

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

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DEPARTMENT OF  
WATER RESOURCES

A Beneficial Use Field Report is prepared by a water right examiner as the result of an examination to clearly confirm and establish the extent of the beneficial use of water established in connection with a permit during the development period authorized by the permit and any extensions of time previously approved.

**A. GENERAL INFORMATION**Permit No. 63-329111. Owner Tree Top Ranches LPPhone No. 208-377-0998Current address PO Box 8126, Boise, 837022. Examiner's name Scott King, P.E. (Examiner No. 133)EXAM DATE November 29, 20173. Accompanied by William MulderEmail wjmulder@treetopranches.comAddress same as aboveRelationship to permit holder Manager

Phone No. \_\_\_\_\_

4. Source Boise Rivertributary to Snake River**B. OVERLAP REVIEW**

63-127C, 63-128C, 63-129C, 63-130C, 63-131C, 63-178B, 63-21530, 63-33590 (irrigation)

1. Other water rights with the same place of use 63-32467, 63-32912 (permits for wildlife uses)2. Other water rights with the same source and point of diversion None**C. DIVERSION AND DELIVERY SYSTEM**

## 1. Point(s) of Diversion:

| Ident. No. | Gov't Lot | ¼ | ¼  | ¼  | Sec | Twp | Rge | County | Method of Determination/Remarks |
|------------|-----------|---|----|----|-----|-----|-----|--------|---------------------------------|
| Pump 1     | 1         |   | SW | SE | 22  | 5N  | 5W  | Canyon | GPS, Exam                       |
| Pump 2     | 1         |   | SW | SE | 22  | 5N  | 5W  | Canyon | GPS, Exam                       |
|            |           |   |    |    |     |     |     |        |                                 |
|            |           |   |    |    |     |     |     |        |                                 |

## 2. Place(s) of Use:

Method of determination Exam, 2015 Arial Photo

| Twp | Rge | Sec | NE |    |    |    | NW |    |    |    | SW |    |    |      | SE |    |      |    | Totals |
|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|------|----|----|------|----|--------|
|     |     |     | NE | NW | SW | SE | NE | NW | SW | SE | NE | NW | SW | SE   | NE | NW | SW   | SE |        |
| 5N  | 5W  | 22  |    |    | X  |    |    |    |    | X  | X  |    |    | X    |    | X  | X    |    |        |
|     |     |     |    |    |    |    |    |    |    |    |    |    |    | Lt 2 |    |    | Lt 1 |    |        |
|     |     |     |    |    |    |    |    |    |    |    |    |    |    |      |    |    |      |    |        |
|     |     |     |    |    |    |    |    |    |    |    |    |    |    |      |    |    |      |    |        |
|     |     |     |    |    |    |    |    |    |    |    |    |    |    |      |    |    |      |    |        |
|     |     |     |    |    |    |    |    |    |    |    |    |    |    |      |    |    |      |    |        |
|     |     |     |    |    |    |    |    |    |    |    |    |    |    |      |    |    |      |    |        |

"X" = Wildlife and Wildlife Storage

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☒ see attached.

Scale: 1" = \_\_\_\_\_

- ☒ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (**required**)  
☒ Aerial photo attached (required for irrigation of 10+ acres)  
☒ Photo of diversion and system attached

4.

| Well or Diversion Identification No.* | Motor Make | Hp  | Motor Serial No. | Pump Make | Pump Serial No. or Discharge Size |
|---------------------------------------|------------|-----|------------------|-----------|-----------------------------------|
| Pump 1                                | John Deere | 200 | PE4045H459537    | Cornell   | 145393                            |
| Pump 2                                | Perkins    | 200 | unknown          | Cornell   | 169883                            |
|                                       |            |     |                  |           |                                   |

\*Code to correspond with no. on map and aerial photo

#### D. FLOW MEASUREMENTS

1.

| Measurement Equipment | Type       | Make | Model No. | Serial No. | Size    | Calib. Date |
|-----------------------|------------|------|-----------|------------|---------|-------------|
| Portable Flowmeter    | Ultrasonic | GE   | PT878     | 7140       | various | 3/27/17     |
|                       |            |      |           |            |         |             |

2. **Measurements:** \_\_\_\_\_

Discharge from each of the two pumps was measured with portable flowmeter on 8-inch plastic pipe.

