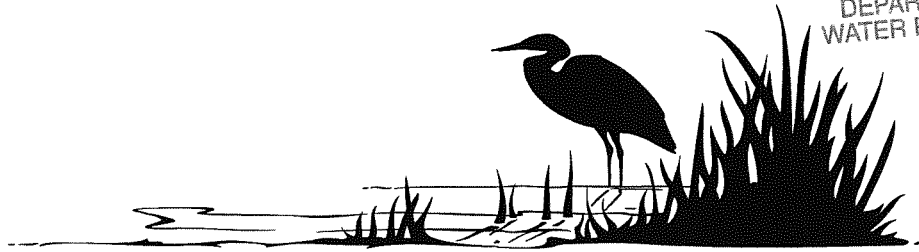


RECEIVED

JAN 27 2012

DEPARTMENT OF  
WATER RESOURCES



**CITY OF CAREY, IDAHO**

**Public Works Department**

20482 Main Street, PO Box 9, Carey, Idaho 83320

(w) 208-823-4045 (f) 208-823-4171

[careywater@frontier.com](mailto:careywater@frontier.com)

25 January 2012

Idaho Department of Water Resources

PO Box 83720

Boise ID 83720-0098

Re Wr 37-22661 Item 13 deficiency items on completion form

The application for this water right is in addition to the .60 CFS of WR 37-21243.

In April we conducted the DEQ required 24 hr test on this new water source this was through a 12" 90 degree v notch weir at this time there was no flow meter installed on the system. At this time the well pumped approximately 2.0 CFS with a draw down of 40 ft.

In May the flow meter was installed and we started using this well as a part of the city's system. On October 2<sup>nd</sup> Cindy Yenter Watermaster 130 conducted the certification of the flow meter. At this time the well pumped 922 GPM / 2.05 CFS this is where we came up with requirement of 1.45 CFS plus the .60 CFS of WR 37-21243 to match what this well is pumping at full rate.

Attached are the test results from the IDWR testing and the test data from the 24 hr required DEQ testing and our summary report that was submitted to WD 130 the end of the year

If you have any questions are require additional information, please contact me at (208) 309-0319.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Simpson". The signature is fluid and cursive, with a prominent loop at the end.

Robert Simpson

Public Works Director

City of Carey  
Well #3 (Waterford Well) Test Data

static water level at 91.5 ft from surface readings are ft above probe

[illegible]

**CITY OF CAREY WELL #1  
A0004263  
2011 MONTHLY SUMMARY**

| DATE     | METER<br>READING | GALLONS<br>PUMPED | GPD   | GPM<br>per Day | MGPM  | MGPD  | ACRE<br>FT / MO | DEPTH<br>STATIC | DEPTH<br>DYNAMIC |
|----------|------------------|-------------------|-------|----------------|-------|-------|-----------------|-----------------|------------------|
| 12/31/10 | 349700           |                   |       |                |       |       |                 |                 |                  |
| 01/31/11 | 359510           | 981000            | 31645 | 22             | 0.981 | 0.032 | 3.01            | 73.08           |                  |
| 02/28/11 | 370220           | 1071000           | 38250 | 27             | 1.071 | 0.038 | 3.29            | 79.20           |                  |
| 03/31/11 | 382230           | 1201000           | 38742 | 27             | 1.201 | 0.039 | 3.69            | 86.30           |                  |
| 04/29/11 | 393200           | 1097000           | 37828 | 26             | 1.097 | 0.038 | 3.37            | 74.08           |                  |
| 05/31/11 | 398550           | 535000            | 16719 | 12             | 0.535 | 0.017 | 1.64            | 41.00           |                  |
| 06/30/11 | 400080           | 153000            | 5100  | 4              | 0.153 | 0.005 | 0.47            | 31.54           |                  |
| 07/31/11 | 400090           | 1000              | 32    | 0              | 0.001 | 0.000 | 0.00            | 30.50           |                  |
| 08/31/11 | 400160           | 7000              | 226   | 0              | 0.007 | 0.000 | 0.02            | 33.17           |                  |
| 09/30/11 | 400160           | 0                 | 0     | 0              | 0.000 | 0.000 | 0.00            | 43.00           |                  |
| 10/31/11 | 400264           | 10400             | 335   | 0              | 0.010 | 0.000 | 0.03            |                 |                  |
| 11/30/11 | 400266           | 200               | 7     | 0              | 0.000 | 0.000 | 0.00            | 48.45           |                  |
| 12/30/11 | 400266           | 0                 | 0     | 0              | 0.000 | 0.000 | 0.00            | 54.15           |                  |
| Total    |                  | 5056600           |       |                | 5.06  |       | 15.52           |                 |                  |

