

[illegible]

Method of Determination: Map submitted with application for permit indicating actual location of point of diversion along with ESRI and Google Earth satellite imagery.

3. ☐ 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).

4.

<u>Well or Diversion</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>
311255 – Production well					
311254 – Injection well					

D. FLOW MEASUREMENTS

1. Measurements:

No measurements as permit meets the requirements exempting it from on-site examination and direct measurement specified in the Beneficial Use Examination Rules (IDAPA 37.03.02).

E. FLOW CALCULATIONS

_____ Additional Computation Sheets Attached

Measured Method: Theoretical Yield:

$$Q = \frac{8.8 \times (\text{Hp}) \times (\text{Eff})}{H}$$

Where Hp = 1 Hp (per applicant)

Eff = Efficiency = 70% assumed

H = total head = pumping level + (2.31 x system pressure)

$$H = 34 + (40 \times 2.31) = 126.4$$

$$Q = \frac{8.8 \times 1 \times .70}{126.4} = 0.05 \text{ cfs}$$

F. VOLUME CALCULATIONS

1. Volume Calculations for Other Uses: Heating and Cooling; according Mr. Greener the system is in operation year round and operates at a flow rate of 9 gpm and is estimated to operate approximately 40% of time:

$$0.02 \text{ cfs} \times 365 \times 1.9835 \times 0.40 = 5.8 \text{ AFA}$$

Heating season 10/1 – 4/30 or 212 days (approximate):

$$0.02 \text{ cfs} \times 212 \text{ days} \times 1.9835 \times 0.40 = 3.4 \text{ AF}$$

Cooling season 5/1 – 9/30 or 153 days (approximate):

$$0.02 \text{ cfs} \times 153 \times 1.9835 \times 0.40 = 2.4 \text{ AF}$$

G. NARRATIVE/REMARKS/COMMENTS

Permit 45-14352 was permitted for 0.02 cfs heating and cooling.

Application for permit was submitted by Barney and Sherrie Greener on June 20, 2011 and proof of beneficial use was received on October 9, 2012. On October 9, 2012, the Watermaster for Water District 130 submitted a letter requesting that a flow meter requirement for this permit (condition 212) be waived as the amount used is de-minimus and on November 2, 2012 the Department issued an order to modify the condition to preclude the installation of a measuring device at this time. I have dropped condition 212 from the license and placed a modified condition on the license worded as the order specifies.

The heat pump system installed consists of a 1 Hp pump that supplies water a heat pump that utilizes 9 gpm and is operated

The heat pump system has a 1 Hp pump that supplies water a heat pump that utilizes 9 gpm and is operated year round to heat and cool a 3,750 square foot daycare facility. The system is closed loop and the water is passed out to an injection well and reinjected after use in the heat pump system.

Recommend licensing 0.02 cfs for Heating/Cooling with an annual volume of 5.8 AF (3.4 AF Heating; 2.4 AF cooling).

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>
COOLING	01/01 to 12/31	0.020 CFS	2.4 AF
HEATING	01/01 to 12/31	0.020 CFS	3.4 AF
<u>Totals:</u>		0.020 CFS	5.8 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

