



State of Idaho

## DEPARTMENT OF WATER RESOURCES

322 East Front Street • P.O. Box 83720 • Boise, Idaho 83720-0098

Phone: (208) 287-4800 • Fax: (208) 287-6700 • Website: [www.idwr.idaho.gov](http://www.idwr.idaho.gov)

C.L. "BUTCH" OTTER  
Governor

GARY SPACKMAN  
Director

January 3, 2017

JAKE AND JENNIFER TRAUGHBER  
368 SOUTH 200 EAST  
JEROME ID 83338

**RESPONSE DEADLINE**  
**2/1/2017**

**RE: Water Supply Bank Rental Fees for 2017 Rental Agreements**

Dear Renter,

The following are your 2017 water rentals from the Water Supply Bank:

| Rental       | Start | End  | Water Right | Rental Volume (AF) | Total Rental Fee | Owner Fee (90%) | Admin Fee (10%) | Rental Fee Due Date |
|--------------|-------|------|-------------|--------------------|------------------|-----------------|-----------------|---------------------|
| 1            | 2016  | 2019 | 36-2087K    | 4.2                | \$71.40          | \$64.26         | \$7.14          | 1/1/2017            |
| 1            | 2016  | 2019 | 36-2113K    | 1.7                | \$28.90          | \$26.01         | \$2.89          | 1/1/2017            |
| 1            | 2016  | 2019 | 36-2161K    | 1                  | \$17.00          | \$15.30         | \$1.70          | 1/1/2017            |
| 1            | 2016  | 2019 | 36-2289M    | 0.6                | \$10.20          | \$9.18          | \$1.02          | 1/1/2017            |
| 1            | 2016  | 2019 | 36-2311K    | 2.1                | \$35.70          | \$32.13         | \$3.57          | 1/1/2017            |
| 1            | 2016  | 2019 | 36-2500K    | 2.1                | \$35.70          | \$32.13         | \$3.57          | 1/1/2017            |
| 1            | 2016  | 2019 | 36-2614K    | 3.2                | \$54.40          | \$48.96         | \$5.44          | 1/1/2017            |
| 1            | 2016  | 2019 | 36-7307K    | 2.1                | \$35.70          | \$32.13         | \$3.57          | 1/1/2017            |
| 1            | 2016  | 2019 | 36-7362K    | 2.4                | \$40.80          | \$36.72         | \$4.08          | 1/1/2017            |
| 1            | 2016  | 2019 | 36-7477K    | 1.1                | \$18.70          | \$16.83         | \$1.87          | 1/1/2017            |
| 1            | 2016  | 2019 | 36-7606K    | 1                  | \$17.00          | \$15.30         | \$1.70          | 1/1/2017            |
| 1            | 2016  | 2019 | 36-7779K    | 3.3                | \$56.10          | \$50.49         | \$5.61          | 1/1/2017            |
| 1            | 2016  | 2019 | 36-7832K    | 0.5                | \$8.50           | \$7.65          | \$0.85          | 1/1/2017            |
| 1            | 2016  | 2019 | 36-10225K   | 1                  | \$17.00          | \$15.30         | \$1.70          | 1/1/2017            |
| 1            | 2016  | 2019 | 36-15169K   | 17.8               | \$302.60         | \$272.34        | \$30.26         | 1/1/2017            |
| <b>Total</b> |       |      |             | 44.1               | \$749.70         | \$674.73        | \$74.97         |                     |

Our records indicate that payment has not yet been received for the above water right rentals.

If you have not already done so, please remit payment of **\$749.70** prior to the due dates above and enclose a copy of this letter with your payment.

If you have questions about your rental, you can contact me at 208-287-4918.

Regards,

**Remington Buyer**  
Water Supply Bank Coordinator

STATE OF IDAHO  
DEPARTMENT OF WATER RESOURCES  
**WATER SUPPLY BANK RENTAL AGREEMENT**

RECEIVED

DEC 23 2015

DEPARTMENT OF  
WATER RESOURCES

This is to certify that: **JAKE AND JENNIFER TRAUGHBER**  
**368 SOUTH 200 EAST**  
**JEROME ID 83338**  
**208-280-1113**

filed an application to rent water from the Water Supply Bank ("Bank"). The Idaho Water Resource Board ("Board"), being authorized to operate a Bank and to contract by and through the Director of the Idaho Department of Water Resources ("Director, Department") for rental of water from the Bank, agrees to rent water as follows:

**Summary of Water Rights or Portions Rented from the Bank**

| Water Right                        | Priority Date | Source       | Tributary | Rented Rate     | Annual Rented Volume |
|------------------------------------|---------------|--------------|-----------|-----------------|----------------------|
| 36-2087K                           | 1/23/1950     | Ground Water | NA        | 0.02 cfs        | 4.2 af               |
| 36-2113K                           | 3/12/1951     | Ground Water | NA        | 0.01 cfs        | 1.7 af               |
| 36-2161K                           | 1/11/1952     | Ground Water | NA        | 0.01 cfs        | 1.0 af               |
| 36-2289M                           | 12/2/1955     | Ground Water | NA        | 0.01 cfs        | 0.6 af               |
| 36-2311K                           | 11/23/1956    | Ground Water | NA        | 0.01 cfs        | 2.1 af               |
| 36-2500K                           | 7/18/1961     | Ground Water | NA        | 0.01 cfs        | 2.1 af               |
| 36-2614K                           | 6/7/1965      | Ground Water | NA        | 0.02 cfs        | 3.2 af               |
| 36-7307K                           | 2/26/1973     | Ground Water | NA        | 0.02 cfs        | 2.1 af               |
| 36-7362K                           | 8/2/1973      | Ground Water | NA        | 0.01 cfs        | 2.4 af               |
| 36-7477K                           | 5/28/1974     | Ground Water | NA        | 0.01 cfs        | 1.1 af               |
| 36-7606K                           | 2/4/1976      | Ground Water | NA        | 0.01 cfs        | 1.0 af               |
| 36-7779K                           | 2/22/1978     | Ground Water | NA        | 0.02 cfs        | 3.3 af               |
| 36-7832K                           | 12/11/1978    | Ground Water | NA        | 0.01 cfs        | 0.5 af               |
| 36-10225K                          | 5/1/1985      | Ground Water | NA        | 0.01 cfs        | 1.0 af               |
| 36-15169K                          | 12/11/1969    | Ground Water | NA        | 0.04 cfs        | 17.8 af              |
| <b>Total Annual Combined Limit</b> |               |              |           | <b>0.18 cfs</b> | <b>44.1 af</b>       |

**Annual Combined Rental Totals**

**0.18 cfs 44.1 af\***

\* This rental is limited to 28.5 af due to a change in nature of use

**Term of Rental:** This rental is in effect from the day the Idaho Water Resource Board signs the rental agreement and shall be in effect until December 31, 2019.

**Rental Fee:** Years 2016-2017 \$749.70 annually  
Years 2018-2019 \$882.00 annually

The fee for rental of the above-described water is \$749.70 annually for years 2016-2017 and \$882.00 annually for years 2018-2019. Ten percent (\$74.97/\$88.20) will go to the Department for administrative costs, and the remainder will be paid to the lessor(s). An annual payment shall be received by the Department prior to January 1 each year for the duration of the rental period. The agreement will be void if payment is not received prior to the due date in a given year. To terminate the agreement prior to the end of the rental period, written notice must be received by the Department at least 30 days prior to the rental fee due date. No rental fees will be refunded once the fee is collected and the start date for a Rental Agreement has passed.

