

STATE OF IDAHO  
DEPARTMENT OF WATER RESOURCES  
**BENEFICIAL USE FIELD REPORT**

**A. GENERAL INFORMATION**

Permit No: 37-8862

Exam Date: 5/11/2012

1. Current Owner: CITY OF BELLEVUE  
PO BOX 825  
BELLEVUE ID 83313-0449  
(208)788-2128

2. Accompanied by: Dan Black

Phone No: 481-1190

Relationship to Permit Holder: public works administrator (city employee)

3. **SOURCE**

GROUND WATER

**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: water right portfolio for the city of Bellevue (see attachment)
2. Other water rights with the same point of diversion: 37-8848

**C. DIVERSION AND DELIVERY SYSTEM**

1. **LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER L3 SW1/4SW1/4 Sec. 25, Twp 02N, Rge 18E, B.M. BLAINE County

Method of Determination: field visit and existing WMIS point

2.

| <b><u>PLACE OF USE:</u></b> |                   |                   | <b>MUNICIPAL--</b> |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | <b><u>Totals</u></b> |
|-----------------------------|-------------------|-------------------|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------------|
| <b><u>Twp</u></b>           | <b><u>Rge</u></b> | <b><u>Sec</u></b> | <b><u>NE</u></b>   | <b><u>NW</u></b> | <b><u>SW</u></b> | <b><u>SE</u></b> | <b><u>NE</u></b> | <b><u>NW</u></b> | <b><u>SW</u></b> | <b><u>SE</u></b> | <b><u>NE</u></b> | <b><u>NW</u></b> | <b><u>SW</u></b> | <b><u>SE</u></b> | <b><u>NE</u></b> | <b><u>NW</u></b> | <b><u>SW</u></b> | <b><u>SE</u></b> |                      |
| 01N                         | 18E               | 1                 |                    | X                | X                | X                | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                      |
|                             |                   |                   |                    | L 2              |                  |                  | L 3              |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                      |
| 02N                         | 18E               | 25                |                    |                  |                  |                  |                  |                  |                  |                  |                  | X                | X                | X                | X                | X                | X                | X                |                      |
| 02N                         | 18E               | 26                |                    |                  | X                | X                |                  |                  |                  |                  |                  |                  |                  |                  | X                | X                | X                | X                |                      |
| 02N                         | 18E               | 35                | X                  |                  |                  | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                      |
| 02N                         | 18E               | 36                | X                  | X                | X                | X                | X                | X                | X                | X                | X                | X                | X                | X                | X                | X                | X                |                  |                      |
|                             |                   |                   |                    |                  |                  |                  |                  |                  | L 3              |                  |                  |                  |                  |                  |                  |                  |                  |                  |                      |
| 02N                         | 19E               | 31                |                    |                  |                  |                  |                  | X                | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                      |
|                             |                   |                   |                    |                  |                  |                  |                  | L 1              | L 2              |                  |                  |                  |                  |                  |                  |                  |                  |                  |                      |

Method of Determination: Recently decreed city rights contain the above large POU

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.

**Well or Diversion****ID No.\*    Motor Make****Hp    Motor Serial No.**

A0018529    Premium Efficiency High Thrust Motor    US Electric    150 B41Z-Z03Y314R050M

**D. FLOW MEASUREMENTS**

1.

