

**CLAIM OF
BENEFICIAL USE
for Surface Water Permits
claiming more than 0.1 cfs**



Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1266
(503) 986-0900
www.oregon.gov/OWRD

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**A fee of \$230 must accompany this form for permits
with priority dates of July 9, 1987, or later.**

A separate form shall be completed for each permit.

In cases where a permit has been amended through the permit amendment process, a separate claim for the permit amendment is not required. Incorporate the permit amendment into the claim for the permit.

This form is subject to revision. **Begin each new claim** by checking for a new version of this form at:
<https://www.oregon.gov/OWRD/Forms/Pages/default.aspx>

Go to "Resources for Water Right Examiners (CWRE)" Page
<https://www.oregon.gov/OWRD/programs/WaterRights/COBU/Pages/default.aspx>
The completion of this form is required by OAR 690-014-0100(1) and 690-014-0110(4).

Please type or print in dark ink. If this form is found to contain errors or omissions, it may be returned to you. **Every item must have a response.** If any requested information does not apply to the claim, insert "NA." **Do not delete or alter any section of this form unless directed by the form.** The Department may require the submittal of additional information from any water user or authorized agent.

"Section 8" of this form is intended to aid in the completion of this form and should not be submitted.

If you have questions regarding the completion of this form, please call 503-979-9103.

The Department has a program that allows it to enter into a voluntary agreement with an applicant for expedited services. Under such an agreement, the applicant pays the cost to hire additional staff that would not otherwise be available. This program means a certificate may be issued in about a month. For more information on this program see
<https://www.oregon.gov/OWRD/programs/WaterRights/RA/Pages/default.aspx>

**SECTION 1
GENERAL INFORMATION**

1. File Information:

| | | |
|---------------|----------|--------------------|
| APPLICATION # | PERMIT # | PERMIT AMENDMENT # |
|---------------|----------|--------------------|

| | | |
|---------|---------|----|
| S-87119 | S-54582 | T- |
|---------|---------|----|

2. Property Owner (current owner information):

| | | | |
|---|--------------------|------------------------------------|--|
| APPLICANT/BUSINESS NAME L & L Farms | | PHONE NO. 1 541 561 5404 | ADDITIONAL CONTACT NO. |
| ADDRESS 1000 HWY 395 S 423 | | | |
| CITY Hermiston | STATE OR | ZIP 97838 | E-MAIL boblevy@windyriverfarms.com |

If the current property owner is not the permit holder of record, it is recommended that an assignment be filed with the Department. ***Each permit holder of record must sign this form.***

3. Permit or holder of record (this may, or may not, be the current property owner):

| | | | |
|---|--------------------|---------------------|--|
| PERMIT HOLDER OF RECORD L & L Farms | | | |
| ADDRESS 822 HWY 395 S 423 | | | |
| CITY Hermiston | STATE OR | ZIP 97838 | |

| | | | |
|---|-------|-----|--|
| ADDITIONAL PERMIT HOLDER OF RECORD Not Applicable | | | |
| ADDRESS | | | |
| CITY | STATE | ZIP | |

4. Date of Site Inspection:

December 11, 2024

5. Person(s) interviewed and description of their association with the project:

| NAME | DATE | ASSOCIATION WITH THE PROJECT |
|----------------|-----------------|------------------------------|
| Rob Cox | 12/11/24 | Farm Supervisor |
| | | |

6. County:

Umatilla

7. If any property described in the place of use of the permit final order is excluded from this report, identify the owner of record for that property (ORS 537.230(5)):

| | | | |
|--|-------|-----|--|
| OWNER OF RECORD Not Applicable | | | |
| ADDRESS | | | |
| CITY | STATE | ZIP | |

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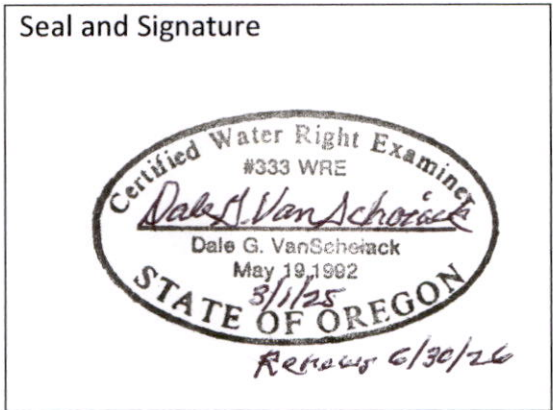
Add additional tables for owners of record as needed

**SECTION 2
SIGNATURES**

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CWRE Statement, Seal and Signature

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge.



| | | | |
|--------------------------------------|--------------------|------------------------------------|--|
| CWRE NAME Dale VanSchoiack | | PHONE NO. 1 509 627 8717 | ADDITIONAL CONTACT NO. |
| ADDRESS 2141 S Lyle | | | |
| CITY Kennewick | STATE WA | ZIP 99337 | E-MAIL dalevconsulting@gmail.com |

Permit Holder of Record Signature or Acknowledgement

Each permit holder of record must sign this form in the space provided below.

The facts contained in this Claim of Beneficial Use are true and correct to the best of my knowledge. I request that the Department issue a water right certificate.

| SIGNATURE | PRINT OR TYPE NAME | TITLE | DATE |
|-----------|-----------------------|------------|------|
| | L & L Farms, Bob Levy | Farm Owner | |
| | | | |
| | | | |
| | | | |
| | | | |

SECTION 3

CLAIM DESCRIPTION

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1. Point of diversion name or number:

| POINT OF DIVERSION (POD) NAME OR NUMBER (CORRESPOND TO MAP) |
|---|
| Butter Creek Reservoir |
| Sparks Reservoir |

2. Point of diversion source and tributary:

| POD NAME OR NUMBER | SOURCE | TRIBUTARY |
|------------------------|----------------|----------------|
| Butter Creek Reservoir | Umatilla River | Columbia River |
| Sparks Reservoir | Umatilla River | Columbia River |

3. Developed use(s), period of use, and rate for each use:

| POD NAME OR NUMBER | USES | IF IRRIGATION, LIST CROP TYPE | SEASON OR MONTHS WHEN WATER WAS USED | ACTUAL RATE OR VOLUME USED (CFS, GPM, OR AF) |
|-------------------------------------|--------------------|----------------------------------|--|--|
| Butter Creek Reservoir | Supplemental Irrig | Corn, alfalfa, potatoes, onions | Apr 1 – Oct 31 | 3867 gpm (8.62 cfs) 535 ac ft |
| Sparks Reservoir | Supplemental Irrig | Corn, alfalfa, potatoes, onions | Apr 1 – Oct 31 | 5352 gpm (11.93 cfs) 353 ac ft |
| Total Quantity of Water Used | | | | 888 ac ft |

4. Provide a general narrative description of the distribution works. This description must trace the water system from each point of diversion to the place of use:

There are two PODs associated with the water right. The most northerly POD is Butter Creek Reservoir. It is in the SESE of Section 5, T3N R28E W.M. Water is pumped from this reservoir through the Butter Creek Lagoon Pumping Station. It is comprised of three 150 hp pumps totaling 450 hp. From this pumping station the water flows through 1460'± of buried 24" pipeline in a south and then westerly direction to the Butter Creek Booster pumping station. The Butter Creek Booster Pumping Station is a 250 hp booster pumping station consisting of two 125 hp pumps. From the Butter Creek Booster Pumping Station, the water flows 14670'± in a southwesterly then southerly direction through a buried 18" pipeline to a point where it reduces in size to a 16" and continues 5740'± southwesterly to the southwesterly corner of the intersection of HWY 207 and the Echo Highway. From this point the pipeline bends to the east and extends 8800'± along the southerly side of Echo Highway to a point where it bends to the southeast. It then continues 6810'± in a southeast direction to the southwest corner of the Sparks Reservoir, located in the NENW of Section 34, T3N R28E W.M. which is the second POD. Water from the Sparks Reservoir is pumped through the Sparks Pumping Station, which consists of four 250 hp pumps, through a pipe distribution system to 29 circular irrigation machines and one rectangular shaped land parcel that make up the irrigated acreage authorized by the permit. Refer to the COBU map for details regarding the farm pipe distribution system.

On the COBU map there are references to a Canal Pumping Station, a 250 hp Booster Station, and a 75

hp Booster Station. These facilities are used in conjunction with primary irrigation water rights and are not used in conjunction with the supplemental irrigation water for Permit S-54582.

Reminder: The map associated with this claim must identify the location of the point(s) of diversion, Donation Land Claims (DLC), Government Lots (GLot), and Quarter-Quarters (QQ).

5. Variations:

Was the use developed differently from what was authorized by the permit, or permit amendment final order? If yes, describe below.

NO

(e.g. "The permit allowed three points of diversion. The water user only developed one of the points." or "The permit allowed 40.0 acres of irrigation. The water user only developed 10.0 acres.")

Not Applicable

6. Claim Summary:

| POD NAME OR # | MAXIMUM RATE AUTHORIZED | CALCULATED THEORETICAL RATE BASED ON SYSTEM | AMOUNT OF WATER MEASURED | USE | # OF ACRES ALLOWED | # OF ACRES DEVELOPED |
|------------------------|---|--|--------------------------|-------------------------|--------------------|----------------------|
| Butter Creek Reservoir | The rate is not stated in the permit. Maximum volume 535 ac ft. | 3867 gpm (8.62 cfs) Based on the operation of one Butter Creek Bstr. Pump* | Not Applicable | Supplemental Irrigation | 3284.95 | 3284.95 |
| Sparks Reservoir | The rate is not stated in the permit. Maximum volume 353 ac ft. | 5352 gpm (11.93 cfs) Based on the operation of two Sparks Reservoir pumps. ** | Not Applicable | Supplemental Irrigation | 3284.95 | 3284.95 |

* Water is pumped from the Butter Creek Reservoir to the Sparks Reservoir. The normal peak rate that water is pumped from the Butter Creek Reservoir to Sparks Reservoir is 3867 gpm (8.62 cfs).

** Water from the Sparks Reservoir is pumped to the farmland. The normal peak rate at which water is pumped to the farmland is 5352 gpm (11.93 cfs).

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 YES

SECTION 4
 SYSTEM DESCRIPTION

Are there multiple PODs?

If "YES" you will need to copy and complete a separate Section 4 for each POD.

POD Name or Number this section describes (only needed if there is more than one):

Butter Creek Reservoir

A. Place of Use

1. Is the right for municipal use?

NO

If "YES" the table below may be deleted.

| TWP | RNG | MER | SEC | QQ | GLOT | DLC | USE | IF IRRIGATION, # PRIMARY ACRES | IF IRRIGATION, # SUPPLEMENTAL ACRES |
|-----|-----|-----|-----|------|-------|-----|------------|--------------------------------------|---|
| 2N | 28E | WM | 4 | NENE | Lot 1 | | Supp Irrig | | 34.00 |
| 2N | 28E | WM | 4 | NWNE | Lot 2 | | Supp Irrig | | 33.90 |
| 2N | 28E | WM | 4 | SWNE | | | Supp Irrig | | 29.20 |
| 2N | 28E | WM | 4 | SENE | | | Supp Irrig | | 29.20 |
| 2N | 28E | WM | 4 | NENW | Lot 3 | | Supp Irrig | | 34.20 |
| 2N | 28E | WM | 4 | NWNW | Lot 4 | | Supp Irrig | | 34.30 |
| 2N | 28E | WM | 4 | SWNW | | | Supp Irrig | | 28.90 |
| 2N | 28E | WM | 4 | SENW | | | Supp Irrig | | 28.90 |
| 2N | 28E | WM | 4 | NESW | | | Supp Irrig | | 33.70 |
| 2N | 28E | WM | 4 | NWSW | | | Supp Irrig | | 33.70 |
| 2N | 28E | WM | 4 | SWSW | | | Supp Irrig | | 31.30 |
| 2N | 28E | WM | 4 | SESW | | | Supp Irrig | | 27.90 |
| 2N | 28E | WM | 4 | NESE | | | Supp Irrig | | 33.50 |
| 2N | 28E | WM | 4 | NWSE | | | Supp Irrig | | 33.00 |
| 2N | 28E | WM | 4 | SWSE | | | Supp Irrig | | 28.50 |
| 2N | 28E | WM | 4 | SESE | | | Supp Irrig | | 28.70 |
| 3N | 28E | WM | 14 | SWSE | | | Supp Irrig | | 1.20 |
| 3N | 28E | WM | 14 | SESE | | | Supp Irrig | | 1.20 |
| 3N | 28E | WM | 23 | NENE | | | Supp Irrig | | 33.60 |
| 3N | 28E | WM | 23 | NWNE | | | Supp Irrig | | 34.20 |
| 3N | 28E | WM | 23 | SWNE | | | Supp Irrig | | 27.70 |
| 3N | 28E | WM | 23 | SENE | | | Supp Irrig | | 27.10 |
| 3N | 28E | WM | 23 | NENW | | | Supp Irrig | | 30.20 |
| 3N | 28E | WM | 23 | NWNW | | | Supp Irrig | | 29.00 |
| 3N | 28E | WM | 23 | SWNW | | | Supp Irrig | | 36.50 |
| 3N | 28E | WM | 23 | SENW | | | Supp Irrig | | 36.95 |

