000

Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

March 1, 1993

Patrick D. Brown
Hepworth, Nungester and Lezamiz
133 Shoshone St. N.
P.O. Box 389
Twin Falls, ID 83303-0389

Re: Notice of Appearance

Dear Mr. Brown:

We received your Notice of Appearance on behalf of Hagerman Water Owners, Inc. and its individual members on February 10, 1993. The records listed on the notice were updated with some exceptions.

Claim numbers with "A" prefixes identify claims filed in the SRBA. Claim numbers without prefixes identify recommendations in the Director's Report. The following table identifies claimants for which you filed a notice of appearance, but the number you referred to is actually the identification of the recommendation. They have been updated with the notice information.

Claimant's Name	Recommendation No. (no "A" prefix)
Bybee, Gertrude B. Owsley	36-00042A 36-00041C
Candy, Walter W. & Margaret	36-00135B
Crandlemire, Roger C.	36-00134C 36-00135C
Gustafson Family Trust/Gustafson, Ivan J. & Lucille co-trustees	36-00033F
McFaddan, Dan H. & Irma R.	36-00048A
Muller, Manfred	36-00035J
Zink, Basil Lester & Myrle Hyde	36-00103F

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The following is a list of claims that have been updated with the notice information, however, there is a discrepancy between IDWR records and the notice list (see third column).

Claimant's Name as listed on Notice of Appearance	As Claimed/ As Recommended	Claim No. or Claimant's Name in IDWR's Records
Anderson, Anita G.	A36-00050D/36-00050D	Andersen (name spelling is different)
Brailsford, Robert H.	A36-04260/36-04260	A36-04260B/36-04260B (claim was split--"B" suffix)
Brooks, Allen L. & Andree	A35-00060	A36-00060/36-00060 (Basin 36 instead of Basin 35)
Crandlemire, Roger C. & George C.	A36-00113J/36-00113J	Crandlemire, Roger C. (George C. not listed as claimant)
Gisler, Harry R.	A36-00021B/36-00021B	A36-00021/36-00021 (claim was renumbered)
Glauner, Frank L. & Joan	A36-00039E/36-00039E	Jean instead of Joan
Gustafson Family. Trust/Gustafson, Ivan J. & Lucille co-trustees	A36-00011C/36-00033F	Gustafson, Ivan J. (not listed as a trust)
Johnson, Ira L. & Huguette M.	A36-07142/36-07142	Johnson, Ira L. (Huguette M. not listed as claimant)
Joint Hagerman School Dist. 233	A36-15463/36-15463	Original claim & IDWR records show school dist. as #3.
Jones, John W., Jr.	A36-00068/36-00068 A36-00069/36-00069 A36-07071/36-07071 A36-00070/36-00070	Jones, John W. Jr. & Deloris D. (Deloris D. is included as a claimant)

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OCT 11 1994

Claimant's Name as listed on Notice of Appearance	As Claimed/ As Recommended	Claim No. or Claimant's Name in IDWR's Records
Mueller, Manfred	A36-00034D/36-00035J	Muller (name spelling is different in IDWR records)
Strange, Wm. (Penelope Turner-remainder man)	A36-00006/36-00006 A36-00007/36-00007 A36-00008/36-00008	Strange, Wm. & Louise (Louise is included as a claimant, Penelope Turner is not in records)
Veenendaal, Dick J.	A36-00108A/36-00108A A36-00039C/36-00039C	Veenendaal, Dick J. & Sigrid E. (Sigrid E. is included as a claimant)
Wiens, M. J., Jr.	A36-80317	A36-08317/36-08317 (no. was transposed on notice)
Wiens, M. J., Jr.	A36-00098/36-15384	36-15384 (claim was combined with no. 36-00141 into no. 36- 15384)
Wiens, M. J., Jr.	A36-00141/36-15384	36-15384 (claim was combined with no. 36-00098 into no. 36- 15384)

The following claims have not been updated with the notice information because of the discrepancies listed in the third column.

Claimant's Name	Claim No. as listed on Notice of Appearance	Discrepancy Between Notice of Appearance and IDWR Records
Hagerman Gun Club	A36-00100/36-00100 A36-00099/36-00099 A36-07233/36-07233 A36-07172/36-07172 A36-10249/36-10249	Owners are listed as Bob Porter and Fred Surbaugh

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OCT 11 1994

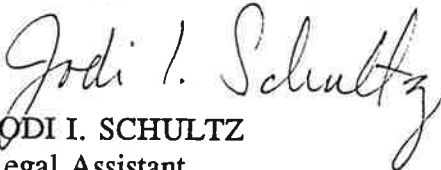
Mr. Patrick D. Brown
March 1, 1993
Page 4

Claimant's Name	Claim No. as listed on Notice of Appearance	Discrepancy Between Notice of Appearance and IDWR Records
Ya-Ta-Hay Investments, Inc.	A36-07875/36-07875	No record of this claim no., nor any other claim no. for claimant other than A36-10283A/36-10283A (as listed)

Please review the claimants and claim numbers and let me know if you have any questions or problems with the claims as listed in IDWR's records. Also, please review the claims in the last table. We need to solve these discrepancies before IDWR's records are updated with the notice information. My phone number is 327-5444.

Please note we have received your supplemental and second supplemental notices of appearance and are currently working to update those records. We will inform you if there are any discrepancies.

Sincerely,


JODI I. SCHULTZ
Legal Assistant
Idaho Department of Water Resources

cc: IDWR Southern Region

Bypass
gate
→



Photos by
SCC

HEADGATE &
HEAD OF
PIPELINE
ON SANDS
DITCH



36-0006, 7 STRANGE

PHOTOS by SCC



AREA OF MEASUREMENT.

36-0006, 7
STRANGE



Riser at end of pipeline
from SANDS ditch.

Photos by
SCU

HEAD GATE
&
HEAD OF
PIPELINE
ON SANDS
DITCH.



Bypass
gate →



36-0006, 7 STRANGE

Photos by See

36-0006, 7
STRANGE



Area of Measurement



Riser at end of pipeline
from SANDS Ditch.