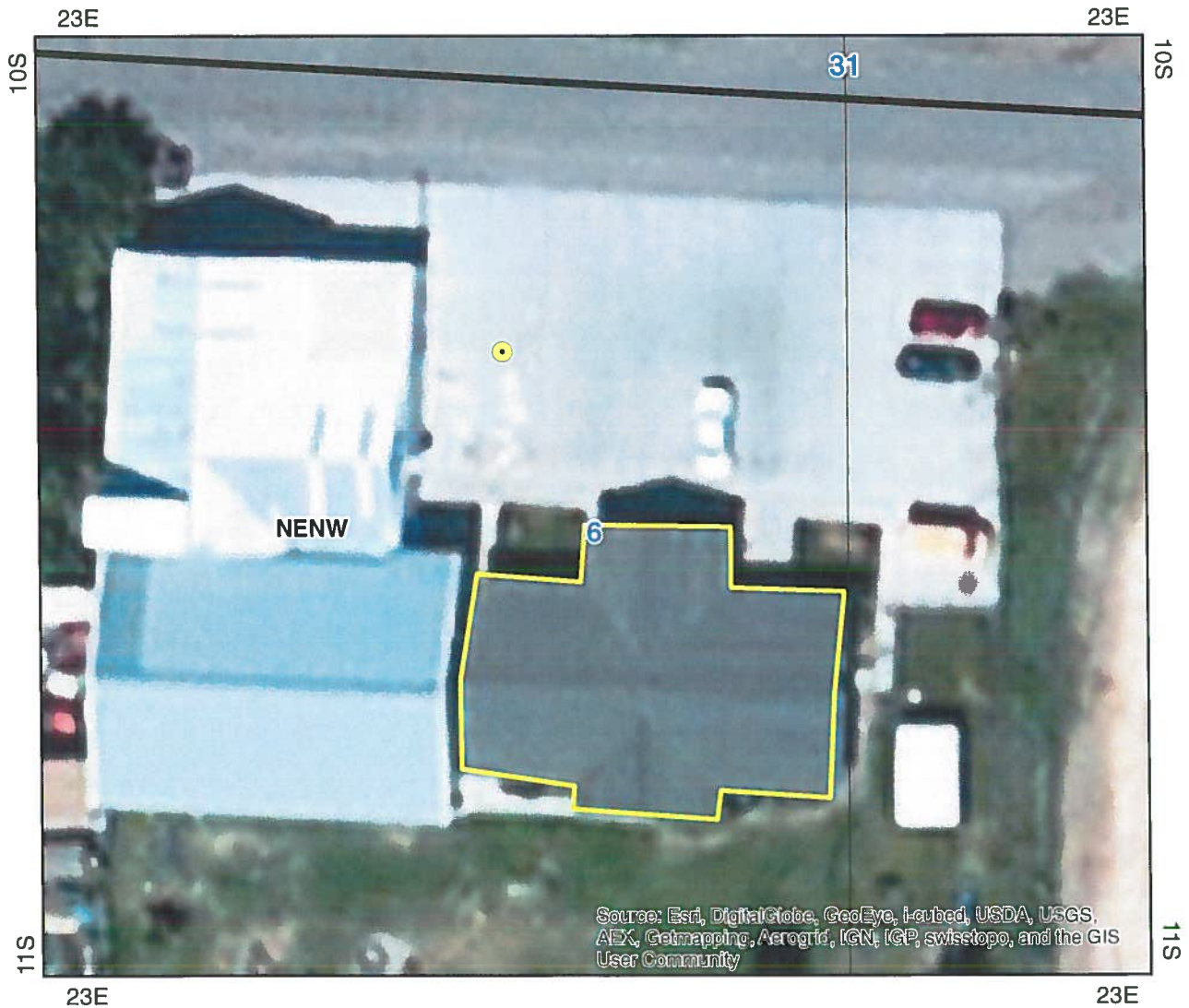
Field Examiner's Name Brian Mill Date 10-16-2013
Reviewer [Signature] Date 10/23/2013

State of Idaho
Department of Water Resources

Attachment To Water Right License

45-14352

This map depicts the HEATING place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.