| TWP | RNG | MER | SEC | QQ | GLOT | DLC | USE | IF IRRIGATION, # PRIMARY ACRES | IF IRRIGATION, # SUPPLEMENTAL ACRES |
|-----|-----|-----|-----|------|------|-----|------------|--------------------------------------|---|
| 3N | 28E | WM | 23 | NESW | | | Supp Irrig | | 37.60 |
| 3N | 28E | WM | 23 | NWSW | | | Supp Irrig | | 35.70 |
| 3N | 28E | WM | 23 | SWSW | | | Supp Irrig | | 40.20 |
| 3N | 28E | WM | 23 | SESW | | | Supp Irrig | | 35.60 |
| 3N | 28E | WM | 23 | NESE | | | Supp Irrig | | 30.30 |
| 3N | 28E | WM | 23 | NWSE | | | Supp Irrig | | 31.30 |
| 3N | 28E | WM | 23 | SWSE | | | Supp Irrig | | 23.70 |
| 3N | 28E | WM | 23 | SESE | | | Supp Irrig | | 21.70 |
| 3N | 28E | WM | 26 | NENE | | | Supp Irrig | | 30.20 |
| 3N | 28E | WM | 26 | NWNE | | | Supp Irrig | | 35.70 |
| 3N | 28E | WM | 26 | SWNE | | | Supp Irrig | | 35.20 |
| 3N | 28E | WM | 26 | SENE | | | Supp Irrig | | 28.10 |
| 3N | 28E | WM | 26 | NENW | | | Supp Irrig | | 17.50 |
| 3N | 28E | WM | 26 | NWNW | | | Supp Irrig | | 22.70 |
| 3N | 28E | WM | 26 | SWNW | | | Supp Irrig | | 38.80 |
| 3N | 28E | WM | 26 | SENW | | | Supp Irrig | | 36.60 |
| 3N | 28E | WM | 27 | NENE | | | Supp Irrig | | 36.40 |
| 3N | 28E | WM | 27 | NWNE | | | Supp Irrig | | 26.80 |
| 3N | 28E | WM | 27 | SWNE | | | Supp Irrig | | 37.90 |
| 3N | 28E | WM | 27 | SENE | | | Supp Irrig | | 21.10 |
| 3N | 28E | WM | 27 | NENW | | | Supp Irrig | | 28.40 |
| 3N | 28E | WM | 27 | NWNW | | | Supp Irrig | | 30.40 |
| 3N | 28E | WM | 27 | SWNW | | | Supp Irrig | | 30.40 |
| 3N | 28E | WM | 27 | SENW | | | Supp Irrig | | 31.80 |
| 3N | 28E | WM | 27 | NESW | | | Supp Irrig | | 30.10 |
| 3N | 28E | WM | 27 | NWSW | | | Supp Irrig | | 27.60 |
| 3N | 28E | WM | 27 | SWSW | | | Supp Irrig | | 32.00 |
| 3N | 28E | WM | 27 | SESW | | | Supp Irrig | | 28.90 |
| 3N | 28E | WM | 27 | NESE | | | Supp Irrig | | 38.80 |
| 3N | 28E | WM | 27 | NWSE | | | Supp Irrig | | 40.00 |
| 3N | 28E | WM | 27 | SWSE | | | Supp Irrig | | 16.00 |
| 3N | 28E | WM | 27 | SESE | | | Supp Irrig | | 13.60 |
| 3N | 28E | WM | 28 | NENE | | | Supp Irrig | | 33.00 |
| 3N | 28E | WM | 28 | NWNE | | | Supp Irrig | | 33.00 |
| 3N | 28E | WM | 28 | SWNE | | | Supp Irrig | | 29.40 |
| 3N | 28E | WM | 28 | SENE | | | Supp Irrig | | 29.40 |
| 3N | 28E | WM | 28 | NENW | | | Supp Irrig | | 31.30 |
| 3N | 28E | WM | 28 | NWNW | | | Supp Irrig | | 31.20 |
| 3N | 28E | WM | 28 | SWNW | | | Supp Irrig | | 31.00 |
| 3N | 28E | WM | 28 | SENW | | | Supp Irrig | | 30.80 |

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| TWP | RNG | MER | SEC | QQ | GLOT | DLC | USE | IF IRRIGATION, # PRIMARY ACRES | IF IRRIGATION, # SUPPLEMENTAL ACRES |
|------------------------------|-----|-----|-----|------|------|-----|------------|--------------------------------------|---|
| 3N | 28E | WM | 28 | NESW | | | Supp Irrig | | 30.50 |
| 3N | 28E | WM | 28 | NWSW | | | Supp Irrig | | 30.20 |
| 3N | 28E | WM | 28 | SWSW | | | Supp Irrig | | 39.00 |
| 3N | 28E | WM | 28 | SESW | | | Supp Irrig | | 39.00 |
| 3N | 28E | WM | 28 | NESE | | | Supp Irrig | | 27.20 |
| 3N | 28E | WM | 28 | NWSE | | | Supp Irrig | | 28.00 |
| 3N | 28E | WM | 28 | SWSE | | | Supp Irrig | | 35.90 |
| 3N | 28E | WM | 28 | SESE | | | Supp Irrig | | 30.90 |
| 3N | 28E | WM | 29 | NESW | | | Supp Irrig | | 28.30 |
| 3N | 28E | WM | 29 | NWSW | | | Supp Irrig | | 29.70 |
| 3N | 28E | WM | 29 | SWSW | | | Supp Irrig | | 33.70 |
| 3N | 28E | WM | 29 | SESW | | | Supp Irrig | | 36.50 |
| 3N | 28E | WM | 29 | NESE | | | Supp Irrig | | 30.00 |
| 3N | 28E | WM | 29 | NWSE | | | Supp Irrig | | 26.20 |
| 3N | 28E | WM | 29 | SWSE | | | Supp Irrig | | 34.90 |
| 3N | 28E | WM | 29 | SESE | | | Supp Irrig | | 36.90 |
| 3N | 28E | WM | 32 | NENE | | | Supp Irrig | | 36.70 |
| 3N | 28E | WM | 32 | NWNE | | | Supp Irrig | | 36.90 |
| 3N | 28E | WM | 32 | SWNE | | | Supp Irrig | | 32.20 |
| 3N | 28E | WM | 32 | SENE | | | Supp Irrig | | 32.00 |
| 3N | 28E | WM | 32 | NENW | | | Supp Irrig | | 36.40 |
| 3N | 28E | WM | 32 | NWNW | | | Supp Irrig | | 31.70 |
| 3N | 28E | WM | 32 | SWNW | | | Supp Irrig | | 31.90 |
| 3N | 28E | WM | 32 | SENW | | | Supp Irrig | | 31.50 |
| 3N | 28E | WM | 33 | NENE | | | Supp Irrig | | 31.30 |
| 3N | 28E | WM | 33 | NWNE | | | Supp Irrig | | 36.50 |
| 3N | 28E | WM | 33 | SWNE | | | Supp Irrig | | 31.00 |
| 3N | 28E | WM | 33 | SENE | | | Supp Irrig | | 31.00 |
| 3N | 28E | WM | 33 | NENW | | | Supp Irrig | | 36.90 |
| 3N | 28E | WM | 33 | NWNW | | | Supp Irrig | | 36.30 |
| 3N | 28E | WM | 33 | SWNW | | | Supp Irrig | | 32.00 |
| 3N | 28E | WM | 33 | SENW | | | Supp Irrig | | 32.40 |
| 3N | 28E | WM | 33 | NESW | | | Supp Irrig | | 29.20 |
| 3N | 28E | WM | 33 | NWSW | | | Supp Irrig | | 30.90 |
| 3N | 28E | WM | 33 | SWSW | | | Supp Irrig | | 32.70 |
| 3N | 28E | WM | 33 | SESW | | | Supp Irrig | | 30.50 |
| 3N | 28E | WM | 33 | NESE | | | Supp Irrig | | 31.10 |
| 3N | 28E | WM | 33 | NWSE | | | Supp Irrig | | 31.20 |
| 3N | 28E | WM | 33 | SWSE | | | Supp Irrig | | 32.70 |
| 3N | 28E | WM | 33 | SESE | | | Supp Irrig | | 32.30 |
| Total Acres Irrigated | | | | | | | | | 3284.95 |