↑
NORTH

OVERVIEW OF STRANGE PLACE

NAPP 1987 AA69

1/27/98 Sw

Strange
PO Box 387
Hagerman, Id, 83332



RECEIVED
JAN 19 1993
dept. of Water Res.
Altn. Jeanie Roberts
222 Shoshone St. East
Department of Water Resources
Southern Region Office
Twin Falls, Id. 83330

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OCT 11 1994

RECEIPT
For Monies Paid
to the
IDAHO DEPARTMENT OF WATER RESOURCES

Receipt No: 5015284

RECEIVED

JAN 19 1993

Department of Water Resources
Southern Region Office

Date: 1/19/1993
Time: 11:39:07

Received
From:

STRANGE WILLIAM

Type of Payment

Program Acct Class

Amount

FEE FOR COPIES FO ADJUDICATION CLAIM
64100

229 21 1760

9.12

Total

CHECK 357

\$9.12

Region: SOUTHERN

Signature:

R. Foster

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OCT 11 1994



State of Idaho
DEPARTMENT OF WATER RESOURCES
Southern Region, 222 Shoshone St. East, Twin Falls, Idaho 83301 (208) 736-3033

CECIL D. ANDRUS
Governor

R. KEITH HIGGINSON
Director

12-Jan-1993

WILLIAM STRANGE
PO BOX 387
HAGERMAN ID 83332

RE: Copy of SRBA File(s): 36-00006, 36-00007, 36-00008

Dear Mr. Strange:

Please find enclosed the copies of documents you recently requested contained in the above referenced SRBA file(s) as of this date. Please note that copies of orthophoto quad maps or NAPP photography or aerial slides which may have been used in the review of your claim(s) have not been included since they are not easily reproduced. These items are however available for your review at our office. Please also note that in some situations some water rights may have other associated files which contain privileged information between IDWR staff and our legal council which has not been copied.

Please remit the following for the cost of the copies and postage:

\$9.12

Sincerely,


Jeanie Robertson
Records Clerk

Encl:

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OCT 11 1994

RECEIVED

JAN 11 1993

Department of Water Resources
Southern Region Office

1-9-93
(Date)

IDAHO DEPARTMENT OF WATER RESOURCES
222 SHOSHONE ST. EAST
TWIN FALLS, IDAHO 83301

Dear Idaho Department of Water Resources:

Please provide me with a copy of all information included in my file as it relates to water right number 36-00008, 36,00006, 36,00007

Please advise me of any documents in my file which you are not releasing to me and why they are not being released.

Please bill me for the copy charge.

Sincerely,

William Strange

William Strange
(Name)

P.O. Box 387
(Address)

Hagerman, Idaho 83332
(City, State, Zip Code)

cc: David B. Shaw, Adjudication Bureau Chief
Idaho Department of Water Resources
1301 North Orchard Street
Statenhouse Mail
Boise, Idaho 83720-9000

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OCT 11 1994

NOTICE OF ERROR

RESPONSE

CORRECTED R PROOF



20

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JAN 20 1993



State of Idaho

DEPARTMENT OF WATER RESOURCES

Southern Region, 222 Shoshone St. East, Twin Falls, Idaho 83301 (208) 736-3033

CECIL D. ANDRUS
Governor

R. KEITH HIGGINSON
Director

17-Oct-1992

WILLIAM STRANGE
PO BOX 387
HAGERMAN ID 83332

RE: RESPONSE TO NOTICE OF ERROR FOR CLAIMS 36-00006,
36-00007, AND 36-00008.

Dear Mr Strange

This letter is in response to the Notice(s) of Error (NOE) you recently filed with IDWR regarding the Director's proposed recommendation of the claim(s) listed above. Your NOE indicates that you would like the recommendation to show a longer season of use for irrigation. The Director has approved extending the period of use for the Hagerman valley to 3/15 to 11/15.

The proposed recommendation is based on irrigation season of use standards adopted by the Director for the various regions throughout the state. These standards are based on the period of the year in which there is less than a 75% chance of a 24 degree F. frost.

In addition, since there are some years in which water can be beneficially used for irrigation outside the irrigation season, the proposed Director's Report includes a general provision which provides for irrigation outside the irrigation season under certain conditions. The conditions are that the water is beneficially used, as determined by the director; that all water rights with a period of use outside the irrigation season, regardless of priority, are satisfied; and that the use does not conflict with the public interest as determined by the director. This proposed general provision will be included in the Director's Report.

Your NOE also questions the basis for recommending disallowal of a claim to a previously decreed water right.

Under Idaho law, water rights are limited to the amount of water beneficially used for the purposes for which the water rights were established. The amount of water beneficially

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JAN 20 1993

STRANGE
PAGE 2
17-Oct-1992

used is limited to the amount that is actually used and is reasonably required. For irrigation purposes, a reasonable amount is the amount required using irrigation methods that are reasonably efficient under current circumstances. If the water right shown in a decree is no longer beneficially used, then the water right is forfeited.

In your case, you filed multiple overlapping claims. IDWR determined the amount of water reasonably required for the recommended uses, based on available data and current methods of analysis, and proposed to recommend the most senior claims that were within this total. To support recommendation of the notice of claim listed above, you will need to submit evidence of beneficial use of an amount of water greater than the total of the rights proposed to be recommended.

If you still disagree with IDWR's recommendations, you will have an opportunity to file an objection to the Director's Report with the court. When the Director's Report is filed with the court, you will be mailed a notice that will contain more information about the objection process. As part of the objection process, IDWR will work with the claimants to resolve disputed issues, including efforts to obtain additional data which will be made available to the water users.

Sincerely

Kelly K Christensen
Sr Water Resource Agent

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JAN 20 1993

AUG-24-1992

NOTICE OF ERROR FORM

RECEIVED

SEP 9 1992

Department of Water Resources

Please type or print clearly, fill out completely, and return to:

Idaho Department of Water Resources

Statehouse Mail

Boise, Idaho 83720-9000

The notice of error must be received at IDWR by the **deadline date** printed below with your proposed recommendation.

YOUR DEADLINE FOR FILING A NOTICE OF ERROR IS: SEP-24-1992

1. Water right number: 36-00006

2. Name: William Strange

Address: PO Box 387

Nagerman, Ida. 83332

Weekday Telephone Number:

837-4767

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JAN 20 1993

(Instead of filling in items 3 and 4 below you may include a copy of your proposed recommendation with the changes marked on the copy.)

