

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 65-22349

Exam Date: 5/3/18

1. Current Owner:

TEUNISSEN PROPERTIES LP 3749 SW 3RD AVE NEW PLYMOUTH ID 83665

flteunissen@msn.com

2. Accompanied by: FRANK & LESLIE TEUNISSEN

Phone No: (208) 278-3205

Address: 3749 SW 3RD AVE NEW PLYMOUTH ID 83665

Relationship to Permit Holder: Frank Teunissen is the registered agent for Teunissen Properties LP

3. SOURCE:

GROUND WATER

B. OVERLAP REVIEW1. Other water rights with the same place of use: Overlap? ☒ Yes ☐ No

Water Right No.	Owner	Source	Purpose of Use
Multiple	Black Canyon Irrigation District	Elijah Drain, Wilson Drain, Tunnel No 2 Drain	Irrigation
65-4511	Loena and Ralph Ankenman	Groundwater	Domestic
65-4588	Betty and Francis Crabb	Groundwater	Stockwater & Domestic

Comments: Black Canyon Irrigation District: The irrigation district water rights are for irrigation use and not domestic, commercial or stockwater, so overlap with this water right is not a concern.

65-4511: The permit holder of 65-22349 believes that water right 65-4511 was the original house well for the farm that has since been abandoned so overlap does not currently exist. Water right 65-22349 will be conditioned to address domestic use.

65-4588: The place of use for water right 65-4588 is in the SWNW quarter-quarter of Section 17, and the place of use for domestic and stockwater for this permit is in the NESW and SENW so overlap with this right is not a concern.

2. Other water rights with the same point of diversion: Overlap? ☐ Yes ☒ No

Water Right No.	Owner	Source	Purpose of Use
65-4511	Leona and Ralph Ankenman	Groundwater	Domestic

Comments: The permit holder of 65-22349 believes that water right 65-4511 was the original farm house well that has since been abandoned. There is no actual overlap at the POD. During licensing, this water right will be conditioned with typical domestic use limitations.

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER SE¼NW¼ Sec. 17, Twp 07N, Rge 04W, B.M. PAYETTE County

GROUND WATER NE¼SW¼ Sec. 17, Twp 07N, Rge 04W, B.M. PAYETTE County

GROUND WATER NE¼SW¼ Sec. 17, Twp 07N, Rge 04W, B.M. PAYETTE County

Method of Determination: The locations of the points of diversion were determined during the field exam with GPS and were verified with aerial imagery. An amendment is needed to change one of the points of diversion.

2. PLACE OF USE: DOMESTIC

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
07N	04W	17								X									

PLACE OF USE: COMMERCIAL

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
07N	04W	17							X	X	X	X							

PLACE OF USE: 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	
07N	04W	17								X	X								

Method of Determination: The legal description in the permit was confirmed with public land survey maps and aerial imagery. The location was verified during the field exam. The domestic POU shape is based on aerial imagery of the house and surrounding irrigation at the time that proof of beneficial use was filed in 2006.

3. Attachments

Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

X

Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

X

X Aerial Photo Attached (required for irrigation of 10+ acres).

X Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Site ID No. A0020303 (North Well)	Unknown	7.5 Hp	Unknown	Unknown	Unknown
Site ID No. A0020302 (South Well)	Unknown	3 Hp	Unknown	Unknown	Unknown
Site ID No. A0020304 (Dairy #2/Domestic)	Unknown	3 Hp	Unknown	Unknown	Unknown

*Code to correspond with ID on map and aerial photo

Note: Information about the well pumps was not available at the wellheads or in the buildings where the pressure tanks were located. Well and pump information was requested from the owner; however only horsepower information for each well pump was provided.

D. FLOW MEASUREMENTS

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
N/A						

- Measurements: Flow measurements were not possible due to the lack of length of straight piping which is required for an accurate reading.

E. FLOW CALCULATIONS☒ See attached calculations

1. Method: There was no way to measure this system. The power panels and pump boxes did not have any information to confirm the horsepower of the three pumps. The permit holder told us that the pump installer was no longer in the area, and there were no records of the pumps in the wells. Therefore, only the horsepower reported by the permit holder could be used. Theoretical flow calculations were based on pump horsepower, pumping level available from the Well Driller's Reports and pressure readings from the pressure gauges at the time of the field exam.