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Reminder: The map associated with this claim must identify Donation Land Claims (DLC), Government Lots (GLot), Quarter Quarters (QQ), and if for irrigation, the number of acres irrigated within each projected DLC, GLot, and QQ.

B. Diversion and Delivery System Information

Provide the following information concerning the diversion and delivery system. Information provided must describe the equipment used to transport and apply the water from the point of diversion to the place of use.

1. Is a pump used?

YES

If "NO" items 2 through item 6 may be deleted.

2. Pump Information:

| MANUFACTURER | MODEL | SERIAL NUMBER | TYPE (CENTRIFUGAL, TURBINE OR SUBMERSIBLE) | INTAKE SIZE | DISCHARGE SIZE |
|-------------------------------|---------|---------------|--|-------------|----------------|
| Butter Creek Lagoon Pump Sta. | | | | | |
| Pump 1 - Cornell | 5HH-F18 | 91X04897 | Centrifugal | 8" | 5" |
| Pump 2 - Cornell | 5HH-F18 | 91X04893 | Centrifugal | 8" | 5" |
| Pump 3 - Cornell | 5HH-F18 | 91X04899 | Centrifugal | 8" | 5" |
| | | | | | |
| Butter Creek Bstr. | | | | | |
| Pump 1 - Cornell | 8H-F18K | Z0112120302 | Centrifugal | 10" | 8" |
| Pump 2 - Cornell | 8H-F18K | Z0103290152 | Centrifugal | 10" | 8" |
| | | | | | |

3. Motor Information:

| MANUFACTURER | RPM | HORSEPOWER |
|-------------------------------|------|------------|
| Butter Creek Lagoon Pump Sta. | | |
| Pump 1 - Toshiba R1504FLF4UM | 1770 | 150 |
| Pump 2 - Toshiba R1504FLF4UM | 1770 | 150 |
| Pump 3 - Toshiba R1504FLF4UM | 1770 | 150 |
| | | |
| Butter Creek Bstr. | | |
| Pump 1 - Baldor EM2559T-4 | 1775 | 125 |
| Pump 2 - Baldor EM2559T-4 | 1775 | 125 |

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4. Theoretical Pump Capacity:

| HORSEPOWER | OPERATING PSI | LIFT FROM SOURCE TO PUMP | LIFT FROM PUMP TO PLACE OF USE | TOTAL PUMP OUTPUT (IN CFS) |
|--------------------------------------|---|-----------------------------|--------------------------------|----------------------------|
| Butter Creek Lagoon Pump Sta. | | | | |
| Pump 1 – 150 hp | 100 psi | 12 ft positive suction head | -30 ft (630' - 600') | 1945 gpm (4.33 cfs) |
| Pump 2 – 150 hp | 100 psi | 12 ft positive suction head | -30 ft (630' - 600') | 1945 gpm (4.33 cfs) |
| Pump 3 – 150 hp | 100 psi | 12 ft positive suction head | -30 ft (630' - 600') | 1945 gpm (4.33 cfs) |
| Butter Creek Bstr. | | | | |
| Pump 1 – 125 hp | 35 psi (115 psi discharge pressure – 80 psi suction pressure) | 80 psi suction pressure | 125 ft (725' - 600') | 3867 gpm (8.62 cfs) |
| Pump 2 – 125 hp | 35 psi (115 psi discharge pressure – 80 psi suction pressure) | 80 psi suction pressure | 125 ft (725' - 600') | 3867 gpm (8.62 cfs) |

5. Provide pump calculations:

BUTTER CREEK LAGOON PUMPS

(Three identical 150 hp pumps, one pump is reported to be a spare pump. Normal operation is two pumps.)

Estimated Pumping head (TDH ft)

| | |
|---|---------------|
| Positive head at pump suction | -12 ft |
| Pressure 100 psi at pump discharge head x 2.31 ft/psi = | 231 ft |
| Misc. 10 ft friction loss valves, fittings, | 10 ft |
| Total TDH | 229 ft |

Estimated Flow Rate Each Pump

$$Hp = \frac{TDH \times gpm}{3960 \times \text{eff.}} \text{ or } gpm = \frac{3960 \times \text{eff} \times hp}{TDH} = \frac{3960 \times 75\% \times 150 \text{ hp}}{229 \text{ ft}} = 1945 \text{ gpm or } 4.33 \text{ cfs}$$

Estimated Flow Rate for Two Pumps

1945 gpm x 2 = 3890 gpm (8.67 cfs)

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BUTTER CREEK BOOSTER PUMPS

(Two identical 125 hp pumps, one pump is reported to be a spare pump. Normal operation is one pump.)

Estimated Pumping head (TDH ft)

| | |
|---|--------------|
| Positive head at pump suction 80 psi | -185 ft |
| Pressure 115 psi at pump discharge head x 2.31 ft/psi = | 266 ft |
| Misc. 15 ft friction loss valves, fittings, | <u>15 ft</u> |
| Total TD | 96 ft |

Estimated Flow Rate Each Pump

$$Hp = \frac{TDH \times gpm}{3960 \times \text{eff.}} \text{ or } gpm = \frac{3960 \times \text{eff} \times hp}{TDH} = \frac{3960 \times 75\% \times 125 \text{ hp}}{96 \text{ ft}} = \underline{3867 \text{ gpm or } 8.62 \text{ cfs}}$$

6. Measured Pump Capacity (using meter if meter was present and system was operating):

| INITIAL METER READING | ENDING METER READING | DURATION OF TIME OBSERVED | TOTAL PUMP OUTPUT (IN CFS) |
|-----------------------|----------------------|---------------------------|----------------------------|
| Not Applicable | | | |

Reminder: For pump calculations use the reference information at the end of this document.

