

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 63-4641A
Date Received: 3/8/1990
Receipt No:
Received By:

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

1. Name of Claimant(s)

TREE TOP RANCHES LP Phone: (208)377-0998
914 HOUSTON RD
BOISE ID USA 83706

2. Date of Priority: 11/01/1880

3. Source: SAND HOLLOW CREEK Trib. to: BOISE RIVER

4. Point of Diversion:

Township	Range	Section	1/4 of 1/4 of 1/4 Lot	County	Type
05N	05W	22	NW NE	CANYON	

5. Description of diverting works:

HEADGATE, PIPELINE, GRAVITY DITCH

6. Water is used for the following purposes:

Purpose	From	To	C.F.S.	(or) A.F.A
IRRIGATION	4/01	10/31	1.89	

7. Total Quantity Appropriated is:
1.89 C.F.S.

8. Total consumptive use:

9. Non-irrigation uses:

10. Place of use:

Township	Range	Section	1/4 of 1/4 Lot	Use	Acres
05N	05W	15	SW SE	IRRIGATION	20
			SE SE	IRRIGATION	34
				Section Acres	54

SCANNED
APR 11 2008

Total Acres 54

11. Place of use in counties: CANYON

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

13. Other Water Rights Used:

14. Remarks:

THIS CLAIM IS A RESULT OF A CHANGE IN OWNERSHIP FOR A PORTION OF CLAIM NO. A63-04641 FEE PAID UNDER RECEIPT NO. W010765. RDH 11/8/96.

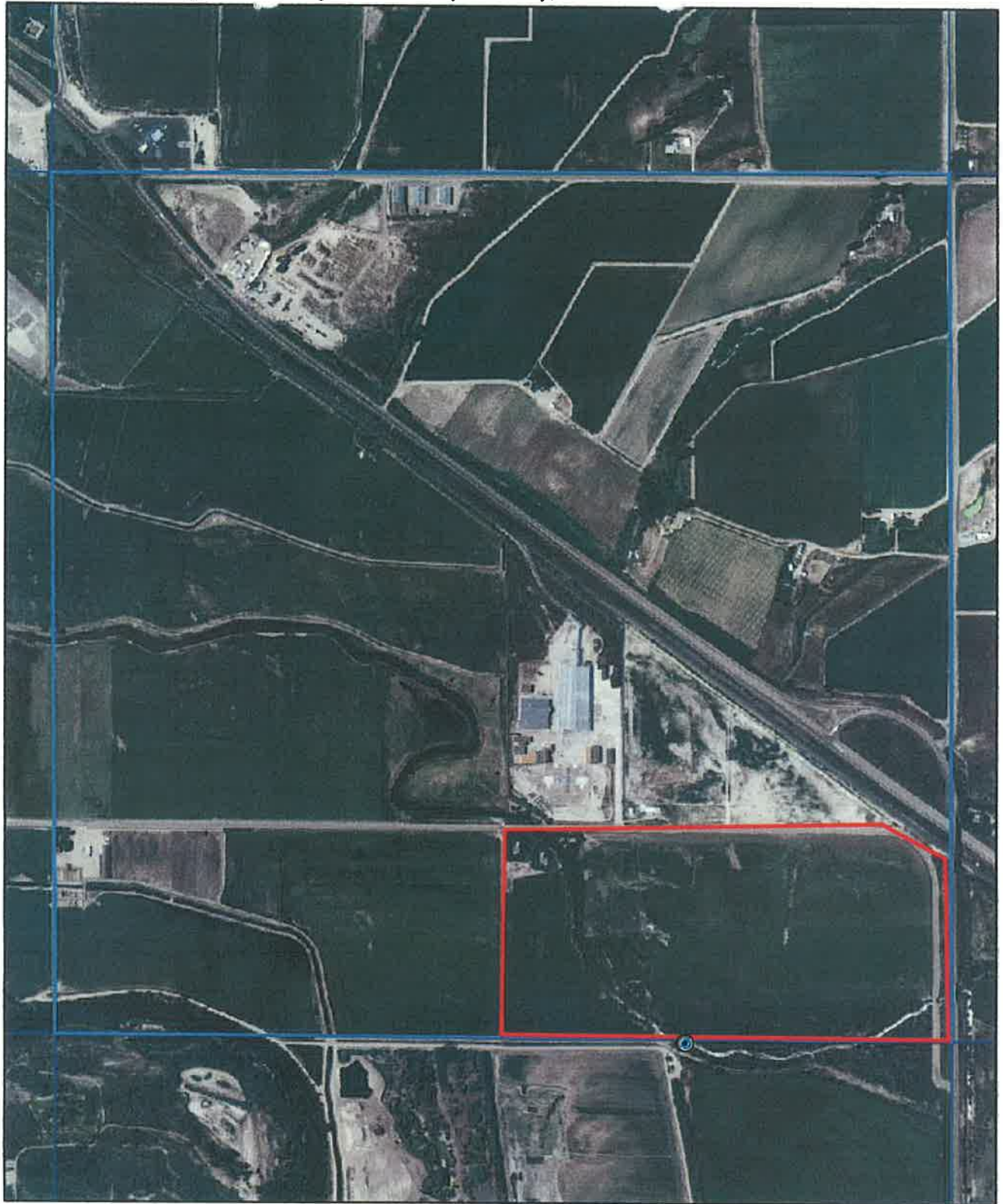
The point of diversion claimed for this water right was established prior to November 19, 1987 and accordingly qualifies as an accomplished transfer pursuant to Idaho Code Section 42-1425.

CHANGE IN OWNERSHIP LG 9-22-2006- REVIEWED BY V. MUSIC

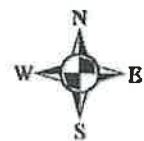
15. Basis of Claim: Beneficial Use

Water Right 63-04641A +B

Section 15, Township 5 North, Range 5 West, Canyon County, Idaho



- Place of Use
- Point of Diversion



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: **A63-04641A**
Date Received: 3/ 8/1990
Receipt No: X777777
Received By: _____

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

1. Name: LESLIE W HAMILTON
Address: RURAL RT #1
26415 SAND RD
PARMA ID

83660

2. Date of Priority: NOV 1, 1880

3. Source: UNNAMED DRAIN

Trib. to: SAND HOLLOW DRAIN

4. Point of Diversion:

Township	Range	Section	1/4 of	1/4 of	1/4 of	Lot	County
05N	05W	14		NW	SW		CANYON

5. Description of diverting works:
HEADGATE, PIPELINE, GRAVITY DITCH

6. Water is used for the following purposes:

Purpose	From	To	C.F.S.	(or)	A.F.A.
IRRIGATION	04/01	10/31	1.890		

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

A.F.A.

8. Total consumptive use is Acre Feet Per Annum.

9. Non-irrigation uses:

10. Place of Use:

Township	Range	Section	1/4 of	1/4 of	Lot	Use	Acres
05N	05W	15	SW	SE		IRR	20.0
			SE	SE		IRR	34.0

Section Acres 54.0

10. Place of Use: Continued

Total Acres 54.0

11. Place of use in counties: CANYON

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

13. Other Water Rights Used:

14. Remarks:

THIS CLAIM IS A RESULT OF A CHANGE IN OWNERSHIP FOR A PORTION
OF CLAIM NO. A63-04641 FEE PAID UNDER RECEIPT NO. W010765.
RDH 11/8/96.

15. Basis of Claim: STATUTORY CLAIM

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

Signature of Claimant(s): _____ Date: _____
_____ Date: _____

State of Idaho)
County of _____) SS.

Subscribed and sworn (or affirmed) before me this _____ day
of _____ 19 _____

Notary Public

Seal

Residing at _____

My Commission Expires _____

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: A63-04641
Date Received: 3/08/1990
Receipt No: W010765
Received By: JFW

NOTICE OF CLAIM TO A WATER RIGHT
ACQUIRED UNDER STATE LAW

1. Name: LESLIE W. HAMILTON
Address: RURAL RT. #1; 26415 SAND RD.
PARMA, ID 83660
2. Date of Priority: NOV 01, 1880
3. Source: UNNAMED DRAIN Trib. to: SAND HOLLOW DRAIN
4. Point of Diversion:

Township	Range	Section	1/4 of	1/4 of	1/4	Lot	County
05N	05W	14		NW	SW		CANYON
5. Description of diverting works:
HEADGATE, PIPELINE, GRAVITY DITCH
6. Water is used for the following purposes:

Purpose	From	To	C.F.S.	(or)	A.F.A.
IRRIGATION	04/01	10/31	2.000		
7. Total Quantity Appropriated is:
2.000 C.F.S. (and/or) A.F.A.
8. Total consumptive use is Acre Feet Per Annum.
9. Non-irrigation uses:
10. Place of Use:

Township	Range	Section	1/4 of	1/4	Lot	Use	Acres
05N	05W	15	SW	SE		IRR	23.0
			SE	SE		IRR	34.0
Section Acres							57.0

10. Place of Use: Continued

Total Acres 57.0

11. Place of use in counties: CANYON

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

13. Other Water Rights Used:

14. Remarks:

15. Basis of Claim: STATUTORY CLAIM

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

Signature of Claimant(s): Leslie W. Hamilton Date: 3-8-90

Date: _____

State of Idaho)
County of Ada) SS.

Subscribed and sworn (or affirmed) before me this 8 day
of March 19 90

Lori Harris
Notary Public

Seal

Residing at Boise, Idaho
My Commission Expires 12-8-94

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SEP 14 2006

DEPARTMENT OF
WATER RESOURCESIN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLSIN RE THE GENERAL ADJUDICATION
OF RIGHTS TO THE USE OF WATER FROM
THE SNAKE RIVER BASIN WATER SYSTEM

CIVIL CASE NUMBER: 39576

Ident. Number A63-04641A

Date Received 9-14-06

Receipt Number

AMENDED
NOTICE OF CLAIM
TO A
WATER RIGHT
ACQUIRED UNDER STATE LAWAttorney: Scott L. Campbell
Moffatt, Thomas, Barrett,
Rock & Fields, Chartered
P. O. Box 829
Boise, Idaho 83701-0829
(208) 345-2000

Please type or print clearly

1. Name of Claimant (s) Tree Top Ranches, LP Phone (208) 377-0998
Mailing Address 914 Houston Road, Boise, ID Zip 837062. Date of Priority (Only one (1) per claim) November 1, 18803. Source of water supply (a) Sand Hollow Creek Drain, aka Cole Slough Drain
which is tributary to (b) Boise River4. a. Location of existing point of diversion is: Township 5N Range 5W Section 22,
NW 1/4 of NE 1/4 of _____ 1/4, Govt. Lot, _____ B.M., County of _____ Canyon

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.

Approximately 75 horsepower pump, pipeline, gravity ditch

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SEP 18 2006

WATER RESOURCES
WESTERN REGION

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BOI_MT2:625898.1

SEP 15 2006

6. Water is claimed for the following purposes:

(both dates are inclusive)

(cfs)

(acre feet)

For Irrigation purposes from 4/1 to 10/31 amount 1.890 or _____
 For _____ purposes from _____ to _____ amount _____ or _____
 For _____ purposes from _____ to _____ amount _____ or _____
 For _____ purposes from _____ to _____ amount _____ or _____

7. Total quantity claimed (a) 1.890 (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.) _____

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.

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	
05N	05W	15															20	34	54

Total number of acres irrigated 54.0

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

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.
A63-04641B or None ()

14. Remarks:

The point of diversion claimed for this water right was established prior to November 19, 1987 and accordingly qualifies as an accomplished transfer pursuant to Idaho Code Section 42-1425.

Last Name Tree Top Ranches, LP Ident No. A63-04641A

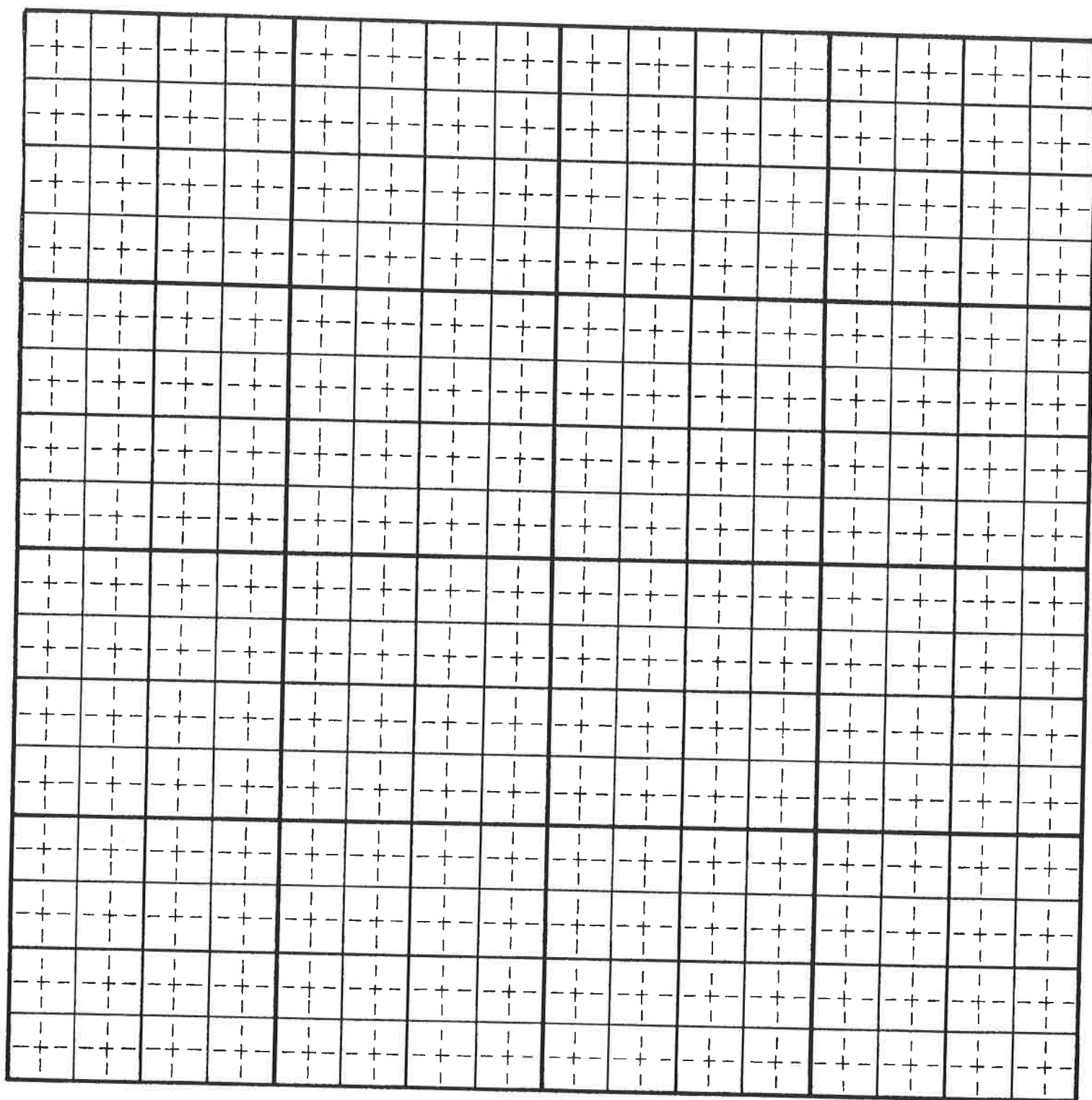
SCANNED

BOI_MT2:625898.1

SEP 15 2006

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

Scale: 2 inches equals 1 mile Please see attached map.



Last Name Tree Top Ranches, LP

Ident No. A63-04641A

SCANNED

SEP 15 2006

BOI_MT2:625898.1

15. Basis of Claim (check one) Beneficial Use ☒ Posted Notice _____ License _____ Permit _____
Decree _____
If applicable provide IDWR Water Right Number A63-04641A
Court _____ Case Number _____ Decree Date _____
Plaintiff vs 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 ☒
wish to receive and pay a small annual fee for monthly copies of the docket sheet.
Number of attachments 2

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] Date _____

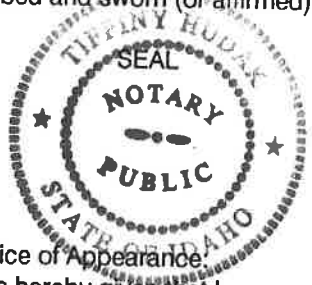
_____ Date _____

For Organizations: I do solemnly swear or affirm that I am _____ President
of _____ Tree Top Ranches, LP _____ Title
Organization, that I have signed the foregoing
document in the space below as _____ President of _____ Tree Top Ranches, LP
Title Organization
and that the statements contained in the foregoing document are true and correct.

Signature of Authorized Agent [Signature]
Title and Organization Larry D. Williams, President, Tree Top Ranches, LP Date 9/6/06

State of Idaho/or _____)
County of Ada) SS.

Subscribed and sworn (or affirmed) before me this 6th day of September, 2006
Notary Public [Signature]
Residing at Boise
My Commission Expires 9/16/06



17. Notice of Appearance
Notice is hereby given that I, Scott L. Campbell 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 P.O. Box 829, Boise, Idaho 83701-0829
Date 9/13/06

Last Name Tree Top Ranches, LP Ident. Number A63-04641A

Shurte, Jan

From: Courtney, Andrea
Sent: Tuesday, May 26, 2009 9:27 AM
To: Shurte, Jan
Cc: Williams, Ray; Music, Vicky
Subject: Tree Top 63-4534B et al

Jan~

Andy Waldera just called about this Tree Top batch that is currently scheduled for trial in July. He has spoken with Dana (evidently neither of them is excited about the prospect of a trial). Andy summarized his call as this-- the main objections are source and quantity. The source objection can be resolved with the B63 administration remark (that the Dept added to at least one SF5 that I recall). That leaves the quantity objection and what the Dept wanted to do with the Haas Ditch soil comparison, if anything. Andy said that his client commissioned Scott King to perform a Hubble, and Andy would like the chance to meet with you about the results of it. Sounds like the Hubble might be something that could convince Dana and client of an agreeable quantity. Andy is eager to meet and share the "fun" (yes, he called it fun) information. I told him we could not meet until after the 27th (to allow time for last-minute work on the spring late claims report), but perhaps we could do it the morning of the 28th. Let me know if that is acceptable; I'm in the office all day today.

Hope you had a nice long weekend.

Andrea

Shurte, Jan

From: Shurte, Jan
Sent: Wednesday, April 22, 2009 2:55 PM
To: 'Scott King'
Cc: Courtney, Andrea; Williams, Ray
Subject: RE: 63-4641A / 63-4641B

Scott,

The Department does not have the personnel needed to conduct Excessive Diversion Rate Analysis (Hubble) at this time. Also, we do not normally complete this type of analysis, to my knowledge, in response to a cfs objection. It is usually up to the objector to show that additional water, over and above the 1" per acre, is needed in order to beneficially water the crop. Ditch loss should also be taken into account when determining how much water is required.

Due to our previous cutbacks this year and more coming, we have no personnel available to conduct this type of analysis. Most regional personnel are either working on processing backlogged applications for permits and transfers with a few working on objection resolution. Sorry we cannot accommodate requests such as this like we did in the past.

Sincerely,
Jan Shurte
Water Rights Supervisor
Western Region
IDWR

From: Scott King [mailto:SKing@spfwater.com]
Sent: Tuesday, April 21, 2009 3:28 PM
To: Shurte, Jan
Subject: 63-4641A / 63-4641B

Hello Jan,

As we briefly discussed by telephone, on behalf of our client Tree Top Ranches, I am requesting that IDWR perform an Excessive Diversion Rate Analysis (Hubble) for the 63-4641A and 63-4641B water rights. I understand from our conversation that you would consider this request and let me know if IDWR is willing and able to perform this analysis and provide a report prior to May 15, 2009. Thank you for considering the request. I look forward to hearing back.

Best wishes,
Scott

Scott N. King, P.E.
Supervising Engineer
SPF Water Engineering, LLC
300 East Mallard Drive, Suite 350
Boise, Idaho 83706
phone: (208) 383-4140 ext. 209
fax: (208) 383-4156
email: sking@spfwater.com
www.spfwater.com

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4/22/2009

Moffatt Thomas

MOFFATT THOMAS BARRETT ROCK & FIELDS, CHTD.

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SEP 18 2008

WATER RESOURCES
WESTERN REGION

Boise
Idaho Falls
Pocatello
Twin Falls

US Bank Plaza Building
101 S Capitol Blvd 10th Fl
PO Box 829
Boise Idaho 83701 0829

September 16, 2008

208 345 2000
800 422 2889
208 385 5384 Fax
www.moffatt.com

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John W. Barrett
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John S. Simko
John C. Ward
D. James Manning
David B. Lincoln
Gary T. Dance
Larry C. Hunter
Randall A. Peterman
Mark S. Prusynski
Stephen R. Thomas
Glenna M. Christensen
Gerald T. Husch
Scott L. Campbell
Robert B. Burns

Michael E. Thomas
Patricia M. Olsson
Christine E. Nicholas
Bradley J. Williams
Lee Radford
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Rebecca A. Rainey
Nathan R. Starnes
Andrew J. Snook

Robert E. Bakes, *of counsel*

Willis C. Moffatt, 1907-1980
Kirk R. Helvie, 1956-2003

Andrea Courtney
Office of the Attorney General, State of Idaho
322 E. Front Street
P.O. Box 83720
Boise, ID 83720-0098

Jan Shurte
Idaho Department of Water Resources Western
Region Office
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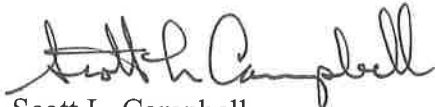
Re: Subcase Nos. 63-04641A and 63-04641B
in the Name of Tree Top Ranches / Soils Analysis
MTBR&F File No. 22567.0000

Dear Andrea and Jan:

Pursuant to the discussions at our meeting held on August 8, 2008, my client, Tree Top Ranches, L.P., hired a consultant to undertake a soils analysis of the real property to which water rights 63-4641A and 63-4641B are appurtenant. I have enclosed a copy of the soils analysis, dated September 15, 2008 and prepared by Terry Scanlan, P.E., P.G. ("Scanlan Soils Analysis"). As you will note, Mr. Scanlan concluded that the surface "soils within the Haas Ditch Company service area and the place of use for Tree Top Ranches' water right 63-4641A and 63-4641B have similar characteristics for purposes of irrigation." Scanlan Soils Analysis, page 2.

Please feel free to contact me with any questions.

Very truly yours,



Scott L. Campbell

SLC/tmh
Enclosures

cc: Larry Williams (w/encls.)
Dana L. Hofstetter (w/encls.)



September 15, 2008

Scott Campbell
Moffatt Thomas
101 S. Capitol Blvd., 10th Floor
P.O. Box 829
Boise, ID 83701-0829

Subject: Soil Analysis for Water Rights 63-4641A and 63-4641B

Dear Scott:

As authorized by email dated August 29, 2008, SPF Water Engineering has reviewed soil information related to the places of use for water rights 63-4641A and 63-4641B claimed in the SRBA by Tree Top Ranches LP. This soil information has been compared to the soils data available for the Haas Ditch Company service area. The analysis found that soil types within the Haas Ditch Company service area and at the place of use for the 63-4641A and 63-4641B water rights are similar, and will have similar irrigation characteristics. Details of the analysis are provided below.

Method

The analysis has utilized soil mapping data available from the USDA Soil Conservation Service Soil Survey of the Canyon Area, Idaho (1972).

Soil survey mapping data were superimposed over the places of use for the Tree Top Ranches water right place of use and the Haas Ditch Company water right place of use. Water right places of use were available as GIS shape files from the Idaho Department of Water Resources. Figure 1 presents soil mapping for the 63-4641 water right places of use and Figure 2 presents soil mapping for the Haas Ditch Company water right place of use.

The total acres of each soil type within the places of use were determined using ESRI ArcMap version 9.2 Geographic Information System (GIS) software. The percentages of each soil types were then tabulated and are presented in Table 1 (63-4641 soils) and Table 2 (Haas Ditch Company soils), along with physical characteristics of each soil type listed in the Soil Survey.

The weighted averages for the upper 30 inches of soil in each area are also provided for selected characteristics in Tables 1 and 2. The upper 30 inches was selected for analysis due to the high seasonal water table (generally 1 to 3 feet) and the coarse-grained nature of soils below 30 inches.

Results

The mapping found that the surface soils at both locations are similar, consisting primarily of fine sandy loams and loams in the upper 30 inches, and sand and gravel below approximately 30 inches. Approximately 57 percent of the Haas soils are classified as saline, while approximately 15 percent of the 63-4641 soils are classified as saline-alkali. All of the soils units have surface slopes of 0 to 1 percent.

Permeability in both areas is generally moderate to moderately rapid in the upper 30 inches, and rapid below 30 inches. Calculated average upper soil permeability of the Haas soils is 8.1 inches per hour, compared to 5.7 inches per hour for the 63-4641 soils. Both values are skewed by the presence of high permeability Notus soils within each area. Neglecting the Notus soils, upper soil permeability averages approximately 2 inches per hour within the Haas service area and 4 inches per hour within the 63-4641A place of use. Permeability within the 63-4641B place of use is lower, averaging 1.3 inches per hour.

Upper soil water holding capacities are also similar within the 63-4641A and 63-4641B place of use and Haas Ditch Company service area, averaging 0.14, 0.11, and 0.12 inches per inch, respectively.

Based on soil texture, the intake families for flood and furrow irrigation average 1.9 and 0.54, respectively, for the 63-4641A place of use, 1.5 and 0.50, respectively, for the 63-4641B place of use, and 2.6 and 0.65, respectively, for the Haas Ditch Company place of use. These values are in the same general range, but reflect the slightly higher average permeability and slightly lower average water holding capacity of the Haas soils in comparison to the 63-4641 soils.

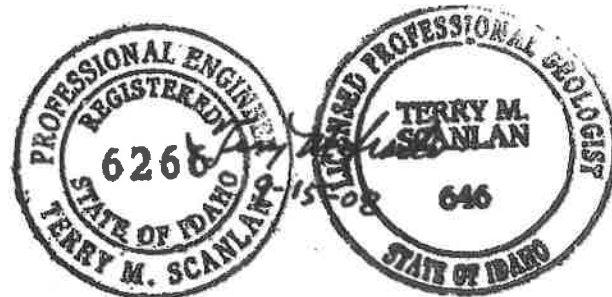
In summary, the soils within the Haas Ditch Company service area and the place of use for Tree Top Ranches' water right 63-4641A and 63-4641B have similar characteristics for purposes of irrigation. As a result, average irrigation diversion requirements for both areas will be similar, with difference influenced more by field configuration and irrigation method than by average soil characteristics.

Please contact me with any questions.

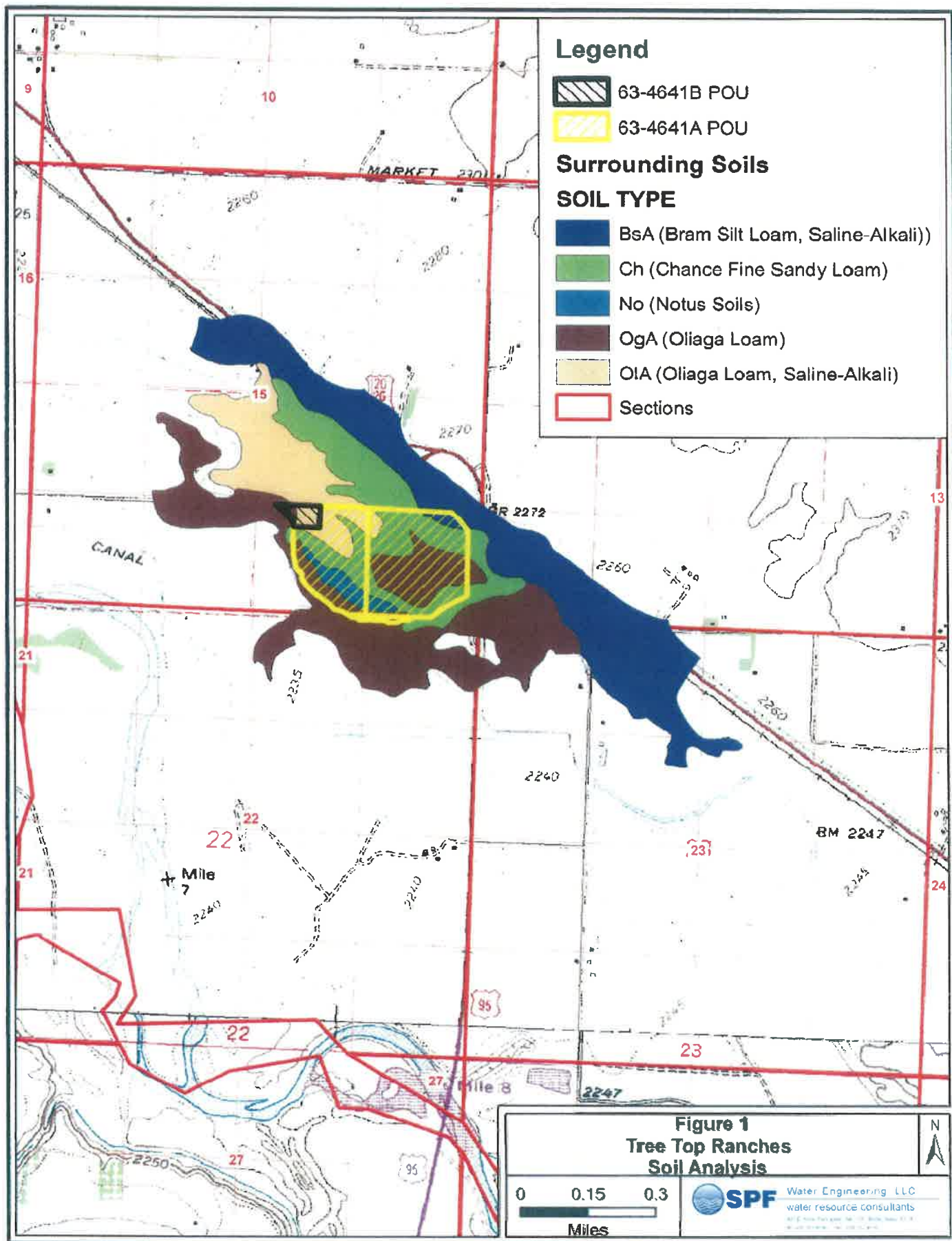
Sincerely,



Terry M. Scanlan, P.E., P.G.



Cc: Bill Mulder – Tree Top Ranches



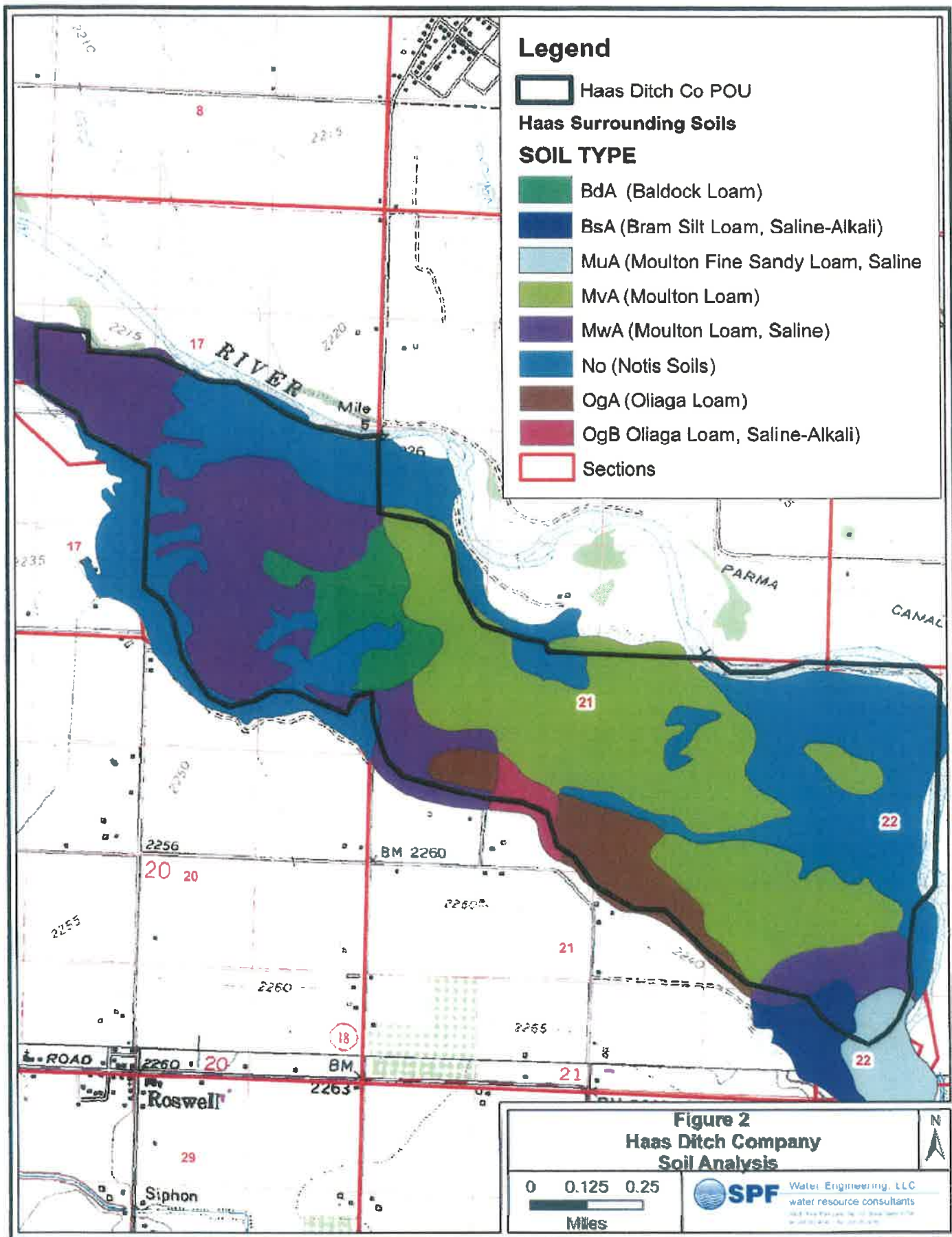


Table 1 - Soil Summary for Water Rights 63-4641A and 63-4641B

Map Symbol	Soil Type	Drainage	Amount (Acres)		Seasonal High Water Table (feet)	Depth from Surface (inches)	Permeability (inches per hour)	Available Water Capacity (inches per inch of soil)	Soil				
			Within 63- 6641A POU	% 63- 4641A POU					Texture Intake Family (furrow)	Texture Intake Family (flood)			
BsA	Bram Silt Loam, Saline-Alkali	Somewhat poorly drained	1.3	2.0%	0 to 1	0 to 52	silt loam, loam	0.06 - 0.20	0.10 - 0.18	7.9-9.6	1.5	0.5	
Ch	Chance Fine Sandy Loam	Very poorly drained	22	41.0%	0 to 1	0 to 23	fine sandy loam and sandy loam	2.00 - 6.30	0.13 - 0.15	6.1-7.3	2	0.55	
Ne	Notus Soils	Somewhat poorly drained	4.7	9.0%	0 to 1	0 to 14	fine sandy loam to gravelly loamy sand	2.00 - 20.00	0.08 - 0.14	6.6-7.8	2.5	0.63	
OgA	Oliaga Loam	Somewhat poorly drained	19	35.0%	0 to 1	0 - 35	loam and fine sandy loam	0.63 - 2.00	0.16 - 0.18	7.4-8.4	1.5	0.5	
QIA	Oliaga Loam, Saline Alkali	Somewhat poorly drained	7	13.0%	0 to 1	35 - 60	sand and gravel	>20.00	0.03 - 0.05		4	0.85	
Total			54	100%	2.3	100%							
Weighted Average for upper 30 inches - 63-4641A										5.7	0.14	1.9	0.54
Weighted Average for upper 30 inches - 63-4641B										1.3	0.11	1.5	0.50

Table 2 - Soil Summary for Haas Ditch Company Service Area

Map Symbol	Soil Type	Drainage	Amount: (Acres) Within Haas POU	% Haas POU	Slope (%)	Seasonal High Water Table (feet)	Depth from Surface (inches)	Texture	Permeability (inches per hour)	Available Water Capacity (inches per foot of soil)	Soil pH	Intake Family (feet)	Intake Family (furrows)
BdA	Baldock Loam	Somewhat poorly drained	38.5	5.0%	0 to 1	3 to 4	0 to 56	loam	0.63 - 2.00	0.16 - 0.18	7.4-9.0	1.5	0.5
							56 to 65	fine sandy loam	2.00 - 6.30	0.13 - 0.15	7.9-8.4	2	0.55
BsA	Bram Silt Loam, Saline-Alkali	Somewhat poorly drained	5.5	1.0%	0 to 1	3 to 6	0 to 52	silt loam, loam	0.06 - 0.20	0.10 - 0.18	7.9-9.6	1.5	0.5
MuA	Moulton Fine Sandy Loam, Saline	Poorly drained	6.7	1.0%	0 to 1	2 to 3	0 to 30	fine sandy loam, loam and loamy sand	0.63 - 6.30	0.13 - 0.15	6.6-7.8	2.5	0.63
							30	gravel and coarse sand	>20.0	0.03 - 0.05		4	0.85
MvA	Moulton Loam, Saline	Poorly drained	221.5	31.0%	0 to 1	2 to 3	0 to 30	fine sandy loam, loam and loamy sand	0.63 - 6.30	0.13 - 0.15	6.6-7.8	2.5	0.63
							30	gravel and coarse sand	>20.0	0.03 - 0.05		4	0.85
MwA	Moulton Loam, Saline	Poorly drained	180.2	25.0%	0 to 1	2 to 3	0 to 30	fine sandy loam, loam and loamy sand	0.63 - 6.30	0.13 - 0.15	6.6-7.8	2.5	0.63
							30	gravel and coarse sand	>20.0	0.03 - 0.05		4	0.85
No	Notus Solis	Somewhat poorly drained	213.1	30.0%	0 to 1	1 to 3	0 to 14	fine sandy loam to gravelly loamy sand	2.00 - 20.00	0.08 - 0.14	6.6-7.8	2.5	0.63
							14 - 60	sand and gravel	>20.00	0.03 - 0.05	6.6-7.3	4	0.85
OgA	Ollaga Loam	Somewhat poorly drained	41.1	6.0%	0 to 1	2 to 3	0 - 35	loam and fine sandy loam	0.63 - 2.00	0.16 - 0.18	7.4-8.4	1.5	0.5
							35 - 60	sand and gravel	>20.00	0.03 - 0.05		4	0.85
OvA	Ollaga Loam, Saline-Alkali	Somewhat poorly drained	7	1.0%	0 to 1	1 to 3	0 - 35	loam and fine sandy loam	0.63 - 2.00	0.10 - 0.12	7.9-9.4	1.5	0.5
							35 - 60	sand and gravel	>20.00	0.03 - 0.05		4	0.85

713.6* 100%

*Limited to 561 acres irrigation within the Haas Ditch Co. service area

Weighted Average for upper 30 inches

8.1 0.12 2.6 0.65

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 63-04641A
(Insert water right number)

STANDARD FORM 1
OBJECTION

Please fill in the following information:

B. NAME AND ADDRESS OF PERSON OBJECTING

Name: Tree Top Ranches, LP

Address: 914 Houston Road

Boise, Idaho 83706

Daytime Phone: 208-377-0998

Name & Address of Attorney, if any:

Scott L. Campbell

Moffatt Thomas

PO Box 829, Boise, Idaho 83701

C. CLAIMANT OF WATER RIGHT AS LISTED IN DIRECTOR'S REPORT

Name: Tree Top Ranches, LP

Address: 914 Houston Road

Boise, Idaho 83706

D. I object to the following elements as recommended in the Director's Report. (Please check the appropriate box(es))

1. ☐ **Name and Address**
Should be: _____
2. ☒ **Source**
Should be: Tributary should be Boise River
3. ☒ **Quantity**
Should be: 1.89 cfs
4. ☐ **Priority Date**
Should be: _____
5. ☐ **Point of Diversion**
Should be: _____
6. ☐ **Instream Flow Beginning and Ending Point**
Should be: _____
7. ☒ **Purpose(s) of Use**
Should be: Quantity should be 1.89 cfs
8. ☒ **Period of Year**
Should be: Quantity should be 1.89 cfs
9. ☒ **Place of Use**
Should be: Please see attachment 1 hereto
10. ☐ **I object because:**
 - ☐ This water right Should not exist.
 - ☐ This water right was not recommended, but Should be recommended with the elements described above.

E. **REASONS SUPPORTING OBJECTIONS(S):**

Please see attachment 2 hereto.

F.

VERIFICATION (must be completed)

State of Idaho)
)ss.
County of Ada)

Scott L. Campbell, 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

(Signature of person filing objection)

Scott L. Campbell
(Attorney signing in representative capacity)

Subscribed and sworn to before me on: June 19, 2007



Deborah Long
Notary Public for Idaho

Residing at: Boise

My Commission Expires: 10/10/07

**ATTACHMENT 2 TO
STANDARD FORM 1 – OBJECTION
SUBCASE 63-04641A**

Reasons Supporting Objection(s)

Source:

The tributary to Sand Hollow Creek is incorrectly listed as the Snake River. The correct tributary is the Boise River.

Quantity:

The claimed quantity of 1.89 cfs should be recommended in full, based upon historic diversion, delivery, and use of irrigation water by Tree Top Ranches, LP, and its predecessors.

Purpose of Use and Period of Year:

The claimed quantity of 1.89 cfs should be recommended in full, based upon historic diversion, delivery, and use of irrigation water by Tree Top Ranches, LP, and its predecessors.

Place of Use:

The place of use described in the Director's Report does not accurately describe the lands historically irrigated under this water right.

Other Provisions Necessary for Definition or Administration of this Water Right:

There is no legal basis for the inclusion of the following remark:

This right remains subject to the right of the original appropriator, in good faith and in compliance with the state laws governing changes in use and/or expansion of water rights, to cease wasting water, to change the place or manner of wasting it, or to recapture it.

**ATTACHMENT 1 TO
STANDARD FORM 1 – OBJECTION
SUBCASE 63-04641A**

The Director's Report incorrectly identifies the place of use for irrigation of lands under this water right. The correct, historic place of use is as follows:

<u>TWP</u>	<u>RNG</u>	<u>SEC</u>	<u>1/4 of</u>	<u>1/4</u>	<u>Lot</u>	<u>Acres Claimed</u>
5N	5W	15	SE	SE		34
			SW	SE		20
					Total	54

INSTRUCTIONS FOR MAILING

You must mail 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 June 19, 2007, 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:

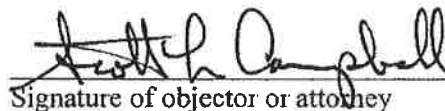
Name: Tree Top Ranches, LP
Address: 914 Houston Road
Boise, Idaho 83706

3 Copies to:

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

United States Department of Justice
Environment & Nat'l Resources Div
550 W Fort Street, MSC 033
Boise, ID 83724

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



Signature of objector or attorney
mailing on Objector's behalf

**ATTACHMENT 2 TO
STANDARD FORM 1 – OBJECTION
SUBCASE 63-04641A**

Reasons Supporting Objection(s)

Source:

The tributary to Sand Hollow Creek is incorrectly listed as the Snake River. The correct tributary is the Boise River.

Quantity:

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Purpose of Use and Period of Year:

The claimed quantity of 1.89 cfs should be recommended in full, based upon historic diversion, delivery, and use of irrigation water by Tree Top Ranches, LP, and its predecessors.

Place of Use:

The place of use described in the Director's Report does not accurately describe the lands historically irrigated under this water right.

Other Provisions Necessary for Definition or Administration of this Water Right:

There is no legal basis for the inclusion of the following remark:

This right remains subject to the right of the original appropriator, in good faith and in compliance with the state laws governing changes in use and/or expansion of water rights, to cease wasting water, to change the place or manner of wasting it, or to recapture it.

Water Right 63-04641A +

Section 15, Township 5 North, Range 5 West, Canyon County, Idaho



— Place of Use
● Point of Diversion



12/10/2006

IDAHO DEPARTMENT OF WATER RESOURCES
PRELIMINARY RECOMMENDATION WATER RIGHTS ACQUIRED UNDER STATE LAW

RIGHT NUMBER: 63-4641A
NAME AND ADDRESS: TREE TOP RANCHES LP
914 HOUSTON RD
BOISE ID 83706

SOURCE: SAND HOLLOW CREEK
UNNAMED DRAIN
TRIBUTARY: SNAKE RIVER
TRIBUTARY: SAND HOLLOW CREEK

QUANTITY: 1.080 CFS
PRIORITY DATE: 03/01/1935

POINT OF
DIVERSION: T05N R05W S14 SWSW Within CANYON County
T05N R05W S15 SWSE Within CANYON County

PURPOSE AND
PERIOD OF USE:

<u>PURPOSE OF USE</u>	<u>PERIOD OF USE</u>	<u>QUANTITY</u>
IRRIGATION	03/01 11/15	1.080 CFS

PLACE OF USE: IRRIGATION in CANYON County

T05N R05W S15	SWSE	20.50	T05N R05W S15	SESE	32.50
T05N R05W S22	NENE	0.80	T05N R05W S22	NWNE	0.20

54 ACRES TOTAL

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

This right remains subject to the right of the original appropriator, in good faith and in compliance with state laws governing changes in use and/or expansion of water rights, to cease wasting water, to change the place or manner of wasting it, or to recapture it.

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 - Beneficial Use

The following rights are also diverted through point of diversion in the SWSE S15 described above: 63-4641B, 63-7921.

Source diverted in the SWSE S15 is also known as Sand Hollow Creek Drain and Cole Slough Drain.

Right No. 63-4641B is also diverted through point of diversion in the SWSW S14 described above.



Idaho Department of Water Resources

63-4641A

05N 05W S15 & S22



-  POU
-  POD
-  Sections
-  Quarter/Quarter

Total Irrigated
Acres: 54.0

400 0 400 Feet



IDWR
Prepared by: Lori Graves
Date: 09-29-06
1986-87 Photography

IDAHO DEPARTMENT OF WATER RESOURCES

Adjudication Recommendation Report 63-4641A V1

WATER RIGHT NUMBER: 63-4641A V1

<u>Owner Type</u>	<u>Name and Address</u>
Original Owner	LESLIE W HAMILTON 26415 SAND RD PARMA, ID 83660
Current Owner	TREE TOP RANCHES LP 914 HOUSTON RD BOISE, ID 83706 (208)377-0998
Attorney	SCOTT L CAMPBELL MOFFATT THOMAS BARRETT ROCK & FIELDS CHTD PO BOX 829 BOISE, ID 83701-0829 (208) 345-2000

Priority Date: 03/01/1935

Basis: Beneficial Use

Status: Active

<u>Source</u>	<u>Tributary</u>
SAND HOLLOW CREEK	SNAKE RIVER
UNNAMED DRAIN	SAND HOLLOW CREEK

<u>Beneficial Use</u>	<u>From</u> <u>To</u>	<u>Diversion Rate</u>	<u>Annual Volume</u>
IRRIGATION	03/01 to 11/15	1.080 CFS	
	<u>Total Diversion:</u>	1.080 CFS	

<u>Location of Point(s) of Diversion</u>		
UNNAMED DRAIN CANYON County	SW1/4SW1/4	Sec. 14, Twp 05N, Rge 05W, B.M.
SAND HOLLOW CREEK CANYON County	SW1/4SE1/4	Sec. 15, Twp 05N, Rge 05W, B.M.

Place of Use

IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
05N	05W	15															20.5	32.5	53.0
05N	05W	22	.8	.2															1.0

Total Acres: 54

IDAHO DEPARTMENT OF WATER RESOURCES
Adjudication Recommendation Report 63-4641A V1

Conditions of Approval:

1. F06 The following rights are also diverted through point of diversion in the SWSE S15 described above: 63-4641B, 63-7921.
2. C18 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.
3. B01 Source diverted in the SWSE S15 is also known as Sand Hollow Creek Drain and Cole Slough Drain.
4. F05 Right No. 63-4641B is also diverted through point of diversion in the SWSW S14 described above.

Remarks:

Comments:

1. Igraves 9/25/2006 Parcel No.

Comment: Irrigation is within Parcel No. R3891500000.

2. Igraves 9/25/2006 Overlaps

Comment: Right 63-7921 is for separate acres on the west side of the creek and shares the SWSE p/d. Right 63-4641B is for separate acres in the SWSE and shares the same irrigation system as A63-4641A.

3. Igraves 9/25/2006 P/Ds

Comment: The original claim lists one p/d on an unnamed drain in the NWSW S14. The SRBA field exam confirmed that this diversion exists and is actually located in the SWSW S14. An amended claim was filed 7/14/2006 changing the p/d to Sand Hollow Creek Drain in the NWNE S22. The SRBA field exam confirmed that the amended diversion exists and is actually in the SWSE S15 as licensed on right 63-7921. This p/d has been recommended as an accomplished transfer because the application map for license 63-7921 submitted in 1979 indicated both p/ds. The original p/d was also recommended based on the SRBA field exam findings.

4. Igraves 9/25/2006 Source

Comment: For the SWSW S14 p/d, the original claim listed unnamed drain tributary to Sand Hollow Drain. Based on the topo map, the tributary has been clarified to Sand Hollow Creek. For the SWSE p/d, the amended claim lists Sand Hollow Creek Drain tributary to the Boise River. Based on the topo map, source has been clarified to Sand Hollow Creek tributary to the Snake River.

5. Igraves 9/29/2006 Flow Rate

Comment: The SWSE S15 p/d was measured at 1.53 cfs in 1979 for license 63-7921. The SWSW S14 p/d was measured at 7.23 cfs during the SRBA field exam. Recommended acres are limited to .02 cfs/acre.

IDAHO DEPARTMENT OF WATER RESOURCES
Adjudication Recommendation Report 63-4641A V1

Dates and Other Information:

Decreed Date:
Enlargement Use Priority Date:
Enlargement Statute Priority Date:
Defendant:
Plaintiff:
Civil Case Number:
Judicial District:
Notice of Error Flag:
State or Federal: S
Owner Name Connector:
Water District Number:
Generic Max Rate Per Acre:
Generic Max Volume Per Acre:
Swan Falls Trust or Nontrust:
Swan Falls Dismissed:
DLE Act Number:
Carey Act Number:
Mitigation Plan: False

Combined Use Limits:

Water Supply Bank:

Adjudication Claim Report 63-4641A

WATER RIGHT NUMBER: 63-4641A

add Scott Campbell as
attorney of record

per exams +
topo - all
comments

Tributary
SNAKE
BOISE RIVER

BOISE RIVER
Sand Hollow Cr

From	To
------	----

Diversion Rate

Annual Volume

~~4/01~~ to ~~10/31~~
3/1 11/7

~~1.890~~ CFS

1.08

Total Diversion:

~~1,890~~ CFS

1.08

SW SE
NW 1/4 NE 1

Sec. ¹⁵~~22~~, Twp 05N, Rge 05W, B.M.

SW SW

Sec 14 per SKBA exam

IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	Totals
05N	05W	15															20.0	34.0	54.0
																	20.5	32.5	

Total Acres: 54

1. The point of diversion claimed for this water right was established prior to November 19, 1987 and accordingly qualifies as an accomplished transfer pursuant to Idaho Code Section 42-1425.
2. CHANGE IN OWNERSHIP LG 9-22-2006- REVIEWED BY V. MUSIC
3. THIS CLAIM IS A RESULT OF A CHANGE IN OWNERSHIP FOR A PORTION OF CLAIM NO. A63-04641 FEE PAID UNDER RECEIPT NO. W010765. RDH 11/8/96.

Claim Received Date: 3/8/1990
Enlargement Use Priority Date:
Enlargement Statute Priority Date:

add F05 - shared P/D in
SW SW S14
F06 - shared P/D in
SW SE S15
B01 - SW SE source
AKA

Music, Vicky

From: Hemenway, Sandy
Sent: Thursday, September 14, 2006 9:13 AM
To: Music, Vicky
Subject: FW: Tree Top Ranches claims nos. 63-4641A & B, 63-21530 and 63-21580



Map.gif

Here's the copy you requested.....s

-----Original Message-----

From: Tiffany Hudak [mailto:TMH@moffatt.com]
Sent: Wednesday, September 13, 2006 4:14 PM
To: Music, Vicky
Cc: Hemenway, Sandy; Scott Campbell; lwilliams@treetopranches.com
Subject: Re: Tree Top Ranches claims nos. 63-4641A & B, 63-21530 and 63-21580

Vicky:

The purpose of this email is to confirm the date, time, and location of the site visit to Tree Top Ranches for purposes of conducting a field examination for water right nos. 63-4641A & B, 63-21530 and 63-21580. The site visit is set for Monday, September 18, 2006, at 10:00 am. Please note that you and/or Sandy will be meeting with Kelly Yore, the Ranch Manager. Scott Campbell will not attend this site visit. I've attached a map showing the location of Tree Top Ranches. Please note that the entrance to the Ranch is located right off of Hwy 95, just south of the 20/26 and 95 junction. You can enter the Ranch at the first gate, then follow the signs to the shop.

If you need further information, please let me know.

Sincerely, Tiffany

Tiffany Hudak
Paralegal
Moffatt Thomas Barrett Rock & Fields, Chtd.
101 S. Capitol Blvd., 10th Floor
PO Box 829
Boise, ID 83701
208.385.5435 (direct line)
208.385.5435 (direct fax)
tmh@moffatt.com

>>> "Music, Vicky" <Vicky.Music@idwr.idaho.gov> 9/13/2006 3:39 PM >>>
Tiffany -

I received your voice mail re the field exams for the above claims. Monday, September 18, 2006 at 10:00 AM is fine. Sandy Hemenway will be conducting the field exams. I may be there too if my schedule allows. Please let me know if it is Kelly Yore who will be accompanying her and an address where Sandy is to meet him. Thanks.

Vicky L. Music
Sr. Water Resource Agent
Adjudication Bureau
IDWR/Western Region
2735 Airport Way
Boise, Idaho 83705-5082
(208) 334-2190

NOTICE: This e-mail, including attachments, constitutes a confidential attorney-client communication. It is not intended for transmission to, or receipt by, any unauthorized persons. If you have received this communication in error, do not read it. Please delete it from your system without copying it, and notify the sender by reply e-mail or by calling (208) 345-2000, so that our address record can be corrected. Thank you.

NOTICE: To comply with certain U.S. Treasury regulations, we inform you that, unless expressly stated otherwise, any U.S. federal tax advice contained in this e-mail, including attachments, is not intended or written to be used, and cannot be used, by any person for the purpose of avoiding any penalties that may be imposed by the Internal Revenue Service.

Moffatt Thomas

MOFFATT THOMAS BARRETT ROCK & FIELDS, CHTD.

Eugene C. Thomas
John W. Barrett
R. B. Rock
Richard C. Fields
John S. Simko
John C. Ward
D. James Manning
Gary T. Dance
Larry C. Hunter
Randall A. Peterman
Mark S. Prusynski
Stephen R. Thomas
Glenna M. Christensen
Gerald T. Husch
Scott L. Campbell
Robert B. Burns

Michael E. Thomas
Patricia M. Olsson
Bradley J. Williams
Lee Radford
Michael O. Roe
David S. Jensen
James L. Martin
C. Clayton Gill
Michael W. McGraham
David P. Gardner
Julian E. Gabiola
Angela Schaer Kaufmann
Kimberly D. Evans Ross
Paul D. McFarlane
Jon A. Stenquist
Tyler J. Henderson

Jason G. Murray
Mark C. Peterson
Andrew J. Waldera
Tyler J. Anderson
Dylan B. Lawrence
Russell G. Metcalf
Benjamin C. Ritchie
Robert E. Bakes, *of counsel*
Morgan W. Richards, *of counsel*
Willis C. Moffatt, 1907-1980
Kirk R. Helvie, 1956-2003

RECEIVED

SEP 14 2006

DEPARTMENT OF
WATER RESOURCES

September 13, 2006

Boise
Idaho Falls
Pocatello
Twin Falls

US Bank Plaza Building
101 S Capitol Blvd 10th Fl
PO Box 829
Boise Idaho 83701 0829

208 345 2000
800 422 2889
208 385 5384 Fax
www.moffatt.com

RECEIVED

SEP 18 2006

WATER RESOURCES
WESTERN REGION

Misty Mount
Idaho Department of Water Resources
Idaho Water Center
322 E. Front Street, 6th Floor
P.O. Box 83720
Boise, ID 83720-0098

Re: Amended SRBA Claim for Water Right Nos. 63-04641A and 63-04641B
MTBR&F File No. 22567.0

Dear Misty:

Enclosed for filing please find an original and one copy of an Amended Snake River Basin Adjudication Notice of Claim for each of water right nos. 63-04641A and 63-04641B. Please file the originals, receive-stamp the copies, and return the copies to me in the enclosed self-addressed, stamped envelope.

Thank you for your assistance this matter. If you have any questions, please do not hesitate to contact me.

Sincerely,



Tiffany M. Hudak
Paralegal

/tmh

Enclosure

cc: Larry Williams (w/encl.)

SCANNED

SEP 15 2006

BOI_MT2:626216.1



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082 - (208) 334-2190

FAX (208) 334-2348

JAMES E. RISCH
Governor

KARL J. DREHER
Director

VIA FACSIMILE - 1 page

September 13, 2006

Tiffany M. Hudak
Paralegal
Moffatt Thomas.
101 S. Capitol Blvd., 10th Floor
Boise, Idaho 83701-0829
Facsimile No. (208) 385-5384

385-5435

RE: FIELD EXAMS

Snake River Basin Claim Nos.: A63-4641A and B, 63-21530 and 63-21580

Dear Tiffany:

This letter is in response to your correspondence, dated September 6, 2006. The claims referenced above are the remaining Tree Top Ranches claims for which a field exam is needed, unless they have acquired additional properties with appurtenant rights or claims of which we are not aware.

Your letter suggested that Dan Nelson conduct these exams because he conducted the 63-4534 field exam. However, Dan will not be available to conduct these exams, nor is it necessary. The claims in need of field exams are for totally different places of use and points of diversion, as well as different sources and additional uses. If we find that any of the points of diversion of the surface water claims have been changed to that of 63-4534, we can dispense with measuring the ditch and use Dan's calculations, but will still need to examine the delivery system specific to the claims.

Sandy Hemenway and/or I will conduct the field exams. Please provide me with some available dates for the exams and the on-site contact person for the exams. Contact me directly at (208) 334-2190 if you have questions regarding this matter.