Dairy #2 Well	0.11 cfs
North Well	0.22 cfs
South Well	0.46 cfs
Total	0.79 cfs

Permitted maximum amount	0.50 cfs
Theoretical	0.79 cfs

Because the water right cannot be licensed for an amount that is greater than what was permitted, the license will be limited to 0.50 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: N/A
2. Volume Calculations for Other Uses: See attachment for stockwater and commercial volume calculations

Volume calculations were made using numbers reported from Frank Teunissen at the time of the field inspection (see attachments labeled "Daily Fresh Water Requirement for Dairy #1 and Dairy #2). The current calculated water requirement for dairy 1 & 2 is as follows:

Stockwater Volume	102 AFA
Commercial Volume	30 AFA
Total	132 AFA

The original intent of the permit was to develop 99 AFA for stockwater and commercial uses. The dairy has grown since proof of beneficial use was submitted; however, to prevent enlargement of the water use after permitting, the license must be limited to the 99 AFA of volume originally sought by the permit holder. A new permit will be required to cover the increase in water resulting from the increase in cows at the dairy. (The permitted number was 2,200 total cows whereas the reported total at the time of the field exam was 2,600 cows).

Domestic use was developed under this permit both during the development period and at the time of proof of beneficial use. The house was only recently disconnected from the well in October 2017. Domestic use will be limited to 1.2 AFA as is standard.

G. NARRATIVE/REMARKS/COMMENTS**History:**

Permit 65-22349 was issued in 2001 for domestic, stockwater and commercial purposes for a dairy operation. Stockwater use was permitted for 1,300 dairy cattle and 900 head of young stock.

The intended annual volumes for the permit as issued based on calculations by Darwin Vander Stelt were:

Stockwater	54 AFA
Commercial	45 AFA
Total	99 AFA

**See Application for Permit Attachment A*

Dairy barn number 1 is located on the south side of the property and is the original operation that was developed under this permit. Commercial calculations for the permit included wash pens; however, wash pens have since been eliminated. Since the time of permit in 2001, a second dairy barn has been constructed north of the original dairy barn and there are a total of 2,600 dairy cows. Based on current operations of dairy barn number 1 and the intended usage of dairy barn number 2, the following water usage is expected:

Stockwater	102 AFA
<u>Commercial</u>	<u>30 AFA</u>
Total	132 AFA

The intent of the permit was to develop 99 AFA of water for stockwater and commercial purposes. I believe that 99 AFA was developed by the time that proof of beneficial use was submitted and has since expanded to the current operation that requires an extra 33 AFA. A new permit will be required to cover the difference created by increased water usage as a result of the new development.

Domestic use was developed under this permit during the development period and existed at the time that proof of beneficial use was submitted. Therefore, the license should include domestic use. The home was connected to dairy #2 well until October of 2017.

Available tax parcel data from 2017 shows that Frank and Leslie Teunissen are owners of a majority of the place of use (POU) and Teunissen Properties LP is the owner of the remaining southeast quarter of the POU. Frank Teunissen is the registered agent for Teunissen Properties LP as shown on the Idaho Secretary of State website. The physical address of the property is 3749 SW 3rd Avenue, New Plymouth, ID 83655.

The POU shapes are based on the permitted POUs and actual development at the property. No amendments are needed for the place of use. The domestic use POU includes the location of the house and yard during the development period and the time that proof of beneficial use was submitted.

Point of diversion (POD) shapes are based on GPS points taken at the time of the field exam and were verified using aerial imagery. The permit authorized two wells in the SENW quarter-quarter of Section 17 and one in the NESW quarter-quarter; however, only one well was developed in the SENW and two were developed in the NESW quarter-quarter. An amendment is needed for this change in POD location.

System Description:

Dairy barn number one uses two wells which are located to the west of the dairy barn (see attached system diagram). These two wells are referred to as "North well" and "South well" for their respective locations. This dairy barn has a water holding tank outside, distribution lines inside which serve milking operations for 1,800 cows three times a day, equipment washing (three hours of washing with a pressure hose daily), a washing machine for towels and employee showers and restrooms. The north well diverts directly into the pressurized system and the south well open discharges into a 20,000 gallon storage tank.

Dairy number two has a similar setup with a well outside of the equipment storage building to the south of the dairy barn. There are two pressure tanks in the equipment storage building which fill a 16,000 gallon storage tank. Distribution lines inside serve milking operations for 800 cows three times a day, equipment washing, a washing machine for towels and employee restrooms. As previously mentioned, the home was connected to dairy #2 well until October of 2017.

