

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 36-8636

Exam Date: 1/13/2016

1. Current Owner: DANNY C VANDERHAM
3349 S 1500 E
WENDELL ID 83355
(208) 539-5621

2. Accompanied by: Danny Vanderham

Phone No: 208-539-5621

Address: 3349 S. 1500 E.

Wendell, ID 83355

Relationship to Permit Holder: Permit holder

3. SOURCE

GROUND WATER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 36-10817 (D & S in the NENE)
2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER NE1/4NE1/4 Sec. 22, Twp 08S, Rge 14E, B.M.

GOODING County

GROUND WATER NE1/4NE1/4 Sec. 22, Twp 08S, Rge 14E, B.M.

GOODING County

Method of Determination: GPS and aerial photography.

2.

PLACE OF USE: STOCKWATER

TwpRge Sec	NE				NW				SW				SE				
	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>Totals</u>
08S 14E 22	X			X													

PLACE OF USE: COMMERCIAL

TwpRge Sec	NE				NW				SW				SE				
	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>Totals</u>
08S 14E 22	X			X													

Method of Determination: Arcmap and aerial photography.

3. ☐ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- ☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
- ☒ Aerial Photo Attached (required for irrigation of 10+ acres).
- ☐ Photo of Diversion and System Attached

4.

<u>Well or Diversion ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
A0002841(North)		5 HP			2 inch
A0002842(South)		7.5 HP			2 inch

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

<u>Measurement Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
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2. Measurements: WMIS records indicate that a flowmeter calibration for the North Well (A0002841) yielded a flow of 39.8 gpm or 0.09 cfs on September 2, 2011.

Calibration Date/Time:		11/02/2011		Factor:		0.95	
Installed Meter Data:				Standard Meter Data:			
Installed Meter Flow:		41.90		Standard Meter Flow:		39.80	
Rate Unit:		GPM		Rate Unit:		GPM	
Rate Multiplier:		1.0000		Pipe Material:		STEEL	
Volume Multiplier:		100.0000		Outside Diameter (inches):		2.39	
Volume Unit:		GAL		Wall Thickness (inches):		0.17	
Location:				Downstream Distance (feet):		3.00	
Comments:				Upstream Distance (feet):		2.00	
Well just east of milk parlor, Meter near roof in mechanical room.				Calibration Confidence:		FAIR	
Installed Meter Information:							
Manufacturer:		MASTER		Installation Date:			
Model Number:				Serial Number:		2363155	
Meter Type:		IMPELLER		Other Well:			

A flowmeter calibration for the South Well (A0002842) yielded a flow of 206.0 gpm or 0.46 cfs on September 21, 2006. The additive flow rate of both the wells is 0.55 cfs and is recommended for licensing purposes. (206 gpm +39.8 gpm= 245.8 gpm or 0.55 cfs)

Calibration Date/Time:		09/21/2006	Factor:	1.03
Installed Meter Data:		Standard Meter Data:		
Installed Meter Flow:	200.00	Standard Meter Flow:	206.00	
Rate Unit:	GPM	Rate Unit:	GPM	
Rate Multiplier:	1.0000	Pipe Material:	STEEL	
Volume Multiplier:	100.0000	Outside Diameter (inches):	2.43	
Volume Unit:	GAL	Wall Thickness (inches):	0.17	
Location:	GOOD	Downstream Distance (feet):	3.00	
Comments:		Upstream Distance (feet):	3.00	
Corrected Serial Number per IDWR Audit. DAN		Calibration Confidence:	GOOD	
Installed Meter Information:				
Manufacturer:	MASTER	Installation Date:		
Model Number:		Serial Number:	2269829	
Meter Type:	IMPELLER	Other Well:		

E. FLOW CALCULATIONS

____ Additional Computation Sheets

Attached

Measured Method:

F. VOLUME CALCULATIONS**1. Volume Calculations for Irrigation:**

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 =$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$$

2. Volume Calculations for Other Uses:

From IDWR Spreadsheet: (see attached)

Stockwater= 36.9 AF

Commercial= 83.5 AF

TOTAL = 120.4 AF

Although there are no WMIS records for the development period, water use on average for the last 15 years is around 90 AFA. Records from the WMIS database indicates annual water usage for the dairy in the year 2014 was 112.46 AF and coincides closely with the dairy spreadsheet calculations of 120.4 AF. This also reflects actual usage at the dairy so I am recommending the highest recorded volume of 112.5 AF for commercial and stockwater use.

G. NARRATIVE/REMARKS/COMMENTS

Permit 36-8636 is for the diversion of up to 1.0 cfs for domestic, stockwater and commercial uses associated with a dairy operation and a home. Application for permit was filed on November 18, 1991 and approved on April 24, 1992. The permit lapsed but was reinstated in 1997 with an advanced priority date of September 23, 1997. Proof was filed on this same date.