Sincerely,

Vicky L. Music
Senior Water Resource Agent
Adjudication Bureau/ Western Region

* * * Memory TX Result Report (Sep. 13. 2006 9:51AM) * * *

1) Idaho Dept. of Water Resources
2)

Date/Time: Sep. 13. 2006 9:51AM

File No. Mode	Destination	Pg(s)	Result	Page Not Sent
5886 Memory TX	93855435	P. 1	OK	

Reason for error

E. 1) Hang up or line fail
E. 3) No answer
E. 5) Exceeded max. E-mail size

E. 2) Busy
E. 4) No facsimile connection



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082 - (208) 334-2190
FAX (208) 334-2348

JAMES E. RISCH
Governor
KARL J. DREHER
Director

VIA FACSIMILE - 1 page

September 13, 2006

Tiffany M. Hudak
Paralegal
Moffatt Thomas
101 S. Capitol Blvd., 10th Floor
Boise, Idaho 83701-0829
Facsimile No. (208) 385-5584

RE: FIELD EXAMS

Snake River Basin Claim Nos.: A63-4641A and B, 63-21530 and 63-21580

Dear Tiffany:

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Your letter suggested that Dan Nelson conduct these exams because he conducted the 63-4534 field exam. However, Dan will not be available to conduct these exams, nor is it necessary. The claims in need of field exams are for totally different places of use and points of diversion, as well as different sources and additional uses. If we find that any of the points of diversion of the surface water claims have been changed to that of 63-4534, we can dispense with measuring the ditch and use Dan's calculations, but will still need to examine the delivery system specific to the claims.

Sandy Hernenway and/or I will conduct the field exams. Please provide me with some available dates for the exams and the on-site contact person for the exams. Contact me directly at (208) 334-2190 if you have questions regarding this matter.

Sincerely,

Vicky L. Musick
Senior Water Resource Agent
Adjudication Bureau/ Western Region

MEMORANDUM TO SUBCONTRACTOR

TO: SANDY HEMENWAY
FROM: VICKY L MUSIC, SR WATER RESOURCE AGENT, IDWR / WESTERN
REGION
SUBJECT: 63-4641 A & B
DATE: 9/12/2006
CC: CLAIM FILE

These are beneficial use claims. It appears that the claim was split and 3 acres sold and claimed as the B portion. The A portion is for 54 acres. Both claims are now owned by Treetop Ranches. A change of ownership has been filed. The site address is: 26471 Sand Rd, Parma ID. It is southwest of the intersection of Hwy 95 S., and Hwy 20-26. Your contact is claimant's attorney, Scott Campbell or his paralegal, Tiffany Hudak at 345-2000.

Please:

1 – verify the acres irrigated in 1987 on the 1987 aerial.

2 –GPS the location of the pod. Take flow measurements and calculate flow if the pod is as claimed in section 14. If it is the pod in section 15 adjacent to Hwy 95 – we already have those measurements. Describe diversion and delivery system to claimed pou.

3 – the pod located on a map included with the change of ownership shows the pod actually in the NENE S 22. If this is the current location of the POD, when did it change?

4 – label pod, delivery system, etc on the attached 2004 aerial.

Thanks.

VLM

Moffatt Thomas

MOFFATT THOMAS BARRETT ROCK & FIELDS, CHTD.

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Morgan W. Richards, *of counsel*
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Kirk R. Helvie, 1956-2003

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DEPARTMENT OF
WATER RESOURCES

September 8, 2006

Boise
Idaho Falls
Pocatello
Twin Falls

US Bank Plaza Building
101 S Capitol Blvd 10th Fl
PO Box 829
Boise Idaho 83701 0829

208 345 2000
800 422 2889
208 385 5384 Fax
www.moffatt.com

Sally Sherman
Technical Records Specialist
Idaho Department of Water Resources
State Office, Adjudication Bureau
PO Box 83720
Boise, Idaho 83720-0098

Re: Water Right 63-4641A
MTBR&F File No. 22567.0

Dear Sally:

We are in receipt of your letter dated September 6, 2006, concerning the above-referenced water right. Please note that we submitted a change of water right ownership form, along with the supporting documents, to the Western Region office on August 31, 2006. Therefore, I am enclosing for processing the copies of Scott Campbell's letter dated August 31, 2006 (returned with your September 6th letter and containing hand-written notes), wherein he requests that all future notices, correspondence, pleadings, filings or other communication concerning the above-referenced water right be directed to Mr. Campbell at the above-identified address.

Thank you for your assistance to this matter. If you have any questions, please do not hesitate to contact me.

Sincerely,


Tiffany M. Hudak
Paralegal

/tmh

Enclosure

cc: Larry Williams (w/encl.)

SCANNED

SEP 14 2006

BOI_MT2:626400.1

Moffatt Thomas

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DEPARTMENT OF
WATER RESOURCES

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PO Box 829
Boise Idaho 83701 0829

208 345 2000
800 422 2889
208 385 5384 Fax
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August 31, 2006

Sally Sherman
Technical Records Specialist
Idaho Department of Water Resources
Adjudication Bureau
Idaho Water Center
322 E. Front Street, 6th Floor
P.O. Box 83720
Boise, ID 83720-0098

Re: Water Right 63-04641A
MTBR&F File No. 22567.0

*belongs to
Leslie W. Hamilton
not Tree Top / WMS.
-m 9-6-06*

Dear Sally:

This firm represents Larry and Marianne Williams and Tree Top Ranches LP with respect to certain water rights issues. The purpose of this correspondence is to request that all future notices, correspondence, pleadings, filings or other communication concerning the above-referenced water right be directed to the undersigned at the above-identified address.

Thank you for your assistance in this matter. If you have any questions, please do not hesitate to contact me.

Very truly yours,


Scott L. Campbell

SLC/tmh

cc: Larry Williams

SCANNED

SEP - 6 2006

Moffatt Thomas

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Robert E. Baltes, *of counsel*
Morgan W. Richards, *of counsel*

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101 S Capitol Blvd 10th Fl
PO Box 829
Boise Idaho 83701 0829208 345 2000
800 422 2889
208 385 5384 Fax
www.moffatt.comSeptember 6, 2006
*via Facsimile*Vicky Music
Sr. Water Resource Agent
Idaho Department of Water Resources
Western Region Office, Adjudication Bureau
2735 Airport Way
Boise, Idaho 83705**Re: Water Rights 63-4641A and 63-4641B**
MTBR&F File No. 22567.0

Dear Vicky:

In response to your letter to Tree Top Ranches dated August 24, 2006, and your letter to me dated August 31, 2006, regarding the above-referenced water rights, we are enclosing a copy of the Affidavit of Sam Smyser, dated September 5, 2006, concerning irrigation of the subject property. In your letter, you request evidence to establish the claimed priority date for these water rights. As you will note from the Affidavit, Mr. Smyser has observed irrigation of the subject property since at least 1935.

Your August 24th correspondence also identifies that a change in water right ownership is necessary for these water rights. Please note that we submitted a change in water right ownership, together with the supporting documents, to the Department on or about August 31, 2006.

Finally, in response to your August 31st correspondence, you identify the need for a field examination of water rights 63-4641A and 63-4641B. I presume the Department will also require a field examination of water rights 63-21530 and 63-21580, which are also beneficial use water rights. Perhaps we can schedule one field examination for all of these water rights? Dan Nelson with the Department's Western Region office recently conducted a field examination concerning water right 63-4534. Because Mr. Nelson is familiar with the property and has met the Tree Top Ranches' manager, Kelly Yore, perhaps he can conduct the field examinations of these remaining water rights.

Vicky Music
September 6, 2006
Page 2

Thank you for your assistance to this matter. If you have any questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Tiffany M. Hudak", written in a cursive style.

Tiffany M. Hudak
Paralegal
tmh@moffatt.com

/tmh

cc: Larry Williams (via Facsimile)

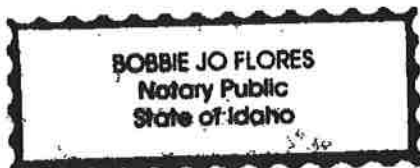
AFFIDAVIT OF SAM SMYSER

STATE OF IDAHO)

County of Canyon) ss.

SAM SMYSER, being first duly sworn upon oath, deposes and says:

1. I make this affidavit based upon personal information.
2. I was born on October 9, 1922, in Caldwell, Idaho. I have resided in the vicinity of Parma, Canyon County, Idaho, continuously since 1928.
3. I have been involved with irrigated agriculture my entire life and am familiar with the various irrigation methods and practices.
4. I have been familiar, since 1935, with the irrigation conducted on the real property currently owned by Tree Top Ranches, LP (Larry and Marianne Williams), which property is located in the South Half of the Southeast Quarter of Section 15, all within Township 5 North, Range 5 West, Boise Meridian, Canyon County, Idaho (the "Property").
5. Portions of the Property was previously owned by Jerry Kramer and Curt Christofferson, prior to purchase of the Property by Tree Top Ranches, LP.
6. I personally observed annual irrigation of the Property using water from the Sand Hollow Creek, or an unnamed tributary thereto, since at least 1935.

DATED this 5th day of September, 2006.Sam Smyser
Sam SmyserSUBSCRIBED AND SWORN to before me this 5th day of September, 2006.Bobbie Jo Flores
NOTARY PUBLIC FOR IDAHO
Residing at Parma, ID
My Commission Expires 8-9-07

Moffatt Thomas

MOFFATT THOMAS BARRETT ROCK & FIELDS, CHTD.

US Bank Plaza Building
101 S Capitol Blvd 10th Fl
PO Box 829
Boise Idaho 83701 0829208 345 2000
208 385 5384 Fax
208 385 5435 Direct**FACSIMILE****From:** Tiffany M. Hudak
Paralegal**Date:** September 6, 2006**Re:** Water Rights 63-4641A and 63-4641B**File No.:** 22567.0**Number of pages being transmitted including the cover page: 4**
Please call fax operator at (208) 345-2000 if all pages are not received.

	Name	Organization	Fax No.	Voice No.
To:	Vicky Music	Idaho Department of Water Resources	334-2348	334-2190
CC:	Larry Williams	Treetop Ranches	377-1049	890-1962

Message:

Please see attached letter.

PLEASE DELIVER IMMEDIATELY

The information contained in this facsimile message is attorney privileged and confidential information intended only for the use of the individual or entity named above. If you have received this communication in error, please immediately notify us by telephone to arrange for return of the original document to us. Thank you.

Moffatt Thomas

MOFFATT THOMAS BARRETT ROCK & FIELDS, CHTD.

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WESTERN REGION

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Robert E. Bakes, *of counsel*
Morgan W. Richards, *of counsel*

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August 31, 2006

US Bank Plaza Building
101 S Capitol Blvd 10th Fl
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Boise Idaho 83701 0829

208 345 2000
800 422 2889
208 385 5384 Fax
www.moffatt.com

Lori Graves
Idaho Department of Water Resources
Western Region Office
2735 Airport Way
Boise, ID 83705

Re: Water Rights 63-04641A and 63-04641B
MTBR&F File No. 22567.0

Dear Lori:

Enclosed please find an original and one copy of the change of water right ownership form and supporting documentation for the above-referenced water rights. Please file the original, receive-stamp the copy, and return the copy in the enclosed self-addressed, stamped envelope. ✓DB

Please note that we are in the process of obtaining evidence to support the claimed priority date for water rights 63-04641A and 63-04641B, and should be able to provide you with such evidence in the near future. Thank you for your assistance to this matter. If you have any questions, please do not hesitate to contact me.

Sincerely,

Tiffany M. Hudak
Paralegal

/tmh

Enclosure

cc: Larry Williams



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082 - (208) 334-2190

FAX (208) 334-2348

VIA FACSIMILE – 1 page

August 31, 2006

JAMES E. RISCH
Governor

KARL J. DREHER
Director

Tiffany M. Hudak
Paralegal
Moffatt Thomas.
101 S. Capitol Blvd., 10th Floor
Boise, Idaho 83701-0829
Facsimile No. (208) 385-5384

RE: EVIDENCE OF PRIORITY AND FIELD EXAM
Snake River Basin Claim No.(s): A63-4641A and B

Dear Tiffany:

This letter is in response to your correspondence, dated August 28, 2006. The claims were entered in our database with a "temporary" rather than an "active" status, and as such, were not available for viewing by the public. The status has recently been changed and you should be able to view the claims on the IDWR website.

In addition to the evidence of priority, IDWR must conduct a field exam to verify the elements of these statutory claims. We customarily do not schedule these until after we receive the evidence of priority. Hence, the letter to your client did not mention the field exam. Please provide the name and phone number of a contact person with whom the Department can schedule the exam as soon as possible.

Your letter stated that you will not be able to submit evidence of priority by September 1, 2006, for the claims referenced above. The IDWR internal deadline for recommendations is September 22, 2006. If I do not receive all of the information I have requested prior to September 22, 2006, I will recommend the claims as disallowed in the Preliminary Director's Report. Your client will still have the Notice of Error time period in which they can submit the evidence of priority and schedule a field exam. If I still do not receive the information by October 31, 2006, the expiration of the Notice of Error time period, I will recommend them as disallowed in the Basin 63 Part 3 Director's Report. Your client will then have to file objections to change the recommendation.

Please contact me directly at (208) 334-2190 if you have questions regarding this matter.

Sincerely,

Vicky L. Music
Senior Water Resource Agent
Adjudication Bureau/ Western Region

* * * Memory TX Result Report (Aug. 31. 2006 9:25AM) * * *

1) Idaho Dept. of Water Resources
2)

Date/Time: Aug. 31. 2006 9:24AM

File No. Mode	Destination	Pg(s)	Result	Page Not Sent
5741 Memory TX	93855384	P. 1	OK	

Reason for error

E. 1) Hang up or line fail
E. 3) No answer
E. 5) Exceeded max. E-mail size

E. 2) Busy
E. 4) No facsimile connection



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082 - (208) 334-2190
FAX (208) 334-2348

VIA FACSIMILE - 1 page
August 31, 2006

JAMES E. RIESCH
Governor
KARL J. DREHER
Director

Tiffany M. Hudak
Paralegal
Moffatt Thomas
101 S. Capitol Blvd., 10th Floor
Boise, Idaho 83701-0829
Facsimile No. (208) 385-5384

RE: EVIDENCE OF PRIORITY AND FIELD EXAM
Snake River Basin Claim No.(s): A63-4641A and B

Dear Tiffany:

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Please contact me directly at (208) 334-2190 if you have questions regarding this matter.

Sincerely,

Vicky E. Music
Vicky E. Music
Senior Water Resource Agent
Adjudication Bureau/ Western Region

Moffatt Thomas

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Benjamin C. Ritchie
Robert E. Bakes, *of counsel*
Morgan W. Richards, *of counsel*
Willis C. Moffatt, 1907-1980
Kirk R. Helvie, 1956-2003August 28, 2006
*via Facsimile*US Bank Plaza Building
101 S Capitol Blvd 10th Fl
PO Box 829
Boise Idaho 83701 0829208 345 2000
800 422 2889
208 385 5384 Fax
www.moffatt.comVicky Music
Sr. Water Resource Agent
Idaho Department of Water Resources
Western Region Office, Adjudication Bureau
2735 Airport Way
Boise, Idaho 83705**Re: Water Rights 63-4641A and 63-4641B**
MTBR&F File No. 22567.0

Dear Vicky:

This firm represents the Tree Top Ranches, LP, with respect to its water rights matters. We are in receipt of your letter to Tree Top Ranches dated August 24, 2006, which was postmarked August 25, 2006, and received by Tree Top Ranches on August 28, 2006. Your August 24th correspondence concerns the above-referenced water right and requests evidence to establish the claimed priority date for these water rights be submitted by September 1, 2006. At the outset, please note that five (5) days is not a sufficient amount of time to properly investigate this matter and provide the Department with the requested information. Although we will endeavor to provide the Department with the requested information as soon as possible, we will most likely not meet the September 1st deadline.

In addition, we note that your correspondence concerns a split of water right 63-4641. In reviewing the Department's online database, we could not locate any water rights with the "A" and "B" split suffix. Any additional information you could provide concerning the "A" and "B" split of water right 63-4641 would be appreciated.

Thank you for your assistance to this matter. If you have any questions, please do not hesitate to contact me.

Sincerely,


Tiffany M. Hudak
Paralegal

/tmh

cc: Larry Williams (via Facsimile)

Moffatt Thomas

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US Bank Plaza Building
101 S Capitol Blvd 10th Fl
PO Box 829
Boise Idaho 83701 0829208 345 2000
208 385 5384 Fax
208 385 5435 Direct**FACSIMILE****From:** Tiffiny M. Hudak
Paralegal**Date:** August 28, 2006**Re:** Water Rights 63-4641A and 63-4641B**File No.:** 22567.0**Number of pages being transmitted including the cover page: 2**
Please call fax operator at (208) 345-2000 if all pages are not received.

	Name	Organization	Fax No.	Voice No.
To:	Vicky Music	Idaho Department of Water Resources Western Region Office, Adjudication Bureau	334-2348	334-2190
CC:	Larry Williams	Treetop Ranches	377-1049	890-1962

Message:

Please see attached letter.

PLEASE DELIVER IMMEDIATELY

The information contained in this facsimile message is attorney privileged and confidential information intended only for the use of the individual or entity named above. If you have received this communication in error, please immediately notify us by telephone to arrange for return of the original document to us. Thank you.



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082 - (208) 334-2190

FAX (208) 334-2348

August 24, 2006

JAMES E. RISCH
Governor

KARL J. DREHER
Director

TREETOP RANCHES
P O BOX 8126
BOISE, ID 83707

RE: EVIDENCE OF PRIORITY AND CHANGE OF OWNERSHIP -
Snake River Basin Adjudication Claim No(s): A63-4641A AND A63-4641B

Dear TREETOP RANCHES,

In the past, LESLIE HAMILTON submitted the above referenced claims during the Snake River Basin Adjudication (SRBA) claims taking. Enclosed is a computer-generated printout of the claims for your reference. LESLIE HAMILTON indicated, when this claim was filed, that the water rights were based on a "Statutory Claim" to the use of the water. Water rights of this type are established by historical use of the water for a beneficial use purpose, dating back to the time the water was first used; this date being the "Priority Date" as shown on the enclosed print-outs. These claims has not been confirmed by a previous filing with the Department of Water Resources since there is no decree, license, or permit on file to verify the use of this water. For this reason, the Department is required to gather evidence from claimants supporting the date of priority for claims based on historical beneficial use of water.

Enclosed is a pamphlet entitled "**Evidence of Priority**" which describes why evidence of the priority date is necessary, along with examples of types of evidence that can be submitted to fulfill this requirement. While I encourage you to read the entire pamphlet, I direct your attention to the two sections entitled "**What Kind of Evidence is Required**" and "**Some Examples of Documents Which May Be Evidence of the Priority Date.**"

If no evidence of this priority date is submitted, or we do not hear from you by September 1, 2006, this claim may not be recommended to the SRBA court for decree. This could jeopardize your water use under these rights if water availability problems arise in the future.

Additionally, Idaho law requires that an owner file a change of ownership for a water right or claim to a right within 120 days of a property transaction. Enclosed is a change of ownership form. Please complete and return it to me with the proof of priority.

Please call me as soon as possible to let me know if you may not be able to submit proof of priority or if you have any questions not covered by this letter and the enclosed pamphlet.

Respectfully Submitted,

Vicky L. Music
Sr. Water Resource Agent
Adjudication Bureau

Enclosure: "Evidence of Priority" pamphlet, Notices of Claim Report A63-4641A & B, and Change of Ownership form

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
NOTICE OF CHANGE IN WATER RIGHT OWNERSHIP

RECEIVED

SEP 01 2006

WATER RESOURCES
WESTERN REGION

Please print or type. Attach pages with additional information. Instructions are included at the end of this form.
 Incomplete forms will be returned.

1. Please list the water right number(s) and/or adjudication claim number(s) (if any) for each water right to be changed. List just the adjudication claim number if there is no corresponding water right record on file with the department. Indicate, by checking in the space provided (under the "split" heading), if the change in ownership is limited to a portion of a water right in which case division of the existing water right or adjudication claim record will be required.

Water Right No(s)	Adjudication Claim No(s)	Split	Water Right No(s)	Adjudication Claim No(s)	Split
63-4641A	A63-04641A	☐			☐
63-4641B	A63-04641B	☐			☐
		☐			☐
		☐			☐
		☐			☐

2. The following **REQUIRED** information must be submitted with this form:

- A. The appropriate **FILING FEE**. See instructions for fee amounts.
- B. A copy of the most recent **DEED, TITLE POLICY, CONTRACT OF SALE** or other legal document indicating your ownership of the property and water right(s) or claim(s) in question, **WITH ATTACHED LEGAL DESCRIPTION**.
 SEE ATTACHMENT A
- C. Either of the following (if necessary to clarify division of water rights or other complex property descriptions):
PLAT OF PROPERTY or **SURVEY MAP** clearly showing the location of the point(s) of diversion and place of use of your water right(s) and/or adjudication claim(s) (these are usually attached to your deed or on file with the county).
 OR
 SEE ATTACHMENT B
 If your water right(s) and/or adjudication claim(s) is for ten or more acres of irrigation, you must submit a USDA Farm Service Agency **AERIAL PHOTO** with the irrigated acres outlined and point(s) of diversion clearly marked. The **AERIAL PHOTO** should be submitted in place of the **PLAT OF PROPERTY** or **SURVEY MAP**.

3. Name and Address of Former Owner/Claimant(s) Jerry Kramer, PO Box 370, Parma, Idaho 83660
Curt Christofferson, 26415 Sand Rd., Parma, Idaho 83660
4. New Owner/Claimant(s) Tree Top Ranches, LP
 Name Connector (Check one): ☐ and, ☐ or, ☐ and/or
- New Mailing Address 914 Houston Road
- City, State and ZIP Code Boise, Idaho 83706
- New Telephone Number (208) 377-0998
5. Date you acquired the property April 22, 1997/April 28, 1997

6. **If the change in ownership affects the entire water right for each water right or adjudication claim number listed in item 1, THEN SKIP THIS ITEM AND GO TO ITEM 7.** If the change in ownership divides the water right(s) among multiple owners, you must describe, in detail, your portion of each water right after the change. Fill in the appropriate spaces in the box(es) below to describe your water right(s) after the change (one water right per box, you may copy this page as necessary). If your quantity of water is greater than a proportionate split, you must attach documentation to show justification for a larger amount. If you are not sure how to identify your portion of the original water right or adjudication claim records, please contact the nearest IDWR office for assistance.

DESCRIPTION OF YOUR PORTION OF WATER RIGHT (If the right(s) will not be split, skip this area and proceed to item 7)		
Water Right and/or Adjudication Claim Number _____		
Water Use	Diversion Rate or Volume (cubic feet per second or acre-feet per annum)	Description (acres, number and type of stock, homes, etc)
Irrigation	_____	_____
Stock	_____	_____
Domestic	_____	_____
Other _____	_____	_____
Total	_____	_____

DESCRIPTION OF YOUR PORTION OF WATER RIGHT (If the right(s) will not be split, skip this area and proceed to item 7)		
Water Right and/or Adjudication Claim Number _____		
Water Use	Diversion Rate or Volume (cubic feet per second or acre-feet per annum)	Description (acres, number and type of stock, homes, etc)
Irrigation	_____	_____
Stock	_____	_____
Domestic	_____	_____
Other _____	_____	_____
Total	_____	_____

7. Signature of New Owner(s) or Claimant(s) _____
(include title if applicable) **Larry D. Williams, Partner, Tree Top Ranches, LP**

For Snake River Basin Adjudication Claims: Please attach a Notice of Appearance completed by your attorney, if you wish IDWR to correspond with him/her for all matters related to your claims.

For Office Use Only

Received by _____	Date _____	Fee _____
Received by _____	Date _____	Receipt No. _____
Processed by _____	Date _____	WR _____ Date _____

9913379
LT 2740 POW
Mw

WARRANTY DEED

For value received, GERALD L. KRAMER, aka JERRY KRAMER, a single man, dealing with his sole and separate property, of P.O. Box 370, Parma, Idaho 83660, Grantor, does hereby convey, grant, bargain, and sell unto LARRY D. WILLIAMS and MARIANNE WILLIAMS, husband wife, of 914 Houston, Boise, Idaho 83706, Grantees, the following described premises in Canyon County, Idaho, to wit:

See EXHIBIT A, attached hereto and made a part hereof by reference.

TOGETHER With all water, water rights, ditches and rights of way for ditches appurtenant thereto, and together with all tenements, hereditaments and appurtenances thereto belonging or used in connection therewith.

To have and to hold said premises, with their appurtenances unto the said Grantees, Grantees' heirs and assigns forever. Grantor does hereby covenant to and with Grantees that Grantor is the owner in fee simple of said premises; that said premises are free from all encumbrances and that Grantor will warrant and defend the same from all lawful claims whatsoever, subject only to the following encumbrances:

1. Restrictions imposed by law, ordinance or regulation by any governmental entity, department or agency;
2. Restrictions contained in any covenants of record affecting the premises;
3. All rights of way or easements, affecting the premises regardless of how evidenced or acquired and whether the same appear of record or not;
4. Taxes and assessments of all taxes units not yet due and payable, pro rated as of the date of closing;
5. Reservations in patents or state grants or in acts authorizing the issuance thereof;
6. All repayment contracts between irrigation districts within which said premises are situated and any government or agency; and
7. The bonded debt of all taxing units within which said premises are located.

DATE: 4-22-97

Gerald L. Kramer
GRANTOR

STATE OF IDAHO)
 : ss.
County of Canyon)

On the 22nd day of April, 1997, before me,
Kimberly A. Condit, a notary public for said state, person--
ally appeared before me, GERALD L. KRAMER, aka JERRY KRAMER,
known or identified to me to be the person whose name is sub-
scribed to the within instrument, who acknowledged to me that he
executed the same.



Kimberly A. Condit
Notary Public for Idaho
Residing at: Calduell
My commission expires: 1-27-99

Exhibit "A"

PARCEL I

The South Half of the Southeast Quarter, Section 15, Township 5 North, Range 5 West, Boise Meridian, Canyon County, Idaho.

EXCEPTING THEREFROM

A parcel of land being on the Westerly side of the centerline of U.S. Highway 95, Project No. F-3311(5) Highway Survey as shown on the plans thereof now on file in the office of the Department of Highways of the State of Idaho, and being a portion of the Southeast Quarter of the Southeast Quarter of Section 15, Township 5 North, Range 5 West, Boise Meridian, Canyon County, Idaho, described as follows, to-wit:

BEGINNING at the Southeast corner of Section 15, Township 5 North, Range 5 West, Boise Meridian, Canyon County, Idaho; thence

South 89° 45' 19" West along the South line of the Southeast Quarter of the Southeast Quarter of said Section 15 a distance of 132 feet, more or less, to a point in a line parallel with and 25 feet distant Westerly from the centerline of a proposed County Road Connection Survey as shown on the plans of said U.S. Highway 95 Project No. F-3311(5) Highway Survey and which point bears

South 89° 45' 19" West a distance of 140 feet from Station 349+1248 of said Highway Survey; thence along said parallel line as follows:

North 0° 14' 41" West a distance of 1,013.11 feet to a point opposite Station 13+14.83 of said proposed County Road Connection Survey, which point bears

South 89° 45' 19" West a distance of 140 feet from Station 359+25.59 of said Highway Survey, Northerly, Northwesterly and Westerly along a 293.31-foot-radius curve left 457.96 feet to a point in the Southerly right of way line of an existing County East and West Road, which point bears South 0° 17' 49" West a distance of 25 feet from Station 18+11.82 of said proposed County Road Connection Survey; thence

North 0° 17' 49" East a distance of 25 feet, more or less, to a point in the North line of said Southeast Quarter of the Southeast Quarter; thence

Easterly along said North line a distance of 153 feet, more or less, to point in the Southwesterly right of way line of the Oregon Short Line Railroad; thence

South 54° 28' East along said railroad right of way line a distance of 330 feet, more or less, to a point in the East line of said Southeast Quarter of the Southeast Quarter; thence

Southerly along said East line a distance of 1,133 feet, more or less, to the PLACE OF BEGINNING.

U.S. Highway 95 Station reference: 349+1248 to 360+43.09.

ALSO EXCEPTING THEREFROM the right of way of the Oregon Shortline Railroad.

(continued)

ALSO EXCEPTING THEREFROM

A portion of the Southwest Quarter of the Southeast Quarter of Section 15, Township 5 North, Range 5 West, Boise Meridian, Canyon County, Idaho, being more particularly described as follows:

COMMENCING at the Northwest corner of said Southwest Quarter of the Southeast Quarter; thence

South $89^{\circ} 49' 17''$ East (formerly South $89^{\circ} 49' 15''$ East) along the North boundary of said Southwest Quarter of the Southeast Quarter a distance of 140 feet to the TRUE POINT OF BEGINNING; thence continuing

South $89^{\circ} 49' 17''$ East (formerly South $89^{\circ} 49' 15''$ East) along the North boundary of said Southwest Quarter of the Southeast Quarter a distance of 610 feet; thence

South $00^{\circ} 10' 43''$ West perpendicular to said North boundary a distance of 253 feet; thence

North $89^{\circ} 49' 17''$ West parallel with said North boundary a distance of 423.84 feet; thence

North $36^{\circ} 10' 00''$ West a distance of 314.11 feet to the TRUE POINT OF BEGINNING.

PARCEL II

The East Half of the Northwest Quarter and the Northeast Quarter of the Southwest Quarter; the Northeast Quarter; the North Half of the Southeast Quarter; the Southeast Quarter of the Southeast Quarter and Lots 1 and 2, all in Section 22, Township 5 North, Range 5 West, Boise Meridian, Canyon County, Idaho;

AND

The Southwest Quarter of the Northwest Quarter; the West Half of the Northwest Quarter of the Southwest Quarter of Section 23, Township 5 North, Range 5 West, Boise Meridian, Canyon County, Idaho.

EXCEPTING THEREFROM

A tract of land being on both sides of the centerline of U.S. Highway No. 95, Project No. F-3311(5) Highway Survey as shown on the plans thereof now on file in the office of the Department of Highways of the State of Idaho, and lying over and across the East Half of the East Half, Section 22, the West Half of the Northwest Quarter of the Southwest Quarter and the Southwest Quarter of the Northwest Quarter of Section 23, Township 5 North, Range 5 West, Boise Meridian, Canyon County, Idaho, described as follows, to-wit:

COMMENCING at the Southeast corner of Section 22, Township 5 North, Range 5 West, Boise Meridian, Canyon County, Idaho; thence

South $89^{\circ} 59' 43''$ West along the South line of said Section 22 a distance of 42.22 feet to a point in a line parallel with and 50.0 feet Easterly from the centerline of said U.S. Highway 95, Project No. F-3311(5) Highway Survey and being the REAL POINT OF BEGINNING; thence

Northerly along said parallel line being an 8,235.11-foot radius curve left 345 feet, more or less, to a point in the East line of said Section 22; thence

(continued)

Northerly along said East line a distance of 964 feet, more or less, to the Southwest corner of the Northwest Quarter of the Southwest Quarter of Section 23, Township 5 North, Range 5 West, Boise Meridian, Canyon County, Idaho; thence

Easterly along the South line of said Northwest Quarter of the Southwest Quarter a distance of 66 feet, more or less, to a point in a line parallel with and 50 feet Easterly from the centerline of said Highway Survey; thence along said parallel line as follows:

Northerly along an 8,235.11-foot radius curve left 55 feet, more or less, to a point opposite Station 307+64.68, back equals 310+05.16 ahead and

North 0° 16' 16" West, back equals North 0° 14' 41" West ahead of said Highway Survey; thence continuing along said last parallel line

North 0° 14' 41" West a distance of 1,273 feet, more or less, to a point in the North line of said Northwest Quarter of the Southwest Quarter; thence leaving said last parallel line

Easterly along said North line a distance of 10 feet, more or less, to a point in a line parallel with and 60 feet Easterly from the centerline of said Highway Survey; thence

North 0° 14' 41" West along said last parallel line a distance of 1,316 feet, more or less, to a point in the North line of the Southwest Quarter of the Northwest Quarter of said Section 23; thence

Westerly along said last North line a distance of 71 feet, more or less, to the Southeast corner of the Northeast Quarter of the Northeast Quarter of said Section 22; thence

Northerly along the East line of said Section 22 a distance of 1,320 feet, more or less, to the Northeast corner thereof; thence

South 89° 45' 19" West along the North line of said Section 22 a distance of 132 feet, more or less, to a point in a line parallel with and 140 feet Westerly from the centerline of said Highway Survey; thence

South 0° 14' 41" East along said last parallel line a distance of 187.48 feet to a point opposite Station 347+25 of said Highway Survey; thence

South 32° 51' 50" East a distance of 148.41 feet to a point in a line parallel with and 60 feet Westerly from the centerline and opposite Station 346+00 of said Highway Survey; thence

South 0° 14' 41" East along said last parallel line a distance of 2,322 feet, more or less, to a point in the South line of the Southeast Quarter of the Northeast Quarter of said Section 22; thence

Easterly along said last South line a distance of 10 feet, more or less, to a point in a line parallel with and 50 feet Westerly from the centerline of said Highway Survey; thence along said last parallel line as follows:

South 0° 14' 41" East a distance of 1,273 feet, more or less, to a point opposite said Station 307+64.68, back equals 310+05.16 ahead, Southerly along an 8,135.11-foot radius curve right 1,371.13 feet to a point in the South line of said Section 22; thence leaving said last parallel line

North 89° 59' 43" East along said last South line a distance of 101.42 feet, more or less, to the REAL POINT OF BEGINNING.

Highway Station Reference: 293+93.3 to 349+12.48.

REGISTERED PIONEER - CAIDWELL
TYPE Deal REC 15th JUL

BY J. H. HALE
CANYON COUNTY RECORDER

39 APR 7 AM 11 41

RECORDED

9913379

9713456
PC20521

WARRANTY DEED

FOR VALUE RECEIVED Curt D. Christofferson and Jolene I. Christofferson, husband and wife

the Grantors, do hereby grant, bargain, sell and convey unto ~~Larry D. Williams and Marianne Williams, husband and wife~~, a married person

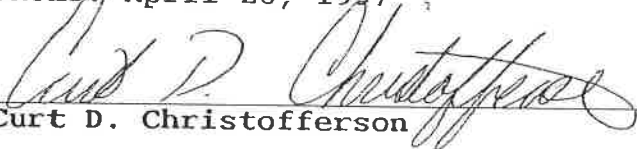
the Grantees, whose address is ~~26415 Sand Rd., Parma, ID, 83660~~

914 Houston Rd., Boise, ID 83706
the following described premises, to-wit:

See attached Exhibit "A", which by this reference is made a part hereof and is comprised of one (1) page.

TO HAVE AND TO HOLD the said premises, with their appurtenances unto the said Grantees, their heirs and assigns forever. And the said Grantors do hereby covenant to and with the said Grantees, that they are the owners in fee simple of said premises; that said premises are free from all encumbrances; except for general taxes and assessments for the year 1997 and subsequent years, covenants, conditions, restrictions and easements of record; and that they will warrant and defend the same from all lawful claims whatsoever. Together with all water rights.

DATED: April 28, 1997


Curt D. Christofferson


Jolene I. Christofferson

STATE OF IDAHO

COUNTY OF CANYON

On this 28th day of April in the Year 1997, before me, a Notary Public, personally appeared Curt D. Christofferson and Jolene I. Christofferson known or identified to me to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.


Notary Public
Residing at Caldwell
My commission expires 1-27-99



PIONEER TITLE COMPANY
OF CANYON COUNTY

100 10TH AVE SOUTH
NAMPA, IDAHO 83651

423 SOUTH KIMBALL
CALDWELL, ID 83605

PC 20521

Exhibit "A"

A portion of the Southwest Quarter of the Southeast Quarter of Section 15, Township 5 North, Range 5 West, Boise Meridian, Canyon County, Idaho, and being more particularly described as follows:

COMMENCING at the Northwest corner of said Southwest Quarter of the Southeast Quarter; thence

South 89° 49' 17" East (formerly South 89° 49' 15" East) along the North boundary of said Southwest Quarter of the Southeast Quarter a distance of 140 feet to the TRUE POINT OF BEGINNING; thence continuing

South 89° 49' 17" East (formerly South 89° 49' 15" East) along the North boundary of said Southwest Quarter of the Southeast Quarter a distance of 610 feet; thence

South 00° 10' 43" West perpendicular to said North boundary a distance of 253 feet; thence

North 89° 49' 17" West parallel with said North boundary a distance of 423.84 feet; thence

North 36° 10' 00" West a distance of 314.11 feet to the TRUE POINT OF BEGINNING.

9713456

RECORDED

97 APR 29 PM 3 56

NED J KERR

CANYON CNTY RECORDER

BY *John D. Munn* day

PIONEER - CALDWELL

REQUEST

TYPE *See*

FEE

6.00



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region, 2735 Airport Way, Boise, Idaho 83705-5082 - (208) 334-2190

FAX (208) 334-2348

September 22, 2006

JAMES E. RISCH
Governor

KARL J. DREHER
Director

Tree Top Ranches LP
914 Houston Road
Boise, ID 83706

Notice of Claim to a Water Right No. 63-4641A, 63-4641B

Dear Claimant(s):

Enclosed is a copy of the above referenced claim(s), which reflect the change in ownership of the land and appurtenant water rights, covered under the original filing.

Please note that the enclosed Notice of Claim to a Water Right is not a final determination of your water right. This claim was filed during claims taking in the Snake River Basin Adjudication (SRBA) and has not yet been verified by this Department. Water rights are established and maintained by beneficial use of water for the uses designated on this claim form dating back to the priority date listed. This claim will be investigated, verified and recommended to the SRBA Court for court decree sometime in the near future. You will be notified prior to the beginning of any verification of this water right.

Thank you for your patience and cooperation, as we have had several water right changes to process. If you have any questions concerning the enclosed information, please feel free to contact this office.

Sincerely,

A handwritten signature in cursive script, appearing to read 'L. Gagnon', with a long horizontal flourish extending to the right.

Liberty Gagnon
Office Specialist 1
Adjudication Section
Western Region Office

LG: lg

Enclosure

IDAHO DEPARTMENT OF WATER RESOURCES
ADJUDICATION CLAIMS PROOF READING REPORT
(REGIONAL)

11/08/96 09:42:36
Page 1

Water Right Number - A63-04641 **A**

Prefix Translation: ADJUDICATION CLAIM

Old (D) Number - **X777777**

+ - - - - Last Name - - - - + + - First Name - - + + - - - - - Address - - - - - +

*** C - CURRENT OWNER ***
HAMILTON

LESLIE W

1 - RURAL RT #1; 26415 SAND RD
2 -
3 -
City- PARMA
Phone - 208-000-0000

State- ID Zip- 83660

+ - - Priority Date - - + + - - - Region - - - + + - - - Stage - - - + + - - - Status - - - +
11/01/1880 14 WESTERN S - STATUTORY CLAIM

+ - - - - Source - - - - - + + - - - - Tributary - - - - - +
UNNAMED DRAIN SAND HOLLOW DRAIN

+ - - - - Point of Diversion - - - - - +
Twn Rng Sec Tract Lot RFlg County
05N 05W 14 NW SW (27) CANYON

+ - - - - Water Use - - - - - +
Code Description Period From Period To Diversion Rate Diversion Volume
01 - IRRIGATION 04/01 10/31 ~~2.000~~ **1.89 cfs**

+ - Total Div. Rate - + + - Total Div. Volume - + + - Total Consumptive Use - + + - KW Usage - +
~~2.000~~ **1.89 cfs** 0.0

+ - - - - Place of Use - - - - - +
Twn Rng Sec Tract Lot Acres Code Description County
05N 05W 15 SW SE ~~23.0~~ ²⁰ 01 IRRIGATION (27) CANYON
05N 05W 15 SE SE 34.0 01 IRRIGATION (27) CANYON

Total Acres: ~~57.0~~ **54**

+ - - Diversion Means - HEADGATE, PIPELINE, GRAVITY DITCH

+ - - Non-Irrigation Use -

+ - - Other Rights for Same Use -

$$\frac{57 \text{ Ac}}{2 \text{ cfs}} \times \frac{54}{x} = 1.89 \text{ cfs}$$

+ - - - - Remarks - - - - - +

THIS CLAIM IS A RESULT OF A CHANGE IN OWNERSHIP FOR A PORTION OF CLAIM
NO. A63-04641 FEE PAID UNDER RECEIPT NO. W010765
RDH 11/8/96

+ - - - - Conditions of Approval - - - - - +
No Conditions of Approval found.



NEW PROPERTY OWNER NOTICE OF CHANGE OF WATER RIGHT OWNERSHIP

Please print or type
(see instructions on back of page)

RECEIVED

JUN 24 1996

WATER RESOURCES
WESTERN REGION

DATE OF CLOSING: _____

LEGAL DESCRIPTION OF PROPERTY: Township 5 N Range 5 W
Section 15, 1/4 of _____ 1/4 of _____ 1/4, Govt. Lot _____, BM.
Lot _____, Block _____, Subdivision/Townsite _____.
If you have additional legal descriptions, please attach separate sheet.

- ☐ Served Only by a Public Service Water Supply (all water is received from a city or company who maintains water supply system, owns the water right, and bills the customer on a regular basis)
- ☐ Water Right Number(s)
Assigned by IDWR: _____
- ☐ Name and Address of Former Owner/Claimant(s)(Seller): Donald Asher

- ☐ New Owner/Claimant (Purchaser): Cliff & Idun Christensen

- ☐ New Mailing Address: 26415 Sand Rd
Perma ID 83660

- ☐ New Telephone Number: () 722 - 7450
- ☐ Does the change in ownership result in a splitting of the water right owned/claimed? yes no
If yes, then describe the portion of the water right that is now owned/claimed by the new owner:

- ☐ Attach proof of ownership, describe proof attached: _____
(proof of ownership must describe either the property conveyed or include the claim number. Proof of ownership is not required if this form is signed by the former owner/claimant.)
- ☐ Signature of New Owner/Claimant(s) Idun Christensen Date 6/18/96
_____ Date _____
- ☐ Signature of Former Owner/Claimant(s): _____ Date _____
_____ Date _____

(Signature of former claimant(s) is not required if proof of ownership is attached.)

FOR IDWR USE ONLY:

Initial Review and Data-Entry

Date: _____ By: _____

Further Action Needed:

Further Action Taken

Date: _____ By: _____

Final Review and Data-Entry

Date: _____ By: _____

Claim Numbers of Split, if any:

Original to be mailed to Idaho Department of Water Resources
Copies to Former Owner and New Owner

PC07453

WARRANTY DEED

FOR VALUE RECEIVED Donald R. Asher, an unmarried man

the Grantor, does hereby grant, bargain, sell and convey unto Curt D. Christofferson and Jolene I. Christofferson, husband and wife

the Grantees, whose address is 6415 Sand Road, Parma, ID, 83660

the following described premises, to-wit:

See attached Exhibit "A", which by this reference is made a part hereof and is comprised of one (1) page.

TO HAVE AND TO HOLD the said premises, with their appurtenances unto the said Grantees, their heirs and assigns forever. And the said Grantor does hereby covenant to and with the said Grantees, that he is the owner in fee simple of said premises; that said premises are free from all encumbrances; except for general taxes and assessments for the year 1993 and subsequent years, covenants, conditions, restrictions and easements of record; and that he will warrant and defend the same from all lawful claims whatsoever.

DATED: May 14 , 1993

Donald R. Asher
Donald R. Asher

STATE OF IDAHO

COUNTY OF CANYON

On this 18th day of May in the year 1993, before me, a Notary Public, personally appeared Donald R. Asher known or identified to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same.

Carol E. Jones
Notary Public
Residing at Parma
My commission expires 8/17/96

RECEIVED

JUN 24 1996

WATER RESOURCES
WESTERN REGION

PIONEER TITLE COMPANY
OF CANYON COUNTY

100 10TH AVE SOUTH
NAMPA, IDAHO 83651

423 SOUTH KIMBALL
CALDWELL, ID 83605

Exhibit "A"

A portion of the Southwest Quarter of the Southeast Quarter of Section 15, Township 5 North, Range 5 West, Boise Meridian, Canyon County, Idaho, and being more particularly described as follows:

COMMENCING at the Northwest corner of said Southwest Quarter of the Southeast Quarter; thence

South 89° 49' 17" East (formerly South 89° 49' 15" East) along the North boundary of said Southwest Quarter of the Southeast Quarter a distance of 140 feet to the TRUE POINT OF BEGINNING; thence continuing

South 89° 49' 17" East (formerly South 89° 49' 15" East) along the North boundary of said Southwest Quarter of the Southeast Quarter a distance of 610 feet; thence

South 00° 10' 43" West perpendicular to said North boundary a distance of 253 feet; thence

North 89° 49' 17" West parallel with said North boundary a distance of 423.84 feet; thence

North 36° 10' 00" West a distance of 314.11 feet to the TRUE POINT OF BEGINNING.

RECEIVED

JUN 24 1996

WATER RESOURCES
WESTERN REGION

9311039

RECORDED

JUN 21 PM 4 21

HELPER

CANYON CNI RECORDER
BY C. SmithREQUEST PIONEER - CALDWELL
TYPE *Shed* FEB 6 00

RECEIVED

SEP 04 1996

WATER RESOURCES
WESTERN REGION

CANYON COUNTY ASSESSOR
1115 ALBANY ST. RM. 323
CALDWELL, ID 83605

THIS IS NOT A BILL
IMPORTANT NOTICE-PLEASE READ

PRESORTED
FIRST CLASS MAIL
U.S. POSTAGE PAID
CALDWELL, ID 83605-3542
PERMIT NO. 4

Phone 454-7431

PARCEL NO. 6R38915-010- -0
UNIFORM 05N05W158560
TAX CODE 138-00 05-12-96

CATEGORY DESCRIPTION	LOTS/ACRES	MARKET VALUE
RUR RESIDENT TRACT	1.00	13,000
RES TRACT OVER 1 ACR	2.00	10,625
RES IMP-RUR RES TR		33,500
IMP ON RUR TRACT		2,825

1996

TAXPAYER'S

VALUATION

ASSESSMENT NOTICE

TAXES ARE BASED ON THE VALUATION

LISTED ON THIS STATEMENT

IF THERE ARE ANY QUESTIONS

REGARDING THIS STATEMENT

NOTIFY THE ASSESSOR'S OFFICE BEFORE

TOTAL FULL CASH VALUE
TX 13 IN SWSE

59,950 JUNE 17, 1996
Homeowner Exemption-Yes

See the reverse side for further references
KEEP THIS COPY FOR YOUR RECORDS

REGULAR ROLL

SEC 15-5N-5W SE

Mail To:

CHRISTOFFERSON, CURT D
& CHRISTOFFERSON, JOLENE I-H/W

PROPERTY ADDRESS
26415 SAND RD, PA

26415 SAND RD
PARMA

ID 83660

MEMO TO FILE

CLAIM/WR NO: A63-04641/A63-07921

AGENT: RON HOWERTON

DATE: November 8, 1996

REF: OWNERSHIP CHANGE

1. Received the chain of title from Pioneer Title of Canyon County. It shows that the Hamilton property was sold to Donald R. Asher of Parma. Then, with a portion sold to Jolene Christofferson as shown on copy attached to ownership change.
2. The parcel sold to Jolene Christofferson was plotted from their warranty deed on meets and bounds and an exception was plotted from Donald R. Asher's warranty deed. By comparing the 63-04641 & 63-07921 water right file maps versus our ortho quads the land is only appurtenant to the A63-04641 claim.
3. I attempted to call Donald R. Asher at last known phone # listed as 722-7135 and the tenant said that Mr. Asher didn't live there and may just have his old phone number. I also called the directory assistance and they didn't have any Donald R. Asher listed in Idaho anymore. Thus, with this information we don't have a phone number or address.
4. The ownership change for a portion of A63-04641 can be completed and since we have no ownership change to Asher from Hamilton nor an address for Asher the "A" portion will have to be left in Hamilton's name. The file shows returned mail and undeliverable to Hamilton, so no need to try and mail the split portion to that name or address.
5. The license isn't appurtenant to the Christofferson's deed thus shall stay in Hamilton's name until further information is available.

COMMUNICATION DOCUMENTATION

Claim No. A63-04641 & A63-07921

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.

IDWR Employee/Agent Ron Howerton

DATE

November 7, 1996

CUSTOMER

JOLENE CHRISTOFFERSON

WK # 454-7391

SUBJECT: A63-04641 & A63-07921

1. Called and requested that she send me a copy of the deed that showed the property being transferred from Hamilton to Asher.
2. I suggested that she call the title company and they could fax the warranty deed to me. She said she would try.
3. She also said that they were going to sell the property next year. She said the amount of land was 3 acres they bought.
4. This matches the Warranty deed legal for 3 acres in the SWSE, T5N, R5W, S15. This would split both claims.
5. The original claimant, Hamilton was sent notice about the directors report and we received returned mail for both claims, so it probably means that either Asher or someone else owns the other part of the split.



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

May 8, 1996

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

NEW PROPERTY OWNER
RT 1 26415 SAND RD
PARMA ID 83660

RECEIVED

MAY 08 1996

RE: Snake River Basin Adjudication (SRBA)
Notice(s) of Claim Nos. #A63-04641

WATER RESOURCES
WESTERN REGION

Dear New Property Owner:

A legal notice mailed recently by IDWR was returned to us by the Post Office. The notice was mailed to an apparent former owner at your address who has or had this property or others in the area.

Before we can modify our records to reflect your new ownership of the property and water rights referenced above, we need Form 42-1409(7) completed and returned. We have enclosed this form for your use.

Please contact this office at 208/327-7862 or call us toll-free at 800/451-4129 if you have any questions.

Sincerely,

Idaho Department of Water Resources
Adjudication Bureau

SO:ss:region

Enclosure:

Form 42-1409(7)

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

In Re Snake River Basin Adjudication Case)
No. 39576)

Notice of Filing Director's Report and Supplemental
Director's Report Part II & III, United States' and Tribal
Non-consumptive Claims.

TO: ALL CLAIMANTS OF RIGHTS TO THE USE OF WATER IN THE SNAKE RIVER BASIN
YOU ARE HEREBY NOTIFIED OF THE FOLLOWING:

THE DIRECTOR'S REPORT PART II & III FOR THE UNITED STATES' AND TRIBAL NON-CONSUMPTIVE CLAIMS HAS BEEN FILED WITH THE DISTRICT COURT. A SUPPLEMENTAL DIRECTOR'S REPORT PART II & III HAS ALSO BEEN FILED WITH THE DISTRICT COURT. THIS NOTICE CONTAINS IMPORTANT INFORMATION ABOUT THE DIRECTOR'S REPORTS, AND DEADLINES AND FURTHER PROCEEDINGS ON THESE WATER RIGHT CLAIMS.

IMPORTANT NOTICE REGARDING YOUR WATER RIGHT

**THIS CONTAINS YOUR LEGAL NOTICE OF THE DIRECTOR'S REPORTS OF U.S. AND
TRIBAL NON-CONSUMPTIVE CLAIMS IN THE SNAKE RIVER BASIN ADJUDICATION
THESE CLAIMS COULD AFFECT YOUR WATER RIGHT**

55105
Idaho Department of Water Resources
Statehouse Mail
Boise, Idaho 83720

Presorted
First Class Mail
U.S. Postage Paid
Boise, Idaho
Permit No. 1

A63-04641
O.R.
Call P.O.

RETURNED
TO
SENDER
UNDELIVERABLE AS ADDRESSED
FORWARDING ORDER EXPIRED
DECEASED

LESLIE W HAMILTON
RT 1; 26415 SAND RD
PARMA ID 83660

RECEIVED
APR 20 1995

Department of Water Resources

NOTICE OF FILING DIRECTOR'S REPORT

DIRECTOR'S REPORT

This Director's Report Part II is a report by the Director of the Idaho Department of Water Resources (IDWR). It contains abstracts of claims by the United States and Indian Tribes to "non-consumptive" water rights (such as instream flows) throughout the Snake River Basin. The abstracts summarize the claims without substantively changing the water right as claimed. The Supplemental Director's Report Part II includes abstracts of claims not included in the Director's Report Part II. The supplemental report also includes abstracts of amended claims, which contain changes to claims previously abstracted in the Director's Report Part II.

The Director's Report Part III contains the claims filed for these water rights, and includes both the claim documents and maps. The Supplemental Director's Report Part III includes claims not included in the Director's Report Part III, as well as amended claims which contain changes to claims included in the Director's Report Part III.

Complete copies of Part II of the reports are available for inspections at all offices of IDWR and at the other locations printed on this notice. Complete copies of Part III of the reports are available for inspection at the State Office of IDWR and the SRBA District Court. Copies of all or a portion of the reports are available from the IDWR State Office subject to payments of costs of mailing and/or copying.

OBJECTIONS TO DIRECTOR'S REPORT

You may file an objection to any portion of the Director's Reports with the SRBA District Court. You must use a court approved objection form that is available from IDWR, which contains instructions for filing the objection. All objections must be **received** by the court on or before October 16, 1995. You must mail a copy of your objection to IDWR and the United States as shown on the objection form. If you are objecting to an abstract of a claim filed by an Indian tribe, you must also mail a copy of the objection to the tribe at

PARTIAL DECREE OF UNCONTESTED PORTIONS OF DIRECTOR'S REPORT

Those portions of the Director's Report to which no objections are filed will be decreed by the district court after a hearing to be held at 1:30 p.m., May 21, 1996 at the SRBA Courthouse in Twin Falls.

NOTICE OF FURTHER PROCEEDINGS

You will be mailed a notice of further proceedings on an objection to **your water right, your objection, or your response**. You will not be mailed notice of **other** objections or proceedings on other objections.

Notice of other objections and responses to other objections will be included on a monthly docket sheet distributed by the SRBA District Court. A subscription to the docket sheet may be obtained from the court for a small annual fee (\$7.50 for the calendar year 1995).

IDWR has filed or will file Director's Reports for all other claims within the Snake River Basin, one for each of the reporting areas in the Snake River Basin. Notice of the filing of these reports, and of further proceedings on these reports, will also be included in the docket sheet.

You may be affected by orders and decrees entered by the court in proceedings on other objections and proceeding on other reports. **It is very important that you subscribe to the docket sheet** if you wish to stay informed of these other proceedings. For further information as to documents filed with the court and hearings scheduled before the court in the SRBA, you must inquire at the SRBA District Court.

FURTHER INFORMATION

The court has adopted procedures for the post-report phase of the SRBA, which are set forth in the order of the court entitled "SRBA Administrative Order No. 1." A copy of this order can be obtained from the State Office of IDWR or the SRBA District Court.

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

LIST OF PARTNERS OF TREE TOP RANCHES, L.P.

General Partner

LDW, Inc.
1299 N. Orchard, Suite 203
Boise, Idaho 83706

Limited Partners

Larry Williams
1299 N. Orchard, Suite 203
Boise, Idaho 83706

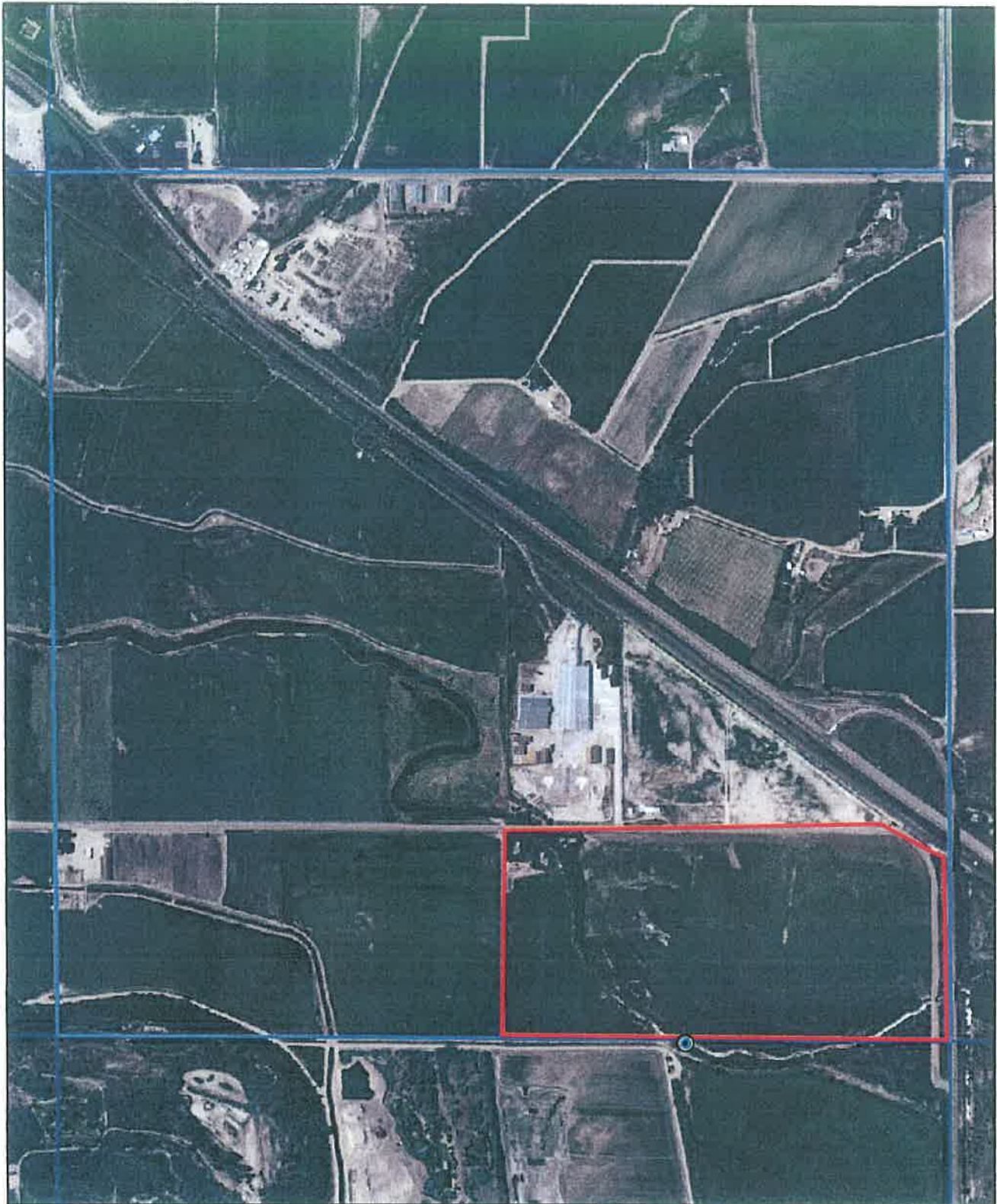
Marianne Williams
1299 N. Orchard, Suite 203
Boise, Idaho 83706

Williams Industries, Inc.
1299 N. Orchard, Suite 203
Boise, Idaho 83706

SCANNED

BOI_MT2:603021.1

SEP 15 2006



- Place of Use
- Point of Diversion



SCANNED
SEP 15 2006

**ATTACHMENT 1 TO
STANDARD FORM 1 – OBJECTION
SUBCASE 63-04641A**

The Director's Report incorrectly identifies the place of use for irrigation of lands under this water right. The correct, historic place of use is as follows:

<u>TWP</u>	<u>RNG</u>	<u>SEC</u>	<u>1/4 of</u>	<u>1/4</u>	<u>Lot</u>	<u>Acres Claimed</u>
5N	5W	15	SE	SE		34
			SW	SE		20
					Total	54

**ATTACHMENT 2 TO
STANDARD FORM 1 - OBJECTION
SUBCASE 63-04641A**

Reasons Supporting Objection(s)

Source:

The tributary to Sand Hollow Creek is incorrectly listed as the Snake River. The correct tributary is the Boise River.