In addition to the dairy, commercial use for this permit includes land upon which dairy wastewater may be applied to irrigated.

Water Source:

The source for this water right is groundwater.

Diversion Rate and Volume:

There was very limited information available regarding the diversion rates of the well pumps. At the time of the field exam, there was not any information available about the well pumps at the wellheads or within the buildings where the pressure tanks were located. Well and pump information was requested from the owner; however only horsepower information was provided for each pump. Additionally, flow measurements at the time of the field exam were not possible due to the lack of length of straight piping required for an accurate reading. Due to this lack of information, theoretical calculations were used. Sections E and F above and the theoretical equation attachment sheet further detail these calculations.

Overlap: As discussed in Section B above, no overlapping rights for this permit were found.

Conditions/ Recommendations: Conditions 1, 2 and 3 will be removed for licensing as these conditions are typically only used for permits. Conditions 4 (01M) and 6 (WD8), 7 and 9 (X01) will be retained for the licensed. Condition 5 will be updated to condition #103. Condition 8 will be removed as this condition is no longer used on licenses.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
DOMESTIC	01/01 to 12/31	0.04 CFS	
COMMERCIAL	01/01 to 12/31	0.50 CFS	99.0 AFA
STOCKWATER	01/01 to 12/31	0.50 CFS	99.0 AFA
Totals		0.50 CFS	99.0 AFA

2. Recommended Amendments

x Change POD as reflected above Add POD as reflected above None

 Change POU as reflected above Add POU as reflected above None

I. AUTHENTICATION – Rachael Smith, Water Resource Agent, Sr.

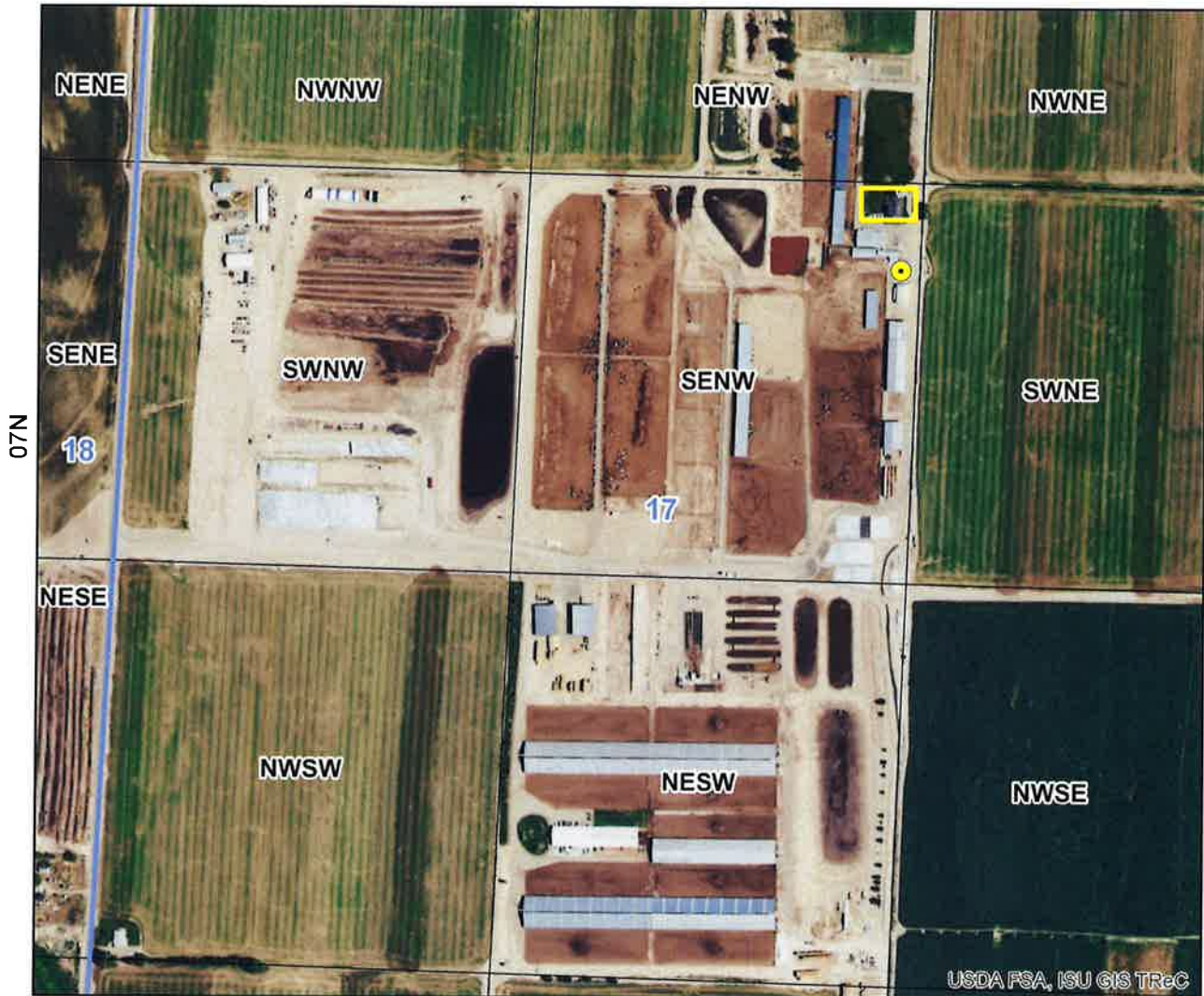
Field Examiner's Name Rachael Smith Date 6/18/18