3. Describe the portion of proposed recommendation with which you disagree:

1. Quantity
2. Dates of usage

4. Describe the changes you wish to have made in the proposed recommendation:

Restore/Retain original decreed right.

5. Describe why you disagree with the proposed recommendation:

Your proposal takes something (a water right) that belongs to me and is something I need. Your proposal leaves inadequate water to irrigate land involved.

6. Date:

9-7-92

SIGNATURE

Wm Strange

R PROOF

CVR

MAPS

PHOTOS

MISC



MICROFILM

JAN 20 1983

Water Right Number - R36-00006

Prefix Translation: RESEARCH

Old (D) Number -

+ - - - - Last Name - - - - + + - First Name - - + + - - - - - Address - - - - - +

*** C - CURRENT OWNER ***
STRANGE

WILLIAM

1 - PO BOX 387

VERIFIED BY KRC

2 -

3 -

City- HAGERMAN

State- ID Zip- 83332

Phone - 208-837-4767

STRANGE

LOUISE

1 - PO BOX 387

2 -

3 -

City- HAGERMAN

State- ID Zip- 83332

Phone - 208-837-4767

+ - - Priority Date - - + + - - Region - - - + + - - Stage - - - + + - - Status - - - +
04/01/1885 17 SOUTHERN D - DECREED

+ - - - - Source - - - - + + - - - - - Tributary - - - - - +
BILLINGSLEY CREEK SNAKE RIVER

+ - - - - Point of Diversion - - - - - +

TwN Rng Sec Tract Lot RFlg County

07S 13E 11 NW SW NE (47) GOODING

+ - - - - Water Use - - - - - +
Code Description Period From Period To Diversion Rate Diversion Volume

01 - IRRIGATION 04/01 10/31 0.920

+ - Total Div. Rate - + + - Total Div. Volume - + + - Total Consumptive Use - + + - KW Usage - +
0.920 39.0

+ - - - - Place of Use - - - - - +

TwN	Rng	Sec	Tract	Lot	Acres	Code	Description	County
07S	13E	11	SW SW		3.0	01	IRRIGATION	(47) GOODING
07S	13E	14	NW NW		10.0	01	IRRIGATION	(47) GOODING

Total Acres: 13.0

+ - - Diversion Means - HEADGATE & SANDS DITCH, GRAVITY IRRIGATION

+ - - Non-Irrigation Use -

+ - - Other Rights for Same Use - NONE

+ - - - - Remarks - - - - - +

WATER IS DELIVERED THROUGH THE SANDS DITCH.
A DIVERSION RATE OF 0.84 CFS AT THE FIELD HEADGATE IS
RECOMMENDED FOR THE PLACE OF USE DESCRIBED ABOVE.

MICROFILMED
JAN 7 0 1993

Water right number - R36-00006

Prefix Translation: RESEARCH

+ - - - - Remarks - - - - -
0.08 CFS OF THIS RIGHT IS LIMITED TO USE FOR CONVEYANCE
LOSSES IN DELIVERY OF THIS RIGHT.

+ - - - - Old Water Right Numbers - - - - -
3600006

+ - - - - Conditions of Approval - - - - -
No Conditions of Approval found.

+ - - - Decree Plaintiff - - - + + - - - Decree Defendant - - - + + - Decree Date - +
NEW INTERNATIONAL MORTGAGE BANK IDAHO POWER COMPANY 03/22/1932

+ - - - - Comments - - - - -
Date: 08/04/1992 User Id: CHRISTEN Subject: COPIED FROM REMARKS
USE IS CLAIMED FOR ALL THE LAND I OWN THAT IS SOUTH OF THE BARLOGI DITCH.

+ - - Audit Fields - - +
08/04/92 CHRISTEN

+ - - - - Adjudication Rights Dates and Flags Area - - - - -

Court Report Filing	- 00/00/0000	Field Inspection Made	- 00/00/0000	Civil Case Number	- 39576
Objection Filed Date	- 00/00/0000	Field Inspection Flag	-	Old Case Number	-
Response Filed Date	- 00/00/0000	Verified Date	- 08/04/1992	Old Judicial District	-
Claim Received Date	- 08/05/1988	Last Amended Date	- 00/00/0000	Temporary Right	- P
		Receipt Number	- S001311	Water District	- 36A
		POU Ownership Flag	- Y	Federal/State Indicator	- S
		Name Connector	- AND/OR	Presumption Flag	-
				Notice of Error Flag	-

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JAN 20 1993

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
ADJUDICATION CLAIM VERIFICATION REPORT

15:35:25
06/28/90

PAGE: 14
QUICKLOOK INFORMATION

CLAIM NUMBER: A36-00006

WR ELEMENT	FIELD EXAM Y/N	CORRESPONDENCE SENT/RECEIVED BY WHOM/DATE	FIELD EXAM BY WHOM/DATE	CHANGE CLAIM Y/N	VERIFIED BY CODE	COMPLETED REVIEW WHOM/DATE	COMPLETED DATA ENTRY WHOM/DATE	VERIFIED DATE WHOM/DATE
PRIORITY DATE				N		HHT 8/3/92	OB	
POINT OF DIV	Y			N	12456			
SOURCE				N				
PLACE OF USE	Y		7-24-90 SCC/HHT	(Y)	12456			
DIV. AMOUNT CFS/VOLUME	N			(Y)	6			
CONSUMPTIVE USE	N			(Y)				
PURPOSES	N			N				
PERIOD OF USE	Y			(Y)	6			
BASIS OF CLAIM	N			N				
REMARKS	Y			(Y)	6.			

not
7-18-90

"VERIFIED BY" CODES

TOPO MAP/ORTHO-PQ = 1
ASCS MAP = 2
WATERMASTER RECORDS = 3
NAPP PHOTOS = 4
FIELD EXAM = 5
OTHER (SEE REMARKS) = 6

THESE CODES ARE USED TO INDICATE HOW THE FIELD EXAMINER VERIFIED THE INFORMATION
USED FOR THIS FIELD EXAMINATION. INDICATED ARE ALL CODES WHICH APPLY.