Quantity:

The claimed quantity of 1.89 cfs should be recommended in full, based upon historic diversion, delivery, and use of irrigation water by Tree Top Ranches, LP, and its predecessors.

Purpose of Use and Period of Year:

The claimed quantity of 1.89 cfs should be recommended in full, based upon historic diversion, delivery, and use of irrigation water by Tree Top Ranches, LP, and its predecessors.

Place of Use:

The place of use described in the Director's Report does not accurately describe the lands historically irrigated under this water right.

Other Provisions Necessary for Definition or Administration of this Water Right:

There is no legal basis for the inclusion of the following remark:

This right remains subject to the right of the original appropriator, in good faith and in compliance with the state laws governing changes in use and/or expansion of water rights, to cease wasting water, to change the place or manner of wasting it, or to recapture it.

NOTICE OF ERROR
REPLY

09/29/2006
RECEIVED
NOV 01 2006
WATER RESOURCES
WESTERN REGION

Please type or print clearly, fill out this form completely and mail.

Return this reply form to IDWR by the deadline date printed below if you want IDWR to change your recommendation or you want to let IDWR know that you agree with its recommendation.

YOUR DEADLINE FOR RETURNING A NOTICE OF ERROR REPLY IS: October 31, 2006

Water right number: 63-4641A

TREE TOP RANCHES LP

914 HOUSTON RD

BOISE ID 83706

Telephone Number: (208) 377-0998

1. Describe the portion of the proposed recommendation with which you disagree (e.g. priority date, period of use, source):

Quantity; Purpose and Period of Use

2. Describe the changes you wish to make in the proposed recommendation:

Quantity: Increase the total quantity of water to the claimed amount of 1.890 cfs.

Purpose and Period of Use: Increase the quantity to the claimed amount of 1.890 cfs.

3. Give a brief explanation as to why you disagree with these portions:

Quantity: There is no basis for the reduction in the total quantity of water.

Purpose and Period of Use: There is no basis for the reduction in the total quantity of water.

____ I AGREE with this proposed recommendation: no changes need to be made.

Date: 10/31/06

SIGNATURE: Scott L. Campbell

Please print your name: Scott L. Campbell, attorney of record for Tree Top Ranches, LP

IDWR Western Regional Office, 2735 Airport Way, Boise, ID 83705, 208-334-2190

recommended all the acres claimed @ 1"/acre.
soil analysis not included
acres sprinkle irrigated was 1/2 pivot

Moffatt Thomas

MOFFATT THOMAS BARRETT ROCK & FIELDS, CHTD.

Boise
Idaho Falls
Pocatello
Twin Falls

Eugene C. Thomas
John W. Barrett
R. B. Rock
Richard C. Fields
John S. Simko
John C. Ward
D. James Manning
Gary T. Dance
Larry C. Hunter
Randall A. Peterman
Mark S. Prusynski
Stephen R. Thomas
Glenna M. Christensen
Gerald T. Husch
Scott L. Campbell
Robert B. Burns

Michael E. Thomas
Patricia M. Olsson
Bradley J. Williams
Lee Radford
Michael O. Roe
David S. Jensen
James L. Martin
C. Clayton Gill
Michael W. McGreaham
David P. Gardner
Julian E. Gabiola
Angela Schaer Kaufmann
Kimberly D. Evans Ross
Paul D. McFarlane
Jon A. Stenquist
Tyler J. Henderson

Jason G. Murray
Mark C. Peterson
Andrew J. Waldera
Tyler J. Anderson
Dylan B. Lawrence
Russell G. Mercalf
Benjamin C. Ritchie
Rebecca A. Rainey

Robert E. Bakes, *of counsel*
Morgan W. Richards, *of counsel*

Willis C. Moffatt, 1907-1980
Kirk R. Helvie, 1956-2003

October 30, 2006

US Bank Plaza Building
101 S Capitol Blvd 10th Fl
PO Box 829
Boise Idaho 83701 0829

208 345 2000
800 422 2889
208 385 5384 Fax
www.moffatt.com

RECEIVED

NOV 01 2006

WATER RESOURCES
WESTERN REGION

Idaho Department of Water Resources
Western Region Office, Adjudication Bureau
2735 Airport Way
Boise, Idaho 83705

Re: Water Right Nos. 63-4641A, 63-4641B, 63-4534B, 63-21530 and 63-21580
MTBR&F File No. 22567.0

Dear Sir or Madam:

Enclosed please find the original Notice of Error Reply form for each of the following water rights: 63-4641A, 63-4641B, 63-4534B, 63-21530 and 63-21580. We are submitting the enclosed Notices on behalf of our clients, Tree Top Ranches, LP, and Larry and Marianne Williams. A copy of each form is also enclosed. Please receive stamp the copies and return them in the enclosed self-addressed, stamped envelope. ✓ *SLC*

Thank you for your assistance to this matter. If you have any questions, please do not hesitate to contact me.

Very truly yours,



Scott L. Campbell

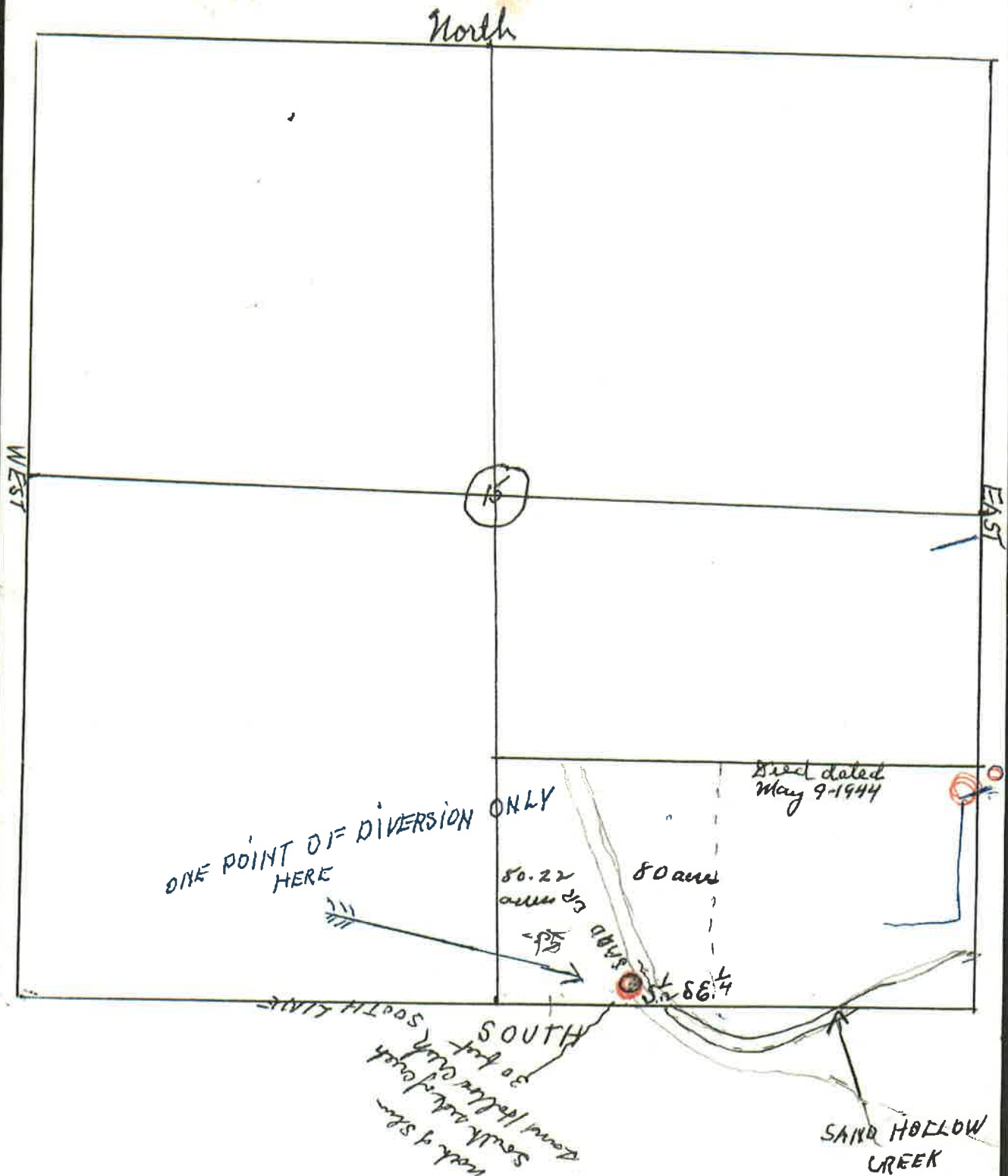
SLC/tmh

Enclosures

cc: Larry Williams (w/encls.)



Section 15, Township 5 North, Range 5 West of B.M.



WATER RIGHT LICENSE

THIS IS TO CERTIFY, that LESLIE W. HAMILTON

Beneficial Use	Period of Use	Rate of Diversion	Annual Volume
Irrigation	from April 1 to November 1	at 0.32 cfs and	72 acre feet
	from _____ to _____	_____ cfs and	_____
	from _____ to _____	_____ cfs and	_____

(both dates inclusive)

Description and location of place of use:

Total number of acres irrigated 16

Witness the seal and signature of the Director, affixed at Boise, Idaho, this 31 day of December, 19 79.

Director

DATE OF EXAM 6/7/79

ACREAGE

Found 16
Recommended 16

Irrigation Requirement 4.5 Ac Ft/Ac

USE

Irrigation Q = .32 c.f.s. V = 720 AF/Ann. from 7/1 to 11/1
Domestic Q = c.f.s. V = AF/Ann. from to
Livestock Q = c.f.s. V = AF/Ann. from to

Is water co-mingled? yes no ✓

Name source: SAND HOLLOW CREEK
twp. 5N N/S, Rge 5W E/W, B.M., Sec. 15, Sub. SW 1/4 SE 1/4 CANYON
County

Exchange? yes no ✓

Name source exchanged with:
twp. N/S, Rge E/W, B.M., Sec. , Sub. 1/4 1/4
County

Point of injection:
twp. N/S, Rge E/W, B.M., Sec. , Sub. 1/4 1/4
County

Point of exchange:
twp. N/S, Rge E/W, B.M., Sec. , Sub. 1/4 1/4
County

Total Q measured 1.53 cfs Method of measurement CIPOLLETTI WEIR

Total Q recommended .32 cfs Meter No. Type Condition

Total V recommended 720 AF/Ann

Recommended Amendments:

P.D.
Place of Use
Other
None ✓

MEASUREMENT CALCULATION:

DIRECTLY MEASURED 4.5" INCHES ON CIPOLLETTI WEIR WITH GRAFT LENGTH = 1.5'
FLOW TAKEN FROM TABLE 4, P. 25, WATER MEASUREMENT BULLETIN NO. 552,
U. of I. = 1.53 cfs

SYSTEM DESCRIPTION:

10" MOTOR LIFT PUMP, 8" PIPE DISCHARGE INTO WEIR BOX, DITCHES
TO CONVEY WATER TO FLOWED IRRIGATOR

REMARKS:

63-1641 CLAIM COVERS THE REST OF L.W. HAMILTON'S PROPERTY
THIS POINT OF DIVERSION HE MADE APP. 63-7921 DAILY IRRIGATES THE
16 ACRES IN SWSE, SEC. 15, T 5N, R 5W.

Examiner's Signature Charles W. Byrnes Jr. Date 6/8/79

Checked by W. H. [Signature] Date 11 June 79

Approved by Date

Identification No. _____

Application No. 63-7921

STATE OF IDAHO
DEPARTMENT OF WATER ADMINISTRATION

APPLICATION FOR PERMIT **APPROVED**

To Appropriate the Public Waters of the State of Idaho
(TYPE OR PRINT IN INK)

1. Name of applicant Leslie W. Hamilton
post office address Rural Route No. 1, Parma, Idaho.
2. Source of water supply Sand Hollow Creek which is a tributary of Boise River
3. a. Location of point of diversion is South 1/4 of SE 1/4 of Section 15 Township 5 North
Range 5 West B.M. Canyon County; additional points of diversion if any:
30 feet North of the South Line of Section 15, Township 5 North,
Range 5 West of the Boise Meridian, and about 600 feet East from the
Southwest Corner of the SW 1/4 of the SE 1/4 of the of the said Section 15, aforesaid
b. If water is not consumed, it will be discharged into Sand Hollow Creek at a point in said 1/4
of 1/4 of Section 15 Township 5 North Range 5 West B.M. Canyon
4. Water will be used for the following purposes: each year
two second feet
Amount 2 for irrigation purpose from April 1st to November 1, (both dates inclusive)
(cfs or acre-feet per annum)
Amount all for irrigation purpose from See above dates (both dates inclusive)
(cfs or acre-feet per annum)
Amount 0 for purpose from to (both dates inclusive)
(cfs or acre-feet per annum)
5. Total quantity to be appropriated:
a. Two Second feet cubic feet per second and/or
b. acre feet per annum.
6. Proposed diverting works:
a. Description of ditches, flumes, pumps, headgates, etc. One four inch 10 H. P. Motor
operating the same with gasoline, but expect later on to install
an electric motor, with the necessary pump.
No storage dam no reservoir
b. Height of storage dam feet, active reservoir capacity acre feet; total reservoir
capacity acre feet, materials used in storage dam:
Period of year during which storage will occur (Mo. Day) to (Mo. Day) inclusive.
c. Proposed well diameter is inches; proposed depth of well is feet.
7. a. Time required for the completion of the works and application of the water to the proposed beneficial use
is 5 years.
b. Estimated construction cost is \$ Present Total for all purposes about \$1200.00
8. Description of proposed uses: Pump \$485.00; Engine (Motor) \$325.00; Pipe, etc
\$400.00
a. If water is not for irrigation: It is for irrigation
(1) Give the place of use of water: About 18 miles West of Sand Hollow Creek in the SW 1/4 of the Township
SE 1/4 of Section 15, Township 5 North Range 5 West of the Boise Meridian.
(2) Amount of power to be generated: None hp under feet of head.
(3) List number of each kind of livestock to be watered:
Not for watering livestock
(4) Name of municipality to be served No municipal purpose, or number of families to be
supplied with domestic water .
(5) If water is to be used for other purposes describe:

b. If water is for irrigation, indicate acreage in each subdivision in the tabulation below:

Total number of acres to be irrigated_____80

c. Describe any other water rights used for the same purposes as described above.

9. a. Who owns the property at the point of diversion

b. Who owns the land to be irrigated or place of use

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing none

10. Remarks

Proposed Priority 1-29-1974

Received by WJ Date 1-28-74 Time 2:00 PM
 Preliminary check by WJH Fee \$ 35.00
 Received by WJ Date 1-30-74 Rec'd # 13621
 Publication prepared by WJ Date 1-31-74
 Published in Idaho Review
 Publication dates 2-7 & 2-14-74
 Publication approved WJ Date 2-14-74
 Priority reduced to _____ Reason _____

 Protests filed by: _____

 Copies of protests forwarded by _____
 Hearing held by _____ Date _____
 Recommended for approval denial by WJH

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER ADMINISTRATION

This is to certify that I have examined Application for Permit to appropriate the public waters of the State of Idaho No. 63-7921, and said application is hereby APPROVED.

1. Approval of said application is subject to the following limitations and conditions:

- a. SUBJECT TO ALL PRIOR WATER RIGHTS.
- b. Proof of construction of works and application of water to beneficial use shall be submitted on or before May 1, 19 79.
- c. Other: (1) A measuring device of a type approved by this Department shall be permanently installed and maintained as part of the diverting works.
(2) The maximum volume per year shall not exceed 360 acre feet or 4.5 acre feet per acre per year.

2. Denial of said application is for the following reasons: _____

Witness my hand this 20 day of May, 19 74.

R. Keith Higin
 Director

CLAIM TO A WATER RIGHT

The filing of this claim does not confirm the water right claimed but failure to file may result in forfeiture of a water right.

Notice is hereby given that Leslie W. Hamilton

Rural Rt. #1, Parma, Idaho

(Name of Claimant)

Telephone No. 722-5810

claims a right to the diversion and beneficial use of the surface or ground water. The extent and nature of said claim is as follows:

(1) Date of priority: (When was the water first applied to a beneficial use) November 1, 1880

A claim is not acceptable on a ground water source with a priority later than March 25, 1963 or on a surface water source with a priority later than May 20, 1971. An exception is that a claim may be filed on single family domestic use from a ground water source.

(2) Describe the source of water: (Name of stream, lake, spring, etc., or ground water)

Unnamed Drain

tributary to Sand Hollow Drain

(3) Describe the purpose for which the water has been used and the time during the year when you have used the right claimed:

(cfs, gpd, AFA)		(Domestic, Irrigation, Stock, Etc.)		(Both dates inclusive)	
Quantity	Use	Period of Use From	To	(Mo., Day)	(Mo., Day)
2.0	Irrigation	4/1	10/31		

(4)	TOTAL QUANTITY USED.
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
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99	99
100	100

{cfs, gpd, AFA}

(5) A. Point of diversion: (Location of point where water is diverted from its source)

NW ¼ SW ¼, Sec. 14 Twp. 5N Rge. 5W B.M., County of Canyon

Additional points of diversion:

B) Describe means of diversion of water: (Pump and pipeline, well, diversion dam, reservoir, length of ditch and field, etc.). Give sizes and capacities; be as specific as possible. Describe any changes in the system and give the date of the change.

(6) A) Describe location of use by listing number of irrigated acres within each 40-acre tract in appropriate box. If use is not for irrigation, place an "X" in appropriate box to show location.

[illegible]

No. of acres 57

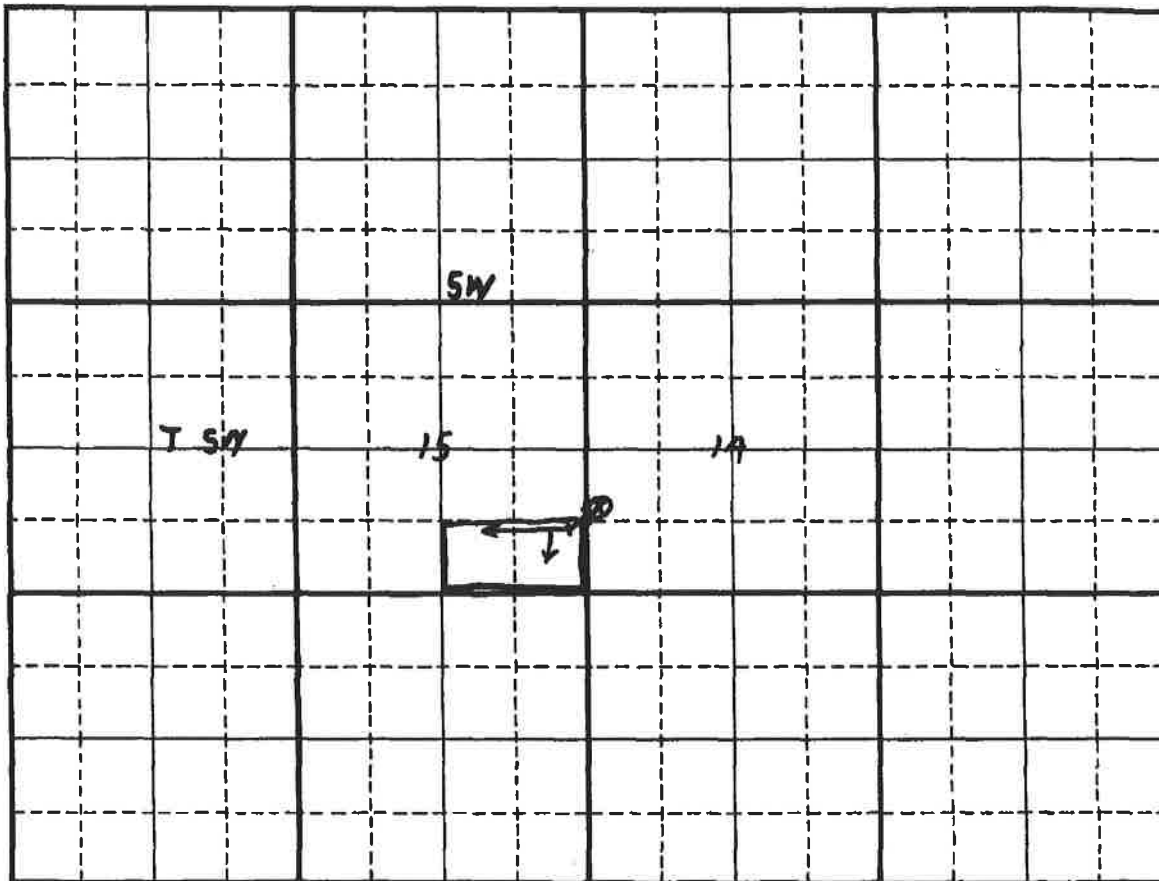
B) If water is used for other than irrigation, fully describe that use, being as specific as possible:

NOTE: Include here the type and number of stock watered:

(7) If you are claiming water as a member of an organization, list name of organization:

MICROFILMED

(8) Remarks _____



Scale: 2 Inches equal 1 mile.

Map should show the location of the point of diversion and the place of use of the water by 40-acre subdivisions, section, township and range of the public land survey system.

State of Idaho)
County of Ada) ss.

Be it known that the undersigned, being duly sworn, deposes and says that he, she, they subscribed the foregoing claim to a water right, together with all attached information, and that the matters and facts therein are true to the best of the affiant's knowledge.

Sworn to before me this 19th day of March, 19 79.

Leslie W. Hamilton
(Claimant)

Kathryn A. Walker
Notary Public
Residing at Boise

My commission expires life

FOR DEPARTMENT USE ONLY

Received by KK CWB Date 3/19/79 Exception filed by: _____
Prelim. check by _____ Date _____
\$20.00 fee received by 2000 Date 3/19 # 12600
Published in News Tribune
Dates 3/29 & 4/5/79

Forwarded to claimant by: KK Date 4/19/79

Field Exam Date 9/18/2006+ 9/29/2006

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
ADJUDICATION FIELD REPORT

RECEIVED

OCT 13 2006

WATER RESOURCES
WESTERN REGION

Prior to Field Exam

- ☐ Copy of Claim, claim has been signed, sealed, and dated by notary?
- ☐ Check fees paid
- ☐ Well logs (if needed)
- ☐ Copy of topo or NAPP
- ☐ Check of Govt. Lots, if needed, Govt. Plat/Tax lot information
- ☐ Check POD & POU overlap, see below – include overlapping right for exam
- ☐ Evidence of Priority – if none, talk with claimant

CLAIMANT INFORMATION – verify contact information is complete

Claim No(s) 63-4641A/BOwner: Tree Top Ranches LP Phone No. (208) 377-0998Current Address: PO Box 8126 Boise, Id 83707☐ No change NAME IS THE SAME☒ NEW OWNER representative☐ No change Address☒ NEW ADDRESS owner: PO Box 8126 Boise, Id 83707 (208) 377-0998How long owned property? early 1990'sAccompanied by: Kelly Gore, Ranch Manager (208) 573-4960

PRIORITY DATE

☒ No change – Complete evidence submitted or not necessary☐ Incomplete – Claimant should be asked when water was first used and submit proof of date.☐ Priority date is acceptable/within mandatory filing dates?Priority date, per claimant, is: 11/1/1880

(If priority date, based on your exam, seems questionable, explain below.)

Source: Unnamed Drain Sand Hollow Creek
Sand Hollow Creek Tributary to Snake River

☐ No Change – SAME SOURCE☐ Source found is different than claimed: * see comment by Lgraves 9/29/2006

POINT OF DIVERSION

☐ No change * see 9/25/2006 comment by Lgraves☐ POD found is different than claimed: _____☐ If different, when did POD change? _____

DIVERSION AND DELIVERY SYSTEM

Points of Diversion:

ID #	Govt Lot #	1/4	1/4	1/4	Sec.	Twp.	Rge.	County	Method of Determination/Remarks GPS ID
			SW	SE	15	5N	5W	Canyon	N43°45.796'W116°55.100'
			SW	SW	14	5N	5W	Canyon	N43°45.974'W116°54.618'

Sand Hollow
pump station #3
unnamed drain

Description of diverting works

* see attachment

OVERLAP REVIEW

Other water rights with the same point of diversion: * see 9/25/06 legaves comments

Does overlap add acres or uses to existing system, increase rate of flow or volume, or other? Explain:

* see 9/25/2006 legaves comments

WATER USES

- ☐ No change
- ☐ Different Uses

Use Irrigation From 3/1 To 11/15 Amount _____ CFS _____ AFA
 Use _____ From _____ To _____ Amount _____ CFS _____ AFA
 Use _____ From _____ To _____ Amount _____ CFS _____ AFA

* change dates in season to 3/1-11/15
(corrected 10/2/06)

TOTAL VOLUME – Groundwater only

N/A

- ☐ Incomplete on claim, the total is, Amount _____ CFS _____ AFA
- ☐ Changes found, the new total is, Amount _____ CFS _____ AFA
- ☐ More than 1" per Acre? Yes _____ (claimant must complete excess flow sheet)

NON-IRRIGATION USES:

- ☐ No change
- ☒ Changes Exam found: Domestic # of homes _____ Stock # 100 pr. cattle, 4 bulls
 Types _____ Additional comments: rotate around Pastures,
moving them west from
Hwy 95 + going west down
Sand Rd

PLACE OF USE:

- ☒ No Change
- ☐ Changes shown below:

Place of Use			NE				NW				SW				SE				Totals
TWP	RGE	SEC	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
No changes																			

Overlap with other water rights: * see 9/25/2006 comments from Lgraves

Does overlap increase rate of flow, volume, additional acres, different source for same acres? Explain:

* see 9/25/2006 comments from Lgraves

Delivery System Narrative: * see attachment

Pump station # 3 (as drawn on map):

	Well or Diversion Identification No GPS ID	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge size
grey →	N43°45.796'	US Motor	25	F422A	turbine	8"
black →	W116°55.100'	US Motor	40	BF491	turbine	8"

FLOW MEASUREMENTS:

Attach appropriate documents

NARRATIVE/REMARKS/COMMENTS

Supplemental water: None

Contact: Scott Campbell (attorney) & Tiffany Hudak (paralegal)
Moffatt Thomas Barrett, Rock, Fields, Chtd. 101 S. Capital Blvd, 10th floor
PO Box 829, Boise, Id 83701 (208) 385-5435 (direct line) or 345-2000.

Directions: I84, Hwy 20/26 Parma/Notes off ramp,
south on Hwy 95, Sand Rd first right after coming down
the overpass, entrance to Tree Top Ranch is first
entrance on right after Sand Rd.

POD (pump station #3): after entering 1st entrance, continue
west, turn north & pump station is at the end before you
run into Sand Hollow POU fields
north west + northeast of pump station #3.

AFTER EXAM THE FILE SHOULD CONTAIN:

- ☐ Completed claim checklist
- ☐ Photographs of POD's and POU
- ☐ GPS readings
- ☐ Completed map and or GIS layout showing POD's and POU

POD (unnamed drain) on north side of Hwy 20/26
438' east of the Hwy 95/Hwy 20/26
junction POU: piped to (2)
1/2 pivots (same
field as POU from
pump station #3)

DATE EXAM CONDUCTED:

10/13/2006

FIELD EXAMINER:

Judy Hemenway

pump station #3

63-4641A/B Tree Top Ranches

Date of Inspection: 9/18/06 & 9/29/06

Inspector: Sandy Hemenway

Description of Diverting Works:

1987 System:

Sand Hollow, was pumped from where station #3 now exists, open discharged to dirt ditches (new manager did not know size of pumps previously utilized with the system).

Unnamed Drain diverts into a 54" concrete buried pipe that runs southwest under Hwy 20/26 and under the railroad tracks to a concrete head gate/control box.

Current System:

Sand Hollow/Pump Station #3 (named that on the hand drawn map), (1)-25Hp US Motor turbine pump, (1)-40Hp US Motor turbine pump, both 8" discharge, both run at 60psi, both 3' lift from wet well/collection area below the two pumps.

Unnamed Drain: same as 1987 system, no changes.

Delivery System Narrative:

1987 System:

From Sand Hollow pumps, open discharged to dirt ditches running on the south boarder running east and west (gravity flow south to north in the southwest corner), dirt ditches continuing to the southeast corner then turning north (gravity flow east to west), in northeast corner dirt ditches turning and running east to west on the north boarder (gravity flow north to south). Wheel line was also used in a couple of places.

Unnamed Drain: from head gate/control box, buried 54" concrete pipe southwest and open discharged to dirt ditch running on the north boarder east to west (gravity flow north to south), dirt ditch running from north to south on the east boarder (gravity flow east to west), then running along the south boarder east to west (gravity flow south to north in the southwest corner).

Current System:

Sand Hollow/Pump Station #3 (was upgraded in spring 2006, and half pivots were installed). 10" buried PVC runs north through the middle of the (2)-1/2 pivots (both 3 towers with end gun) to the north boarder (supplies flow for hand line that runs east and west on the north boarder, and 7 big guns located in the northwest corner, and 9 big guns located in the northeast corner). Open discharge to dirt ditch in the southwest corner (gravity flow south to north)

Unnamed Drain: can utilize the same system as indicated above (1987), or the piped system to the (2) 1/2 pivots (manager was not sure of the size buried pipe to the 1/2 pivots).

NOTE: 26415 Sand Rd is still irrigated with this irrigation system. 26471 & 26469 Sand Rd have a private well for internal/external use.

Tree Top Ranch, LP 63-4641a, 1641b

Inspection Date: 9/18/2006

Inspector: Sand Hemenway #45

Ditch Measurement Site A (SW of POD south of Mile Post)

Orange Peel $H = 15'' = 1.25'$ $W = 5'$

$Q = VA = 2.25 \text{ ft/sec} \times 6.25 \text{ ft}^2 = 14.06 \text{ cfs}$ ditch capacity from POD

$V = 9 \text{ ft} / 4 \text{ sec} = 2.25 \text{ ft/sec}$

$A = H \times W = 1.25' \times 5' = 6.25 \text{ ft}^2$

Pump Station #3 for: (2) half pivots, (9) $1\frac{1}{2}''$ weather tech. nozzles in corner
3' lift, 8" discharge (both), 60 psi (both)
(2) US Motor Turbines
(grey) 25 Hp model # F422A
(blk) 40 Hp 3 phase

Ditch Measurement (field south of employee houses)

Orange Peel $H = 22'' = 1.83'$ $W = 4'$

$Q = VA = 2.16 \text{ ft/sec} \times 7.32 \text{ ft}^2 = 15.81 \text{ cfs}$ capacity of ditch

$V = 8.6 \text{ ft} / 4 \text{ sec} = 2.16 \text{ ft/sec}$

$A = H \times W = 1.83' \times 4' = 7.32 \text{ ft}^2$

(some waste water also runs into this ditch)

Half Pivots

(2) half Pivots w/ 3 towers each + Big Gun on end
100 gpm/tower + 150 gpm average end gun
 $300 + 150 = 450 \text{ gpm} \times 0.00223 = 1.00 \text{ cfs}$ each

Sprinkler System

(9) $1\frac{1}{2}''$ weather tec nozzles at NE corner
2 run at one time

(7) 1" rainbirds nozzles at NW corner
2 run at one time

POD: SWSW S14 N43°45.974' W116°54.618'

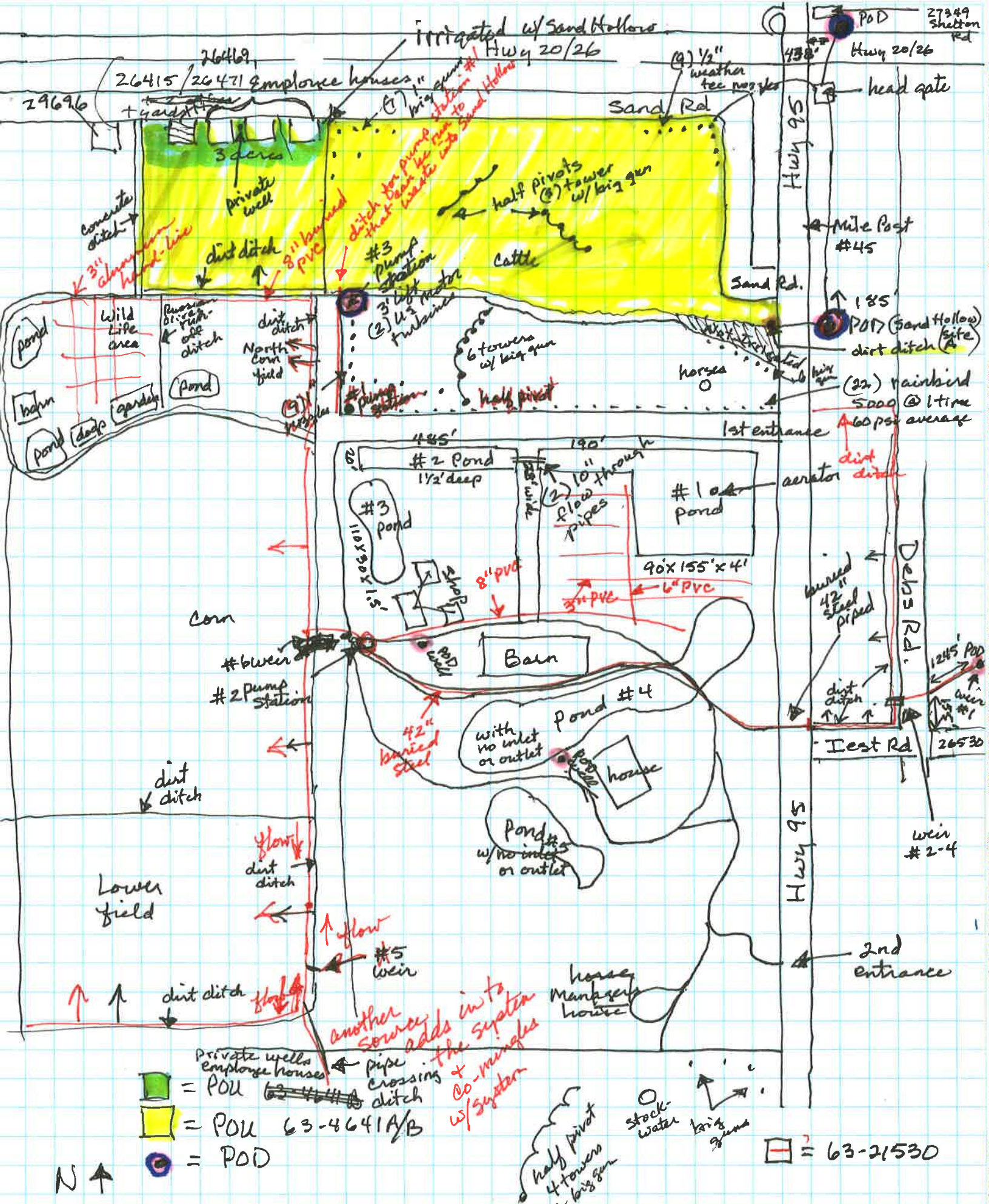
located 438' east of Hwy 95/Hwy 20/26 junction, north side of Hwy 20/26

$V = 5' / 3 \text{ sec} = 1.67' / \text{sec}$

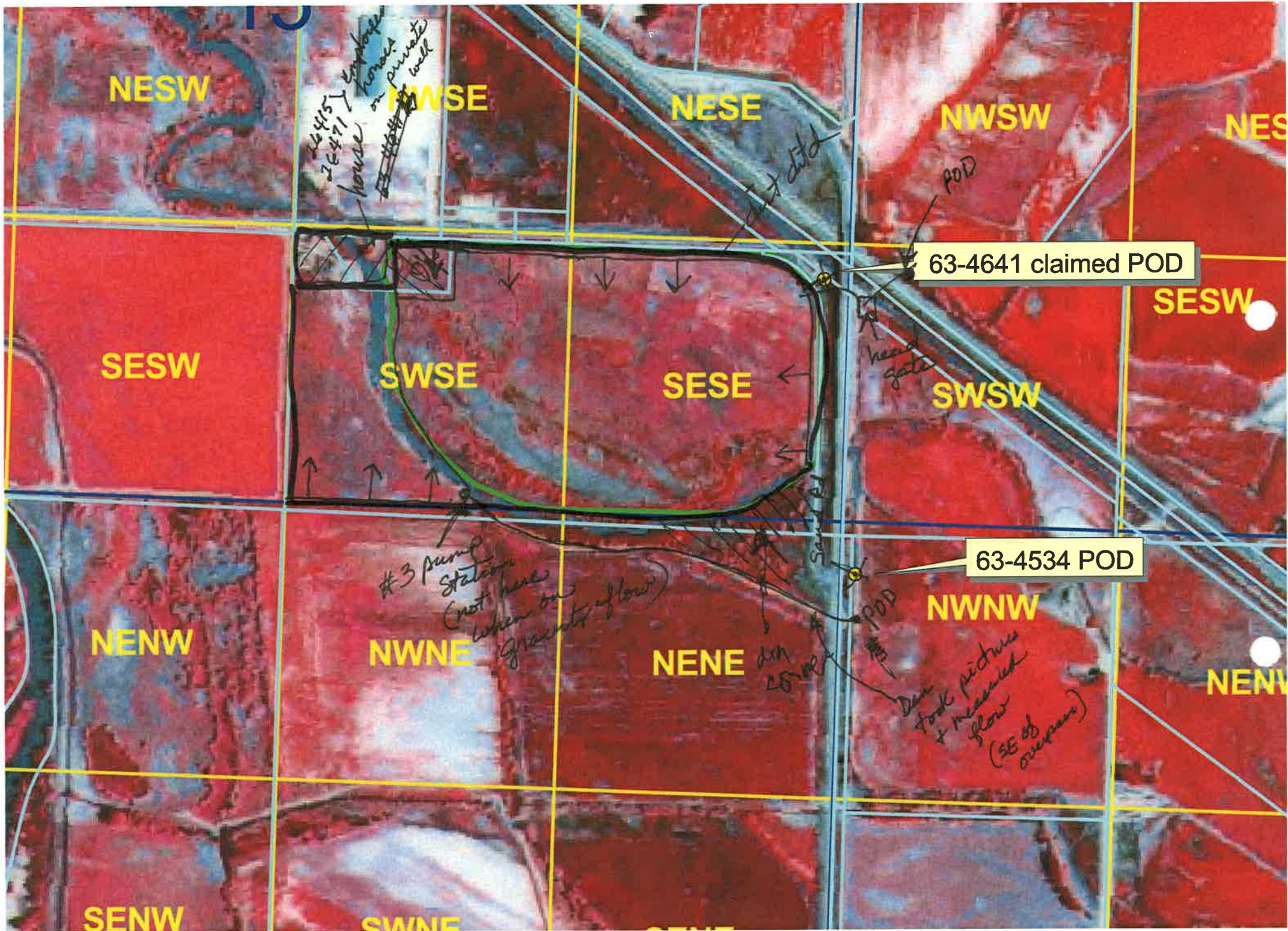
$A = 4' W \times 1.08' D = 4.33 \text{ ft}^2$

$Q = VA = 1.67 \text{ ft/sec} \times 4.33 \text{ ft}^2 = 7.23 \text{ cfs}$

54" Concrete buried pipe = 79.52 Max. pipe capacity cfs



Tree Top Ranches Map of Systems for 63-4641a, 4641b, 21531, + 21580



63-4641 A AND B - 1987 NAPP.

System as it existed in 1987

9/18/2006 SH



63-21580 - 2004 AERIAL . THE B PORTION CLAIMED 3 ACRES IRRIGATED BUT THE ENTIRE LOT IS LESS THAN 3 ACRES.
ONLY ABOUT 1.5 - 2 ACRES IRRIGABLE AND IS INCLUDED IN THE 54 ACRES OF B. *Current System* 9/18/06 SAH



Sand Hollow
+ diversion
head gate

185'
southeast
of stop
sign at
Hwy 95
+ Sand Rd
intersection
(south of
mile post
#45)

09/18/2006

63-4641 A/B
Tree Top Ranches

9/18/2006 SH

N43°45.718'
W116°54.697'



Sand
Hollow
head gate
diverting
flow to
unnamed
drain

N43°45.718',
W116°54.697'



"site A"
unnamed
drain
(where
it starts
on the
west
side
of Hwy 95
185'
South
of
Sand Rd.)

63-4641 A/B
Tree Top Ranches

9/18/2006 SH

N43°45.718',
W116°54.711'



POD:

Pump
Station
#3
on hand
drawn
map



US Motor
25Hp
model F422A

US Motor
40Hp
3phase
BF491

(2) US
Motor Turbine
3' lift

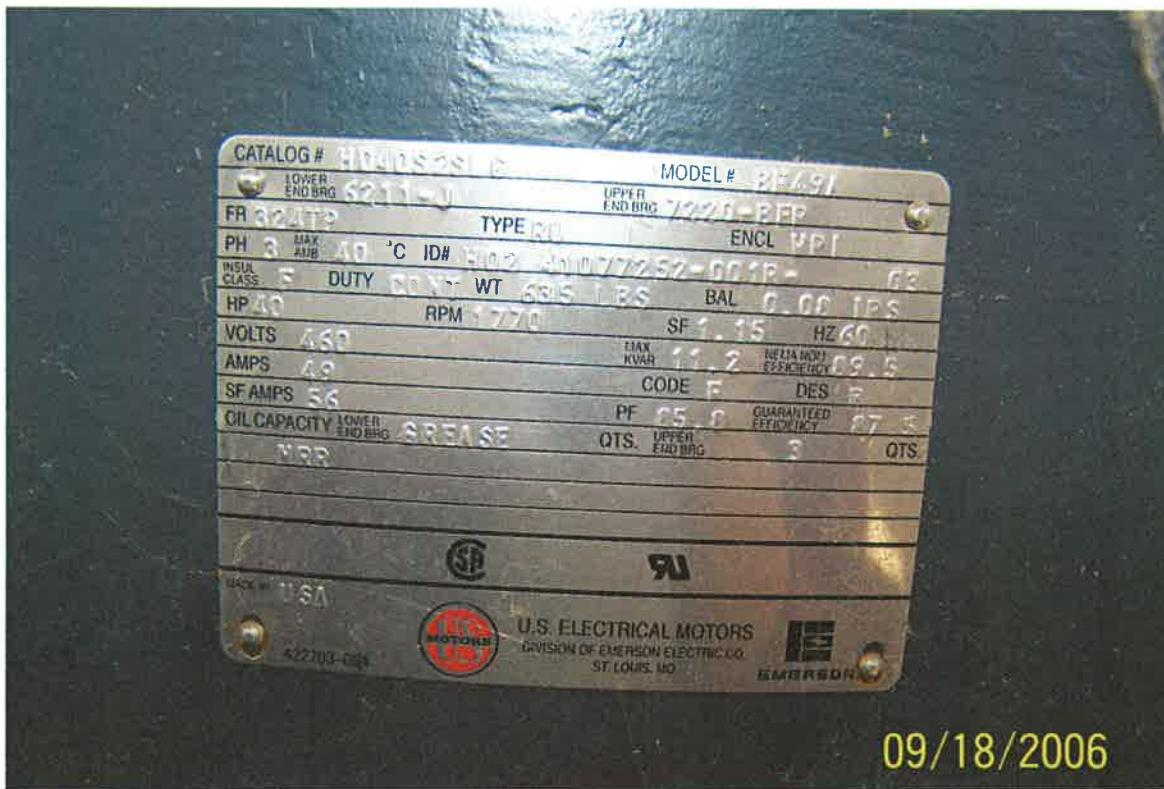
8" discharge
(both)

60 psi
(both) is
what system
run at

63-4641 A/B
Tree Top Ranches

9/18/2006 SH

N43°45.796'
W116°55.100'
Sand Hollow Creek



US Motor
40 Hp
3phase
BF491

09/18/2006



POU!

(2) half
pivots
(3) towers
each w/
big guns
(7) 1"
big guns
NW corner
(4) 1 1/2"
weather
tee big
guns
NE corner

09/18/2006

63-4641 A/B
Tree Top Ranches

9/18/2006 SH

running
east to
west,
unnamed
drain
w/in
25' of
pump
station
#3

Pou 1



09/18/2006



09/18/2006

ditch
measured
west
of
pump
station #3.
+ south
of
employee houses

63-4641 A/B
Tree Top Ranches

9/18/2006 SH



Dirt
Ditch
Measured
West of
pump
station #3
- South of
employee
houses

63-4641 A/B
Tree Top Ranches

9/18/2006 SH

POU:
SWSE
SESE



100 pr.
cattle,
4 bulls.
Stockwater
inclusive
with
irrigation
(no
stock
tanks)
rotate
them
west thru
all the
fields
they own
going
down
Sand Rd.



#1
half pivot
3 towers
w/ big gun
(9) 1 1/2"
weather
tech
nozzles
irrigate NE
corners
(run 2 at
1 time);
(7) 1" big
gun NW
corner

63-4641 A/B
Tree Top Ranches

9/18/2006 SH

#1
half pivot
3 towers
w/ big gun



#2
half pivot
3 towers
w/ big
gun

POU:
SWSE
SESE

09/18/2006



3"
hand-
line
on north
hoarder
(south side
of Sand Rd)
60+ sections
5/32 nozzles
30 sections
run @ 1 time
(1 nozzle
per section)

09/18/2006

63-4641 A/B
Tree Top Ranches

9/18/2006 SH



POU:
 NWSWSE
 employees
 houses
 26415,
 26471
 plus 2
 other
 house
 (yards)



Area
 Not
 Irrigated
 SESESE

63-4641 A/B
 Tree Top Ranches

9/18/2006 SH



Control
Valves
located
south of
employees
houses

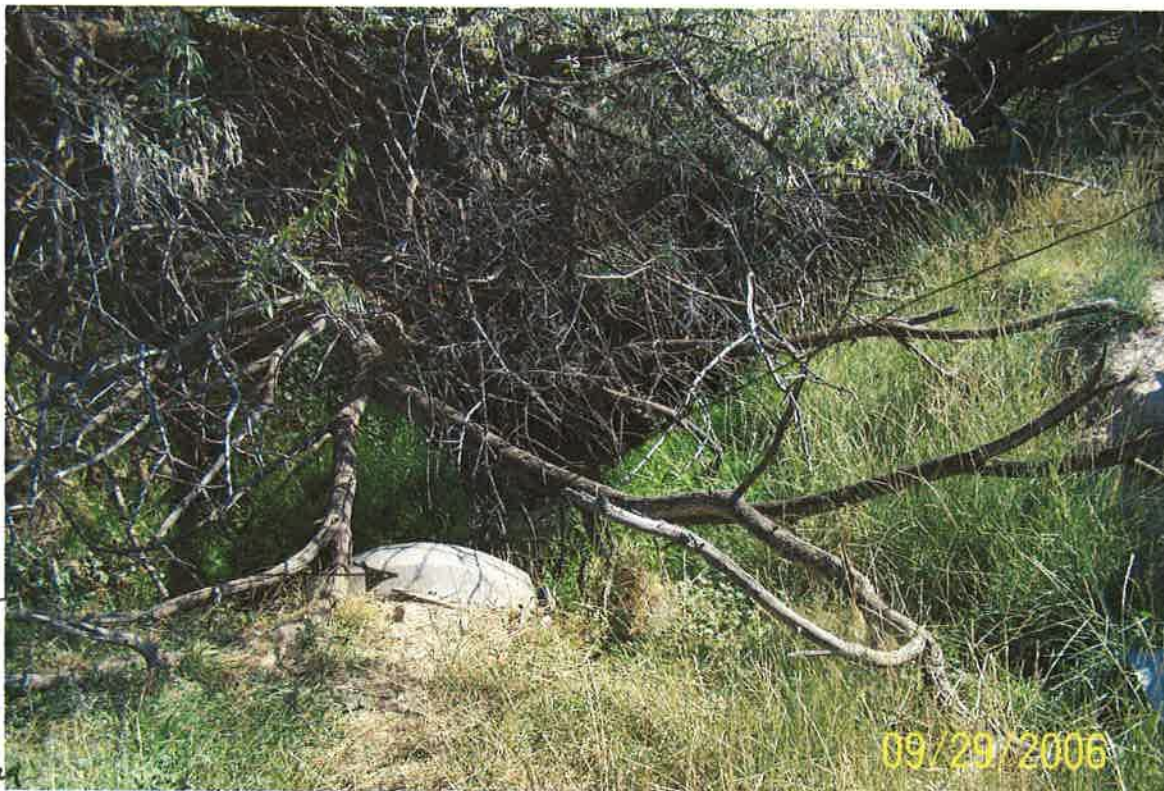


POU
26471 +
26469
Sand Rd.
employee
houses

POD
10" casing
5" above
gnd. level
ID tag:
A0002146

63-4641 A/B
Tree Top Ranches

N43°45.997'
W116°55.277'



Southeast
of 27349
Shelton Rd

POD

438' east
of Hwy 95
junction
overpass,
on the
north side
of Hwy
20/26

09/29/2006

54"
concrete
buried line
under Hwy.
20/26 running
southwest
to
head gate

63-4641 A/B
Tree Top Ranches

N 43° 45.974'
W 116° 54.618'

Unnamed Drain



head
gate
where
Sand Hollow
+ unnamed
drain
co-mingle



head
gate

63-4641 A/B
Tree Top Ranches

N43°45.966'
W116°54.686'

Monday 10am
Sept 18

MEMORANDUM TO SUBCONTRACTOR

TO: SANDY HEMENWAY
FROM: VICKY L MUSIC, SR WATER RESOURCE AGENT, IDWR / WESTERN
REGION
SUBJECT: 63-4641 A & B
DATE: 9/12/2006
CC: CLAIM FILE

These are beneficial use claims. It appears that the claim was split and 3 acres sold and claimed as the B portion. The A portion is for 54 acres. Both claims are now owned by Treetop Ranches. A change of ownership has been filed. The site address is: 26471 Sand Rd, Parma ID. It is southwest of the intersection of Hwy 95 S., and Hwy 20-26. Your contact is claimant's attorney, Scott Campbell or his paralegal, Tiffany Hudak at 345-2000.

Please:

✓ 1 – verify the acres irrigated in 1987 on the 1987 aerial.

2 –GPS the location of the pod. Take flow measurements and calculate flow if the pod is as claimed in section 14. If it is the pod in section 15 adjacent to Hwy 95 – we already have those measurements. Describe diversion and delivery system to claimed pou.

✓ 3 – the pod located on a map included with the change of ownership shows the pod actually in the NENE S 22. If this is the current location of the POD, when did it change? *It's still NW NW, only lower/further south than where shown on map*

4 – label pod, delivery system, etc on the attached 2004 aerial.

Thanks.

VLM

*employee
houses*

Questions for Tree Top Ranches: (answered by Kelly Yore/Ranch Manager (208) 573-4960, per 9/29/06 phone conversation)

+ 10/13/06 SK

Sec 22 SENE

8/23/98 D0007530 100gpm
static 4' depth 120'
6" casing

D0007461 80gpm (Sec 22 NENE)
10' static, 124' deep
6" casing 8/26/98

63-21580 Ground water sources:

- 1) What Hp are the submersible pumps? House 1.5, Shop 1.5
- 2) Average pressure system ran at? House 30, Shop 30
- 3) Motor/pump make? House Gould, Shop Gould
- 4) Discharge size from well? House 1 1/4", Shop 1 1/4"
- 5) When was POD/ground water sources locations changed from where they were listed on the application (i.e. over by the barn area now)? House _____ Shop _____. Since Adamson Pump drilled both of these wells.
- 6) Were the original wells abandoned, or where are they now?
- 7) What is the size of the pipe from the house and shop wells that go to the stock tanks? 1 1/4"

unknown

D0007590
200gpm, 3' static
179' deep, 6" casing
10/1/98
well adj.
Sand Rd.
Sec 22 SENE

**** Answers for 63-21580 were obtained by calling Adamson Pump at (208) 466-6439, and speaking with: L/M 10/12/06

63-21530

- 1) Where does the water go from the dirt ditch that irrigates the field on Debs Rd. and Iest Rd (at the north end)? Drain or Sand Hollow
- 2) Where does the water that supplies the north corn field and wild life habitat area go? Inlet into the ponds, then outlet to the river.
- 3) Where does the water to the 1" Rainbird nozzles in the NE corner north of entrance #1 come from? #3 pump station
- 4) What water source is used to fill the ponds near the wild life habitat area? Run-off
- 5) How do the ponds at entrance #1 get filled (pond #1, #2, #3)? What are their sources? Piped from water coming west off of Iest Rd; #3 is piped from pond #2
- 6) Where does pump station #1 get its water supply? Ditch running N&S and ends in drain by #3 station
- 7) Does the horse manager have a private well, or what is his water source? Not sure
- 8) The wild life habitate area has 3" handline that comes off of 6" buried PVC, 40 sections, 40' sections, 5/32" nozzles, 3 lines run at one time. How many sections make up the 3 lines? How many lines total are there? 20
- 9) How is the pasture south of the house, and west of the horse manager's house irrigated? Pump station #2 What source? Piped from Iest Rd.

63-4641A/B gravity & wheel line prior to pivot (pivots installed ^{spring} 2006)

- 1) What is the average pressure for the pumps at the pump station #3 that supplies the (2)-half pivots in the far north field (on Sand Rd)? The gauges both indicated 9 pressure at the time of inspection. 60 psi
- 2) Is there another POD on the NE corner of Sands Rd? Where does it come from and where does it go? For the 2 pivots, not used currently but not abandoned, buried pipe under the railroad tracks
- 3) What size discharge on pump station #3? 8" both
- 4) Where is the well that supplies internal/external water for the employee homes? Private well behind shrubs by entrance

line from head gate (unnamed drain) 54" pipe discharged to dirt ditch

- 5) Size hand line on north boarder (3"), number of sections (60+) nozzle size (5/32"), pressure (unknown), number run at one time (1/2-----1 nozzle per section).



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

) SPECIAL MASTER'S REPORT
)
) FINDINGS OF FACT AND
) CONCLUSIONS OF LAW
)
) FOR WATER RIGHTS 63-04534B,
) 63-04641A, and 63-04641B

I. FINDINGS OF FACT

Notices of claim were filed for the above-captioned water rights pursuant to I.C. § 42-1409. The Director of the State of Idaho Department of Water Resources (IDWR) examined the water system for this reporting area. The *Director's Report* contained a recommendation or abstract for the elements of these water rights.

On June 19, 2007, Tree Top Ranches, LP, through its attorney Scott Campbell, filed objections to the *Director's Report*. Greg Obendorf, through his attorney Dana Hofstetter, filed responses to the objections. On June 11, 2009, the parties filed a *Standard Form 5 - Stipulated Elements of a Water Right* in each of the subcases, which resolved the objections. The Idaho Department of Water Resources concurred with the stipulations.

II. CONCLUSIONS OF LAW

Therefore based on the file and record herein and pursuant to the *Standard Forms 5*, IT IS RECOMMENDED that water rights 63-04534B, 63-04641A, and 63-04641B be **decreed** with the elements as set forth in the attached *Recommendations for Partial Decrees Pursuant to*

I.R.C.P. 54(b).

Dated

July 16, 2009

Theodore R. Booth

Theodore R. Booth
Special Master
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

DISTRICT COURT - SRBA Fifth Judicial District County of Twin Falls - State of Idaho JUL 16 2009 By _____ Clerk Deputy Clerk

In Re SRBA

Case No. 39576

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

Water Right 63-04641B

NAME AND ADDRESS: TREE TOP RANCHES LP
914 HOUSTON RD
BOISE, ID 83706

SOURCE: SAND HOLLOW CREEK TRIBUTARY: SNAKE RIVER
UNNAMED DRAIN TRIBUTARY: SAND HOLLOW CREEK

QUANTITY: 0.06 CFS

PRIORITY DATE: 03/01/1935

POINT OF DIVERSION: T05N R05W S14 SWSW Within Canyon County
S15 SWSE

PURPOSE AND PERIOD OF USE:	PURPOSE OF USE	PERIOD OF USE	QUANTITY
	Irrigation	03-01 TO 11-15	0.06 CFS

PLACE OF USE: Irrigation Within Canyon County
T05N R05W S15 SWSE 2.3
2.3 Acres Total

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

This right remains subject to the right of the original appropriator, in good faith and in compliance with state laws governing changes in use and/or expansion of water rights, to cease wasting water, to change the place or manner of wasting it, or to recapture it.

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.

John M. Melanson Presiding Judge of the Snake River Basin Adjudication RECOMMENDATION JUL 16 2009 <i>Red Booth</i> SPECIAL MASTER



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 ISSUANCE OF
SPECIAL MASTER'S
RECOMMENDATION

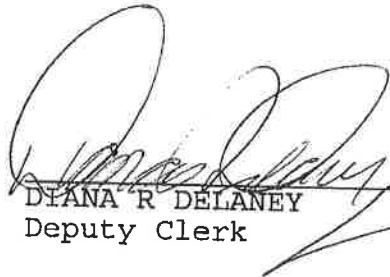
Water Right(s): 63-04534B
63-04641A 63-04641B

On July 16, 2009, Special Master THEODORE R. BOOTH
issued a SPECIAL MASTER'S RECOMMENDATION for the above subcase(s)
pursuant to SRBA Administrative Order 1 (AO1), Section 13a.

Pursuant to SRBA Administrative Order 1, Section 13a, any party
to the adjudication including parties to the subcase, may file a Motion
to Alter or Amend on or before the 28th day of the next month.