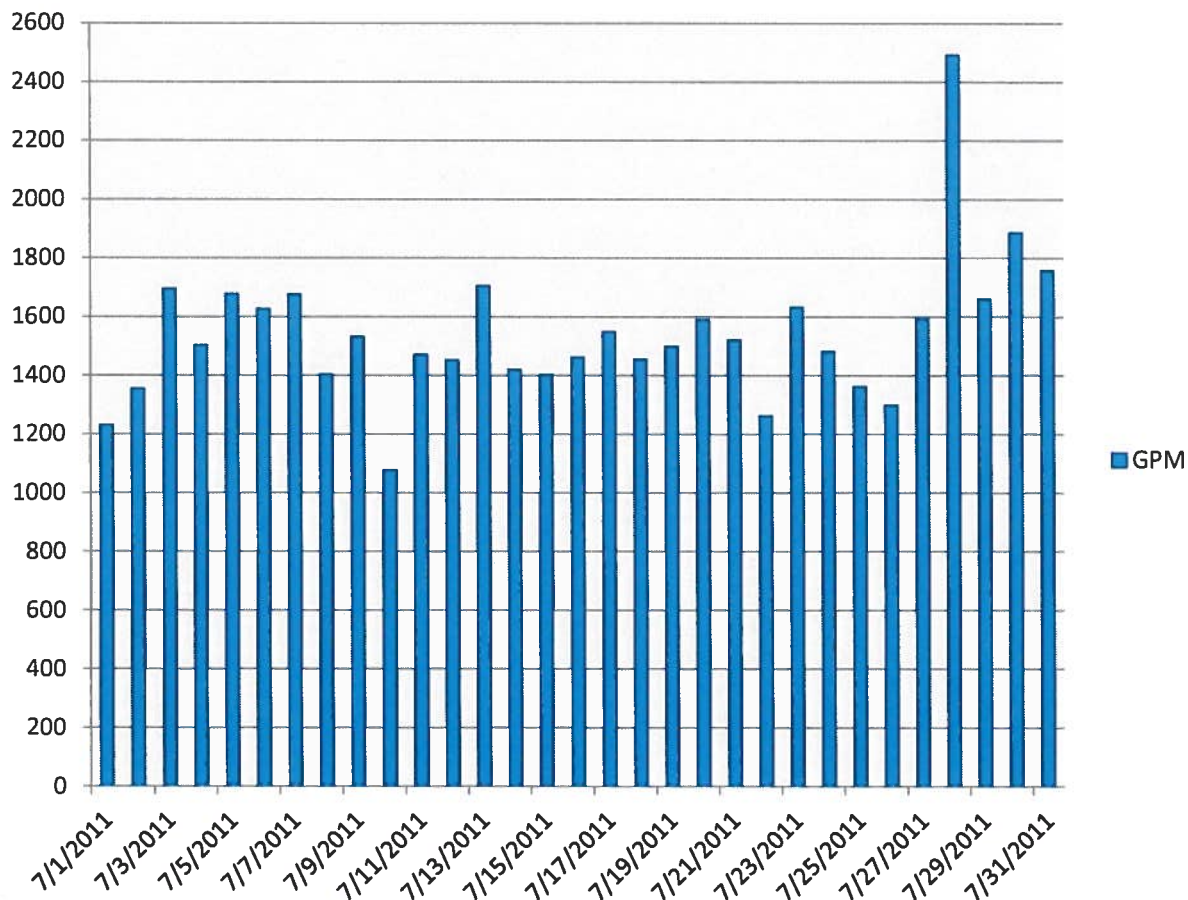
**Measurement****Equipment    Type    Make    Model No.    Serial No.    Size    Calib. Date**

NA—There was not an open length of pipe that I could attach the polysonic for a measurement. I did acquire measurement records and system specs to compare a theoretical estimate against the actual readings.

2. Measurements: Diversion records and theoretical

**E. FLOW CALCULATIONS**☐ Additional Computation Sheets Attached

Measured Method: In 2011, Dan Black took measurement readings on the well every day in July. The measurements were taken on the Water Specialties measuring device. The measuring device consists of an electronic propeller meter that has transmitter FC101 that is remote mounted.

**Chantrelle Well Activity--City of Bellevue**

**FLOW CALCULATIONS CONTINUED**

There is a major outlier in the measurement records that occurred on 7/28/2011. On this day the daily well log reflected a measurement of 2492 gpm while it was typical that ~1200 to ~1600 gpm was being diverted. I believe that the next largest diversion rate of 1888 (4.21 cfs) is close to what the well can produce. The following theoretical estimate yielded the following diversion rate:

$$\text{TDH} = 215.42 \qquad \frac{8.8 \times 0.7 \times 150}{26 + (2.31 \times 82)} = \frac{924}{215.42} = 4.29 \text{ cfs}$$

$$h_p = 150$$

$$26 + (2.31 \times 82) = 215.42$$

$$\text{depth to water} = 26$$

$$\text{psi} = 70$$

$$\text{efficiency (standard)} = 0.7$$

The limiting factor in the case of permit 37-8862 is the permitted rate of 0.67 cfs. The license will reflect a diversion rate of 0.67 cfs. No combined limit with 37-8848 will be necessary since the two diversion rates are less than 4.21 cfs.