**CITY OF CAREY WELL #2**  
**D0034183**  
**2011 MONTHLY SUMMARY**

| DATE     | METER<br>READING | GALLONS<br>PUMPED | GPD    | GPM<br>per Day | MGPM  | MGPD  | ACRE<br>FT / MO | DEPTH<br>STATIC | DEPTH<br>DYNAMIC |
|----------|------------------|-------------------|--------|----------------|-------|-------|-----------------|-----------------|------------------|
| 12/31/10 | 626590           |                   |        |                |       |       |                 |                 |                  |
| 01/30/11 | 627580           | 99000             | 3300   | 2              | 0.099 | 0.003 | 0.30            | 61.90           | 81.20            |
| 02/28/11 | 629820           | 224000            | 7724   | 5              | 0.224 | 0.008 | 0.69            | 66.60           | 85.20            |
| 03/31/11 | 631370           | 155000            | 5000   | 3              | 0.155 | 0.005 | 0.48            | 73.80           |                  |
| 04/30/11 | 631610           | 24000             | 800    | 1              | 0.024 | 0.001 | 0.07            | 67.90           |                  |
| 05/31/11 | 653420           | 2181000           | 70355  | 49             | 2.181 | 0.070 | 6.69            | 43.10           |                  |
| 06/30/11 | 695590           | 4217000           | 140567 | 98             | 4.217 | 0.141 | 12.94           | 33.90           |                  |
| 07/31/11 | 768200           | 7261000           | 234226 | 163            | 7.261 | 0.234 | 22.28           | 28.10           |                  |
| 08/31/11 | 832460           | 6426000           | 207290 | 144            | 6.426 | 0.207 | 19.72           | 28.10           |                  |
| 09/09/11 | 848010           | 1555000           | 172778 | 120            | 1.555 | 0.173 | 4.77            |                 |                  |
| 09/30/11 | 277              | 277000            | 13190  | 9              | 0.277 | 0.013 | 0.85            | 30.80           | 52.60            |
| 10/31/11 | 305              | 28000             | 903    | 1              | 0.028 | 0.001 | 0.09            | 38.30           |                  |
| 11/30/11 | 384              | 79000             | 2633   | 2              | 0.079 | 0.003 | 0.24            | 45.10           |                  |
| 12/31/11 | 765              | 381000            | 12290  | 9              | 0.381 | 0.012 | 1.17            | 51.40           |                  |
| Total    |                  | 22907000          |        |                | 22.91 |       | 70.30           |                 |                  |

install new mag meter

**CITY OF CAREY WELL #3  
D0030213  
2011 MONTHLY SUMMARY**

| DATE     | METER<br>READING | GALLONS<br>PUMPED | GPD    | GPM<br>per Day | MGPM  | MGPD  | ACRE<br>FT / MO | DEPTH<br>STATIC | DEPTH<br>DYNAMIC                                |
|----------|------------------|-------------------|--------|----------------|-------|-------|-----------------|-----------------|-------------------------------------------------|
| 12/31/10 |                  |                   |        |                |       |       |                 |                 |                                                 |
| 01/31/11 |                  |                   |        |                |       |       |                 |                 |                                                 |
| 02/28/11 |                  |                   |        |                |       |       |                 |                 |                                                 |
| 03/31/11 |                  |                   |        |                |       |       |                 |                 |                                                 |
| 04/08/11 |                  | 1500000           | 187500 | 130            | 1.500 | 0.188 | 4.60            | 95.70           |                                                 |
| 05/31/11 |                  |                   |        |                |       |       |                 |                 | est amt DEQ req 24 hr test<br>plus pump testing |
| 06/30/11 | 473              | 473000            | 15767  | 11             | 0.473 | 0.016 | 1.45            | 63.40           |                                                 |
| 07/31/11 | 860              | 387000            | 12484  | 9              | 0.387 | 0.012 | 1.19            | 58.50           |                                                 |
| 08/31/11 | 1643             | 783000            | 25258  | 18             | 0.783 | 0.025 | 2.40            | 74.40           |                                                 |
| 09/30/11 | 3469             | 1826000           | 60867  | 42             | 1.826 | 0.061 | 5.60            | 79.70           |                                                 |
| 10/31/11 | 5292             | 1823000           | 58806  | 41             | 1.823 | 0.059 | 5.59            | 83.70           |                                                 |
| 11/30/11 | 6503             | 1211000           | 40367  | 28             | 1.211 | 0.040 | 3.72            | 88.80           |                                                 |
| 12/31/11 | 7467             | 964000            | 31097  | 22             | 0.964 | 0.031 | 2.96            | 95.50           |                                                 |
| Total    |                  | 8967000           |        |                | 8.97  |       | 27.52           |                 |                                                 |

**CITY OF CAREY**  
2011 well tests

|         |          | WR #                 | Amt permitted<br>CFS | Date<br>tested | pump test<br>Flow cfs | Tested by         |
|---------|----------|----------------------|----------------------|----------------|-----------------------|-------------------|
| Well #1 | A0004263 | 37-7766              | 0.71                 | 8/2/2011       | 0.75                  | Cindy Yenter IDWR |
| Well #2 | D0034183 | 37-20384<br>37-21355 | 0.70<br>1.37         | 10/5/2011      | 1.96                  | Jana Reeder IDWR  |
| Well #3 | D0030213 | 37-21243<br>37-22661 | 0.60<br>1.45         | 8/2/2011       | 2.05                  | Cindy Yenter IDWR |
| Totals  |          |                      | 4.83                 |                | 4.76                  |                   |

IDAHO DEPARTMENT OF WATER RESOURCES  
Water Measurement Program

**WATER MEASURING DEVICE CERTIFICATION**

(Revised 7/2002)

District 30

Diversion Name well 1

Inventory Date \_\_\_\_\_

Inventory Examiner \_\_\_\_\_

PCC o.k.? ☐ Yes ☐ No

Test Date 8.02.11

Person performing test cyento

Exam complete? ☒ Yes ☐ No

Name:

City of Carey

Water Right No.:

Legal Description:

T \_\_\_\_\_ R \_\_\_\_\_ Sec. \_\_\_\_\_  $\frac{1}{4}$   $\frac{1}{4}$   $\frac{1}{4}$