Reviewer Daniel A. Mehr Date 6-18-18

State of Idaho
Department of Water Resources
Attachment to Field Exam
65-22349

This map depicts the DOMESTIC place of use boundary
and is attached solely for illustrative purposes.

04W



-  Townships
-  PLS Sections
-  Domestic Point of Diversion
-  Domestic Place of Use



0 0.075 0.15 0.3 Miles

State of Idaho
Department of Water Resources
Attachment to Field Exam
65-22349

This map depicts the COMMERCIAL and STOCKWATER
place of use boundary and is attached solely for illustrative purposes.

04W



-  Townships
-  PLS Sections
-  Commercial Place of Use
-  Stockwater Place of Use

-  Dairy #2 well
-  North well
-  South well



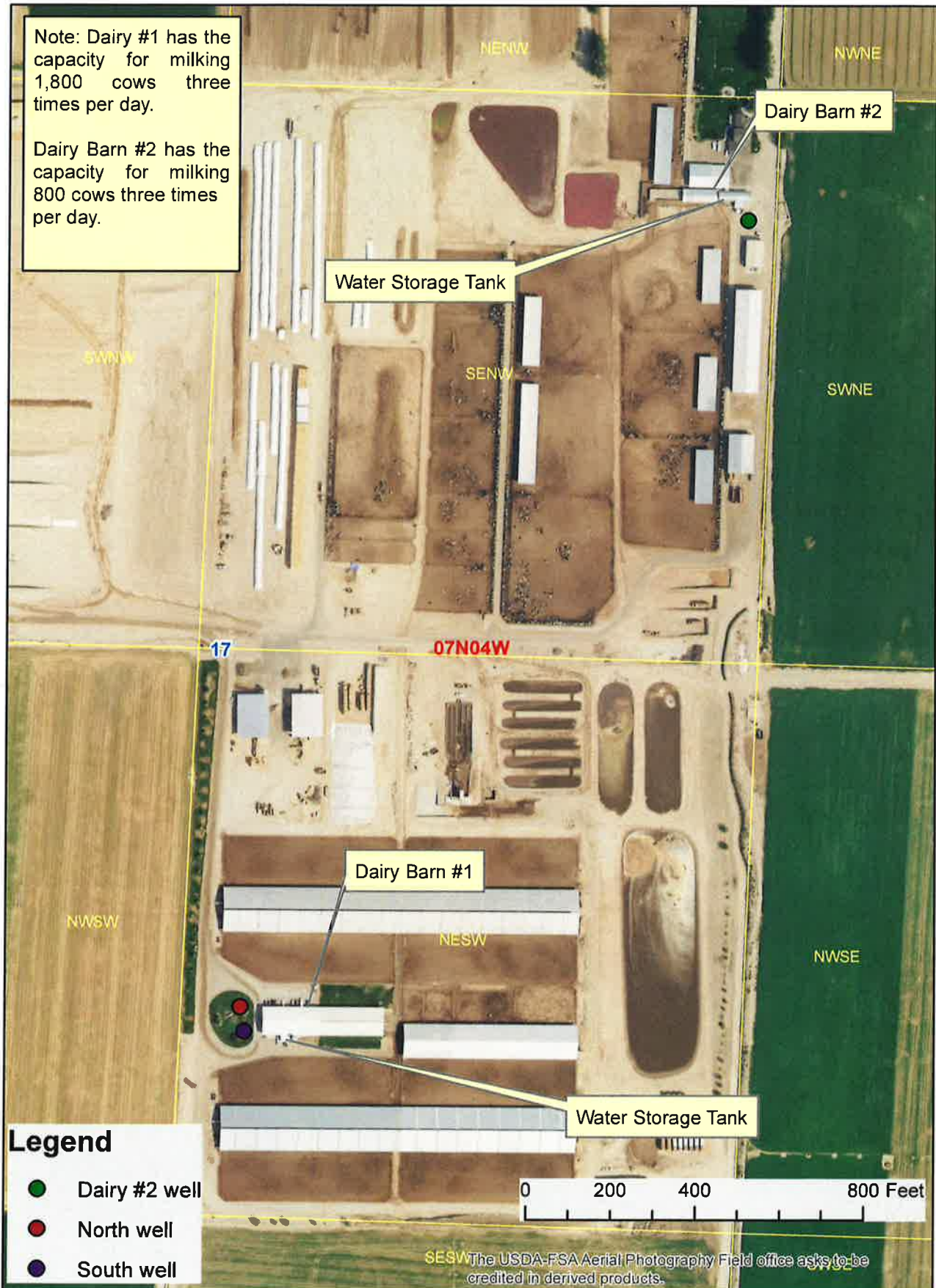
0 0.075 0.15 0.3 Miles

Teunissen Properties LP System Diagram

Water Permit 62-22349

Note: Dairy #1 has the capacity for milking 1,800 cows three times per day.

Dairy Barn #2 has the capacity for milking 800 cows three times per day.



Water Right 65-22349

Domestic water use in 2005

Home and irrigated lawn

Google Earth

Image U.S. Geological Survey

N

200 ft

THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 65-22349
 Reviewer: Rachael Smith and Dan Nelson
 Date of Review: 5/22/2018

P/D No.:

PUMP HORSEPOWER
 BOOSTER HORSEPOWER

PUMPING LEVEL

DISCHARGE PRESSURE

RATE OF FLOW (cfs)

North Well
7.5
0
80
55.8
0.22
99

South Well
7.5
0
80
9.3
0.46
204

Dairy 2 Well
3
0
65
45
0.11
49

0.79
 352.81

The above calculates the formula =

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Assumptions: %70 efficiency.
 No Friction

Examiners Notes:

There was no way to measure this system. The power panels and pump boxes did not have any information to confirm the horsepower of the three pumps. The permit holder told us that the pump installer was no longer in the area, and there were no records of the pumps in the wells. Therefore, we can only use the Horsepower relayed to us by the permit holder.

The pumping water level of 80 feet for the North and South well is shown on the Well Driller's Reports. The Dairy 2 Well has a total depth of 94 feet with a static water level of 35 feet. Using the Department standard for estimating the pumping water level by using the following equation:

$$[(94 \text{ ft well depth} - 35 \text{ ft static}) / 2] + 35 \text{ ft static} = 64.5 \text{ feet.}$$

The estimated pumping water level used for the Dairy 2 Well of 64.5 feet will be used as the lift.

The pressure was taken from the owner's gauge on Dairy 2 Well, and the variable speed drives on the North and South Wells. Please see Photos.

We believe that a combined diversion rate of 0.79 cfs does seem reasonable.

The reason the South Well has a much higher diversion rate than the other wells is that it open discharges into a large storage tank, and doesn't divert directly into the pressurized system.

DAILY FRESH WATER REQUIREMENT FOR DAIRY #1

FOR: TEUNISSEN PROPERTIES LP
 BY: RACHAEL SMITH
 DATE: 5/3/2018

STOCKWATER VOLUME REQUIREMENT

TYPE OF ANIMAL	NUMBER	USE/DAY	TOTAL GAL/DAY	TOTAL GAL/YEAR
MILKING COWS	1800	35	63000	22995000
DRY COWS	N/A			
HEIFERS	N/A			
TOTAL GALLONS			63000	22995000

STOCKWATER ANNUAL VOLUME NEEDED

71

COMMERCIAL VOLUME REQUIREMENT

WASH PEN ESTIMATE N/A

GPM PER NOZZLE	NUMBER OF NOZZLES	TIME PER USE (IN MINUTES)	NUMBER OF USES/DAY	TOTAL GAL/DAY	TOAL GAL/YEAR
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MILKING PARLOR ESTIMATES