**E. NARRATIVE/REMARKS/COMMENTS**

Two portable pumps withdraw water from the Boise River. Flow is piped from the pump discharge into ditches where it gravity flows to ponds and flooded areas for wildlife use. The pumps were supplied by Rain for Rent and are standard model DV200c with stated design capacity of 4,600 gpm (10 cfs) each. Pump spec sheets are included in Attachment B. Andrews Ditch supply under 63-32467 uses the same ditch system and place of use.

The pump pipelines and ditches provide the straight lengths of pipe and ditches required for measurement.

See Attachment C for flow measurements and storage volume calculations.

**Exam Attachments**

Attachment A: Field Exam Maps

Attachment B: System Components and Diagrams

Attachment C: Flow Rate and Volume Calculations

Attachment D: Exam Photos

Attachment E: Proof of Beneficial Use

Has the permit holder met all conditions of permit approval, including any mitigation requirements and/or measuring device installation requirements? ☒ Yes ☐ No If no, what must be done to meet the permit requirements?

Conditions provide for up to 6 ponds, natural swales, and/or agricultural fields that will be flooded that together shall not exceed 63 surface acres and a storage volume of 181.5 afa when combined with 63-32912. These limits have been met (see Beneficial Use Field Report for 63-32912 and attached volume calculations).

**F. FLOW CALCULATIONS**☒ Additional computation sheets attached

Measured Method:

Pump 1 = 8.35 cfs

Pump 2 = 8.92 cfs

Total = 17.27 cfs

**G. VOLUME CALCULATIONS**

## 1. Volume Calculations for Irrigation:

 $V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$  \_\_\_\_\_ $V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 =$  \_\_\_\_\_ $V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$  \_\_\_\_\_

## 2. Volume Calculations for Other Uses:

Per the operator, peak use during the development period for the Boise River pump system is operating for 10 hours per day, 21 days per season at an average flow of 8.9 cfs.

 $8.9 \text{ cfs} \times 1.9835 \times 21 \text{ days} \times 10/24 = 154.5 \text{ af.}$ 

Storage volume = 112.6 af (see attached)

**H. RECOMMENDATIONS**

## 1. Recommended Amounts

| Beneficial Use       | Period of Use |     | Rate of Diversion<br>Q (cfs) | Annual Volume<br>V (afa) |
|----------------------|---------------|-----|------------------------------|--------------------------|
|                      | From          | To  |                              |                          |
| Wildlife             | 11/15         | 3/1 | 17.27                        | 154.5                    |
| Wildlife Storage     | 11/15         | 3/1 |                              | 112.6                    |
| Diversion to Storage | 11/15         | 3/1 | 17.27                        | 154.5                    |
|                      |               |     |                              |                          |
|                      |               |     |                              |                          |
| <b>Totals:</b>       |               |     | 17.27                        | 267.1 af                 |

## 2. Recommended Amendments

☒ Change P.D. as reflected on page 1☒ Add P.D. as reflected on page 1☐ None☒ Change P.U. as reflected on page 1☐ Add P.U. as reflected on page 1☐ Other**I. AUTHENTICATION**