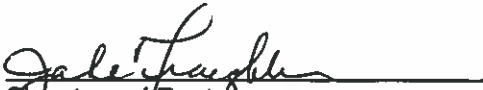
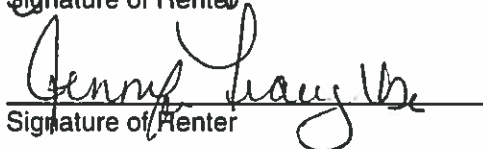
SUPPORT DATA

Detailed water right conditions are attached.

IN FILE # 36-2087K

STATE OF IDAHO  
DEPARTMENT OF WATER RESOURCES  
**WATER SUPPLY BANK RENTAL AGREEMENT**

The undersigned renter agrees to use the water rented under this agreement in accordance with the Water Supply Bank rules and in compliance with the limitations and conditions of use described in this agreement:

|                                                                                                          |                                                      |                         |
|----------------------------------------------------------------------------------------------------------|------------------------------------------------------|-------------------------|
| <br>Signature of Renter | <u>Jake Traughber</u><br>Printed Name and Title*     | <u>12-15-15</u><br>Date |
| <br>Signature of Renter | <u>Jennifer Traughber</u><br>Printed Name and Title* | <u>12-15-15</u><br>Date |

\*Please provide title of signatory if signing on behalf of a company or organization or with power of attorney

Having determined that this agreement satisfied the provisions of Idaho Code § 42-1763 and IDAPA 37.02.03.030 (Water Supply Bank Rule 30), for the rental and use of water under the terms and condition herein provided, and none other, I hereby execute this Rental Agreement on behalf of the Idaho Water Resource Board.

By  Date 12/24/2015  
BRIAN PATTON, Acting Administrator  
Idaho Water Resource Board

Rental Approved by IDWR  Date 12-24-2015

STATE OF IDAHO  
DEPARTMENT OF WATER RESOURCES  
**WATER SUPPLY BANK RENTAL AGREEMENT**

**WATER USE DETAILS**

**LOCATION OF POINT(S) OF DIVERSION**

GROUND WATER      SW¼NW¼      Sec. 9      Twp 09S      Rge 17E      JEROME County

**BENEFICIAL USE**

COMMERCIAL AND STOCKWATER

**SEASON OF USE**

01/01 TO 12/31

**RENTER'S PLACE OF USE:**      COMMERCIAL AND STOCKWATER

| Twp | Rge | Sec | NE |    |    |    | NW |    |    |    | SW |    |    |    | SE |    |    |    | Totals |
|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------|
|     |     |     | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE |        |
| 09N | 17E | 9   |    |    |    |    |    |    | X  |    |    |    |    |    |    |    |    |    |        |

**CONDITIONS APPLICABLE TO ALL RENTED WATER RIGHTS**

1. The use of water under this agreement shall be subject to the provisions of Idaho Code § 42-1766.
2. Rental of the specified right from the bank does not, in itself, confirm the validity of the right or any elements of the water right, or improve the status of the right including the notion of resumption of use. It does not preclude the opportunity for review of the validity of this water right in any other department application process.
3. Use of water under this agreement does not constitute a dedication of the water to renter's place of use, and upon expiration of this agreement, the points of diversion and place of use of the water shall revert to those authorized under the water right and/or again be available to rent from the bank.
4. This rental does not grant any right-of-way or easement to use the diversion works or conveyance works of another party.
5. Use of water under this agreement shall not prejudice any action of the Department in its consideration of an application for transfer or permit filed by the applicant for this same use.
6. Renter agrees to comply with all applicable state and federal laws while using water under this agreement.
7. Renter agrees to hold the Board, the Director and the state of Idaho harmless from all liability on account of negligent acts of the renter while using water.
8. Renter acknowledges and agrees that the Director may terminate diversion of water if the Director determines there is not a sufficient water supply for the priority of the right or portion thereof being rented.
9. Failure of the renter to comply with the conditions of this agreement is cause for the Director to rescind approval of the rental agreement.
10. The right holder shall maintain a totalizing measuring device of a type approved by the Department as a part of the diverting works.
11. The water rented under this agreement is appurtenant to irrigation of 12.3 acres.
12. This rental agreement does not authorize the construction of a well.
13. Use of water under this agreement will be regulated by a watermaster with responsibility for the distribution of water among appropriators within a water district. At the time of this approval, this water right is within State Water District No. 130.

**CONDITIONS APPLICABLE TO RIGHTS 36-10225K**

14. This water right is an enlargement of Rights 36-2087K, 36-2113K, 36-2161K, 36-2289M, 36-2311K, 36-2500K, 36-2614K, 36-7307K, 36-7362K, 36-7477K, 36-7606K, 36-7779K, 36-7832K, and 36-15169K pursuant to Section 42-1426, Idaho Code. It is subordinate to all water rights with a priority date earlier than April 12, 1994, that are not decreed as enlargements pursuant to Section 42-1426, Idaho Code. As between water rights decreed as enlargements pursuant to Section 42-1426, Idaho Code, the earlier priority right is the superior right.



Idaho Water Resource Board  
**Water Supply Bank Rental Agreement**

Effective until December 31, 2019

This map depicts the **rental place of use** pursuant to the rental agreement and is attached to the agreement solely for illustrative purposes.



2013 USDA-FSA Aerial Photography

-  Authorized Rental Point of Diversion
-  Authorized Rental Place of Use
-  Townships
-  PLS Sections
-  Quarter Quarters



0  200 Yards

SEP 16 2015

DEPARTMENT OF  
WATER RESOURCES**APPLICATION TO RENT WATER  
FROM THE BOARD'S WATER SUPPLY BANK**Applicant Name: Jake and Jennifer TraugherIs this application being submitted with a lease application as a lease/rental package? Yes ☐ No ☒

An *Application to Rent Water from the Board's Water Supply Bank* must be completed in accordance with the minimum requirement checklist below to be acceptable for processing by the Idaho Department of Water Resources (IDWR). This checklist is part of the rental application and must be included with the rental application. **Applications that do not meet the minimum requirements will not be placed in the processing queue and may be returned until all minimum requirements have been met.**

Applications to rent water should be submitted well in advance of the desired start date for the use of water. Rental applications may be submitted as early as November 1 of the year prior to the intended use of rental water. Rental applications submitted more than one year in advance of the proposed start date for water use will not be accepted and will be returned to applicants. Rental applications will not be processed if they are received after the end of the rental season of use.

One rental application per beneficial use of water. One rental application can be submitted if you propose to rent water from multiple sources. For multiple beneficial uses of water, individual rental requests should be submitted for each unique beneficial use of water.

For additional instructions on completing a rental application, visit the Department's website at [www.idwr.idaho.gov](http://www.idwr.idaho.gov).

**Checked All Items as Either Attached (Yes) or Not Applicable (N/A)**

YES

☒ Completed *Application to Rent Water from the Board's Water Supply Bank*

Attachment N/A YES

- |    |                                     |                                                                                                                                                              |
|----|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2  | <input checked="" type="checkbox"/> | A map showing the proposed point(s) of diversion, place(s) of use, and water diversion and distribution systems proposed to be used with your rental request |
| 3A | <input type="checkbox"/>            | <input checked="" type="checkbox"/> Detailed information on a proposed use of rental water                                                                   |
| 3E | <input type="checkbox"/>            | <input checked="" type="checkbox"/> Authorization from the owner/operator of the rental point(s) of diversion                                                |
| 3G | <input type="checkbox"/>            | <input checked="" type="checkbox"/> Water modeling to account for the impacts of the rental request                                                          |
| 3J | <input type="checkbox"/>            | <input checked="" type="checkbox"/> Documents justifying a need to rent water for irrigation at a rate of flow greater than 0.02 cfs/acre                    |
| 3K | <input type="checkbox"/>            | <input checked="" type="checkbox"/> Authorization from the owner/operator of the property at the proposed rental place(s) of use                             |
| 4B | <input type="checkbox"/>            | <input checked="" type="checkbox"/> Explanation of how the rental water will sufficiently accomplish your rental purposes                                    |
| 4C | <input type="checkbox"/>            | <input checked="" type="checkbox"/> Explanation of consumptive use amounts for water rights experiencing a change in nature of use                           |

Department Use Only – Proposed Water Right(s)

STATE OF IDAHO  
WATER RESOURCE BOARD

**Application to Rent Water (Continued)**

**1. CONTACT INFORMATION**

A. Applicant Jake and Jennifer Traughber

Mailing Address 368 South 200 East Jerome Idaho 83338

Email Address \_\_\_\_\_ Phone Number (208) 280-1113

B. Is this application being completed by an authorized representative on behalf of the applicant? Yes ☒ No ☐

If yes, representatives (includes company employees if the applicant is a corporation, as well as legal counsel or consultants) should provide their information below if they desire to be included on correspondence with the rental applicant.