Site Tag No.:

A0004263

Diversion Name:

**Current Owner**

Name \_\_\_\_\_

Phone \_\_\_\_\_

Address \_\_\_\_\_

Cell \_\_\_\_\_

City \_\_\_\_\_ St \_\_\_\_\_ Zip \_\_\_\_\_

E-mail \_\_\_\_\_

**Operator (if leased or operated by person other than owner)**

Name \_\_\_\_\_

Phone \_\_\_\_\_

Address \_\_\_\_\_

Cell \_\_\_\_\_

City \_\_\_\_\_ St \_\_\_\_\_ Zip \_\_\_\_\_

E-mail \_\_\_\_\_

**SECTION 1 – Well Site Identification**

**Global Positioning System Data:**

Data Collection Filename \_\_\_\_\_ Offset \_\_\_\_\_

IDWR Site Tag Identification No. \_\_\_\_\_

Site Tag Location description: \_\_\_\_\_

PLS/USGS LOCATOR \_\_\_\_\_

For Department/District Use Only

Received by \_\_\_\_\_

Date \_\_\_\_\_

Reviewed by \_\_\_\_\_

Date \_\_\_\_\_

Data Entry By cy

Date 8.11.11

*DE*

## SECTION II – Installed Meter Information

| METER AND MOUNTING PIPE INFORMATION |                                                                                               |                                               |                                                                                                                                                                                                                                                     |
|-------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motor HP                            | 30                                                                                            | Volume units                                  | Acre-Feet <u>Gallons</u><br>Other (specify) _____                                                                                                                                                                                                   |
| Meter Install Date                  | <del>2005</del> 2007                                                                          | Volume multiplier                             | 100                                                                                                                                                                                                                                                 |
| Manufacturer                        | McCrometer                                                                                    | Installation location                         | <input type="checkbox"/> Excel <input checked="" type="checkbox"/> Fair<br><input type="checkbox"/> Good <input type="checkbox"/> Poor                                                                                                              |
| Meter Type                          | prop                                                                                          | Pipe material                                 | CS                                                                                                                                                                                                                                                  |
| Meter Model                         |                                                                                               | Outside diameter                              | 4.56                                                                                                                                                                                                                                                |
| Serial Number                       | * 03-07878-4                                                                                  | Wall thickness                                | 0.28                                                                                                                                                                                                                                                |
| Size (nominal)                      |                                                                                               | Inside diameter                               |                                                                                                                                                                                                                                                     |
| Measure Flow Rate?                  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                           | Amount of straight pipe upstream from meter   | 44 _____ Inches<br>_____ Pipe Lengths                                                                                                                                                                                                               |
| Measurement Units                   | <input type="checkbox"/> CFS <input checked="" type="checkbox"/> GPM<br>Other (specify) _____ | Amount of straight pipe downstream from meter | 10 _____ Inches<br>_____ Pipe Lengths                                                                                                                                                                                                               |
| Flow Rate Multiplier                | 1                                                                                             | Standard Meter Type                           | <input checked="" type="checkbox"/> Sonic <input type="checkbox"/> Pyg<br><input type="checkbox"/> Collins <input type="checkbox"/> Hall<br><input type="checkbox"/> Anub <input type="checkbox"/> Dye/chem<br><input type="checkbox"/> Other _____ |
| Measure Cumulative Volume?          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                           | Standard Meter Confidence                     | <input type="checkbox"/> Excellent 2%<br><input checked="" type="checkbox"/> Good 5%<br><input type="checkbox"/> Fair 10%<br><input type="checkbox"/> Poor > 10%                                                                                    |

STD  
12  
12

Multiple Flowmeters

Are multiple flowmeters used to measure diversions from this well?

☐ Yes ☒ No

If yes, how many? \_\_\_\_\_

(Attach separate form for each meter checked and/or calibrated.)

Multiple Wells

If this meter measures diversions from multiple wells, list names and locations of other wells:

\* meter was on hand, never used, installed new in 2007

3.24 on FLD12  
240335

A - 4263

**SECTION III – Certification for Calibration of a Water Measurement Meter****Measurement No. 1 (M<sub>1</sub>)** is the measured rate of flow from the permanently installed flow meter.**Measurement No. 2 (M<sub>2</sub>)** is the measured rate of flow from the measuring device being used to check the flow for the calibration. This method or device must be accurate to within  $\pm 5\%$  error. Describe below the method and equipment used to perform this measurement.

$$\text{Percent Difference} = (M_1 - M_2) \div M_2 \times 100 = \pm \% \quad (\text{Acceptable is within } \pm 10\%) \quad (\text{equation 1})$$

$$\text{Calibration Multiplier} = M_2 \div M_1 \quad (\text{equation 2})$$

Is flowmeter installed according to manufacturer's specifications? ☐ Yes ☒ No ☐ Unsure

Describe any apparent problems with installation or operation \_\_\_\_\_

INSufficient D.S., does not appear to affect  
operation

Flowmeter accuracy prior to any adjustments: \_\_\_\_\_ Totalizer reading \_\_\_\_\_

Flowmeter accuracy after final adjustment: \_\_\_\_\_ Totalizer reading \_\_\_\_\_