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JAN 20 1993

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
ADJUDICATION CLAIM VERIFICATION REPORT

15:35:25
06/28/90

PAGE: 1
GENERAL INFORMATION

CLAIM NUMBER: A36-00006

LAST: STRANGE
ADDRESS: P.O. BOX 387
CITY: HAGERMAN
PHONE NUMBER: 208-837-4767

FIRST: WILLIAM
STATE: ID ZIP: 83332

OWNER CODE: C

LAST: STRANGE
ADDRESS: P.O. BOX 387
CITY: HAGERMAN
PHONE NUMBER: 208-837-4767

FIRST: LOUISE
STATE: ID ZIP: 83332

OWNER CODE: C

FIELD EXAM REQUIRED?

VERIFICATION REQUIRED DUE TO REMARKS?

DATABASE
Y

FIELD
EXAMINER

CLAIM REMARKS: USE IS CLAIMED FOR ALL THE LAND I OWN THAT IS SOUTH OF THE
BARLOGI DITCH.

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CONTACT PERSON: _____

PHONE NUMBER: (____) ____-____

DATE OF FIELD EXAM: ____/____/____

APPOINTMENT MADE: Y(____) N(____)

TIME: ____:____ A(____) P(____)

ACCOMPANIED BY: _____

PHONE NUMBER: (____) ____-____

RELATIONSHIP TO CLAIMANT: _____

DIRECTIONS TO PROPERTY / REMARKS:

No one Home - no one answered the door.

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A. AJ CLAIM: # A36-00006 PRIORITY DATE: 04-01-1885 STAGE: D
B. WR RECORD: # 36-00006 PRIORITY DATE: 04-01-1885 STAGE: D

C. FIELD EXAM REQUIRED?
DUE TO PRIORITY DATE DISCREPANCY? (Y/N) DATABASE N FIELD EXAMINER N

ARE THERE OBVIOUS REASONS TO QUESTION THE PRIORITY DATE CLAIMED? Y() N(☒)
IF YES EXPLAIN.

REMARKS:

RECOMMENDED PRIORITY DATE:
04-01-1885

REVIEWED BY llt

DATE

7-18-90

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A. AJ CLAIM POINT OF DIVERSION AND SOURCE:

RIGHT	TWP.	RGE.	SEC.	1/4	1/4	1/4	LOT	CNTY
A36-00006	07S	13E	11	NW	SW	NE		GOODING

OTHER AJ CLAIMS WITH SAME AJ POD

A PREFIX	R PREFIX
A36-00036	NONE
A36-10566	
A36-07233	
A36-07271	
A36-00007	
A36-00110A	
A36-00081A	
A36-07172	
A36-00037C	
A36-00080A	
A36-00099	
A36-00100	
A36-00111A	
A36-00113G	

WR RECORDS IN SAME 40 ACRE TRACT

36-00007
36-00036
36-00037
36-00066
36-00079
36-00080
36-00081
36-00097
36-00098
36-00099
36-00100
36-00101
36-00110
36-00111
36-00113B
36-00113D
36-00140
36-00141
36-00142
36-00143
36-00144
36-00145
36-00146
36-00147
36-00148
36-00150
36-00151
36-02082
36-07081
36-07172
36-07229
36-07233
36-07271
36-07565
36-07838

SOURCE: BILLINGSLEY CREEK

TRIB: SNAKE RIVER

B. WR POINT OF DIVERSION AND SOURCE:

RIGHT	TWP.	RGE.	SEC.	1/4	1/4	1/4	LOT	CNTY
36-00006	07S	13E	11		SW	NE		GOODING

OTHER WR RECORDS WITH SAME WR POD

AJ CLAIMS IN SAME 40 ACRE TRACT

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JAN 20 1993

36-00007
36-00036
36-00037
36-00066
36-00079
36-00080
36-00081
36-00097
36-00098
36-00099
36-00100
36-00101
36-00110
36-00111
36-00113B
36-00113D
36-00140
36-00141
36-00142
36-00143
36-00144
36-00145
36-00146
36-00147
36-00148
36-00150
36-00151
36-02082
36-07081
36-07172
36-07229
36-07233
36-07271
36-07565
36-07838

A36-10080
A36-07229
A36-00113E
A36-00141
A36-00066
A36-00066A
A36-00079
A36-07081
A36-07565
A36-10543
A36-00021A
A36-00021B
A36-00037A
A36-00036
A36-10566
A36-07233
A36-07271
A36-00007
A36-00110A
A36-00081A
A36-07172
A36-00037C
A36-00080A
A36-00099
A36-00100
A36-00111A
A36-00113G

NONE

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SOURCE: BILLINGSLEY CREEK

TRIB: SNAKE RIVER

C. FIELD EXAM REQUIRED?

DUE TO POD DISCREPANCY? (Y/N)
DUE TO SOURCE DISCREPANCY? (Y/N)

DATABASE
Y
N

FIELD
EXAMINER

REMARKS:

A. ROOT WATER RIGHT NUMBERS: A36-00006

B. POU LISTING

TWP	RNG	SEC	1/4	1/4	LOT	NAME	AJ #/ACRES	WR #/ACRES	LANDSAT DATA	FIELD EXAM.	RECOMM. ACRES
07S	13E	15	NE	NE	1	STRANGE, WILLIAM STRANGE, WILLIAM BARLOGI, REX BARLOGI, AGNES	A36-00006 /39.0 A36-00007 /39.0	36-00006 / 36-00007 / 36-00008 / 36-00146 /	3.0	~~Ø~~	~~Ø~~
07S	13E	15	NW	NE	2	STRANGE, WILLIAM STRANGE, WILLIAM	A36-00006 /24.0 A36-00007 /24.0	- / - /	~~Ø~~	~~Ø~~	~~Ø~~
07S	13E	15	NE	NW	3	STRANGE, WILLIAM STRANGE, WILLIAM	A36-00006 / 5.0 A36-00007 / 5.0	- / - /	~~Ø~~	~~Ø~~	~~Ø~~
07S	13E	10	SE	SE	5	STRANGE, WILLIAM STRANGE, WILLIAM STRANGE, LOUISE BARLOGI, AGNES	A36-00006 / 9.0 A36-00007 / 9.0 A36-00008 / 8.0	36-00006 / 36-00007 / 36-00008 / 36-00146 /		~~Ø~~	~~Ø~~
07S	13E	11	SW	SW		STRANGE, WILLIAM STRANGE, WILLIAM STRANGE, WILLIAM STRANGE, LOUISE BARLOGI, AGNES	A36-00006 /12.0 A36-10353 / A36-00007 /12.0 A36-00008 /	36-00006 / - / 36-00007 / 36-00008 / 36-00145 /	38.0	3.0	3.0
07S	13E	14	NW	NW		STRANGE, WILLIAM BECKSTEAD, FRED A. COATES, FAYE BECKSTEAD, FRED A. STRANGE, WILLIAM BECKSTEAD, FRED A. BECKSTEAD, FRED A. BARLOGI, REX BARLOGI, AGNES SULLIVAN, RALPH	A36-00006 /28.0 A36-10169 / 7.5 A36-00067 / 7.5 A36-07298 / A36-00007 /28.0 A36-00065 / 7.5 A36-00066 / 7.5	36-00006 / - / 36-00067 / 36-07298 / 36-00007 / 36-00065 / 36-00066 / 36-00008 / 36-00145 / 36-04025 / 5.0	30.0	10.0	10.0
TOTAL ACRES						A36-00006	117.00		68.00		13.0

ARE IRRIGATED ACRES FOUND IN TRACTS OTHER THAN INDICATED ABOVE, Y() N()
IF YES SEE ATTACHED SHEET:

C. FIELD EXAM REQUIRED?

DUE TO POU DISCREPANCY? (Y/N)

DATABASE
Y

FIELD
EXAMINER
Y

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PRESUMPTION FLAG:

REMARKS:

Napp photo confirms what we observed in the field exam.

Also by ASCS color slide, 1980-June, (C35; E-12-1, E-13-1)

*sw
7-15-92*

RECOMMENDATIONS:

TOTAL ACRES: 13.0

REVIEWED BY: SCC

DATE: 1-3-91

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A. AJ CLAIMED USES:

PURPOSES
A36-00006 IRRIGATION

MONTH/DAY 10-31
FROM 04-01 TO 10-15

DIVERSION QUANTITY
3.500 CFS

TOTAL DIVERSION RATE/VOLUME CLAIMED

3.500 CFS

B. WR RECORDED USES:

PURPOSES
36-00006 IRRIGATION

MONTH/DAY
FROM TO

DIVERSION QUANTITY
3.500 CFS

TOTAL DIVERSION RATE/VOLUME CLAIMED

3.500 CFS

PRESUMPTION FLAG:

C. FIELD EXAM REQUIRED?

DUE TO WATER-USE DISCREPANCY? (Y/N)
DUE TO DIVERSION RATE DISCREPANCY? (Y/N)
DUE TO PERIOD FROM/TO DISCREPANCY? (Y/N)

DATABASE
N
N
Y

FIELD
EXAMINER

N
N
Y excess flow

D. PERIOD OF USE:

RECOMMEND AS CLAIMED?

Y(X) N()

RECOMMEND TO WR STANDARDS OR OTHER?

Y() N(X)

Explain in remarks, below.

REMARKS:

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A. DOES DIVERSION RATE CLAIMED AGREE WITH EXISTING RECORDS?

Y(X) N()

AJ TOTAL CLAIMED DIVERSION RATE: 3.500 CFS
WR ROOT RIGHT TOTAL DIVERSION RATE: 3.500 CFS

*** IF NO or IF STATUTORY CLAIM or BENEFICIAL USE then flow measurement required. ***
** If an amount smaller than the original diversion rate is **
** claimed and an exam is NOT required, explain in remarks. **

FLOW MEASUREMENT REQUIRED?

DUE TO STAGE OR DIVERSION RATE DISCREPANCY? (Y/N)

FIELD
DATABASE EXAMINER
N

B.

FLOW MEASUREMENT

MEASUREMENT METHOD Habbe Analysis, SEE ATTACHED CALCULATIONS.

C. ARE OTHER WATER RIGHTS USED? Y(Y) N() IF YES COMPLETE OVERLAP REVIEW.

OTHER RIGHTS LISTED IN CLAIM: A36-00007

LIST ALL RIGHTS WITH A SAME POU AND IRRIGATION USAGE:

CLAIM	SOURCE	NAME	DIV. RATE	DIV. RATE/ACRE	DIV. VOL.	DIV. VOL./ACRE
A36-00006	BILLINGSLEY CREEK	STRANGE , WILLIAM	3.500	0.029		
A36-00007	BILLINGSLEY CREEK	STRANGE , WILLIAM	1.080	0.009		
A36-10169	WASTE WATER	BECKSTEAD , FRED A.	2.000	0.266		
A36-00067	BILLINGSLEY CREEK	COATES , FAYE	0.500	0.014		
A36-00065	BILLINGSLEY CREEK	BECKSTEAD , FRED A.	0.700	0.019		
A36-00066	BILLINGSLEY CREEK	BECKSTEAD , FRED A.	1.400	0.039		

LIST ALL RIGHTS WITH SAME POU BUT NOT USED FOR IRRIGATION.

CLAIM NO.	PURPOSES	NAME	MONTH/DAY	RATE	VOLUME
A36-00008	STOCKWATER	STRANGE , LOUISE	FROM 01-01 TO 12-31	.030 CFS	
A36-10353	DOMESTIC	STRANGE , WILLIAM	FROM 01-01 TO 12-31	.040 CFS	
A36-07298	FISH PROPAGATION	BECKSTEAD , FRED A.	FROM 01-01 TO 12-31	2.000 CFS	

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D.

