

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

**A. GENERAL INFORMATION**

Permit No: 23-11341

Exam Date: 5/19/2015

1. Current Owner: PALISADES BENCH HOMEOWNERS ASSN INC  
8900 MOUNTAIN VIEW LN  
BOULDER CO 80303
2. Accompanied by: Allen Wilder  
Phone No: (208) 456.2287  
Address:  
Relationship to Permit Holder: Water system operator

3. SOURCE TRIBUTARY  
GROUND WATER

**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: None
2. Other water rights with the same point of diversion: None

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

|                   |                 |          |          |               |
|-------------------|-----------------|----------|----------|---------------|
| GROUND WATER      | SE1/4SE1/4SW1/4 | Sec. 24, | Twp 01N, | Rge 44E, B.M. |
| BONNEVILLE County |                 |          |          |               |
| GROUND WATER      | SE1/4SE1/4SW1/4 | Sec. 24, | Twp 01N, | Rge 44E, B.M. |
| BONNEVILLE County |                 |          |          |               |

Method of Determination: GPS and aerial photography

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 |        |
| 01N | 44E | 24  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |        |
|     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |        |

Method of Determination: Aerial photography

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

4.

| <u>Well or Diversion ID No.*</u> | <u>Motor Make</u> | <u>Hp</u> | <u>Motor Serial No.</u> | <u>Pump Make</u> | <u>Pump Serial No. or Discharge Size</u> |
|----------------------------------|-------------------|-----------|-------------------------|------------------|------------------------------------------|
| D0049240                         |                   | 20        |                         |                  |                                          |
| D0048962                         |                   | 50        |                         |                  |                                          |

**D. FLOW MEASUREMENTS**

1.

| <u>Measurement Equipment</u> | <u>Type</u> | <u>Make</u> | <u>Model No.</u> | <u>Serial No.</u> | <u>Size</u> | <u>Calib. Date</u> |
|------------------------------|-------------|-------------|------------------|-------------------|-------------|--------------------|
| Flow meter                   | Ultrasonic  | Fuji        |                  |                   |             | 4/2015             |

2. Measurements:

Two measurements were taken using a Fuji ultrasonic flow meter

**E. FLOW CALCULATIONS**

\_\_\_\_\_ Additional Computation Sheets Attached

Measured Method:

Observed rate of diversion from the 20 hp pump was 91.0 gallons per minute

Observed rate of diversion from the 50 hp pump was 239.0 gallons per minute.

Combined rate of diversion = 330.0 gallons per minute or 0.74 cfs.

Permit rate of diversion is 0.55 cfs. Recommended rate of diversion = 0.55 cfs.

**F. VOLUME CALCULATIONS**

1. Volume Calculations for Irrigation: N/A

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

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

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

2. Volume Calculations for Other Uses:

In-house: 28 homes X 0.6 acre-feet per home = 16.8 acre-feet

Irrigation: 28 lots X 0.5 acre per lot X 1.7 acre-feet per acre (CIR; ET Idaho) = 23.8 acre-feet

Total volume = 40.6 acre-feet.

**G. NARRATIVE/REMARKS/COMMENTS**

Two submersible pumps divert water to a 100,000 gallon storage tank. From the storage tank water then is delivered through a mainline to 28 homes within the subdivision. Flow meters are installed.

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> |
|-----------------------|----------------------|-----------------------|----------------------|
| DOMESTIC              | 01/01 to 12/31       | 0.550 CFS             | 40.60 AF             |
| <u>Totals:</u>        |                      | 0.550 CFS             | 40.60 AF             |