Failure of any party in the adjudication to pursue or participate
in a Motion to Alter or Amend the SPECIAL MASTER'S RECOMMENDATION
shall constitute a waiver of the right to challenge it before the
Presiding Judge.

DATED July 16, 2009.


DIANA R DELANEY
Deputy Clerk

NOTICE OF ISSUANCE

PAGE 1
07/16/09

DISTRICT COURT - SRBA
Fifth Judicial District
County of Twin Falls - State of Idaho

JUL 16 2009

By _____ Clerk
Deputy Clerk

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)
_____)

CERTIFICATE OF MAILING

Water Right(s): 63-04534B
63-04641A 63-04641B

CERTIFICATE OF MAILING

I certify that a true and correct copy of the SPECIAL MASTER'S
REPORT, SPECIAL MASTER'S RECOMMENDATION FOR PARTIAL DECREE and NOTICE
OF ISSUANCE OF SPECIAL MASTER'S REPORT AND RECOMMENDATION were mailed
on July 16, 2009, with sufficient first-class postage prepaid to
the following:

DIRECTOR OF IDWR
PO BOX 83720
BOISE, ID 83720-0098

GREG OBENDORF

Represented by:
DANA L. HOFSTETTER
608 WEST FRANKLIN STREET
BOISE, ID 83702
Phone: 208-424-7800

TREE TOP RANCHES LP

Represented by:
SCOTT L CAMPBELL
101 S CAPITOL BLVD 10TH FLOOR
PO BOX 829
BOISE, ID 83701-0829
Phone: 208-345-2000

CERTIFICATE OF MAILING


DIANA R DELANEY
Deputy Clerk

PAGE 1
07/16/09

SF5 Right No. 63-4641A

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

RIGHT NUMBER: 63-4641A

NAME AND ADDRESS: TREE TOP RANCHES LP
914 HOUSTON RD
BOISE ID 83706SOURCE: SAND HOLLOW CREEK
UNNAMED DRAIN
TRIBUTARY: SNAKE RIVER
TRIBUTARY: SAND HOLLOW CREEKQUANTITY: 1.620 CFS ~~1.08-CFS~~

PRIORITY DATE: 03/01/1935

POINT OF DIVERSION:

T05N R05W S14 SWSW Within CANYON County

T05N R05W S15 SWSE Within CANYON County

PURPOSE AND
PERIOD OF USE:

<u>PURPOSE OF USE</u>	<u>PERIOD OF USE</u>	<u>QUANTITY</u>
IRRIGATION	03/01 11/15	<u>1.620 CFS</u> 1.08-CFS

PLACE OF USE: IRRIGATION in CANYON County

T05N R05W S15	SWSE	20.50	T05N R05W S15	SESE	32.50
T05N R05W S22	NENE	0.80	T05N R05W S22	NWNE	0.20

54 ACRES TOTAL

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

This right remains subject to the right of the original appropriator, in good faith and in compliance with state laws governing changes in use and/or expansion of water rights, to cease wasting water, to change the place or manner of wasting it, or to recapture it.

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 - Beneficial Use

Use of water under this right will be regulated by a watermaster with responsibility for the distribution of water among appropriators within a water district. At this time, this water right is within State Water District No. 63, Boise River.

The following rights are also diverted through point of diversion in the SWSE S15 described above: 63-4641B, 63-7921.

Source diverted in the SWSE S15 is also known as Sand Hollow Creek Drain and Cole Slough Drain.

Right No. 63-4641B is also diverted through point of diversion in the SWSW S14 described above.

Moffatt Thomas

MOFFATT THOMAS BARRETT ROCK & FIELDS, CHTD.

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June 10, 2009

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Hofstetter Law Office, LLC
608 W. Franklin St.
Boise, ID 83702-5509

Re: Tree Top Ranches, LP
MTBR&F File No. 22567.0000

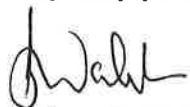
Dear Ms. Hofstetter:

I am enclosing a Standard Form 5 ("SF5") for each of SRBA Subcase Nos. 63-4641A and 63-4641B. You already have the SF5 for water right no. 63-4534B. Please review the documents, and if they are acceptable, please sign on the indicated signature lines, initial the revised recommendations and return the originals to my office for filing with the Court.

Given that water right no. 63-21530 has now been moved over to the Andrews Ditch Co.-related subcases (due to the fact that water right no. 63-21530 is "stacked" with/overlaps with acres irrigated by some former Andrews Ditch Co. water rights), execution of these SF5s will obviate the need for the trial currently scheduled for July 9 and 10, 2009. As we have discussed, both Tree Top and your client would like to avoid the need for a trial in July, or for depositions in the meantime.

If you have any questions, please contact me at 385-5418.

Very truly yours,



Andrew J. Waldera

AJW/dll

Enclosures

cc: Bill Mulder
Andrea Courtney
Ray Williams, Paralegal
Jan Shurte

*Copy of Andip
letter to Dana con-
cerning the SF5's
signed & sent plus
leaving the 63-21530
out of this one & into the
other group of tree top's
due to the overlapping acrs.*

WATER RESOURCES
WESTERN REGION

IDWR Concurrence:

 6/3/09

Jan Shurte Date
Water Rights Supervisor

 6/2/09

Andrea L. Courtney Date
Deputy Attorney General
Attorney for IDWR

SF5 Right No. 63-4641A

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

RIGHT NUMBER: 63-4641A

NAME AND ADDRESS: TREE TOP RANCHES LP
914 HOUSTON RD
BOISE ID 83706

SOURCE: SAND HOLLOW CREEK
UNNAMED DRAIN

TRIBUTARY: SNAKE RIVER
TRIBUTARY: SAND HOLLOW CREEK

QUANTITY: 1.620 CFS ~~1.08 CFS~~

PRIORITY DATE: 03/01/1935

POINT OF DIVERSION:

T05N R05W S14 SWSW Within CANYON County

T05N R05W S15 SWSE Within CANYON County

PURPOSE AND
PERIOD OF USE:

PURPOSE OF USE	PERIOD OF USE	QUANTITY
IRRIGATION	03/01 11/15	<u>1.620 CFS</u> 1.08 CFS

PLACE OF USE: IRRIGATION in CANYON County

T05N R05W S15	SWSE	20.50	T05N R05W S15	SESE	32.50
T05N R05W S22	NENE	0.80	T05N R05W S22	NWNE	0.20

54 ACRES TOTAL

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

This right remains subject to the right of the original appropriator, in good faith and in compliance with state laws governing changes in use and/or expansion of water rights, to cease wasting water, to change the place or manner of wasting it, or to recapture it.

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 - Beneficial Use

Use of water under this right will be regulated by a watermaster with responsibility for the distribution of water among appropriators within a water district. At this time, this water right is within State Water District No. 63, Boise River.

The following rights are also diverted through point of diversion in the SWSE S15 described above: 63-4641B, 63-7921.

Source diverted in the SWSE S15 is also known as Sand Hollow Creek Drain and Cole Slough Drain.

Right No. 63-4641B is also diverted through point of diversion in the SWSW S14 described above.

SF5 Right No. 63-4641A

CERTIFICATE OF MAILING

I certify that on _____, 2009, I mailed the original and copies of this form, including all attachments, to the following persons by mailing the original and/or 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. Copies to:

GREG OBENDORF
Represented by:
DANA L. HOFSTETTER
608 WEST FRANKLIN STREET
BOISE, ID 83702

TREE TOP RANCHES, LP
Represented by:
SCOTT L. CAMPBELL
ANDREW J. WALDERA
101 S. CAPITOL BLVD., 10th FLOOR
P.O. BOX 829
BOISE, ID 83701-0829

DIRECTOR OF IDWR
P.O. BOX 83720
BOISE, ID 83720-0098

Signature of person or attorney

RECEIVED

MAY 26 2009

DEPARTMENT OF
WATER RESOURCES

Dana L. Hofstetter, ISB #3867
HOFSTETTER LAW OFFICE, LLC
608 West Franklin Street
Boise, Idaho 83702
Telephone (208) 424-7800
Facsimile: (208) 424-8774
Email: Dana@IdahoWaterLaw.com

Attorney for Respondent Greg Obendorf

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

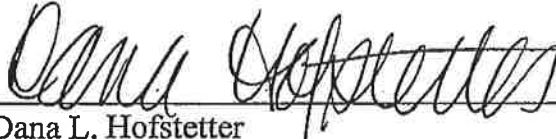
In Re SRBA	)	
	)	
	)	Subcase Nos. 63-4534B, 63-4641A, 63-4641B
	)	and 63-21530
	)	
Case 39576	)	RESPONDENT'S DISCLOSURE
	)	OF WITNESSES
_____	)	

Comes now Respondent Greg Obendorf, by and through his attorney of record, Dana L. Hofstetter of Hofstetter Law Office, LLC, and pursuant to the Court's February 11, 2009 Trial Scheduling Order hereby discloses the following witnesses who may testify at trial:

Vicki Music, Idaho Department of Water Resources ("IDWR")
Jan Shurte, IDWR
Other IDWR agents with relevant knowledge of the subject water rights
Respondent Greg Obendorf

Dated this 22nd day of May, 2009

HOFSTETTER LAW OFFICE, LLC



Dana L. Hofstetter
Attorney for Greg Obendorf

CERTIFICATE OF SERVICE

I hereby certify that I caused to be served a copy of the foregoing document this 22nd day of May 2009, by U.S. Mail postage pre-paid to:

IDWR Director
P.O. Box 83720
Boise, ID 83720-0098

Scott Campbell
Moffatt Thomas
P.O. Box 829
Boise, ID 83701


Dana L. Hofstetter

Moffatt Thomas

MOFFATT THOMAS BARRETT ROCK & FIELDS, CHTD.

Eugene C. Thomas
John W. Barrett
R. B. Rock
Richard C. Fields
John S. Simko
John C. Ward
D. James Manning
David B. Lincoln
Gary T. Dance
Larry C. Hunter
Randall A. Peterman
Mark S. Prusynski
Stephen R. Thomas
Glenna M. Christensen
Gerald T. Husch
Scott L. Campbell
Robert B. Burns

Michael E. Thomas
Patricia M. Olsson
Christine E. Nicholas
Bradley J. Williams
Lee Radford
Michael O. Roe
Nancy J. Garrett
David S. Jensen
James L. Martin
C. Clayton Gill
Michael W. McGreaham
David P. Gardner
Tara Martens
Mark C. Peterson
Julian E. Gabiola
Kimberly D. Evans Ross
Jason G. Murray

Jon A. Stenquist
Tyler J. Anderson
Paul D. McFarlane
Tyler J. Henderson
C. Edward Cather III
Michelle C. Michaud
Andrew J. Waldera
Dylan B. Lawrence
Benjamin C. Ritchie
Rebecca A. Rainey
Nathan R. Starnes
Andrew J. Snook
Robert E. Bakes, *of counsel*
Willis C. Moffatt, 1907-1980
Kirk R. Helvie, 1956-2003

RECEIVED

SEP 18 2008

WATER RESOURCES
WESTERN REGION

Boise
Idaho Falls
Pocatello
Twin Falls

US Bank Plaza Building
101 S Capitol Blvd 10th Fl
PO Box 829
Boise Idaho 83701 0829

September 16, 2008

208 345 2000
800 422 2889
208 385 5384 Fax
www.moffatt.com

Andrea Courtney
Office of the Attorney General, State of Idaho
322 E. Front Street
P.O. Box 83720
Boise, ID 83720-0098

Jan Shurte
Idaho Department of Water Resources Western
Region Office
2735 Airport Way
Boise, ID 83705

Re: Subcase Nos. 63-04641A and 63-04641B
in the Name of Tree Top Ranches / Soils Analysis
MTBR&F File No. 22567.0000

Dear Andrea and Jan:

Pursuant to the discussions at our meeting held on August 8, 2008, my client, Tree Top Ranches, L.P., hired a consultant to undertake a soils analysis of the real property to which water rights 63-4641A and 63-4641B are appurtenant. I have enclosed a copy of the soils analysis, dated September 15, 2008 and prepared by Terry Scanlan, P.E., P.G. ("Scanlan Soils Analysis"). As you will note, Mr. Scanlan concluded that the surface "soils within the Haas Ditch Company service area and the place of use for Tree Top Ranches' water right 63-4641A and 63-4641B have similar characteristics for purposes of irrigation." Scanlan Soils Analysis, page 2.

Please feel free to contact me with any questions.

Very truly yours,



Scott L. Campbell

SLC/tmh
Enclosures

cc: Larry Williams (w/encls.)
Dana L. Hofstetter (w/encls.)



September 15, 2008

Scott Campbell
Moffatt Thomas
101 S. Capitol Blvd., 10th Floor
P.O. Box 829
Boise, ID 83701-0829

Subject: Soil Analysis for Water Rights 63-4641A and 63-4641B

Dear Scott:

As authorized by email dated August 29, 2008, SPF Water Engineering has reviewed soil information related to the places of use for water rights 63-4641A and 63-4641B claimed in the SRBA by Tree Top Ranches LP. This soil information has been compared to the soils data available for the Haas Ditch Company service area. The analysis found that soil types within the Haas Ditch Company service area and at the place of use for the 63-4641A and 63-4641B water rights are similar, and will have similar irrigation characteristics. Details of the analysis are provided below.

Method

The analysis has utilized soil mapping data available from the USDA Soil Conservation Service Soil Survey of the Canyon Area, Idaho (1972).

Soil survey mapping data were superimposed over the places of use for the Tree Top Ranches water right place of use and the Haas Ditch Company water right place of use. Water right places of use were available as GIS shape files from the Idaho Department of Water Resources. Figure 1 presents soil mapping for the 63-4641 water right places of use and Figure 2 presents soil mapping for the Haas Ditch Company water right place of use.

The total acres of each soil type within the places of use were determined using ESRI ArcMap version 9.2 Geographic Information System (GIS) software. The percentages of each soil types were then tabulated and are presented in Table 1 (63-4641 soils) and Table 2 (Haas Ditch Company soils), along with physical characteristics of each soil type listed in the Soil Survey.

The weighted averages for the upper 30 inches of soil in each area are also provided for selected characteristics in Tables 1 and 2. The upper 30 inches was selected for analysis due to the high seasonal water table (generally 1 to 3 feet) and the coarse-grained nature of soils below 30 inches.

Results

The mapping found that the surface soils at both locations are similar, consisting primarily of fine sandy loams and loams in the upper 30 inches, and sand and gravel below approximately 30 inches. Approximately 57 percent of the Haas soils are classified as saline, while approximately 15 percent of the 63-4641 soils are classified as saline-alkali. All of the soils units have surface slopes of 0 to 1 percent.

Permeability in both areas is generally moderate to moderately rapid in the upper 30 inches, and rapid below 30 inches. Calculated average upper soil permeability of the Haas soils is 8.1 inches per hour, compared to 5.7 inches per hour for the 63-4641 soils. Both values are skewed by the presence of high permeability Notus soils within each area. Neglecting the Notus soils, upper soil permeability averages approximately 2 inches per hour within the Haas service area and 4 inches per hour within the 63-4641A place of use. Permeability within the 63-4641B place of use is lower, averaging 1.3 inches per hour.

Upper soil water holding capacities are also similar within the 63-4641A and 63-4641B place of use and Haas Ditch Company service area, averaging 0.14, 0.11, and 0.12 inches per inch, respectively.

Based on soil texture, the intake families for flood and furrow irrigation average 1.9 and 0.54, respectively, for the 63-4641A place of use, 1.5 and 0.50, respectively, for the 63-4641B place of use, and 2.6 and 0.65, respectively, for the Haas Ditch Company place of use. These values are in the same general range, but reflect the slightly higher average permeability and slightly lower average water holding capacity of the Haas soils in comparison to the 63-4641 soils.

In summary, the soils within the Haas Ditch Company service area and the place of use for Tree Top Ranches' water right 63-4641A and 63-4641B have similar characteristics for purposes of irrigation. As a result, average irrigation diversion requirements for both areas will be similar, with difference influenced more by field configuration and irrigation method than by average soil characteristics.

Please contact me with any questions.

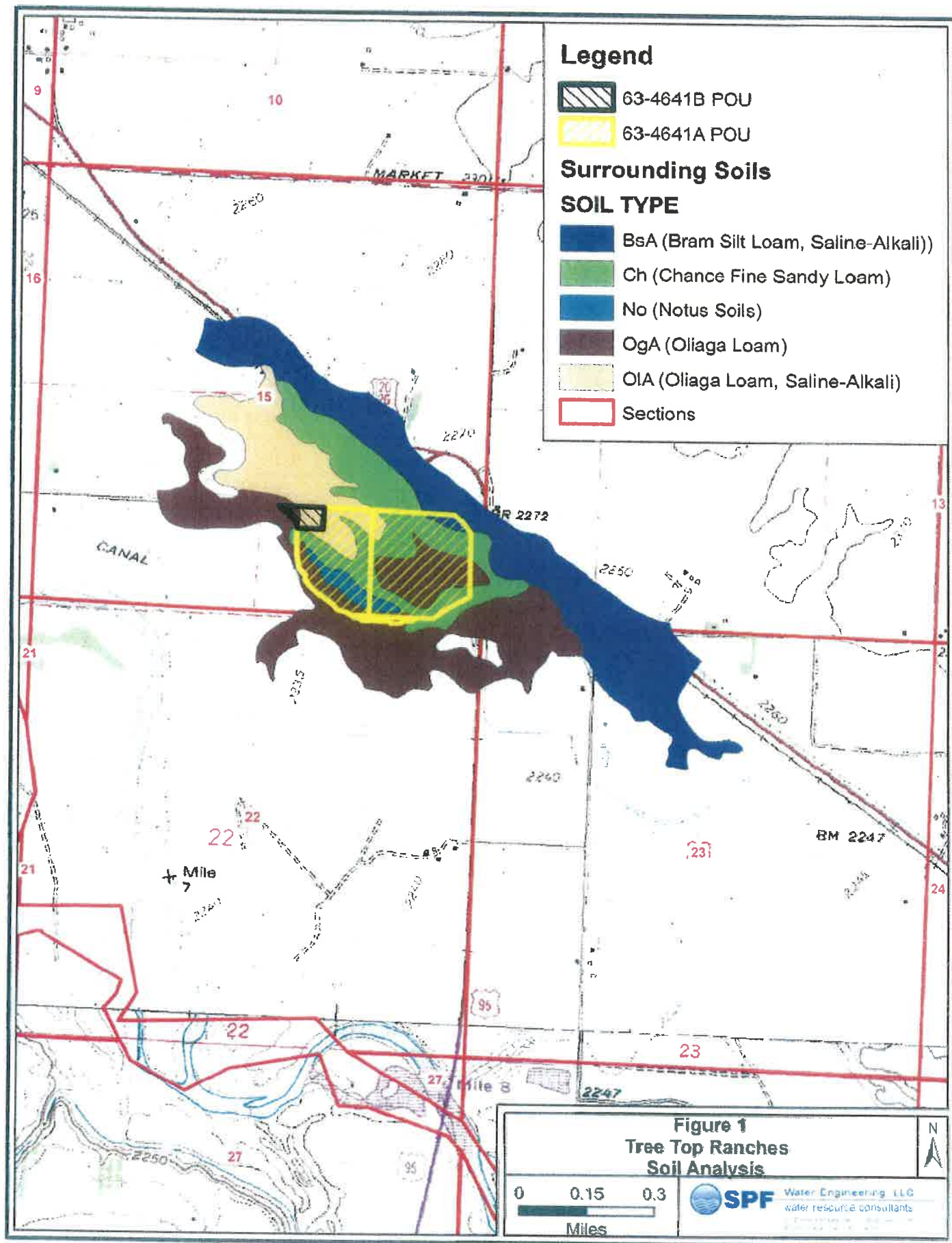
Sincerely,



Terry M. Scanlan, P.E., P.G.

Cc: Bill Mulder - Tree Top Ranches





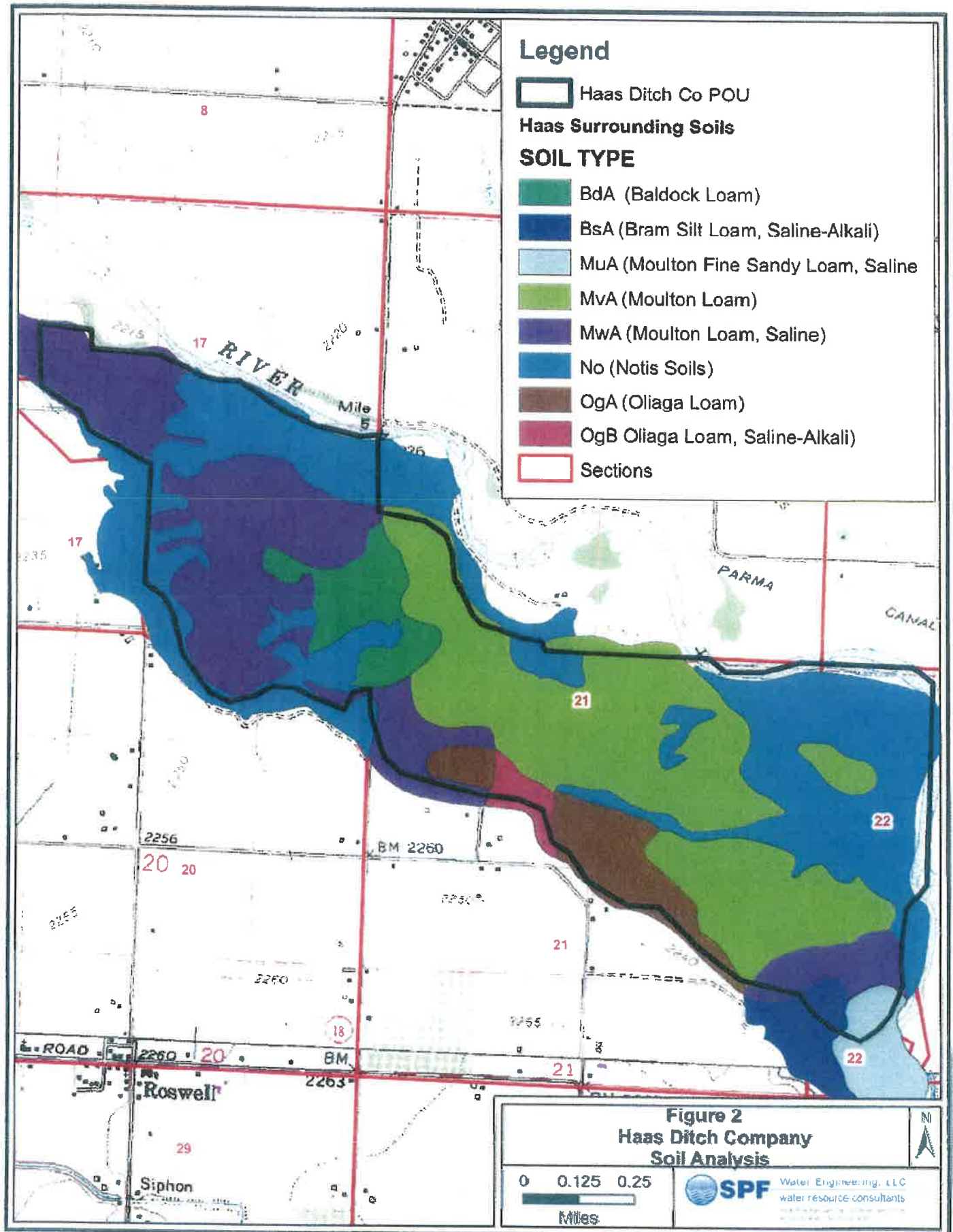


Table 1 - Soil Summary for Water Rights 63-4641A and 63-4641B

Map Symbol	Soil Type	Drainage	Amount (Acres) Within 63- 6641A POU	% 63- 4641A POU	Amount (Acres) Within 63- 4641 POU	%63- 4641B POU	Slope (%)	Seasonal High Water Table (feet)	Depth from Surface (inches)	texture	Permeability (inches per hour)	Available Water Capacity (inches per inch of soil)	Soil pH	Soil Texture Intake Family (flood)	Soil Texture Intake Family (furrow)
BsA	Bram Silt Loam, Saline-Alkali	Somewhat poorly drained	1.3	2.0%			0 to 1	3 to 6	0 to 52	silt loam, loam	0.06 - 0.20	0.10 - 0.18	7.9-9.6	1.5	0.5
Ch	Chance Fine Sandy Loam	Very poorly drained	22	41.0%			0 to 1	0 to 1	0 to 23	fine sandy loam and sandy loam	2.00 - 6.30	0.13 - 0.15	6.1-7.3	2	0.55
									23 to 60	gravel and sand	>20.0	0.03 - 0.05	6.1-7.3	4	0.85
Ne	Notus Soils	Somewhat poorly drained	4.7	9.0%			0 to 1	1 to 3	0 - 14	fine sandy loam to gravelly loamy sand	2.00 - 20.00	0.08 - 0.14	6.6-7.8	2.5	0.63
									14 - 60	sand and gravel	>20.00	0.03 - 0.05	6.6-7.3	4	0.85
OgA	Oliaga Loam	Somewhat poorly drained	19	35.0%	0.6	26%	0 to 1	2 to 3	0 - 35	loam and fine sandy loam	0.63 - 2.00	0.16 - 0.18	7.4-8.4	1.5	0.5
									35 - 60	sand and gravel	>20.00	0.03 - 0.05		4	0.85
QIA	Oliaga Loam, Saline Alkali	Somewhat poorly drained	7	13.0%	1.7	74%	0 to 1	1 to 3	0 - 35	loam and fine sandy loam	0.63 - 2.00	0.10 - 0.12	7.9-9.4	1.5	0.5
									35 - 60	sand and gravel	>20.00	0.03 - 0.05		4	0.85
Total			54	100%	2.3	100%									
Weighted Average for upper 30 inches - 63-4641A											5.7	0.14		1.9	0.54
Weighted Average for upper 30 inches - 63-4641B											1.3	0.11		1.5	0.50

Table 2 - Soil Summary for Haas Ditch Company Service Area

Map Symbol	Soil Type	Drainage	Amount (Acres) Within Haas POU	% Haas POU	Slope (%)	Seasonal High Water Table (feet)	Depth from Surface (inches)	texture	Permeability (inches per hour)	Available Water Capacity (inches per inch of soil)	Soil pH	Intake Family (flood)	Intake Family (furrow)
BdA	Baldock Loam	Somewhat poorly drained	38.5	5.0%	0 to 1	3 to 4	0 to 56	loam	0.63 - 2.00	0.16 - 0.18	7.4-9.0	1.5	0.5
							56 to 65	fine sandy loam	2.00 - 6.30	0.13 - 0.15	7.9-8.4	2	0.55
BsA	Bram Silt Loam, Saline-Alkali	Somewhat poorly drained	5.5	1.0%	0 to 1	3 to 6	0 to 52	silt loam, loam	0.06 - 0.20	0.10 - 0.18	7.9-9.6	1.5	0.5
MuA	Moulton Fine Sandy Loam, Saline	Poorly drained	6.7	1.0%	0 to 1	2 to 3	0 to 30	fine sandy loam, loam and loamy sand	0.63 - 6.30	0.13 - 0.15	6.6-7.6	2.5	0.63
							30	gravel and coarse sand	>20.0	0.03 - 0.05		4	0.85
MvA	Moulton Loam, Saline	Poorly drained	221.5	31.0%	0 to 1	2 to 3	0 to 30	fine sandy loam, loam and loamy sand	0.63 - 6.30	0.13 - 0.15	6.6-7.6	2.5	0.63
							30	gravel and coarse sand	>20.0	0.03 - 0.05		4	0.85
MwA	Moulton Loam, Saline	Poorly drained	180.2	25.0%	0 to 1	2 to 3	0 to 30	fine sandy loam, loam and loamy sand	0.63 - 6.30	0.13 - 0.15	6.6-7.6	2.5	0.63
							30	gravel and coarse sand	>20.0	0.03 - 0.05		4	0.85
No	Notus Soils	Somewhat poorly drained	219.1	30.0%	0 to 1	1 to 3	0 to 14	fine sandy loam to gravelly loamy sand	2.00 - 20.00	0.06 - 0.14	6.6-7.6	2.5	0.63
							14 - 60	sand and gravel	>20.00	0.03 - 0.05	6.6-7.3	4	0.85
OgA	Oliaga Loam	Somewhat poorly drained	41.1	6.0%	0 to 1	2 to 3	0 - 35	loam and fine sandy loam	0.63 - 2.00	0.16 - 0.18	7.4-8.4	1.5	0.5
							35 - 60	sand and gravel	>20.00	0.03 - 0.05		4	0.85
OxA	Oliaga Loam, Saline Alkali	Somewhat poorly drained	7	1.0%	0 to 1	1 to 3	0 - 35	loam and fine sandy loam	0.63 - 2.00	0.10 - 0.12	7.9-9.4	1.5	0.5
							35 - 60	sand and gravel	>20.00	0.03 - 0.05		4	0.85

713.6*

100%

*Limited to 561 acres irrigation within the Haas Ditch Co. service area

Weighted Average for upper 30 inches

8.1

0.12

2.6

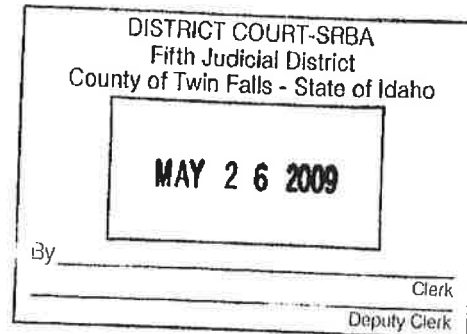
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MAY 27 2009

MOFFATT, THOMAS, BARRETT,
ROCK & FIELDS, CHTD

Scott L. Campbell, ISB No. 2251
Andrew J. Waldera, ISB No. 6608
Matthew J. McGee, ISB No. 7979
MOFFATT, THOMAS, BARRETT, ROCK &
FIELDS, CHARTERED
101 S. Capitol Boulevard, 10th Floor
Post Office Box 829
Boise, Idaho 83701-0829
Telephone: (208) 345-2000
Facsimile: (208) 385-5384
22567.0000



Attorneys for Tree Top Ranches, L.P.

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. 63-04534B 63-04641A
63-04641B 63-21530

**TREE TOP RANCHES, L.P.'S WITNESS
DISCLOSURE**

COMES NOW Tree Top Ranches, L.P. ("Tree Top"), by and through
undersigned counsel of record and pursuant to Idaho Rule of Civil Procedure 16(e)(6)(J) and
the Court's Trial Scheduling Order ("Order"), filed February 11, 2009, and hereby makes the
following witness disclosures.

A. PRELIMINARY NOTE

Tree Top makes these witness disclosures in each of the above captioned subcases
which are presently set for the same July 9-10, 2009 trial setting. While it is not likely that all of

the following witness will be called to testify in each of the above-references subcases, some combination of the following witnesses will be called to testify in each of the above-referenced subcases.

B. EXPERT WITNESSES

Scott King; SPF Water Engineering, LLC; 300 East Mallard Drive, Suite 350, Boise, Idaho 83706. Mr. King is a professional engineer expected to testify regarding Tree Top's Parma Ranch field irrigation requirements and place of use matters. A copy of Mr. King's Curriculum Vitae is attached hereto. Also attached hereto are: (1) Memorandum from Marci S. Pape to Dave Tuthill, regarding the Diversion Rate Analysis for the Haas Ditch Company water right nos. 63-00172B and 63-00202B, and the Diversion Rate Analysis itself, prepared by Marci S. Pape, dated January 29, 2006; (2) Soil Analysis for Water Right Nos. 63-04641A and 63-04641B prepared by Terry Scanlan, dated September 15, 2008; and (3) the Irrigation Requirement Analysis prepared by Marci S. Pape regarding water right nos. 63-04641A and 63-04641B, dated May 20, 2009.

Terry Scanlan; SPF Water Engineering, LLC; 300 East Mallard Drive, Suite 350, Boise, Idaho 83706. Mr. Scanlan is a professional engineer and hydrogeologist expected to testify regarding Tree Top's Parma Ranch field irrigation requirements and place of use matters. A copy of Mr. Scanlan's Curriculum Vitae is attached hereto. Like Mr. King, Mr. Scanlan's testimony will refer to the documents attached hereto.

Marci S. Pape; SPF Water Engineering, LLC; 300 East Mallard Drive, Suite 350, Boise, Idaho 83706. Ms. Pape is a professional engineer expected to testify regarding Tree Top's Parma Ranch field irrigation requirements and place of use matters. A copy of Ms. Pape's

Curriculum Vitae is attached hereto. Like Mr. King and Mr. Scanlan, Ms. Pape's testimony will refer to the documents attached hereto.

C. IDWR WITNESSES

Vicki L. Music; Idaho Department of Water Resources ("IDWR") Western Region Office; 2735 Airport Way, Boise, Idaho 83705. Ms. Music is an IDWR Senior Water Resource Agent familiar with the water rights at issue, and the corresponding Director's Reports issued therefor.

Dan Nelson; IDWR State Office, 322 East Front Street, P.O. Box 83720, Boise, Idaho 83720. Mr. Nelson is an IDWR Water Resource Agent familiar with the location of Sand Hollow Creek and whether the creek is tributary to either the Snake or the Boise River.

Andrea Courtney; IDWR State Office, 322 East Front Street, P.O. Box 83720, Boise, Idaho 83720. Ms. Courtney is a Deputy Attorney General assigned to the IDWR. Ms. Courtney is familiar with the water rights at issue as she is the deputy attorney general assigned to these subcases.

Lori Graves; SPF Water Engineering, LLC; 300 East Mallard Drive, Suite 350, Boise, Idaho 83706. Though Ms. Graves is currently employed by SPF, Ms. Graves was previously an IDWR Water Resource Agent formerly assigned to processing the claims, investigations, and recommendations of the water rights at issue.

Sandy Hemenway; IDWR Western Region Office; 2735 Airport Way, Boise, Idaho 83705. Upon information and belief, Ms. Hemenway is currently employed by IDWR as a beneficial use claim Field Examiner. Ms. Hemenway is familiar with the water rights at issue as she performed the Tree Top Parma Ranch beneficial use field examination on March 18 and 29, 2006.

D. LAY WITNESSES

Larry Williams; c/o Moffatt Thomas Barrett Rock & Fields, Chtd., P.O. Box 829, Boise, Idaho 83701. Mr. Williams is a partner in Tree Top Ranches, L.P. Mr. Williams has knowledge of, and is qualified to testify regarding the water rights at issue, their place of use, as well as regarding Tree Top's Parma Ranch operations.

Bill Mulder; c/o Moffatt Thomas Barrett Rock & Fields, Chtd., P.O. Box 829, Boise, Idaho 83701. Mr. Mulder is the Property Manager for Tree Top. Mr. Mulder has knowledge of, and is qualified to testify regarding the water rights at issue, their place of use, as well as regarding Tree Top's Parma Ranch operations.

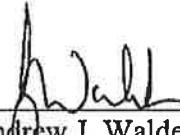
Kelly Yore; c/o Moffatt Thomas Barrett Rock & Fields, Chtd., P.O. Box 829, Boise, Idaho 83701. Mr. Yore is a former Ranch Manager of Tree Top Parma Ranch (from 2004 - 2007). Mr. Yore has knowledge of, and is qualified to testify regarding the water rights at issue, their place of use, as well as regarding Tree Top's Parma Ranch operations.

Bill Seward; c/o Moffatt Thomas Barrett Rock & Fields, Chtd., P.O. Box 829, Boise, Idaho 83701. Mr. Seward is the current Ranch Manager of Tree Top Parma Ranch (from 2007 – present). Mr. Seward has knowledge of, and is qualified to testify regarding the water rights at issue, their place of use, as well as regarding Tree Top's Parma Ranch operations.

In addition to the above named witnesses, Tree Top reserves the right to call any witnesses disclosed by the Respondent, Greg Obendorf. Further, Tree Top reserves the right to supplement this disclosure for rebuttal/impeachment witness purposes pursuant to the Court's February 11, 2009 Order.

DATED this 22nd day of May, 2009,

MOFFATT, THOMAS, BARRETT, ROCK &
FIELDS, CHARTERED

By 
Andrew J. Waldera – Of the Firm
Attorneys for Tree Top Ranches, L.P.

CERTIFICATE OF SERVICE

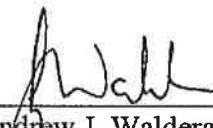
I HEREBY CERTIFY that on this 22nd day of May, 2009, I
caused a true and correct copy of the foregoing **TREE TOP RANCHES, L.P.'S WITNESS
DISCLOSURE** to be served by the method indicated below, and addressed to the following:

Dana L. Hofstetter
608 W. Franklin
Boise, ID 83702
Fax: 424-8774

☒ U.S. Mail, Postage Prepaid
☐ Hand Delivered
☐ Overnight Mail
☐ Facsimile

Director
IDAHO DEPARTMENT OF WATER RESOURCES
322 East Front Street, 6th Floor
P.O. Box 83720
Boise, ID 83720-0098

☒ U.S. Mail, Postage Prepaid
☐ Hand Delivered
☐ Overnight Mail
☐ Facsimile


Andrew J. Waldera

Education

M.S., Civil Engineering
University of Idaho

B.S., General Engineering
Idaho State University

Professional Certification

Professional Engineer
Idaho No. 7914, 1995

Certified Water Right Examiner
Idaho No. 10-133

Areas of Expertise

- Water rights
 - investigations and analysis
 - permits and transfers
 - marketing and acquisitions
- Water resource investigations
- Water well design
- Surface water modeling
- Gravity irrigation systems
- Stream flow measurement
- Pumping efficiency evaluations

Experience Summary

Mr. King has over 18 years of professional and academic experience in water resources engineering. He is currently a Supervising Engineer with SPF Water Engineering, LLC and specializes in water right issues, water flow measurement, open-channel flow, pumping system design, water well design, and geographic information systems (GIS). Prior work includes 14 years experience in a broad variety of Idaho Department of Water Resources' (IDWR) programs including water rights adjudication, water rights administration, safety of dams, and energy efficiency. He also has recent experience developing surface water models and providing consulting engineering services while employed at DHI, Inc, formerly known as the Danish Hydraulic Institute.

SPF Water Engineering, LLC – 2005 to present

Mr. King is currently a Supervising Engineer with SPF Water Engineering, LLC. SPF was founded in March 2004 to provide hydrologic characterization, water resource development, and public water system design and regulatory compliance. Mr. King provides consulting services on water rights issues, pump design, irrigation system evaluation, surface water hydrology, surface water modeling, and river hydraulics. His recent project experience includes the following:

- Extensive water right experience including
 - permit and transfer applications
 - investigations and analysis
 - acquisitions and sales
 - beneficial use field examinations
 - adjudication claim preparation and support
- Gravity irrigation system design and analysis
- Stream flow measurement and monitoring
- Conveyance capacity determinations for streams, culverts, and other open-channel systems
- Water well design including designs to municipal public drinking water supply standards
- Well capacity determination
- Pumping system design

DHI, INC – 2004 to 2005

Mr. King worked as a senior project engineer responsible for development of various surface water models. Project experience includes the following:

Modeling – MIKE 11. Developed hydrodynamic 1-D MIKE 11 model of the Little Claggett Creek storm water drainage system, a part of Marion County's East Salem Service District, Oregon. Produced flood maps for SCS Type 1A design storms and for the February 1996 flood event. This model includes 8.5 km of streams in two branches, over 100 cross-sections extracted from a 2 ft vertical resolution DEM, and 23 culverts with corresponding broad-crested weirs representing roadways over culvert crossings. Inflow boundary conditions are represented by 21 catchments contributing point-source and distributed inflows simulated in MIKE 11's rainfall / runoff module.

Modeling – MIKE BASIN. Project lead on MIKE BASIN surface water distribution models developed for the Idaho Department of Water Resources. These models are used by IDWR for three primary purposes: flow enhancement tools to address flow-limited stream reaches; decision making tools to assist in selecting effective mitigation and restoration projects; and communication tools for educating decision makers and stimulating discussion among stakeholders. Developed systems include the Pahsimeroi River and East Fork Salmon River, and experiences with Lemhi River and Stanley Basin models. These models operate on a daily time step and represent the water distribution system within the basins including the stream networks, points of diversion, places of use, and locations of return flow. Time series information includes records of stream gaging, diversion measurements, precipitation, and evapotranspiration. Provided training to IDWR staff, contractors, and watermasters on the operation of MIKE BASIN through a series of hands-on sessions. Presented proposals to local waterusers and stakeholders for new model applications in Morgan Creek and Carmen Creek.

Modeling – Rainfall / Runoff. Developed lumped conceptual rain/snow/runoff models of the Stanley and East Fork Salmon River Basins for the Idaho Department of Water Resources using DHI's lumped conceptual rainfall/runoff module. The developed models are used to supply tributary inflow boundary conditions to the East Fork Salmon River and Stanley Basin MIKE BASIN models.

Developed rainfall/runoff models of 21 catchments supplying inflow boundary conditions for the Little Claggett Creek MIKE 11 model described above. Rainfall/runoff is simulated using DHI's URBAN module. Four storm events are modeled including the February 1996 observed event and SCS Type-1A 2-, 10-, and 50-year design storms.

Idaho Department of Water Resources – 1990 to 2004

During 14 years with the Idaho Department of Water Resources, Mr. King held four engineering positions and gained experience in a wide range of IDWR activities. These positions included Technical Engineer in the Adjudication Bureau, and Staff Engineer positions in the Water

Distribution Section, in Western Region's Safety of Dams unit, and in the Energy Division. Relevant experience includes the following:

Program Management

Managed Western Region's Safety of Dams program. Inspected dams and made recommendations for maintenance and operation to improve safety and meet state standards. Issued storage certificates and authorizations to fill.

Lead technical consultant in statewide water measurement program. Defined water measurement standards and implemented a program for measuring and reporting ground-water withdrawals. Coordinated field work performed by department staff and various measuring districts. Inspected contractor projects for adequacy and compliance with department standards. Designed and managed water measurement databases.

Water Rights

Reviewed complex water right claims and prepared water right recommendations for the Director's Report to the Snake River Basin Adjudication court. Provided technical analysis and recommendations for nonstandard water right claims, such as claims for diversion rates exceeding the standard allocation, and for claims to the use of water outside of the standard seasons of use.

Provided training and direction to new employees, water districts, water measurement districts, groundwater districts, and private consultants on water rights, water measurement programs, and adjudication procedures.

Worked with water users and their legal representatives on various water right enforcement issues, including excessive and illegal water diversions.

Experienced with all aspects of IDWR regional office operations including water rights, transfers, well drilling, adjudication, water district operation, violations, enforcement, and customer complaints.

Irrigation and Pumping Systems

Performed pumping system evaluations including determinations of municipal, industrial, and agricultural pumping plant efficiencies and recommended measures for improved efficiency and reduced operating costs. Provided recommendations and designs for conversions to low-pressure irrigation systems for reduced operating costs and improved yields.

Technical Expert to Snake River Basin Adjudication (SRBA) Court

Provided technical engineering support to department staff in the ongoing SRBA.

Designated as department expert to the SRBA court regarding irrigation requirements, evapotranspiration, and crop water requirements. and how this information is utilized for preparing recommendations.

Public Relations

Presentations at public meetings to explain laws and regulations relating to water measurement and water appropriation.

Provided conflict resolution support for several water related disputes.

Trained IDWR employees, state Watermasters and Hydrographers, contractors, and consultants on water measurement standards, equipment, practices, and procedures through regular training sessions and individual assistance.

Guest lecturer in 1996 and 1998 for College of Southern Idaho's Water Measurement course, and in 1998 for Boise State University's Water Measurement lab.

Presented *Selection and Installation of Pipe Flow Water Measurement Devices* at the 1997 Idaho Irrigation Equipment Show and Exhibition, Shilo Inn, Idaho Falls, January 8-9.

Technical

Developed and proposed to department administration and to the general public technically sound methods of using power records for estimation of pumped water diversions.

Determined acceptability and provided professional opinions for numerous non-standard water measurement methods and devices proposed to IDWR by engineering consultants and water users.

Determined conveyance capacity of pumps, diversions, pipelines, open channels, turbines, etc.

Led IDWR efforts to utilize global positioning systems (GPS). Developed standards for use, trained staff and consultants, and integrated GPS data collection into GIS work.

Report Development

Authored various reports including annual reports of ground water diversions, reports to individual water users, flowmeter accuracy reports, and various other reports relating to water measurement.

Co-author of *Eastern Snake Plain Aquifer Water Measurement Program, A Summary of Measurement Activity & Results from Basin 36 Project Area, 1995-1996 and a Review of Program Expansion in 1997*, IDWR, May 1998.

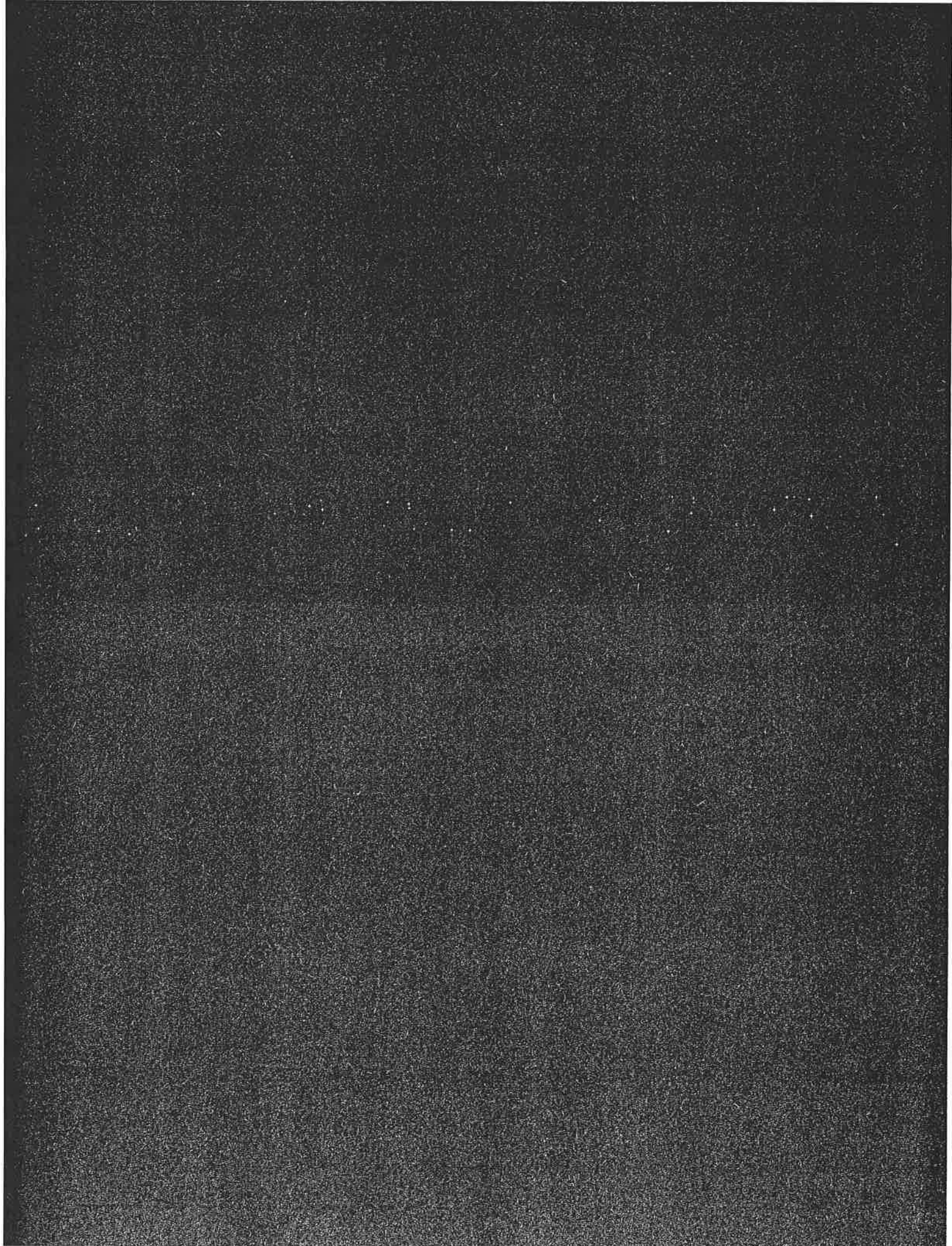
University of Idaho – 1999 to 2002

Masters of Science in Civil Engineering Thesis: The Effective Discharge Concept in Gravel Bed Stream Restoration: The Twelve Mile Reach of the Salmon River at Challis, Idaho.

Determined channel effective discharge based on sediment transport

measurements and flow records. Compared effective discharge to bankfull discharge and stated implications of findings in regards to channel restoration. Completed hydraulic, hydrologic, and geomorphologic characteristics of the study reach. Presented findings and recommendations to technical groups and local property owners.

Developed hydrodynamic pseudo 2-D MIKE 11 model of the Twelve Mile Reach, Salmon River, near Challis, ID. Produced animated flood maps of primary flooding events from 1974 (100-yr), 1996, and 1997. This model includes 27-km of mainstem river including braided sections and split flows. Over-bank discharge into Hannah Slough and across One-Mile Island is represented by link-channels. The model includes 68 surveyed cross-sections and utilizes a 2-ft interval contour map for flood mapping.



Education

M.S., Geological Engineering
University of Idaho

B.S., Geological Engineering
University of Idaho

Professional Certification

Professional Engineer
Idaho No. 6266, 1990

Professional Geologist
Idaho No. 646, 1989

Oregon No. G1311, 1992

Certified Water Right Examiner
Idaho No. 05-129

Areas of Expertise

- Design, installation, and testing of high-capacity wells for irrigation, municipal, and industrial water supply
- Groundwater development studies
- Water rights

Experience Summary

Mr. Scanlan has more than 23 years of professional experience in water supply consulting as an engineer and hydrogeologist. He has particular expertise in water rights, well and pump design, public water systems, pressurized irrigation, and other water resource issues.

Mr. Scanlan's work experience has focused on well design and construction, surface water and ground water pump systems, aquifer and well testing, water development studies, and water rights. He also has experience in geothermal resource development, mining-related environmental studies, ground water drainage investigations, soils investigations, geologic mapping, and wastewater land application projects. He has served as Chairman of the Idaho Board of Registration for Professional Geologists. Mr. Scanlan is a Certified Water Right Examiner in Idaho.

SPF Water Engineering, LLC—2004 to present

Mr. Scanlan is currently a Principal Engineer with SPF Water Engineering, LLC. SPF Water Engineering, LLC, was formed from Scanlan Engineering in March 2004 to provide a wider range of water resource engineering services. Since joining SPF, Mr. Scanlan has continued his practice of water resource consulting and engineering, with additional emphasis on development of community water systems for subdivisions and planned communities in southwest Idaho.

Scanlan Engineering—1994 to 2004

Mr. Scanlan formed Scanlan Engineering in 1994 to provide engineering and hydrogeologic consulting to public and private clients. Scanlan Engineering provided water resource consulting services to more than 200 separate clients, primarily in southwest Idaho. Local clients included the City of Boise (Public Works Department, Parks Department), Micron Technology, J.R. Simplot Company, Capitol Water Corporation, United Water Idaho, Inc., Meridian School District, City of Eagle, Sorrento Lactalis, City of Nampa, Boise State University, Ada County Highway District, and the Idaho Water Resources Research Institute. Mr. Scanlan has served as a subconsultant on water supply projects for numerous engineering firms in Idaho, most recently including Montgomery Watson Harza, Toothman-Orton Engineering Company, Entranco, Secesh Engineering, Materials Testing, Inc., and Civil Survey Consultants.

Montgomery Watson—1986 to 1993

Prior to forming Scanlan Engineering in 1994, Mr. Scanlan worked as a supervising hydrogeologist for Montgomery Watson in Boise, Idaho. He

managed and conducted investigations related to ground water development and ground water contamination at locations throughout the western United States.

U.S. Geological Survey—1984 to 1986

Mr. Scanlan was employed by the U.S. Geological Survey as a field assistant in the geologic division prior to joining Montgomery Watson in 1986. Responsibilities included geologic mapping, landslide hazard evaluation, and mineral potential studies. Mr. Scanlan worked on the Challis and Hailey 2° Quadrangle CUSMAP programs.

Relevant Water Supply Project Experience

- Ground water development projects at more than 100 sites in Idaho for public and private water utilities, subdivisions, schools, and industries, including production well and pump design, aquifer pumping tests, exploration drilling programs, and ground water development studies.
- Design, construction monitoring, and testing of four 1,000- to 1,200-foot, high-capacity, industrial water supply wells and pump systems for Micron Technology in Boise, Idaho.
- Lead consultant to Micron Technology for the Boise River water supply and aquifer recharge project. Mr. Scanlan provided consulting services involving water rights, a nominal 25,000-gpm pump station, 3 miles of 24-inch and 30-inch pipeline, an ultra-filtration membrane water treatment system, and a nominal 4-MGD injection well for recharge purposes.
- Irrigation well and pump system design, surface water pump system design, construction monitoring, and well testing at municipal parks in Boise, Idaho. These projects included work on approximately 80 well and pump systems, including design and construction of more than 25 well or surface water pumping systems.
- Design, permitting, and construction inspection of well pump systems and well houses for Capitol Water Corporation in Boise, Idaho. Mr. Scanlan also provided consulting services related to ASR and water rights.
- Design, construction, and testing of salt water production wells for large-scale aquarium projects in Guam and Taiwan.
- Evaluation of ground water potential for snowmaking supplies at Sun Valley and Bogus Basin ski areas and design and testing of the water supply well for the snowmaking system at Sun Valley.
- Evaluation and testing of infiltration galleries and Ranney Collectors at Sequim, Washington (horizontal gallery, Dungeness River), Irrigon, Oregon (four Ranney Collectors, Columbia River), and Boise, Idaho (three Ranney Collectors, Boise River).
- Ground water development studies, well construction, and aquifer testing for fish hatchery projects in the Columbia, Umatilla,

Walla Walla, Imnaha, and Grand Ronde river basins of Oregon for the Bonneville Power Administration. These projects included test well drilling and aquifer tests at ten locations, with well construction in alluvial and basalt aquifers.

- Production well design and testing at the Upper Pahsimeroi Fish Hatchery for Idaho Power Company.
- Design of the domestic supply, mine-pit dewatering, and industrial supply wells for the Beartrack mining project at Leesburg, Idaho.
- Resident geologist during drilling and completion of a 3,015-foot water supply well at Wright, Wyoming.
- Water master plan for the 3600-acre City of Boise Twenty Mile South Farm. The master plan included reconfiguration of water rights, development of additional irrigated lands, design of two large-capacity irrigation wells, and design of a 500-hp variable speed deep well turbine pump system.

Relevant Water Rights Experience

- Preparation of hundreds of water right applications (transfers, amendments, permits, claims) for public and private clients in Idaho. Since 2004, Mr. Scanlan and SPF staff have been involved in more than 150 projects involving water rights for more than 100 different clients.
- Evaluation of surface water and ground water interactions, well interference, irrigation development, and consumptive water use related to water right transfers in the Boise Valley, Wood River Valley, Mud Lake, Magic Valley, Big Lost River, and Little Lost River areas of Idaho.
- Evaluation and measurement of flow from springs involved in water right disputes along the Snake River near Twin Falls and Hagerman, Idaho.
- Investigations related to Snake River Basin Adjudication claims, including calculation of irrigation requirements and seepage losses, measurement of irrigation diversion rates, and determination of historically irrigated areas.
- Expert witness testimony regarding water use, well interference, and the interaction of surface water and ground water for numerous clients in southern and central Idaho.
- Evaluation of irrigation diversions, natural flow, return flow, and storage accounting on the Payette River system for the Payette Water Users Association.
- Evaluation of Federal and Tribal in-stream flow and spring claims in the Snake and Salmon River Basins.
- Preparation of mitigation plans to allow ground water diversions for irrigation and industrial use in moratorium areas or ground water management areas in the Boise and Snake River Basins.

Relevant Geothermal Resource Development Experience

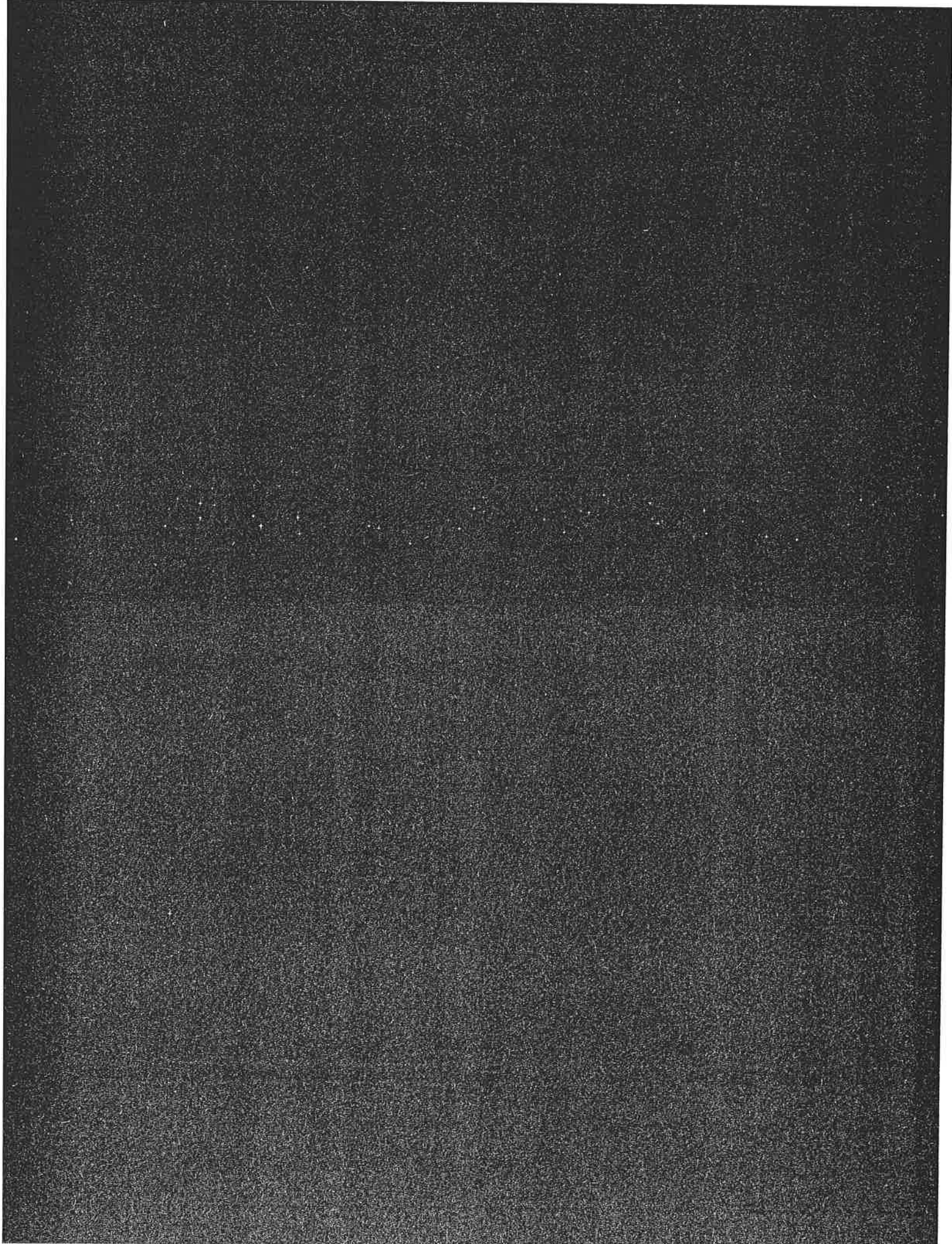
- Construction monitoring for drilling and hydraulic fracturing of a 2,300-foot geothermal injection well for the Veterans Administration Medical Center in Boise, Idaho.
- Project manager for detailed study of the Boise Front Geothermal Aquifer for the city of Boise and Boise Warm Springs Water District. The study included computer modeling of hydraulic and thermal impacts of increased geothermal fluid production and spent fluid injection. Mr. Scanlan served as project manager for design, construction, and testing of a 3,200-foot geothermal injection well for the city.
- Aquifer testing and high-capacity variable-speed pump system design for deep geothermal space-heating wells at the College of Southern Idaho.
- Geothermal aquifer investigations, well testing, production well and pump design, and water level monitoring for J.R. Simplot Company at aquaculture facilities in Caldwell and Grand View, Idaho.