RATE/VOLUME CALCULATIONS: (IRRIGATION)

1a. IRRIGATION RATE

ACRES 13 x 0.02 CFS/ACRE = 0.26 CFS
(Taken from p/u review)

DOES AMOUNT CLAIMED EXCEED 0.02 CFS/ACRE? Y(X) N()

*** IF YES ADDITIONAL WATER USE FORM FILED AND ATTACHED? Y() N(X) ***

2. IRRIGATION CONSUMPTIVE USE

CLAIMED CONSUMPTIVE USE = 351.0 AF/A

ACRES 13 x CONSUMPTIVE VOL. AF/A FOR AREA 3.0 =
TOTAL CONSUMPTIVE USE 39 AF/A

3. IRRIGATION DIVERSION VOLUME

CLAIMED DIVERSION VOLUME = AF/A

ACRES 13 x DIVERSION VOL. AF/A FOR AREA 4 =
TOTAL DIVERSION VOLUME 52 AF/A

4. CALCULATIONS FOR USES OTHER THAN IRRIGATION:

SEE ATTACHED SHEET? Y() N()

REMARKS: (Include limitations on CONSUMPTIVE USE for combined rights.)

1b. CALCULATIONS

* See Hubble Analysis.

+ 0.84
+ 0.08 conveyance loss

0.92

See attached sheet for
conveyance loss analysis

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RECOMMENDATIONS:

REC. PURPOSES	REC. PERIOD FROM TO	REC. DIV RATE CFS	REC. DIV VOL. AF/A	REC. CONS. USE
IRRIGATION	04-01 10-15 ³¹	DATABASE EXAMINER ~~3.500~~ ~~0.26~~ 0.92	DATABASE EXAMINER ~~52~~ ~~52~~	DATABASE EXAMINER ~~351.0~~ ~~39~~
TOTAL FOR THIS RIGHT		~~3.500~~ ~~0.26~~ 0.92		~~351.0~~
REVIEWED BY: <u>SCL</u>		DATE: <u>1-3-90</u>	<u>N/A</u>	

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$$\cancel{\text{WR proportional Rate}} = \cancel{\frac{3.5 \text{ cfs}}{160 \text{ Ac}}} = 0.02 \cancel{\text{ cfs/Ac.}}$$

A. CHECK ONLY THE FOLLOWING THAT APPLY:

OWNERSHIP _____
FORFEIT/ABANDON _____
ADDITIONAL DIV. AMOUNT _____

ACCEPTED
AS CLAIMED
(☒)
()
()

NEEDS
REVIEW
()
(☒)
()

OK - Irrigation Analysis -

B. SPLIT WATER RIGHT REVIEW

ROOT WATER RIGHT NUMBER: 36-00006

TOTAL DIVERSION RATE OF WR SPLITS

DATABASE
3.500

EXAMINER

CFS

SPLITS:

OLD RIGHT NUMBERS	CURRENT CLAIM NUMBERS	DIVERSION RATE	CURRENT "R" CLAIM NUM.	"R" DIV. RATE	WR RIGHT NUMBERS	DIVERSION RATE
A36-00006	A36-00006	3.500	-		36-00006	3.500
TOTAL CFS		3.500				3.500

DIVERSION RATE REVIEW

DO THE SUM CFS RATE OF THE SPLITS EQUAL THE ROOT RIGHT CFS RATE? (Y/N)
IF NO, is the written review sheet attached? (Y/N)

DATABASE
Y

FIELD
EXAMINER
OK

REMARKS:

AUTHENTICATION:

SIGNATURE: _____

DATE: _____

NAME OF FIELD EXAMINER: _____

TITLE: _____

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RECOMMENDED POINT(S) OF DIVERSION AND SOURCE:

TWP.	RGE.	SEC.	1/4	1/4	1/4	LOT	COUNTY
<u>7S</u>	<u>13E</u>	<u>11</u>	<u>NW</u>	<u>SW</u>	<u>NE</u>	<u> </u>	<u>Gooding.</u>

SOURCE: BILLINGSLEY CREEK

TRIB: SNAKE RIVER

REVIEWED BY: ket

DATE: 7-18-90

OK

VIA Sands Ditch

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JAN 20 1993

JAN 20 1993
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confirmed by:

ASCS color slide

635 E-12-1
E-13-1

C 60 X 105
(6010)

F 294
B 105
6320

T 660
C 72
(505)

A36-00008

A36-00006

A36-00007

DISALLOW

10 11
15 14

(3)

(5)

(5)

C 1 +
B (6130)
8.1

C 3470
(5440)