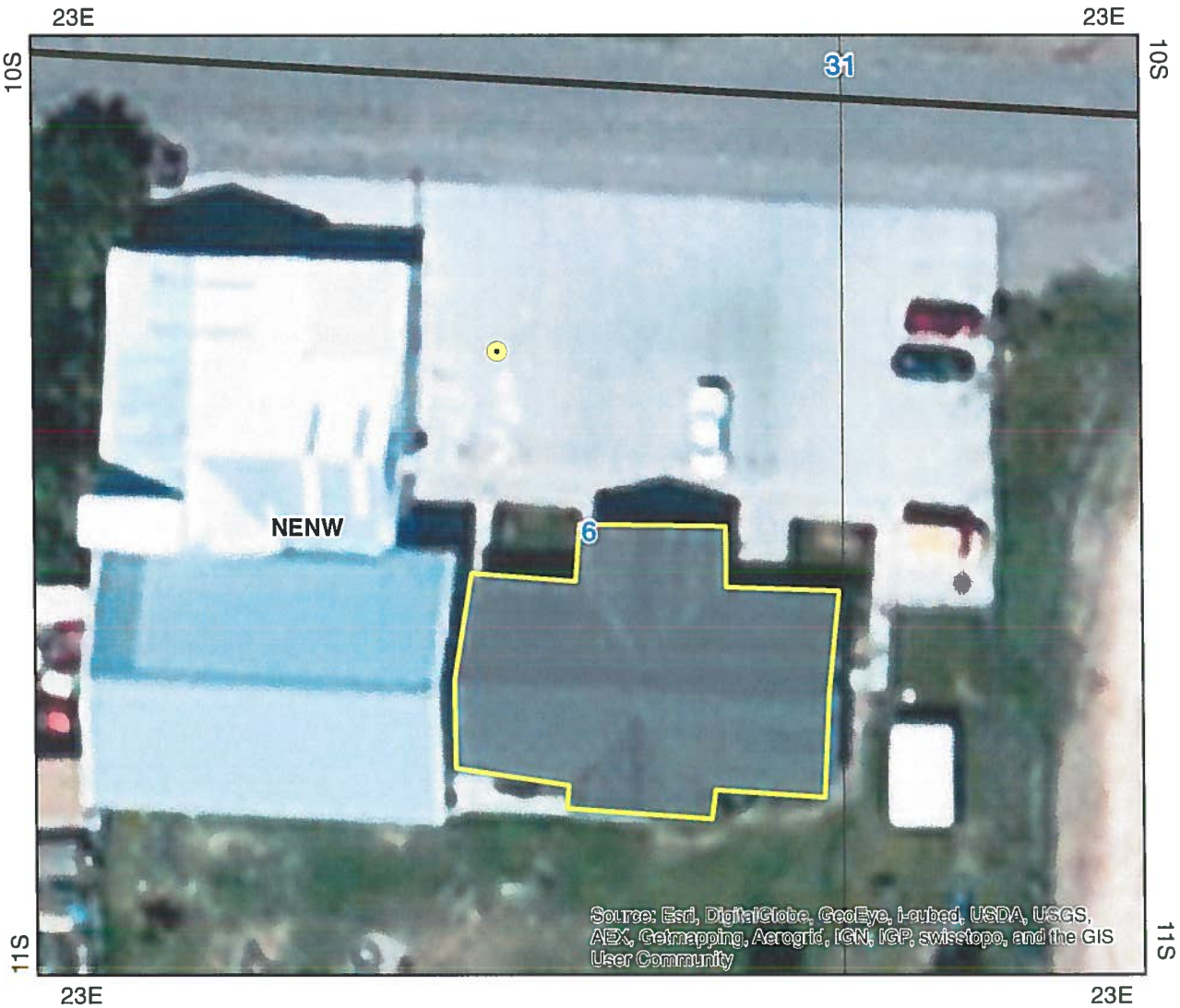
- Point of Diversion
- Place Of Use Boundary
- Townships
- PLS Sections
- Quarter Quarters

0 0.00425 0.0085 0.017 Miles



State of Idaho
Department of Water Resources
Attachment To Water Right License
45-14352

This map depicts the COOLING place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.



- Point of Diversion
- Place Of Use Boundary
- Townships
- PLS Sections
- Quarter Quarters

0 0.00425 0.0085 0.017 Miles



1. DRILLING PERMIT NO. 45-94-S-0029-000
Other IDWR No. 45-WI-33-001

2. OWNER:

2. OWNER: Lynn Morgan
Name
Address 700 W 40th Street
City Burlington State IL Zip 63118

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.



T. 11 S North ☐ or South ☒
 R. 23 E East ☒ or West ☐
 Sec. 6 1/4 NE 1/4 NE 1/4
 Gov't Lot _____ 40 acres _____ 160 acres
 County Carroll

Address of Well Site

(Give at least Direction + Distance to Road or Landmark)

Lot No. _____ Block No. _____ Subd. Name _____

4. PROPOSED USE:

☐ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☒ Injection ☐ Other

5. TYPE OF WORK

☒ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

6. DRILL METHOD

☐ Mud Rotary ☐ Air Rotary ☒ Cable ☐ Other

7. SEALING PROCEDURES

[illegible]

Was drive shoe seal tested? Y ☐ N ☐ How?