**F. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation: NA
2. Volume Calculations for Other Uses: NA

**G. NARRATIVE/REMARKS/COMMENTS**

This well is known as the Chantrelle Well. It is only used in the summer. During the winter and spring there is enough water that is captured in the city's reservoir from a spring source that is authorized under 37-1208. The demand is higher in the summer and the Chantrelle well must be turned on where it is discharged in the city's distribution system.

When this right was being developed, the city thought they could develop two PDs. A second well was drilled, D0002506, and later perforated. However, the well was never fully developed. Rights 37-8848 and 37-8862 both divert from one well; Chantrelle well ID#A0018529.

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> |
|-----------------------|----------------------|-----------------------|----------------------|
| MUNICIPAL             | 1/01 to 12/31        | 0.670 CFS             | NA                   |
| <u>Totals:</u>        |                      | 0.670 CFS             | NA                   |

**2. Recommended Amendments**

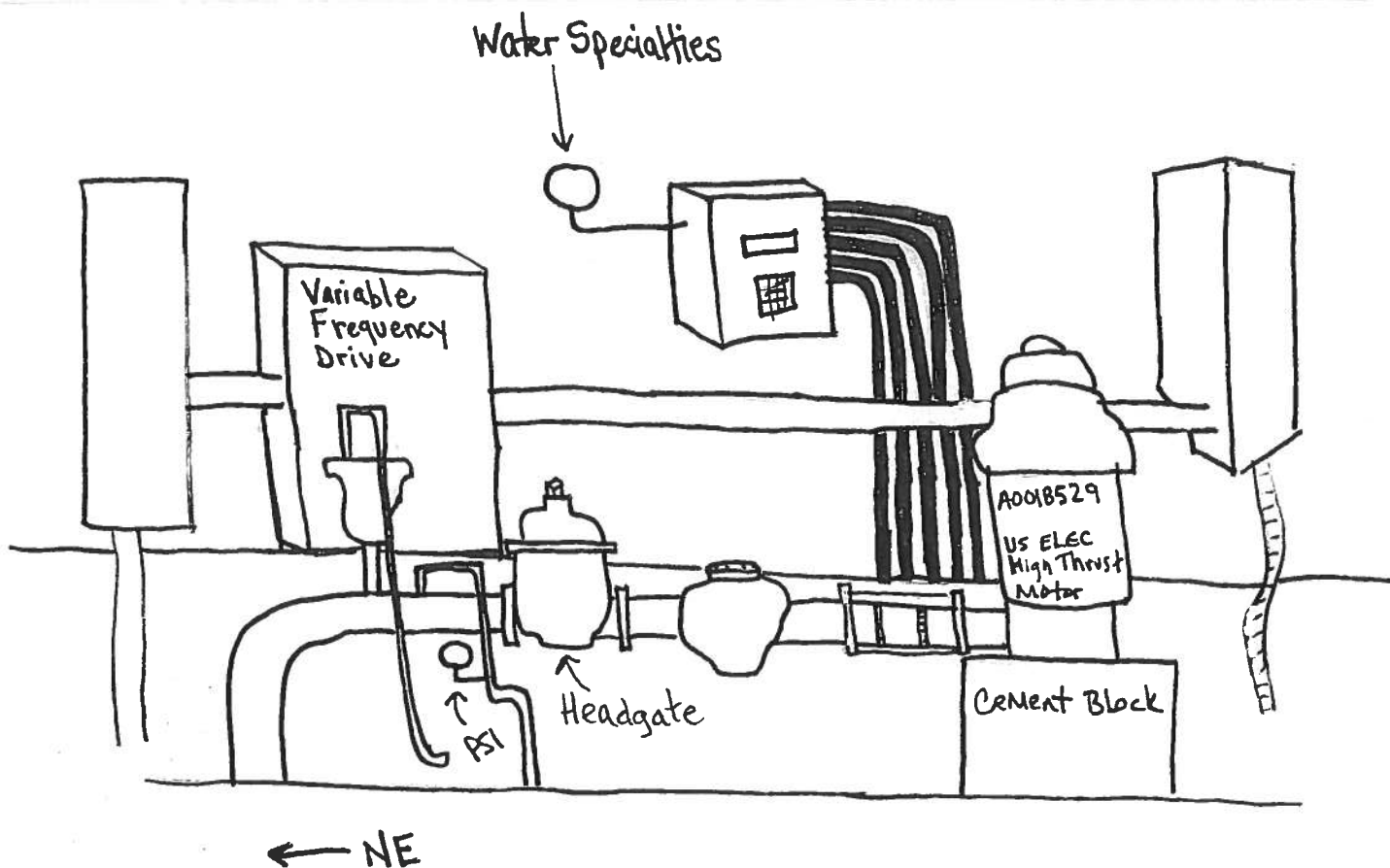
☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