T 743

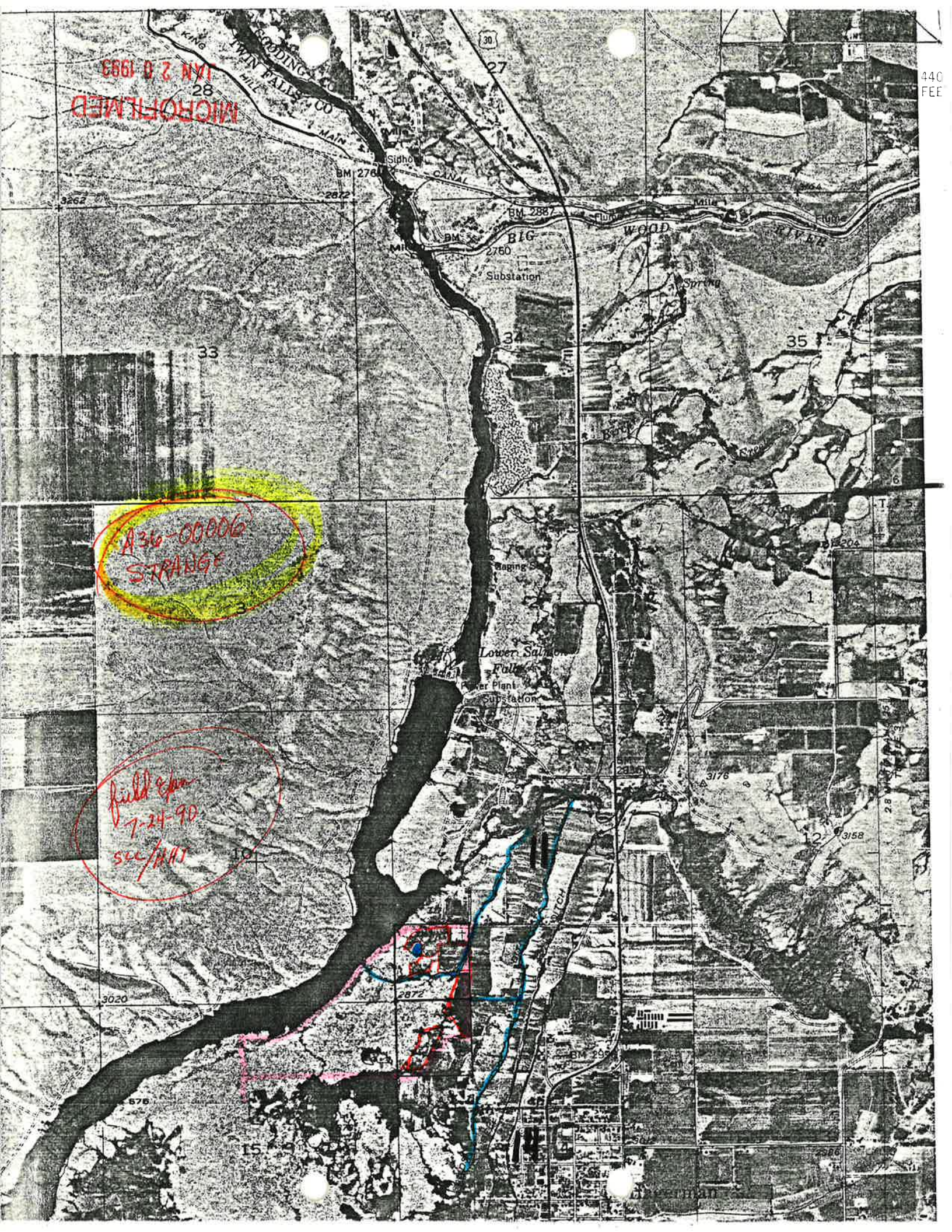
E 1.8
F 227
(6330)
F 593

C 200
B 2.6
4.1

6861 0 2 NYI
28
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A36-00006
STRANGE

field exp
7-24-90
SAC/HAJ



see 8-3-92

CONVEYANCE LOSS - WORSTELL

REACH	LENGTH (FT)	AVE WIDTH (FT)	SEEPAGE (FT/DAY)	WORSTELL LOSS (CFS)	DELIVERY (CFS)	DELIVERY LEFT (CFS)	LOSS FACTOR	DELIVERY LOSS (CFS)	FLOW (CFS)
1	200	10.0	2.00	0.05	0.61	11.93	0.0042	0.00	15.29
2	900	10.0	2.00	0.23	0.44	11.32	0.0201	0.01	14.63
3	1300	10.0	2.00	0.33	0.21	10.88	0.0302	0.01	13.96
4	200	10.0	2.00	0.05	0.34	10.67	0.0047	0.02	13.42
5	700	10.0	2.00	0.18	0.22	10.33	0.0171	0.02	13.03
6	600	10.0	2.00	0.15	0.84	10.11	0.0150	0.08	12.64
7	600	10.0	2.00	0.15	0.55	9.27	0.0164	0.06	11.65
8	1400	10.0	2.00	0.35	0.24	8.72	0.0406	0.04	10.94
9	2900	10.0	2.00	0.73	1.06	8.48	0.0864	0.25	10.35
10	4500	10.0	2.00	1.14	7.42	7.42	0.1532	2.88	8.56
11				0.00		0.00	0.0000	0.00	-0.00
12				0.00		0.00	0.0000	0.00	-0.00
13				0.00		0.00	0.0000	0.00	-0.00
14				0.00		0.00	0.0000	0.00	-0.00
15				0.00		0.00	0.0000	0.00	-0.00
16				0.00		0.00	0.0000	0.00	-0.00
17				0.00		0.00	0.0000	0.00	-0.00
18				0.00		0.00	0.0000	0.00	-0.00
19				0.00		0.00	0.0000	0.00	-0.00
20				0.00		0.00	0.0000	0.00	-0.00
TOTALS	13300			3.36	11.93			3.36	

SANDS DITCH

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REACH = SECTION OF CHANNEL
 LENGTH = LENGTH OF REACH, THE CHANNEL CAN BE DIVIDED INTO EQUAL LENGTH REACHES
 OR ACTUAL LENGTHS BETWEEN DELIVERY POINTS
 AVE WIDTH = AVERAGE TOP WIDTH OF REACH
 SEEPAGE = SOIL SEEPAGE RATE OF REACH
 WORSTELL LOSS = CONVEYANCE LOSS IN REACH BASED ON WORSTELL METHOD
 DELIVERY = TOTAL DELIVERIES IN REACH
 DELIVERY LEFT = SUM(DELIVERIES OF CURRENT AND REMAINING REACHES)
 LOSS FACTOR = WORSTELL LOSS/DELIVERY LEFT
 DELIVERY LOSS = SUM(LOSS FACTORS OF CURRENT AND PREVIOUS REACHES) X DELIVERY,
 REPRESENTS THE LOSSES ASSIGNED TO THE DELIVERIES IN THE REACH
 FLOW = TOTAL FLOW AT BEGINNING OF EACH REACH

P316 06006

INITIALS

HA

DATE
$$\underline{8 \mid 3 \mid 92}$$

**PRESUMPTION
CODE**

FOI

Sands Ditch

102

0.08 cf3

SHR

0.84 cfs

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JAN 20 1993

GRADED BORDER EVALUATION

Job name: STRANGE

Location: A36-00006

By: SCC

Date: Jul 22, 1992

Roughness coefficient (n)= 0.250

Intake family (If)=3.00

Slope (S)= 0.0100 ft/ft

Border width (W)= 43 ft

Net application (Fn)= 1.71 inches

Border length (L)= 242 ft

Inflow time (Ti)= 8 hours, 0 minutes

Flow per Border (cfs)	Unit Flow (cfs/ft)	Gross Application (in)	Deep Percolation (in)	Runoff (in)	Application Efficiency (percent)	Notes
0.61		Gross depth is less than required gross application depth				
0.62		Gross depth is less than required gross application depth				
0.63		Gross depth is less than required gross application depth				
0.64		Gross depth is less than required gross application depth				
0.65		Gross depth is less than required gross application depth				
0.66		Gross depth is less than required gross application depth				
0.67		Gross depth is less than required gross application depth				
0.68	0.016	22.58	20.87	0.01	7.6	
0.69	0.016	22.92	20.87	0.34	7.5	
0.70	0.016	23.25	20.87	0.67	7.4	
0.71	0.017	23.58	20.87	1.00	7.3	
0.72	0.017	23.91	20.87	1.34	7.2	
0.73	0.017	24.24	20.87	1.67	7.1	

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JAN 20 1993

CONVERSATION MEMORANDUM

EMPLOYEE: STEVE CLELLAND

FILE A36 - 00006

RE: irrigation methods

DATE 7-20-92 9:30am

NAME OF PARTY

WILLIAM STRANGE

(837-4767)

He says he uses his water all the time, continuously. He also picks up waste water from other ranches. He says he needs the constant flow to support the wild life ponds on his farm.