Representative Greg Sullivan Professional Title Engineer

Organization Brockway Engineering Relationship to Applicant Consultant

Mailing Address 2016 North Washington Street Suite 4 Twin Falls, Idaho 83301

Email Address greg.sullivan@brockwayeng.com Phone Number 208-736-8543

**2. MAP**

Create a map of the proposed point(s) of diversion, place(s) of use, and water diversion, delivery and distribution systems. Make sure the place of use is outlined with an obvious, bolded line. For irrigation purposes, note that the place of use outlined on your map cannot exceed the number of acres you are proposing to rent. Attach the map to this application and label it Attachment 2.

**3. DESCRIPTION OF PROPOSED USE FOR RENTAL WATER**

A. Describe the purpose of your rental request. Include any anticipated rates of water application, water use practices or number of stock (if any). If the proposed use is not for irrigation, please provide a detailed description of the proposed use and how you determined the amount of rental water required. Attach additional sheets if required and label it Attachment 3A:

Intended use is for stock and commercial water use at an existing dairy facility. See attached water demand

spreadsheet. It is proposed to rent 38.0 acre-feet of water but only utilize 28.5 acre-feet of water at the dairy.

B. Enter the desired and/or minimum necessary rates of flow, volume, or irrigable acres requested for your rental purposes:

| Desired Rate<br>(Cubic Feet/Second) | Desired Volume<br>(Acre-Foot) | Minimum Rate*<br>(Cubic Feet/Second) | Minimum Volume*<br>(Acre-Foot) | Acres (if applicable)<br>(Acre) |
|-------------------------------------|-------------------------------|--------------------------------------|--------------------------------|---------------------------------|
| 0.18 CFS                            | 38.0 AF                       | 0.18 CFS                             | 38.0 AF                        | N/A AC                          |

*Sometimes water rights available for rent provide an exceptionally low rate per acre and/or low volume per acre. This section is meant to establish an acceptable range of water sufficient for your proposed water use. Please see question 4B and complete if necessary.*

C. Enter the proposed start date and latest possible start date for using rental water. Also provide the number of years you would like to rent water:

| Proposed Start Date<br>(month/day/year) | Latest Possible Start<br>(month/day/year) | * Proposed Rental<br>Duration<br>(Max 5 Years) | ** For multi-year rentals, indicate whether you desire to rent water for remaining years if a rental request cannot be approved for the first year? |                                                                                   |
|-----------------------------------------|-------------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 1/01/2016                               | 12/31/2016                                | 4                                              | <input checked="" type="checkbox"/> Yes, approve rental for all remaining future years.                                                             | <input type="checkbox"/> No, return rental request if first year is unapprovable. |

\* The number of years permissible for a rental is subject to the lease contract duration for the water right(s) being rented.

\*\* Subject to the availability of rentable water. A multi-year rental that cannot begin during the first year requested may be approved for some or all remaining years, depending on availability. Rental requests will be returned if no water is available to rent in the first and/or subsequent years of the rental request.

**STATE OF IDAHO  
WATER RESOURCE BOARD**

**Application to Rent Water (Continued)**

- D. Refer to the map you created in item 2 and specify the location of the point(s) of diversion (POD) from which rental water is proposed to be diverted:

| Water Source | TWP | RGE | SEC | ¼ | ¼  | ¼  | County | Other water rights for the same purpose diverted from this POD |
|--------------|-----|-----|-----|---|----|----|--------|----------------------------------------------------------------|
| Ground Water | 09S | 17E | 9   |   | SW | NW | Jerome |                                                                |
| Ground Water | 09S | 17E | 9   |   | SW | NW | Jerome |                                                                |
|              |     |     |     |   |    |    |        |                                                                |
|              |     |     |     |   |    |    |        |                                                                |

The entry in this grid must match the map from item 2 on the application.

- E. Do you own and/or possess the authority to divert water from the above POD(s)? Yes ☒ No ☐  
If no, provide documentation from the owner/operator confirming your authorization to use the POD(s) and label it Attachment 3E.

- F. Do any POD(s) identified in Question 3D divert from a water source that may require water modeling? Yes ☒ No ☐  
*Refer to the Water Modeling Requirements Information Sheet to determine if a rental POD may require water modeling.*

- G. Has water modeling been provided with your rental request? Yes ☒ No ☐

If yes, include as Attachment 3G. Otherwise please explain why modeling was not provided:

*Rental applications that require modeling will be returned if modeling is not provided.*

- H. Specify the proposed beneficial use: ☐ Irrigation ☒ Commercial ☐ Industrial ☐ Municipal  
☐ Groundwater Recharge ☐ Mining ☒ Stockwater ☐ Other: \_\_\_\_\_

- I. Refer to the map you created in item 2 and specify below the places you propose to use water. If for irrigation, specify the number of acres to be irrigated per ¼ ¼ tract. Otherwise indicate usage by marking the ¼ ¼ tracts with the first letter of your proposed use identified above:

| TWP                                                                       | RGE | SEC | NE |    |    |    | NW |    |    |    | SW |    |    |    | SE |    |    |    | TOTALS                       |
|---------------------------------------------------------------------------|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------------------------------|
|                                                                           |     |     | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE |                              |
| 09S                                                                       | 17E | 9   |    |    |    |    |    |    | X  |    |    |    |    |    |    |    |    |    |                              |
|                                                                           |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                              |
|                                                                           |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                              |
|                                                                           |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                              |
|                                                                           |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                              |
|                                                                           |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                              |
| The entry in this grid must match the map from item 2 on the application. |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Total Acres (for irrigation) |

- J. For irrigation uses, do you propose a water diversion rate greater than 0.02 cfs/acre? N/A ☒ Yes ☐ No ☐  
If yes, explain the justification for this rate of flow and attach any supporting documents as Attachment 3J:

- K. Do you own the land at the proposed rental place of use (POU)? Yes ☒ No ☐  
If no, attach documentation from the POU owner/operator confirming your authorization to use the POU and label it Attachment 3K.

- L. Describe your water distribution system and how water will be delivered from the POD(s) to the proposed POU(s):  
Existing well, mainlines and delivery system.

STATE OF IDAHO  
WATER RESOURCE BOARD

**Application to Rent Water (Continued)**

M. List all other water rights and sources of water at the rental place of use for the same purpose and explain why additional water is required. Include privately owned water rights and water received from a municipal supplier, an irrigation district, a canal company, or any other water deliver entity:  
36-15271

**4. RENTAL REQUESTS FOR SPECIFIC WATER RIGHTS**

A. Are you requesting to rent specific water rights? Yes ☒ No ☐  
If yes, specify below the water rights you are requesting to rent. Otherwise continue to Section 5 of this application form.