Flowmeter calibration multiplier: \_\_\_\_\_

**FLOWMETER ACCURACY CALIBRATION TABLE**

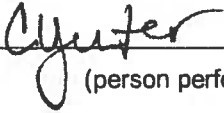
| Installed meter (totalizer reading) | Time   | Total Gallons | Average Flow Rate GPM (M <sub>1</sub> ) | Standard total gallons | Average Flow Rate GPM (M <sub>2</sub> ) | % diff. (±) | Comments and adjustments |
|-------------------------------------|--------|---------------|-----------------------------------------|------------------------|-----------------------------------------|-------------|--------------------------|
| 1404 400123                         | Q      |               |                                         |                        |                                         |             |                          |
| 158                                 | 9:58   |               |                                         |                        |                                         |             |                          |
|                                     | (9.91) | 3500          | 351.1                                   | 3376                   | 337.6                                   | +3.9%       |                          |
|                                     |        |               |                                         |                        |                                         |             |                          |
|                                     |        |               |                                         |                        |                                         |             |                          |
|                                     |        |               |                                         |                        |                                         |             |                          |
|                                     |        |               |                                         |                        |                                         |             |                          |

Notes – Comments – Calculations: Speed 4701 (water 52°)

| WATER LEVEL DATA                                                                                                     |                                                                 |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Does the well have access to measure water levels? ~ Yes ~ No ( <i>check one</i> )                                   |                                                                 |
| Is this well part of USGS, IDWR, or another network of water level monitoring wells? ~ Yes ~ No ( <i>check one</i> ) |                                                                 |
| Static Water Level _____ ft<br>Date _____                                                                            | Pumping Water Level _____ ft (at condition _____)<br>Date _____ |

**Sketch and/or photograph of installation:**

I certify that the above information is true and correct to the best of my knowledge and ability and the measurements taken and recorded are in accordance with the standards and specifications of the equipment used.

Signature  Date 8.02.11  
(person performing measurements)

CITY OF CAREY - WELL 1

LOG NAME:A0004263

START :08-02 14:04

END :08-02 14:14

INTERVAL:00:01:00

8/2/2011 14:04

+8.594E+0 ft/s

+3.366E+2 gal/m

+TOTAL 0000000 gal

NORMAL

8/2/2011 14:10

+8.562E+0 ft/s

+3.353E+2 gal/m

+TOTAL 0002019 gal

NORMAL

8/2/2011 14:05

+8.617E+0 ft/s

+3.375E+2 gal/m

+TOTAL 0000332 gal

NORMAL

8/2/2011 14:11

+8.546E+0 ft/s

+3.347E+2 gal/m

+TOTAL 0002355 gal

NORMAL

8/2/2011 14:06

+8.645E+0 ft/s

+3.386E+2 gal/m

+TOTAL 0000670 gal

NORMAL

8/2/2011 14:12

+8.550E+0 ft/s

+3.348E+2 gal/m

+TOTAL 0002692 gal

NORMAL

8/2/2011 14:07

+8.540E+0 ft/s

+3.344E+2 gal/m

+TOTAL 0001008 gal

NORMAL

8/2/2011 14:13

+8.553E+0 ft/s

+3.350E+2 gal/m

+TOTAL 0003028 gal

NORMAL

8/2/2011 14:08

+8.631E+0 ft/s

+3.380E+2 gal/m

+TOTAL 0001345 gal

NORMAL

8/2/2011 14:14

+8.621E+0 ft/s

+3.376E+2 gal/m

+TOTAL 0003365 gal

NORMAL

8/2/2011 14:09

+8.607E+0 ft/s

+3.371E+2 gal/m

+TOTAL 0001683 gal

NORMAL

336.50 GPM

0.75 CFS

IDAHO DEPARTMENT OF WATER RESOURCES  
Water Measurement Program

**WATER MEASURING DEVICE CERTIFICATION**

(Revised 11/2001)

District 130

Diversion Name well #2

Inventory Date \_\_\_\_\_

Inventory Examiner \_\_\_\_\_

PCC o.k.? ☐ Yes ☐ No

Test Date 10/5/11

Person performing test freeder

Exam complete? ☒ Yes ☐ No

Name: \_\_\_\_\_

Water Right No.: \_\_\_\_\_

Legal Description: T \_\_\_\_\_ R \_\_\_\_\_ Sec. \_\_\_\_\_  $\frac{1}{4}$   $\frac{1}{4}$   $\frac{1}{4}$