Field Examiner's Signature

*Kevin King*

Date

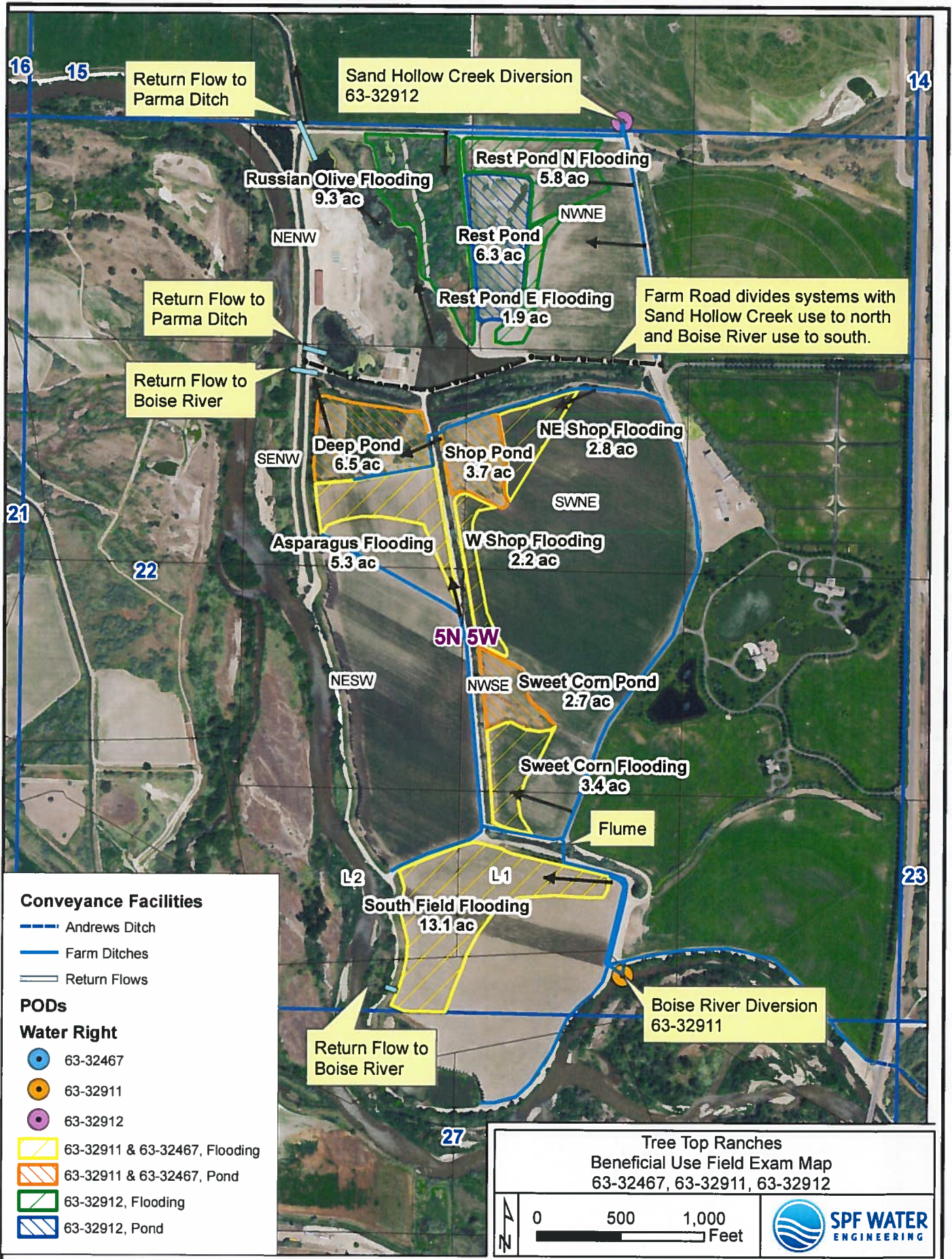
12/1/2017

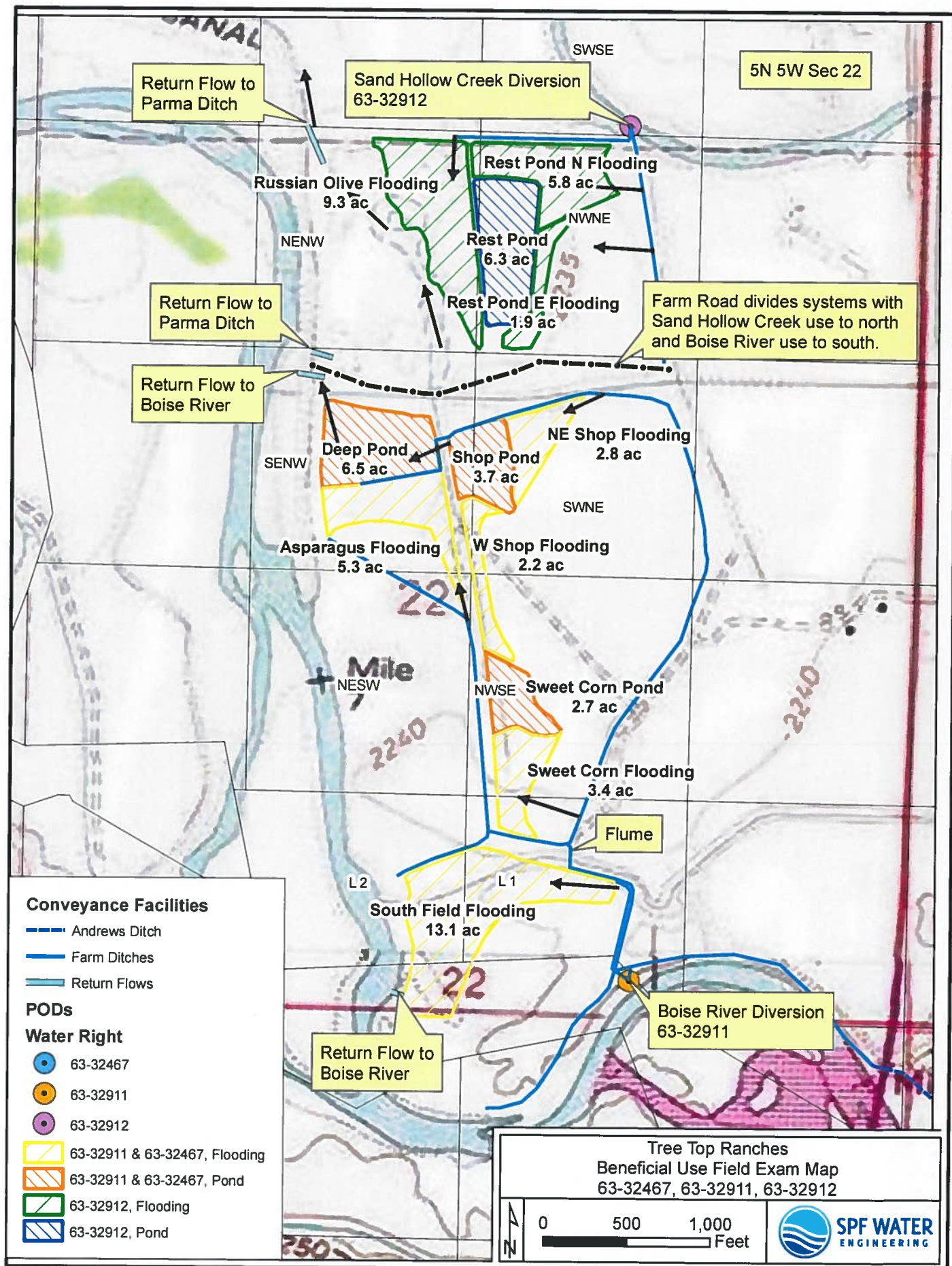
Reviewer

Date



**Attachment A**  
**Field Exam Map**





**Attachment B**  
**System Components and Diagrams**

# Sewage and Trash Pump

DV200c

## Overview:

The 12" suction x 8" discharge self-priming centrifugal DV200c trash pump provides up to a maximum of 4,600 gallons per minute pumping and up to 260 feet of head. This pump is usually mounted on a trailer and features the standard PowerPrime Clean Prime Venturi priming system which allows it to run continuously, unattended and even run dry.