Professional Affiliations

Idaho Association of Professional Geologists

National Ground Water Association

Idaho Ground Water Association



Education

B.S., Civil Engineering

University of Idaho

A.S., General Engineering

College of Southern Idaho

Professional Certification

Professional Engineer

Idaho No. 7933

Areas of Expertise

- Water rights investigations and analysis
- Water right permit and transfer applications
- Irrigation system evaluation and determination of field irrigation water requirements

Experience Summary

Ms. Pape has over 14 years of professional experience in water resources engineering. She is currently a Project Engineer with SPF Water Engineering, LLC and specializes in water rights, irrigation system efficiency analysis, and geographic information systems (GIS). Prior work includes 12 years experience with the Idaho Department of Water Resources (IDWR) where she was integrally involved with developing the department's GIS capabilities for analysis of water rights in the Snake River Basin Adjudication (SRBA) and analyzing irrigation systems to determine reasonable Field Irrigation Requirements, particularly for claims to irrigation water rights exceeding state standards for diversion rates and volumes.

SPF Water Engineering, LLC to 2007 to present

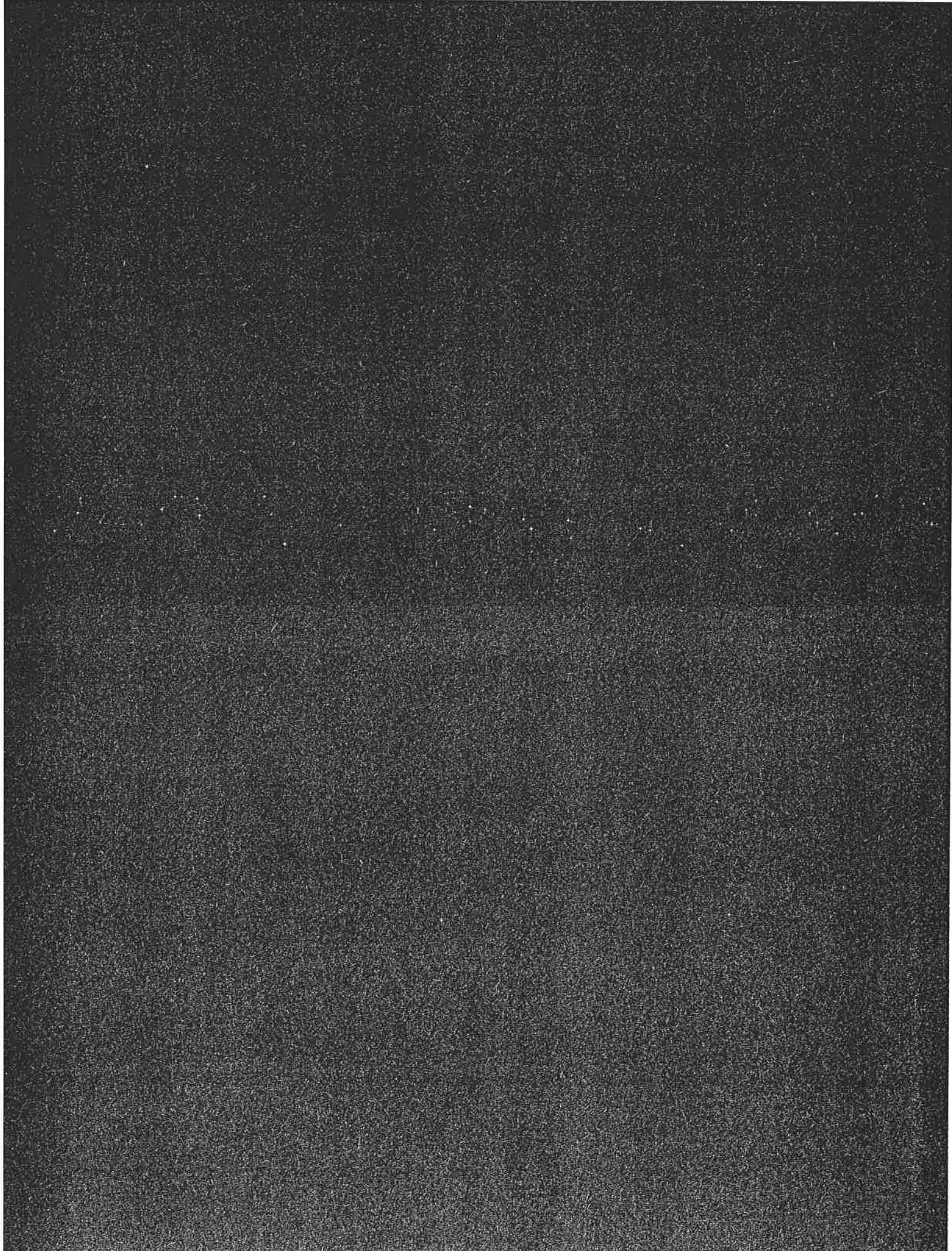
Ms. Pape is responsible for preparing water right permit and transfer applications, researching and analyzing existing water rights, and performing irrigation system analyses.

Self-Employed – September 2005 to October 2006

Performed irrigation system analyses including determinations of field irrigation requirements and conveyance losses through a contract with Idaho Department of Water Resources.

Idaho Department of Water Resources – October 1990 to Sept 2002

During 12 years with the Idaho Department of Water Resources, Ms. Pape provided engineering and technical assistance for the adjudication of water rights in the Snake River Basin. Responsibilities included evaluating irrigation systems, utilizing GIS technology for water right mapping, and providing engineering assistance to legal staff along with written court testimony.



Memorandum

To: Dave Tuthill *DT*
From: Marci Pape
Date: 1/29/06
Re: Diversion Rate Analysis for Haas Ditch Co. Right Nos. A63-00172B & A63-00202B

I have completed the diversion rate analysis for the Haas Ditch Co. water right listed above and have attached the results. I was not able to analyze all the fields, since the claimant did not supply information for some of the fields. The majority of the fields were analyzed, however, and all of those fields require diversion rates in excess of 1 in/ac, according to my findings.

CALCULATIONS

Raymond Abbott supplied some of the information necessary for the analysis. He included furrow direction and a five-year crop history for 24 of the 30 fields. The remaining fields were not fully addressed. Mr. Abbott did not describe the irrigation method(s) for the property, so I assumed the fields were irrigated using corrugations and furrows. I based the row spacings on those given in Figure A-6 of the Evaluation Workbook for Irrigation Diversion Rates, prepared in 1991 by Hubble Engineering and Associated Earth Sciences, Inc. I used a spacing of 2 ft. for sugar beets, rounding up from the suggested 22 in. to the nearest 0.5 foot.

Danielle Favreau provided the shapefile used by IDWR for the recommended Place of Use and I used those field boundaries in ArcView to determine average furrow lengths. Some of the fields were split for the purposes of the investigation, either because the furrow lengths were too variable or because the analysis required it for the full irrigation of an individual field.

Field slopes were determined using 1:24000 digital topographical maps in ArcView wherever possible. The area is nearly flat, according to both the topographic maps and Mr. Abbott. I assumed a slope of 0.2 percent for those fields where a slope was impossible to measure due to a lack of topographic lines.

The soil types were determined using the soils information from the USDA, NRCS for the Canyon Area, Idaho. The dominant soils on the property are Baldock loam, Moulton loam, saline Moulton loam, Notus, and Oliaga loam. There are other soil types on the property, but none of them cover more than 10 percent of the area of any field, so they were not used in the analysis.

The weather station nearest to this site is the Parma Experimental Station. The 80th percentile monthly ET values from that weather station were used for my analysis. There were no ET values available for one of the crops grown on the property, radish seed, so I assumed an ET value equivalent to that for alfalfa hay to allow for a generous estimate of ET.

January 29, 2006

RESULTS

The total on-farm irrigation requirement for the analyzed fields was determined to be 23.44 cfs for 385.7 acres, or 0.061 cfs per acre. This determination was made using the crop with the highest irrigation requirement for each field. The results for each field are contained in the table below. These are strictly the on-farm diversion requirements, with no allowances made for conveyance loss.

Field No.	On-Farm Irrigation Reqt. (cfs/ac)	Field Size (ac.)	Total On-Farm Irrigation Reqt. (cfs)
A	0.031	9.5	0.30
B	0.034	12.5	0.43
C	0.038	3.0	0.12
D	0.029	5.9	0.17
E	0.051	13.6	0.69
F	0.045	10.2	0.46
G1	0.102	16.2	1.65
G2	0.043	22.0	2.44
H	0.085	1.2	0.10
I	0.049	7.4	0.37
J	0.080	15.9	1.27
K1	0.102	24.8	2.53
K2	0.050	10.5	0.53
L	0.085	2.1	0.18
M	0.054	11.1	0.60
N	0.111	1.1	0.12
O	0.031	14.3	0.45
P	0.052	37.1	1.92
Q	0.045	23.3	1.04
R	0.053	26.9	1.43
S	0.046	23.8	1.10
W	0.043	57.9	2.46
X	0.058	11.7	0.68
Y	0.101	23.7	2.40
TOTAL		385.7	23.44

cfs

Avg. On-Farm Irrigation Requirement (cfs/ac):

0.061

cfs/ac

The remaining fields include a total of 175.9 acres. If those fields were assumed to require only 0.02 cfs/ac, it would add an additional 3.52 cfs to the total. This would bring the Total On-Farm Irrigation Requirement to 26.96cfs. This exceeds the claimed diversion rate of 8.54 cfs (A63-00172B) + 8.80 cfs (A63-00202B) = 17.34 cfs. Therefore, I have concluded that the claimed diversion rate is reasonable.

/DM

IRRIGATION DIVERSION RATE ANALYSIS

CLAIM NO(S):	63-00172B, 63-00202B
FIELD ID NO:	E
TOTAL ACRES:	13.6 AC
FIELD SLOPE:	0.6 %
FURROW LENGTH:	800 FT

ANALYSIS COMPLETED BY: MARCI PAPE
DATE OF ANALYSIS: 01/12/06

Qmax PER FURROW:		Qmin PER FURROW:
For corrugates:	10.0 gpm	For both: 3.0 gpm
For furrows:	16.7 gpm	

[illegible]

TOTAL AC	TOTAL %	CFS/AC FOR EACH CROP:			
13.6	100	0.037	0.051	0.037	

TOTAL CFS FOR FIELD: 0.69

FIELD ID NO:	F
TOTAL ACRES:	10.2 AC
FIELD SLOPE:	0.2 %
FURROW LENGTH:	700 FT

DATE OF ANALYSIS: 01/12/06

Qmax PER FURROW:		Qmin PER FURROW:
For corrugates:	10.0 gpm	For both: 3.0 gpm
For furrows:	50.0 gpm	

[illegible]

TOTAL AC	TOTAL %	CFS/AC FOR	
10.2	100	EACH CROP:	0.045

TOTAL CFS FOR FIELD: 0.46 $\Leftarrow$ same crop, eff, I.F., + MAD as that for Field Q, $\therefore$ use cfs/ac for Field

(assumed slope - nearly flat)

DATE OF ANALYSIS:

1/12/08

Qmax PER FURROW:
For corrugates:
For furrows:

10.0 gpm
50.0 gpm

Qmin PER FURROW:
For both: 3.0 gpm
* 24 hr set times

[illegible]

FIELD ID NO:	G2
TOTAL ACRES:	22.0 AC
FIELD SLOPE:	0.2 %
FURROW LENGTH:	500 FT

(assumed slope - nearly flat)

DATE OF ANALYSIS:

1/12/08

Qmax PER FURROW:
For corrugates:
For furrows:

10.0 gpm
50.0 gpm

Qmin PER FURROW:
For both: 3.0 gpm

[illegible]

(assumed slope - nearly flat)

DATE OF ANALYSIS:

1/21/06

Q_{max} PER FURROW:

10.0 gpm
50.0 gpm

Qmin PER FURROW:

For both: 3.0 gpm

[illegible]

FIELD ID NO:	K1
TOTAL ACRES:	24.8 AC
FIELD SLOPE:	0.2 %
FURROW LENGTH:	1050 FT

(assumed slope - nearly flat)

DATE OF ANALYSIS:

1/21/08

Qmax PER FURROW:

Qmin PER FURROW:

For corrugates:
For *furrows*:

10.0 gpm
50.0 gpm

For both: 3.0 gpm

* 36 hr set time
** 24 hr set time

*** 24 hr set time

[illegible]

FIELD ID NO:	K2
TOTAL ACRES:	10.5 AC
FIELD SLOPE:	0.2 %
FURROW LENGTH:	1300 FT

(assumed slope - nearly flat)

DATE OF ANALYSIS:

1/21/08

Qmax PER FURROW:

10.0 gpm
50.0 gpm

Qmin PER FURROW:

For both: 3.0 gpm

- *fields split into 650ft lengths

[illegible]

FIELD ID NO:	N	DATE OF ANALYSIS:	1/12/06
TOTAL ACRES:	1.1 AC		
FIELD SLOPE:	0.2 %	(assumed slope - nearly flat)	
FURROW LENGTH:	450 FT		
		Qmax PER FURROW:	Qmin PER FURROW:
		For corrugates:	For both:
		For furrows:	
		10.0 gpm	3.0 gpm
		50.0 gpm	

TOTAL AC	TOTAL %	CFS/AC FOR EACH CROP:
1.1	100	0.111

0.12

DATE OF ANALYSIS:		1/12/08	
Q _{max} PER FURROW:		Q _{min} PER FURROW:	
For corrugates:	10.0 gpm	For both:	3.0 gpm
For furrows:	20.0 gpm		

TOTAL AC	TOTAL %
14.3	100

CFS/AC FOR EACH CROP: 0.031

0.025

0.45

FIELD ID NO: W
 TOTAL ACRES: 58.9 AC
 FIELD SLOPE: 0.2 %
 FURROW LENGTH: 750 FT

DATE OF ANALYSIS: 1/12/06
 Qmax PER FURROW: 10.0 gpm
 For corrugates: 50.0 gpm
 Qmin PER FURROW: 3.0 gpm
 For both: 3.0 gpm

SOIL TYPE	ACRES	% OF TOTAL AC	INTAKE FAMILY	CROP = MAD	corn EFFICIENCY	CROP = MAD	pasture EFFICIENCY	CROP = MAD	EFFICIENCY	CROP = MAD	EFFICIENCY	CROP = MAD	EFFICIENCY
QgB	8.3	11	0.55										
QgA	28.6	50	0.55	3.07	416%	2.8	45%						
MvA	20.4	36	0.7	2.24	449%	1.88	29%						
No	1.6	3	0.55										
MwA	0.1	0	0.7										

TOTAL AC 58.9
 TOTAL % 100

CFS/AC FOR EACH CROP: 0.034

0.043

TOTAL CFS FOR FIELD:

2.46

FIELD ID NO: X
 TOTAL ACRES: 11.7 AC
 FIELD SLOPE: 0.2 %
 FURROW LENGTH: 750 FT

DATE OF ANALYSIS: 1/12/06
 Qmax PER FURROW: 10.0 gpm
 For corrugates: 50.0 gpm
 Qmin PER FURROW: 3.0 gpm
 For both: 3.0 gpm

SOIL TYPE	ACRES	% OF TOTAL AC	INTAKE FAMILY	CROP = MAD	corn EFFICIENCY	CROP = MAD	pasture EFFICIENCY	CROP = MAD	EFFICIENCY	CROP = MAD	EFFICIENCY	CROP = MAD	EFFICIENCY
MvA	9.5	81	0.7	2.24	449%	1.88	29%						
No	2.2	19	0.55	1.52	27%	1.28	22%						

TOTAL AC 11.7
 TOTAL % 100

CFS/AC FOR EACH CROP: 0.041

0.058

TOTAL CFS FOR FIELD:

0.68

(assumed slope - nearly flat)

1/25/08

Qmin PER FURROW:

10.0 gpm

For both: 3.0 gpm

50.0 gpm

[illegible]

TOTAL AC	TOTAL %
9.5	100

CFS/AC FOR EACH CROP: 0.031

TOTAL CFS FOR FIELD:

0.30

FIELD ID NO:	B
TOTAL ACRES:	12.5 AC
FIELD SLOPE:	0.2 %
FURROW LENGTH:	800 FT

(assumed slope - nearly flat)

DATE OF ANALYSIS:

1/25/08

Q_{max} PER FURROW:

Qmin PER FURROW:

For corrugates:

10.0 gpm

For both: 3.0 gpm

[illegible]

TOTAL AC	TOTAL %
12.5	100

CFS/AC FOR EACH CROP: 0.034

TOTAL CFS FOR FIELD :

0.43

FIELD ID NO: C
 TOTAL ACRES: 3.0 AC
 FIELD SLOPE: 0.2 %
 FURROW LENGTH: 200 FT

DATE OF ANALYSIS: 1/25/08
 Qmax PER FURROW:
 For corrugates: 10.0 gpm
 For furrows: 50.0 gpm
 Qmin PER FURROW:
 For both: 3.0 gpm

SOIL TYPE	ACRES	% OF TOTAL AC	INTAKE FAMILY	CROP = MAD	corn EFFICIENCY	CROP = MAD	EFFICIENCY	CROP = MAD	EFFICIENCY	CROP = MAD	EFFICIENCY	CROP = MAD	EFFICIENCY
MwA	3.0	100	0.7	2.24	39%								
TOTAL AC	3.0	TOTAL %	100	CFS/AC FOR EACH CROP: 0.038									

TOTAL CFS FOR FIELD: 0.12

FIELD ID NO: D
 TOTAL ACRES: 5.9 AC
 FIELD SLOPE: 0.2 %
 FURROW LENGTH: 400 FT

DATE OF ANALYSIS: 1/25/08
 Qmax PER FURROW:
 For corrugates: 10.0 gpm
 For furrows: 50.0 gpm
 Qmin PER FURROW:
 For both: 3.0 gpm

SOIL TYPE	ACRES	% OF TOTAL AC	INTAKE FAMILY	CROP = MAD	corn EFFICIENCY	CROP = MAD	EFFICIENCY	CROP = MAD	EFFICIENCY	CROP = MAD	EFFICIENCY	CROP = MAD	EFFICIENCY
MwA	5.7	97	0.7	2.24	59%								
No	0.2	3			***		***		***		***		***
TOTAL AC	5.9	TOTAL %	100	CFS/AC FOR EACH CROP: 0.029									

TOTAL CFS FOR FIELD: 0.17

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field A
 date: 01/21/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
corn	9.5	fur	48	0	0	1.99	3.99	8.16	6.78	3.98	0.9	2.24	1.11	6.3	4.60	9.23	18.87	15.68	9.20	2.08		

Summary 9.5

Peak Gross Irrigation Application (mm/day) = 18.87
 On-Farm Irrigation Requirement (cfs/acre) = 0.031
 Total On-Farm Irrigation Requirement (cfs) = 0.30
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

4.60 9.23 18.87 15.68 9.20 2.08

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field B
 date: 01/21/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep.					oct	mar	apr	may	jun	jul	aug	sep	
corn	12.5	fur	44	0	0	1.99	3.99	8.16	6.78	3.98	0.9	2.24	1.11	6.3	5.02	10.07	20.59	17.10	10.04	2.27			

Summary 12.5

Peak Gross Irrigation Application (mm/day) = 20.59
 On-Farm Irrigation Requirement (cfs/acre) = 0.034
 Total On-Farm Irrigation Requirement (cfs) = 0.43
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

5.02 10.07 20.59 17.10 10.04 2.27

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field C
 date: 01/21/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
corn	3	fur	39	0	0	1.99	3.99	8.16	6.78	3.98	0.9	2.24	1.11	6.3	5.66	11.36	23.22	19.30	11.33	2.56		

Summary

3
 Peak Gross Irrigation Application (mm/day) = 23.22
 On-Farm Irrigation Requirement (cfs/acre) = 0.038
 Total On-Farm Irrigation Requirement (cfs) = 0.12
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

5.66 11.36 23.22 19.30 11.33 2.56

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field D
 date: 01/21/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep	oct					mar	apr	may	jun	jul	aug	sep	oct	
corn	5.9	fur	52	0	0	1.99	3.99	8.16	6.78	3.98	0.9	2.24	1.11	6.3	4.25	8.52	17.42	14.47	8.50	1.92				

Summary 5.9

Peak Gross Irrigation Application (mm/day) = 17.42
 On-Farm Irrigation Requirement (cfs/acre) = 0.029
 Total On-Farm Irrigation Requirement (cfs) = 0.17
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

4.25 8.52 17.42 14.47 8.50 1.92

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field E
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)										AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)										season (mm/yr)
				mar	apr	may	jun	jul	aug	sep	oct	mar	apr					may	jun	jul	aug	sep	oct					
alf hay	13.6	cor	44	2.47	5.02	6.63	8.26	8.86	7.43	5.68	3.39		1.76	1.12	4.5	6.29	12.78	16.88	21.03	22.55	18.91	14.46	8.63					

Summary 13.6

Peak Gross Irrigation Application (mm/day) = 22.55
 On-Farm Irrigation Requirement (cfs/acre) = 0.037
 Total On-Farm Irrigation Requirement (cfs) = 0.51
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

6.29 12.78 16.88 21.03 22.55 18.91 14.46 8.63

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field E
date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
sug. beet	13.6	fur	44	0	1.51	2.02	4.82	8.8	7.17	4.74	2.01	1.76	1.12	4.5	3.84	5.14	12.27	22.40	18.25	12.07	5.12	

Summary 13.6

Peak Gross Irrigation Application (mm/day) = 22.40
On-Farm Irrigation Requirement (cfs/acre) = 0.037
Total On-Farm Irrigation Requirement (cfs) = 0.50
Irrigation Diversion Volume (ft/yr) = 0.00
Total Irrigation Diversion Volume (ac-ft/yr) = 0

3.84 5.14 12.27 22.40 18.25 12.07 5.12

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field E
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							oct	AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep						mar	apr	may	jun	jul	aug	sep	
wheat	13.6	cor	30	0.75	1.7	5.55	8.26	6.78	1.35			1.52	1.12	4.2	2.80	6.35	20.72	30.84	25.31	5.04			

Summary 13.6

Peak Gross Irrigation Application (mm/day) = 30.84
 On-Farm Irrigation Requirement (cfs/acre) = 0.051
 Total On-Farm Irrigation Requirement (cfs) = 0.69
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

2.80 6.35 20.72 30.84 25.31 5.04

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field G1
 date: 01/21/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
alf hay	16.2	cor	22	2.47	5.02	6.63	8.26	8.86	7.43	5.68	3.39	1.76	1.12	4.5	12.57	25.56	33.75	42.05	45.11	37.83	28.92	17.26

Summary 16.2

Peak Gross Irrigation Application (mm/day) = 45.11
 On-Farm Irrigation Requirement (cfs/acre) = 0.075
 Total On-Farm Irrigation Requirement (cfs) = 1.21
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

12.57 25.56 33.75 42.05 45.11 37.83 28.92 17.26

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field G1
 date: 01/21/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep	oct					max	apr	may	jun	jul	aug	sep	oct	
sug. beet	16.2	fur	28	0	1.51	2.02	4.82	8.8	7.17	4.74	2.01	1.76	1.12	4.5	6.04	8.08	19.28	35.20	28.68	18.96	8.04			

Summary 16.2

Peak Gross Irrigation Application (mm/day) = 35.20
 On-Farm Irrigation Requirement (cfs/acre) = 0.058
 Total On-Farm Irrigation Requirement (cfs) = 0.94
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

6.04 8.08 19.28 35.20 28.68 18.96 8.04

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field G1
 date: 01/21/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep	oct					mar	apr	may	jun	jul	aug	sep	oct	
wheat	16.2	cor	15	0.75	1.7	5.55	8.26	6.78	1.35			1.52	1.12	4.2	5.60	12.69	41.44	61.67	50.62	10.08				

Summary 16.2

Peak Gross Irrigation Application (mm/day) = 61.67
 On-Farm Irrigation Requirement (cfs/acre) = 0.102
 Total On-Farm Irrigation Requirement (cfs) = 1.65
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

5.60 12.69 41.44 61.67 50.62 10.08

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant - Haas Ditch Co. - Field G2
date: 01/18/06 Weather Station - Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep	oct					mar	apr	may	jun	jul	aug	sep	
corn	22	fur	48	0	0	1.99	3.99	8.16	6.78	3.98	0.9	2.24	1.11	6.3	4.60	9.23	18.87	15.68	9.20	2.08			

Summary 22

Peak Gross Irrigation Application (mm/day) =	18.87
On-Farm Irrigation Requirement (cfs/acre) =	0.031
Total On-Farm Irrigation Requirement (cfs) =	0.69
Irrigation Diversion Volume (ft/yr) =	0.00
Total Irrigation Diversion Volume (ac-ft/yr) =	0

4.60 9.23 18.87 15.68 9.20 2.08

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field G2
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	sep	
radish sd	22	fur	15	2.47	5.02	6.63	8.26	8.86	7.43	5.68	3.39	0.59	1.14	1.5	18.77	38.15	50.39	62.78	67.34	56.47	43.17	25.76	

Summary 22

Peak Gross Irrigation Application (mm/day) = 67.34
 On-Farm Irrigation Requirement (cfs/acre) = 0.111
 Total On-Farm Irrigation Requirement (cfs) = 2.45
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

18.77 38.15 50.39 62.78 67.34 56.47 43.17 25.76

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field G2
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
sug. beet	22	fur	41	0	1.51	2.02	4.82	8.8	7.17	4.74	2.01	2.60	1.10	6.8	4.05	5.42	12.93	23.61	19.24	12.72	5.39	

Summary 22

Peak Gross Irrigation Application (mm/day) =	23.61
On-Farm Irrigation Requirement (cfs/acre) =	0.039
Total On-Farm Irrigation Requirement (cfs) =	0.86
Irrigation Diversion Volume (ft/yr) =	0.00
Total Irrigation Diversion Volume (ac-ft/yr) =	0

4.05 5.42 12.93 23.61 19.24 12.72 5.39

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field G2
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
wheat	22	cor	35	0.75	1.7	5.55	8.26	6.78	1.35		2.24	1.11	6.2	2.38	5.39	17.60	26.20	21.50	4.28			

Summary 22

Peak Gross Irrigation Application (mm/day) = 26.20
 On-Farm Irrigation Requirement (cfs/acre) = 0.043
 Total On-Farm Irrigation Requirement (cfs) = 0.95
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

2.38 5.39 17.60 26.20 21.50 4.28

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field I
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
barley	7.4	cor	31	0.75	1.7	5.55	8.26	6.78	1.35		1.52	1.12	4.2	2.71	6.14	20.05	29.84	24.50	4.88			

Summary 7.4

Peak Gross Irrigation Application (mm/day) =	29.84
On-Farm Irrigation Requirement (cfs/acre) =	0.049
Total On-Farm Irrigation Requirement (cfs) =	0.37
Irrigation Diversion Volume (ft/yr) =	0.00
Total Irrigation Diversion Volume (ac-ft/yr) =	0

2.71 6.14 20.05 29.84 24.50 4.88

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field I
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
corn	7.4	fur	46	0	0	1.99	3.99	8.16	6.78	3.98	0.9	1.52	1.12	4.2	4.85	9.71	19.87	16.51	9.69	2.19		

Summary 7.4

Peak Gross Irrigation Application (mm/day) = 19.87
 On-Farm Irrigation Requirement (cfs/acre) = 0.033
 Total On-Farm Irrigation Requirement (cfs) = 0.24
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

4.85 9.71 19.87 16.51 9.69 2.19

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field I
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep	oct					mar	apr	may	jun	jul	aug	sep	oct	
sug. beet	7.4	fur	36	0	1.51	2.02	4.82	8.8	7.17	4.74	2.01	1.76	1.12	4.5	4.70	6.28	15.00	27.38	22.31	14.75	6.25			

Summary 7.4

Peak Gross Irrigation Application (mm/day) = 27.38
 On-Farm Irrigation Requirement (cfs/acre) = 0.045
 Total On-Farm Irrigation Requirement (cfs) = 0.34
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

4.70 6.28 15.00 27.38 22.31 14.75 6.25

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field J
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
barley	15.9	cor	19	0.75	1.7	5.55	8.26	6.78	1.35			2.24	1.11	6.2	4.38	9.93	32.42	48.26	39.61	7.89		

Summary 15.9

Peak Gross Irrigation Application (mm/day) = 48.26
 On-Farm Irrigation Requirement (cfs/acre) = 0.080
 Total On-Farm Irrigation Requirement (cfs) = 1.27
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

4.38 9.93 32.42 48.26 39.61 7.89

FIELD IRRIGATION REQUIREMENT

Initials: MP Claimant = Haas Ditch Co. - Field J
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep	oct					mar	apr	may	jun	jul	aug	sep	oct	
corn	15.9	fur	42	0	0	1.99	3.99	8.16	6.78	3.98	0.9	2.24	1.11	6.3		5.26	10.55	21.57	17.92	10.52	2.38			

Summary 15.9

Peak Gross Irrigation Application (mm/day) = 21.57
 On-Farm Irrigation Requirement (cfs/acre) = 0.036
 Total On-Farm Irrigation Requirement (cfs) = 0.57
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

5.26 10.55 21.57 17.92 10.52 2.38

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field J
date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
sug. beet	15.9	fur	35	0	1.51	2.02	4.82	8.8	7.17	4.74	2.01	2.60	1.10	6.8	4.75	6.35	15.15	27.66	22.53	14.90	6.32	

Summary 15.9

Peak Gross Irrigation Application (mm/day) = 27.66
On-Farm Irrigation Requirement (cfs/acre) = 0.046
Total On-Farm Irrigation Requirement (cfs) = 0.73
Irrigation Diversion Volume (ft/yr) = 0.00
Total Irrigation Diversion Volume (ac-ft/yr) = 0

4.75 6.35 15.15 27.66 22.53 14.90 6.32

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field KI
date: 01/21/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
corn	24.8	fur	29	0	0	1.99	3.99	8.16	6.78	3.98	0.9	4.44	1.06	13.0	7.27	14.58	29.83	24.78	14.55	3.29		

Summary 24.8

Peak Gross Irrigation Application (mm/day) = 29.83
On-Farm Irrigation Requirement (cfs/acre) = 0.049
Total On-Farm Irrigation Requirement (cfs) = 1.22
Irrigation Diversion Volume (ft/yr) = 0.00
Total Irrigation Diversion Volume (ac-ft/yr) = 0

7.27 14.58 29.83 24.78 14.55 3.29

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field K1
date: 01/21/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep	oct					mar	apr	may	jun	jul	aug	sep	oct	
sug. beet	24.8	fur	27	0	1.51	2.02	4.82	8.8	7.17	4.74	2.01	1.76	1.12	4.5	6.26	8.38	19.99	36.50	29.74	19.66	8.34			

Summary 24.8

Peak Gross Irrigation Application (mm/day) = 36.50
On-Farm Irrigation Requirement (cfs/acre) = 0.060
Total On-Farm Irrigation Requirement (cfs) = 1.50
Irrigation Diversion Volume (ft/yr) = 0.00
Total Irrigation Diversion Volume (ac-ft/yr) = 0

6.26 8.38 19.99 36.50 29.74 19.66 8.34

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant - Naas Ditch Co. - Field K1
 date: 01/21/06 Weather Station - Parma Exp. Station

crop	acres	irrig. system	eff. (%)	mar	apr	may	Monthly ET (mm/day)				AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
							jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
wheat	24.8	cor	15	0.75	1.7	5.55	8.26	6.78	1.35		1.52	1.12	4.2	5.60	12.69	41.44	61.67	50.62	10.08			

Summary 24.8

Peak Gross Irrigation Application (mm/day) = 61.67
 On-Farm Irrigation Requirement (cfs/acre) = 0.102
 Total On-Farm Irrigation Requirement (cfs) = 2.53
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

5.60 12.69 41.44 61.67 50.62 10.08

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field K2
date: 01/21/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep	oct					mar	apr	may	jun	jul	aug	sep	oct	
corn	10.5	fur	32	0	0	1.99	3.99	8.16	6.78	3.98	0.9	4.44	1.06	13.0	6.59	13.22	27.03	22.46	13.18	2.98				

Summary 10.5

Peak Gross Irrigation Application (mm/day) = 27.03
On-Farm Irrigation Requirement (cfs/acre) = 0.045
Total On-Farm Irrigation Requirement (cfs) = 0.47
Irrigation Diversion Volume (ft/yr) = 0.00
Total Irrigation Diversion Volume (ac-ft/yr) = 0

6.59 13.22 27.03 22.46 13.18 2.98

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field K2
 date: 01/21/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	sep	
sug. beet	10.5	fur	32	0	1.51	2.02	4.82	8.8	7.17	4.74	2.01	2.60	1.10	6.8	5.19	6.94	16.57	30.25	24.65	16.29	6.91		

Summary 10.5

Peak Gross Irrigation Application (mm/day) = 30.25
 On-Farm Irrigation Requirement (cfs/acre) = 0.050
 Total On-Farm Irrigation Requirement (cfs) = 0.53
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

5.19 6.94 16.57 30.25 24.65 16.29 6.91

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field K2
 date: 01/21/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE YR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
wheat	10.5	cor	34	0.75	1.7	5.55	8.26	6.78	1.35			2.24	1.11	6.2	2.45	5.55	18.12	26.97	22.13	4.41		

Summary 10.5

Peak Gross Irrigation Application (mm/day) = 26.97
 On-Farm Irrigation Requirement (cfs/acre) = 0.045
 Total On-Farm Irrigation Requirement (cfs) = 0.47
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

2.45 5.55 18.12 26.97 22.13 4.41

FIELD IRRIGATION REQUIREMENT

Initials: MP Claimant = Haas Ditch Co. - Field L
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (t)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
past	2.1	cor	15	0.85	3.62	5.09	6.36	6.82	5.72	4.37	2.61	1.28	1.13	4.2	6.40	27.27	38.34	47.91	51.38	43.09	32.92	19.66

Summary 2.1

Peak Gross Irrigation Application (mm/day) =	51.38
On-Farm Irrigation Requirement (cfs/acre) =	0.085
Total On-Farm Irrigation Requirement (cfs) =	0.18
Irrigation Diversion Volume (ft/yr) =	0.00
Total Irrigation Diversion Volume (ac-ft/yr) =	0

6.40 27.27 38.34 47.91 51.38 43.09 32.92 19.66

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field M
date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep	oct					mar	apr	may	jun	jul	aug	sep	oct	
alf hay	11.1	cor	38	2.47	5.02	6.63	8.26	8.86	7.43	5.68	3.39		1.76	1.12	4.5	7.28	14.80	19.54	24.35	26.11	21.90	16.74	9.99	

Summary 11.1

Peak Gross Irrigation Application (mm/day) = 26.11
On-Farm Irrigation Requirement (cfs/acre) = 0.043
Total On-Farm Irrigation Requirement (cfs) = 0.48
Irrigation Diversion Volume (ft/yr) = 0.00
Total Irrigation Diversion Volume (ac-ft/yr) = 0

7.28 14.80 19.54 24.35 26.11 21.90 16.74 9.99

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field M
date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep	oct					mar	apr	may	jun	jul	aug	sep	oct	
sug. beet	11.1	fur	30	0	1.51	2.02	4.82	8.8	7.17	4.74	2.01	1.76	1.12	4.5	5.64	7.54	17.99	32.85	26.77	17.70	7.50			

Summary 11.1

Peak Gross Irrigation Application (mm/day) =	32.85
On-Farm Irrigation Requirement (cfs/acre) =	0.054
Total On-Farm Irrigation Requirement (cfs) =	0.60
Irrigation Diversion Volume (ft/yr) =	0.00
Total Irrigation Diversion Volume (ac-ft/yr) =	0

5.64 7.54 17.99 32.85 26.77 17.70 7.50

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field M
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep	oct					mar	apr	may	jun	jul	aug	sep	oct	
wheat	11.1	cor	29	0.75	1.7	5.55	8.26	6.78	1.35			1.52	1.12	4.2	2.90	6.57	21.43	31.90	26.18	5.21				

Summary 11.1

Peak Gross Irrigation Application (mm/day) =	31.90
On-Farm Irrigation Requirement (cfs/acre) =	0.053
Total On-Farm Irrigation Requirement (cfs) =	0.59
Irrigation Diversion Volume (ft/yr) =	0.00
Total Irrigation Diversion Volume (ac-ft/yr) =	0

2.90 6.57 21.43 31.90 26.18 5.21

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field O
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep	oct					mar	apr	may	jun	jul	aug	sep	oct	
corn	14.3	fur	58	0	0	1.99	3.99	8.16	6.78	3.98	0.9	4.44	1.06	13.0	3.64	7.29	14.91	12.39	7.27	1.64				

Summary 14.3

Peak Gross Irrigation Application (mm/day) = 14.91
 On-Farm Irrigation Requirement (cfs/acre) = 0.025
 Total On-Farm Irrigation Requirement (cfs) = 0.35
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

3.64 7.29 14.91 12.39 7.27 1.64

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field O
date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep	oct					mar	apr	may	jun	jul	aug	sep	oct	
sug. beet	14.3	fur	51	0	1.51	2.02	4.82	8.8	7.17	4.74	2.01	2.60	1.10	6.8	3.26	4.36	10.40	18.98	15.46	10.22	4.34			

Summary 14.3

Peak Gross Irrigation Application (mm/day) = 18.98
On-Farm Irrigation Requirement (cfs/acre) = 0.031
Total On-Farm Irrigation Requirement (cfs) = 0.45
Irrigation Diversion Volume (ft/yr) = 0.00
Total Irrigation Diversion Volume (ac-ft/yr) = 0

3.26 4.36 10.40 18.98 15.46 10.22 4.34

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field P
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
corn	37.1	fur	32	0	0	1.99	3.99	8.16	6.78	3.98	0.9	4.44	1.06	13.0	6.59	13.22	27.03	22.46	13.18	2.98		

Summary 37.1

Peak Gross Irrigation Application (mm/day) = 27.03
 On-Farm Irrigation Requirement (cfs/acre) = 0.045
 Total On-Farm Irrigation Requirement (cfs) = 1.66
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

6.59 13.22 27.03 22.46 13.18 2.98

FIELD IRRIGATION REQUIREMENT

initials: MF Claimant - Haas Ditch Co. - Field P
 date: 01/18/06 Weather Station - Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep	oct					mar	apr	may	jun	jul	aug	sep	oct	
sug. beet	37.1	fur	31	0	1.51	2.02	4.82	8.8	7.17	4.74	2.01	2.60	1.10	6.8	5.36	7.17	17.10	31.23	25.44	16.82	7.13			

Summary 37.1

5.36 7.17 17.10 31.23 25.44 16.82 7.13

Peak Gross Irrigation Application (mm/day) = 31.23
 On-Farm Irrigation Requirement (cfs/acre) = 0.052
 Total On-Farm Irrigation Requirement (cfs) = 1.92
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field Q
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr).
				mar	apr	may	jun	jul	aug	sep	oct					mar	apr	may	jun	jul	aug	sep	oct	
corn	23.3	fur	44	0	0	1.99	3.99	8.16	6.78	3.98	0.9	3.07	1.09	8.8	4.93	9.88	20.21	16.80	9.86	2.23				

Summary 23.3

Peak Gross Irrigation Application (mm/day) = 20.21
 On-Farm Irrigation Requirement (cfs/acre) = 0.033
 Total On-Farm Irrigation Requirement (cfs) = 0.78
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

4.93 9.88 20.21 16.80 9.86 2.23

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field Q
date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep	oct					mar	apr	may	jun	jul	aug	sep	oct	
sug. beet	23.3	fur	51	0	1.51	2.02	4.82	8.8	7.17	4.74	2.01	2.60	1.10	6.8	3.26	4.36	10.40	18.98	15.46	10.22	4.34			

Summary 23.3

Peak Gross Irrigation Application (mm/day) = 18.98
On-Farm Irrigation Requirement (cfs/acre) = 0.031
Total On-Farm Irrigation Requirement (cfs) = 0.73
Irrigation Diversion Volume (ft/yr) = 0.00
Total Irrigation Diversion Volume (ac-ft/yr) = 0

3.26 4.36 10.40 18.98 15.46 10.22 4.34

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field Q
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
wheat	23.3	cor	34	0.75	1.7	5.55	8.26	6.78	1.35		2.24	1.11	6.2	2.45	5.55	18.12	26.97	22.13	4.41			

Summary 23.3

Peak Gross Irrigation Application (mm/day) = 26.97
 On-Farm Irrigation Requirement (cfs/acre) = 0.045
 Total On-Farm Irrigation Requirement (cfs) = 1.04
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

2.45 5.55 18.12 26.97 22.13 4.41

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field R
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
corn	26.9	fur	39	0	0	1.99	3.99	8.16	6.78	3.98	0.9	1.52	1.12	4.2	5.71	11.46	23.43	19.47	11.43	2.58		

Summary 26.9

Peak Gross Irrigation Application (mm/day) = 23.43
 On-Farm Irrigation Requirement (cfs/acre) = 0.039
 Total On-Farm Irrigation Requirement (cfs) = 1.04
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

5.71 11.46 23.43 19.47 11.43 2.58

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field R
date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)	
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug		sep
past	26.9	cor	24	0.85	3.62	5.09	6.36	6.82	5.72	4.37	2.61	1.28	1.13	4.2	4.00	17.04	23.97	29.95	32.11	26.93	20.58	12.29	

Summary 26.9

Peak Gross Irrigation Application (mm/day) = 32.11
On-Farm Irrigation Requirement (cfs/acre) = 0.053
Total On-Farm Irrigation Requirement (cfs) = 1.43
Irrigation Diversion Volume (ft/yr) = 0.00
Total Irrigation Diversion Volume (ac-ft/yr) = 0

4.00 17.04 23.97 29.95 32.11 26.93 20.58 12.29

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field S
date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
corn	23.8	fur	51	0	0	1.99	3.99	8.16	6.78	3.98	0.9	2.24	1.11	6.3	4.33	8.68	17.76	14.76	8.66	1.96		

Summary 23.8

4.33 8.68 17.76 14.76 8.66 1.96

Peak Gross Irrigation Application (mm/day) = 17.76
On-Farm Irrigation Requirement (cfs/acre) = 0.029
Total On-Farm Irrigation Requirement (cfs) = 0.70
Irrigation Diversion Volume (ft/yr) = 0.00
Total Irrigation Diversion Volume (ac-ft/yr) = 0

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field S
 date: . 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)		
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug		sep	oct
past	23.8	cor	27	0.85	3.62	5.09	6.36	6.82	5.72	4.37	2.61		1.88	1.11	6.3	3.49	14.88	20.93	26.15	28.04	23.52	17.97	10.73	

Summary 23.8

Peak Gross Irrigation Application (mm/day) = 28.04
 On-Farm Irrigation Requirement (cfs/acre) = 0.046
 Total On-Farm Irrigation Requirement (cfs) = 1.10
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

3.49 14.88 20.93 26.15 28.04 23.52 17.97 10.73

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field W
date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
corn	56.9	fur	44	0	0	1.99	3.99	8.16	6.78	3.98	0.9	2.24	1.11	6.3	5.02	10.07	20.59	17.10	10.04	2.27		

Summary 56.9

Peak Gross Irrigation Application (mm/day) = 20.59
On-Farm Irrigation Requirement (cfs/acre) = 0.034
Total On-Farm Irrigation Requirement (cfs) = 1.94
Irrigation Diversion Volume (ft/yr) = 0.00
Total Irrigation Diversion Volume (ac-ft/yr) = 0

5.02 10.07 20.59 17.10 10.04 2.27

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field W
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	sep	
past	56.9	cor	29	0.85	3.62	5.09	6.36	6.82	5.72	4.37	2.61	1.88	1.11	6.3	3.25	13.86	19.48	24.34	26.10	21.89	16.73	9.99	

Summary 56.9

Peak Gross Irrigation Application (mm/day) = 26.10
 On-Farm Irrigation Requirement (cfs/acre) = 0.043
 Total On-Farm Irrigation Requirement (cfs) = 2.46
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

3.25 13.86 19.48 24.34 26.10 21.89 16.73 9.99

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field X
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
corn	11.7	fur	37	0	0	1.99	3.99	8.16	6.78	3.98	0.9	1.52	1.12	4.2	6.02	12.08	24.70	20.52	12.05	2.72		

Summary 11.7

Peak Gross Irrigation Application (mm/day) =	24.70
On-Farm Irrigation Requirement (cfs/acre) =	0.041
Total On-Farm Irrigation Requirement (cfs) =	0.48
Irrigation Diversion Volume (ft/yr) =	0.00
Total Irrigation Diversion Volume (ac-ft/yr) =	0

6.02 12.08 24.70 20.52 12.05 2.72

FIELD IRRIGATION REQUIREMENT.

initials: MP Claimant = Haas Ditch Co. - Field X
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep	oct					mar	apr	may	jun	jul	aug	sep	oct	
past	11.7	cor	22	0.85	3.62	5.09	6.36	6.82	5.72	4.37	2.61	1.28	1.13	4.2	4.37	18.59	26.14	32.67	35.03	29.38	22.45	13.41		

Summary 11.7

Peak Gross Irrigation Application (mm/day) = 35.03
 On-Farm Irrigation Requirement (cfs/acre) = 0.058
 Total On-Farm Irrigation Requirement (cfs) = 0.68
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

4.37 18.59 26.14 32.67 35.03 29.38 22.45 13.41

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field Y
date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	sep	
alf hay	23.7	cor	21	2.47	5.02	6.63	8.26	8.86	7.43	5.68	3.39	2.60	1.10	6.8	12.94	26.30	34.73	43.27	46.41	38.92	29.75	17.76	

Summary 23.7

Peak Gross Irrigation Application (mm/day) = 46.41
On-Farm Irrigation Requirement (cfs/acre) = 0.077
Total On-Farm Irrigation Requirement (cfs) = 1.82
Irrigation Diversion Volume (ft/yr) = 0.00
Total Irrigation Diversion Volume (ac-ft/yr) = 0

12.94 26.30 34.73 43.27 46.41 38.92 29.75 17.76

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field Y
 date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)								season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	sep	
wheat	23.7	cor	15	0.75	1.7	5.55	8.26	6.78	1.35		2.24	1.11	6.2	5.55	12.58	41.07	61.12	50.17	9.99				

Summary 23.7

Peak Gross Irrigation Application (mm/day) = 61.12
 On-Farm Irrigation Requirement (cfs/acre) = 0.101
 Total On-Farm Irrigation Requirement (cfs) = 2.40
 Irrigation Diversion Volume (ft/yr) = 0.00
 Total Irrigation Diversion Volume (ac-ft/yr) = 0

5.55 12.58 41.07 61.12 50.17 9.99

FIELD IRRIGATION REQUIREMENT

initials: MP Claimant = Haas Ditch Co. - Field Y
date: 01/18/06 Weather Station = Parma Exp. Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)							season (mm/yr)
				mar	apr	may	jun	jul	aug	sep					oct	mar	apr	may	jun	jul	aug	
past	23.7	cor	15	0.85	3.62	5.09	6.36	6.82	5.72	4.37	2.61	1.88	1.11	6.3	6.29	26.79	37.67	47.06	50.47	42.33	32.34	19.31

Summary 23.7

Peak Gross Irrigation Application (mm/day) = 50.47
On-Farm Irrigation Requirement (cfs/acre) = 0.083
Total On-Farm Irrigation Requirement (cfs) = 1.98
Irrigation Diversion Volume (ft/yr) = 0.00
Total Irrigation Diversion Volume (ac-ft/yr) = 0

6.29 26.79 37.67 47.06 50.47 42.33 32.34 19.31

Field E: Mwa, hay, corrugations

FURROW

Auto

INTAKE FAMILY <I> = 0.70
 DESIGN APPLICATION <Fn> = 2.60 INCHES
 FURROW SLOPE <S> = 0.006 FEET/FOOT
 FURROW SPACING <U> = 2.50 FEET
 FURROW LENGTH <L> = 800 FEET
 INFLOW RATE <Q> = 9.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS
 =====
 ADVANCE TIME <Tt> = 173.5 MINUTES; OR 2.9 HOURS
 GROSS APPLICATION <FG> = 5.20 INCHES
 NET APPLICATION <F> = 4.44 INCHES
 RUNOFF <RO> = 0.05 INCHES
 DEEP PERCOLATION <DP> = 2.55 INCHES
 EFFICIENCY <E> = 50.03 %
 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.60 in
 Furrow Slope <2> 0.006 ft/ft
 Furrow Spacing <3> 2.50 ft
 Furrow Length <4> 800 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 9.0 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>?

Field E: Mwa, wheat, corrugations

FURROW

Auto

INTAKE FAMILY <I> = 0.70
 DESIGN APPLICATION <Fn> = 2.24 INCHES
 FURROW SLOPE <S> = 0.006 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 800 FEET
 INFLOW RATE <Q> = 9.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS
 =====
 ADVANCE TIME <Tt> = 173.5 MINUTES; OR 2.9 HOURS
 GROSS APPLICATION <FG> = 6.50 INCHES
 NET APPLICATION <F> = 5.55 INCHES
 RUNOFF <RO> = 0.06 INCHES
 DEEP PERCOLATION <DP> = 0.19 INCHES
 EFFICIENCY <E> = 34.40 %
 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.24 in
 Furrow Slope <2> 0.006 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 800 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 9.0 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>?

Field E: Mwa, sugar beets, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.70
 DESIGN APPLICATION <Fn> = 2.60 INCHES
 FURROW SLOPE <S> = 0.006 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 800 FEET
 INFLOW RATE <Q> = 7.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS
 =====
 ADVANCE TIME <Tt> = 288.4 MINUTES; OR 4.8 HOURS
 GROSS APPLICATION <FG> = 5.05 INCHES
 NET APPLICATION <F> = 3.74 INCHES
 RUNOFF <RO> = 0.03 INCHES
 DEEP PERCOLATION <DP> = 2.42 INCHES
 EFFICIENCY <E> = 51.46 %
 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.60 in
 Furrow Slope <2> 0.006 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 800 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 7.0 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>?

Field E: No, alfalfa hay, corrugations

FURROW

Auto

INTEGRAL FAMILY <If> = 0.55
 DESIGN APPLICATION <Fn> = 1.76 INCHES
 FURROW SLOPE <S> = 0.006 FEET/FOOT
 FURROW SPACING <U> = 2.50 FEET
 FURROW LENGTH <L> = 800 FEET
 INFLOW RATE <Q> = 7.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 210.3 MINUTES; OR 3.5 HOURS
 GROSS APPLICATION <FG> = 4.04 INCHES
 NET APPLICATION <Fn> = 3.25 INCHES
 RUNOFF <RO> = 0.13 INCHES
 DEEP PERCOLATION <DP> = 2.15 INCHES
 EFFICIENCY <E> = 43.50 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 1.76 in
 Furrow Slope <2> 0.006 ft/ft
 Furrow Spacing <3> 2.50 ft
 Furrow Length <4> 800 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 7.0 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

Field E: No, wheat, corrugations

FURROW

Auto

INTEGRAL FAMILY <If> = 0.55
 DESIGN APPLICATION <Fn> = 1.52 INCHES
 FURROW SLOPE <S> = 0.006 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 800 FEET
 INFLOW RATE <Q> = 7.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 210.3 MINUTES; OR 3.5 HOURS
 GROSS APPLICATION <FG> = 5.05 INCHES
 NET APPLICATION <Fn> = 4.06 INCHES
 RUNOFF <RO> = 0.16 INCHES
 DEEP PERCOLATION <DP> = 3.37 INCHES
 EFFICIENCY <E> = 30.08 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 1.52 in
 Furrow Slope <2> 0.006 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 800 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 7.0 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

Field E: No, sugar beets, furrows

FURROW

Auto

INTEGRAL FAMILY <If> = 0.55
 DESIGN APPLICATION <Fn> = 1.76 INCHES
 FURROW SLOPE <S> = 0.006 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 800 FEET
 INFLOW RATE <Q> = 5.5 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 356.8 MINUTES; OR 5.9 HOURS
 GROSS APPLICATION <FG> = 3.97 INCHES
 NET APPLICATION <Fn> = 2.60 INCHES
 RUNOFF <RO> = 0.12 INCHES
 DEEP PERCOLATION <DP> = 2.07 INCHES
 EFFICIENCY <E> = 44.33 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 1.76 in
 Furrow Slope <2> 0.006 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 800 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 5.5 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

Field F: MwA, corn, furrows

```

FURROW
Auto
*****
INTAKE FAMILY <If> = 0.70
DESIGN APPLICATION <Fn> = 2.24 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <L> = 3.00 FEET
FURROW LENGTH <L> = 700 FEET
INFLOW RATE <Q> = 2.0 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Tt> = 379.2 MINUTES; OR 6.3 HOURS
GROSS APPLICATION <Fc> = 4.95 INCHES
NET APPLICATION <Fn> = 2.42 INCHES
RUNOFF <Ro> = 1.15 INCHES
DEEP PERCOLATION <Dp> = 1.56 INCHES
EFFICIENCY <E> = 45.25 %
TO CHANGE: PRESS (EXISTING)
Design Application <1> 2.24 in
Furrow Slope <2> 0.002 ft/ft
Furrow Spacing <3> 3.00 ft
Furrow Length <4> 700 ft
Furrow Intake Family <5> 0.70
Inflow Rate <6> 2.0 gpm/furrow
Inflow Time <7> 12 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <0/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

```

Field F: MwA, wheat, corrugations

```

FURROW
Auto
*****
INTAKE FAMILY <If> = 0.70
DESIGN APPLICATION <Fn> = 2.24 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <L> = 2.00 FEET
FURROW LENGTH <L> = 700 FEET
INFLOW RATE <Q> = 0.0 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Tt> = 532.1 MINUTES; OR 8.9 HOURS
GROSS APPLICATION <Fc> = 6.60 INCHES
NET APPLICATION <Fn> = 2.82 INCHES
RUNOFF <Ro> = 0.06 INCHES
DEEP PERCOLATION <Dp> = 4.30 INCHES
EFFICIENCY <E> = 33.94 %
TO CHANGE: PRESS (EXISTING)
Design Application <1> 2.24 in
Furrow Slope <2> 0.002 ft/ft
Furrow Spacing <3> 2.00 ft
Furrow Length <4> 700 ft
Furrow Intake Family <5> 0.70
Inflow Rate <6> 8.0 gpm/furrow
Inflow Time <7> 12 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <0/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

```

Field F: MwA, sugar beets, furrows

```

FURROW
Auto
*****
INTAKE FAMILY <If> = 0.70
DESIGN APPLICATION <Fn> = 2.60 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <L> = 2.00 FEET
FURROW LENGTH <L> = 700 FEET
INFLOW RATE <Q> = 8.5 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Tt> = 445.2 MINUTES; OR 7.4 HOURS
GROSS APPLICATION <Fc> = 7.01 INCHES
NET APPLICATION <Fn> = 3.08 INCHES
RUNOFF <Ro> = 1.46 INCHES
DEEP PERCOLATION <Dp> = 2.95 INCHES
EFFICIENCY <E> = 37.08 %
TO CHANGE: PRESS (EXISTING)
Design Application <1> 2.60 in
Furrow Slope <2> 0.002 ft/ft
Furrow Spacing <3> 2.00 ft
Furrow Length <4> 700 ft
Furrow Intake Family <5> 0.70
Inflow Rate <6> 8.5 gpm/furrow
Inflow Time <7> 12 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <0/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

```

Field G1: MWA, alfalfa hay, corrugations

```

FURROW
Auto
INTAKE FAMILY <If> = 0.70
DESIGN APPLICATION <Fn> = 2.60 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <D> = 2.50 FEET
FURROW LENGTH <L> = 1000 FEET
INFLOW RATE <Q> = 10.0 GPM/FURROW
APPLICATION TIME <Ti> = 24 HOURS
*****
ADVANCE TIME <Tt> = 1172.5 MINUTES; OR 19.5 HOURS
GROSS APPLICATION <Fg> = 2.24 INCHES
NET APPLICATION <Fn> = 3.06 INCHES
RUNOFF <Ro> = 0.01 INCHES
DEEP PERCOLATION <Dp> = 6.63 INCHES
EFFICIENCY <E> = 28.14 %
TO CHANGE:
  Design Application <1> 2.60 in (EXISTING)
  Furrow Slope <2> 0.002 ft/ft
  Furrow Spacing <3> 2.50 ft
  Furrow Length <4> 1000 ft
  Furrow Intake Family <5> 0.70
  Inflow Rate <6> 10.0 gpm/furrow
  Inflow Time <7> 24 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <8/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?
  