Site Tag No.: \_\_\_\_\_

Diversion Name: \_\_\_\_\_

**Current Owner**

Name City of Carey

Phone \_\_\_\_\_

Address \_\_\_\_\_

Cell \_\_\_\_\_

City \_\_\_\_\_ St \_\_\_\_\_ Zip \_\_\_\_\_

E-mail \_\_\_\_\_

**Operator (if leased or operated by person other than owner)**

Name Bob Simpson

Phone 823-4422

Address \_\_\_\_\_

Cell 309-0319

City \_\_\_\_\_ St \_\_\_\_\_ Zip \_\_\_\_\_

E-mail \_\_\_\_\_

**SECTION 1 – Well Site Identification**

**Global Positioning System Data:**

Data Collection Filename \_\_\_\_\_ Offset \_\_\_\_\_

IDWR Site Tag Identification No. \_\_\_\_\_

Site Tag Location description: \_\_\_\_\_

PLS/USGS LOCATOR \_\_\_\_\_

For Department/District Use Only

Received by \_\_\_\_\_ Date \_\_\_\_\_

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_

Data Entry By \_\_\_\_\_ Date \_\_\_\_\_

## SECTION II – Installed Meter Information

| METER AND MOUNTING PIPE INFORMATION |                                                                                               |                                               |                                                                                                                                                                                                                                                     |
|-------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motor HP                            | 40                                                                                            | Volume units                                  | Acre-Feet <u>Gallons</u><br>Other (specify) _____                                                                                                                                                                                                   |
| Meter Install Date                  |                                                                                               | Volume multiplier                             | X 1000                                                                                                                                                                                                                                              |
| Manufacturer                        | McCrometer                                                                                    | Installation location                         | <input checked="" type="checkbox"/> Excel <input type="checkbox"/> Fair<br><input type="checkbox"/> Good <input type="checkbox"/> Poor                                                                                                              |
| Meter Type                          | Mag                                                                                           | Pipe material                                 | Duct                                                                                                                                                                                                                                                |
| Meter Model                         | Ultra                                                                                         | Outside diameter                              | 6.9                                                                                                                                                                                                                                                 |
| Serial Number                       | UM20110515                                                                                    | Wall thickness                                | .36 Mortar = 0.12<br>Lining                                                                                                                                                                                                                         |
| Size (nominal)                      | 6"                                                                                            | Inside diameter                               |                                                                                                                                                                                                                                                     |
| Measure Flow Rate?                  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                           | Amount of straight pipe upstream from meter   | _____ Inches<br>_____ Pipe Lengths                                                                                                                                                                                                                  |
| Measurement Units                   | <input type="checkbox"/> CFS <input checked="" type="checkbox"/> GPM<br>Other (specify) _____ | Amount of straight pipe downstream from meter | _____ Inches<br>_____ Pipe Lengths                                                                                                                                                                                                                  |
| Flow Rate Multiplier                | X                                                                                             | Stand Meter Type                              | <input checked="" type="checkbox"/> Sonic <input type="checkbox"/> Pyg<br><input type="checkbox"/> Collins <input type="checkbox"/> Hall<br><input type="checkbox"/> Anub <input type="checkbox"/> Dye/chem<br><input type="checkbox"/> Other _____ |
| Measure Cumulative Volume?          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                           | Standard Meter Confidence                     | <input checked="" type="checkbox"/> Excellent 2%<br><input type="checkbox"/> Good 5%<br><input type="checkbox"/> Fair 10%<br><input type="checkbox"/> Poor > 10%                                                                                    |

403 6.351

**Multiple Flowmeters**Are multiple flowmeters used to measure diversions from this well? ☐ Yes ☒ No

If yes, how many? \_\_\_\_\_

(Attach separate form for each meter checked and/or calibrated.)

**Multiple Wells**

If this meter measures diversions from multiple wells, list names and locations of other wells:

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### SECTION III – Certification for Calibration of a Water Measurement Meter

**Measurement No. 1 ( $M_1$ )** is the measured rate of flow from the permanently installed flow meter.

**Measurement No. 2 ( $M_2$ )** is the measured rate of flow from the measuring device being used to check the flow for the calibration. This method or device must be accurate to within  $\pm 5\%$  error. Describe below the method and equipment used to perform this measurement.

$$\text{Percent Difference} = (M_1 - M_2) \div M_2 \times 100 = \pm \% \quad (\text{Acceptable is within } \pm 10\%) \quad (\text{equation 1})$$

$$\text{Calibration Multiplier} = M_2 \div M_1 \quad (\text{equation 2})$$

Is flowmeter installed according to manufacturer's specifications? ☒ Yes ☐ No ☐ Unsure

Describe any apparent problems with installation or operation \_\_\_\_\_

Flowmeter accuracy prior to any adjustments: \_\_\_\_\_ Totalizer reading \_\_\_\_\_

Flowmeter accuracy after final adjustment: \_\_\_\_\_ Totalizer reading \_\_\_\_\_

Flowmeter calibration multiplier: \_\_\_\_\_

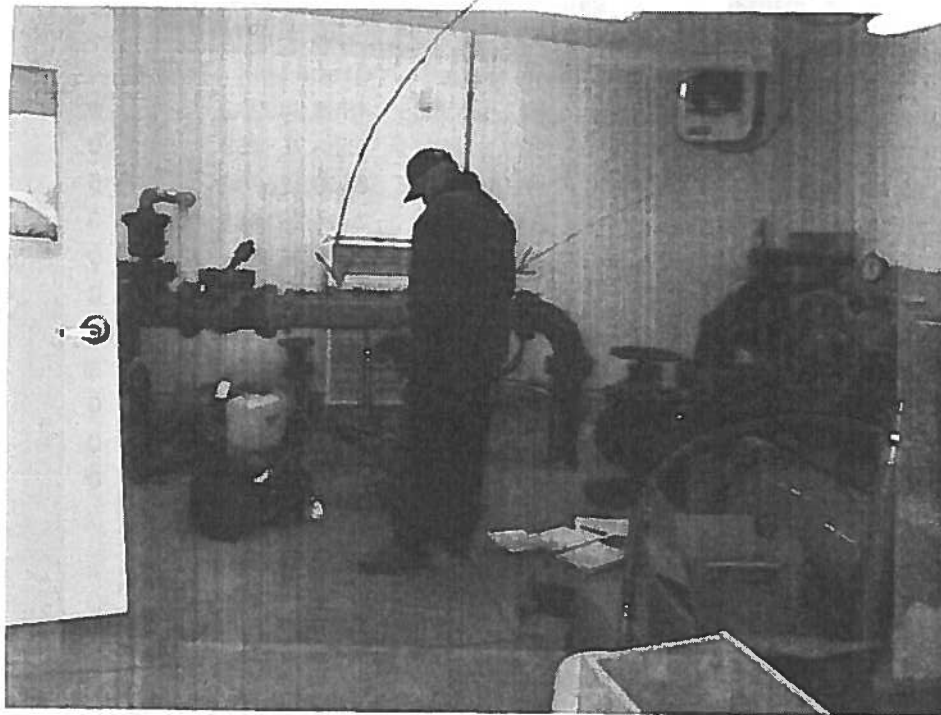
| FLOWMETER ACCURACY CALIBRATION TABLE |         |               |                                 |                        |                                 |                   |                          |
|--------------------------------------|---------|---------------|---------------------------------|------------------------|---------------------------------|-------------------|--------------------------|
| Installed meter (totalizer reading)  | Time    | Total Gallons | Average Flow Rate GPM ( $M_1$ ) | Standard total gallons | Average Flow Rate GPM ( $M_2$ ) | % diff. ( $\pm$ ) | Comments and adjustments |
| 294                                  | Start   | 10000         | 883.4                           | 8740                   | 874.                            | +1.1%             | good Meas                |
| 304                                  | 11:19   |               |                                 |                        |                                 |                   |                          |
|                                      | <11.32> |               |                                 |                        |                                 |                   |                          |
|                                      |         |               |                                 |                        |                                 |                   |                          |
|                                      |         |               |                                 |                        |                                 |                   |                          |
|                                      |         |               |                                 |                        |                                 |                   |                          |
|                                      |         |               |                                 |                        |                                 |                   |                          |

