

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

**A. GENERAL INFORMATION**

**Permit No:** 97-7551  
**Exam Date:** 06/14/2022

1. Current Owner:  
TILLAKUM 1 ASSN PO BOX 360  
586 HAGMAN RD NORDMAN ID 83848
2. Accompanied by: Caroline Schmidt C/O Nancy Moffett  
Phone No: 509-993-7181  
Address: 11039 N Joy Faith Dr Oro Valley, AZ 85737  
Relationship to permit Holder: Caroline Schmidt is the Assn Treasurer; Nancy Moffett is one of the condo owners living full-time on site.

3. **SOURCE:**  
GROUND WATER

**Method of Determination: ArcMap and DRG.**

**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: NO Overlap
2. Other water rights with the same point-of-diversion: NO Overlap

Comments: There are no other recorded water rights that use the well associated with this permit, but warranty deed records reflect the applicants hold 9/16<sup>th</sup> ownership of the groundwater well, which implies there may be an exempt water use from the well that hasn't been recorded to date. A Notice of Claim, 97-7720, was filed on the well lot by Leslie Songstad, for domestic use from a groundwater source that doesn't have a designated claim POD in ArcMap. It is reasonable that this Permit's POD is the same well, but as the claim has not been validated, I'm not recommending condition F06 for licensing 97-7551.

**C. DIVERSION AND DELIVERY SYSTEM**

1. **LOCATION OF POINT(S) OF DIVERSION:**  
GROUND WATER L2 ( NW¼ NW¼), Sec. 16, Twp 61N, Rge 04W, B.M. BONNER County

Method of Determination: GPS; POD located at -116°52.152, 48°38.702. No D-Tag information for older well without designated backfile information.

**PLACE OF USE: IRRIGATION**

| Twp | Rng | Sec | NE |    |    |    | NW        |           |    |    | SW |    |    |    | SE |    |    |    | Totals |
|-----|-----|-----|----|----|----|----|-----------|-----------|----|----|----|----|----|----|----|----|----|----|--------|
|     |     |     | NE | NW | SW | SE | NE        | NW        | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE |        |
| 61N | 04W | 16  |    |    |    |    | 0.1<br>L2 | 0.1<br>L2 |    |    |    |    |    |    |    |    |    |    | 0.2    |

Total Acres: 0.2

**PLACE OF USE: DOMESTIC**

| Twp | Rng | Sec | NE |    |    |    | NW      |         |    |    | SW |    |    |    | SE |    |    |    | Totals |
|-----|-----|-----|----|----|----|----|---------|---------|----|----|----|----|----|----|----|----|----|----|--------|
|     |     |     | NE | NW | SW | SE | NE      | NW      | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE |        |
| 61N | 04W | 16  |    |    |    |    | X<br>L2 | X<br>L2 |    |    |    |    |    |    |    |    |    |    |        |

Method of Determination: Beneficial use field examination and ArcMap aerial imagery.

3.

X 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 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 |
|---------------------------|------------|-----|------------------|-----------|-----------------------------------|
| Groundwater well          | Pentek     | 1.5 | MFG# 5818909     | Goulds    | Unkown                            |

#### D. FLOW MEASUREMENTS

1.

| Measurement Equipment | Type | Make | Model No. | Serial No. | Size | Calib. Date |
|-----------------------|------|------|-----------|------------|------|-------------|
| NONE                  |      |      |           |            |      |             |

2. Measurements: I was unable to perform flow measurements due to inadequate pipe requirements. The wellhead is in the floor of a small pump house with concrete floor; the main service line routes directly to four pressure tanks prior to distribution to water uses. The pressure tanks influence water in the system with PSI holding at 60-65 PSI. This is not the well pump's correlated PSI but rather pressure tank holding pressure. A theoretic pump equation derived a diversion rate of 0.07 cfs considering department rounding standards with well pump at depth of 40 feet and designated pressure of 45 PSI.

#### E. FLOW CALCULATIONS

X Additional Computation Sheets Attached

Measured Method: Two Theoretic Pump Equations were calculated based on a pump depth of 40 ft and one at 65 ft. The 40 ft is estimated by the applicants to be the well depth as illustrated on the application for permit documents. The 65 ft depth equation is based on the average depth of 13 separate wells with generic bulk centroids in ArcMap. While I was unable to validate the exact well driller report linked to the applicant's old well, it is reasonable that **0.07 cfs** is achievable based on the various flow rates indicated on 13 separate well logs located nearby the applicant's POD physical location.