7. Is the distribution system piped? **YES**

If "NO" items 8 through item 13 may be deleted.

8. Mainline Information:

| MAINLINE SIZE | LENGTH | TYPE OF PIPE | BURIED OR ABOVE GROUND |
|---------------|--------|--------------|------------------------|
| 6" | 1500' | PVC | Buried |
| 12" | 1330' | PVC | Buried |
| 15" | 14410' | PVC | Buried |
| 16" | 21350' | PVC | Buried |
| 18" | 30590' | PVC | Buried |
| 20" | 12090' | PVC | Buried |
| 24" | 9230' | PVC | Buried |

9. Lateral or Handline Information:

| LATERAL OR HANDLINE SIZE | LENGTH | TYPE OF PIPE | BURIED OR ABOVE GROUND |
|--------------------------|--------|--------------|------------------------|
| Pivot to Mainline | | | |
| 4" | 2150' | PVC | Buried |
| 6" | 3960' | PVC | Buried |
| 8" | 3760' | PVC | Buried |
| 10" | 46860' | PVC | Buried |
| 12" | 3780' | PVC | Buried |

10. Sprinkler Information:

| SIZE | OPERATING PSI | SPRINKLER OUTPUT (GPM) | TOTAL NUMBER OF SPRINKLERS | MAXIMUM NUMBER USED | TOTAL SPRINKLER OUTPUT (CFS) |
|-------------------|---------------|------------------------|-------------------------------|-------------------------------|------------------------------|
| 5/32" dia nozzles | 50 psi | 5 gpm | 66 Two 1320 ft wheel lines | 66 Two 1320 ft wheel lines | 330 gpm (0.74 cfs) |
| | | | | | |
| | | | | | |

Reminder: For sprinkler output determination use the reference information at the end of this document.

11. Drip Emitter Information:

| SIZE | OPERATING PSI | EMITTER OUTPUT (GPM) | TOTAL NUMBER OF EMITTERS | MAXIMUM NUMBER USED | TOTAL EMITTER OUTPUT (CFS) |
|----------------|---------------|----------------------|--------------------------|---------------------|----------------------------|
| Not Applicable | | | | | |
| | | | | | |
| | | | | | |

12. Drip Tape Information:

| DRIPPER SPACING IN INCHES | GPM PER 100 FEET | TOTAL LENGTH OF TAPE | MAXIMUM LENGTH OF TAPE USED | TOTAL TAPE OUTPUT (CFS) | ADDITIONAL INFORMATION |
|---------------------------|------------------|----------------------|-----------------------------|-------------------------|------------------------|
| Not Applicable | | | | | |
| | | | | | |
| | | | | | |

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13. Pivot Information:

| PIVOT NUMBER | MANUFACTURER | MAXIMUM WETTED RADIUS | OPERATING PSI | TOTAL PIVOT OUTPUT (GPM) | TOTAL PIVOT OUTPUT (CFS) |
|--------------|--------------|-----------------------|---------------|--------------------------|--------------------------|
| LL01 | Valley | 1355' | 50 psi | 750 gpm | 1.67 cfs |
| LL02 | Pierce | 1358' | 50 psi | 750 gpm | 1.67 cfs |
| LL03 | Pierce | 1318' part circle | 50 psi | 750 gpm | 1.67 cfs |
| LL04 | Valley | 1316' | 50 psi | 750 gpm | 1.67 cfs |
| LL05 | Valley | 1217' | 50 psi | 750 gpm | 1.67 cfs |
| LL06 | Pierce | 1338' | 50 psi | 750 gpm | 1.67 cfs |
| LL07 | Valley | 1654' part circle | 50 psi | 750 gpm | 1.67 cfs |
| LL08 | Valley | 1291' | 50 psi | 750 gpm | 1.67 cfs |
| LL09 | Valley | 1281' | 50 psi | 750 gpm | 1.67 cfs |
| LL10 | Pierce | 1389' | 50 psi | 750 gpm | 1.67 cfs |
| LL11 | Pierce | 1315' | 50 psi | 750 gpm | 1.67 cfs |
| LL12 | Valley | 1312' | 50 psi | 750 gpm | 1.67 cfs |
| LL13 | Pierce | 1333' | 50 psi | 750 gpm | 1.67 cfs |
| LL14 | Valley | 1272' | 50 psi | 750 gpm | 1.67 cfs |
| LL15 | Pierce | 1313' | 50 psi | 750 gpm | 1.67 cfs |
| LL16 | Pierce | 1327' | 50 psi | 750 gpm | 1.67 cfs |
| LL17 | Valley | 1328' | 50 psi | 750 gpm | 1.67 cfs |
| LL18 | Valley | 1322' | 50 psi | 750 gpm | 1.67 cfs |
| LL19 | Valley | 1305' | 50 psi | 750 gpm | 1.67 cfs |
| LL20 | Valley | 1276' | 50 psi | 750 gpm | 1.67 cfs |
| LL21 | Valley | 537' | 50 psi | 750 gpm | 1.67 cfs |
| LL22 | Valley | 537' | 50 psi | 750 gpm | 1.67 cfs |
| LL23 | Valley | 537' | 50 psi | 750 gpm | 1.67 cfs |
| LL24 | Valley | 1328' | 50 psi | 750 gpm | 1.67 cfs |
| LL25 | Valley | 1306' | 50 psi | 750 gpm | 1.67 cfs |
| LL26 | Valley | 1314' | 50 psi | 750 gpm | 1.67 cfs |
| LL27 | Valley | 1313' | 50 psi | 750 gpm | 1.67 cfs |
| LL28 | Valley | 1333' | 50 psi | 750 gpm | 1.67 cfs |
| LL29 | Valley | 1318' | 50 psi | 750 gpm | 1.67 cfs |
| | | | | | |

C. Storage

1. Does the distribution system include in-system storage (e.g. storage tank, bulge in system / reservoir)?

NO

If "NO", item 2 and 3 relating to this section may be deleted.

If "YES" is it a:
 Storage Tank
 Bulge in System / Reservoir

NO

NO

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Complete appropriate table(s), unused table may be deleted.

2. Storage Tank:

| MATERIAL (CONCRETE, FIBERGLASS, METAL, ETC.) | CAPACITY (IN GALLONS) | ABOVE GROUND OR BURIED |
|---|--------------------------|------------------------|
| Not Applicable | | |

3. Bulge in System / Reservoir:

| RESERVOIR NAME OR NUMBER (CORRESPOND TO MAP) | APPROXIMATE DAM HEIGHT | APPROXIMATE CAPACITY (IN ACRE FEET) |
|---|------------------------|-------------------------------------|
| Not Applicable | | |

D. Gravity Flow Pipe

(THE DEPARTMENT TYPICALLY USES THE HAZEN-WILLIAM’S FORMULA FOR A GRAVITY FLOW PIPE SYSTEM)

1. Does the system involve a gravity flow pipe? **YES**

There is a 24” gravity flow pipe from the Butter Creek Lagoon to the Butter Creek Lagoon Pumping Station.