Notes – Comments – Calculations: 4747: 98.6 good diagnostics

13608 946  
4868.946

8740

| WATER LEVEL DATA                                                                                            |                                                                 |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Does the well have access to measure water levels? ~ Yes <input checked="" type="radio"/> No (check one)    |                                                                 |
| Is this well part of USGS, IDWR, or another network of water level monitoring wells? ~ Yes ~ No (check one) |                                                                 |
| Static Water Level _____ ft<br>Date _____                                                                   | Pumping Water Level _____ ft (at condition _____)<br>Date _____ |

Sketch and/or photograph of installation:

I certify that the above information is true and correct to the best of my knowledge and ability and the measurements taken and recorded are in accordance with the standards and specifications of the equipment used.

Signature Sara Reeder Date 10/5/11  
(person performing measurements)

**Log Name** D0034183.LOG  
**Log Title** Well # 2  
**Start Time** 10/5/2011 14:57  
**End Time** 10/5/2011 15:08  
**Records** 3  
**Interval** 60  
**Error Flags** 8208  
**Cyclic Flags** 2

| Item # | Label    | Symbol | UnitType | Channel |
|--------|----------|--------|----------|---------|
| 0      | Velocity | ft/s   | 578      | 0       |
| 1      | Volume   | gal/m  | 846      | 0       |
| 2      | (+)Total | gal    | 1160     | 0       |

| Date/Time          | Velocity (ft/s) | Volume (gal/m) | (+)Total (gal) | Error # |
|--------------------|-----------------|----------------|----------------|---------|
| 10/5/2011 14:57:28 | 10.10031188     | 872.4048565    | 4868.945922    | 0       |
| 10/5/2011 14:58:28 | 10.20265529     | 881.2446711    | 5730.763168    | 0       |
| 10/5/2011 14:59:29 | 10.13399782     | 875.314447     | 6640.116792    | 0       |
| 10/5/2011 15:00:28 | 10.13549159     | 875.4434705    | 7495.151485    | 0       |
| 10/5/2011 15:01:28 | 10.11890795     | 874.0110746    | 8347.463024    | 0       |
| 10/5/2011 15:02:28 | 10.1174854      | 873.888203     | 9252.37429     | 0       |
| 10/5/2011 15:03:28 | 10.08580279     | 871.1516474    | 10103.39528    | 0       |
| 10/5/2011 15:04:29 | 10.07980475     | 870.6335721    | 11005.52111    | 0       |
| 10/5/2011 15:05:28 | 10.10647769     | 872.9374222    | 11856.84835    | 0       |
| 10/5/2011 15:06:28 | 10.07452856     | 870.1778466    | 12719.18289    | 0       |
| 10/5/2011 15:07:29 | 10.09450428     | 871.9032307    | 13608.69366    | 0       |

873.9747742

Panametrics= 874 gpm  
 McCrometer= 883.4 gpm  
 1.10%

IDAHO DEPARTMENT OF WATER RESOURCES  
Water Measurement Program

**WATER MEASURING DEVICE CERTIFICATION**

(Revised 7/2002)

District 130  
Diversion Name Well 3 (waterford)

Inventory Date \_\_\_\_\_

Inventory Examiner \_\_\_\_\_

PCC o.k.? ☐ Yes ☐ No

Test Date 8.02.11

Person performing test Cyentiv

Exam complete? ☒ Yes ☐ No

Name: City of Carey  
Water Right No.: \_\_\_\_\_  
Legal Description: T \_\_\_\_\_ R \_\_\_\_\_ Sec. \_\_\_\_\_  $\frac{1}{4}$   $\frac{1}{4}$   $\frac{1}{4}$   
Site Tag No.: D0030213  
Diversion Name: \_\_\_\_\_