8. CASING/LINER:

Diameter	From	To	Gauge	Casting	Liner	Steel	Plastic	Welded	Threaded
6	71	70	1/4	✓		☒	☐	☒	☐
						☐	☐	☐	☐
						☐	☐	☐	☐
						☐	☐	☐	☐

Final location of shoes

Top Packer or Headpipe _____ Bottom Tailpipe _____

9. PERFORATIONS/SCREENS

☒ Perforations Method _____

☐ Screens Type _____ Material _____

From	To	Slot Size	Number	Diameter	Tele/Pipe Size	Casting	Line
57	59	5/16	40	2"		☒	☐
						☐	☐
						☐	☐
						☐	☐

10. WELL TESTS:

☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Depth	Time
20	0	34	1 hr

Temperature of water SS Was a water analysis done? Yes ☐ No ☐

By whom?

Water Quality (odor, etc.)

Bottom Hole Temperature

11. STATIC WATER LEVEL:

34 ft. below surface Depth artesian flow found

Artesian pressure _____ lb. Describe access port _____

Describe Controlling Devices:

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

[illegible]

13. DRILLER'S CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Firm Name Charles Mullin Firm No. 428

Firm Official Ben Chisley Date 6-4-94

Supervisor of Operator Tracy Chulapate 6-4-94
(Sign once if Firm Official & Operator)

FEB 10 1995 FORWARD WHITE COPY TO WATER RESOURCES

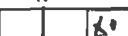
1. DRILLING PERMIT NO. 45-94-S-0030-000
Other IDWR No. _____

2. OWNER:

Name Lynn Morgan
Address 700 W 40th
City Burlington State VT Zip 05318

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.



T. 11S North ☐ or South ☐
 E. R. 23E East ☐ or West ☐
 Sec. 6 1/4 NE 1/4 NE 1/4
 Gov't Lot _____ County Cass

Address of Well Site

(Give at least Direction + Distance to Road or Landmark)

Lot No. _____ Block No. _____ Subd. Name _____

4. PROPOSED USE:

☒ Domestic ☐ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other

5. TYPE OF WORK

☒ New Well ☐ Modify or Repair ☐ Replacement ☐ Abandonment

6. DRILL METHOD

☐ Mud Rotary ☐ Air Rotary ☒ Cable ☐ Other _____

7. SEALING PROCEDURES

SEAL/FILTER PACK		AMOUNT		METHOD
Material	From	To	Sacks or Pounds	
Budding clay	0	20		Packed

Was drive shoe seal tested? Y ☐ N ☒ How?

8. CASING/LINER:

Diameter	From	To	Gauge	Casting	Liner	Steel	Plastic	Welded	Threaded
6	71	76	250	✓		☒	☐	☒	☐
						☐	☐	☐	☐
						☐	☐	☐	☐
						☐	☐	☐	☐

Final location of shoes

Top Packer or Headpipe _____ Bottom Tailpipe _____

9. PERFORATIONS/SCREENS

☒ Perforations Method MILLS
☐ Screens Type _____ Material _____

From	To	Slot Size	Number	Diameter	Tele/Pipe Size	Casting	Linear
60	63	5/16	40	5/16 x 2		☒	☐
						☐	☐
						☐	☐
						☐	☐

MISSION

FEB 10 1995

10. WELL TESTS:

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11. STATIC WATER LEVEL:

34 ft. below surface Depth artesian flow found

Artesian pressure _____ lb. Describe access port _____

Describe Controlling Devices:

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

[illegible]

Date: Started 5-31-94 Completed 6-1-94

13. DRILLER'S CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Firm Name Chesley Dyeing Firm No. 428

Firm Official Don Cherry Date 6-4-94

and
Supervisor or Operator Tracy A. Kuley Date 6-4-94
(Sign once if Firm Official & Operator)

(Sign once if Firm Official & Operator)

TO WATER RESOURCES