If “NO”, items 2 through 4 relating to this section may be deleted.

2. Complete the table:

| PIPE SIZE | PIPE TYPE | “C” FACTOR | AMOUNT OF FALL | LENGTH OF PIPE | SLOPE | COMPUTED RATE OF WATER FLOW (IN CFS) |
|-----------|--------------|------------|----------------|----------------|-------|--------------------------------------|
| 24” | Ductile Iron | 140 | 0.83 ft | 107 ft | 0.8% | 27.16 cfs |

3. Provide calculations:

Refer to attached Butter Creek Lagoon Pipe Capacity Calculator.

4. If an actual measurement was taken, provide the following:

| DATE OF MEASUREMENT | WHO MADE THE MEASUREMENT | MEASUREMENT METHOD | MEASURED QUANTITY OF WATER (IN CFS) |
|---------------------|--------------------------|--------------------|-------------------------------------|
| Not Applicable | | | |

E. Gravity Flow Canal or Ditch

(THE DEPARTMENT TYPICALLY USES MANNING’S FORMULA FOR CANALS AND DITCHES)

1. Is a gravity flow canal or ditch used to convey the water as part of the distribution system? **NO**

If “NO”, items 2 through 4 relating to this section may be deleted.

Items 2 through 4 relating to this section were deleted.

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F. Additional notes or comments related to the system:

NONE

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SECTION 4 SYSTEM DESCRIPTION

Are there multiple PODs?

YES

If "YES" you will need to copy and complete a separate Section 4 for each POD.

POD Name or Number this section describes (only needed if there is more than one):

Sparks Reservoir

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A. Place of Use

1. Is the right for municipal use?

NO

If "YES" the table below may be deleted.

| TWP | RNG | MER | SEC | QQ | GLOT | DLC | USE | IF IRRIGATION, # PRIMARY ACRES | IF IRRIGATION, # SUPPLEMENTAL ACRES |
|-----|-----|-----|-----|------|-------|-----|------------|--------------------------------------|---|
| 2N | 28E | WM | 4 | NENE | Lot 1 | | Supp Irrig | | 34.00 |
| 2N | 28E | WM | 4 | NWNE | Lot 2 | | Supp Irrig | | 33.90 |
| 2N | 28E | WM | 4 | SWNE | | | Supp Irrig | | 29.20 |
| 2N | 28E | WM | 4 | SENE | | | Supp Irrig | | 29.20 |
| 2N | 28E | WM | 4 | NENW | Lot 3 | | Supp Irrig | | 34.20 |
| 2N | 28E | WM | 4 | NWNW | Lot 4 | | Supp Irrig | | 34.30 |
| 2N | 28E | WM | 4 | SWNW | | | Supp Irrig | | 28.90 |
| 2N | 28E | WM | 4 | SENW | | | Supp Irrig | | 28.90 |
| 2N | 28E | WM | 4 | NESW | | | Supp Irrig | | 33.70 |
| 2N | 28E | WM | 4 | NWSW | | | Supp Irrig | | 33.70 |
| 2N | 28E | WM | 4 | SWSW | | | Supp Irrig | | 31.30 |
| 2N | 28E | WM | 4 | SESW | | | Supp Irrig | | 27.90 |
| 2N | 28E | WM | 4 | NESE | | | Supp Irrig | | 33.50 |
| 2N | 28E | WM | 4 | NWSE | | | Supp Irrig | | 33.00 |
| 2N | 28E | WM | 4 | SWSE | | | Supp Irrig | | 28.50 |
| 2N | 28E | WM | 4 | SESE | | | Supp Irrig | | 28.70 |
| 3N | 28E | WM | 14 | SWSE | | | Supp Irrig | | 1.20 |
| 3N | 28E | WM | 14 | SESE | | | Supp Irrig | | 1.20 |
| 3N | 28E | WM | 23 | NENE | | | Supp Irrig | | 33.60 |
| 3N | 28E | WM | 23 | NWNE | | | Supp Irrig | | 34.20 |
| 3N | 28E | WM | 23 | SWNE | | | Supp Irrig | | 27.70 |
| 3N | 28E | WM | 23 | SENE | | | Supp Irrig | | 27.10 |
| 3N | 28E | WM | 23 | NENW | | | Supp Irrig | | 30.20 |
| 3N | 28E | WM | 23 | NWNW | | | Supp Irrig | | 29.00 |
| 3N | 28E | WM | 23 | SWNW | | | Supp Irrig | | 36.50 |
| 3N | 28E | WM | 23 | SENW | | | Supp Irrig | | 36.95 |

| TWP | RNG | MER | SEC | QQ | GLOT | DLC | USE | IF IRRIGATION, # PRIMARY ACRES | IF IRRIGATION, # SUPPLEMENTAL ACRES |
|-----|-----|-----|-----|------|------|-----|------------|--------------------------------------|---|
| 3N | 28E | WM | 23 | NESW | | | Supp Irrig | | 37.60 |
| 3N | 28E | WM | 23 | NWSW | | | Supp Irrig | | 35.70 |
| 3N | 28E | WM | 23 | SWSW | | | Supp Irrig | | 40.20 |
| 3N | 28E | WM | 23 | SESW | | | Supp Irrig | | 35.60 |
| 3N | 28E | WM | 23 | NESE | | | Supp Irrig | | 30.30 |
| 3N | 28E | WM | 23 | NWSE | | | Supp Irrig | | 31.30 |
| 3N | 28E | WM | 23 | SWSE | | | Supp Irrig | | 23.70 |
| 3N | 28E | WM | 23 | SESE | | | Supp Irrig | | 21.70 |
| 3N | 28E | WM | 26 | NENE | | | Supp Irrig | | 30.20 |
| 3N | 28E | WM | 26 | NWNE | | | Supp Irrig | | 35.70 |
| 3N | 28E | WM | 26 | SWNE | | | Supp Irrig | | 35.20 |
| 3N | 28E | WM | 26 | SENE | | | Supp Irrig | | 28.10 |
| 3N | 28E | WM | 26 | NENW | | | Supp Irrig | | 17.50 |
| 3N | 28E | WM | 26 | NWNW | | | Supp Irrig | | 22.70 |
| 3N | 28E | WM | 26 | SWNW | | | Supp Irrig | | 38.80 |
| 3N | 28E | WM | 26 | SENW | | | Supp Irrig | | 36.60 |
| 3N | 28E | WM | 27 | NENE | | | Supp Irrig | | 36.40 |
| 3N | 28E | WM | 27 | NWNE | | | Supp Irrig | | 26.80 |
| 3N | 28E | WM | 27 | SWNE | | | Supp Irrig | | 37.90 |
| 3N | 28E | WM | 27 | SENE | | | Supp Irrig | | 21.10 |
| 3N | 28E | WM | 27 | NENW | | | Supp Irrig | | 28.40 |
| 3N | 28E | WM | 27 | NWNW | | | Supp Irrig | | 30.40 |
| 3N | 28E | WM | 27 | SWNW | | | Supp Irrig | | 30.40 |
| 3N | 28E | WM | 27 | SENW | | | Supp Irrig | | 31.80 |
| 3N | 28E | WM | 27 | NESW | | | Supp Irrig | | 30.10 |
| 3N | 28E | WM | 27 | NWSW | | | Supp Irrig | | 27.60 |
| 3N | 28E | WM | 27 | SWSW | | | Supp Irrig | | 32.00 |
| 3N | 28E | WM | 27 | SESW | | | Supp Irrig | | 28.90 |
| 3N | 28E | WM | 27 | NESE | | | Supp Irrig | | 38.80 |
| 3N | 28E | WM | 27 | NWSE | | | Supp Irrig | | 40.00 |
| 3N | 28E | WM | 27 | SWSE | | | Supp Irrig | | 16.00 |
| 3N | 28E | WM | 27 | SESE | | | Supp Irrig | | 13.60 |
| 3N | 28E | WM | 28 | NENE | | | Supp Irrig | | 33.00 |
| 3N | 28E | WM | 28 | NWNE | | | Supp Irrig | | 33.00 |
| 3N | 28E | WM | 28 | SWNE | | | Supp Irrig | | 29.40 |
| 3N | 28E | WM | 28 | SENE | | | Supp Irrig | | 29.40 |
| 3N | 28E | WM | 28 | NENW | | | Supp Irrig | | 31.30 |
| 3N | 28E | WM | 28 | NWNW | | | Supp Irrig | | 31.20 |
| 3N | 28E | WM | 28 | SWNW | | | Supp Irrig | | 31.00 |
| 3N | 28E | WM | 28 | SENW | | | Supp Irrig | | 30.80 |