The system consists of two wells that service the dairy. WMIS records indicate a maximum flow rate of 0.55 cfs for the combined system. Recommend the flow rate of 0.55 cfs for commercial and stockwater use. WMIS records for the dairy annual water usage for the last 15 years is also available and appears to be accurate. Annual Volumes also coincide closely with the dairy spreadsheet calculations of 120.4 AF. Therefore I am recommending the highest recorded annual volume of 112.5 AF for commercial and stockwater uses at the dairy facility. In addition the home to the north of the facility that is associated with the dairy is on a separate system and is already covered by domestic water right 36-10817 so the domestic component for this permit can be dropped at licensing.

Note an amendment was filed to add the SENE of section 22 to the commercial place of use and is reflected above.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
STOCKWATER	01/01 to 12/31	0.550 CFS	112.50 AF
COMMERCIAL	01/01 to 12/31	0.550 CFS	112.50 AF
<u>Totals:</u>		0.550 CFS	112.50 AF

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☐ None

☒ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name

Sana Reeder

Date

1/19/16

Reviewer

Douglas Jones

Date

4/5/16

		N 5hp	S 7.5hp		
		a0002841	a0002842		Total Vol
	1994	Proof b/u due			
	2000	32.01	52.78		84.79
	2001	61.66	43.82		105.48
	2002	58.21	41.9		100.11
	2003	54.51	49.33		103.84
	2004	21.26	64.24		85.5
	2005	6.4	81.37		87.77
	2006	41.12	60.69		101.81
	2007	51.96	29.75		81.71
	2008	58.09	32.95		91.04
	2009	47.88	19.03		66.91
	2010	67.32	12.6		79.92
	2011	47.95	35.26		83.21
	2012	65.15	26.55		91.7
	2013	29.06	67.21		96.27
	2014	12.1	100.36		112.46
	2015	17.92	92.38		110.3

Recommended



Stock use

Parlor



South

North



Flowmeters

North Well

South Well

Idaho Department of Water Resources

WMIS

Water Management Information System



Quick Search:

[For assistance, email](#)[WMIS Info](#)

Search Method:

Metal Tag Number

Metal Tag Number

A0002841

You are logged in as Guest

Point Of Diversion PCC Flow Meter Time Clock Alternate Contacts Data Summary
Other Logout

Data Summary

You are viewing 400436; A0002841

Report Year	Alternate	FM	PCC	Time Clock
2014		12.10		
2013		29.06		
2012		65.15		
2011		47.95		
2010		67.32		
2009		47.88		
2008		58.09		
2007		51.96		
2006		41.12		
2005		6.40		
2004		21.26		
2003		54.51		
2002		58.21		
2001		61.66		
2000		32.01		
1998		0.10		
1997				

Field exam 36-8636

Idaho Department of Water Resources

WMIS
Water Management Information System

Quick Search:

[For assistance, email](#)[WMIS Info](#)

Search Method:

Metal Tag Number

Metal Tag Number

A0002842

You are logged in as Guest

[Point Of Diversion](#) [PCC](#) [Flow Meter](#) [Time Clock](#) [Alternate](#) [Contacts](#) [Data Summary](#)
[Other](#) [Logout](#)

Data Summary

You are viewing 401897; A0002842

Report Year	Alternate	FM	PCC	Time Clock
2014		100.36		
2013		67.21		
2012		26.55		
2011		35.26		
2010		12.60		
2009		19.03		
2008		32.95		
2007		29.78		
2006		60.69		
2005		81.37		
2004		64.24		
2003		49.33		
2002		41.90		
2001		43.82		
2000		52.78		
1999				
1997				