## Features:

- Continuous self-priming
- Runs dry unattended
- 12 volt, electric start with auto-start capable control panel
- Flex coupled to diesel engine
- 24-hour minimum capacity fuel tank
- Compressor fitted to operate the air-ejector priming system
- Cast iron wet end with open impellers
- Replaceable wear plates
- SAE Mounted
- Suction lift up to 28ft.

## Specs:

|                                  |                   |
|----------------------------------|-------------------|
| Maximum Flow                     | 4,600 GPM         |
| Maximum Head                     | 260 feet          |
| Pump Size                        | 12" x 8"          |
| Maximum Solids Handling          | 3.375 inches      |
| Dry weight                       | 5,560 lbs.        |
| Footprint: Trailer mounted model | 150" x 78"        |
| Fuel tank                        | 190 gallon        |
| Fuel consumption                 | 7 gph @ 1,800 RPM |



SA Option Available: 70dB(A) @ 30'

## Accessories:

- Spillguard
- Suction and Discharge Hoses
- Fuel Nurse Tank



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Rain for Rent is a registered trademark of Western Oilfields Supply Company. Features and specifications are subject to change without notice.

**Liquid Ingenuity.**  
800-742-7246  
rainforrent.com



# Rain For Rent

CURVE: 01-0133-02-16

PUMP : DV-200c

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SUCTION  
12"

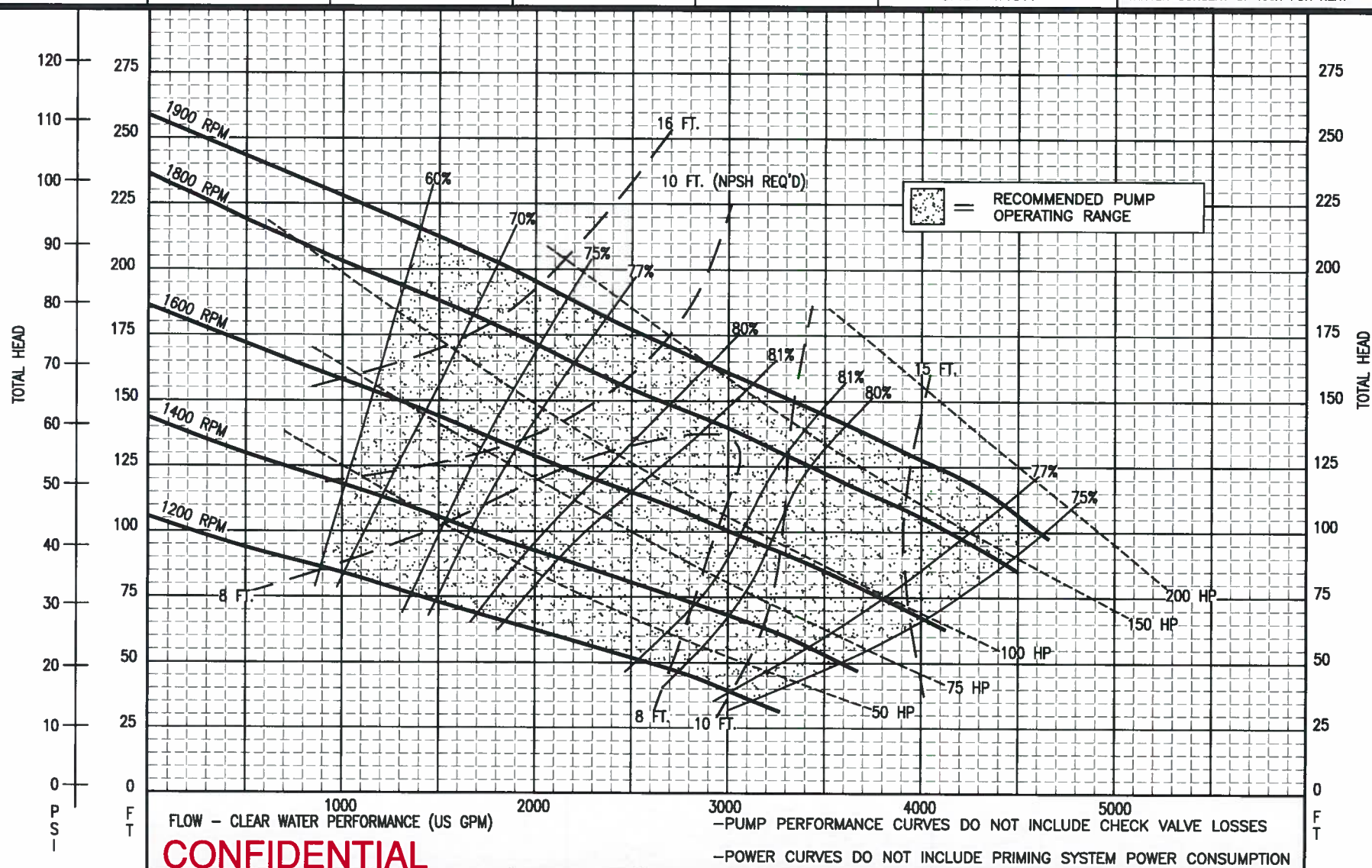
DISCHARGE  
8"