**Please note:** Diversion rates and volumes to be rented from a leased water right must be proportionate to the per acre diversion rates and per acre volume limits of the water right leased to the Bank. Applicants should query a water right's rental availability by reviewing active lease and rental documents, searchable via [IDWR's website](#), to ensure all elements of a water right remain available in sufficient quantity to satisfy a rental request.

Water rights identified below must either already be leased to the Bank or a lease proposal should accompany the rental request. Rental requests for water rights not yet leased to the Bank will be returned if companion lease applications are not provided with the rental request.

For leased rights with combined limits, applicants should request to rent against the combined limit diversion rate, volume or acre limits.

| Elements of Water Rights Leased to the Bank (Contract Details)                                                                                                            |                                                                       |              |            |             |            |              |            | Leased totals minus water actively engaged in rental agreement equals rental availability | Rental Request |            |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------|------------|-------------|------------|--------------|------------|-------------------------------------------------------------------------------------------|----------------|------------|------------|
| Water Right Number                                                                                                                                                        | Nature of Use                                                         | Water Source | Rate (CFS) | Volume (AF) | Acres (AC) | Start (year) | End (year) |                                                                                           | Rate (CFS)     | Vol. (AF)  | Acres (AC) |
|                                                                                                                                                                           | See attached water right rental list with diversion rates and volumes |              |            |             |            |              |            |                                                                                           |                |            |            |
|                                                                                                                                                                           |                                                                       |              |            |             |            |              |            |                                                                                           |                |            |            |
|                                                                                                                                                                           |                                                                       |              |            |             |            |              |            |                                                                                           |                |            |            |
|                                                                                                                                                                           |                                                                       |              |            |             |            |              |            |                                                                                           |                |            |            |
|                                                                                                                                                                           |                                                                       |              |            |             |            |              |            |                                                                                           |                |            |            |
|                                                                                                                                                                           |                                                                       |              |            |             |            |              |            |                                                                                           |                |            |            |
|                                                                                                                                                                           |                                                                       |              |            |             |            |              |            |                                                                                           |                |            |            |
|                                                                                                                                                                           |                                                                       |              |            |             |            |              |            |                                                                                           |                |            |            |
| Applicants must ensure the requested rate per acre and volume per acre do not exceed the rate per acre and volume per acre that have been leased to the Water Supply Bank |                                                                       |              |            |             |            |              |            | TOTAL                                                                                     | 0.18<br>CFS    | 38.0<br>AF | 9.5<br>AC  |

Attach multiple copies of this page if space above is insufficient to list all water rights requested to be rented on this application.

B. If water right conditions, combined limits, or the sum of all water right elements being requested provide an unconventional duty of water (e.g., an unusually low rate per acre or volume per acre for irrigation use), explain how your proposed rental will sufficiently accomplish your intended purposes. Attach a separate page if space is insufficient and label it Attachment 4B:  
N/A

STATE OF IDAHO  
WATER RESOURCE BOARD

Application to Rent Water (Continued)

- C. Does your rental request propose to change the nature of use for any water right(s) being requested? Yes ☒ No ☐

If yes, explain how the water right(s) will be converted to new uses. Include the historic, consumptive use amounts for the water right being rented, as well as the new consumptive use amount for your proposed beneficial use. Attach a separate page if space is insufficient and label it Attachment 4C:

The proposed rented water rights are for irrigation use. A 3.0 acre-feet/acre of consumptive use was used to calculate the consumptive volume of 28.5 afa.

5. ADDITIONAL INFORMATION

- A. Is this the first time that rental water is being requested for this purpose at the rental place of use? Yes ☐ No ☒

If no, list previous rental requests/agreements and explain why you have not secured a permanent water right for your needs: Previous rental contracts have been secured for 2014 and 2015. No additional water rights have been located that are available for purchase and permanent transfer.

- B. Have you or do you intend to submit an application for permit or transfer proposing a similar use as this rental? Yes ☐ No ☒

If yes, describe:

- C. Was this rental application submitted in response to a Notice of Violation (NOV) or a pending NOV? Yes ☐ No ☒

If yes, describe the date and location of the NOV.

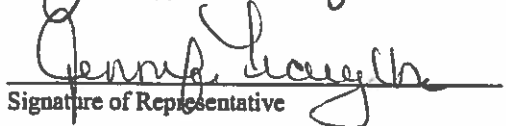
DECLARATION

I hereby assert that the information contained in this application is true to the best of my knowledge. I understand that any willful misrepresentations made in this application may result in rejection of the application or cancellation of an approval. I understand that if this rental application is approved, it will be subject to the provisions of Section 42-1766, Idaho Code and all applicable state and federal laws.

  
Signature of Applicant

Jake Traughber  
Printed Name of Applicant

9-14-15  
Date

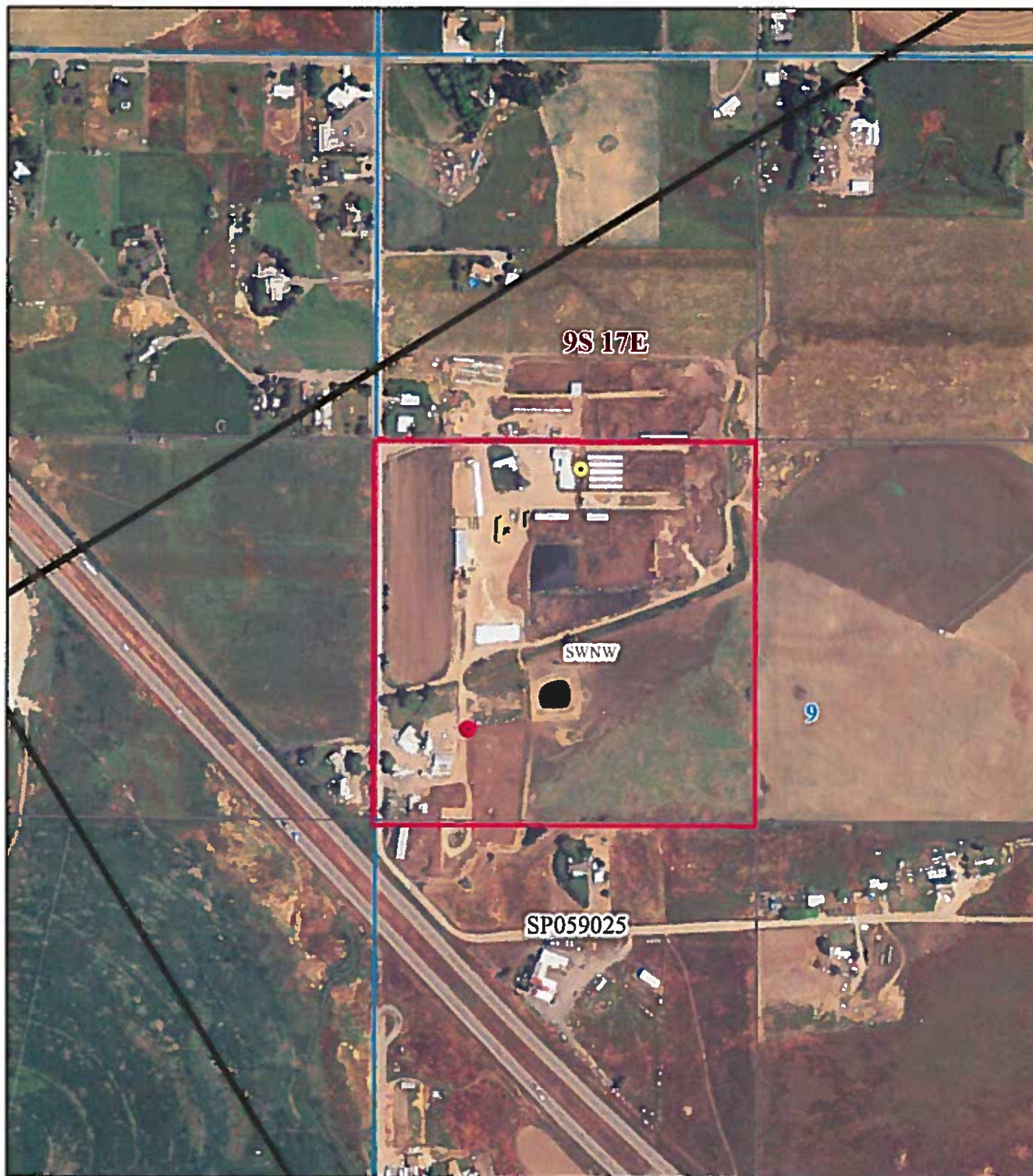
  
Signature of Representative

Jennifer Traughber  
Printed Name of Representative

9-14-15  
Date

Mail to:

Idaho Department of Water Resources  
P.O. Box 83720  
Boise, ID 83720-0098



0 200 400 800 Feet

**TRAUGHER - WATER SUPPLY BANK  
RENTAL 2015, 36-15271  
NAIP 2011 AERIAL PHOTO.**

BROCKWAY ENGINEERING, PLLC.  
ALR - OCT. 16, 2013

**Legend**

- Well
- Water\_Rights\_POD
- Water\_Rights\_POU
- ESPA CELLS
- twnshp
- Sections
- QQ Lines



**Multiple Irrigation to Stock and Commercial**

Total Acres           **1009.6**  
 CFS                   **19.65**  
 AFA                   **4038.4**      4.00    AFA/acre  
 Acres wsb/ Transferring   **9.5**  
                               0.00941    %

| Water Right  | Amount       |               |       | Acre Limit | WSB Rental Amount |             |
|--------------|--------------|---------------|-------|------------|-------------------|-------------|
|              | cfs          | AFA           | Acres |            | cfs               | AFA         |
| 36-2087K     | 1.99         | 504.8         | 126.2 | 1009.6     | 0.02              | 3.2         |
| 36-2113K     | 1.03         | 205.2         | 51.3  |            | 0.01              | 1.3         |
| 36-2161K     | 0.6          | 122           | 30.5  |            | 0.01              | 0.8         |
| 36-2289M     | 0.16         | 66.4          | 16.6  |            | 0.00              | 0.4         |
| 36-2311K     | 1.24         | 248           | 62    |            | 0.01              | 1.6         |
| 36-2500K     | 0.82         | 251.6         | 62.9  |            | 0.01              | 1.6         |
| 36-2614K     | 1.69         | 386.4         | 96.6  |            | 0.02              | 2.5         |
| 36-7307K     | 1.27         | 256.8         | 64.2  |            | 0.01              | 1.7         |
| 36-7362K     | 2.05         | 866.1         | 639.3 |            | 0.02              | 5.6         |
| 36-7477K     | 0.66         | 131.2         | 32.8  |            | 0.01              | 0.8         |
| 36-7606K     | 0.61         | 124           | 31    |            | 0.01              | 0.8         |
| 36-7779K     | 1.93         | 401.2         | 100.3 |            | 0.02              | 2.6         |
| 36-7832K     | 0.16         | 62.8          | 15.7  |            | 0.00              | 0.4         |
| 36-10225K    | 0.58         | 120.4         | 30.1  |            | 0.01              | 0.8         |
| 36-15169K    | 5.76         | 2156          | 539   |            | 0.05              | 13.9        |
| <b>Total</b> | <b>20.55</b> | <b>5902.9</b> |       |            | <b>0.19</b>       | <b>38.0</b> |

**Rental Amount**

|                            |      |       |
|----------------------------|------|-------|
|                            | 9.5  | Acres |
|                            | 0.18 | CFS   |
| Volume at 4.0 acre-ft/acre | 38.0 | AFA   |
| Volume at 3.0 acre-ft/acre | 28.5 | AFA   |

**Multiple Irrigation to Stock and Commercial**

Total Acres           **1009.6**  
 CFS                   **19.65**  
 AFA                   **4038.4**      4.00      AFA/acre  
 Acres wsb/ Transferring   **9.5**  
                                   0.00941   %

| Water Right | Amount       |               |              | Acre Limit | WSB Rental Amount |             |
|-------------|--------------|---------------|--------------|------------|-------------------|-------------|
|             | cfs          | AFA           | Acres        |            | cfs               | AFA         |
| 36-2087K    | <b>1.99</b>  | <b>504.8</b>  | <b>126.2</b> | 1009.6     | 0.02              | 3.2         |
| 36-2113K    | <b>1.03</b>  | <b>205.2</b>  | <b>51.3</b>  |            | 0.01              | 1.3         |
| 36-2161K    | <b>0.6</b>   | <b>122</b>    | <b>30.5</b>  |            | 0.01              | 0.8         |
| 36-2289M    | <b>0.16</b>  | <b>66.4</b>   | <b>16.6</b>  |            | 0.00              | 0.4         |
| 36-2311K    | <b>1.24</b>  | <b>248</b>    | <b>62</b>    |            | 0.01              | 1.6         |
| 36-2500K    | <b>0.82</b>  | <b>251.6</b>  | <b>62.9</b>  |            | 0.01              | 1.6         |
| 36-2614K    | <b>1.69</b>  | <b>386.4</b>  | <b>96.6</b>  |            | 0.02              | 2.5         |
| 36-7307K    | <b>1.27</b>  | <b>256.8</b>  | <b>64.2</b>  |            | 0.01              | 1.7         |
| 36-7362K    | <b>2.05</b>  | <b>866.1</b>  | <b>639.3</b> |            | 0.02              | 5.6         |
| 36-7477K    | <b>0.66</b>  | <b>131.2</b>  | <b>32.8</b>  |            | 0.01              | 0.8         |
| 36-7606K    | <b>0.61</b>  | <b>124</b>    | <b>31</b>    |            | 0.01              | 0.8         |
| 36-7779K    | <b>1.93</b>  | <b>401.2</b>  | <b>100.3</b> |            | 0.02              | 2.6         |
| 36-7832K    | <b>0.16</b>  | <b>62.8</b>   | <b>15.7</b>  |            | 0.00              | 0.4         |
| 36-10225K   | <b>0.58</b>  | <b>120.4</b>  | <b>30.1</b>  |            | 0.01              | 0.8         |
| 36-15169K   | <b>5.76</b>  | <b>2156</b>   | <b>539</b>   |            | 0.05              | 13.9        |
| Total       | <b>20.55</b> | <b>5902.9</b> |              |            |                   | <b>0.19</b> |

**Rental Amount**

|                            |      |       |
|----------------------------|------|-------|
|                            | 9.5  | Acres |
|                            | 0.18 | CFS   |
| Volume at 4.0 acre-ft/acre | 38.0 | AFA   |
| Volume at 3.0 acre-ft/acre | 28.5 | AFA   |

| Trimester | 1 | 2 | Trimester |
|-----------|---|---|-----------|
| Annual    |   |   | April     |

|       |    |    |    |    |     |     |    |    |    |    |    |
|-------|----|----|----|----|-----|-----|----|----|----|----|----|
| AFIT: | 00 | 00 | 01 | 02 | 005 | 178 | 03 | 02 | 00 | 01 | 00 |
|-------|----|----|----|----|-----|-----|----|----|----|----|----|

**Transfer 1 :** K & K Real Estate LLC to Trougher 2010-2010 Rental

[illegible]

**Read Me**

| WR No                                                                    | Div Rate<br>(CPS) | Con Vol<br>(AFA) | No of Int<br>Agres | Priority<br>Date | POD<br>Location | Dedicated Vot<br>AFV/ AFT | Model<br>Needs |
|--------------------------------------------------------------------------|-------------------|------------------|--------------------|------------------|-----------------|---------------------------|----------------|
| <b>Transfer: Proposed Steady State Impacts following Transfer</b>        |                   |                  |                    |                  |                 |                           |                |
| <b>Transfer 1: Worst Case Transient State Impacts following Transfer</b> |                   |                  |                    |                  |                 |                           |                |

[illegible]

**Evaluation of overall mitigation requirements per reach Steady State and Transient State, and Un-Setting Monies (Sum of reach debts only where mitigation is required and credits**

Carry out one way analysis. If reach depletions go up, it is a debit, if they go down, it is a credit. Sum all debits, only where mitigation is required (dark yellow), and all credits (light yellow). Mitigation is required for the full amount of the summed values if greater than zero.