**2. Recommended Amendments**

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

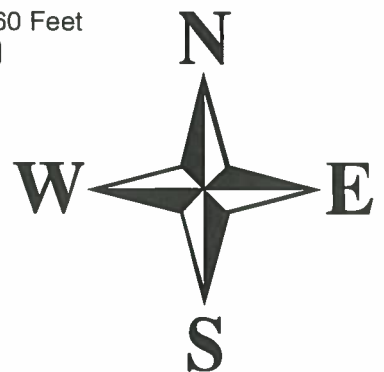
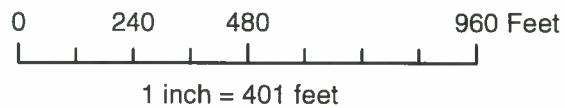
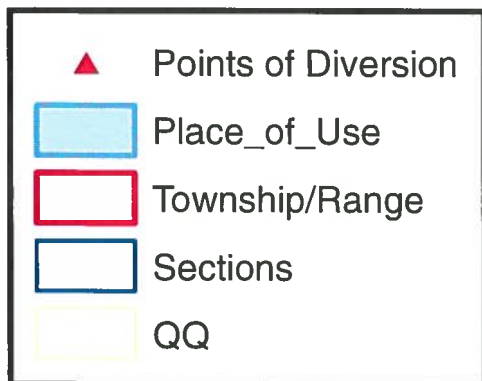
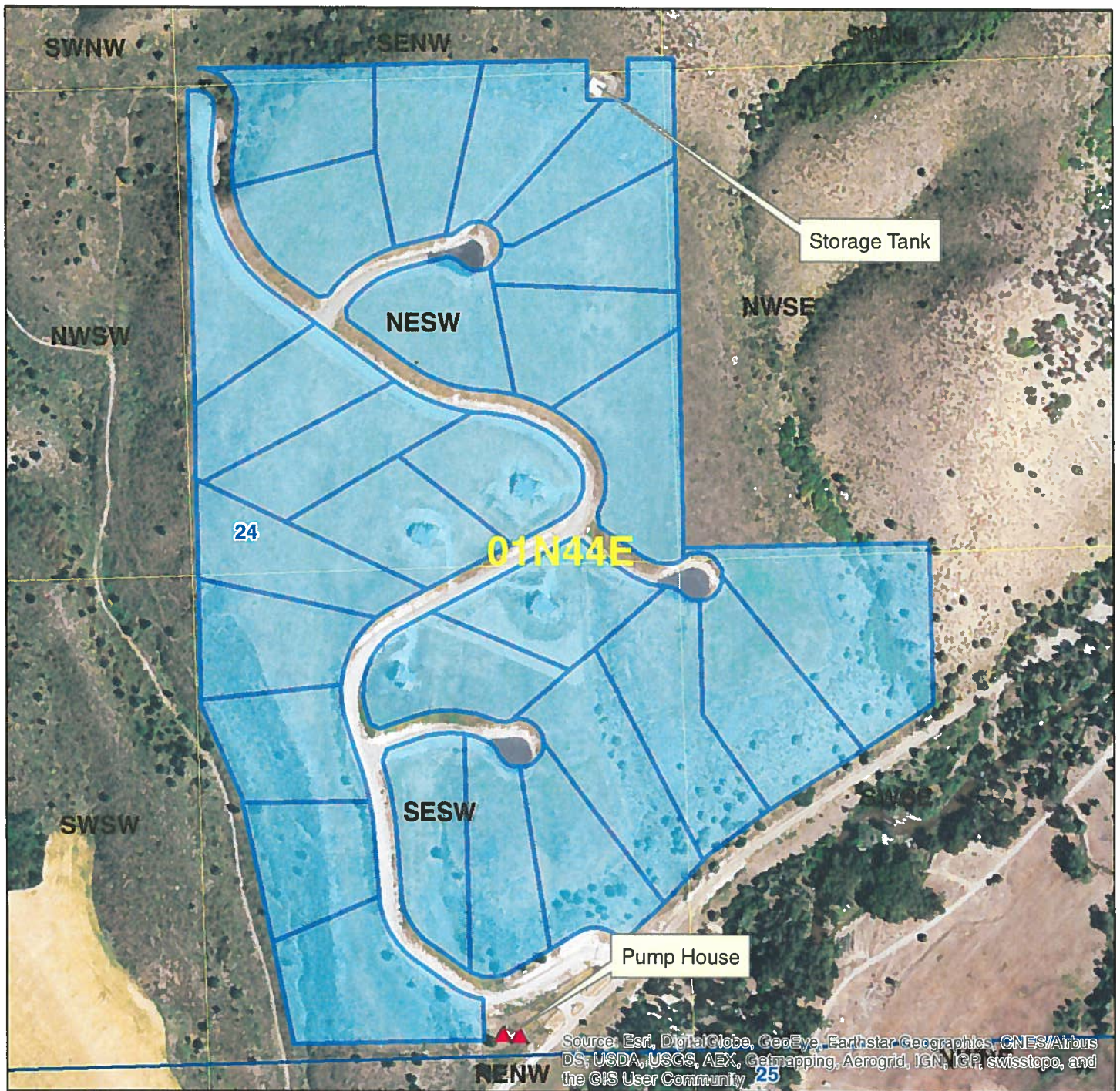
☐ Change P.U. as reflected above    ☐ Add P.U. as reflected above    ☐ Other

**I. AUTHENTICATION**

Field Examiner's Name Blake Jordan Date 5/20/2015

Reviewer James Cefalo Date 5/20/15

23-11341



Well # 1 20 HP Tag # D0049240



Well # 2 50 HP Tag # D0048962



100,000 gallon storage tank

# ET<sub>Idaho</sub> 2012 -- Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho

Please send suggestions for improving this site to [robison@kimberly.uidaho.edu](mailto:robison@kimberly.uidaho.edu) Copyright 2012, University of Idaho.