I asked specifically about his irrigation and he said he must return to irrigate each field within 3-4 days. His set times vary from 12 to 24 hours depending on the length of runs.

He has 50" corrugate spacings and told me everything is corrugated except out in the rocky areas.

Same methods used for Sands Ditch Water & the Barlogis Water.

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JAN 20 1993

A36-00006

~~WATKINS~~
STRANGE7-20-92
SCC

INTAKE FAMILY <If> = 0.70
 DESIGN APPLICATION <Fn> = 2.85 INCHES
 FURROW SLOPE <S> = 0.010 FEET/FOOT
 FURROW SPACING <W> = 2.50 FEET
 FURROW LENGTH <L> = 317 FEET
 INFLOW RATE <Q> = 3 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

ADVANCE TIME <TT> = 59.7 MINUTES; OR 1.0 HOURS
 GROSS APPLICATION <FG> = 4.37 INCHES
 NET APPLICATION <Fx> = 3.97 INCHES
 RUNOFF <RO> = 0.21 INCHES
 DEEP PERCOLATION <DP> = 1.31 INCHES
 EFFICIENCY <E> = 65.19 %

TO CHANGE:	PRESS	(EXISTING)
Design Application	<1>	2.85 in
Furrow Slope	<2>	0.010 ft/ft
Furrow Spacing	<3>	2.50 ft
Furrow Length	<4>	317 ft
Furrow Intake Family	<5>	0.70
Inflow Rate	<6>	3 gpm/furrow
Inflow Time	<7>	12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS:<8/9>

NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

$$F.I.R. = 4.2 \frac{C.U.}{EFF.}$$

$$= 4.2 \frac{0.267}{65.19}$$

$$= 0.017 \text{ cfs/Ac}$$

∴ allow 0.02 cfs per acre

$$8 \times 0.02 = 0.16 \text{ cfs}$$

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JAN 20 1993

IRRIGATION ANALYSIS WORKSHEET

CLAIM NO. A36-00006
 DATE 7-15-92
 AGENT SCC

CLAIMANT/SYSTEM DESCRIPTION STRANGE - SANDS D.142

IRRIGATION SYSTEM -----

ANALYSIS METHOD -----

BORDER / FURROW

TYPE OF CROP -----

ALFALFA

MAXIMUM PROFILE DEPTH -----

60 INCHES

INTAKE FAMILY -----

0.70

SOIL TYPE FAB ----- SYSTEM TOTALACRES PER TYPE 8 ----- 8 ACRESSOIL PROFILE WHC 3.42 5.70 -----DESIGN IRR $\frac{1}{2}$ WHC 1.24 2.85 -----

CROP REQUIREMENT:

REPORT AREA & FIGURE NO. ----- Blm 10-8

DAILY CROP REQUIREMENT:

6.79 (MM/DAY) / 25.4 (FACTOR IN MM/IN) ----- 0.267 IN/DAYACTUAL ROTATION PRACTICED ----- 4 DAYSDRY DAY ROTATION 0 IRR DAY ROTATION 4

THEORETICAL ROTATION:

2.85 DESIGN IRR / 0.267 CROP REQ = 10.7 DAYS

DESCRIPTION OF FIELD:

AVERAGE LENGTH RUN ----- 317TOTAL WIDTH OF FIELD ----- 1100'CHECK 317 L * 1100 W / 43,560 = 8.0 ACRES% SLOPE ----- 1%~~BORDER WIDTH~~ ----- N/A~~WIDTH OF FIELD / DAYS OF ROTATION~~FURROW / CORRUGATION WIDTH ----- 30"SET TIME ----- 12-24 Hrs

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JAN 20 1993

IRRIGATION ANALYSIS WORKSHEET

CLAIM NO. A36-00006DATE 7-15-92AGENT SCCLAIMANT/SYSTEM DESCRIPTION Strange @ Sand2072IRRIGATION SYSTEM ----- FLOODANALYSIS METHOD ----- BORDER / ~~FURROW~~TYPE OF CROP ----- PASTUREMAXIMUM PROFILE DEPTH ----- 36 INCHESINTAKE FAMILY ----- 3.0

SOIL TYPE FAB ----- SYSTEM TOTALACRES PER TYPE 5 ----- 5 ACRESSOIL PROFILE WHC 3.42 -----DESIGN IRR $\frac{1}{2}$ WHC 1.71 -----

CROP REQUIREMENT:

REPORT AREA & FIGURE NO. ----- Bliss 10-8

DAILY CROP REQUIREMENT:

6.44 (MM/DAY) / 25.4 (FACTOR IN MM/IN) ----- 0.25 IN/DAYACTUAL ROTATION PRACTICED ----- 4 DAYSDRY DAY ROTATION 0 IRR DAY ROTATION 4

THEORETICAL ROTATION:

1.71 DESIGN IRR / 0.25 CROP REQ = 6.8 DAYS

DESCRIPTION OF FIELD:

AVERAGE LENGTH RUN ----- 242'TOTAL WIDTH OF FIELD ----- 900'CHECK 242 L * 900 W / 43,560 = 5.0 ACRES

% SLOPE -----

BORDER WIDTH ----- 43'900' WIDTH OF FIELD / 7 DAYS OF ROTATION (129)~~FURROW / CORRUGATION WIDTH~~ ----- N/ASET TIME ----- 8 hr43' @ 8 hr set

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JAN 20 1993