Steady state analysis represents permanent mitigation requirements at future steady state (or last timestep from the ESPAM Transfer Tool model run).

Transient state analysis represents mitigation requirements for the worst or maximum time step in the model run.

[illegible]

Evaluation of transient state mitigation requirement is not comprehensive across all time steps. Instead this evaluation finds the maximum stream depletion following the start of the transfer and looks at depletion amounts from that time step. In many instances this depletion is greater than the depletion associated with the steady state condition or final time step. This evaluation is merely an indicator of whether transient depletions must be considered, not an indicator of all transient impacts.

[illegible]

**Evaluation of Permanent Mitigation Efforts (non-use, acreage consolidation) In Addition to Off-Setting Transfer Benefits - Steady State Evaluation Only**

**Set Aside 1 (Non-Use/Dedication):**

| WR No.                                                  | Div. Rate<br>(CFS) | Con. Vol.<br>(AFA) | No. of Ir.<br>Acres | Priority<br>Date | POD<br>Location | Dedicated Vol.<br>AFA/ AFT | Model<br>Node |
|---------------------------------------------------------|--------------------|--------------------|---------------------|------------------|-----------------|----------------------------|---------------|
| Non-Use: Proposed Steady State Impacts following Change |                    |                    |                     |                  |                 |                            |               |

### Non-Use: Proposed Steady State Impacts following Change

### Non-Use 1: Worst Case Transient State Impacts following Change

| Impact by Reach (AFT/Investor) |          |            |             |           |             |          |          |             |       |          |
|--------------------------------|----------|------------|-------------|-----------|-------------|----------|----------|-------------|-------|----------|
| Ashton to                      | Hesse to | Shelley to | Nr Bickn To | Nesley to | Dev Wbl. To | Buhl to  | 1000 Spr | 1000 Spr to | Mated | Mated to |
| Reimb.                         | Shelley  | Nr Bickn   | Nesley      | Memphis   | Buhl        | 1000 Spr |          | Mated       |       | Barcroft |
|                                |          |            |             |           |             |          |          |             |       |          |

[illegible]

**Re-evaluation of overall mitigation requirements per reach, Steady State Only (Sum of reach debits only where mitigation is required and credits)**

[illegible]

# ENHANCED GROUND-WATER RIGHTS TRANSFER

UNIVERSITY OF IDAHO - IDAHO WATER RESOURCES RESEARCH INSTITUTE

IDAHO DEPT

Cells this color are  
set up for user entries

ENTER STARTING DATE FOR  
SIMULATION. THEN PUSH

TRANSFER NO:

"UPDATE DATES" BUTTON

YEAR

1950

TRANSFER NAME:

SEASON

SPRING

ENTER CELL LOCATIONS:

'TO' CELL

'FROM1' CELL

'FROM2' CELL

'FROM3' CELL

ROW

59

50

38.0 AFA

38.0 AFA

COLUMN

25

16

| TRIMESTER<br>OF<br>ACTIVITY | TO WELL                       | FROM1 WELL                    |                                  | FROM2 WELL                    |                                  | FROM3 WELL                    |                                  |
|-----------------------------|-------------------------------|-------------------------------|----------------------------------|-------------------------------|----------------------------------|-------------------------------|----------------------------------|
|                             | Protected Use<br>AF/TRIMESTER | With Transfer<br>AF/TRIMESTER | Without Transfer<br>AF/TRIMESTER | With Transfer<br>AF/TRIMESTER | Without Transfer<br>AF/TRIMESTER | With Transfer<br>AF/TRIMESTER | Without Transfer<br>AF/TRIMESTER |
| SPR 1950                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1950                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1950                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1951                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1951                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1951                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1952                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1952                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1952                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1953                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1953                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1953                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1954                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1954                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1954                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1955                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1955                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1955                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1956                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1956                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1956                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1957                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1957                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1957                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1958                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1958                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1958                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1959                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1959                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1959                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1960                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1960                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1960                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1961                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1961                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1961                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1962                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1962                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1962                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1963                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1963                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1963                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1964                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1964                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1964                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1965                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1965                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1965                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1966                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1966                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1966                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1967                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1967                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1967                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1968                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1968                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1968                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1969                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1969                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1969                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1970                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1970                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1970                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1971                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1971                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1971                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1972                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1972                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1972                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1973                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1973                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1973                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1974                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1974                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1974                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |

# ENHANCED GROUND-WATER RIGHTS TRANSFER

UNIVERSITY OF IDAHO - IDAHO WATER RESOURCES RESEARCH INSTITUTE

IDAHO DEPT

Cells this color are  
set up for user entries

ENTER STARTING DATE FOR  
SIMULATION. THEN PUSH  
"UPDATE DATES" BUTTON

TRANSFER NO:

YEAR

1950

TRANSFER NAME:

SEASON

SPRING

ENTER CELL LOCATIONS:

|        | 'TO' CELL | 'FROM1' CELL | 'FROM2' CELL | 'FROM3' CELL |
|--------|-----------|--------------|--------------|--------------|
| ROW    | 59        | 50           |              |              |
| COLUMN | 25        | 16           |              |              |

38.0 AFA

38.0 AFA

| TRIMESTER<br>OF<br>ACTIVITY | TO WELL                       | FROM1 WELL                    |                                  | FROM2 WELL                    |                                  | FROM3 WELL                    |                                  |
|-----------------------------|-------------------------------|-------------------------------|----------------------------------|-------------------------------|----------------------------------|-------------------------------|----------------------------------|
|                             | Protected Use<br>AF/TRIMESTER | With Transfer<br>AF/TRIMESTER | Without Transfer<br>AF/TRIMESTER | With Transfer<br>AF/TRIMESTER | Without Transfer<br>AF/TRIMESTER | With Transfer<br>AF/TRIMESTER | Without Transfer<br>AF/TRIMESTER |
| SPR 1975                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1975                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1975                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1976                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1976                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1976                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1977                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1977                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1977                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1978                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1978                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1978                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1979                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1979                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1979                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1980                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1980                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1980                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1981                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1981                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1981                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1982                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1982                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1982                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1983                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1983                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1983                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1984                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1984                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1984                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1985                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1985                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1985                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1986                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1986                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1986                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1987                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1987                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1987                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1988                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1988                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1988                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1989                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1989                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1989                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1990                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1990                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1990                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1991                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1991                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1991                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1992                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1992                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1992                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1993                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1993                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1993                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1994                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1994                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1994                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1995                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1995                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1995                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1996                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1996                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1996                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1997                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1997                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1997                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1998                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1998                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1998                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 1999                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 1999                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 1999                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |



# ENHANCED GROUND-WATER RIGHTS TRANSFER

UNIVERSITY OF IDAHO - IDAHO WATER RESOURCES RESEARCH INSTITUTE

IDAHO DEPARTMENT OF AGRICULTURE

Cells this color are set up for user entries

ENTER STARTING DATE FOR SIMULATION, THEN PUSH

TRANSFER NO:

"UPDATE DATES" BUTTON

YEAR

1990

TRANSFER NAME:

SEASON

SPRING

ENTER CELL LOCATIONS:

'TO' CELL

'FROM1' CELL

'FROM2' CELL

'FROM3' CELL

ROW

59

50

38.0 AFA

38.0 AFA

COLUMN

25

16

| TRIMESTER<br>OF<br>ACTIVITY | TO WELL                       | FROM1 WELL                    |                                  | FROM2 WELL                    |                                  | FROM3 WELL                    |                                  |
|-----------------------------|-------------------------------|-------------------------------|----------------------------------|-------------------------------|----------------------------------|-------------------------------|----------------------------------|
|                             | Protected Use<br>AF/TRIMESTER | With Transfer<br>AF/TRIMESTER | Without Transfer<br>AF/TRIMESTER | With Transfer<br>AF/TRIMESTER | Without Transfer<br>AF/TRIMESTER | With Transfer<br>AF/TRIMESTER | Without Transfer<br>AF/TRIMESTER |
| SPR 2025                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2025                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2025                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2026                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2026                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2026                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2027                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2027                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2027                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2028                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2028                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2028                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2029                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2029                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2029                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2030                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2030                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2030                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2031                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2031                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2031                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2032                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2032                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2032                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2033                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2033                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2033                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2034                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2034                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2034                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2035                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2035                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2035                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2036                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2036                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2036                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2037                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2037                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2037                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2038                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2038                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2038                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2039                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2039                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2039                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2040                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2040                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2040                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2041                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2041                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2041                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2042                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2042                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2042                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2043                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2043                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2043                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2044                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2044                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2044                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2045                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2045                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2045                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2046                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2046                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2046                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2047                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2047                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2047                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SPR 2048                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| SUM 2048                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |
| WIN 2048                    | 0.0                           | 12.7                          | 12.7                             | 0.0                           | 0.0                              | 0.0                           | 0.0                              |

# Livestock Confinement Operations

## Water Requirements and Consumptive Use Worksheet

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COMPLETE BLUE HIGHLIGHTED SECTIONS ONLY

Prepared for: **Jake and Jennifer Traugher**

Revision: 9801  
Run Date: 10/3/2013

Remarks:

### Herd Information - User Input

Number of milking cows **649**  
Number of dry cows **75**  
Number of other adult dry animals **6**

Breed: **Large**

Calves at age:  
1 month **0**  
2 months **0**  
3 months **0**  
4 months **114**

Heifers at age:  
5 - 18 months **164**  
15 - 18 months **165**  
18 - 24 months **57**

### ANIMAL INFORMATION

Use defaults or enter values if known

Average body weight **1300** lbs  
Milk fat percentage **3.3** %  
Average days dry **60**  
Annual milk yield per animal **23000** lbs/year  
Percent dry matter in ration **90** %

Nearest weather station **Jerome**  
Number of milkings/day **3**

Check: Total herd size based on days dry 493  
HERD SIZE NOT CONSISTENT WITH DAYS DRY

### Lagoon Information - User Input

| Lagoon Number | Top width | Top length | SS (h:v) | Max depth | Average depth factor | % days with water | Top Area | Bottom Area | Average Area |
|---------------|-----------|------------|----------|-----------|----------------------|-------------------|----------|-------------|--------------|
| 1             | 150       | 160        | 3        | 6         | 0.8                  | 100               | 24000    | 18744       | 22949        |
| 2             | 200       | 130        | 3        | 8         | 0.8                  | 100               | 26000    | 18656       | 24531        |
| 3             |           |            |          |           |                      |                   |          |             |              |
| 4             |           |            |          |           |                      |                   |          |             |              |
| 5             |           |            |          |           |                      |                   |          |             |              |
| 6             |           |            |          |           |                      |                   |          |             |              |
| 7             |           |            |          |           |                      |                   |          |             |              |
| 8             |           |            |          |           |                      |                   |          |             |              |
| 9             |           |            |          |           |                      |                   |          |             |              |
| 10            |           |            |          |           |                      |                   |          |             |              |

TOTAL ACRES 1.15 0.86 1.09

## Facility Information - User Input

|                                          | Holding<br>Pen 1 | Holding<br>Pen 2 |                                        |
|------------------------------------------|------------------|------------------|----------------------------------------|
| Holding pen active                       | 1                | 0                | (0 = not used or nonexistent)          |
| Number of sprinklers in pen              | 0                |                  |                                        |
| Average line pressure                    | 30               |                  | psi                                    |
| Sprinkler nozzle size - primary          | 0                | 0                | inches                                 |
| Sprinkler nozzle size - secondary        | 0                | 0                | (enter 0 for single-nozzle sprinklers) |
| Daily operation time of sprinklers       | 0                |                  | minutes                                |
| Percent of days per year cows are washed | 0                |                  | %                                      |

|                           |     |      |
|---------------------------|-----|------|
| Number of free stalls     | 380 |      |
| Length of each free stall | 8   | feet |
| Width of each free stall  | 3   | feet |

|                                         |     |
|-----------------------------------------|-----|
| Is the feeding area flushed to lagoon?  | Yes |
| Is this housing area flushed to lagoon? | No  |

|                       | Barn | Feeding | Housing |
|-----------------------|------|---------|---------|
| Flushing recycle rate | 0%   | 100%    | 0%      |

### CLEANING VOLUMES

Use defaults or enter manufacturer volumes

|                       |      |      |                    |     |     |
|-----------------------|------|------|--------------------|-----|-----|
| Cleaning parlor floor | 1750 | 3000 | Cleaning pipeline  | 300 | 400 |
| Cleaning milkroom     | 0    | 200  | Cleaning equipment | 100 | 200 |
| Cleaning bulk tank    | 0    | 400  |                    |     |     |

## Land Application Information - User Input

|                      |            |
|----------------------|------------|
| Type of system       | Hand Lines |
| Predominant cropping | FCorn      |

|                                                                       |      |
|-----------------------------------------------------------------------|------|
| Percent of waste water which goes to meet crop irrigation requirement | 10 % |
|-----------------------------------------------------------------------|------|

## Stockwater Component

### Drinking Water Calculation for Lactating Cows

|                             |                |
|-----------------------------|----------------|
| 4% fat-corrected milk yield | 20585 lbs/year |
| Daily average FCM yield     | 67.49 lbs/day  |
| Daily average milk yield    | 75.41 lbs/day  |
| Estimated DMI               | 44.94 lbs/day  |

#### METHOD 1: Kertz

|                                                  |                                  |
|--------------------------------------------------|----------------------------------|
| Estimated total water intake (TWI)               | 272.8 lbs/day or<br>32.7 gal/day |
| As-fed feed daily intake                         | 49.9 as-fed lb/day               |
| Water content of feed                            | 4.99 lb/day in feed              |
| Drinking water intake                            | 267.8 lb/day or<br>32.1 gal/day  |
| Drinking water requirement<br>for lactating cows | 20843 gal/day<br>23.3 ac-ft/year |

#### METHOD 2: Holter and Urban

Regression equation with DMI, milk production, and dry matter %

|                       |                                  |
|-----------------------|----------------------------------|
| Drinking water intake | 99.1 liters/day<br>26.2 gal/day  |
|                       | 16984 gal/day<br>19.0 ac-ft/year |

Max drinking water requirement **23.3 ac-ft/year**

### Drinking Water Calculation for Dry Cows

|                               |              |
|-------------------------------|--------------|
| Estimated DMI                 | 24.7 lbs/day |
| Average drinking water intake | 13 gal/day   |