ITEM	GALS/OP	X'S/DAY	GALS/DAY	GALS/YEAR
BULK TANK	300.00	3.00	900.00	328,500.00
COW PREP	450.00	3.00	1,350.00	492,750.00
PIPELINES	250.00	3.00	750.00	273,750.00
PARLOR CLEANUP	3,000.00	3.00	9,000.00	3,285,000.00
WASHPEN CLEANUP	0.00		0.00	0.00
TOTAL MILK PARLOR USE			12,000.00	4,380,000.00

(1/4 gal per cow per operation)

HOSPITAL BARN USE N/A

ITEM	GALS/OP	X'S/DAY	GALS/DAY	GALS/YEAR
BULK TANK			0.00	0.00
COW PREP			0	0
PARLOR & HOLDING				
PEN CLEANUP			0	0
TOTAL HOSPITAL BARN USE			0	0

MISCELLANEOUS USES

ITEM	GALS/OP	X'S/DAY	GALS/DAY	GALS/YEAR
TOWEL WASHING	50	20	1000	365000
EMPLOYEE SHOWERS				
& RESTROOMS	1500	1	1500	547500
MAINTENANCE SHOP	5400	1	5400	1971000
TOTAL MISCELLANEOUS USES			7900	2883500

*Based on 30 gals x 50 employees/ day per
<https://www.epa.gov/lean/lean-water-toolkit-appendix-c>
 3 hr washing per day with a pressure hose => 30 gpm x 3 hrs per day

COMMERCIAL ANNUAL VOLUME NEEDED

22

STOCKWATER VOLUME REQUIREMENT = 71
 COMMERCIAL REQUIREMENT = 22
 TOTAL VOLUME REQUIRED = 93

DAILY FRESH WATER REQUIREMENT FOR DAIRY #2

FOR: TEUNISSEN PROPERTIES LP
 BY: RACHAEL SMITH
 DATE: 5/3/2018

STOCKWATER VOLUME REQUIREMENT

TYPE OF ANIMAL	NUMBER	USE/DAY	TOTAL GAL/DAY	TOTAL GAL/YEAR
MILKING COWS	800	35	28,000	10,220,000
DRY COWS	N/A			
HEIFERS	N/A			
TOTAL GALLONS			28,000	10,220,000

STOCKWATER ANNUAL VOLUME NEEDED

31

COMMERCIAL VOLUME REQUIREMENT

WASH PEN ESTIMATE

GPM PER NOZZLE	NUMBER OF NOZZLES	TIME PER USE (IN MINUTES)	NUMBER OF USES/DAY	TOTAL GAL/DAY	TOAL GAL/YEAR
N/A					

MILKING PARLOR ESTIMATES

ITEM	GALS/OP	X'S/DAY	GALS/DAY	GALS/YEAR
BULK TANK	500	1	500	182,500
COW PREP	200	3	600	219,000
PIPELINES	250	3	750	273,750
PARLOR CLEANUP	1,500	3	4,500	1,642,500
WASHPEN CLEANUP	N/A			0
TOTAL MILK PARLOR USE			6,350	2,317,750

(1/4 gal per cow per operation)

HOSPITAL BARN USE

N/A

ITEM	GALS/OP	X'S/DAY	GALS/DAY	GALS/YEAR
BULK TANK			0	0
COW PREP			0	0
PARLOR & HOLDING				
PEN CLEANUP			0	0
TOTAL HOSPITAL BARN USE			0	0

MISCELLANEOUS USES

ITEM	GALS/OP	X'S/DAY	GALS/DAY	GALS/YEAR
TOWEL WASHING	50	10	500	182,500
EMPLOYEE SHOWERS				
& RESTROOMS	135	1	135	49,275
MAINTENANCE SHOP	50	1	50	18,250
TOTAL MISCELLANEOUS USES			685	250,025

Based on 15 gals x 9 employees/ day
 per <https://www.epa.gov/lean/lean-water-toolkit-appendix-c>
 One cleaning operation per day

COMMERCIAL ANNUAL VOLUME NEEDED

8

STOCKWATER VOLUME REQUIREMENT = 31
COMMERCIAL REQUIREMENT = 8
TOTAL VOLUME REQUIRED = 39

Total Stockwater Volume (Dairy 1 & 2)

102

AFA

Total Commercial Volume (Dairy 1 & 2)