## Swan Valley 1 W (NWS -- 108937)

Statistics based on thirty year normal spans 1968 to 2010 years

For a different land cover or crop click on the above link.

You can highlight this table and copy via the clipboard to a Microsoft Excel or OpenOffice spreadsheet to plot or otherwise work with this data.

| Grass - Turf (lawns) - Irrigated                               |        |      |      |      |      |      |      |      |      |       |       |       |                             |                                 |        |
|----------------------------------------------------------------|--------|------|------|------|------|------|------|------|------|-------|-------|-------|-----------------------------|---------------------------------|--------|
| Precipitation Deficit <a href="#">(Click here for a graph)</a> |        |      |      |      |      |      |      |      |      |       |       |       |                             |                                 |        |
|                                                                | Jan    | Feb  | Mar  | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct   | Nov   | Dec   | Growing Season <sup>a</sup> | Non Growing Season <sup>b</sup> | Annual |
| Mean <sup>j</sup>                                              | mm/day |      |      |      |      |      |      |      |      |       |       |       | mm                          |                                 |        |
| Monthly <sup>c</sup>                                           | 0.01   | 0.02 | 0.02 | 0.30 | 1.54 | 4.16 | 5.00 | 4.12 | 1.79 | -0.24 | -0.16 | -0.02 | 517                         | -13                             | 507    |
| 15-Day Moving Average <sup>d</sup>                             | 0.01   | 0.00 | 0.02 | 0.21 | 1.54 | 4.16 | 4.97 | 4.00 | 1.72 | -0.26 | -0.15 | -0.01 | 1.7 Af                      |                                 |        |
| 7-Day Moving Average <sup>e</sup>                              | 0.01   | 0.01 | 0.01 | 0.22 | 1.51 | 4.14 | 4.98 | 4.10 | 1.73 | -0.25 | -0.17 | -0.02 |                             |                                 |        |
| 3-Day Moving Average <sup>f</sup>                              | 0.01   | 0.01 | 0.01 | 0.27 | 1.52 | 4.17 | 5.00 | 4.13 | 1.78 | -0.25 | -0.18 | -0.02 |                             |                                 |        |
| Standard Deviation <sup>k</sup>                                | mm/day |      |      |      |      |      |      |      |      |       |       |       | mm                          |                                 |        |
| Monthly <sup>c</sup>                                           | 0.04   | 0.05 | 0.09 | 0.43 | 1.78 | 1.16 | 1.47 | 0.99 | 0.92 | 0.52  | 0.27  | 0.13  | 93                          | 12                              | 91     |
| 15-Day Moving Average <sup>d</sup>                             | 0.06   | 0.08 | 0.17 | 0.45 | 1.65 | 1.57 | 1.39 | 1.11 | 1.42 | 0.64  | 0.32  | 0.13  |                             |                                 |        |
| 7-Day Moving Average <sup>e</sup>                              | 0.10   | 0.16 | 0.29 | 0.75 | 2.19 | 2.13 | 1.86 | 1.59 | 2.01 | 1.08  | 0.51  | 0.23  |                             |                                 |        |
| 3-Day Moving Average <sup>f</sup>                              | 0.17   | 0.29 | 0.51 | 1.20 | 3.01 | 2.88 | 2.66 | 2.31 | 2.78 | 1.65  | 0.85  | 0.33  |                             |                                 |        |
| 20% Exceedance <sup>l</sup>                                    | mm/day |      |      |      |      |      |      |      |      |       |       |       | mm                          |                                 |        |
| Monthly <sup>c</sup>                                           | 0.03   | 0.05 | 0.08 | 0.35 | 2.25 | 5.31 | 6.03 | 4.75 | 2.50 | 0.11  | 0.00  | 0.01  | 599                         | -4                              | 580    |
| 15-Day Moving Average <sup>d</sup>                             | 0.13   | 0.17 | 0.30 | 0.63 | 3.68 | 6.20 | 6.46 | 5.31 | 3.92 | 0.46  | 0.17  | 0.11  |                             |                                 |        |
| 7-Day Moving Average <sup>e</sup>                              | 0.20   | 0.35 | 0.50 | 1.60 | 5.21 | 6.58 | 6.98 | 6.33 | 4.91 | 1.15  | 0.38  | 0.17  |                             |                                 |        |
|                                                                |        |      |      |      |      |      |      |      |      |       |       |       |                             |                                 |        |