Average drinking water requirement **1.2 ac-ft/year**

### Drinking Water Calculation for Replacement Herd (Calves and Heifers)

| Age      | GPD  | Ac-Ft/year |
|----------|------|------------|
| 1 mo     | 0    | 0.00       |
| 2 mo     | 0    | 0.00       |
| 3 mo     | 0    | 0.00       |
| 4 mo     | 371  | 0.42       |
| 5 mo     | 689  | 0.77       |
| 15-18 mo | 1073 | 1.20       |
| 18-24 mo | 482  | 0.54       |

Drinking water requirement  
for replacement herd **2.93 ac-ft/year**

TOTAL STOCKWATER COMPONENT 27.5 AC-FT/YEAR

## Commercial Component

---

### Milking Parlor Water Usage Calculation

Volume needed per milking in each parlor for:

|                       |          |                    |           |
|-----------------------|----------|--------------------|-----------|
| Cleaning parlor floor | 1750 gal | Cleaning pipeline  | 300 gal   |
| Cleaning milkroom     | 0 gal    | Cleaning equipment | 100 gal   |
| Cleaning bulk tank    | 0 gal    | Cleaning cows      | 324.5 gal |

|                              |                        |
|------------------------------|------------------------|
| Total milking parlor volume  | 7423.5 gal/day         |
| Second milking parlor volume | 0 gal/day              |
| Recycled water               | 0 gal/day              |
|                              | <b>8.32 ac-ft/year</b> |

### Holding Pen Water Usage Calculation

|                             |       |           |
|-----------------------------|-------|-----------|
|                             | Pen 1 | Pen 2     |
| Output of primary nozzle    | #N/A  | #N/A gpm  |
| Output of secondary nozzle  | 0     | 0 gpm     |
| Holding pen flushing volume | 3000  | 0 gal     |
| Sprinkler volume            | #N/A  | 0 gal/day |
| Total holding pen volume    | 3000  | 0 gal/day |
| Recycled water              | 0     | 0 gal/day |

**3.36 ac-ft/year**

### Other Flushing Water Calculation

Daily volume needed for:

|                       |              |
|-----------------------|--------------|
| Feeding area flushing | 2000 gal/day |
| Housing area flushing | 0 gal/day    |

|                             |              |
|-----------------------------|--------------|
| Total other flushing volume | 2000 gal/day |
| Recycled water              | 2000         |

**0.00 ac-ft/year**

**TOTAL COMMERCIAL COMPONENT 11.7 AC-FT/YEAR**

## Consumptive Use Calculation

### A. Lagoon Evaporation

|                                                |                 |         |
|------------------------------------------------|-----------------|---------|
| Annual reference ET (Allen & Brockway , 1983)  | 4.51 feet       |         |
| Annual open water coeff (Kohler Nordenson Fox) | 0.90            |         |
| Annual open water (lagoon) evaporation         | 4.06 feet       |         |
| Manual override: Input annual lagoon evap      | feet            |         |
| Total lagoon water surface area at full        | 50000 sq. ft.   |         |
| Total lagoon bottom area                       | 37400 sq. ft.   |         |
| Average surface area when water is present     | 47480 sq. ft. = | 1.09 ac |

Total lagoon evaporation **4.43 ac-ft/year**

### B. Animal usage: milk, metabolism, and excretion loss

|                                                  |                                         |                                 |
|--------------------------------------------------|-----------------------------------------|---------------------------------|
|                                                  | Milking                                 | Dry                             |
| Waste excretion volume per cow                   | 1.3                                     | 1.3 ft <sup>3</sup> /day/1000lb |
| Water content                                    | 87.5                                    | 88.4 %                          |
| Total water volume in excrement                  | 7179                                    | 905 gal/day                     |
| Percent of excrement flushed to lagoons          | 55 % (based on areas which are flushed) |                                 |
| Consumptive use (evap.) of water in excrement    | 45 %                                    |                                 |
| Consumptive use (evap.) volume                   | 3638 gal/day                            |                                 |
| Excrement c.u. attributable to drinking water    | 3571 gal/day                            |                                 |
| Total milk production - assume 100% leaves site  | 48941 lbs/day or                        | 5868 gal/day                    |
| Water content of milk                            | 5105 gal/day                            |                                 |
| Water content attributable to drinking water     | 5012 gal/day                            |                                 |
| Water use for animal metabolism                  | 9095 gal/day                            |                                 |
| Metabolism water attributable to drinking water  | 8929 gal/day                            |                                 |
| Consumptive use - replacement herd (100%)        | 2613 gal/day                            |                                 |
| Total animal consumptive use from drinking water | 20126 gal/day or                        | <b>22.5 ac-ft/year</b>          |
| Percent of drinking water intake                 | 91.9 %                                  |                                 |

### C. Parlor/holding pen cleanup

|                                            |                |            |
|--------------------------------------------|----------------|------------|
| Average sprinkler washing system evap loss | 2 %            |            |
| Free stall total area                      | 9120 sq. ft. = | 0.21 acres |
| Length of time free stall concrete is wet  | 1 hr/day       |            |
| Average evaporation from wet concrete      | 0.15 in./day   |            |

|                               |                 |
|-------------------------------|-----------------|
| Sprinkler system loss volume  | 0.00 ac-ft/year |
| Free stall evaporation volume | 0.04 ac-ft/year |

Total cleanup loss **0.04 ac-ft/year**

### D. Land application site

|                                                   |                    |
|---------------------------------------------------|--------------------|
| Crop evapotranspiration                           | 2.43 ac-ft/ac/year |
| Irrigation diversion volume                       | 3.47 ac-ft/ac/year |
| System efficiency                                 | 70 %               |
| Waste water volume to lagoons                     | 16.5 ac-ft/year    |
| Waste water volume available for land application | 12.1 ac-ft/year    |

Total crop consumptive use of waste water **0.8 ac-ft/year**

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## Summary

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### Consumptive Use

|                                          |      |
|------------------------------------------|------|
| Lagoon evaporation                       | 4.43 |
| Animal milk, excretion, & metabolism     | 22.5 |
| Parlor and holding pen cleanup           | 0.04 |
| Crop consumptive use on land application | 0.8  |

|                              |                        |
|------------------------------|------------------------|
| <b>Total consumptive use</b> | <b>27.9 ac-ft/year</b> |
|------------------------------|------------------------|

|                                      |        |
|--------------------------------------|--------|
| Percent of diversion volume consumed | 71.2 % |
|--------------------------------------|--------|

|                                              |         |
|----------------------------------------------|---------|
| Annual crop consumptive use - IDWR allowable | 689 mm  |
|                                              | 2.3 afa |

|                                   |                   |
|-----------------------------------|-------------------|
| <b>Equivalent irrigated acres</b> | <b>12.3 acres</b> |
|-----------------------------------|-------------------|

### Drinking Water

|                                       |      |
|---------------------------------------|------|
| Milking herd                          | 23.3 |
| Non-milking herd (dry cows)           | 1.2  |
| Replacement herd (calves and heifers) | 2.9  |

|                                    |                        |
|------------------------------------|------------------------|
| <b>Total drinking water volume</b> | <b>27.5 ac-ft/year</b> |
|------------------------------------|------------------------|

|                                                    |                      |
|----------------------------------------------------|----------------------|
| <b>Diversion volume to acres conversion factor</b> | <b>3.18 ac-ft/ac</b> |
|----------------------------------------------------|----------------------|

### Commercial

|                         |      |
|-------------------------|------|
| Milking parlor          | 8.32 |
| Holding pen and cleanup | 3.4  |
| Other flushing water    | 0.00 |

|                                |                        |
|--------------------------------|------------------------|
| <b>Total commercial volume</b> | <b>11.7 ac-ft/year</b> |
|--------------------------------|------------------------|

|                                           |                      |
|-------------------------------------------|----------------------|
| <b>TOTAL DIVERSION VOLUME REQUIREMENT</b> | <b>39.1 AC-FT/YR</b> |
|-------------------------------------------|----------------------|