MAX. SPHERE  
3.375"

IMPELLER  
2 VANE

IMPELLER  
14.00"

IMPELLER &  
WEAR RINGS  
CAST IRON



# **Attachment C**

## **Flow Rate and Volume Calculations**

Permit: 63-32911  
 Owner: Tree Top Ranches LP  
 Site Name: Boise River Pump 1  
 POD Location: 5N 5W 22 Lt 1 (SWSE)  
 Tag No: none  
 Meter: GE TransPort PT878  
 Type: Portable Ultrasonic Time Flight Liquid Flow Meter  
 Serial Number: 7140  
 Calibration Date: March 27, 2017  
 Operator: Scott King

| Date/Time       | Volume (gal/m) | (+)Total (gal) | (-)Total (gal) | Error # |
|-----------------|----------------|----------------|----------------|---------|
| 11/29/2017 2:01 | 3674           | 174365         | 143            | 0       |
| 11/29/2017 2:02 | 3737           | 178199         | 143            | 0       |
| 11/29/2017 2:03 | 3696           | 181955         | 143            | 0       |
| 11/29/2017 2:04 | 3697           | 185750         | 143            | 0       |
| 11/29/2017 2:05 | 3833           | 189427         | 143            | 0       |
| 11/29/2017 2:06 | 3767           | 193202         | 143            | 0       |
| 11/29/2017 2:07 | 3760           | 196879         | 143            | 0       |
| 11/29/2017 2:08 | 3609           | 200691         | 143            | 0       |
| 11/29/2017 2:09 | 3652           | 204370         | 143            | 0       |
| 11/29/2017 2:10 | 3827           | 208135         | 143            | 0       |
| 11/29/2017 2:11 | 3761           | 211823         | 143            | 0       |

|        |               |
|--------|---------------|
| Time   | 10 minutes    |
| Volume | 37458 gallons |
| Rate   | 3746 gpm      |
| Rate   | 8.35 cfs      |

Permit: 63-32911  
 Owner: Tree Top Ranches LP  
 Site Name: Boise River Pump 2  
 POD Location: 5N 5W 22 Lt 1 (SWSE)  
 Tag No: none  
 Meter: GE TransPort PT878  
 Type: Portable Ultrasonic Time Flight Liquid Flow Meter  
 Serial Number: 7140  
 Calibration Date: March 27, 2017  
 Operator: Scott King