Field exam 36-8636

FILE NUMBER _____
REVIEWER _____

DAIRIES: WATER USE WORKSHEET

REQUIRED DAIRY DATA

NUMBER OF MILKING CATTLE _____ 1000
NUMBER OF DRY CATTLE _____
NUMBER OF REPLACEMENT CATTLE: 0-2 MONTHS _____ 0
3-4 MONTHS _____ 0
5-8 MONTHS _____ 0
9-12 MONTHS _____ 0
13-18 MONTHS _____ 0
19-24 MONTHS _____ 0
ENTER 1 FOR MANUAL COW WASHING, 2 FOR AUTOMATIC, OR 3 IF
SPRINKLERS ARE USED TO FLUSH HOLDING PEN AND WASH COWS _____ 3
IF SPRINKLERS ARE USED: NUMBER OF SPRINKLERS IN HOLDING PEN _____ 55
NOZZLE DISCHARGE (USE 5.0 GPM IF UNKNOWN) _____ 5.00
OPERATION TIME OF SPRINKLERS (MIN/DAY) _____ 240
NUMBER OF MILKINGS PER DAY _____ 3
AVG. LBS. OF MILK PRODUCED PER DAY PER ANIMAL (IDAHO AVG IS 70 LBS.) _____ 80
HOURS PER DAY PUMP OPERATES FOR STOCKWATER USE _____ 12.0
HOURS PER DAY PUMP OPERATES FOR COMMERCIAL USE _____ 12.0
IS RECYCLED WATER USED TO FLUSH MILKHOUSE AND PARLOR FLOORS? _____ Y
IS RECYCLED WATER USED TO WASH COWS? _____ N
IS A PLATE COOLER USED? _____ Y
IS RECYCLED WATER USED FOR PLATE COOLER? (IF NO PLATE COOLER,
LEAVE BLANK) _____ N
IF CORRAL MISTERS ARE USED: NUMBER OF MISTERS IN HOLDING PEN _____
NOZZLE DISCHARGE (GPM) _____
OPERATION TIME OF MISTERS (MIN/DAY) _____
DAYS PER YEAR MISTERS ARE USED _____

CALCULATIONS

DIVERSION RATE (CFS):

STOCKWATER
MILKING CATTLE (BASED ON MILK PRODUCTION) _____ 0.12
DRY CATTLE @ 17.0 GPM/HD _____ 0.00
REPLACEMENT CATTLE _____ 0.00
TOTAL _____ 0.12

COMMERCIAL
TOTAL _____ 0.23

TOTAL DIVERSION RATE _____ 0.35

DIVERSION VOLUME (AFA):

STOCKWATER
MILKING CATTLE _____ 38.9
DRY CATTLE _____ 0.0
REPLACEMENT CATTLE _____ 0.0
TOTAL _____ 38.9

COMMERCIAL
WASHING OF BULK TANK AND RELATED EQUIPMENT _____ 0.8
BACKFLUSH _____ 0.0
PARLOR/MILKHOUSE/HOLDING PEN CLEANUP _____ 0.0
CATTLE WASHING BASED UPON METHOD OF WASHING _____ 73.9
PLATE COOLER _____ 9.0
CORRAL MISTERS _____ 0.0
TOTAL _____ 83.5

TOTAL DIVERSION VOLUME _____ 120.4

CONSUMPTIVE USE VOLUME (AFA)(assuming 100% consumptive):

STOCKWATER _____ 38.9
COMMERCIAL _____ 83.5
TOTAL CONSUMPTIVE USE _____ 120.4

THEORETICAL FLOW ESTIMATION WORKSHEET

REQUIRED PUMP INFORMATION

PUMP HORSEPOWER (HP) _____ PUMP 1 PUMP 2 PUMP 3 PUMP 4 PUMP 5
LIFT (FT) _____
DISCHARGE PRESSURE (PSI) _____
FRICTION LOSSES (FT) _____
HOURS PER DAY PUMP OPERATES _____

CALCULATIONS

THEORETICAL FLOW RATE (CFS) * _____ 0.00 0.00 0.00 0.00 0.00
DIVERSION VOLUME (AFA) ** _____ 0.0 0.0 0.0 0.0 0.0

* PUMP EFFICIENCY WAS ASSUMED TO BE 70%.

** DIVERSION VOLUME IS THE ABSOLUTE MAXIMUM VOLUME BASED ON THE
THEORETICAL FLOW RATE ASSUMING PUMP RUNS EVERY DAY OF THE YEAR.

EVALUATION OF EQUIVALENT IRRIGATED ACREAGE

IRRIGATION RIGHT (BEFORE CHANGE)

DIVERSION RATE _____ CFS
ACRES OF IRRIGATION _____ ACRES
DIVERSION VOLUME _____ AC-FT/AC
CONSUMPTIVE USE VOLUME _____ AC-FT/AC
IRRIGATION IS BEING CONVERTED FOR WHICH PORTION OF THE
DAIRY OPERATION - STOCKWATER (S), COMMERCIAL (C), OR
BOTH (B)? _____

CALCULATIONS

IRRIGATION @ DIVERSION RATE PER ACRE _____ #DIV/61 CFS/AC
REDUCTION OF IRRIGATION BASED ON DIVERSION RATE _____ 0.0 ACRES
REDUCTION OF IRRIGATION BASED ON DIVERSION VOLUME _____ 0.0 ACRES
REDUCTION OF IRRIGATION BASED ON CONSUMPTIVE USE _____ 0.0 ACRES