#### F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.2 \text{ ac} \times 3.0 \text{ afa} = 0.6 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.01 \text{ cfs} \times 214 \text{ days} \times 1.9835 = 4.2$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = \mathbf{0.6 \text{ af}}$$

2. Volume Calculations for Other Uses:

- Maximum diversion volume = (9-unit condos x 0.6 af) + 0.6 af irrigation volume = 5.4 af (domestic) + 0.6 af (irrigation) = 6.0 af.

**G. NARRATIVE/REMARKS/COMMENTS**

Field exam performed on 6/14/2022 with the applicant's representative, Nancy Moffett, showed a groundwater well being used for domestic & irrigation use at the Tillakum Condominiums, which serves 9-units with separate ownership per unit in the association. The POD is an older well & the applicants didn't have any support documents to link the well to a well driller report. A warranty deed for the applicant's property dated 10/23/1992 from the Bonner County Tax Assessors website indicates the well was in place prior to 1992, as the well & easement is described in the document. Based on ArcMap software, well centroid layer, there are 13 groundwater wells located in the NW¼NW¼ Gov Lot 2, Section 16, Twp 61N, Rge 04W that have potential to be the applicant's well. Most of the bulk well centroids indicate wells were drilled in the 1970's with an average depth of 65 feet from the pool of reviewed well logs.

The applicant's water system incorporates a 1.5 hp Goulds pump paired with Pentek pump motor that routes directly to 4 pressure tanks prior to distribution to water uses. Storage tanks were not developed for the system. The applicant indicated a well depth of approximately 40 ft on the initial filing, and it appears the 0.07 cfs approved as the Permit's maximum diversion rate was limited by a theoretic pump equation created at time of application filing. I have evaluated the 13 well driller reports that show several well's capacity in the 10-20 gpm range at time of construction, but there are a few that reach 25-30 gpm. Based in this information I'm recommending the theoretic pump equation derived maximum diversion rate of **0.07 cfs** for licensing & each beneficial use retain the permit approved diversion rate which is carried forward to licensing. Department standard diversion rates for 9 homes = 0.14 cfs (App Processing Memo No.22) and irrigation of less than 5 acres = 0.03 cfs per acre (App Processing Memo No.17), which illustrates the applicant's recommended diversion rates are significantly lower than department standards.

The domestic POU was photographed during the exam and consists of a 9-unit lake front condominium. Arcmap was used to assign the POU shape and the recommended annual volume for domestic equals 9 units x 0.6 af (in-home use only) = **5.4 af**. The irrigation POU was walked with Nancy Moffett during the exam and sketched out on field maps. Photographs illustrate the small acreage irrigation of a grass common area at the property entrance and landscape irrigation occurring around the condo structure by means of a pressurized irrigation system with micro-emitters. During licensing review, I used Arcmap software to trace out the POU, which equals 0.2 acres. The recommended annual volume for irrigation = 0.2 ac x 3.0 afa = **0.6 af**, and the maximum diversion volume for licensing equals the sum of two beneficial uses or **6.0 af**.

I removed conditions 128 which described the generic POU and PWS#, as the applicants have maintained their active DEQ PWS system at time of exam and condition 128 is not required for licensing this domestic & irrigation beneficial use WR. Conditions 26A & 046 were also removed from the permit during licensing review. I replaced condition R66 with X31 to better describe the small-scale irrigation of less than 5 acres occurring with the applicant's system. All other conditions on the permit shall be carried forward to licensing. There are no overlapping concerns toward licensing this right.

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>Rate of Diversion</u> | <u>Annual Volume</u> |
|-----------------------|----------------------|--------------------------|----------------------|
| IRRIGATION            | 04/01 to 10/31       | 0.01 CFS                 | 0.6 AF               |
| DOMESTIC              | 01/01 to 12/31       | 0.06 CFS                 | 5.4 AF               |
| <u>Totals:</u>        |                      | 0.07 CFS                 | 6.0 AF               |

**2. Recommended Amendments**

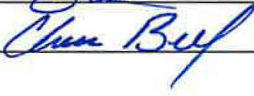
\_\_\_\_\_ Change P.D. as reflected above      \_\_\_\_\_ Add P.D. as reflected above       X  None

\_\_\_\_\_ Change P.U. as reflected above      \_\_\_\_\_ Add P.U. as reflected above       X  None

**I. AUTHENTICATION**

Luke Bates -

Field Examiner's Name  Date 12/26/23

Reviewer  Date 6/5/24

State of Idaho  
Department of Water Resources  
**Attachment to Field Exam**  
97-7551

This map depicts the DOMESTIC system diagram.