|                                                                                           |        |       |       |       |       |       |       |       |       |       |       |       |      |      |      |
|-------------------------------------------------------------------------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|
| 3-Day Moving Average <sup>f</sup>                                                         | 0.27   | 0.48  | 0.84  | 3.63  | 6.55  | 7.81  | 8.00  | 7.02  | 5.82  | 1.92  | 0.50  | 0.26  |      |      |      |
| <b>80% Exceedance<sup>m</sup></b>                                                         | mm/day |       |       |       |       |       |       |       |       |       |       |       | mm   |      |      |
| Monthly <sup>c</sup>                                                                      | -0.01  | -0.04 | -0.04 | -0.02 | 0.41  | 3.35  | 3.91  | 3.52  | 0.94  | -0.64 | -0.49 | -0.02 | 426  | -24  | 410  |
| 15-Day Moving Average <sup>d</sup>                                                        | -0.09  | -0.12 | -0.26 | -0.41 | -0.84 | 1.57  | 2.71  | 1.96  | -0.45 | -1.34 | -1.02 | -0.09 |      |      |      |
| 7-Day Moving Average <sup>e</sup>                                                         | -0.29  | -0.35 | -0.66 | -1.04 | -3.63 | -0.69 | 0.32  | -0.67 | -2.55 | -3.30 | -1.85 | -0.30 |      |      |      |
| 3-Day Moving Average <sup>f</sup>                                                         | -0.67  | -0.85 | -1.65 | -2.72 | -8.56 | -5.39 | -5.04 | -3.75 | -6.88 | -5.20 | -3.74 | -0.79 |      |      |      |
| <b>Ave Highest P<sub>def</sub></b>                                                        | mm/day |       |       |       |       |       |       |       |       |       |       |       | --   |      |      |
| 15-Day Moving Average <sup>g</sup>                                                        | 0.08   | 0.11  | 0.22  | 0.61  | 2.80  | 5.43  | 5.93  | 4.98  | 3.07  | 0.42  | 0.13  | 0.07  |      |      |      |
| 7-Day Moving Average <sup>h</sup>                                                         | 0.15   | 0.27  | 0.42  | 1.16  | 3.94  | 6.15  | 6.55  | 5.76  | 4.25  | 0.95  | 0.35  | 0.12  |      |      |      |
| 3-Day Moving Average <sup>i</sup>                                                         | 0.22   | 0.40  | 0.67  | 2.18  | 5.56  | 7.22  | 7.48  | 6.73  | 5.20  | 1.47  | 0.60  | 0.19  |      |      |      |
| <b>Ave Lowest P<sub>def</sub></b>                                                         | mm/day |       |       |       |       |       |       |       |       |       |       |       | --   |      |      |
| 15-Day Moving Average <sup>g</sup>                                                        | -0.05  | -0.09 | -0.18 | -0.18 | 0.39  | 2.90  | 4.13  | 3.06  | 0.49  | -0.86 | -0.45 | -0.10 |      |      |      |
| 7-Day Moving Average <sup>h</sup>                                                         | -0.15  | -0.21 | -0.48 | -0.73 | -1.42 | 1.06  | 2.69  | 1.72  | -1.06 | -1.79 | -0.97 | -0.25 |      |      |      |
| 3-Day Moving Average <sup>i</sup>                                                         | -0.39  | -0.62 | -1.22 | -1.89 | -4.70 | -2.16 | -0.45 | -1.21 | -4.10 | -3.67 | -2.17 | -0.58 |      |      |      |
| <b>Special normal distribution parameters for monthly, seasonal, and annual intervals</b> |        |       |       |       |       |       |       |       |       |       |       |       |      |      |      |
| Skew <sup>m</sup>                                                                         | 0.09   | 0.33  | 0.15  | 2.22  | 0.32  | -0.29 | -0.12 | 0.01  | 0.02  | -0.18 | 0.41  | -1.02 | 0.52 | 0.57 | 0.60 |
| Kurtosis <sup>o</sup>                                                                     | 0.57   | 3.22  | 0.53  | 7.95  | 1.07  | 2.31  | 0.52  | 0.59  | 2.52  | 0.62  | 4.80  | 2.90  | 2.46 | 2.57 | 2.50 |

<sup>a</sup> Growing Season: This is usually the time from green up or planting in the spring to a killing frost or harvest in the fall. It is not applicable for entries without a growing season and will be blank.

<sup>b</sup> Nongrowing Season: This is usually the time from a killing frost or harvest in the fall to the of green up in the spring. It is not applicable for entries without a growing season.

<sup>c</sup> Mean of the average daily value for month

<sup>d</sup> Mean of the fourteen 15-day period averages contained in the month

<sup>e</sup> Mean of the twenty three 7-day period averages contained in the month

<sup>f</sup> Mean of the twenty seven 3-day period averages contained in the month

<sup>g</sup> Mean of the highest/lowest 15-day period average in month