```

Field G1: MWA, wheat, corrugations

```

FURROW
Auto
INTAKE FAMILY <If> = 0.70
DESIGN APPLICATION <Fn> = 2.24 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <D> = 2.00 FEET
FURROW LENGTH <L> = 1000 FEET
INFLOW RATE <Q> = 10.0 GPM/FURROW
APPLICATION TIME <Ti> = 24 HOURS
*****
ADVANCE TIME <Tt> = 1172.5 MINUTES; OR 19.5 HOURS
GROSS APPLICATION <Fg> = 11.55 INCHES
NET APPLICATION <Fn> = 3.83 INCHES
RUNOFF <Ro> = 0.01 INCHES
DEEP PERCOLATION <Dp> = 9.30 INCHES
EFFICIENCY <E> = 19.39 %
TO CHANGE:
  Design Application <1> 2.24 in (EXISTING)
  Furrow Slope <2> 0.002 ft/ft
  Furrow Spacing <3> 2.00 ft
  Furrow Length <4> 1000 ft
  Furrow Intake Family <5> 0.70
  Inflow Rate <6> 10.0 gpm/furrow
  Inflow Time <7> 24 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <8/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?
  
```

Field G1: MWA, sugar beets, furrows

```

FURROW
Auto
INTAKE FAMILY <If> = 0.70
DESIGN APPLICATION <Fn> = 2.60 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <D> = 2.00 FEET
FURROW LENGTH <L> = 1000 FEET
INFLOW RATE <Q> = 13.0 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Tt> = 526.8 MINUTES; OR 8.8 HOURS
GROSS APPLICATION <Fg> = 7.51 INCHES
NET APPLICATION <Fn> = 2.62 INCHES
RUNOFF <Ro> = 1.63 INCHES
DEEP PERCOLATION <Dp> = 3.28 INCHES
EFFICIENCY <E> = 34.63 %
TO CHANGE:
  Design Application <1> 2.60 in (EXISTING)
  Furrow Slope <2> 0.002 ft/ft
  Furrow Spacing <3> 2.00 ft
  Furrow Length <4> 1000 ft
  Furrow Intake Family <5> 0.70
  Inflow Rate <6> 13.0 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>?
  
```

Field G1: No, alfalfa hay, corrugations

```

FURROW
Auto
*****
INTAKE FAMILY <If> = 0.55
DESIGN APPLICATION <Fn> = 1.76 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <W> = 2.50 FEET
FURROW LENGTH <L> = 1000 FEET
INFLOW RATE <Q> = 0.5 GPM/FURROW
APPLICATION TIME <Ti> = 24 HOURS
*****
ADVANCE TIME <Tt> = 1199.1 MINUTES; OR 20.0 HOURS
GROSS APPLICATION <FG> = 7.05 INCHES
NET APPLICATION <Fn> = 2.26 INCHES
RUNOFF <RO> = 0.78 INCHES
DEEP PERCOLATION <DP> = 5.32 INCHES
EFFICIENCY <E> = 22.41 %
TO CHANGE:
  Design Application <1> PRESS (EXISTING)
  Furrow Slope <2> 1.76 in
  Furrow Spacing <3> 0.002 ft/ft
  Furrow Length <4> 2.50 ft
  Furrow Intake Family <5> 1000 ft
  Inflow Rate <6> 0.55
  Inflow Time <7> 8.5 gpm/furrow
  Inflow Time <7> 24 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <0/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?
  
```

Field G1: No, wheat, corrugations

```

FURROW
Auto
*****
INTAKE FAMILY <If> = 0.55
DESIGN APPLICATION <Fn> = 1.52 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <W> = 2.00 FEET
FURROW LENGTH <L> = 1000 FEET
INFLOW RATE <Q> = 0.5 GPM/FURROW
APPLICATION TIME <Ti> = 24 HOURS
*****
ADVANCE TIME <Tt> = 1199.1 MINUTES; OR 20.0 HOURS
GROSS APPLICATION <FG> = 9.82 INCHES
NET APPLICATION <Fn> = 2.82 INCHES
RUNOFF <RO> = 0.97 INCHES
DEEP PERCOLATION <DP> = 7.33 INCHES
EFFICIENCY <E> = 15.40 %
TO CHANGE:
  Design Application <1> PRESS (EXISTING)
  Furrow Slope <2> 1.52 in
  Furrow Spacing <3> 0.002 ft/ft
  Furrow Length <4> 2.00 ft
  Furrow Intake Family <5> 1000 ft
  Inflow Rate <6> 0.55
  Inflow Time <7> 8.5 gpm/furrow
  Inflow Time <7> 24 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <0/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?
  
```

Field G1: No, sugar beets, furrows

```

FURROW
Auto
*****
INTAKE FAMILY <If> = 0.55
DESIGN APPLICATION <Fn> = 1.76 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <W> = 2.00 FEET
FURROW LENGTH <L> = 1000 FEET
INFLOW RATE <Q> = 11.0 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Tt> = 546.7 MINUTES; OR 9.1 HOURS
GROSS APPLICATION <FG> = 6.35 INCHES
NET APPLICATION <Fn> = 1.95 INCHES
RUNOFF <RO> = 1.78 INCHES
DEEP PERCOLATION <DP> = 2.81 INCHES
EFFICIENCY <E> = 27.71 %
TO CHANGE:
  Design Application <1> PRESS (EXISTING)
  Furrow Slope <2> 1.76 in
  Furrow Spacing <3> 0.002 ft/ft
  Furrow Length <4> 2.00 ft
  Furrow Intake Family <5> 1000 ft
  Inflow Rate <6> 0.55
  Inflow Time <7> 11.0 gpm/furrow
  Inflow Time <7> 12 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <0/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?
  
```

Field G2: MwA, radish seed, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.70
 DESIGN APPLICATION <F> = 0.59 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 500 FEET
 INFLOW RATE <Q> = 5.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 586.3 MINUTES; OR 9.8 HOURS
 GROSS APPLICATION <FG> = 5.77 INCHES
 NET APPLICATION <F> = 1.68 INCHES
 RUNOFF <RO> = 0.85 INCHES
 DEEP PERCOLATION <DP> = 4.34 INCHES
 EFFICIENCY <E> = 10.22 %
 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 0.59 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 500 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 5.0 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>
 TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

Field G2: MwA, corn, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.70
 DESIGN APPLICATION <F> = 2.24 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 3.00 FEET
 FURROW LENGTH <L> = 500 FEET
 INFLOW RATE <Q> = 6.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 329.0 MINUTES; OR 5.5 HOURS
 GROSS APPLICATION <FG> = 4.62 INCHES
 NET APPLICATION <F> = 2.48 INCHES
 RUNOFF <RO> = 1.04 INCHES
 DEEP PERCOLATION <DP> = 1.34 INCHES
 EFFICIENCY <E> = 40.49 %
 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.24 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 3.00 ft
 Furrow Length <4> 500 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 6.0 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>
 TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

Field G2: MwA, wheat, corrugations

FURROW

Auto

INTAKE FAMILY <I> = 0.70
 DESIGN APPLICATION <F> = 2.24 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 500 FEET
 INFLOW RATE <Q> = 5.5 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 627.0 MINUTES; OR 10.4 HOURS
 GROSS APPLICATION <FG> = 6.35 INCHES
 NET APPLICATION <F> = 3.56 INCHES
 RUNOFF <RO> = 0.15 INCHES
 DEEP PERCOLATION <DP> = 3.96 INCHES
 EFFICIENCY <E> = 35.26 %
 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.24 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 500 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 5.5 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>
 TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

Field G2: MwA, sugar beets, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.70
 DESIGN APPLICATION <F> = 2.60 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 500 FEET
 INFLOW RATE <Q> = 5.5 GPM/FURROW
 APPLICATION TIME <T> = 12 HOURS

ADVANCE TIME <T> = 427.8 MINUTES; OR 7.1 HOURS
 GROSS APPLICATION <FG> = 6.35 INCHES
 NET APPLICATION <FN> = 2.97 INCHES
 RUNOFF <RO> = 1.17 INCHES
 DEEP PERCOLATION <DP> = 2.50 INCHES
 EFFICIENCY <E> = 40.93 %

TO CHANGE: PRESS (EXISTING)

Design Application <1> 2.60 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 500 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 5.5 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

Field H: No, pasture, corrugations

FURROW

Auto

INTAKE FAMILY <I> = 0.55
 DESIGN APPLICATION <F> = 1.20 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 100 FEET
 INFLOW RATE <Q> = 3.0 GPM/FURROW
 APPLICATION TIME <T> = 12 HOURS

ADVANCE TIME <T> = 10.1 MINUTES; OR 0.2 HOURS
 GROSS APPLICATION <FG> = 17.32 INCHES
 NET APPLICATION <FN> = 4.86 INCHES
 RUNOFF <RO> = 12.43 INCHES
 DEEP PERCOLATION <DP> = 3.61 INCHES
 EFFICIENCY <E> = 7.39 %

TO CHANGE: PRESS (EXISTING)

Design Application <1> 1.20 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 100 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 3.0 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

Field I: No, barley, corrugations

FURROW

Auto

INTAKE FAMILY <I> = 0.55
 DESIGN APPLICATION <F> = 1.52 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 350 FEET
 INFLOW RATE <Q> = 3.0 GPM/FURROW
 APPLICATION TIME <T> = 12 HOURS

ADVANCE TIME <T> = 407.8 MINUTES; OR 6.8 HOURS
 GROSS APPLICATION <FG> = 4.95 INCHES
 NET APPLICATION <FN> = 2.71 INCHES
 RUNOFF <RO> = 0.47 INCHES
 DEEP PERCOLATION <DP> = 2.96 INCHES
 EFFICIENCY <E> = 30.71 %

TO CHANGE: PRESS (EXISTING)

Design Application <1> 1.52 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 350 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 3.0 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

Field I: No, corn, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.55
 DESIGN APPLICATION <Fn> = 1.52 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <D> = 3.00 FEET
 FURROW LENGTH <L> = 350 FEET
 INFLOW RATE <Q> = 3.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 407.0 MINUTES; OR 6.8 HOURS
 GROSS APPLICATION <FG> = 3.30 INCHES
 NET APPLICATION <Fn> = 1.54 INCHES
 RUNOFF <RO> = 0.74 INCHES
 DEEP PERCOLATION <DP> = 1.04 INCHES
 EFFICIENCY <E> = 46.06 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 1.52 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 3.00 ft
 Furrow Length <4> 350 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 3.0 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>?

Field I: No, sugar beets, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.55
 DESIGN APPLICATION <Fn> = 1.76 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <D> = 2.00 FEET
 FURROW LENGTH <L> = 350 FEET
 INFLOW RATE <Q> = 3.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 407.0 MINUTES; OR 6.8 HOURS
 GROSS APPLICATION <FG> = 4.95 INCHES
 NET APPLICATION <Fn> = 2.32 INCHES
 RUNOFF <RO> = 1.11 INCHES
 DEEP PERCOLATION <DP> = 2.08 INCHES
 EFFICIENCY <E> = 35.56 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 1.76 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 350 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 3.0 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>?

Field I: MWA, barley, corrugations

FURROW

Auto

INTAKE FAMILY <I> = 0.70
 DESIGN APPLICATION <Fn> = 2.24 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <D> = 2.00 FEET
 FURROW LENGTH <L> = 350 FEET
 INFLOW RATE <Q> = 3.5 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 410.4 MINUTES; OR 6.8 HOURS
 GROSS APPLICATION <FG> = 5.77 INCHES
 NET APPLICATION <Fn> = 3.38 INCHES
 RUNOFF <RO> = 0.06 INCHES
 DEEP PERCOLATION <DP> = 3.47 INCHES
 EFFICIENCY <E> = 38.79 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.24 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 350 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 3.5 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>?

Field I: MWA, corn, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.70
 DESIGN APPLICATION <Fn> = 2.24 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 3.00 FEET
 FURROW LENGTH <L> = 350 FEET
 INFLOW RATE <Q> = 4.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 266.1 MINUTES; OR 4.4 HOURS
 GROSS APPLICATION <Fc> = 4.40 INCHES
 NET APPLICATION <Fk> = 2.58 INCHES
 RUNOFF <Ro> = 1.00 INCHES
 DEEP PERCOLATION <DP> = 1.16 INCHES
 EFFICIENCY <E> = 50.91 %

 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.24 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 3.00 ft
 Furrow Length <4> 350 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 4.0 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>
 TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field I: MWA, sugar beets, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.70
 DESIGN APPLICATION <Fn> = 2.60 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 2.00 FEET
 FURROW LENGTH <L> = 350 FEET
 INFLOW RATE <Q> = 3.5 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 410.4 MINUTES; OR 6.8 HOURS
 GROSS APPLICATION <Fc> = 5.77 INCHES
 NET APPLICATION <Fk> = 2.87 INCHES
 RUNOFF <Ro> = 0.92 INCHES
 DEEP PERCOLATION <DP> = 2.26 INCHES
 EFFICIENCY <E> = 45.02 %

 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.60 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 350 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 3.5 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>
 TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field J: MWA, barley, corrugations

FURROW

Auto

INTAKE FAMILY <I> = 0.70
 DESIGN APPLICATION <Fn> = 2.24 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 2.00 FEET
 FURROW LENGTH <L> = 900 FEET
 INFLOW RATE <Q> = 9.0 GPM/FURROW
 APPLICATION TIME <Ti> = 24 HOURS

 ADVANCE TIME <Tt> = 1055.3 MINUTES; OR 17.6 HOURS
 GROSS APPLICATION <Fc> = 11.55 INCHES
 NET APPLICATION <Fk> = 4.86 INCHES
 RUNOFF <Ro> = 0.13 INCHES
 DEEP PERCOLATION <DP> = 9.18 INCHES
 EFFICIENCY <E> = 19.39 %

 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.24 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 900 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 9.0 gpm/furrow
 Inflow Time <7> 24 hours <ANALYSIS MODE>
 TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field J: MWA, corn, furrows

FURROW

Auto

INTAKE FAMILY <If> = 0.70
 DESIGN APPLICATION <Fn> = 2.24 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 3.00 FEET
 FURROW LENGTH <L> = 900 FEET
 INFLOW RATE <Q> = 12.5 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 399.8 MINUTES; OR 6.7 HOURS
 GROSS APPLICATION <G> = 5.35 INCHES
 NET APPLICATION <Fn> = 2.48 INCHES
 RUNOFF <Ro> = 1.33 INCHES
 DEEP PERCOLATION <Dp> = 1.70 INCHES
 EFFICIENCY <E> = 41.89 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.24 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 3.00 ft
 Furrow Length <4> 900 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 12.5 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field J: MWA, sugar beets, furrows

FURROW

Auto

INTAKE FAMILY <If> = 0.70
 DESIGN APPLICATION <Fn> = 2.60 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 2.00 FEET
 FURROW LENGTH <L> = 900 FEET
 INFLOW RATE <Q> = 11.5 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 496.7 MINUTES; OR 8.3 HOURS
 GROSS APPLICATION <G> = 7.38 INCHES
 NET APPLICATION <Fn> = 2.82 INCHES
 RUNOFF <Ro> = 1.59 INCHES
 DEEP PERCOLATION <Dp> = 3.19 INCHES
 EFFICIENCY <E> = 35.26 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.60 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 900 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 11.5 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field K1: MWA, corn, furrows

FURROW

Auto

INTAKE FAMILY <If> = 0.70
 DESIGN APPLICATION <Fn> = 2.24 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 3.00 FEET
 FURROW LENGTH <L> = 1050 FEET
 INFLOW RATE <Q> = 15.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 435.2 MINUTES; OR 7.3 HOURS
 GROSS APPLICATION <G> = 6.50 INCHES
 NET APPLICATION <Fn> = 2.37 INCHES
 RUNOFF <Ro> = 1.37 INCHES
 DEEP PERCOLATION <Dp> = 1.89 INCHES
 EFFICIENCY <E> = 40.73 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.24 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 3.00 ft
 Furrow Length <4> 1050 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 15.0 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field K1: MWA, wheat, corrugations

FURROW

Auto

INTAKE FAMILY <If> = 0.70
 DESIGN APPLICATION <Fn> = 2.24 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 1050 FEET
 INFLOW RATE <Q> = 9.5 GPM/FURROW
 APPLICATION TIME <Ti> = 36 HOURS

 ADVANCE TIME <At> = 1773.3 MINUTES; OR 29.6 HOURS
 GROSS APPLICATION <FG> = 15.67 INCHES
 NET APPLICATION <Fn> = 4.94 INCHES
 RUNOFF <RO> = 0.08 INCHES
 DEEP PERCOLATION <DP> = 13.35 INCHES
 EFFICIENCY <E> = 14.29 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.24 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 1050 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 9.5 gpm/furrow
 Inflow Time <7> 36 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <8/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

Field K1: MWA, sugar beets, furrows

FURROW

Auto

INTAKE FAMILY <If> = 0.70
 DESIGN APPLICATION <Fn> = 2.60 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 1050 FEET
 INFLOW RATE <Q> = 16.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <At> = 517.5 MINUTES; OR 8.6 HOURS
 GROSS APPLICATION <FG> = 7.70 INCHES
 NET APPLICATION <Fn> = 2.75 INCHES
 RUNOFF <RO> = 1.72 INCHES
 DEEP PERCOLATION <DP> = 3.38 INCHES
 EFFICIENCY <E> = 33.77 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.60 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 1050 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 16.0 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>?

Field K1: No, corn, furrows

FURROW

Auto

INTAKE FAMILY <If> = 0.55
 DESIGN APPLICATION <Fn> = 1.52 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 3.00 FEET
 FURROW LENGTH <L> = 1050 FEET
 INFLOW RATE <Q> = 12.5 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <At> = 468.5 MINUTES; OR 7.8 HOURS
 GROSS APPLICATION <FG> = 4.50 INCHES
 NET APPLICATION <Fn> = 1.72 INCHES
 RUNOFF <RO> = 1.40 INCHES
 DEEP PERCOLATION <DP> = 1.66 INCHES
 EFFICIENCY <E> = 33.77 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 1.52 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 3.00 ft
 Furrow Length <4> 1050 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 12.5 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>? _

Field K1: No, wheat, corrugations

```

FURROW
Auto
INTAKE FAMILY <If> = 0.55
DESIGN APPLICATION <Fn> = 1.52 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <W> = 2.00 FEET
FURROW LENGTH <L> = 1050 FEET
INFLOW RATE <Q> = 9.0 GPM/FURROW
APPLICATION TIME <Ti> = 24 HOURS
*****
ADVANCE TIME <Tt> = 1227.3 MINUTES; OR 20.4 HOURS
GROSS APPLICATION <FG> = 9.90 INCHES
NET APPLICATION <Fv> = 2.66 INCHES
RUNOFF <Ro> = 0.97 INCHES
DEEP PERCOLATION <DP> = 7.41 INCHES
EFFICIENCY <E> = 15.35 %
TO CHANGE:
  Design Application <1> PRESS (EXISTING)
  Furrow Slope <2> 1.52 in
  Furrow Spacing <3> 0.002 ft/ft
  Furrow Length <4> 2.00 ft
  Furrow Intake Family <5> 1050 ft
  Inflow Rate <6> 9.0 gpm/furrow
  Inflow Time <7> 24 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <0/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _
  
```

Field K1: No, sugar beets, furrows

```

FURROW
Auto
INTAKE FAMILY <If> = 0.55
DESIGN APPLICATION <Fn> = 1.76 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <W> = 2.00 FEET
FURROW LENGTH <L> = 1050 FEET
INFLOW RATE <Q> = 12.0 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Tt> = 519.3 MINUTES; OR 8.7 HOURS
GROSS APPLICATION <FG> = 6.40 INCHES
NET APPLICATION <Fv> = 2.19 INCHES
RUNOFF <Ro> = 1.92 INCHES
DEEP PERCOLATION <DP> = 2.92 INCHES
EFFICIENCY <E> = 26.67 %
TO CHANGE:
  Design Application <1> PRESS (EXISTING)
  Furrow Slope <2> 1.76 in
  Furrow Spacing <3> 0.002 ft/ft
  Furrow Length <4> 2.00 ft
  Furrow Intake Family <5> 1050 ft
  Inflow Rate <6> 12.0 gpm/furrow
  Inflow Time <7> 12 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <0/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _
  
```

Field K1: BdA, corn, furrows

```

FURROW
Auto
INTAKE FAMILY <If> = 0.55
DESIGN APPLICATION <Fn> = 4.44 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <W> = 3.00 FEET
FURROW LENGTH <L> = 1050 FEET
INFLOW RATE <Q> = 42.0 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Tt> = 82.0 MINUTES; OR 1.4 HOURS
GROSS APPLICATION <FG> = 15.40 INCHES
NET APPLICATION <Fv> = 4.44 INCHES
RUNOFF <Ro> = 10.71 INCHES
DEEP PERCOLATION <DP> = 0.25 INCHES
EFFICIENCY <E> = 20.03 %
TO CHANGE:
  Design Application <1> PRESS (EXISTING)
  Furrow Slope <2> 4.44 in
  Furrow Spacing <3> 0.002 ft/ft
  Furrow Length <4> 3.00 ft
  Furrow Intake Family <5> 1050 ft
  Inflow Rate <6> 42.0 gpm/furrow
  Inflow Time <7> 12 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <0/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _
  
```

Field K1: BdA, wheat, corrugations

FURROW

Auto

INTAKE FAMILY <I> = 0.55
 DESIGN APPLICATION <F> = 4.44 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 2.00 FEET
 FURROW LENGTH <L> = 1050 FEET
 INFLOW RATE <Q> = 10.0 GPM/FURROW
 APPLICATION TIME <T> = 24 HOURS

 ADVANCE TIME <A> = 869.3 MINUTES; OR 14.5 HOURS
 GROSS APPLICATION <G> = 11.00 INCHES
 NET APPLICATION <N> = 5.40 INCHES
 RUNOFF <R> = 1.49 INCHES
 DEEP PERCOLATION <D> = 5.07 INCHES
 EFFICIENCY <E> = 40.37 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 4.44 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 1050 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 10.0 gpm/furrow
 Inflow Time <7> 24 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <8/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

Field K1: BdA, sugar beets, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.55
 DESIGN APPLICATION <F> = 5.42 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 2.00 FEET
 FURROW LENGTH <L> = 1050 FEET
 INFLOW RATE <Q> = 24.5 GPM/FURROW
 APPLICATION TIME <T> = 12 HOURS

 ADVANCE TIME <A> = 139.9 MINUTES; OR 2.3 HOURS
 GROSS APPLICATION <G> = 13.47 INCHES
 NET APPLICATION <N> = 5.43 INCHES
 RUNOFF <R> = 7.44 INCHES
 DEEP PERCOLATION <D> = 0.62 INCHES
 EFFICIENCY <E> = 40.22 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 5.42 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 1050 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 24.5 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>? _

Field K2: MwA, corn, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.70
 DESIGN APPLICATION <F> = 2.24 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 3.00 FEET
 FURROW LENGTH <L> = 1300 FEET
 INFLOW RATE <Q> = 20.0 GPM/FURROW
 APPLICATION TIME <T> = 12 HOURS

 ADVANCE TIME <A> = 453.0 MINUTES; OR 7.6 HOURS
 GROSS APPLICATION <G> = 5.92 INCHES
 NET APPLICATION <N> = 2.42 INCHES
 RUNOFF <R> = 1.57 INCHES
 DEEP PERCOLATION <D> = 2.12 INCHES
 EFFICIENCY <E> = 37.82 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.24 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 3.00 ft
 Furrow Length <4> 1300 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 20.0 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>? _

Field K2: MwA, wheat, corrugations

FURROW

Auto

OPPORTUNITY TIME AT X IS LESS THAN ZERO. WATER DIDN'T REACH POINT X (L)!!! TRY INCREASING 'Q'.

TO CHANGE:

	PRESS	(EXISTING)
Design Application	<1>	2.24 in
Furrow Slope	<2>	0.002 ft/ft
Furrow Spacing	<3>	2.00 ft
Furrow Length	<4>	1300 ft
Furrow Intake Family	<5>	0.70
Inflow Rate	<6>	10.0 gpm/furrow
Inflow Time	<7>	24 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS:<8/9>

NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

INFLOW TIME? 36

OPPORTUNITY TIME AT X IS LESS THAN ZERO. WATER DIDN'T REACH POINT X (L)!!! TRY INCREASING 'Q'.

TO CHANGE:

	PRESS	(EXISTING)
Design Application	<1>	2.24 in
Furrow Slope	<2>	0.002 ft/ft
Furrow Spacing	<3>	2.00 ft
Furrow Length	<4>	1300 ft
Furrow Intake Family	<5>	0.70
Inflow Rate	<6>	10.0 gpm/furrow
Inflow Time	<7>	36 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS:<8/9>

NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field K2: MwA, wheat, furrows, split furrow lengths to 650 ft

FURROW

Auto

INTAKE FAMILY <1> = 0.70

DESIGN APPLICATION <Fm> = 2.24 INCHES

FURROW SLOPE <S> = 0.002 FEET/FOOT

FURROW SPACING <U> = 2.00 FEET

FURROW LENGTH <L> = 650 FEET

INFLOW RATE <Q> = 7.5 GPM/FURROW

APPLICATION TIME <Ti> = 12 HOURS

ADVANCE TIME <Tt> = 480.1 MINUTES; OR 8.0 HOURS

GROSS APPLICATION <G> = 6.66 INCHES

NET APPLICATION <F> = 3.31 INCHES

RUNOFF <RO> = 0.13 INCHES

DEEP PERCOLATION <DP> = 0.29 INCHES

EFFICIENCY <E> = 33.62 %

TO CHANGE:

	PRESS	(EXISTING)
Design Application	<1>	2.24 in
Furrow Slope	<2>	0.002 ft/ft
Furrow Spacing	<3>	2.00 ft
Furrow Length	<4>	650 ft
Furrow Intake Family	<5>	0.70
Inflow Rate	<6>	7.5 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>?

Field K2: MwA, sugar beets, furrows

FURROW

Auto

INTAKE FAMILY <1> = 0.70

DESIGN APPLICATION <Fm> = 2.60 INCHES

FURROW SLOPE <S> = 0.002 FEET/FOOT

FURROW SPACING <U> = 2.00 FEET

FURROW LENGTH <L> = 1300 FEET

INFLOW RATE <Q> = 10.5 GPM/FURROW

APPLICATION TIME <Ti> = 12 HOURS

ADVANCE TIME <Tt> = 543.9 MINUTES; OR 9.1 HOURS

GROSS APPLICATION <G> = 8.22 INCHES

NET APPLICATION <F> = 2.65 INCHES

RUNOFF <RO> = 1.95 INCHES

DEEP PERCOLATION <DP> = 3.67 INCHES

EFFICIENCY <E> = 31.64 %

TO CHANGE:

	PRESS	(EXISTING)
Design Application	<1>	2.60 in
Furrow Slope	<2>	0.002 ft/ft
Furrow Spacing	<3>	2.00 ft
Furrow Length	<4>	1300 ft
Furrow Intake Family	<5>	0.70
Inflow Rate	<6>	10.5 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>?

Field K2: BdA, corn, furrows

```

FURROW
Auto
*****
INTAKE FAMILY <If> = 0.55
DESIGN APPLICATION <Fn> = 4.44 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <U> = 3.00 FEET
FURROW LENGTH <L> = 1300 FEET
INFLOW RATE <Q> = 47.5 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Tt> = 109.9 MINUTES; OR 1.8 HOURS
GROSS APPLICATION <Fg> = 14.07 INCHES
NET APPLICATION <Fn> = 4.45 INCHES
RUNOFF <Ro> = 9.27 INCHES
DEEP PERCOLATION <Dp> = 0.36 INCHES
EFFICIENCY <E> = 31.56 %
TO CHANGE:
Design Application PRESS (EXISTING)
Furrow Slope <1> 4.44 in
Furrow Spacing <2> 0.002 ft/ft
Furrow Length <3> 3.00 ft
Furrow Intake Family <4> 1300 ft
Inflow Rate <5> 0.55
Inflow Time <6> 47.5 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>?
  
```

Field K2: BdA, wheat, corrugations

```

FURROW
Auto
*****
OPPORTUNITY TIME AT X IS LESS THAN ZERO. WATER DIDN'T REACH POINT X (L)!!! TRY
INCREASING 'Q'.
TO CHANGE:
Design Application PRESS (EXISTING)
Furrow Slope <1> 4.44 in
Furrow Spacing <2> 0.002 ft/ft
Furrow Length <3> 2.00 ft
Furrow Intake Family <4> 1300 ft
Inflow Rate <5> 0.55
Inflow Time <6> 10.0 gpm/furrow
Inflow Time <7> 24 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <8/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? 7
INFLOW TIME? 36
OPPORTUNITY TIME AT X IS LESS THAN ZERO. WATER DIDN'T REACH POINT X (L)!!! TRY
INCREASING 'Q'.
TO CHANGE:
Design Application PRESS (EXISTING)
Furrow Slope <1> 4.44 in
Furrow Spacing <2> 0.002 ft/ft
Furrow Length <3> 2.00 ft
Furrow Intake Family <4> 1300 ft
Inflow Rate <5> 0.55
Inflow Time <6> 10.0 gpm/furrow
Inflow Time <7> 36 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <8/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?
  
```

Field K2: BdA, wheat, corrugations, field split into 650 ft lengths

```

FURROW
Auto
*****
INTAKE FAMILY <If> = 0.55
DESIGN APPLICATION <Fn> = 4.44 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <U> = 2.00 FEET
FURROW LENGTH <L> = 650 FEET
INFLOW RATE <Q> = 0.5 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Tt> = 232.5 MINUTES; OR 3.9 HOURS
GROSS APPLICATION <Fg> = 7.55 INCHES
NET APPLICATION <Fn> = 4.63 INCHES
RUNOFF <Ro> = 1.01 INCHES
DEEP PERCOLATION <Dp> = 1.31 INCHES
EFFICIENCY <E> = 50.80 %
TO CHANGE:
Design Application PRESS (EXISTING)
Furrow Slope <1> 4.44 in
Furrow Spacing <2> 0.002 ft/ft
Furrow Length <3> 2.00 ft
Furrow Intake Family <4> 650 ft
Inflow Rate <5> 0.55
Inflow Time <6> 0.5 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>?
  
```

Field K2: BdA, sugar beets, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.55
 DESIGN APPLICATION <F> = 5.42 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 1300 FEET
 INFLOW RATE <Q> = 30.0 GPM/FURROW
 APPLICATION TIME <T> = 12 HOURS

 ADVANCE TIME <T> = 175.6 MINUTES; OR 2.9 HOURS
 GROSS APPLICATION <FG> = 13.33 INCHES
 NET APPLICATION <FN> = 5.45 INCHES
 RUNOFF <RO> = 7.06 INCHES
 DEEP PERCOLATION <DP> = 0.85 INCHES
 EFFICIENCY <E> = 40.67 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 5.42 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 1300 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 30.0 gpm/furrow
 Inflow time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field L: MWA, pasture, corrugations

FURROW

Auto

INTAKE FAMILY <I> = 0.70
 DESIGN APPLICATION <F> = 1.88 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 200 FEET
 INFLOW RATE <Q> = 3.0 GPM/FURROW
 APPLICATION TIME <T> = 12 HOURS

 ADVANCE TIME <T> = 73.8 MINUTES; OR 1.2 HOURS
 GROSS APPLICATION <FG> = 0.66 INCHES
 NET APPLICATION <FN> = 5.62 INCHES
 RUNOFF <RO> = 2.70 INCHES
 DEEP PERCOLATION <DP> = 4.08 INCHES
 EFFICIENCY <E> = 21.70 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 1.88 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 200 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 3.0 gpm/furrow
 Inflow time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field L: No, pasture, corrugations

FURROW

Auto

INTAKE FAMILY <I> = 0.55
 DESIGN APPLICATION <F> = 1.20 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 200 FEET
 INFLOW RATE <Q> = 3.0 GPM/FURROW
 APPLICATION TIME <T> = 12 HOURS

 ADVANCE TIME <T> = 53.6 MINUTES; OR 0.9 HOURS
 GROSS APPLICATION <FG> = 8.66 INCHES
 NET APPLICATION <FN> = 4.65 INCHES
 RUNOFF <RO> = 3.83 INCHES
 DEEP PERCOLATION <DP> = 3.56 INCHES
 EFFICIENCY <E> = 14.70 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 1.20 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 200 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 3.0 gpm/furrow
 Inflow time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field M: No, alfalfa hay, corrugations

FURROW

Auto

INTAKE FAMILY <If> = 0.55
 DESIGN APPLICATION <Fn> = 1.76 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.50 FEET
 FURROW LENGTH <L> = 650 FEET
 INFLOW RATE <Q> = 6.5 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 464.1 MINUTES; OR 7.7 HOURS
 GROSS APPLICATION <Fg> = 4.62 INCHES
 NET APPLICATION <Fn> = 2.21 INCHES
 RUNOFF <Ro> = 0.51 INCHES
 DEEP PERCOLATION <Dp> = 2.35 INCHES
 EFFICIENCY <E> = 30.10 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 1.76 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.50 ft
 Furrow Length <4> 650 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 6.5 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>?

Field M: No, wheat, corrugations

FURROW

Auto

INTAKE FAMILY <If> = 0.55
 DESIGN APPLICATION <Fn> = 1.52 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 650 FEET
 INFLOW RATE <Q> = 6.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 592.8 MINUTES; OR 9.9 HOURS
 GROSS APPLICATION <Fg> = 5.33 INCHES
 NET APPLICATION <Fn> = 1.69 INCHES
 RUNOFF <Ro> = 0.43 INCHES
 DEEP PERCOLATION <Dp> = 3.30 INCHES
 EFFICIENCY <E> = 28.51 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 1.52 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 650 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 6.0 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>?

Field M: No, sugar beets, furrows

FURROW

Auto

INTAKE FAMILY <If> = 0.55
 DESIGN APPLICATION <Fn> = 1.76 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 650 FEET
 INFLOW RATE <Q> = 6.5 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 464.1 MINUTES; OR 7.7 HOURS
 GROSS APPLICATION <Fg> = 5.77 INCHES
 NET APPLICATION <Fn> = 2.29 INCHES
 RUNOFF <Ro> = 1.52 INCHES
 DEEP PERCOLATION <Dp> = 2.50 INCHES
 EFFICIENCY <E> = 30.40 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 1.76 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 650 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 6.5 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>?

Field M: BdA, alfalfa hay, corrugations

FURROW

Auto

INTAKE FAMILY <I> = 0.55
 DESIGN APPLICATION <F> = 5.42 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 650 FEET
 INFLOW RATE <Q> = 6.5 GPM/FURROW
 APPLICATION TIME <T> = 24 HOURS

 ADVANCE TIME <AT> = 464.1 MINUTES; OR 7.7 HOURS
 GROSS APPLICATION <FG> = 9.24 INCHES
 NET APPLICATION <FN> = 5.75 INCHES
 RUNOFF <RO> = 2.01 INCHES
 DEEP PERCOLATION <DP> = 1.81 INCHES
 EFFICIENCY <E> = 50.66 %

TO CHANGE:

	PRESS	(EXISTING)
Design Application	<1>	5.42 in
Furrow Slope	<2>	0.002 ft/ft
Furrow Spacing	<3>	2.00 ft
Furrow Length	<4>	650 ft
Furrow Intake Family	<5>	0.55
Inflow Rate	<6>	6.5 gpm/furrow
Inflow Time	<7>	24 hours

TO PRINT: DATA/WITH HEADING PRESS <8/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field M: BdA, wheat, corrugations

FURROW

Auto

INTAKE FAMILY <I> = 0.55
 DESIGN APPLICATION <F> = 4.44 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 650 FEET
 INFLOW RATE <Q> = 0.5 GPM/FURROW
 APPLICATION TIME <T> = 12 HOURS

 ADVANCE TIME <AT> = 232.5 MINUTES; OR 3.9 HOURS
 GROSS APPLICATION <FG> = 7.55 INCHES
 NET APPLICATION <FN> = 4.63 INCHES
 RUNOFF <RO> = 1.81 INCHES
 DEEP PERCOLATION <DP> = 1.31 INCHES
 EFFICIENCY <E> = 58.80 %

TO CHANGE:

	PRESS	(EXISTING)
Design Application	<1>	4.44 in
Furrow Slope	<2>	0.002 ft/ft
Furrow Spacing	<3>	2.00 ft
Furrow Length	<4>	650 ft
Furrow Intake Family	<5>	0.55
Inflow Rate	<6>	0.5 gpm/furrow
Inflow Time	<7>	12 hours

TO PRINT: DATA/WITH HEADING PRESS <8/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field M: BdA, sugar beets, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.55
 DESIGN APPLICATION <F> = 5.42 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 650 FEET
 INFLOW RATE <Q> = 17.5 GPM/FURROW
 APPLICATION TIME <T> = 12 HOURS

 ADVANCE TIME <AT> = 73.2 MINUTES; OR 1.2 HOURS
 GROSS APPLICATION <FG> = 15.55 INCHES
 NET APPLICATION <FN> = 5.43 INCHES
 RUNOFF <RO> = 2.04 INCHES
 DEEP PERCOLATION <DP> = 0.29 INCHES
 EFFICIENCY <E> = 34.06 %

TO CHANGE:

	PRESS	(EXISTING)
Design Application	<1>	5.42 in
Furrow Slope	<2>	0.002 ft/ft
Furrow Spacing	<3>	2.00 ft
Furrow Length	<4>	650 ft
Furrow Intake Family	<5>	0.55
Inflow Rate	<6>	17.5 gpm/furrow
Inflow Time	<7>	12 hours

TO PRINT: DATA/WITH HEADING PRESS <8/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field N: MwA, radish seed, furrows

```

FURROW
Auto
INTAKE FAMILY <I> = 0.70
DESIGN APPLICATION <Fn> = 0.59 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <U> = 2.00 FEET
FURROW LENGTH <L> = 450 FEET
INFLOW RATE <Q> = 4.5 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Tt> = 527.6 MINUTES; OR 8.8 HOURS
GROSS APPLICATION <FG> = 5.77 INCHES
NET APPLICATION <Fv> = 2.13 INCHES
RUNOFF <RO> = 0.86 INCHES
DEEP PERCOLATION <DP> = 4.33 INCHES
EFFICIENCY <E> = 10.22 %
TO CHANGE:
Design Application <1> PRESS (EXISTING) 0.59 in
Furrow Slope <2> 0.002 ft/ft
Furrow Spacing <3> 2.00 ft
Furrow Length <4> 450 ft
Furrow Intake Family <5> 0.70
Inflow Rate <6> 4.5 gpm/furrow
Inflow Time <7> 12 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <0/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

```

Field N: MwA, corn, furrows

```

FURROW
Auto
INTAKE FAMILY <I> = 0.70
DESIGN APPLICATION <Fn> = 2.24 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <U> = 3.00 FEET
FURROW LENGTH <L> = 450 FEET
INFLOW RATE <Q> = 5.5 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Tt> = 290.9 MINUTES; OR 4.7 HOURS
GROSS APPLICATION <FG> = 4.71 INCHES
NET APPLICATION <Fv> = 2.66 INCHES
RUNOFF <RO> = 1.14 INCHES
DEEP PERCOLATION <DP> = 1.33 INCHES
EFFICIENCY <E> = 67.61 %
TO CHANGE:
Design Application <1> PRESS (EXISTING) 2.24 in
Furrow Slope <2> 0.002 ft/ft
Furrow Spacing <3> 3.00 ft
Furrow Length <4> 450 ft
Furrow Intake Family <5> 0.70
Inflow Rate <6> 5.5 gpm/furrow
Inflow Time <7> 12 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <0/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

```

Field N: MwA, wheat, corrugations

```

FURROW
Auto
INTAKE FAMILY <I> = 0.70
DESIGN APPLICATION <Fn> = 2.24 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <U> = 2.00 FEET
FURROW LENGTH <L> = 450 FEET
INFLOW RATE <Q> = 5.0 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Tt> = 373.1 MINUTES; OR 6.2 HOURS
GROSS APPLICATION <FG> = 6.42 INCHES
NET APPLICATION <Fv> = 3.31 INCHES
RUNOFF <RO> = 1.25 INCHES
DEEP PERCOLATION <DP> = 2.92 INCHES
EFFICIENCY <E> = 34.91 %
TO CHANGE:
Design Application <1> PRESS (EXISTING) 2.24 in
Furrow Slope <2> 0.002 ft/ft
Furrow Spacing <3> 2.00 ft
Furrow Length <4> 450 ft
Furrow Intake Family <5> 0.70
Inflow Rate <6> 5.0 gpm/furrow
Inflow Time <7> 12 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <0/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

```

Field N: MwA, sugar beets, furrows

FURROW

Auto

INTAKE FAMILY <IF> = 0.70
 DESIGN APPLICATION <Fn> = 2.60 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 450 FEET
 INFLOW RATE <Q> = 5.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

ADVANCE TIME <IT> = 373.1 MINUTES; OR 6.2 HOURS
 GROSS APPLICATION <FG> = 6.42 INCHES
 NET APPLICATION <Fn> = 3.31 INCHES
 RUNOFF <RO> = 1.25 INCHES
 DEEP PERCOLATION <DP> = 2.56 INCHES
 EFFICIENCY <E> = 40.52 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.60 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 450 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 5.0 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field O: MvA, sugar beets, furrows

FURROW

Auto

INTAKE FAMILY <IF> = 0.70
 DESIGN APPLICATION <Fn> = 2.60 INCHES
 FURROW SLOPE <S> = 0.005 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 800 FEET
 INFLOW RATE <Q> = 7.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

ADVANCE TIME <IT> = 359.8 MINUTES; OR 6.0 HOURS
 GROSS APPLICATION <FG> = 5.05 INCHES
 NET APPLICATION <Fn> = 3.34 INCHES
 RUNOFF <RO> = 0.04 INCHES
 DEEP PERCOLATION <DP> = 2.41 INCHES
 EFFICIENCY <E> = 51.46 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.60 in
 Furrow Slope <2> 0.005 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 800 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 7.0 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field O: MvA, corn, furrows

FURROW

Auto

INTAKE FAMILY <IF> = 0.70
 DESIGN APPLICATION <Fn> = 2.24 INCHES
 FURROW SLOPE <S> = 0.005 FEET/FOOT
 FURROW SPACING <U> = 3.00 FEET
 FURROW LENGTH <L> = 800 FEET
 INFLOW RATE <Q> = 7.5 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

ADVANCE TIME <IT> = 303.6 MINUTES; OR 5.1 HOURS
 GROSS APPLICATION <FG> = 3.61 INCHES
 NET APPLICATION <Fn> = 2.50 INCHES
 RUNOFF <RO> = 0.18 INCHES
 DEEP PERCOLATION <DP> = 1.19 INCHES
 EFFICIENCY <E> = 62.06 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.24 in
 Furrow Slope <2> 0.005 ft/ft
 Furrow Spacing <3> 3.00 ft
 Furrow Length <4> 800 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 7.5 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field O: BdA, sugar beets, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.55
 DESIGN APPLICATION <F> = 5.42 INCHES
 FURROW SLOPE <S> = 0.005 FEET/FOOT
 FURROW SPACING <W> = 2.00 FEET
 FURROW LENGTH <L> = 800 FEET
 INFLOW RATE <Q> = 6.0 GPM/FURROW
 APPLICATION TIME <T> = 24 HOURS

 ADVANCE TIME <T> = 360.4 MINUTES; OR 6.0 HOURS
 GROSS APPLICATION <G> = 0.66 INCHES
 NET APPLICATION <F> = 5.86 INCHES
 RUNOFF <R> = 1.77 INCHES
 DEEP PERCOLATION <DP> = 1.47 INCHES
 EFFICIENCY <E> = 62.57 %
 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 5.42 in
 Furrow Slope <2> 0.005 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 800 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 6.0 gpm/furrow
 Inflow Time <7> 24 hours <ANALYSIS MODE>
 TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field O: BdA, corn, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.55
 DESIGN APPLICATION <F> = 4.44 INCHES
 FURROW SLOPE <S> = 0.005 FEET/FOOT
 FURROW SPACING <W> = 3.00 FEET
 FURROW LENGTH <L> = 800 FEET
 INFLOW RATE <Q> = 8.0 GPM/FURROW
 APPLICATION TIME <T> = 24 HOURS

 ADVANCE TIME <T> = 194.0 MINUTES; OR 3.2 HOURS
 GROSS APPLICATION <G> = 7.70 INCHES
 NET APPLICATION <F> = 4.55 INCHES
 RUNOFF <R> = 2.79 INCHES
 DEEP PERCOLATION <DP> = 0.47 INCHES
 EFFICIENCY <E> = 57.66 %
 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 4.44 in
 Furrow Slope <2> 0.005 ft/ft
 Furrow Spacing <3> 3.00 ft
 Furrow Length <4> 800 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 8.0 gpm/furrow
 Inflow Time <7> 24 hours <ANALYSIS MODE>
 TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field P: MvA, sugar beets, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.70
 DESIGN APPLICATION <F> = 2.60 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 2.00 FEET
 FURROW LENGTH <L> = 1350 FEET
 INFLOW RATE <Q> = 19.5 GPM/FURROW
 APPLICATION TIME <T> = 12 HOURS

 ADVANCE TIME <T> = 544.8 MINUTES; OR 9.1 HOURS
 GROSS APPLICATION <G> = 8.34 INCHES
 NET APPLICATION <F> = 2.67 INCHES
 RUNOFF <R> = 2.00 INCHES
 DEEP PERCOLATION <DP> = 3.74 INCHES
 EFFICIENCY <E> = 31.17 %
 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.60 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 1350 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 19.5 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>
 TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field P: MvA, corn, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.70
 DESIGN APPLICATION <Fn> = 2.24 INCHES
 FURROW SLOPE <S> = 0.002 FT/FT
 FURROW SPACING <W> = 3.00 FEET
 FURROW LENGTH <L> = 1350 FEET
 INFLOW RATE <Q> = 21.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 458.9 MINUTES; OR 7.6 HOURS
 GROSS APPLICATION <Fg> = 5.99 INCHES
 NET APPLICATION <Fn> = 2.41 INCHES
 RUNOFF <RO> = 1.59 INCHES
 DEEP PERCOLATION <DP> = 2.15 INCHES
 EFFICIENCY <E> = 37.40 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.24 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 3.00 ft
 Furrow Length <4> 1350 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 21.0 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>

Field P: BdA, sugar beets, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.55
 DESIGN APPLICATION <Fn> = 5.42 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 2.00 FEET
 FURROW LENGTH <L> = 1350 FEET
 INFLOW RATE <Q> = 31.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 103.6 MINUTES; OR 3.1 HOURS
 GROSS APPLICATION <Fg> = 13.26 INCHES
 NET APPLICATION <Fn> = 5.42 INCHES
 RUNOFF <RO> = 6.96 INCHES
 DEEP PERCOLATION <DP> = 0.88 INCHES
 EFFICIENCY <E> = 40.87 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 5.42 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 1350 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 31.0 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>

Field P: BdA, corn, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.55
 DESIGN APPLICATION <Fn> = 4.44 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 3.00 FEET
 FURROW LENGTH <L> = 1350 FEET
 INFLOW RATE <Q> = 48.5 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 115.7 MINUTES; OR 1.9 HOURS
 GROSS APPLICATION <Fg> = 13.83 INCHES
 NET APPLICATION <Fn> = 4.45 INCHES
 RUNOFF <RO> = 9.02 INCHES
 DEEP PERCOLATION <DP> = 0.38 INCHES
 EFFICIENCY <E> = 32.10 %

TO CHANGE: PRESS (EXISTING)
 Design Application <1> 4.44 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 3.00 ft
 Furrow Length <4> 1350 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 48.5 gpm/furrow
 Inflow Time <7> 12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <0/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>

Field Q: MvA/MwA, corn, furrows

FURROW

Auto

INTAKE FAMILY <IF> = 0.70
 DESIGN APPLICATION <Fn> = 2.24 INCHES
 FURROW SLOPE <S> = 0.006 FEET/FOOT
 FURROW SPACING <W> = 3.00 FEET
 FURROW LENGTH <L> = 800 FEET
 INFLOW RATE <Q> = 7.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 288.4 MINUTES; OR 4.8 HOURS
 GROSS APPLICATION <FG> = 3.37 INCHES
 NET APPLICATION <Fv> = 2.49 INCHES
 RUNOFF <RO> = 0.82 INCHES
 DEEP PERCOLATION <DP> = 1.11 INCHES
 EFFICIENCY <E> = 66.50 %
 TO CHANGE:
 Design Application <1> PRESS (EXISTING)
 Furrow Slope <2> 2.24 in
 Furrow Spacing <3> 0.006 ft/ft
 Furrow Length <4> 3.00 ft
 Furrow Intake Family <5> 800 ft
 Inflow Rate <6> 7.0 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>?

Field Q: MvA/MwA, sugar beets, furrows

FURROW

Auto

INTAKE FAMILY <IF> = 0.70
 DESIGN APPLICATION <Fn> = 2.60 INCHES
 FURROW SLOPE <S> = 0.006 FEET/FOOT
 FURROW SPACING <W> = 2.00 FEET
 FURROW LENGTH <L> = 800 FEET
 INFLOW RATE <Q> = 7.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 200.4 MINUTES; OR 3.3 HOURS
 GROSS APPLICATION <FG> = 5.05 INCHES
 NET APPLICATION <Fv> = 3.74 INCHES
 RUNOFF <RO> = 0.03 INCHES
 DEEP PERCOLATION <DP> = 2.42 INCHES
 EFFICIENCY <E> = 51.46 %
 TO CHANGE:
 Design Application <1> PRESS (EXISTING)
 Furrow Slope <2> 2.60 in
 Furrow Spacing <3> 0.006 ft/ft
 Furrow Length <4> 2.00 ft
 Furrow Intake Family <5> 800 ft
 Inflow Rate <6> 7.0 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>?

Field Q: MvA/MwA, wheat, corrugations

FURROW

Auto

INTAKE FAMILY <IF> = 0.70
 DESIGN APPLICATION <Fn> = 2.24 INCHES
 FURROW SLOPE <S> = 0.006 FEET/FOOT
 FURROW SPACING <W> = 2.00 FEET
 FURROW LENGTH <L> = 800 FEET
 INFLOW RATE <Q> = 9.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 173.5 MINUTES; OR 2.9 HOURS
 GROSS APPLICATION <FG> = 6.50 INCHES
 NET APPLICATION <Fv> = 5.55 INCHES
 RUNOFF <RO> = 0.06 INCHES
 DEEP PERCOLATION <DP> = 6.19 INCHES
 EFFICIENCY <E> = 34.48 %
 TO CHANGE:
 Design Application <1> PRESS (EXISTING)
 Furrow Slope <2> 2.24 in
 Furrow Spacing <3> 0.006 ft/ft
 Furrow Length <4> 2.00 ft
 Furrow Intake Family <5> 800 ft
 Inflow Rate <6> 9.0 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>?

Field Q: OgA, corn, furrows

```

FURROW
Auto
*****
INTAKE FAMILY <If> = 0.55
DESIGN APPLICATION <Fn> = 3.07 INCHES
FURROW SLOPE <S> = 0.006 FEET/FOOT
FURROW SPACING <U> = 3.00 FEET
FURROW LENGTH <L> = 800 FEET
INFLOW RATE <Q> = 14.5 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Ti> = 77.1 MINUTES; OR 1.3 HOURS
GROSS APPLICATION <FG> = 6.90 INCHES
NET APPLICATION <FN> = 3.08 INCHES
RUNOFF <RO> = 3.73 INCHES
DEEP PERCOLATION <DP> = 0.18 INCHES
EFFICIENCY <E> = 44.00 %
TO CHANGE:
Design Application <1> PRESS (EXISTING)
Furrow Slope <2> 3.07 in
Furrow Spacing <3> 0.006 ft/ft
Furrow Length <4> 3.00 ft
Furrow Intake Family <5> 800 ft
Inflow Rate <6> 0.55
Inflow Time <7> 14.5 gpm/furrow
12 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <8/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

```

Field Q: OgA, sugar beets, furrows

```

FURROW
Auto
*****
INTAKE FAMILY <If> = 0.55
DESIGN APPLICATION <Fn> = 3.34 INCHES
FURROW SLOPE <S> = 0.006 FEET/FOOT
FURROW SPACING <U> = 2.00 FEET
FURROW LENGTH <L> = 800 FEET
INFLOW RATE <Q> = 7.0 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Ti> = 210.3 MINUTES; OR 3.5 HOURS
GROSS APPLICATION <FG> = 5.05 INCHES
NET APPLICATION <FN> = 3.44 INCHES
RUNOFF <RO> = 0.92 INCHES
DEEP PERCOLATION <DP> = 0.79 INCHES
EFFICIENCY <E> = 66.10 %
TO CHANGE:
Design Application <1> PRESS (EXISTING)
Furrow Slope <2> 3.34 in
Furrow Spacing <3> 0.006 ft/ft
Furrow Length <4> 2.00 ft
Furrow Intake Family <5> 800 ft
Inflow Rate <6> 0.55
Inflow Time <7> 7.0 gpm/furrow
12 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <8/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

```

Field Q: OgA, wheat, corrugations

```

FURROW
Auto
*****
INTAKE FAMILY <If> = 0.55
DESIGN APPLICATION <Fn> = 3.07 INCHES
FURROW SLOPE <S> = 0.006 FEET/FOOT
FURROW SPACING <U> = 2.00 FEET
FURROW LENGTH <L> = 800 FEET
INFLOW RATE <Q> = 7.0 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Ti> = 210.3 MINUTES; OR 3.5 HOURS
GROSS APPLICATION <FG> = 5.05 INCHES
NET APPLICATION <FN> = 4.06 INCHES
RUNOFF <RO> = 0.16 INCHES
DEEP PERCOLATION <DP> = 1.82 INCHES
EFFICIENCY <E> = 60.76 %
TO CHANGE:
Design Application <1> PRESS (EXISTING)
Furrow Slope <2> 3.07 in
Furrow Spacing <3> 0.006 ft/ft
Furrow Length <4> 2.00 ft
Furrow Intake Family <5> 800 ft
Inflow Rate <6> 0.55
Inflow Time <7> 7.0 gpm/furrow
12 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <8/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>? _

```

Field R: MvA, corn, furrows

```

FURROW
Auto
*****
INTAKE FAMILY <I> = 0.70
DESIGN APPLICATION <Fn> = 2.24 INCHES
FURROW SLOPE <S> = 0.003 FEET/FOOT
FURROW SPACING <U> = 3.00 FEET
FURROW LENGTH <L> = 1100 FEET
INFLOW RATE <Q> = 13.5 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Tt> = 404.2 MINUTES; OR 6.7 HOURS
GROSS APPLICATION <G> = 4.72 INCHES
NET APPLICATION <F> = 2.39 INCHES
RUNOFF <RO> = 0.84 INCHES
DEEP PERCOLATION <DP> = 1.65 INCHES
EFFICIENCY <E> = 47.41 %
TO CHANGE:
Design Application    PRESS (EXISTING)
Furrow Slope          <2> 2.24 in
Furrow Spacing        <3> 0.003 ft/ft
Furrow Length         <4> 3.00 ft
Furrow Intake Family  <5> 1100 ft
Inflow Rate           <6> 13.5 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>?
  
```

Field R: MvA, pasture, corrugations, split furrows into 550 ft lengths

```

FURROW
Auto
*****
INTAKE FAMILY <I> = 0.55
DESIGN APPLICATION <Fn> = 1.52 INCHES
FURROW SLOPE <S> = 0.003 FEET/FOOT
FURROW SPACING <U> = 3.00 FEET
FURROW LENGTH <L> = 1100 FEET
INFLOW RATE <Q> = 11.0 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Tt> = 458.1 MINUTES; OR 7.6 HOURS
GROSS APPLICATION <G> = 3.85 INCHES
NET APPLICATION <F> = 1.65 INCHES
RUNOFF <RO> = 0.87 INCHES
DEEP PERCOLATION <DP> = 1.46 INCHES
EFFICIENCY <E> = 39.48 %
TO CHANGE:
Design Application    PRESS (EXISTING)
Furrow Slope          <2> 1.52 in
Furrow Spacing        <3> 0.003 ft/ft
Furrow Length         <4> 3.00 ft
Furrow Intake Family  <5> 1100 ft
Inflow Rate           <6> 11.0 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>?
  
```

Field R: No, corn, furrows

```

FURROW
Auto
*****
INTAKE FAMILY <I> = 0.55
DESIGN APPLICATION <Fn> = 1.28 INCHES
FURROW SLOPE <S> = 0.003 FEET/FOOT
FURROW SPACING <U> = 2.00 FEET
FURROW LENGTH <L> = 1100 FEET
INFLOW RATE <Q> = 10.0 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Tt> = 502.3 MINUTES; OR 8.4 HOURS
GROSS APPLICATION <G> = 5.25 INCHES
NET APPLICATION <F> = 1.91 INCHES
RUNOFF <RO> = 0.07 INCHES
DEEP PERCOLATION <DP> = 3.90 INCHES
EFFICIENCY <E> = 24.38 %
TO CHANGE:
Design Application    PRESS (EXISTING)
Furrow Slope          <2> 1.28 in
Furrow Spacing        <3> 0.003 ft/ft
Furrow Length         <4> 2.00 ft
Furrow Intake Family  <5> 1100 ft
Inflow Rate           <6> 10.0 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>?
  