04W



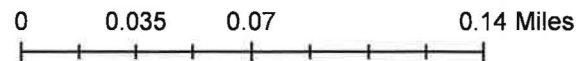
0 0.035 0.07 0.14 Miles

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



This map depicts the IRRIGATION system diagram.

61N



- 

FILED FOR RECORD AT REQUEST OF:

RICHARD D. MCWILLIAMS  
PAINE, HAMBLIN, COFFIN, BROOKE & MILLER  
1200 Washington Trust Financial Center  
717 West Sprague Avenue  
Spokane, WA 99204-0464

FILED BY *R. McWilliams*

'92 OCT 23 AM 7:36

 REC'D: *SK* BONNER  
COUNTY: *SK* DEP.

414319

## WARRANTY DEED

FOR VALUE RECEIVED, ROBERT E. STERLING, as his sole and separate property, the Grantor, does hereby grant, bargain, sell and convey unto TILLAKUM I ASSOCIATION, whose current address is c/o Fred Schunter, 1606 East 38th Avenue, Spokane, Washington 99203, the Grantee, the following described premises, situate in the County of Bonner, State of Idaho:

**PARCEL "A"**

POU for 97-7551

A portion of Government Lot 2 in Section 16, Township 61 North, Range 4 West, Boise Meridian, Bonner County, Idaho, described as follows:

Commencing at the southeast corner of Lot 7 of Smith's Lakeview Lots according to the plat recorded in Book 2 of Plats at Page 6; thence North 89°57'57" East, along the extension of the south line of said Lot 7, 40.64 feet to the easterly right-of-way line of the county road and the POINT OF BEGINNING; thence North 38°09'49" West, along said east right-of-way line, 97.80 feet; thence North 72°50'09" East, 149.30 feet; thence South 17°51'26" East, 15.29 feet; thence North 84°24'40" East, 60.42 feet; thence North 67°33'29" East to the highwater line of Priest Lake; thence southeasterly along said highwater line to said extension of the south line of said Lot 7; thence South 89°57'57" West, along said extension to the POINT OF BEGINNING.

EXCEPT that portion of Government Lot 2, in Section 16, Township 61 North, Range 4 West, Boise Meridian, Bonner County, Idaho, described as follows:

Commencing at the southeast corner of Lot 7 of Smith's Lakeview Lots according to the plat recorded in Book 2 of Plats at Page 6; thence North 89°57'57" East, along the extension of the south line of said Lot 7, 40.64 feet to the easterly right-of-way line of the county road; thence North 89°57'57" East, along said easterly extension, 203.39 feet to the POINT OF BEGINNING; thence North 24°24'16" West, 120.00 feet; thence South 65°03'51" West, 105.23 feet; thence South 65.00 feet; thence North 89°57'57" East, 145.00 feet to the POINT OF BEGINNING.

**PARCEL "B"**

POD for 97-7551

An undivided 9/16ths interest in and to a well, casing, pump and pump house presently located on property owned by Grantor to the North of Parcel "A" above, and the right to take water from the well and to convey such water from the well to Grantee's property to the South by a pipe. Grantor hereby grants to Grantee for the purpose of storing and conveying such water as above-described, a non-exclusive easement on, in, over and across a strip of land 5 feet in width, the centerline of such strip of land beginning at the well and extending in a southerly direction to Grantee's property, and corresponding to the centerline of the existing pipe providing water from the well to Grantee's property. This conveyance is made on the condition that Grantee, its heirs and assigns, shall bear

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9/16ths of all the expenses incurred in the operation of the above-described pump and 9/16ths of all the expenses connected with the maintenance of the well and all accessories thereto, and that Grantee, its successors and assigns, shall keep and maintain the pipe in good order so that there will be no leakage or seepage therefrom, or any defects that might cause injury to the land and the premises of the Grantor. Grantee's use of the water shall be limited to domestic purposes in connection with the operation of the condominium known as "Tillakum I Condominium." Grantor makes no warranty with respect to the continued availability or quality of water to be derived from the well. Such right and easement to take water and to conduct the same over, on, through and across the land of the Grantor shall be subject to the conditions set forth herein in perpetuity.

TOGETHER with a nonexclusive easement for the purpose of ingress and egress from the County Road to be used in common with others as described in the Condominium Declaration for Tillakum I filed on September 17, 1976, in the Office of the Recorder for Bonner County, Idaho under Recording No. 179539 and a nonexclusive easement for ingress and egress to and from the County Road to the beach of Priest Lake which easement will be 20 feet in width; the South line of which is the North Boundary line of Parcel A described herein.