| Date/Time       | Volume (gal/m) | (+)Total (gal) | (-)Total (gal) | Error # |
|-----------------|----------------|----------------|----------------|---------|
| 11/29/2017 3:00 | 3990           | 43908          | 0              | 0       |
| 11/29/2017 3:01 | 4027           | 47933          | 0              | 0       |
| 11/29/2017 3:02 | 4015           | 52010          | 0              | 0       |
| 11/29/2017 3:03 | 3964           | 55873          | 0              | 0       |
| 11/29/2017 3:04 | 3960           | 59970          | 0              | 0       |
| 11/29/2017 3:05 | 3922           | 63842          | 0              | 0       |
| 11/29/2017 3:06 | 3967           | 67943          | 0              | 0       |
| 11/29/2017 3:07 | 4028           | 72073          | 0              | 0       |
| 11/29/2017 3:08 | 3992           | 75952          | 0              | 0       |
| 11/29/2017 3:09 | 4011           | 79808          | 0              | 0       |
| 11/29/2017 3:10 | 3956           | 83924          | 0              | 0       |

|        |               |
|--------|---------------|
| Time   | 10 minutes    |
| Volume | 40016 gallons |
| Rate   | 4002 gpm      |
| Rate   | 8.92 cfs      |

Tree Top Ranches  
Parma Lodge & Stables  
Wildlife Permit Information

| Water Body               | Flooded<br>Area No. | Ac.  | Depth | AF    | Source            | Permits             |
|--------------------------|---------------------|------|-------|-------|-------------------|---------------------|
| Rest Pond                | 1                   | 6.3  | 4.5   | 28.4  | Sand Hollow Creek | 63-32912            |
| Rest Pond North Flooding | 1                   | 5.8  | 1.5   | 8.7   | Sand Hollow Creek | 63-32912            |
| Rest Pond East Flooding  | 1                   | 1.9  | 1     | 1.9   | Sand Hollow Creek | 63-32912            |
| Russian Olive Flooding   | 2                   | 9.3  | 2     | 18.6  | Sand Hollow Creek | 63-32912            |
| Total                    |                     | 23.3 |       | 57.6  |                   |                     |
| Deep Pond                | 3                   | 6.5  | 5.5   | 35.8  | Boise River       | 63-32467 & 63-32911 |
| Asparagus Flooding       | 3                   | 5.3  | 2     | 10.6  | Boise River       | 63-32467 & 63-32911 |
| Shop Pond                | 4                   | 3.7  | 4.5   | 16.7  | Boise River       | 63-32467 & 63-32911 |
| NE Shop Flooding         | 4                   | 2.8  | 1     | 2.8   | Boise River       | 63-32467 & 63-32911 |
| West Shop Flooding       | 4                   | 2.2  | 1.5   | 3.3   | Boise River       | 63-32467 & 63-32911 |
| Sweet Corn Pond          | 5                   | 2.7  | 4.5   | 12.2  | Boise River       | 63-32467 & 63-32911 |
| Sweet Corn Flooding      | 5                   | 3.4  | 1.5   | 5.1   | Boise River       | 63-32467 & 63-32911 |
| South Field Flooding     | 6                   | 13.1 | 2     | 26.2  | Boise River       | 63-32467 & 63-32911 |
| Total                    |                     | 39.7 |       | 112.6 |                   |                     |
| Grand Total              |                     | 63   |       | 170.1 |                   |                     |
| Permit Limit             |                     | 63   |       | 181.5 |                   |                     |

# **Attachment D**

## **Exam Photos**



**Figure 1: Two portable pumps diverting from the Boise River. Pump 1 with John Deere engine is further east, behind Pump 2 with Perkins engine.**