```

Field R: No, pasture, corrugations

FURROW

Auto

INTAKE FAMILY <If> = 0.55
 DESIGN APPLICATION <Fn> = 1.52 INCHES
 FURROW SLOPE <S> = 0.003 FEET/FOOT
 FURROW SPACING <W> = 3.00 FEET
 FURROW LENGTH <L> = 1100 FEET
 INFLOW RATE <Q> = 11.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 459.1 MINUTES; OR 7.6 HOURS
 GROSS APPLICATION <Gg> = 3.05 INCHES
 NET APPLICATION <Fn> = 1.65 INCHES
 RUNOFF <RO> = 0.37 INCHES
 DEEP PERCOLATION <DP> = 1.46 INCHES
 EFFICIENCY <E> = 39.40 %

TO CHANGE:

Design Application	<1>	PRESS (EXISTING)
Furrow Slope	<2>	1.52 in
Furrow Spacing	<3>	0.003 ft/ft
Furrow Length	<4>	3.00 ft
Furrow Intake Family	<5>	1100 ft
Inflow Rate	<6>	0.55
Inflow Time	<7>	11.0 gpm/furrow
		12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING, PRESS <8/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field S: MvA, pasture, corrugations

FURROW

Auto

INTAKE FAMILY <If> = 0.70
 DESIGN APPLICATION <Fn> = 1.00 INCHES
 FURROW SLOPE <S> = 0.003 FEET/FOOT
 FURROW SPACING <W> = 2.00 FEET
 FURROW LENGTH <L> = 750 FEET
 INFLOW RATE <Q> = 9.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 290.4 MINUTES; OR 4.8 HOURS
 GROSS APPLICATION <Gg> = 6.93 INCHES
 NET APPLICATION <Fn> = 5.02 INCHES
 RUNOFF <RO> = 0.17 INCHES
 DEEP PERCOLATION <DP> = 4.08 INCHES
 EFFICIENCY <E> = 27.13 %

TO CHANGE:

Design Application	<1>	PRESS (EXISTING)
Furrow Slope	<2>	1.00 in
Furrow Spacing	<3>	0.003 ft/ft
Furrow Length	<4>	2.00 ft
Furrow Intake Family	<5>	750 ft
Inflow Rate	<6>	0.70
Inflow Time	<7>	9.0 gpm/furrow
		12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING, PRESS <8/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field S: MvA, corn, furrows

FURROW

Auto

INTAKE FAMILY <If> = 0.70
 DESIGN APPLICATION <Fn> = 2.24 INCHES
 FURROW SLOPE <S> = 0.003 FEET/FOOT
 FURROW SPACING <W> = 3.00 FEET
 FURROW LENGTH <L> = 750 FEET
 INFLOW RATE <Q> = 0.5 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 333.6 MINUTES; OR 5.6 HOURS
 GROSS APPLICATION <Gg> = 4.36 INCHES
 NET APPLICATION <Fn> = 2.53 INCHES
 RUNOFF <RO> = 0.72 INCHES
 DEEP PERCOLATION <DP> = 1.40 INCHES
 EFFICIENCY <E> = 51.34 %

TO CHANGE:

Design Application	<1>	PRESS (EXISTING)
Furrow Slope	<2>	2.24 in
Furrow Spacing	<3>	0.003 ft/ft
Furrow Length	<4>	3.00 ft
Furrow Intake Family	<5>	750 ft
Inflow Rate	<6>	0.70
Inflow Time	<7>	0.5 gpm/furrow
		12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING, PRESS <8/9>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field W: OgA, corn, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.55
 DESIGN APPLICATION <Fn> = 3.07 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 3.00 FEET
 FURROW LENGTH <L> = 750 FEET
 INFLOW RATE <Q> = 13.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Ti> = 154.5 MINUTES; OR 2.6 HOURS
 GROSS APPLICATION <FG> = 6.67 INCHES
 NET APPLICATION <Fn> = 3.07 INCHES
 RUNOFF <RO> = 3.19 INCHES
 DEEP PERCOLATION <DP> = 0.41 INCHES
 EFFICIENCY <E> = 46.01 %
 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 3.07 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 3.00 ft
 Furrow Length <4> 750 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 13.0 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>?

Field W: OgA, pasture, corrugations

FURROW

Auto

INTAKE FAMILY <I> = 0.55
 DESIGN APPLICATION <Fn> = 2.00 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 2.00 FEET
 FURROW LENGTH <L> = 750 FEET
 INFLOW RATE <Q> = 8.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Ti> = 445.7 MINUTES; OR 7.4 HOURS
 GROSS APPLICATION <FG> = 6.16 INCHES
 NET APPLICATION <Fn> = 3.04 INCHES
 RUNOFF <RO> = 0.70 INCHES
 DEEP PERCOLATION <DP> = 2.50 INCHES
 EFFICIENCY <E> = 45.46 %
 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.00 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 750 ft
 Furrow Intake Family <5> 0.55
 Inflow Rate <6> 8.0 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>?

Field W: MvA, corn, furrows

FURROW

Auto

INTAKE FAMILY <I> = 0.70
 DESIGN APPLICATION <Fn> = 2.24 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 3.00 FEET
 FURROW LENGTH <L> = 750 FEET
 INFLOW RATE <Q> = 10.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Ti> = 369.7 MINUTES; OR 6.2 HOURS
 GROSS APPLICATION <FG> = 5.13 INCHES
 NET APPLICATION <Fn> = 2.53 INCHES
 RUNOFF <RO> = 1.25 INCHES
 DEEP PERCOLATION <DP> = 1.64 INCHES
 EFFICIENCY <E> = 43.64 %
 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.24 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 3.00 ft
 Furrow Length <4> 750 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 10.0 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>?

Field W: MvA, pasture, corrugations

FURROW

Auto

INTAKE FAMILY <If> = 0.70
 DESIGN APPLICATION <Fn> = 1.80 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 750 FEET
 INFLOW RATE <Q> = 0.5 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 584.9 MINUTES; OR 9.7 HOURS
 GROSS APPLICATION <FG> = 6.54 INCHES
 NET APPLICATION <Fv> = 2.28 INCHES
 RUNOFF <RO> = 0.00 INCHES
 DEEP PERCOLATION <DP> = 4.66 INCHES
 EFFICIENCY <E> = 28.73 %
 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 1.80 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 750 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 0.5 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>? _

Field X: MvA, corn, furrows

FURROW

Auto

INTAKE FAMILY <If> = 0.70
 DESIGN APPLICATION <Fn> = 2.24 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 3.00 FEET
 FURROW LENGTH <L> = 750 FEET
 INFLOW RATE <Q> = 10.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 369.7 MINUTES; OR 6.2 HOURS
 GROSS APPLICATION <FG> = 5.13 INCHES
 NET APPLICATION <Fv> = 2.53 INCHES
 RUNOFF <RO> = 1.25 INCHES
 DEEP PERCOLATION <DP> = 1.64 INCHES
 EFFICIENCY <E> = 83.64 %
 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 2.24 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 3.00 ft
 Furrow Length <4> 750 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 10.0 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>? _

Field X: MvA, pasture, corrugations

FURROW

Auto

INTAKE FAMILY <If> = 0.70
 DESIGN APPLICATION <Fn> = 1.80 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <U> = 2.00 FEET
 FURROW LENGTH <L> = 750 FEET
 INFLOW RATE <Q> = 0.5 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

 ADVANCE TIME <Tt> = 584.9 MINUTES; OR 9.7 HOURS
 GROSS APPLICATION <FG> = 6.54 INCHES
 NET APPLICATION <Fv> = 2.28 INCHES
 RUNOFF <RO> = 0.00 INCHES
 DEEP PERCOLATION <DP> = 4.66 INCHES
 EFFICIENCY <E> = 28.73 %
 TO CHANGE: PRESS (EXISTING)
 Design Application <1> 1.80 in
 Furrow Slope <2> 0.002 ft/ft
 Furrow Spacing <3> 2.00 ft
 Furrow Length <4> 750 ft
 Furrow Intake Family <5> 0.70
 Inflow Rate <6> 0.5 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>? _

Field X: No, corn, furrows

```

FURROW
Auto
*****
INTAKE FAMILY <If> = 0.55
DESIGN APPLICATION <Fn> = 1.52 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <L> = 3.00 FEET
FURROW LENGTH <L> = 750 FEET
INFLOW RATE <Q> = 8.0 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Tt> = 445.7 MINUTES; OR 7.4 HOURS
GROSS APPLICATION <FG> = 4.11 INCHES
NET APPLICATION <Fn> = 1.67 INCHES
RUNOFF <RO> = 1.15 INCHES
DEEP PERCOLATION <DP> = 1.43 INCHES
EFFICIENCY <E> = 37.01 %
TO CHANGE:
  Design Application <1> PRESS (EXISTING)
  Furrow Slope <2> 1.52 in
  Furrow Spacing <3> 0.002 ft/ft
  Furrow Length <4> 3.00 ft
  Furrow Intake Family <5> 750 ft
  Inflow Rate <6> 0.55
  Inflow Time <7> 8.0 gpm/furrow
  12 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <0/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?
  
```

Field X: No, pasture, corrugations

```

FURROW
Auto
*****
INTAKE FAMILY <If> = 0.55
DESIGN APPLICATION <Fn> = 1.20 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <L> = 2.00 FEET
FURROW LENGTH <L> = 750 FEET
INFLOW RATE <Q> = 7.5 GPM/FURROW
APPLICATION TIME <Ti> = 12 HOURS
*****
ADVANCE TIME <Tt> = 535.5 MINUTES; OR 8.9 HOURS
GROSS APPLICATION <FG> = 5.77 INCHES
NET APPLICATION <Fn> = 2.20 INCHES
RUNOFF <RO> = 0.57 INCHES
DEEP PERCOLATION <DP> = 3.92 INCHES
EFFICIENCY <E> = 22.17 %
TO CHANGE:
  Design Application <1> PRESS (EXISTING)
  Furrow Slope <2> 1.20 in
  Furrow Spacing <3> 0.002 ft/ft
  Furrow Length <4> 2.00 ft
  Furrow Intake Family <5> 750 ft
  Inflow Rate <6> 0.55
  Inflow Time <7> 7.5 gpm/furrow
  12 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <0/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?
  
```

Field Y: MvA/MwA, alfalfa hay, corrugations

```

FURROW
Auto
*****
INTAKE FAMILY <If> = 0.70
DESIGN APPLICATION <Fn> = 2.60 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <L> = 2.50 FEET
FURROW LENGTH <L> = 1050 FEET
INFLOW RATE <Q> = 9.5 GPM/FURROW
APPLICATION TIME <Ti> = 36 HOURS
*****
ADVANCE TIME <Tt> = 1773.3 MINUTES; OR 29.6 HOURS
GROSS APPLICATION <FG> = 12.50 INCHES
NET APPLICATION <Fn> = 3.95 INCHES
RUNOFF <RO> = 0.06 INCHES
DEEP PERCOLATION <DP> = 9.87 INCHES
EFFICIENCY <E> = 20.73 %
TO CHANGE:
  Design Application <1> PRESS (EXISTING)
  Furrow Slope <2> 2.60 in
  Furrow Spacing <3> 0.002 ft/ft
  Furrow Length <4> 2.50 ft
  Furrow Intake Family <5> 1050 ft
  Inflow Rate <6> 0.70
  Inflow Time <7> 9.5 gpm/furrow
  36 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <0/9>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?
  
```

Field Y: MvA/MwA, wheat, corrugations

```

FURROW
Auto
*****
INTAKE FAMILY <If> = 0.70
DESIGN APPLICATION <Fn> = 2.24 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <W> = 2.00 FEET
FURROW LENGTH <L> = 1050 FEET
INFLOW RATE <Q> = 2.5 GPM/FURROW
APPLICATION TIME <Ti> = 36 HOURS
*****
ADVANCE TIME <Tt> = 1773.3 MINUTES; OR 29.6 HOURS
GROSS APPLICATION <G> = 15.67 INCHES
NET APPLICATION <N> = 4.94 INCHES
RUNOFF <Ro> = 0.08 INCHES
DEEP PERCOLATION <DP> = 13.35 INCHES
EFFICIENCY <E> = 16.29 %
TO CHANGE: PRESS (EXISTING)
  Design Application <1> 2.24 in
  Furrow Slope <2> 0.002 ft/ft
  Furrow Spacing <3> 2.00 ft
  Furrow Length <4> 1050 ft
  Furrow Intake Family <5> 0.70
  Inflow Rate <6> 2.5 gpm/furrow
  Inflow Time <7> 36 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <0/2>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?
  
```

Field Y: MvA/MwA, pasture, corrugations

```

FURROW
Auto
*****
INTAKE FAMILY <If> = 0.70
DESIGN APPLICATION <Fn> = 1.88 INCHES
FURROW SLOPE <S> = 0.002 FEET/FOOT
FURROW SPACING <W> = 2.00 FEET
FURROW LENGTH <L> = 1050 FEET
INFLOW RATE <Q> = 2.5 GPM/FURROW
APPLICATION TIME <Ti> = 36 HOURS
*****
ADVANCE TIME <Tt> = 1773.3 MINUTES; OR 29.6 HOURS
GROSS APPLICATION <G> = 15.67 INCHES
NET APPLICATION <N> = 4.94 INCHES
RUNOFF <Ro> = 0.08 INCHES
DEEP PERCOLATION <DP> = 13.71 INCHES
EFFICIENCY <E> = 11.29 %
TO CHANGE: PRESS (EXISTING)
  Design Application <1> 1.88 in
  Furrow Slope <2> 0.002 ft/ft
  Furrow Spacing <3> 2.00 ft
  Furrow Length <4> 1050 ft
  Furrow Intake Family <5> 0.70
  Inflow Rate <6> 2.5 gpm/furrow
  Inflow Time <7> 36 hours <ANALYSIS MODE>
TO PRINT: DATA/WITH HEADING PRESS <0/2>
NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?
  
```

Field A: MwA, corn, furrows

FURROW

Auto

INTAKE FAMILY <If> = 0.70
 DESIGN APPLICATION <Fn> = 2.24 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 3.00 FEET
 FURROW LENGTH <L> = 500 FEET
 INFLOW RATE <Q> = 6.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

ADVANCE TIME <Tt> = 329.0 MINUTES; OR 5.5 HOURS
 GROSS APPLICATION <FG> = 4.62 INCHES
 NET APPLICATION <Fv> = 2.48 INCHES
 RUNOFF <RO> = 1.04 INCHES
 DEEP PERCOLATION <DP> = 1.34 INCHES
 EFFICIENCY <E> = 40.49 %

TO CHANGE: PRESS (EXISTING)

Design Application	<1>	2.24 in
Furrow Slope	<2>	0.002 ft/ft
Furrow Spacing	<3>	3.00 ft
Furrow Length	<4>	500 ft
Furrow Intake Family	<5>	0.70
Inflow Rate	<6>	6.0 gpm/furrow
Inflow Time	<7>	12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <R/Y>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field B: MwA, corn, furrows

FURROW

Auto

INTAKE FAMILY <If> = 0.70
 DESIGN APPLICATION <Fn> = 2.24 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 3.00 FEET
 FURROW LENGTH <L> = 800 FEET
 INFLOW RATE <Q> = 10.5 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

ADVANCE TIME <Tt> = 410.9 MINUTES; OR 6.8 HOURS
 GROSS APPLICATION <FG> = 5.05 INCHES
 NET APPLICATION <Fv> = 2.33 INCHES
 RUNOFF <RO> = 1.18 INCHES
 DEEP PERCOLATION <DP> = 1.64 INCHES
 EFFICIENCY <E> = 44.33 %

TO CHANGE: PRESS (EXISTING)

Design Application	<1>	2.24 in
Furrow Slope	<2>	0.002 ft/ft
Furrow Spacing	<3>	3.00 ft
Furrow Length	<4>	800 ft
Furrow Intake Family	<5>	0.70
Inflow Rate	<6>	10.5 gpm/furrow
Inflow Time	<7>	12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <R/Y>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field C: MwA, corn, furrows

FURROW

Auto

INTAKE FAMILY <If> = 0.70
 DESIGN APPLICATION <Fn> = 2.24 INCHES
 FURROW SLOPE <S> = 0.002 FEET/FOOT
 FURROW SPACING <W> = 3.00 FEET
 FURROW LENGTH <L> = 200 FEET
 INFLOW RATE <Q> = 3.0 GPM/FURROW
 APPLICATION TIME <Ti> = 12 HOURS

ADVANCE TIME <Tt> = 73.8 MINUTES; OR 1.2 HOURS
 GROSS APPLICATION <FG> = 5.77 INCHES
 NET APPLICATION <Fv> = 3.20 INCHES
 RUNOFF <RO> = 2.37 INCHES
 DEEP PERCOLATION <DP> = 1.16 INCHES
 EFFICIENCY <E> = 38.79 %

TO CHANGE: PRESS (EXISTING)

Design Application	<1>	2.24 in
Furrow Slope	<2>	0.002 ft/ft
Furrow Spacing	<3>	3.00 ft
Furrow Length	<4>	200 ft
Furrow Intake Family	<5>	0.70
Inflow Rate	<6>	3.0 gpm/furrow
Inflow Time	<7>	12 hours <ANALYSIS MODE>

TO PRINT: DATA/WITH HEADING PRESS <R/Y>
 NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

Field D: MWA, corn, furrows

FURROW

Auto

INTAKE FAMILY <If>

= 0.70

DESIGN APPLICATION <ra>

= 2.24 INCHES

FURROW SLOPE <S>

= 0.002 FEET/FOOT

FURROW SPACING <W>

= 3.00 FEET

FURROW LENGTH <L>

= 400 FEET

INFLOW RATE <Q>

= 4.5 GPM/FURROW

APPLICATION TIME <Ta>

= 12 HOURS

ADVANCE TIME <tt>

= 319.1 MINUTES; OR 5.3 HOURS

GROSS APPLICATION <rg>

= 4.33 INCHES

NET APPLICATION <rn>

= 2.41 INCHES

NUMOF <NO>

= 0.90 INCHES

DEEP PERCOLATION <DP>

= 1.19 INCHES

EFFICIENCY <E>

= 51.72 %

TO CHANGE:

Design Application

PRESS <1>

(EXISTING)

Furrow Slope

PRESS <2>

2.24 in

Furrow Spacing

PRESS <3>

0.002 ft/ft

Furrow Length

PRESS <4>

3.00 ft

Furrow Intake Family

PRESS <5>

400 ft

Infow Rate

PRESS <6>

0.70

Infow Time

PRESS <7>

4.5 gpm/furrow

12 hours

PRESS <8>

ANALYSIS MODE

TO PRINT: DATA/WITH HEADING PRESS <0/9>

NEW DESIGN PRESS <10>, NEW ANALYSIS PRESS <11>, QUIT PRESS <12>?

80th Percentile Values of Monthly ET (mm/day)

Station: Parma Exp. Station

		ETR	ALFH	ALFS	BEANS	F CRN	SILGE	S CRN	PEAS	POTAT	SBEET	SGRAN	WGRAN	PAST	ORCHD	VEGES	ONION	HOPS
March	AVE ET	2.23		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
March	STDD ET	0.29		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
March	80PCT ET	2.47	U	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	1.53	0.77	0.00	0.00	0.00	0.00
April	AVE ET	4.67	S	3.64	0.00	0.00	0.00	0.00	1.53	1.40	1.40	1.58	4.53	3.37	2.04	0.00	1.54	1.46
April	STDD ET	0.42	E	0.33	0.00	0.00	0.00	0.00	0.14	0.13	0.13	0.14	0.41	0.30	0.18	0.00	0.14	0.13
April	80PCT ET	5.02		3.92	0.00	0.00	0.00	0.00	1.65	1.51	1.51	1.70	4.88	3.62	2.19	0.00	1.66	1.57
May	AVE ET	6.24	E	5.61	1.87	1.87	1.87	1.87	4.41	2.39	1.90	5.23	6.24	4.80	4.10	1.98	3.17	4.37
May	STDD ET	0.46	T	0.41	0.14	0.14	0.14	0.14	0.32	0.18	0.14	0.38	0.46	0.35	0.30	0.15	0.23	0.32
May	80PCT ET	6.63	R	5.96	1.99	1.99	1.99	1.99	4.68	2.54	2.02	5.55	6.63	5.09	4.35	2.11	3.38	4.64
June	AVE ET	7.86	F	6.73	4.17	3.80	3.80	3.97	5.59	6.05	4.58	7.86	7.85	6.05	6.51	4.53	6.24	7.46
June	STDD ET	0.48	O	0.41	0.25	0.23	0.23	0.24	0.34	0.37	0.28	0.48	0.48	0.37	0.39	0.27	0.32	0.45
June	80PCT ET	8.26	R	7.08	4.38	3.99	3.99	4.17	5.88	6.36	4.82	8.26	8.25	6.36	6.84	4.76	5.51	7.84
July	AVE ET	8.58	A	5.28	7.92	7.91	7.91	7.87	2.17	7.13	8.52	6.57	4.99	6.61	7.29	6.75	6.76	8.15
July	STDD ET	0.33	L	0.20	0.30	0.30	0.30	0.30	0.08	0.27	0.33	0.25	0.19	0.25	0.28	0.26	0.26	0.31
July	80PCT ET	8.86	F	5.45	8.17	8.16	8.16	8.12	2.24	7.36	8.80	6.78	5.15	6.82	7.53	6.97	6.98	8.41
August	AVE ET	7.14	A	2.92	3.29	6.52	6.52	6.07	0.00	5.32	6.89	1.30	1.09	5.50	6.07	5.63	5.72	6.77
August	STDD ET	0.34	L	0.14	0.16	0.31	0.31	0.29	0.00	0.25	0.33	0.06	0.05	0.26	0.29	0.27	0.27	0.32
August	80PCT ET	7.43	F	3.04	3.42	6.78	6.78	6.31	0.00	5.53	7.17	1.35	1.13	5.72	6.31	5.86	5.95	7.04
September	AVE ET	5.39	A	1.40	0.56	3.78	3.78	0.00	0.00	2.65	4.50	0.00	0.00	4.15	4.42	3.50	4.14	4.85
September	STDD ET	0.34	H	0.09	0.04	0.24	0.24	0.00	0.00	0.17	0.28	0.00	0.00	0.26	0.28	0.22	0.28	0.30
September	80PCT ET	5.68	A	1.48	0.59	3.98	3.98	0.00	0.00	2.79	4.74	0.00	0.00	4.37	4.66	3.69	4.36	5.10
October	AVE ET	3.17	Y	0.34	0.00	0.84	0.00	0.00	0.00	0.00	1.88	0.00	0.00	2.44	1.93	0.00	0.00	0.00
October	STDD ET	0.26		0.03	0.00	0.07	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.20	0.16	0.00	0.00	0.00
October	80PCT ET	3.39		0.37	0.00	0.90	0.00	0.00	0.00	0.00	2.01	0.00	0.00	2.61	2.06	0.00	0.00	0.00

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

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

SOIL CHARACTERISTICS

initials: MP

date: 10/20/05

Soil Type = Baldock (BdA)

Source of Soils Data =

National NRCS Website

soil depth (inches)		AWC (in/in)		PH		organic (%)		soil depth (ft)	AWC (inches)	intake family	
lower	upper	lower	upper	lower	upper	lower	upper			flood	furrow
0	8	0.16	0.21	7.9	8.4	1	2	1	2.22	1.5	0.5
8	56	0.16	0.21					2	4.44		
56	60	0.09	0.15					3	6.66		
								4	8.88		
								5	10.84		
										alternate method	
										2	0.55

Management Allowed Deficit (MAD)

crop	root depth (ft)	stress point	MAD (inches)
alfalfa (hay or seed)	5	0.5	5.42
corn (field or silage)	4	0.5	4.44
grain (winter or spring)	4	0.5	4.44
pasture (or grass hay)	3	0.5	3.33
other (enter below)			
sugar beets	5	0.5	5.42

SOIL CHARACTERISTICS

initials: MP

date: 10/20/05

Soil Type = Moulton (MvA)

Source of Soils Data = National NRCS Website

soil depth (inches)		AWC (in/in)		PH		organic (%)		soil depth (ft)	AWC (inches)	intake family	
lower	upper	lower	upper	lower	upper	lower	upper			flood	furrow
0	3	0.16	0.18	6.6	7.8	2	4	1	1.68	2	0.55
3	21	0.11	0.15					2	3.03		
21	60	0.04	0.08					3	3.75		
								4	4.47		
								5	5.19		
										alternate method	
										3	0.7

Management Allowed Deficit (MAD)

crop	root depth (ft)	stress point	MAD (inches)
alfalfa (hay or seed)	5	0.5	2.60
corn (field or silage)	4	0.5	2.24
grain (winter or spring)	4	0.5	2.24
pasture (or grass hay)	3	0.5	1.88
other (enter below)			
sugar beets	5	0.5	2.60

SOIL CHARACTERISTICS

initials: MP

date: 10/20/05

Soil Type = Moulton, saline (MwA)
 Source of Soils Data = National NRCS Website

soil depth (inches)		AWC (in/in)		PH		organic (%)		soil depth (ft)	AWC (inches)	intake family	
lower	upper	lower	upper	lower	upper	lower	upper			flood	furrow
0	3	0.16	0.18	6.6	7.8	2	4	1	1.68	2	0.55
3	21	0.11	0.15					2	3.03		
21	60	0.04	0.08					3	3.75		
								4	4.47		
								5	5.19		
										alternate method	
										3	0.7

Management Allowed Deficit (MAD)

crop	root depth (ft)	stress point	MAD (inches)
alfalfa (hay or seed)	5	0.5	2.60
corn (field or silage)	4	0.5	2.24
grain (winter or spring)	4	0.5	2.24
pasture (or grass hay)	3	0.5	1.88
other (enter below)			
sugar beets	5	0.5	2.60
radishes	1	0.35	0.59

SOIL CHARACTERISTICS

initials: MP

date: 10/20/05

Soil Type = Notus (No)

Source of Soils Data =

National NRCS Website

soil depth (inches)		AWC (in/in)		PH		organic (%)		soil depth (ft)	AWC (inches)	intake family	
lower	upper	lower	upper	lower	upper	lower	upper			flood	furrow
0	1	0.11	0.13	6.1	8.4	0.5	1	1	1.44	2	0.55
1	14	0.11	0.13					2	2.08		
14	60	0.03	0.05					3	2.56		
								4	3.04		
								5	3.52	alternate method	
										2	0.55

Management Allowed Deficit (MAD)

crop	root depth (ft)	stress point	MAD (inches)
alfalfa (hay or seed)	5	0.5	1.76
corn (field or silage)	4	0.5	1.52
grain (winter or spring)	4	0.5	1.52
pasture (or grass hay)	3	0.5	1.28
other (enter below)			
sugar beets	5	0.5	1.76
radishes	1	0.35	0.50

SOIL CHARACTERISTICS

initials: MP

date: 10/20/05

Soil Type = Oliaga (OgA)

Source of Soils Data =

National NRCS Website

soil depth (inches)		AWC (in/in)		PH		organic (%)		soil depth (ft)	AWC (inches)	intake family	
lower	upper	lower	upper	lower	upper	lower	upper			flood	furrow
0	8	0.16	0.18	7.4	9	1	3	1	1.98	1.5	0.5
8	35	0.13	0.18					2	3.84		
35	60	0.03	0.06					3	5.59		
								4	6.13		
								5	6.67		
										alternate method	
										2	0.55

Management Allowed Deficit (MAD)

crop	root depth (ft)	stress point	MAD (inches)
alfalfa (hay or seed)	5	0.5	3.34
corn (field or silage)	4	0.5	3.07
grain (winter or spring)	4	0.5	3.07
pasture (or grass hay)	3	0.5	2.80
other (enter below)			
sugar beets	5	0.5	3.34

Chemical Soil Properties

Canyon Area, Idaho

[Absence of an entry indicates that data were not estimated]

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorption ratio
	<i>In</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
BdA:								
Baldock	0-8	10-20	---	7.9-8.4	15-25	0	2.0-4.0	20-30
	8-56	15-25	---	7.4-9.0	5-15	0	2.0-4.0	10-20
	56-80	5.0-15	---	7.9-8.4	5-15	0	2.0-4.0	0-10
BsA:								
Bram, saline-alkali	0-8	9.0-19	---	8.5-9.6	0	0	8.0-16.0	5-8
	8-52	7.0-15	---	8.5-9.6	15-25	0	8.0-16.0	5-8
	52-65	7.0-15	---	8.5-9.6	0-5	0	8.0-16.0	5-8
MIB:								
Moulton	0-3	10-25	---	6.6-7.8	0	0	0.0	0
	3-21	5.0-15	---	6.6-7.8	0	0	0.0	0
	21-60	5.0-10	---	6.6-7.8	0	0	0.0	0
MuA:								
Moulton, saline	0-3	10-25	---	6.6-7.8	0	0	0.0	0
	3-21	5.0-15	---	6.6-7.8	0	0	0.0	0
	21-60	5.0-10	---	6.6-7.8	0	0	0.0	0
MvA:								
Moulton	0-3	10-25	---	6.6-7.8	0	0	0.0	0
	3-21	5.0-15	---	6.6-7.8	0	0	0.0	0
	21-60	5.0-10	---	6.6-7.8	0	0	0.0	0
MwA:								
Moulton, saline	0-3	10-25	---	6.6-7.8	0	0	0.0	0
	3-21	5.0-15	---	6.6-7.8	0	0	0.0	0
	21-60	5.0-10	---	6.6-7.8	0	0	0.0	0
No:								
Nodus	0-1	5.0-10	---	6.1-8.4	0-5	0	0.0-2.0	0-5
	1-14	5.0-10	---	6.1-8.4	0-5	0	0.0-2.0	0-5
	14-60	1.0-5.0	---	6.1-8.4	0-5	0	0.0-2.0	0-5
NsA:								
Nyssaton	0-11	5.0-20	---	7.9-8.4	5-15	0	0.0-2.0	0-5
	11-60	5.0-15	---	7.9-9.0	15-20	0	0.0-2.0	0-5
OgA:								
Ollaga	0-8	8.0-25	---	7.4-9.0	5-14	0	0.0-8.0	0-5
	8-35	4.0-15	---	7.4-9.0	5-14	0	0.0-8.0	0-5
	35-60	0.0-9.0	---	6.6-7.3	0-5	0	0.0	0

Chemical Soil Properties

Canyon Area, Idaho

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	<u>Soil reaction</u>	Calcium carbon- ate	Gypsum	Salinity	Sodium adsorption ratio
	<i>In</i>	<i>meq/100 g</i>	<i>meq/100 g</i>	<i>pH</i>	<i>Pct</i>	<i>Pct</i>	<i>mmhos/cm</i>	
OgB:								
Ollaga	0-8	8.0-25	—	7.4-9.0	5-14	0	0.0-8.0	0-5
	8-35	4.0-15	—	7.4-9.0	5-14	0	0.0-8.0	0-5
	35-60	0.0-9.0	—	6.6-7.3	0-5	0	0.0	0
Re:								
Riverwash	0-60	—	—	—	—	—	—	—

Engineering Properties

Canyon Area, Idaho

[Absence of an entry indicates that the data were not estimated]

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percent passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 Inches	3-10 Inches	4	10	40	200		
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
BdA: Baldock	0-8	Loam	CL	A-6	0	0	90-100	90-100	75-100	55-90	24-36	7-15
	8-56	Loam, Silt loam	CL	A-6	0	0	90-100	90-100	75-100	55-85	27-38	12-19
	56-60	Fine sandy loam, Sandy loam	SC-SM	A-4	0	0	75-100	75-100	50-80	25-50	16-27	2-10
BsA: Bram, saline-alkali	0-8	Silt loam	CL	A-4	0	0-5	90-95	90-95	90-95	75-90	24-33	7-12
	8-52	Loam, Silt loam, Very fine sandy loam	CL	A-4	0	0-5	90-95	90-95	90-95	75-90	22-30	7-12
	52-65	Fine sandy loam, Gravelly loam	SC	A-2, A-4	0	0	55-100	50-100	45-70	25-40	22-30	7-12
MtB: Moulton	0-3	Fine sandy loam	SC	A-4	0	0	90-100	90-100	65-85	35-55	25-39	6-13
	3-21	Fine sandy loam, Sandy loam	SC	A-4	0	0	90-100	90-100	75-90	40-60	22-35	6-13
	21-60	Very gravelly loamy sand, Very gravelly sand	GW	A-1	0	0	30-60	30-50	15-35	0-15	17-24	2-6
MuA: Moulton, saline	0-3	Fine sandy loam	SC	A-4	0	0	90-100	90-100	65-85	35-55	25-39	6-13
	3-21	Fine sandy loam, Sandy loam	SC	A-4	0	0	90-100	90-100	75-90	40-60	22-35	6-13
	21-60	Very gravelly loamy sand, Very gravelly sand	GW	A-1	0	0	30-60	30-50	15-35	0-15	17-24	2-6

Engineering Properties

Canyon Area, Idaho

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percent passing sieve number—				Liquid limit	Plasticity Index
			Unified	AASHTO	>10 Inches	3-10 Inches	4	10	40	200		
	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
MvA: Moulton	0-3	Loam	CL	A-4	0	0	90-100	90-100	75-95	55-75	25-39	6-13
	3-21	Fine sandy loam, Sandy loam	SC	A-4	0	0	90-100	90-100	75-90	40-60	22-35	6-13
	21-60	Very gravelly loamy sand, Very gravelly sand	GW	A-1	0	0	30-60	30-50	15-35	0-15	17-24	2-6
MwA: Moulton, saline	0-3	Loam	CL	A-4	0	0	90-100	90-100	75-95	55-75	25-39	6-13
	3-21	Fine sandy loam, Sandy loam	SC	A-4	0	0	90-100	90-100	75-90	40-60	22-35	6-13
	21-60	Very gravelly loamy sand, Very gravelly sand	GW	A-1	0	0	30-60	30-50	15-35	0-15	17-24	2-6
No: Notus	0-1	Sandy loam	SM	A-2, A-4	0	0	95-100	90-100	55-85	25-50	17-24	2-6
	1-14	Fine sandy loam	SM	A-2, A-4	0	0	95-100	90-100	55-85	25-50	17-24	2-6
	14-60	Stratified very gravelly sand to gravelly loamy sand	GP-GM	A-1	0	0-25	30-50	25-45	15-30	5-10	—	NP
NsA: Nyssaton	0-11	Silt loam	CL	A-4	0	0	100	100	90-100	85-90	21-33	4-12
	11-60	Silt loam	CL	A-4	0	0	100	100	90-100	85-90	18-30	4-12

Engineering Properties

Canyon Area, Idaho

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percent passing sieve number—				Liquid limit	Plasticity index
			Unified	AASHTO	>10 Inches	3-10 Inches	4	10	40	200		
OgA: Oliaga	<i>In</i>				<i>Pct</i>	<i>Pct</i>					<i>Pct</i>	
	0-8	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-95	60-75	22-41	6-17
	8-35	Fine sandy loam, Loam	CL-ML, ML	A-4	0	0	100	100	70-95	50-75	16-31	2-12
	35-60	Stratified sand to gravelly sand	GP, SP	A-1	0	0-5	30-60	10-30	5-20	0-5	0-14	NP
OgB: Oliaga	0-8	Loam	CL, CL-ML	A-4, A-6	0	0	100	100	85-95	60-75	22-41	6-17
	8-35	Fine sandy loam, Loam	CL-ML, ML	A-4	0	0	100	100	70-95	50-75	16-31	2-12
	35-60	Stratified sand to gravelly sand	GP, SP	A-1	0	0-5	30-60	10-30	5-20	0-5	0-14	NP
Re: Riverwash	0-60	Stratified gravel to sand	—	—	—	—	—	—	—	—	—	—

Physical Soil Properties

Canyon Area, Idaho

[Entries under "Erosion Factors--T" apply to the entire profile. Entries under "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer. Absence of an entry indicates that data were not estimated]

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erod- bility group	Wind erod- bility Index
										Kw	Kf	T		
BdA:	<i>In</i>	<i>Pct</i>	<i>Pct</i>	<i>Pct</i>	<i>g/cc</i>	<i>micro m/sec</i>	<i>In/in</i>	<i>Pct</i>	<i>Pct</i>					
Baldock	0-8	—	—	12-22	1.20-1.40	4.00-14.11	0.16-0.21	0.0-2.9	1.0-2.0	.32	.32	5	4L	86
	8-56	—	—	18-27	1.25-1.40	4.00-14.11	0.16-0.21	0.0-2.9	0.0-0.5	.32	.32			
	56-60	—	—	5-15	1.35-1.50	14.11-42.34	0.09-0.15	0.0-2.9	0.0-0.5	.10	.10			
BsA:														
Bram, saline-alkali	0-8	—	—	12-18	1.25-1.35	4.00-14.11	0.14-0.17	0.0-2.9	1.0-2.0	.43	.49	5	4L	86
	8-52	—	—	12-18	1.50-1.60	1.41-4.23	0.08-0.11	0.0-2.9	0.0-0.5	.43	.49			
	52-65	—	—	12-18	1.50-1.60	14.11-42.34	0.07-0.10	0.0-2.9	0.0-0.5	.24	.43			
MtB:														
Moulton	0-3	—	—	10-20	1.50-1.70	14.11-42.34	0.13-0.15	0.0-2.9	2.0-4.0	.24	.24	4	3	86
	3-21	—	—	10-20	1.50-1.70	14.11-42.34	0.11-0.15	0.0-2.9	1.0-2.0	.32	.32			
	21-60	—	—	5-10	1.40-1.60	42.34-141.14	0.04-0.08	0.0-2.9	0.5-1.0	.05	.17			
MuA:														
Moulton, saline	0-3	—	—	10-20	1.50-1.70	14.11-42.34	0.13-0.15	0.0-2.9	2.0-4.0	.24	.24	4	3	86
	3-21	—	—	10-20	1.50-1.70	14.11-42.34	0.11-0.15	0.0-2.9	1.0-2.0	.32	.32			
	21-60	—	—	5-10	1.40-1.60	42.34-141.14	0.04-0.08	0.0-2.9	0.5-1.0	.05	.17			
MvA:														
Moulton	0-3	—	—	10-20	1.40-1.50	4.00-14.11	0.16-0.18	0.0-2.9	2.0-4.0	.37	.37	4	5	56
	3-21	—	—	10-20	1.50-1.70	14.11-42.34	0.11-0.15	0.0-2.9	1.0-2.0	.32	.32			
	21-60	—	—	5-10	1.40-1.60	42.34-141.14	0.04-0.08	0.0-2.9	0.5-1.0	.05	.17			

Physical Soil Properties

Canyon Area, Idaho

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	<i>In</i>	<i>Pct</i>	<i>Pct</i>	<i>Pct</i>	<i>g/cc</i>	<i>micro m/sec</i>	<i>In/in</i>	<i>Pct</i>	<i>Pct</i>					
MwA:														
Moulton, saline	0-3	—	—	10-20	1.40-1.50	4.00-14.11	0.16-0.18	0.0-2.9	2.0-4.0	.37	.37	4	5	56
	3-21	—	—	10-20	1.50-1.70	14.11-42.34	0.11-0.15	0.0-2.9	1.0-2.0	.32	.32			
	21-60	—	—	5-10	1.40-1.60	42.34-141.14	0.04-0.06	0.0-2.9	0.5-1.0	.05	.17			
No:														
Notus	0-1	—	—	5-10	1.60-1.70	14.11-42.34	0.11-0.13	0.0-2.9	0.5-1.0	.28	.28	3	4	86
	1-14	—	—	5-10	1.60-1.70	14.11-42.34	0.11-0.13	0.0-2.9	0.5-1.0	.28	.28			
	14-60	—	—	2-7	1.60-1.70	141.14	0.03-0.05	0.0-2.9	0.0-0.5	.05	.24			
NsA:														
Nyssaton	0-11	—	—	8-18	1.30-1.40	4.00-14.11	0.19-0.21	0.0-2.9	1.0-2.0	.49	.49	5	4L	86
	11-60	—	—	8-18	1.30-1.40	0.42-1.41	0.19-0.21	0.0-2.9	0.0-0.5	.43	.43			
OgA:														
Ollaga	0-8	—	—	10-25	1.25-1.40	4.00-14.11	0.16-0.18	0.0-2.9	1.0-3.0	.24	.24	4	4L	86
	8-35	—	—	5-18	1.30-1.45	4.00-14.11	0.13-0.18	0.0-2.9	0.0-1.0	.20	.20			
	35-60	—	—	0-10	1.30-1.60	141.14	0.03-0.06	0.0-2.9	0.0-0.5	.10	.20			
OgB:														
Oliaga	0-8	—	—	10-25	1.25-1.40	4.00-14.11	0.16-0.18	0.0-2.9	1.0-3.0	.24	.24	4	4L	86
	8-35	—	—	5-18	1.30-1.45	4.00-14.11	0.13-0.18	0.0-2.9	0.0-1.0	.20	.20			
	35-60	—	—	0-10	1.30-1.60	141.14	0.03-0.06	0.0-2.9	0.0-0.5	.10	.20			
Re:														
Riverwash	0-60	—	—	—	—	—	—	—	—	—	—	—	—	—

IRRIGATION FLOW RATE QUESTIONNAIRE

The information required in this questionnaire will describe your water delivery system and irrigation methods. This information is essential in order for IDWR staff to evaluate your irrigation water requirements. Much of the information is technical, and you may wish to contact your County Extension Agent, the Natural Resources Conservation Service (formerly SCS) or other professionals for assistance with this form.

1. Please provide your name, address, and phone number where you may be contacted for further information or clarification. Include the claim number(s) for those claims where the irrigation flow rate is greater than 0.02 cfs (1 miner's inch) per acre.

Name Raymond Abbott
Address 20948 Sanderlin Dr Parma 83660
Phone 208 722 5785
Claim No(s). _____

2. Provide the total number of acres irrigated 561 for the claims listed.
3. Provide a detailed diagram or copy of an aerial photograph showing the complete irrigation system for the claims listed. Please include the location of wells, pipelines, canals or ditches, field headgates, and individual field boundaries. Please label by name (or identify by number) each of the elements shown.

4. Provide a description of the water conveyance system from the source to the farm and any major on-farm laterals. This information should include: general soil type (for earthen ditches or canals), type of lining (for lined ditches or canals), length of canal, width of canal at water surface, total depth from land surface to bottom of canal. Use average values. Also include any pipeline lengths and diameters.

The ditch is an open dirt ditch, 10-12 feet wide and average depth of 2.5 feet.

Is this conveyance system shared by other water users? _____ If yes, please describe.

the system is a shared ditch by seven property owners on a rotational crop needs basis.

Is the water supply for the claims listed rotated with other water users? _____ If yes, please describe.

all operators use the water on a shared basis, by use through a needs rotation among the users.

5. For each field, please provide the following information (this page may be copied for each individual field if necessary):

field name or identifying number _____ type of irrigation system _____
historical crop rotation _____ number of acres irrigated _____

Provide the following information, for each field, based on the peak water-use period for the highest water-use crop historically grown.

crop type requiring highest flow rate _____
number of days to irrigate entire field _____ irrigation set time (hrs) _____
irrigation frequency _____ (number of days from the start of one irrigation cycle to the start of the next for a given field)

Please draw a diagram of each field showing general shape and dimensions, include the following information:

For sprinkler systems

location of mainlines
number of laterals
spacing between sprinklers and laterals
nozzle size
average nozzle pressure
average nozzle flow

For surface systems

(furrow, corrugation, border, wild flood, etc.)

field length
direction of flow
slope of field in direction of flow
spacing between furrows, borders, etc.

6. Are you aware of any irrigation system design, evaluations or farm soil surveys completed for this farm by the Natural Resources Conservation Service, private consultants, irrigation equipment dealers or others?

If yes, please describe or attach copies.

7. Please include any additional comments which will aid in the evaluation of your irrigation water requirements.

IDWR may rely on the information in this questionnaire for recommendation of your water right to the SRBA District Court. In order to minimize objections to IDWR's recommendation of your water right, Please be sure that all information provided is as accurate as possible.

I certify that the information provided in this questionnaire is accurate and true to the best of my knowledge and belief.

signature

date

PLEASE RETURN FORMS TO:

253 map.

382nd 7. corn 3 years.
1 year wheat
sugar beets

2. Hay 3 years
wheat
beets

3 Hay 3 years
wheat
beets

4 pasture

5 radish seed
2 year corn
wheat
beets

6. barley
corn 3 years
beets

263

393rd tract. 1. barley
corn 3 years
beets.

2. Corn 3 years
wheat
beets.

3 corn 3 years
wheat
beets

4 pasture

5 corn 3 years
wheat 2 years
beets

6. radish seed
corn 3 years
wheat
beets

Water Resource Map

16. A. beets
corn 3 years

38.5A. beets
corn 3 years

23.7A corn
beets
wheat
corn

21.0A pasture 2 years
corn 3 years

26.0A. pasture 2 years
corn 3 years

58 A. pasture
corn 4 years

12.6 ~~pasture~~
corn 4 years

24.3 hay 4 years
wheat
pasture.



N

Map Printed: Jan 9, 2004

TTR(4641A)-000278



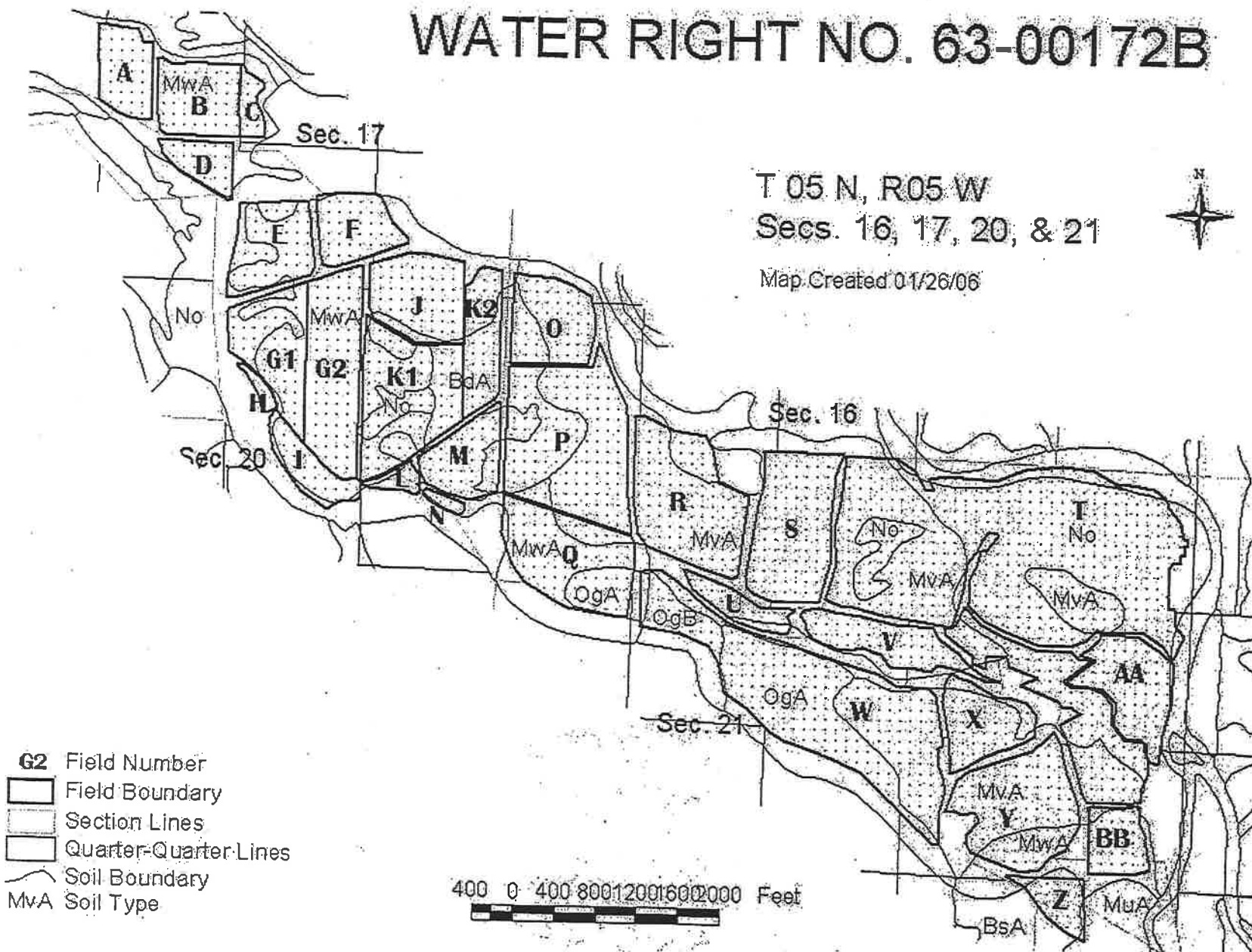
Map Printed: Jan 9, 2004

WATER RIGHT NO. 63-00172B

T 05 N, R 05 W

Secs. 16, 17, 20, & 21

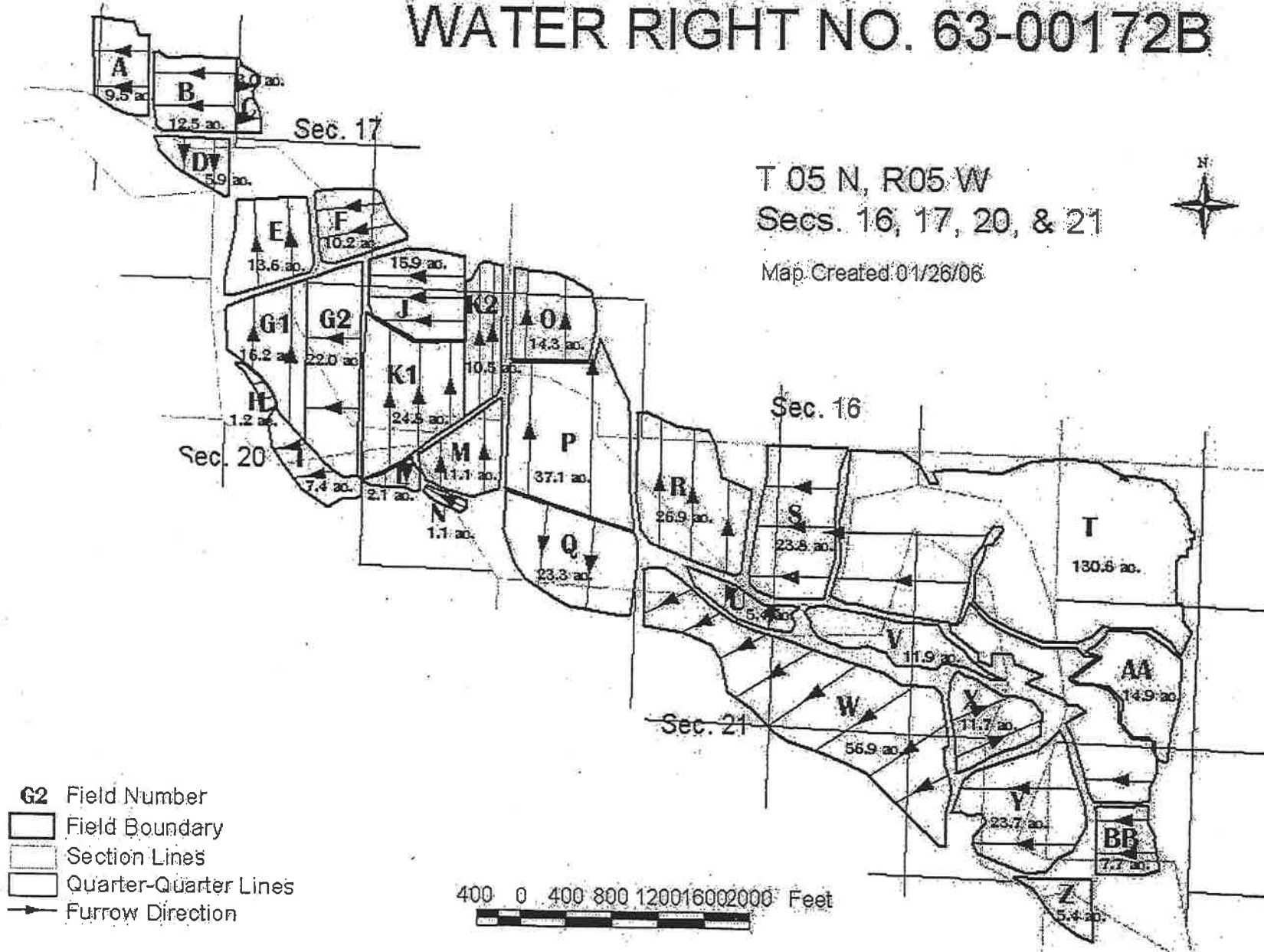
Map Created 01/26/06

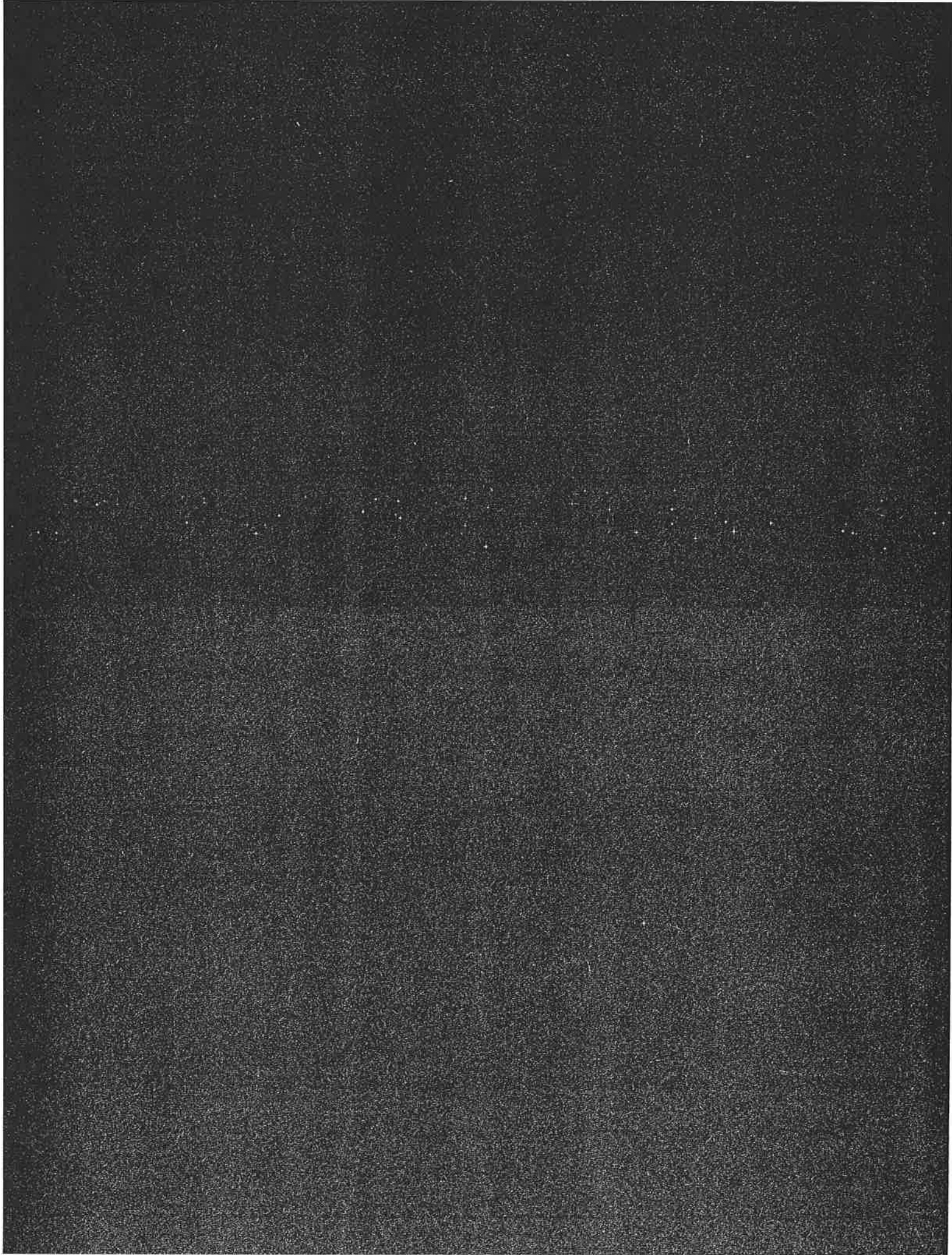


WATER RIGHT NO. 63-00172B

T 05 N, R05 W
Secs. 16, 17, 20, & 21

Map Created 01/26/06







SPF WATER
ENGINEERING, LLC

September 15, 2008

Scott Campbell
Moffatt Thomas
101 S. Capitol Blvd., 10th Floor
P.O. Box 829
Boise, ID 83701-0829

RECEIVED

SEP 17 2008

**MOFFATT, THOMAS, BARRETT,
ROCK & FIELDS, CHTD**

Subject: Soil Analysis for Water Rights 63-4641A and 63-4641B

Dear Scott:

As authorized by email dated August 29, 2008, SPF Water Engineering has reviewed soil information related to the places of use for water rights 63-4641A and 63-4641B claimed in the SRBA by Tree Top Ranches LP. This soil information has been compared to the soils data available for the Haas Ditch Company service area. The analysis found that soil types within the Haas Ditch Company service area and at the place of use for the 63-4641A and 63-4641B water rights are similar, and will have similar irrigation characteristics. Details of the analysis are provided below.

Method

The analysis has utilized soil mapping data available from the USDA Soil Conservation Service Soil Survey of the Canyon Area, Idaho (1972).

Soil survey mapping data were superimposed over the places of use for the Tree Top Ranches water right place of use and the Haas Ditch Company water right place of use. Water right places of use were available as GIS shape files from the Idaho Department of Water Resources. Figure 1 presents soil mapping for the 63-4641 water right places of use and Figure 2 presents soil mapping for the Haas Ditch Company water right place of use.

The total acres of each soil type within the places of use were determined using ESRI ArcMap version 9.2 Geographic Information System (GIS) software. The percentages of each soil types were then tabulated and are presented in Table 1 (63-4641 soils) and Table 2 (Haas Ditch Company soils), along with physical characteristics of each soil type listed in the Soil Survey.

The weighted averages for the upper 30 inches of soil in each area are also provided for selected characteristics in Tables 1 and 2. The upper 30 inches was selected for analysis due to the high seasonal water table (generally 1 to 3 feet) and the coarse-grained nature of soils below 30 inches.

Results

The mapping found that the surface soils at both locations are similar, consisting primarily of fine sandy loams and loams in the upper 30 inches, and sand and gravel below approximately 30 inches. Approximately 57 percent of the Haas soils are classified as saline, while approximately 15 percent of the 63-4641 soils are classified as saline-alkali. All of the soils units have surface slopes of 0 to 1 percent.

Permeability in both areas is generally moderate to moderately rapid in the upper 30 inches, and rapid below 30 inches. Calculated average upper soil permeability of the Haas soils is 8.1 inches per hour, compared to 5.7 inches per hour for the 63-4641 soils. Both values are skewed by the presence of high permeability Notus soils within each area. Neglecting the Notus soils, upper soil permeability averages approximately 2 inches per hour within the Haas service area and 4 inches per hour within the 63-4641A place of use. Permeability within the 63-4641B place of use is lower, averaging 1.3 inches per hour.

Upper soil water holding capacities are also similar within the 63-4641A and 63-4641B place of use and Haas Ditch Company service area, averaging 0.14, 0.11, and 0.12 inches per inch, respectively.

Based on soil texture, the intake families for flood and furrow irrigation average 1.9 and 0.54, respectively, for the 63-4641A place of use, 1.5 and 0.50, respectively, for the 63-4641B place of use, and 2.6 and 0.65, respectively, for the Haas Ditch Company place of use. These values are in the same general range, but reflect the slightly higher average permeability and slightly lower average water holding capacity of the Haas soils in comparison to the 63-4641 soils.