The Grantor and the Grantee agree that the lake frontage conveyed herein is limited to 145 feet, measured from the South property line of the above-described real property.

TO HAVE AND TO HOLD the said premises, with their appurtenances unto the said Grantee, its successors and assigns forever. And the said Grantor does hereby covenant to and with the said Grantee that he is the owner in fee simple of said premises, that said premises are free from all encumbrances except easements, covenants, restrictions and conditions of record, and that he will warrant and defend the same from all lawful claims whatsoever.

DATED this 14 day of October, 1992.

  
Robert E. Sterling

STATE OF WASHINGTON )  
 ) SS.  
County of Spokane )

On this day before me personally appeared ROBERT E. STERLING, to me known to be the individual described in and who executed the within and foregoing instrument and acknowledged that he signed the same as his free and voluntary act and deed, for the uses and purposes therein mentioned.

GIVEN under my hand and official seal this 14 day of October, 1992.

  
Notary Public  
My commission expires: 11/15/92

rdm\m315

THEORETICAL PUMPING EQUATION(S) FOR WR# 97-7551

APPLICANTS REF APPROXIMATE DEPTH OF WELL **40 FT.**

Theoretical Pumping Equation is required because system did not allow for a proper measurement. Pump is estimated to lift 40 ft, and running at 45 psi.

**PUMP EQUATION**

**WATER RIGHT No. 97-7551**

| PRE-1992 WELL                         | HP  | H in feet | Efficiency<br>as a<br>decimal | Pumping<br>lift in feet | System<br>pressure<br>in PSI |
|---------------------------------------|-----|-----------|-------------------------------|-------------------------|------------------------------|
| $Q = \frac{HP * 8.8 * \text{Eff}}{H}$ | 1.5 | 144.0816  | 0.8                           | 40                      | 45                           |
| Q = <b>0.073 cfs</b> <b>32.9 gpm</b>  |     |           |                               |                         |                              |

**65 FT WELL IS THE AVERAGE DEPTH FOR BULK CENTROID DOCUMENTED WELLS IN QQ**

Theoretical Pumping Equation is required because system did not allow for a proper measurement. Pump is estimated to lift ~~70~~ <sup>65</sup> ft, and running at 45 psi.

**PUMP EQUATION**

**WATER RIGHT No. 97-7551**

| PRE-1992 WELL                         | HP  | H in feet | Efficiency<br>as a<br>decimal | Pumping<br>lift in feet | System<br>pressure<br>in PSI |
|---------------------------------------|-----|-----------|-------------------------------|-------------------------|------------------------------|
| $Q = \frac{HP * 8.8 * \text{Eff}}{H}$ | 1.5 | 169.0816  | 0.8                           | 65                      | 45                           |
| Q = <b>0.063 cfs</b> <b>28.1 gpm</b>  |     |           |                               |                         |                              |