30

AFA

Field Exam

Teunissen Properties LP Permit No. 65-22349

Field Exam Completed: 5/3/18

IDWR Staff: Rachael Smith/ Dan Nelson



Well for dairy #2



Site ID No. A0020304 for dairy #2 well



Pressure tanks for dairy #2 well (45 psi)



16,000 gallon storage tank for dairy #2



water distribution for dairy #2



dairy #2 milk tanks



Dairy #2



Washing machine at dairy #2



20,000 gallon storage tank at dairy #1



Site ID No. A0020303 at "North Well"



Site ID No. A0020302 at "South Well"



North Well variable speed box (55.8 psi)



South Well variable speed box
(9.3 psi)



Water distribution at dairy #1



Dairy #1 milk tanks



Milking carousel at dairy #1



Barn near dairy #1



Overall area of dairy #2

Smith, Rachael

From: Frank T <flteunissen@msn.com>
Sent: Thursday, June 14, 2018 3:49 PM
To: Smith, Rachael
Subject: Re: question regarding permit

Racheal,

It was disconnected last year in October.

Leslie

Sent from my iPhone

On Jun 13, 2018, at 9:54 AM, Smith, Rachael <Rachael.Smith@idwr.idaho.gov> wrote:

Hi Leslie,

Do you remember when the domestic well was disconnected from the dairy well? We are supposed to license the water right for the water usage at the time that beneficial use proof was filed (which is not always current with the field exam, as is the case for this one). Knowing when the dairy well also supplied water for the house would be useful.

Thanks again,
Rachael

From: Frank T [<mailto:flteunissen@msn.com>]
Sent: Tuesday, June 12, 2018 12:57 PM
To: Smith, Rachael <Rachael.Smith@idwr.idaho.gov>
Subject: Re: question regarding permit

Hello Racheal,

The three wells do not supply any domestic usage. Previously the one did but that has been disconnected and the home runs on a different well.

Leslie

From: Smith, Rachael <Rachael.Smith@idwr.idaho.gov>
Sent: Monday, June 11, 2018 9:57 AM
To: flteunissen@msn.com
Subject: question regarding permit

Good morning Frank,

Smith, Rachael

From: Frank T <flteunissen@msn.com>
Sent: Tuesday, June 12, 2018 12:57 PM
To: Smith, Rachael
Subject: Re: question regarding permit

Hello Racheal,

The three wells do not supply any domestic usage. Previously the one did but that has been disconnected and the home runs on a different well.

Leslie

From: Smith, Rachael <Rachael.Smith@idwr.idaho.gov>
Sent: Monday, June 11, 2018 9:57 AM
To: flteunissen@msn.com
Subject: question regarding permit

Good morning Frank,

I hope your week is off to a great start. Draft licensing of your water right 65-22349 was reviewed by my supervisor however during the review, there were some questions about domestic use under this permit. Domestic use was originally permitted but that specific usage was not discussed during our field exam. Do any of the three wells that we looked at during the field exam supply water for domestic use? If so we should make sure to include it on the license.

Thank you,

Rachael Smith
Water Resource Agent, Sr.
Idaho Dept of Water Resources
322 E. Front Street PO Box 83720
Boise, ID 83720-0098
Rachael.Smith@idwr.idaho.gov
208.287.4912



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 • Web Site: www.idwr.idaho.gov

GARY SPACKMAN
Director

C.L. "BUTCH" OTTER
Governor

May 18, 2018

FRANK TEUNISSEN
3749 SW 3RD AVENUE
NEW PLYMOUTH ID 83655

RESPONSE DEADLINE

June 1, 2018

RE: Water Permit 65-22349 – Additional Information Required

*****TIME SENSITIVE RESPONSE REQUIRED*****

Dear Permit Holder,

Idaho Department of Water Resources conducted a field examination for water right permit 65-22349 on May 3rd, 2018. At that time, the requirement for well pump specifications was discussed. To this date, well pump information for the three wells has not been received by the Department.

Please provide specifications (make, capacity, serial # and model # if available) for the three well pumps within fourteen (14) days. If the requested information is not submitted or this Department has not been contacted by June 1, 2018, action will be taken to void your permit under the provision of Section 42-219(8) of the Idaho Code.

If you have any questions, please contact me at 208-287-4912. Thank you for your attention to this matter.

Respectfully,

Rachael Smith
Water Resource Agent, Sr.