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| TWP | RNG | MER | SEC | QQ | GLOT | DLC | USE | IF IRRIGATION, # PRIMARY ACRES | IF IRRIGATION, # SUPPLEMENTAL ACRES |
|------------------------------|-----|-----|-----|------|------|-----|------------|--------------------------------------|---|
| 3N | 28E | WM | 28 | NESW | | | Supp Irrig | | 30.50 |
| 3N | 28E | WM | 28 | NWSW | | | Supp Irrig | | 30.20 |
| 3N | 28E | WM | 28 | SWSW | | | Supp Irrig | | 39.00 |
| 3N | 28E | WM | 28 | SESW | | | Supp Irrig | | 39.00 |
| 3N | 28E | WM | 28 | NESE | | | Supp Irrig | | 27.20 |
| 3N | 28E | WM | 28 | NWSE | | | Supp Irrig | | 28.00 |
| 3N | 28E | WM | 28 | SWSE | | | Supp Irrig | | 35.90 |
| 3N | 28E | WM | 28 | SESE | | | Supp Irrig | | 30.90 |
| 3N | 28E | WM | 29 | NESW | | | Supp Irrig | | 28.30 |
| 3N | 28E | WM | 29 | NWSW | | | Supp Irrig | | 29.70 |
| 3N | 28E | WM | 29 | SWSW | | | Supp Irrig | | 33.70 |
| 3N | 28E | WM | 29 | SESW | | | Supp Irrig | | 36.50 |
| 3N | 28E | WM | 29 | NESE | | | Supp Irrig | | 30.00 |
| 3N | 28E | WM | 29 | NWSE | | | Supp Irrig | | 26.20 |
| 3N | 28E | WM | 29 | SWSE | | | Supp Irrig | | 34.90 |
| 3N | 28E | WM | 29 | SESE | | | Supp Irrig | | 36.90 |
| 3N | 28E | WM | 32 | NENE | | | Supp Irrig | | 36.70 |
| 3N | 28E | WM | 32 | NWNE | | | Supp Irrig | | 36.90 |
| 3N | 28E | WM | 32 | SWNE | | | Supp Irrig | | 32.20 |
| 3N | 28E | WM | 32 | SENE | | | Supp Irrig | | 32.00 |
| 3N | 28E | WM | 32 | NENW | | | Supp Irrig | | 36.40 |
| 3N | 28E | WM | 32 | NWNW | | | Supp Irrig | | 31.70 |
| 3N | 28E | WM | 32 | SWNW | | | Supp Irrig | | 31.90 |
| 3N | 28E | WM | 32 | SENW | | | Supp Irrig | | 31.50 |
| 3N | 28E | WM | 33 | NENE | | | Supp Irrig | | 31.30 |
| 3N | 28E | WM | 33 | NWNE | | | Supp Irrig | | 36.50 |
| 3N | 28E | WM | 33 | SWNE | | | Supp Irrig | | 31.00 |
| 3N | 28E | WM | 33 | SENE | | | Supp Irrig | | 31.00 |
| 3N | 28E | WM | 33 | NENW | | | Supp Irrig | | 36.90 |
| 3N | 28E | WM | 33 | NWNW | | | Supp Irrig | | 36.30 |
| 3N | 28E | WM | 33 | SWNW | | | Supp Irrig | | 32.00 |
| 3N | 28E | WM | 33 | SENW | | | Supp Irrig | | 32.40 |
| 3N | 28E | WM | 33 | NESW | | | Supp Irrig | | 29.20 |
| 3N | 28E | WM | 33 | NWSW | | | Supp Irrig | | 30.90 |
| 3N | 28E | WM | 33 | SWSW | | | Supp Irrig | | 32.70 |
| 3N | 28E | WM | 33 | SESW | | | Supp Irrig | | 30.50 |
| 3N | 28E | WM | 33 | NESE | | | Supp Irrig | | 31.10 |
| 3N | 28E | WM | 33 | NWSE | | | Supp Irrig | | 31.20 |
| 3N | 28E | WM | 33 | SWSE | | | Supp Irrig | | 32.70 |
| 3N | 28E | WM | 33 | SESE | | | Supp Irrig | | 32.30 |
| Total Acres Irrigated | | | | | | | | | 3284.95 |

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Reminder: The map associated with this claim must identify Donation Land Claims (DLC), Government Lots (GLOT), Quarter Quarters (QQ), and if for irrigation, the number of acres irrigated within each projected DLC, GLOT, and QQ.

B. Diversion and Delivery System Information

Provide the following information concerning the diversion and delivery system. Information provided must describe the equipment used to transport and apply the water from the point of diversion to the place of use.

1. Is a pump used? YES

If "NO" items 2 through item 6 may be deleted.