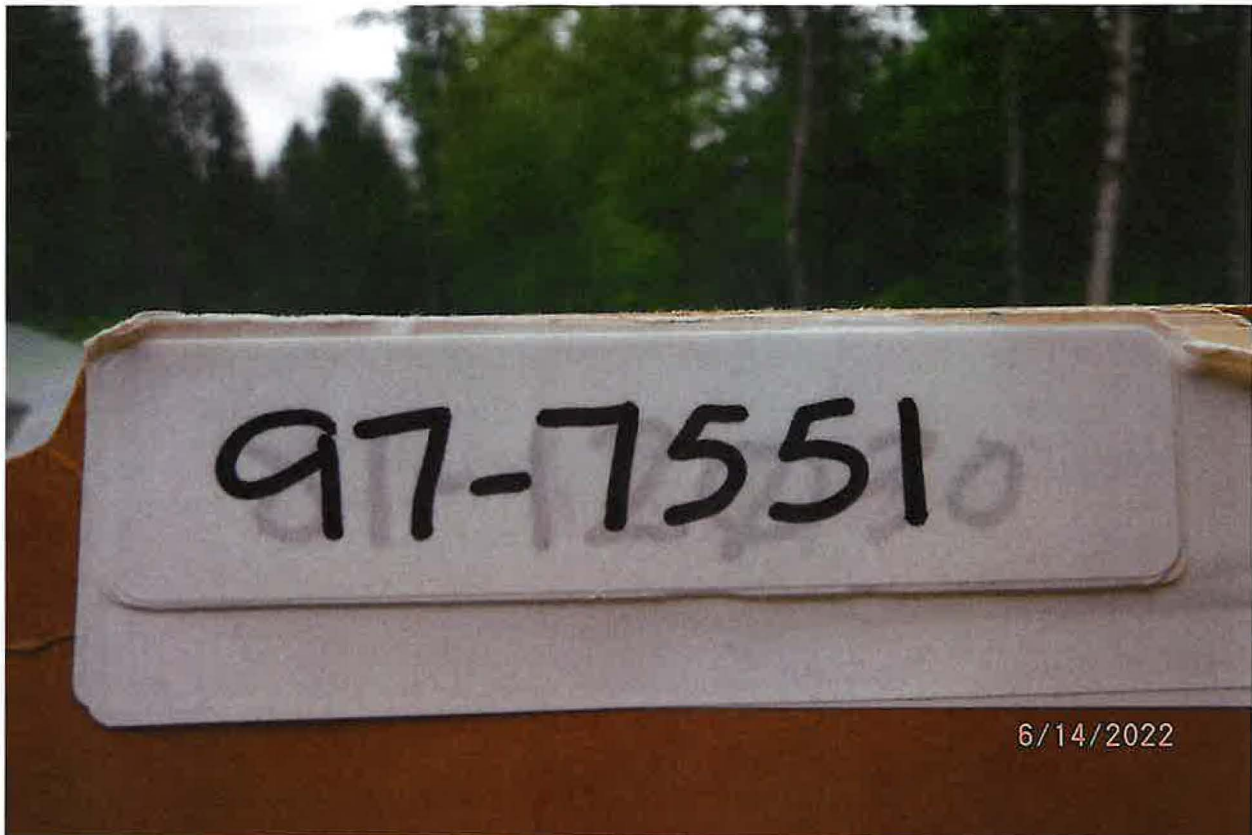
97-7551 - LICENSING REVIEW

GROUNDWATER WELL INFORMATION

GROUNDWATER WELLS USING ARCMAP WELL LAYER - BULK PLACED CENTROID LOCATED WITHIN  
TWP 61N, RGE 04W, SECTION 16, GOV LOT 2, NW¼NW¼ with construction date prior to OCT 23, 1992

| Wells             | Construction Date    | Casing Size  | Depth        | Yield Rate   |
|-------------------|----------------------|--------------|--------------|--------------|
| 333244            | 6/10/1982            | 6"           | 67ft         | 15 gpm       |
| 333041            | 5/15/1975            | 6"           | 60ft         | 10 gpm       |
| 333038            | 5/24/1975            | 6"           | 56ft         | 10 gpm       |
| <del>333817</del> | <del>3/23/1995</del> | <del>X</del> | <del>X</del> | <del>X</del> |
| <del>334120</del> | <del>9/8/1999</del>  | <del>X</del> | <del>X</del> | <del>X</del> |
| <del>330994</del> | <del>10/2/1994</del> | <del>X</del> | <del>X</del> | <del>X</del> |
| 333039            | 5/20/1975            | 6"           | 68ft         | 10 gpm       |
| 332967            | 5/2/1969             | 6"           | 55ft         | 20 gpm       |
| 333036            | 7/8/1975             | 6"           | 78ft         | 30 gpm       |
| <del>333660</del> | <del>8/22/1993</del> | <del>X</del> | <del>X</del> | <del>X</del> |
| 333042            | 5/15/1975            | 6"           | 57ft         | 10 gpm       |
| 333025            | 7/23/1974            | 6"           | 60ft         | 20 gpm       |
| 333037            | 5/21/1975            | 6"           | 40ft         | 10 gpm       |
| <del>334030</del> | <del>4/15/1998</del> | <del>X</del> | <del>X</del> | <del>X</del> |
| 332968            | 4/28/1969            | 6"           | 62ft         | 25 gpm       |
| 333530            | 12/10/1991           | 6"           | 85ft         | 10 gpm       |
| 333043            | 5/16/1975            | 6"           | 60ft         | 10 gpm       |
| 333040            | 5/22/1975            | 6"           | 73ft         | 8 gpm        |

| Wells             | Construction Date     | Casing Size   | Depth               | Yield Rate          |
|-------------------|-----------------------|---------------|---------------------|---------------------|
| <del>431801</del> | <del>12/31/9999</del> | <del>6"</del> | <del>No Depth</del> | <del>DA 60844</del> |
| <del>429446</del> | <del>10/1/2010</del>  | <del>X</del>  | <del>X</del>        | <del>X</del>        |
| <del>432453</del> | <del>6/7/2012</del>   | <del>X</del>  | <del>X</del>        | <del>X</del>        |