**Figure 2: Pump 1 discharging into ditch and flowmeter installation.**

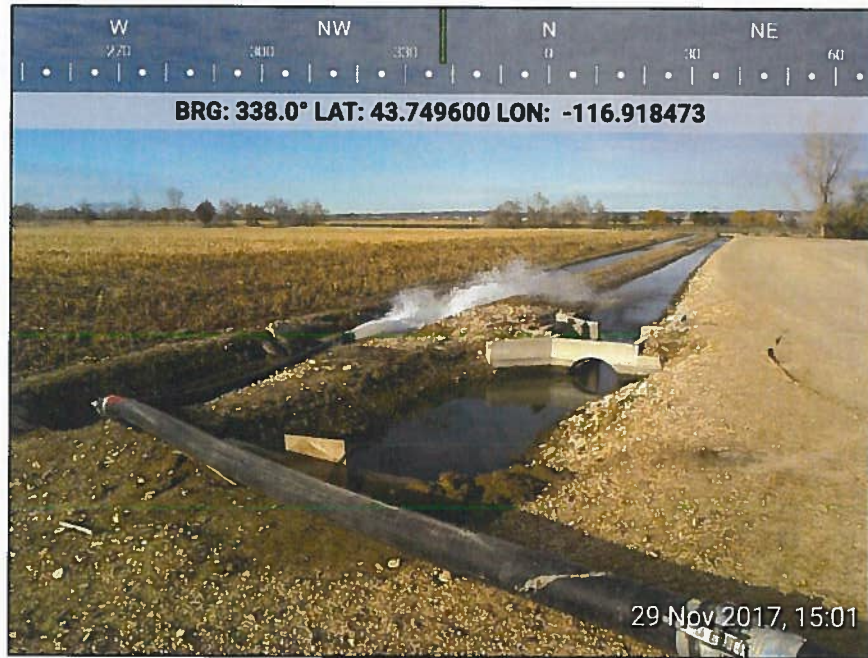


Figure 3: Pump 2 discharging into ditch.

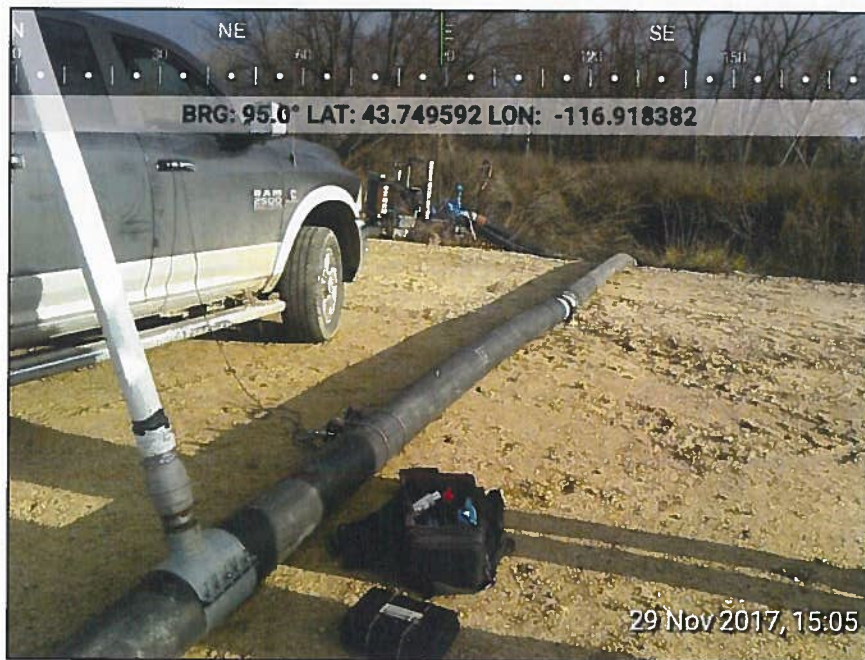


Figure 4: Pump 2 flowmeter installation.



Figure 5: Lower end of Boise River source water collection ditch and entrance to pipeline under Parma Ditch.



Figure 6: Boise River source water is piped under the Parma Ditch and returned to the Boise River.



Figure 7: Sweet Corn Pond is typical place of use with flooding starting for the season.



Figure 8: South Field place of use.



**Figure 9: Lower end of Shop Pond.**

**Attachment E**  
**Proof of Beneficial Use**