**Current Owner**

Name \_\_\_\_\_

Phone \_\_\_\_\_

Address \_\_\_\_\_

Cell \_\_\_\_\_

City \_\_\_\_\_ St \_\_\_\_\_ Zip \_\_\_\_\_

E-mail \_\_\_\_\_

**Operator (if leased or operated by person other than owner)**

Name \_\_\_\_\_

Phone \_\_\_\_\_

Address \_\_\_\_\_

Cell \_\_\_\_\_

City \_\_\_\_\_ St \_\_\_\_\_ Zip \_\_\_\_\_

E-mail \_\_\_\_\_

**SECTION 1 – Well Site Identification**

**Global Positioning System Data:**

Data Collection Filename \_\_\_\_\_ Offset \_\_\_\_\_

IDWR Site Tag Identification No. \_\_\_\_\_

Site Tag Location description: \_\_\_\_\_

PLS/USGS LOCATOR \_\_\_\_\_

For Department/District Use Only

Received by \_\_\_\_\_

Date \_\_\_\_\_

Reviewed by \_\_\_\_\_

Date \_\_\_\_\_

Data Entry By 8.02.2011

Date Cyentiv

70030213

## SECTION II – Installed Meter Information

| METER AND MOUNTING PIPE INFORMATION |                                                                                               |                                               |                                                                                                                                                                                                                                                     |
|-------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Motor HP                            | 50, VFD                                                                                       | Volume units                                  | Acre-Feet <u>Gallons</u><br>Other (specify) _____                                                                                                                                                                                                   |
| Meter Install Date                  | 4.01.11                                                                                       | Volume multiplier                             | 1000                                                                                                                                                                                                                                                |
| Manufacturer                        | McCrometer                                                                                    | Installation location                         | <input type="checkbox"/> Excel <input type="checkbox"/> Fair<br><input checked="" type="checkbox"/> Good <input type="checkbox"/> Poor                                                                                                              |
| Meter Type                          | Mag                                                                                           | Pipe material                                 | PVC                                                                                                                                                                                                                                                 |
| Meter Model                         | <del>Mag</del> Ultra Mag                                                                      | Outside diameter                              | 9.05                                                                                                                                                                                                                                                |
| Serial Number                       | W120100732                                                                                    | Wall thickness                                | 0.5 (measured)                                                                                                                                                                                                                                      |
| Size (nominal)                      | 8                                                                                             | Inside diameter                               |                                                                                                                                                                                                                                                     |
| Measure Flow Rate?                  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                           | Amount of straight pipe upstream from meter   | 48 inches<br>Pipe Lengths                                                                                                                                                                                                                           |
| Measurement Units                   | <input type="checkbox"/> CFS <input checked="" type="checkbox"/> GPM<br>Other (specify) _____ | Amount of straight pipe downstream from meter | 16 ft inches<br>Pipe Lengths                                                                                                                                                                                                                        |
| Flow Rate Multiplier                | 1                                                                                             | Standard Meter Type                           | <input checked="" type="checkbox"/> Sonic <input type="checkbox"/> Pyg<br><input type="checkbox"/> Collins <input type="checkbox"/> Hall<br><input type="checkbox"/> Anub <input type="checkbox"/> Dye/chem<br><input type="checkbox"/> Other _____ |
| Measure Cumulative Volume?          | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                           | Standard Meter Confidence                     | <input type="checkbox"/> Excellent 2%<br><input checked="" type="checkbox"/> Good 5%<br><input type="checkbox"/> Fair 10%<br><input type="checkbox"/> Poor > 10%                                                                                    |

6.30 on FLG 15

240335

**Multiple Flowmeters**

Are multiple flowmeters used to measure diversions from this well?

☐ Yes ☒ No  
\*

If yes, how many? \_\_\_\_\_

(Attach separate form for each meter checked and/or calibrated.)

**Multiple Wells**

If this meter measures diversions from multiple wells, list names and locations of other wells:

\* there is a meter on distribution side, measures some water out of tank N/A for test.

| WATER LEVEL DATA                                                                                            |                                                                 |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Does the well have access to measure water levels? ~ Yes ~ No (check one)                                   |                                                                 |
| Is this well part of USGS, IDWR, or another network of water level monitoring wells? ~ Yes ~ No (check one) |                                                                 |
| Static Water Level _____ ft<br>Date _____                                                                   | Pumping Water Level _____ ft (at condition _____)<br>Date _____ |

**Sketch and/or photograph of installation:**

I certify that the above information is true and correct to the best of my knowledge and ability and the measurements taken and recorded are in accordance with the standards and specifications of the equipment used.

Signature C. J. Jeter Date 8.02.11  
(person performing measurements)

### SECTION III – Certification for Calibration of a Water Measurement Meter

**Measurement No. 1 ( $M_1$ )** is the measured rate of flow from the permanently installed flow meter.

**Measurement No. 2 ( $M_2$ )** is the measured rate of flow from the measuring device being used to check the flow for the calibration. This method or device must be accurate to within  $\pm 5\%$  error. Describe below the method and equipment used to perform this measurement.

$$\text{Percent Difference} = (M_1 - M_2) \div M_2 \times 100 = \pm \% \quad (\text{Acceptable is within } \pm 10\%) \quad (\text{equation 1})$$

$$\text{Calibration Multiplier} = M_2 \div M_1 \quad (\text{equation 2})$$

Is flowmeter installed according to manufacturer's specifications? ☒ Yes ☐ No ☐ Unsure