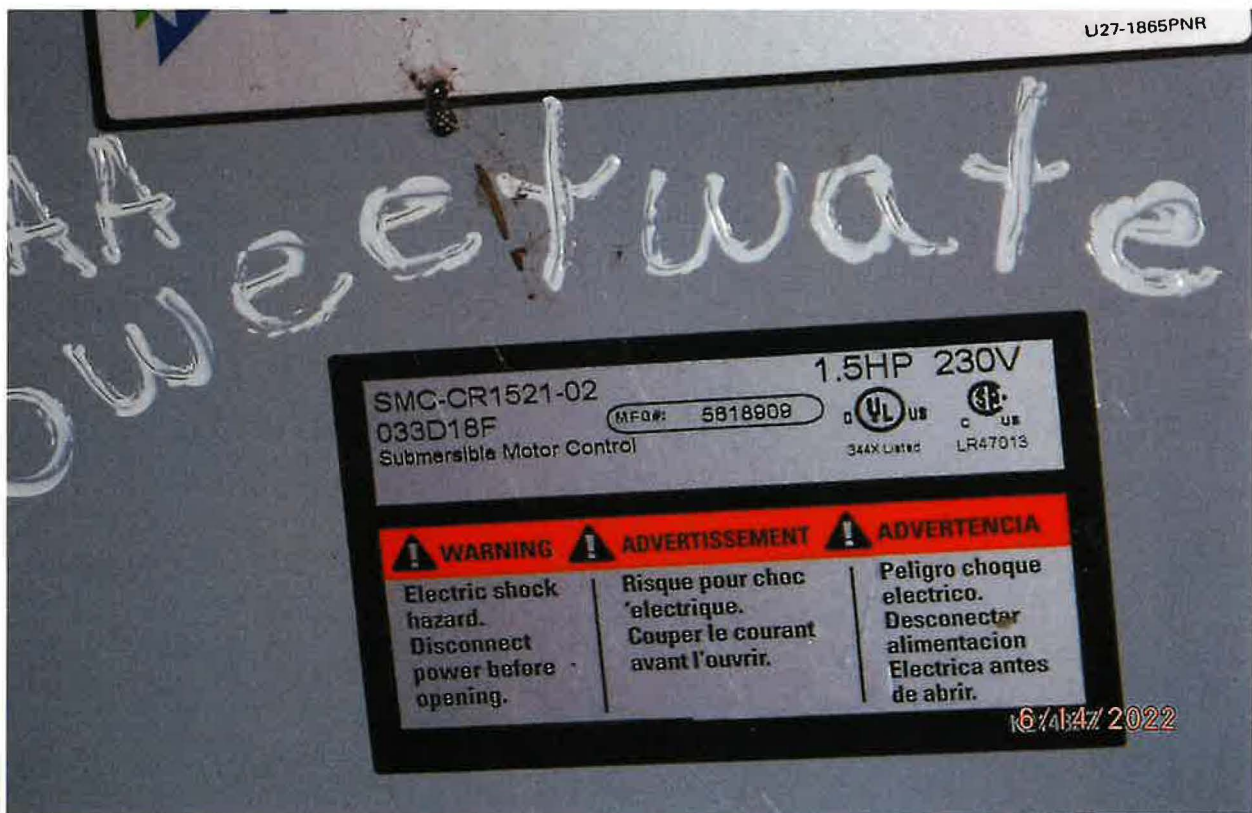


BENEFICIAL USE FIELD EXAMINATION DATE 6/14/2022





POD – GROUNDWATER WELL LOCATED WITHIN A PUMP HOUSE



1.5 HP WELL PUMP MOTOR INSTALLED



55-65 PSI OPERATING PRESSURE



CONVEYANCE SYSTEM – PRESSURE TANKS AND MAIN SERVICE LINE OUT FROM PUMP HOUSE



DOMESTIC POU – 9 UNIT CONDOMINIUM





IRRIGATION POU – PRESSURIZED SPRINKLER SYSTEM





IRRIGATION POU – MICRO EMITTERS





IRRIGATION POU – RISER PIPE TO HOSE & SPRINKLER





IRRIGATION SYSTEM CONTROL PANEL – RAIN DIAL SYSTEM