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

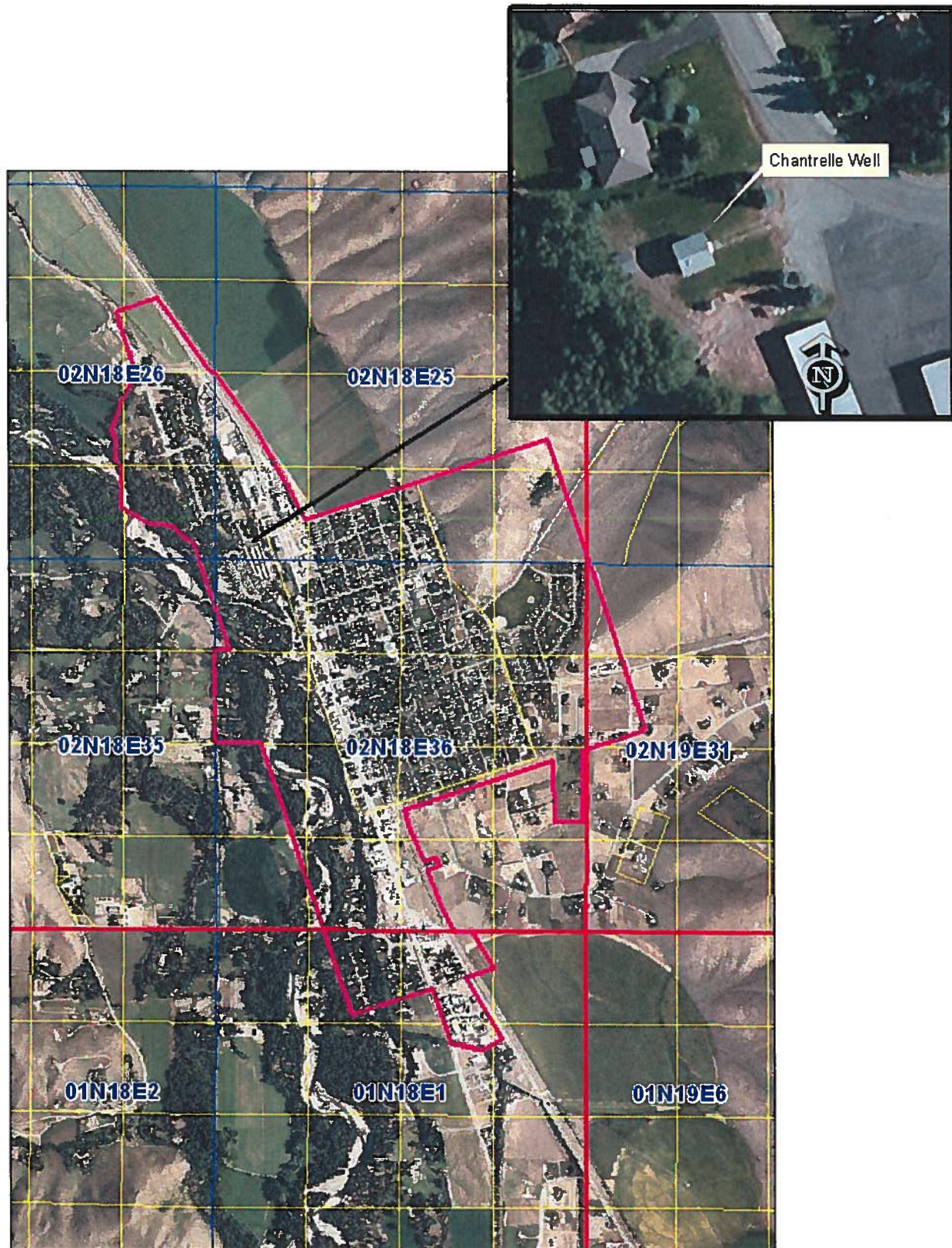
**I. AUTHENTICATION**

Field Examiner's Name Cherie Palmer Date 6/21/12  
 Reviewer \_\_\_\_\_ Date \_\_\_\_\_

System Diagram



Map/Aerial Photo



Photos