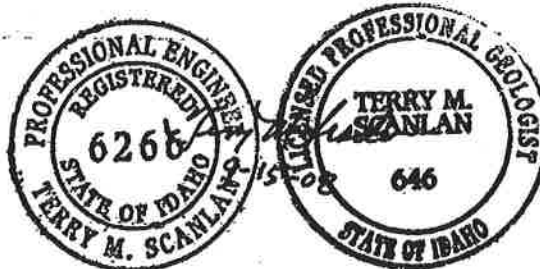
In summary, the soils within the Haas Ditch Company service area and the place of use for Tree Top Ranches' water right 63-4641A and 63-4641B have similar characteristics for purposes of irrigation. As a result, average irrigation diversion requirements for both areas will be similar, with difference influenced more by field configuration and irrigation method than by average soil characteristics.

Please contact me with any questions...

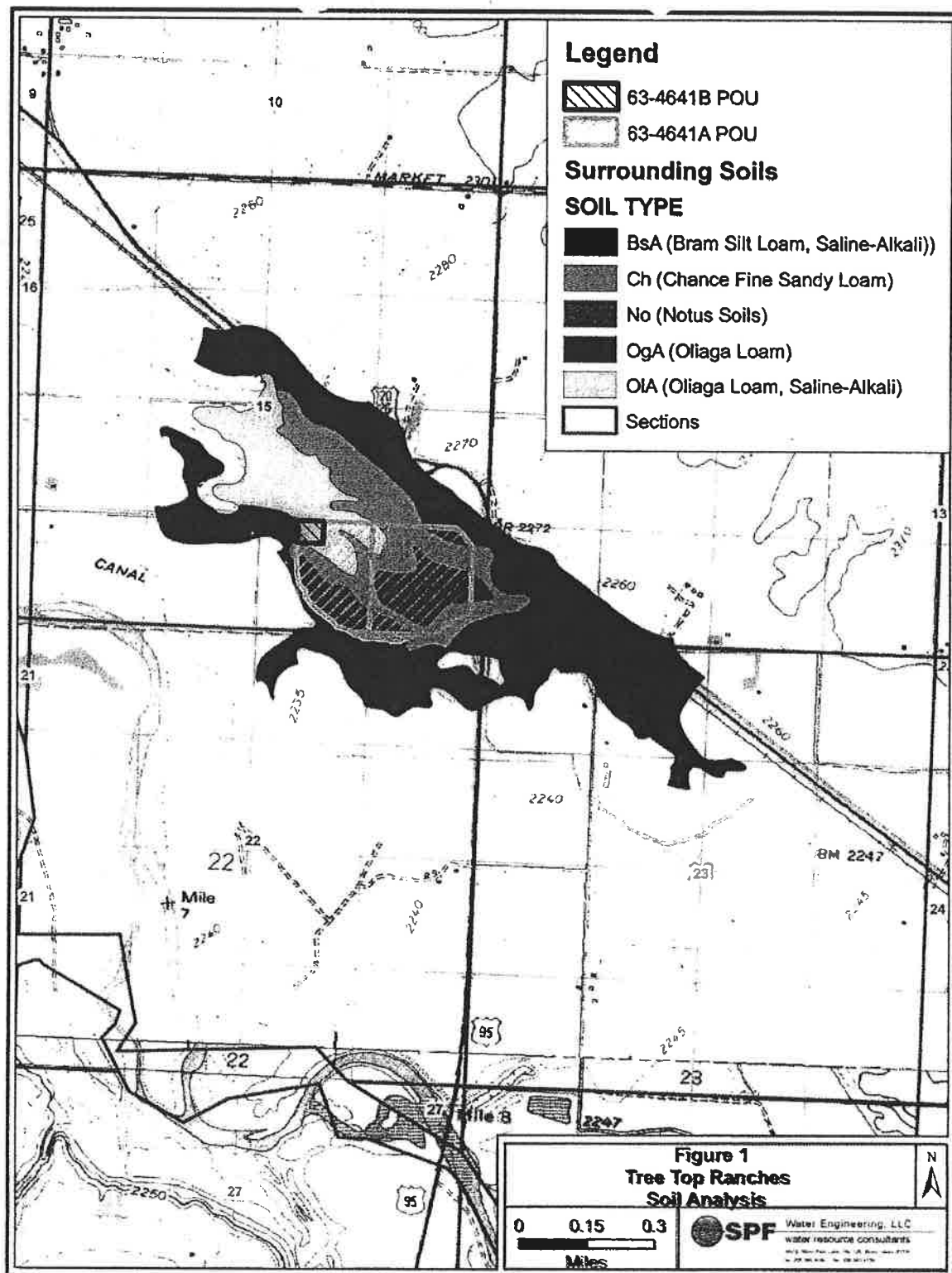
Sincerely,



Terry M. Scanlan, P.E., P.G.



Cc: Bill Mulder – Tree Top Ranches



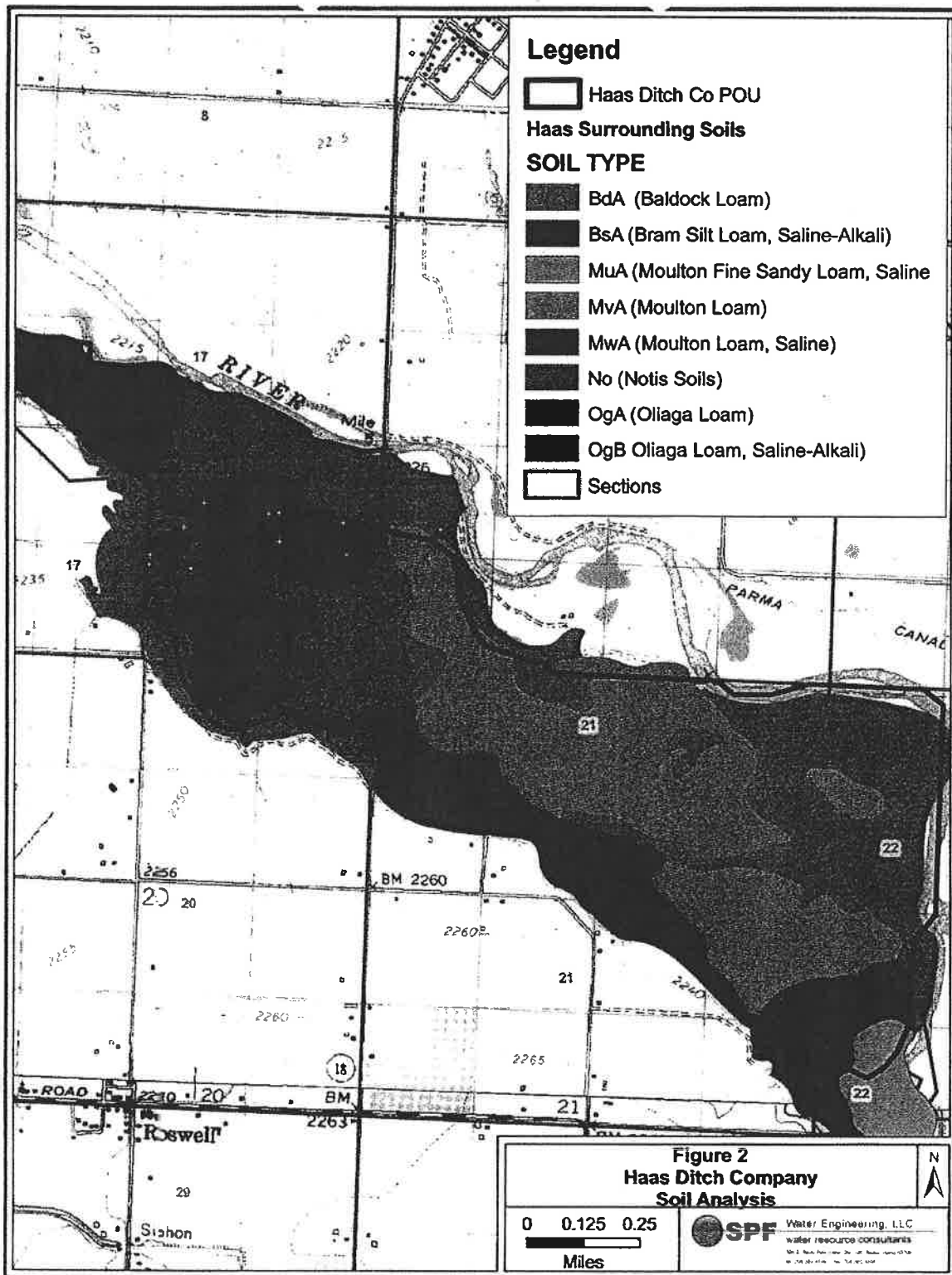


Table 1 - Soil Summary for Water Rights 63-4641A and 63-4641B

Map Symbol	Soil Type	Drainage	Amount (Acres) Within 63- 6641A POU	% 63- 4641A POU	Amount (Acres) Within 63- 4641 POU	%63- 4641B POU	Slope (%)	Seasonal High Water Table (feet)	Depth from Surface (inches)	texture	Permeability (inches per hour)	Available Water Capacity (Inches per inch of soil)	Soil pH	Soil Texture Intake Family (flood)	Soil Texture Intake Family (furrow)
BsA	Bram Silt Loam, Saline-Alkali	Somewhat poorly drained	1.3	2.0%			0 to 1	3 to 6	0 to 52	silt loam, loam	0.08 - 0.20	0.10 - 0.18	7.9-9.6	1.5	0.5
Ch	Chance Fine Sandy Loam	Very poorly drained	22	41.0%			0 to 1	0 to 1	0 to 23	fine sandy loam and sandy loam	2.00 - 6.30	0.13 - 0.15	6.1-7.3	2	0.55
									23 to 60	gravel and sand	>20.0	0.03 - 0.05	6.1-7.3	4	0.85
No	Notus Soils	Somewhat poorly drained	4.7	9.0%			0 to 1	1 to 3	0 - 14	fine sandy loam to gravelly loamy sand	2.00 - 20.00	0.08 - 0.14	6.6-7.8	2.5	0.63
									14 - 60	sand and gravel	>20.00	0.03 - 0.05	6.6-7.3	4	0.85
OgA	Oliaga Loam	Somewhat poorly drained	19	35.0%	0.6	26%	0 to 1	2 to 3	0 - 35	loam and fine sandy loam	0.63 - 2.00	0.16 - 0.18	7.4-8.4	1.5	0.5
									35 - 60	sand and gravel	>20.00	0.03 - 0.05		4	0.85
OIA	Oliaga Loam, Saline Alkali	Somewhat poorly drained	7	13.0%	1.7	74%	0 to 1	1 to 3	0 - 35	loam and fine sandy loam	0.63 - 2.00	0.10 - 0.12	7.9-9.4	1.5	0.5
									35 - 60	sand and gravel	>20.00	0.03 - 0.05		4	0.85
Total			54	100%	2.3	100%									
Weighted Average for upper 30 inches - 63-4641A											5.7	0.14		1.9	0.54
Weighted Average for upper 30 inches - 63-4641B											1.3	0.11		1.5	0.50

Table 2 - Soil Summary for Haas Ditch Company Service Area

Map Symbol	Soil Type	Drainage	Amount (Acres) Within Haas POU	% Haas POU	Slope (%)	Seasonal High Water Table (feet)	Depth from Surface (Inches)	texture	Permeability (Inches per hour)	Available Water Capacity (Inches per Inch of soil)	Soil pH	Intake Family (flood)	Intake Family (furrow)
BdA	Baldock Loam	Somewhat poorly drained	38.6	5.0%	0 to 1	3 to 4	0 to 56	loam	0.63 - 2.00	0.16 - 0.18	7.4-8.0	1.5	0.5
							56 to 65	fine sandy loam	2.00 - 8.30	0.13 - 0.15	7.9-8.4	2	0.55
BsA	Bram Silt Loam, Saline-Alkali	Somewhat poorly drained	5.5	1.0%	0 to 1	3 to 6	0 to 52	silt loam, loam	0.06 - 0.20	0.10 - 0.18	7.9-8.6	1.5	0.5
MuA	Moulton Fine Sandy Loam, Saline	Poorly drained	6.7	1.0%	0 to 1	2 to 3	0 to 30	fine sandy loam, loam and loamy sand	0.63 - 6.30	0.13 - 0.15	6.6-7.8	2.5	0.63
							30	gravel and coarse sand	>20.0	0.03 - 0.05		4	0.85
MvA	Moulton Loam, Saline	Poorly drained	221.5	31.0%	0 to 1	2 to 3	0 to 30	fine sandy loam, loam and loamy sand	0.63 - 6.30	0.13 - 0.15	6.6-7.8	2.5	0.63
							30	gravel and coarse sand	>20.0	0.03 - 0.05		4	0.85
MwA	Moulton Loam, Saline	Poorly drained	180.2	25.0%	0 to 1	2 to 3	0 to 30	fine sandy loam, loam and loamy sand	0.63 - 6.30	0.13 - 0.15	6.6-7.8	2.5	0.63
							30	gravel and coarse sand	>20.0	0.03 - 0.05		4	0.85
No	Notus Soils	Somewhat poorly drained	213.1	30.0%	0 to 1	1 to 3	0 to 14	fine sandy loam to gravelly loamy sand	2.00 - 20.00	0.06 - 0.14	6.6-7.8	2.5	0.63
							14 - 60	sand and gravel	>20.00	0.03 - 0.05	6.6-7.3	4	0.85
OgA	Ollaga Loam	Somewhat poorly drained	41.1	6.0%	0 to 1	2 to 3	0 - 35	loam and fine sandy loam	0.63 - 2.00	0.16 - 0.18	7.4-8.4	1.5	0.5
							35 - 80	sand and gravel	>20.00	0.03 - 0.05		4	0.85
OIA	Ollaga Loam, Saline Alkali	Somewhat poorly drained	7	1.0%	0 to 1	1 to 3	0 - 35	loam and fine sandy loam	0.63 - 2.00	0.10 - 0.12	7.9-8.4	1.5	0.5
							35 - 60	sand and gravel	>20.00	0.03 - 0.05		4	0.85

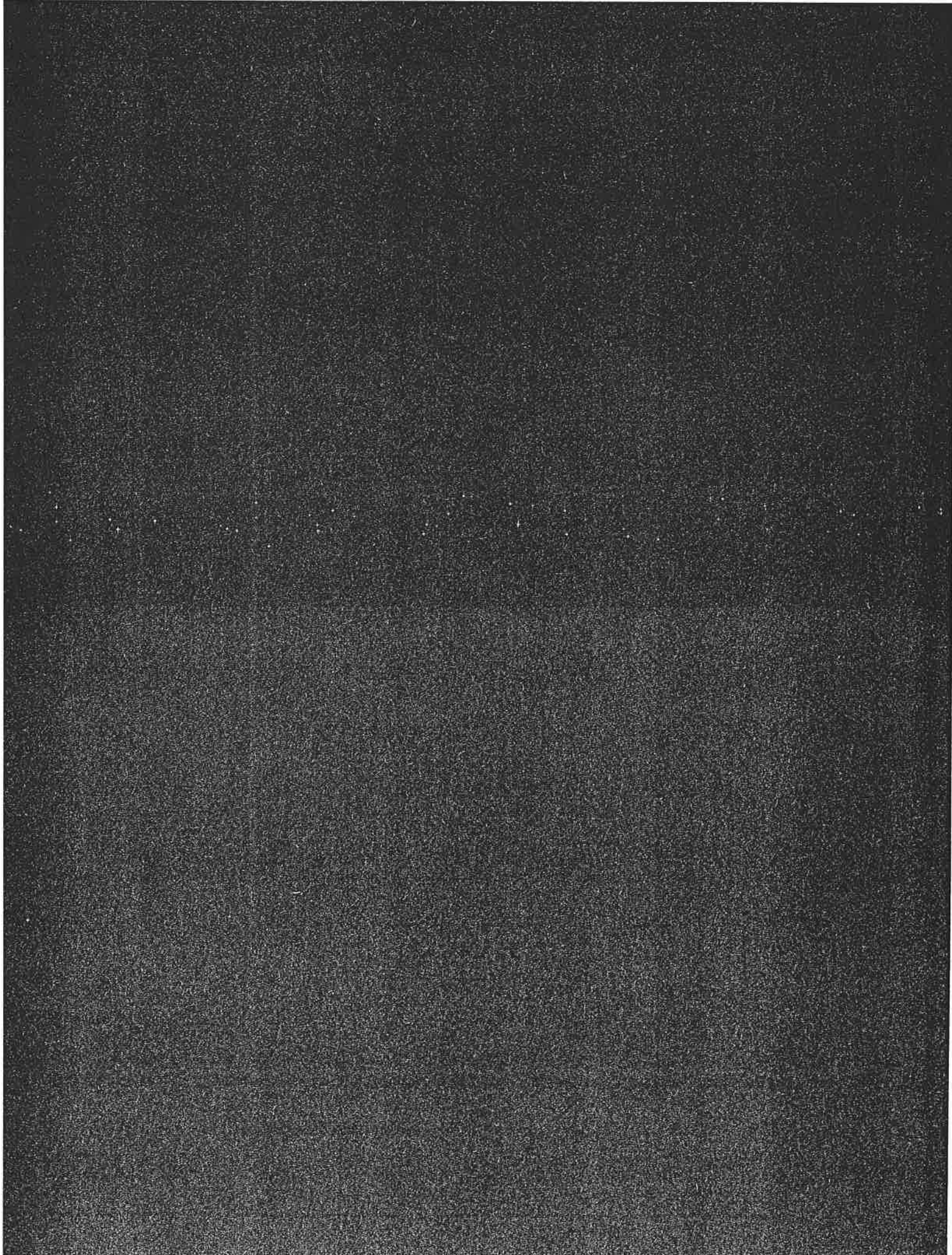
713.6*

100%

*Limited to 561 acres irrigation within the Haas Ditch Co. service area

Weighted Average for upper 30 inches

8.1 0.12 2.6 0.85



IRRIGATION REQUIREMENT ANALYSIS

63-4641A & 63-4641B

Prepared for

Tree Top Ranches, LP
914 Houston Rd
Boise, ID

Prepared by:

Marci S. Pape, P.E.
SPF Water Engineering, LLC
300 East Mallard Drive
Boise, ID 83706

May 20, 2009



Marci Stirling Pape
5/20/09

Table of Contents

1. Background.....	1
2. Water Rights	1
3. Irrigation Requirement Analysis.....	2
3.1. Fields	2
3.2. Soils	4
3.3. Crops	4
3.4. Climate.....	4
3.5. Irrigation Efficiency	5
3.6. Field Irrigation Requirement	5
4. Results and Conclusions.....	7
5. References	8

Appendices

Appendix A: Adjudication Claim Reports

Appendix B: Soil Characteristics

Appendix C: Climate Data

Appendix D: FURROW.EXE results

List of Figures

Figure 1. Places of use and points of diversions for water right claims 63-4641A and 63-4641B. The base layer is IDWR's 1987 color infrared imagery.	2
Figure 2. Field boundaries and soils at Tree Top Ranches.....	3
Figure 3. Field Irrigation Requirement for claim 63-4641A.	6
Figure 4. Field Irrigation Requirement for claim 63-4641B.....	7

List of Tables

Table 1. Properties of predominant soils.	4
Table 2. Field characteristics (furrow spacing = 2 ft).	6

1. BACKGROUND

This report presents a Field Irrigation Requirement (FIR) analysis for a farm located along Highway 20/26/95 about 1.5 miles southeast of Parma, ID, and identified by two Snake River Basin Adjudication (SRBA) water right claims. Claim 63-4641A identifies diversion of 1.89 cfs from Sand Hollow Creek and an unnamed drain for irrigation of 54 acres in Sections 15 and 22 of T5N R5W. Claim 63-4641B lists diversion of 0.11 cfs from the same sources for irrigation of 3 acres, also in T5N R5W Sec 15.

Bill Mulder, the current representative for Tree Top Ranches, provided information necessary to complete this analysis such as irrigation methods, crop patterns, etc. The information has been collected from the best available knowledge of the current owners.

2. WATER RIGHTS

Tree Top Ranches is owner of two claims totaling 2.00 cfs for irrigation of 57 acres in Canyon County:

63-4641A

Priority: 3/1/1935

Source: Sand Hollow Creek, Unnamed Drain

Use: Irrigation of 54 acres

Rate: 1.89 cfs

Points of Diversion: 5N 5W 14, SWSW; 5N 5W 15, SWSE

63-4641B

Priority: 3/1/1935

Source: Sand Hollow Creek, Unnamed Drain

Use: Irrigation of 3 acres

Rate: 0.11 cfs

Points of Diversion: 5N 5W 14, SWSW; 5N 5W 15, SWSE

Figure 1 presents the recommended places of use and points of diversion for these rights. Sand Hollow Creek, also known as Sand Hollow Creek Drain, Sand Creek, or Cole Slough Drain, supplies water to the entire 57 acres of the farm. A drain ditch tributary to Sand Hollow Creek also supplies water to the entire property. This figure also identifies field acreage, field boundaries, and furrow direction. Field 3 is further split based on soil types. Adjudication Claim Reports for these claims are included in Appendix A.

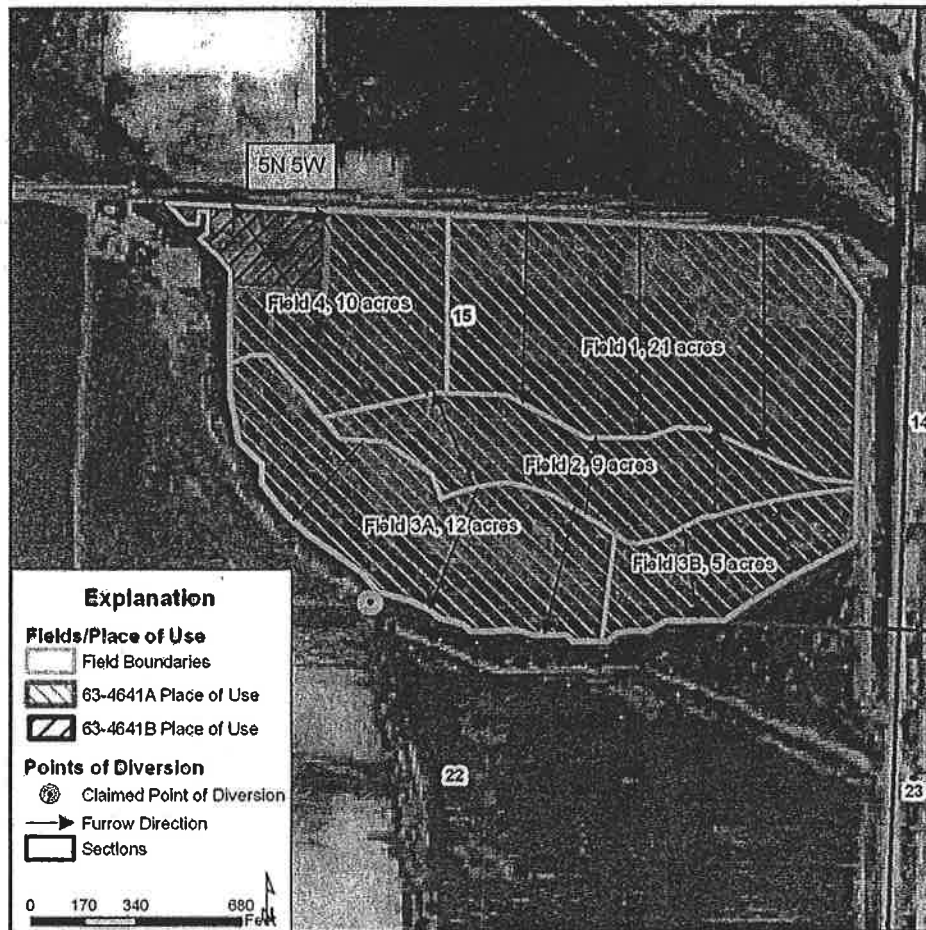


Figure 1. Places of use and points of diversions for water right claims 63-4641A and 63-4641B. The base layer is IDWR's 1987 color infrared imagery.

3. IRRIGATION REQUIREMENT ANALYSIS

3.1. Fields

Field boundaries are based on Bill Mulder's identification, IDWR's digital claim-layer place of use shapefile, and interpretation of 1987, 1994, & 2000 aerial imagery. Figure 2 presents field boundaries and furrow direction overlaid on selected soils from the SSURGO soil database. The fields are generally level and currently irrigated using sprinklers, primarily two center pivots. The fields have historically been irrigated using surface irrigation, however, and the transition to sprinkler irrigation was not made until sometime between 2000 and 2006, based on the aerial imagery. Mr. Mulder indicated that the fields were historically irrigated using wild flooding methods, but IDWR generally does not consider wild flooding to be an acceptable

irrigation practice and instead recommends estimating field application efficiency based on corrugation-type irrigation with reasonable corrugation spacing (Dreher & Tuthill, 1999).

To account for the higher diversion rate demands associated with surface irrigation, and recognizing the historical irrigation methods on the property, the irrigation analysis was based on corrugate methods. Field furrow lengths range from 300 to 750 feet. Slope was assumed to be 0.005 ft/ft for fields with soils described by the SSURGO soils database to have slopes from 0 to 1 percent. One of the prominent soils existing on the property, Notus, has a range of slopes of 0 to 3 percent in its SSURGO soil description, so its slopes were assumed to be 0.01 ft/ft. Based on Dreher and Tuthill, 1999, field irrigation requirements are estimated using the NRCS Furrow program together with soil characteristics, field conditions, and weather station records.

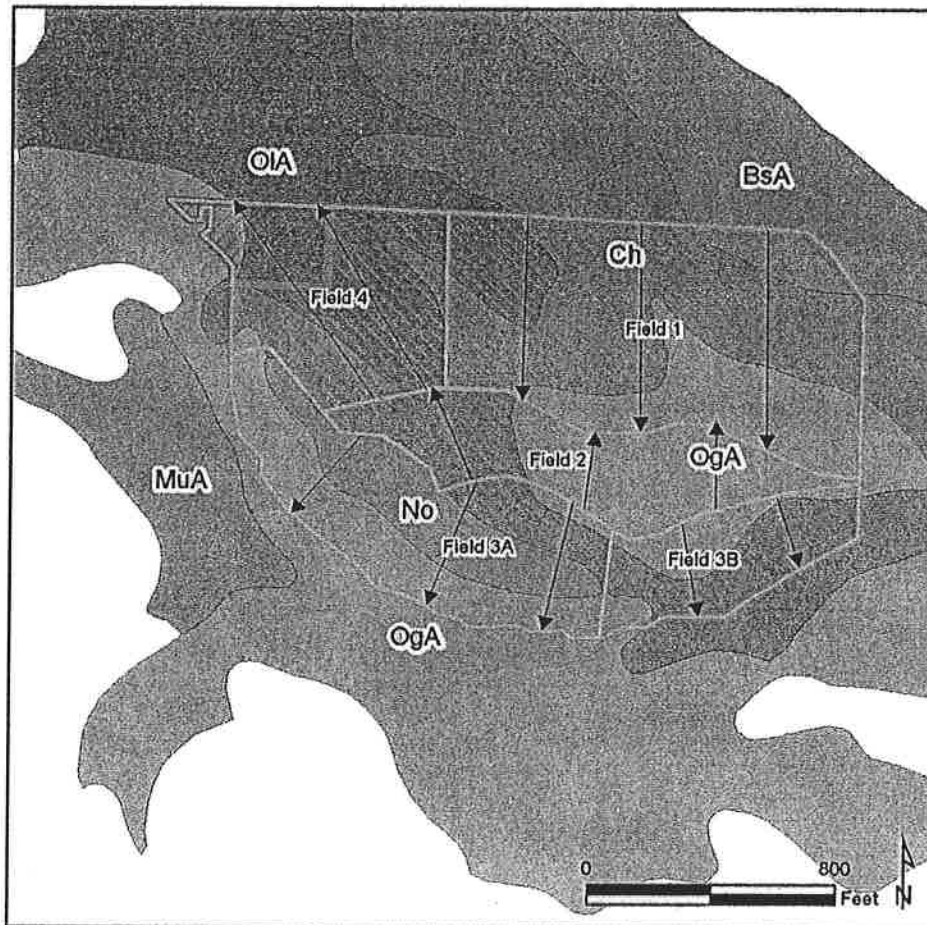


Figure 2. Field boundaries and soils at Tree Top Ranches.

3.2. Soils

Soil information is provided by the Natural Resource Conservation Service digital SSURGO soil database. Table 1 presents the predominant soils found on this farm. Soil analyses, including determination of Management Allowed Deficit (MAD) are included in Appendix B. All of these soils have a furrow intake family value of 0.55, which is in the moderate range. Water infiltrates slowly into low intake family soils, and quickly into high intake family soils (heavy clay = 0.3; sand = 0.8). Most of the soils are deep and have an available water holding capacity (AWC) of at least 0.11 inches of water per inch of soil in the upper layer.

According to the SSURGO soil database, one of the soils present on the farm, Chance, has a texture description of "slightly decomposed plant material" at the soil depth of 0 to 1 inch and "moderately decomposed plant material" at the depth of 1 to 2 inches. The available water capacity, percent organic matter, and saturated hydraulic conductivity are a great deal higher for the top two inches of the Chance soil than for any other depths of that soil or any other soils on the property. This indicates that any water applied would penetrate the top two inches almost immediately, making the next soil layer a much better indicator of intake family. For that reason, the characteristics of the soil layer from 2 to 14 inches were used to determine intake family for the Chance soil.

Table 1. Properties of predominant soils.

<i>Fields</i>	<i>Soil Properties</i>			
	<i>MUSYM Code</i>	<i>Name</i>	<i>Slope (percent)</i>	<i>Furrow Intake Family</i>
1,2,3A,3B,4	Ch	Chance Fine Sandy Loam	0 to 1	0.55
3A	No	Notus	0 to 3	0.55
1,2,3A,3B	OgA	Oliaga Loam	0 to 1	0.55
1,4	OIA	Oliaga Loam	0 to 1	0.55

3.3. Crops

The analyzed crop of grass pasture is based on actual historic cropping patterns per Bill Mulder. Other crops and rotations may result in higher or lower irrigation requirements.

3.4. Climate

The Parma Experiment Station climate station is used as the basis for crop evapotranspiration (ET) requirements for this farm. 80th percentile values of monthly ET for this station were obtained from Richard G. Allen and Clarence W. Robison, 2006 (Revised 2007) and are included in Appendix C.

3.5. Irrigation Efficiency

Per IDWR guidelines (Dreher & Tuthill, 1999), NRCS's FURROW program is used to estimate irrigation efficiency. In this analysis, input parameters include:

- Irrigation application depths ranging from 1.28 to 2.80 inches of water, equivalent to MAD found in Soil Characteristics (Appendix B)
- Corrugate irrigation for grass pasture
- Furrow length ranging from 300 to 750 ft
- Furrow spacing of 2 ft for corrugates
- Furrow slope of 0.005 for soils described with 0 to 1 percent slope, and 0.01 ft/ft for soils with 0 to 3 percent slope
- Soil intake family as listed in Table 1, and per Soil Characteristics in Appendix B
- Furrow inflow rates range from 3 to 6.5 gpm and application time is 12 hours. The most efficient combination of flow and application time is selected for analysis.

Inflow rate is adjusted for application times of 12 or 24 hours in order to determine the optimum irrigation efficiency. All fields demonstrated peak efficiency with 12-hour sets with longer sets resulting in decreased efficiency. Field 3 was split based on soil-type boundaries.

3.6. Field Irrigation Requirement

Field Application Efficiency (FAE) values are the result of Furrow program runs. Table 2 provides Furrow program results for each field based on furrow spacing and length, soil type, crop, irrigation application depth, irrigation method, and the most efficient inflow time / flow rate combination.

Figure 3 presents a spreadsheet used to determine the Field Irrigation Requirement (FIR) for claim 63-4641A based on crop evapotranspiration requirements, net irrigation application (equivalent to MAD values from the soil analysis spreadsheets, Appendix B), and FAE from Furrow runs (Table 2 and Appendix D). Based on the crop rotation presented, the total on-farm irrigation requirement is 1.60 cfs for 54 acres.

Claim 63-4641B covers 3 acres which were historically surface irrigated as part of Field 4. For this reason, Field 4 was analyzed using the same input parameters for claims 63-4641A and 63-4641B, but using a field size of 7 acres for 63-4641A and 3 acres for 63-4641B.

The total on-farm irrigation requirement for claim 63-4641A is 0.030 cfs per acre based on 1.60 cfs for 54 acres. Figure 3 presents the FIR spreadsheet for 63-4641A. The total on-farm irrigation requirement for claim 63-4641B is 0.025 cfs per acre based on 0.08 cfs for 3 acres. Figure 4 presents the FIR spreadsheet for 63-4641B.

Table 2. Field characteristics (furrow spacing = 2 ft).

Field ID	Size (acres)	Crop	Soil	Irrigation Application (inches)	Slope	Furrow Length (ft)	Inflow Rate (gpm)	Irrigation method	Inflow Time (hours)	Irrigation Efficiency (%)
1	21	Pasture	Ch	2.28	0.005	650	5.5	Corrugations	12	47
2	9	Pasture	Ch	2.28	0.005	300	3	Corrugations	12	39
3A	12	Pasture	No	1.28	0.01	400	3	Corrugations	12	30
3B	5	Pasture	Ch	2.28	0.005	300	3	Corrugations	12	39
4	10	Pasture	Ch	2.28	0.005	750	6.5	Corrugations	12	46

* Irrigation efficiency below 15% and above 70% is limited to 15% and 70%, respectively, for FIR determination based on Dreher and Tuthill, 1999.

FIELD IRRIGATION REQUIREMENT															
Initials:		mp	Claimant = Tree Top Ranches - Claim 63-4641A												
date:		05/15/09	Weather Station = Parma Experiment Station												
crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig.		irrig. freq. (days)
				mar	apr	may	jun	jul	aug	sep	oct		app.	ET ratio	
past	21	cor	47	1.12	3.71	5.33	6.07	6.43	5.13	3.27	1.57		2.28	1.10	8.2
past	9	cor	39	1.12	3.71	5.33	6.07	6.43	5.13	3.27	1.57		2.28	1.10	8.2
past	12	cor	30	1.12	3.71	5.33	6.07	6.43	5.13	3.27	1.57		1.28	1.13	4.5
past	5	cor	39	1.12	3.71	5.33	6.07	6.43	5.13	3.27	1.57		2.28	1.10	8.2
past	7	cor	46	1.12	3.71	5.33	6.07	6.43	5.13	3.27	1.57		2.28	1.10	8.2
Summary		54													
Peak Gross Irrigation Application (mm/day) =				17.93											
On-Farm Irrigation Requirement (cfs/acre) =				0.030											
Total On-Farm Irrigation Requirement (cfs) =				1.60											
Irrigation Diversion Volume (ft/yr) =				0.00											
Total Irrigation Diversion Volume (ac-ft/yr) =				0											

Figure 3. Field Irrigation Requirement for claim 63-4641A.

FIELD IRRIGATION REQUIREMENT

initials: mp Claimant = Tree Top Ranches - 63-4641B
date: 05/15/09 Weather Station = Parma Experiment Station

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)							AVE IR season (mm/yr)	net		irrig. freq. (days)	
				mar	apr	may	jun	jul	aug	sep		oct	irrig. app. (in)		ET ratio
past	3	cor	46	1.12	3.71	5.33	6.07	6.43	5.13	3.27	1.57		2.28	1.10	8.2

Summary 3

Peak Gross Irrigation Application (mm/day) = 15.38
On-Farm Irrigation Requirement (cfs/acre) = 0.025
Total On-Farm Irrigation Requirement (cfs) = 0.08
Irrigation Diversion Volume (ft/yr) = 0.00
Total Irrigation Diversion Volume (ac-ft/yr) = 0

Figure 4. Field Irrigation Requirement for claim 63-4641B.

4. RESULTS AND CONCLUSIONS

The above analysis indicates an average field irrigation requirement of 0.030 cfs per acre for claim 3-4641A, and 0.025 cfs per acre for claim 63-4641B. Both amounts exceed the Idaho standard irrigation rate of 0.02 cfs per acre. With the possible exception of the Notus soil, the loamy soils present on this farm appear to be fairly well suited for surface irrigation methods. Field application efficiency tends to be higher with longer furrow lengths.

5. REFERENCES

Allen, Richard G. and Clarence W. Robison, 2006 (Revised 2007). ***Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho***. Research Technical Completion Report, Kimberly Research and Extension Center, University of Idaho, Moscow, ID

Dreher and Tuthill, 1999. ***Report Regarding Evaluation of Irrigation Diversion Rates***. Idaho Department of Water Resources, January 14, 1999.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database [Online at <http://www.ncgc.nrcs.usda.gov/products/datasets/ssurgo/>].

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APPENDIX A
ADJUDICATION CLAIM REPORTS FOR
63-4641A & 63-4641B

IDAHO DEPARTMENT OF WATER RESOURCES
Adjudication Claim Report

5/15/2009

WATER RIGHT NO. 63-4641A

<u>Owner Type</u>	<u>Name and Address</u>
Current Owner	TREE TOP RANCHES LP 914 HOUSTON RD BOISE, ID 83706 (208)377-0998
Original Owner	LESLIE W HAMILTON 26415 SAND RD PARMA, ID 83660

Priority Date: 11/01/1880
Basis: Beneficial Use
Status: Active

<u>Source</u>	<u>Tributary</u>
SAND HOLLOW CREEK	BOISE RIVER

<u>Beneficial Use</u>	<u>From</u>	<u>To</u>	<u>Diversion Rate</u>	<u>Volume</u>
IRRIGATION	4/01	10/31	1.89 CFS	
Total Diversion			1.89 CFS	

Location of Point(s) of Diversion:

SAND HOLLOW CREEK	NWNE	Sec. 22	Township 05N	Range 05W	CANYON County
-------------------	------	---------	--------------	-----------	---------------

Place(s) of use:

Place of Use Legal Description: IRRIGATION CANYON County

Township	Range	Section	Lot	Tract	Acres	Lot	Tract	Acres	Lot	Tract	Acres	Lot	Tract	Acres
05N	05W	15		SWSE	20		SESE	34						

Total Acres: 54

Conditions of Approval:

1.	THIS CLAIM IS A RESULT OF A CHANGE IN OWNERSHIP FOR A PORTION OF CLAIM NO. A63-04641 FEE PAID UNDER RECEIPT NO. W010765. RDH 11/8/96.
2.	The point of diversion claimed for this water right was established prior to November 19, 1987 and accordingly qualifies as an accomplished transfer pursuant to Idaho Code Section 42-1425.
3.	CHANGE IN OWNERSHIP LG 9-22-2006- REVIEWED BY V. MUSIC

Dates:

Licensed Date:

Claim Received Date:

Decreed Date:

Enlargement Use Priority Date:

Enlargement Statute Priority Date:

Other Information:

State or Federal: S

Owner Name Connector:

Water District Number:

Generic Max Rate per Acre:

Generic Max Volume per Acre:

Civil Case Number:

Old Case Number:

Decree Plaintiff:

Decree Defendant:

Swan Falls Trust or Nontrust:

Swan Falls Dismissed:

DLE Act Number:

Cary Act Number:

Mitigation Plan: False

Close

[Close](#)IDAHO DEPARTMENT OF WATER RESOURCES
Adjudication Claim Report

5/15/2009

WATER RIGHT NO. 63-4641B

<u>Owner Type</u>	<u>Name and Address</u>
Current Owner	TREE TOP RANCHES LP 914 HOUSTON RD BOISE, ID 83706 (208)377-0998
Original Owner	CURT CHRISTOFFERSON
Original Owner	JOLENE CHRISTOFFERSON
Original Owner	LESLIE W HAMILTON 26415 SAND RD PARMA, ID 83660 (208)722-7450

Priority Date: 11/01/1880

Basis: Beneficial Use

Status: Active

<u>Source</u>	<u>Tributary</u>
SAND HOLLOW CREEK	BOISE RIVER

<u>Beneficial Use</u>	<u>From</u>	<u>To</u>	<u>Diversion Rate</u>	<u>Volume</u>
IRRIGATION	4/01	10/31	0.11 CFS	
Total Diversion			0.11 CFS	

Location of Point(s) of Diversion:

--	--	--	--	--	--	--	--	--	--

SAND HOLLOW CREEK	NWNE	Sec. 22	Township 05N	Range 05W	CANYON County
-------------------	------	---------	--------------	-----------	---------------

Place(s) of use:

Place of Use Legal Description: IRRIGATION CANYON County

Township	Range	Section	Lot	Tract	Acres	Lot	Tract	Acres	Lot	Tract	Acres	Lot	Tract	Acres
05N	05W	15		SWSE	3									

Total Acres: 3

Conditions of Approval:

1.	THIS CLAIM IS A RESULT OF A CHANGE IN OWNERSHIP FOR A PORTION OF CLAIM NO. A63-04641 FEE PAID UNDER RECEIPT NO. W010765. RDH 11/8/96.
2.	The point of diversion claimed for this water right was established prior to November 19, 1987 and accordingly qualifies as an accomplished transfer pursuant to Idaho Code Section 42-1425.
3.	CHANGE IN OWNERSHIP LG-9/22/2006 REVIEWED BY V. MUSIC

Dates:

Licensed Date:

Claim Received Date:

Decreed Date:

Enlargement Use Priority Date:

Enlargement Statute Priority Date:

Other Information:

State or Federal: S

Owner Name Connector:

Water District Number:

Generic Max Rate per Acre:

Generic Max Volume per Acre:

Civil Case Number:

Old Case Number:

Decree Plaintiff:

Decree Defendant:

Swan Falls Trust or Nontrust:

Swan Falls Dismissed:

DLE Act Number:

Cary Act Number:

Mitigation Plan: False

Close

APPENDIX B

SOIL CHARACTERISTICS

SOIL CHARACTERISTICS

initials: mp

date: MAY 13, 2009

Soil Type = Chance Fine Sandy Loam (Ch)

0-1" = PT; 1-2" = PT; 2-14" = SC; 14-25" = SC; 25-62" = GP-GM, SM, SP-SM, GM

Source of Soils Data =

Soil Survey of Canyon Area, Idaho. Version 8, Jun 25, 2008

soil depth (inches)		AWC (in/in)		PH		organic (%)		soil depth (ft)	AWC (inches)	intake family	
lower	upper	lower	upper	lower	upper	lower	upper			flood	furrow
0	1	0.3	0.6	6.6	7.8	1	2	1	2.30	2	0.55
1	2	0.3	0.6					2	3.88		
2	14	0.13	0.15					3	4.56		
14	25	0.11	0.15					4	5.16	alternate	
25	62	0.03	0.07					5	5.76	method	
										2	0.55

Management Allowed Deficit (MAD)

crop	root depth (ft)	stress point	MAD (inches)
alfalfa (hay or seed)	5	0.5	2.88
corn (field or silage)	4	0.5	2.58
grain (winter or spring)	4	0.5	2.58
pasture (or grass hay)	3	0.5	2.28
other (enter below)			
turf	1	0.5	1.15
orchard	5	0.5	2.88

SOIL CHARACTERISTICS

initials: mp

date: MAY 6, 2009

Soil Type = Notus (No)

0-1" = SM; 1-14" = SM; 14-60" = GP-GM

Source of Soils Data =

Soil Survey of Canyon Area, Idaho. Version 8, Jun 25, 2008

soil depth (inches)		AWC (in/in)		PH		organic (%)		soil depth (ft)	AWC (inches)	intake family	
lower	upper	lower	upper	lower	upper	lower	upper			flood	furrow
0	1	0.11	0.13	6.1	8.4	0.5	1	1	1.44	2	0.55
1	14	0.11	0.13					2	2.08		
14	60	0.03	0.05					3	2.56		
								4	3.04	alternate	
								5	3.52	method	
										2	0.55

Management Allowed Deficit (MAD)

crop	root depth (ft)	stress point	MAD (inches)
alfalfa (hay or seed)	5	0.5	1.76
corn (field or silage)	4	0.5	1.52
grain (winter or spring)	4	0.5	1.52
pasture (or grass hay)	3	0.5	1.28
other (enter below)			
turf	1	0.5	0.72
orchard	5	0.5	1.76

SOIL CHARACTERISTICS

initials: mp

date: MAY 6, 2009

Soil Type = Oliaga Loam (OgA)

0-8" = CL,CL-ML; 8-35" = CL-ML,ML; 35-60" = GP, SP

Source of Soils Data =

Soil Survey of Canyon Area, Idaho. Version 8, Jun 25, 2008

soil depth (inches)		AWC (in/in)		PH		organic (%)		soil depth (ft)	AWC (inches)	intake family	
lower	upper	lower	upper	lower	upper	lower	upper			flooc	furrow
0	8	0.16	0.18	7.4	8.4	1	3	1	1.98	2	0.55
8	35	0.13	0.18					2	3.84		
35	60	0.03	0.06					3	5.59		
								4	6.13	alternate	
								5	6.67	method	
										2	0.55

Management Allowed Deficit (MAD)

crop	root depth (ft)	stress point	MAD (inches)
alfalfa (hay or seed)	5	0.5	3.34
corn (field or silage)	4	0.5	3.07
grain (winter or spring)	4	0.5	3.07
pasture (or grass hay)	3	0.5	2.80
other (enter below)			
turf	1	0.5	0.99
orchard	5	0.5	3.34

SOIL CHARACTERISTICS

initials: mp

date: MAY 6, 2009

Soil Type = Oliaga Loam (Ola)

0-8" = CL,CL-ML; 8-35" = CL-ML,ML; 35-60" = GP, SP

Source of Soils Data = Soil Survey of Canyon Area, Idaho. Version 8, Jun 25, 2008

soil depth (inches)		AWC (in/in)		PH		organic (%)		soil depth (ft)	AWC (inches)	intake family	
lower	upper	lower	upper	lower	upper	lower	upper			flood	furrow
0	8	0.16	0.18	7.9	9.4	1	3	1	1.98	1.5	0.5
8	35	0.13	0.18					2	3.84		
35	60	0.03	0.06					3	5.59		
								4	6.13	alternate	
								5	6.67	method	
										2	0.55

Management Allowed Deficit (MAD)

crop	root depth (ft)	stress point	MAD (inches)
alfalfa (hay or seed)	5	0.5	3.34
corn (field or silage)	4	0.5	3.07
grain (winter or spring)	4	0.5	3.07
pasture (or grass hay)	3	0.5	2.80
other (enter below)			
turf	1	0.5	0.99
orchard	5	0.5	3.34

APPENDIX C CLIMATE DATA

ET_{Idaho} --- Evapotranspiration and Consumptive Irrigation

Water Requirements for Idaho

Please send suggestions for improving this site to robison at kimberly dot uidaho dot edu Copyright 2007, University of Idaho.

Parma Experiment Station (NWS NOAA--106844)

Statistics based on 30 years between 1971 to 2004

For a different land cover or crop click on the above link.

You can highlight this table and copy via the clipboard to a Microsoft Excel or OpenOffice spreadsheet to plot or otherwise work with this data.

Grass Pasture - high management														
Precipitation Deficit (Click here for a graph)														
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a	Annual
Mean	mm/day												mm	
Monthly ^b	0.19	0.12	0.69	3.14	4.65	5.32	5.95	4.79	2.81	1.13	-0.46	-0.49	863	841
15-Day Moving Average ^c	0.21	0.03	0.62	3.21	4.65	5.33	5.98	4.69	2.71	1.20	-0.49	-0.47		
7-Day Moving Average ^d	0.20	0.09	0.65	3.17	4.66	5.32	5.98	4.75	2.76	1.15	-0.51	-0.47		
3-Day Moving Average ^e	0.19	0.11	0.68	3.17	4.64	5.32	5.96	4.78	2.79	1.13	-0.48	-0.47		
Standard Deviation	mm/day												mm	
Monthly	0.50	0.16	0.82	0.96	1.19	0.79	0.76	0.74	0.72	0.69	0.48	0.72	65	67
15-Day Moving Average	0.53	0.26	0.79	1.14	1.34	1.16	0.64	0.83	1.02	0.79	0.72	0.64		
7-Day Moving Average	0.72	0.42	1.06	1.42	1.80	1.70	0.90	1.14	1.35	1.16	1.04	0.83		
3-Day Moving Average	0.98	0.61	1.45	1.91	2.33	2.31	1.32	1.52	1.72	1.50	1.49	1.17		
20% Exceedance	mm/day												mm	
Monthly	0.04	0.24	1.12	3.71	5.33	6.07	6.43	5.13	3.27	1.57	-0.02	-0.01	915	885
15-Day Moving Average	0.18	0.46	2.13	4.64	6.46	6.64	6.88	5.77	3.98	2.42	0.37	0.20		
7-Day Moving Average	0.31	0.74	2.84	5.45	7.31	7.28	7.24	6.40	4.91	3.17	0.58	0.29		
3-Day Moving Average	0.39	1.01	3.62	6.46	8.02	8.34	8.16	7.44	6.02	4.01	0.82	0.39		
80% Exceedance	mm/day												mm	
Monthly	0.38	-0.01	0.19	2.71	3.87	4.58	5.46	4.35	2.49	0.66	-0.74	-1.04	782	784

15-Day Moving Average	0.83	-0.17	-0.44	1.53	2.49	3.00	4.78	3.19	1.27	0.26	-1.66	-1.59
7-Day Moving Average	1.62	-0.72	-1.06	0.62	0.68	0.70	3.82	1.67	0.10	1.38	-3.12	-2.85
3-Day Moving Average	2.82	-1.84	-3.00	-1.92	-2.68	-3.69	1.27	0.04	1.92	3.87	-5.39	-4.70
Ave Highest ET	mm/day											--
15-Day Moving Average ^f	0.12	0.29	1.36	4.01	5.64	6.26	6.48	5.39	3.48	1.88	0.19	0.09
7-Day Moving Average ^g	0.24	0.59	1.97	4.86	6.57	6.97	6.89	6.09	4.26	2.54	0.44	0.20
3-Day Moving Average ^h	0.33	0.77	2.62	5.80	7.40	7.86	7.61	6.99	5.16	3.16	0.68	0.32
Ave Lowest ET	mm/day											--
15-Day Moving Average ^f	0.48	-0.11	0.00	2.43	3.60	4.43	5.43	4.07	2.01	0.46	-1.01	-0.91
7-Day Moving Average ^g	0.98	-0.48	-0.65	1.44	2.05	2.92	4.66	3.25	1.09	0.38	-1.85	-1.62
3-Day Moving Average ^h	1.98	-1.22	-1.95	-0.37	-0.32	0.59	3.06	1.85	0.30	1.74	-3.85	-2.94
Special normal distribution parameters for monthly, seasonal, and annual intervals												--
Skew	0.57	-0.40	0.21	-1.40	-0.22	-0.37	0.20	-0.19	0.47	0.00	-0.82	-0.23
Kurtosis	1.18	3.36	0.87	5.22	0.94	2.27	0.54	1.00	3.67	0.60	3.09	0.57

^a Growing Season: This is usually the time from green up or planting in the spring to a killing frost or harvest in the fall. It is not applicable for entries without a growing season and will be blank.

^b Mean of the average daily value for month

^c Mean of the fourteen 15-day period averages contained in the month

^d Mean of the twenty three 7-day period averages contained in the month

^e Mean of the twenty seven 3-day period averages contained in the month

^f Mean of the highest/lowest 15-day period average in month

^g Mean of the highest/lowest 7-day period average in month

^h Mean of the highest/lowest 3-day period average in month

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This work and report were prepared by the University of Idaho Research and Extension Center at Kimberly, Idaho under

contract with the Idaho Department of Water Resources. Work was supported by funding from IDWR and the Idaho Agricultural Experiment Station and Idaho Engineering Experiment Station. The authors gratefully acknowledge the long-term evapotranspiration data collection and long-standing advice provided by Dr. James L. Wright, USDA-ARS Kimberly (ret.), the more than two decades of high quality agricultural weather data collection by the U.S. Bureau of Reclamation AgriMet system, and the very long-standing, routine data collection by the hundreds of cooperative weather station volunteers across the state who, for more than one-hundred years, have faithfully observed daily air temperature and precipitation.

The citation for the evapotranspiration data used from this site should be: *Allen, Richard G. and Clarence W. Robison, 2006 (Revised 2007). Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho, Research Technical Completion Report, Kimberly Research and Extension Center, University of Idaho, Moscow, ID.*

Questions regarding the data should be addressed to Clarence W. Robison or Richard G. Allen, University of Idaho, Kimberly Research and Extension Center, 3793 North 3600 East, Kimberly, ID 83341. Telephone (208)-423-6610

APPENDIX D
FURROW.EXE RESULTS

```

S:\RESOUR-1\UDWR\Hubble\FURROW.EXE
INTAKE FAMILY (IF) = 0.55
DESIGN APPLICATION (Pn) = 2.28 INCHES
FURROW SLOPE (S) = 0.005 FEET/FOOT
FURROW SPACING (U) = 2.00 FEET
FURROW LENGTH (L) = 650 FEET
INFLOW RATE (Q) = 5.5 GPM/FURROW
APPLICATION TIME (TI) = 12 HOURS
=====
ADVANCE TIME (TT) = 221.0 MINUTES; OR 3.7 HOURS
GROSS APPLICATION (PG) = 4.89 INCHES
NET APPLICATION (Pn) = 3.08 INCHES
RUMOPP (RO) = 0.14 INCHES
DEEP PERCOLATION (DP) = 2.47 INCHES
EFFICIENCY (E) = 46.66 %
TO CHANGE:
Design Application (1) PRESS (EXISTING) 2.28 in
Furrow Slope (2) 0.005 ft/ft
Furrow Spacing (3) 2.00 ft
Furrow Length (4) 650 ft
Furrow Intake Family (5) 0.55
Inflow Rate (6) 5.5 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)?

```

Figure 1. Field 1, pasture

```

S:\RESOUR-1\UDWR\Hubble\FURROW.EXE
INTAKE FAMILY (IF) = 0.55
DESIGN APPLICATION (Pn) = 2.28 INCHES
FURROW SLOPE (S) = 0.005 FEET/FOOT
FURROW SPACING (U) = 2.00 FEET
FURROW LENGTH (L) = 300 FEET
INFLOW RATE (Q) = 3.0 GPM/FURROW
APPLICATION TIME (TI) = 12 HOURS
=====
ADVANCE TIME (TT) = 72.8 MINUTES; OR 1.2 HOURS
GROSS APPLICATION (PG) = 5.77 INCHES
NET APPLICATION (Pn) = 4.17 INCHES
RUMOPP (RO) = 1.35 INCHES
DEEP PERCOLATION (DP) = 2.15 INCHES
EFFICIENCY (E) = 39.48 %
TO CHANGE:
Design Application (1) PRESS (EXISTING) 2.28 in
Furrow Slope (2) 0.005 ft/ft
Furrow Spacing (3) 2.00 ft
Furrow Length (4) 300 ft
Furrow Intake Family (5) 0.55
Inflow Rate (6) 3.0 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)?

```

Figure 2. Field 2, pasture

```

S:\RESOUR-1\UDWR\Hubble\FURROW.EXE
INTAKE FAMILY (IF) = 0.55
DESIGN APPLICATION (Pn) = 1.20 INCHES
FURROW SLOPE (S) = 0.010 FEET/FOOT
FURROW SPACING (U) = 2.00 FEET
FURROW LENGTH (L) = 400 FEET
INFLOW RATE (Q) = 3.0 GPM/FURROW
APPLICATION TIME (TI) = 12 HOURS
=====
ADVANCE TIME (TT) = 87.2 MINUTES; OR 1.5 HOURS
GROSS APPLICATION (PG) = 4.33 INCHES
NET APPLICATION (Pn) = 3.90 INCHES
RUMOPP (RO) = 0.17 INCHES
DEEP PERCOLATION (DP) = 2.80 INCHES
EFFICIENCY (E) = 29.55 %
TO CHANGE:
Design Application (1) PRESS (EXISTING) 1.20 in
Furrow Slope (2) 0.010 ft/ft
Furrow Spacing (3) 2.00 ft
Furrow Length (4) 400 ft
Furrow Intake Family (5) 0.55
Inflow Rate (6) 3.0 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)?

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Figure 3. Field 3A, pasture

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S:\RESOUR-1\UDWR\Hubble\FURROW.EXE
INTAKE FAMILY (IF) = 0.55
DESIGN APPLICATION (Pn) = 2.28 INCHES
FURROW SLOPE (S) = 0.005 FEET/FOOT
FURROW SPACING (U) = 2.00 FEET
FURROW LENGTH (L) = 300 FEET
INFLOW RATE (Q) = 3.0 GPM/FURROW
APPLICATION TIME (TI) = 12 HOURS
=====
ADVANCE TIME (TT) = 72.8 MINUTES; OR 1.2 HOURS
GROSS APPLICATION (PG) = 5.77 INCHES
NET APPLICATION (Pn) = 4.17 INCHES
RUMOPP (RO) = 1.35 INCHES
DEEP PERCOLATION (DP) = 2.15 INCHES
EFFICIENCY (E) = 39.48 %
TO CHANGE:
Design Application (1) PRESS (EXISTING) 2.28 in
Furrow Slope (2) 0.005 ft/ft
Furrow Spacing (3) 2.00 ft
Furrow Length (4) 300 ft
Furrow Intake Family (5) 0.55
Inflow Rate (6) 3.0 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)?

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Figure 4. Field 3B, pasture

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S:\RESOUR-1\UDWR\Hubble\FURROW.EXE
INTAKE FAMILY (IF) = 0.55
DESIGN APPLICATION (Pn) = 2.28 INCHES
FURROW SLOPE (S) = 0.005 FEET/FOOT
FURROW SPACING (U) = 2.00 FEET
FURROW LENGTH (L) = 750 FEET
INFLOW RATE (Q) = 6.5 GPM/FURROW
APPLICATION TIME (TI) = 12 HOURS
=====
ADVANCE TIME (TT) = 242.1 MINUTES; OR 4.0 HOURS
GROSS APPLICATION (PG) = 5.80 INCHES
NET APPLICATION (Pn) = 3.99 INCHES
RUMOPP (RO) = 0.13 INCHES
DEEP PERCOLATION (DP) = 2.57 INCHES
EFFICIENCY (E) = 45.56 %
TO CHANGE:
Design Application (1) PRESS (EXISTING) 2.28 in
Furrow Slope (2) 0.005 ft/ft
Furrow Spacing (3) 2.00 ft
Furrow Length (4) 750 ft
Furrow Intake Family (5) 0.55
Inflow Rate (6) 6.5 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)?

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Figure 5. Field 4, pasture