Describe any apparent problems with installation or operation \_\_\_\_\_

Flowmeter accuracy prior to any adjustments: \_\_\_\_\_ Totalizer reading \_\_\_\_\_

Flowmeter accuracy after final adjustment: \_\_\_\_\_ Totalizer reading \_\_\_\_\_

Flowmeter calibration multiplier: \_\_\_\_\_

**FLOWMETER ACCURACY CALIBRATION TABLE**

| Installed meter (totalizer reading) | Time   | Total Gallons | Average Flow Rate GPM ( $M_1$ ) | Standard total gallons | Average Flow Rate GPM ( $M_2$ ) | % diff. ( $\pm$ ) | Comments and adjustments                |
|-------------------------------------|--------|---------------|---------------------------------|------------------------|---------------------------------|-------------------|-----------------------------------------|
| 1300 869                            | Q      |               |                                 |                        |                                 |                   |                                         |
| 878                                 | 9:50   | 9000          | 915.6                           | 9251                   | 925.1                           | -1%               | H1 FLOW - max only                      |
|                                     | (9.83) |               |                                 |                        |                                 |                   |                                         |
|                                     |        |               |                                 |                        |                                 |                   |                                         |
| 1317 882                            | Q      |               |                                 |                        |                                 |                   | LO FLOW - use this for normal operation |
| 886                                 | 9:16   | 4000          | 431.5                           | 4345                   | 434.5                           | -0.7%             |                                         |
|                                     | (9.27) |               |                                 |                        |                                 |                   |                                         |

Notes - Comments - Calculations: Speed 4760 (water 56°)

meas @ MAX flow (for licensing). open discharge to tank

Also a meter on the discharge side - OFFICIAL MEASURE  
is the LEFT display. (FIT 10-010)

CITY OF CAREY - WELL 3 (WATERFORD)  
MAX FLOW CONDITION

LOG NAME:D00030213  
START :08-02 13:00  
END :08-02 13:10  
INTERVAL:00:01:00

8/2/2011 13:00  
+5.828E+0 ft/s  
+9.245E+2 gal/m  
+TOTAL 0000000 gal  
NORMAL

8/2/2011 13:06  
+5.774E+0 ft/s  
+9.159E+2 gal/m  
+TOTAL 0005531 gal  
NORMAL

8/2/2011 13:01  
+5.935E+0 ft/s  
+9.415E+2 gal/m  
+TOTAL 0000906 gal  
NORMAL

8/2/2011 13:07  
+5.785E+0 ft/s  
+9.178E+2 gal/m  
+TOTAL 0006454 gal  
NORMAL

8/2/2011 13:02  
+5.797E+0 ft/s  
+9.197E+2 gal/m  
+TOTAL 0001833 gal  
NORMAL

8/2/2011 13:08  
+5.840E+0 ft/s  
+9.265E+2 gal/m  
+TOTAL 0007377 gal  
NORMAL

8/2/2011 13:03  
+5.819E+0 ft/s  
+9.231E+2 gal/m  
+TOTAL 0002758 gal  
NORMAL

8/2/2011 13:09  
+5.807E+0 ft/s  
+9.212E+2 gal/m  
+TOTAL 0008299 gal  
NORMAL

8/2/2011 13:04  
+5.772E+0 ft/s  
+9.157E+2 gal/m  
+TOTAL 0003683 gal  
NORMAL

8/2/2011 13:10  
+5.794E+0 ft/s  
+9.191E+2 gal/m  
+TOTAL 0009220 gal  
NORMAL

8/2/2011 13:05  
+5.879E+0 ft/s  
+9.327E+2 gal/m  
+TOTAL 0004606 gal  
NORMAL

922.00 GPM  
2.05 CFS

CITY OF CAREY - WELL 3 (WATERFORD)  
LOW FLOW CONDITION

LOG NAME:D0030213LO

START :08-02 13:17

END :08-02 13:27

INTERVAL:00:01:00

8/2/2011 13:17

+2.761E+0 ft/s

+4.381E+2 gal/m

+TOTAL 0000000 gal

NORMAL

8/2/2011 13:23

+2.722E+0 ft/s

+4.319E+2 gal/m

+TOTAL 0002600 gal

NORMAL

8/2/2011 13:18

+2.755E+0 ft/s

+4.371E+2 gal/m

+TOTAL 0000430 gal

NORMAL

8/2/2011 13:24

+2.744E+0 ft/s

+4.353E+2 gal/m

+TOTAL 0003034 gal

NORMAL

8/2/2011 13:19

+2.743E+0 ft/s

+4.351E+2 gal/m

+TOTAL 0000864 gal

NORMAL

8/2/2011 13:25

+2.734E+0 ft/s

+4.338E+2 gal/m

+TOTAL 0003465 gal

NORMAL

8/2/2011 13:20

+2.664E+0 ft/s

+4.227E+2 gal/m

+TOTAL 0001297 gal

NORMAL

8/2/2011 13:26

+2.726E+0 ft/s

+4.325E+2 gal/m

+TOTAL 0003898 gal

NORMAL

8/2/2011 13:21

+2.730E+0 ft/s

+4.331E+2 gal/m

+TOTAL 0001731 gal

NORMAL

8/2/2011 13:27

+2.724E+0 ft/s

+4.322E+2 gal/m

+TOTAL 0004330 gal

NORMAL

8/2/2011 13:22

+2.715E+0 ft/s

+4.308E+2 gal/m

+TOTAL 0002166 gal

NORMAL

433.00 GPM

0.96 CFS