2. Pump Information:

| MANUFACTURER | MODEL | SERIAL NUMBER | TYPE (CENTRIFUGAL, TURBINE OR SUBMERSIBLE) | INTAKE SIZE | DISCHARGE SIZE |
|-------------------------|------------|---------------|--|-------------|----------------|
| Sparks Lagoon Pump Sta. | | | | | |
| Pump 1 - Cornell | 6HH-F18DBK | C0201115025 | Centrifugal | 8" | 6" |
| Pump 2 - Cornell | 6HH-F18DBK | C0201115035 | Centrifugal | 8" | 6" |
| Pump 3 - Cornell | 6HH-F18DBK | C0201115020 | Centrifugal | 8" | 6" |
| Pump 3 - Cornell | 6HH-F18DBK | C0201115040 | Centrifugal | 8" | 6" |

3. Motor Information:

| MANUFACTURER | RPM | HORSEPOWER |
|-------------------------------|------|------------|
| Butter Creek Lagoon Pump Sta. | | |
| Pump 1 - Baldor EM2563T-4 | 1780 | 200 |
| Pump 2 - Baldor EM2563T-4 | 1780 | 200 |
| Pump 3 - Baldor EM2563T-4 | 1780 | 200 |
| Pump 4 - Baldor EM2563T-4 | 1780 | 200 |

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4. Theoretical Pump Capacity:

| HORSEPOWER | OPERATING PSI | LIFT FROM SOURCE TO PUMP | LIFT FROM PUMP TO PLACE OF USE | TOTAL PUMP OUTPUT (IN CFS) |
|--------------------------------|---------------|-----------------------------|--------------------------------|----------------------------|
| Sparks Lagoon Pump Sta. | | | | |
| Pump 1 – 200 hp | 100 psi | 19 ft positive suction head | 85 ft (800'-715') | 2676 gpm (5.96 cfs) |
| Pump 2 – 200 hp | 100 psi | 19 ft positive suction head | 85 ft (800'-715') | 2676 gpm (5.96 cfs) |
| Pump 3 – 200 hp | 100 psi | 19 ft positive suction head | 85 ft (800'-715') | 2676 gpm (5.96 cfs) |
| Pump 4 – 200 hp | 100 psi | 19 ft positive suction head | 85 ft (800'-715') | 2676 gpm (5.96 cfs) |

5. Provide pump calculations:

SPARKS RESERVOIR PUMPS
 (Four identical 200 hp pumps. Normal peak operation is two pumps.)

Estimated Pumping head (TDH ft)

| | |
|---|---------------|
| Positive head at pump suction | -19 ft |
| Pressure 100 psi at pump discharge head x 2.31 ft/psi = | 231 ft |
| Misc. 10 ft friction loss valves, fittings, | <u>10 ft</u> |
| Total TDH | 222 ft |

Estimated Flow Rate Each Pump

$$Hp = \frac{TDH \times gpm}{3960 \times \text{eff.}} \text{ or } gpm = \frac{3960 \times \text{eff} \times hp}{TDH} = \frac{3960 \times 75\% \times 200 \text{ hp}}{222 \text{ ft}} = 2676 \text{ gpm or } 5.96 \text{ cfs}$$

Estimated Flow Rate for Two Pumps
 2676 gpm x 2 = 5352 gpm (11.93 cfs)

6. Measured Pump Capacity (using meter if meter was present and system was operating):

| INITIAL METER READING | ENDING METER READING | DURATION OF TIME OBSERVED | TOTAL PUMP OUTPUT (IN CFS) |
|-----------------------|----------------------|---------------------------|----------------------------|
| Not Applicable | | | |

Reminder: For pump calculations use the reference information at the end of this document.

7. Is the distribution system piped?

YES

If "NO" items 8 through item 13 may be deleted.

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8. Mainline Information:

| MAINLINE SIZE | LENGTH | TYPE OF PIPE | BURIED OR ABOVE GROUND |
|---------------|--------|--------------|------------------------|
| 6" | 1500' | PVC | Buried |
| 12" | 1330' | PVC | Buried |
| 15" | 14410' | PVC | Buried |
| 16" | 21350' | PVC | Buried |
| 18" | 30590' | PVC | Buried |
| 20" | 12090' | PVC | Buried |
| 24" | 9230' | PVC | Buried |

9. Lateral or Handline Information:

| LATERAL OR HANDLINE SIZE | LENGTH | TYPE OF PIPE | BURIED OR ABOVE GROUND |
|--------------------------|--------|--------------|------------------------|
| Pivot to Mainline | | | |
| 4" | 2150' | PVC | Buried |
| 6" | 3960' | PVC | Buried |
| 8" | 3760' | PVC | Buried |
| 10" | 46860' | PVC | Buried |
| 12" | 3780' | PVC | Buried |

10. Sprinkler Information:

| SIZE | OPERATING PSI | SPRINKLER OUTPUT (GPM) | TOTAL NUMBER OF SPRINKLERS | MAXIMUM NUMBER USED | TOTAL SPRINKLER OUTPUT (CFS) |
|-------------------|---------------|------------------------|---------------------------------|---------------------------------|------------------------------|
| 5/32" dia nozzles | 50 psi | 5 gpm | 66 Two - 1320 ft wheel lines | 66 Two - 1320 ft wheel lines | 330 gpm (0.74 cfs) |
| | | | | | |
| | | | | | |

Reminder: For sprinkler output determination use the reference information at the end of this document.

11. Drip Emitter Information:

| SIZE | OPERATING PSI | EMITTER OUTPUT (GPM) | TOTAL NUMBER OF EMITTERS | MAXIMUM NUMBER USED | TOTAL EMITTER OUTPUT (CFS) |
|----------------|---------------|----------------------|--------------------------|---------------------|----------------------------|
| Not Applicable | | | | | |
| | | | | | |
| | | | | | |

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12. Drip Tape Information:

| DRIPPER SPACING IN INCHES | GPM PER 100 FEET | TOTAL LENGTH OF TAPE | MAXIMUM LENGTH OF TAPE USED | TOTAL TAPE OUTPUT (CFS) | ADDITIONAL INFORMATION |
|---------------------------------|---------------------|----------------------------|-----------------------------------|-------------------------------|------------------------|
| Not Applicable | | | | | |
| | | | | | |
| | | | | | |

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13. Pivot Information:

| PIVOT NUMBER | MANUFACTURER | MAXIMUM WETTED RADIUS | OPERATING PSI | TOTAL PIVOT OUTPUT (GPM) | TOTAL PIVOT OUTPUT (CFS) |
|--------------|--------------|-----------------------|---------------|--------------------------|--------------------------|
| LL01 | Valley | 1355' | 50 psi | 750 gpm | 1.67 cfs |
| LL02 | Pierce | 1358' | 50 psi | 750 gpm | 1.67 cfs |
| LL03 | Pierce | 1318' part circle | 50 psi | 750 gpm | 1.67 cfs |
| LL04 | Valley | 1316' | 50 psi | 750 gpm | 1.67 cfs |
| LL05 | Valley | 1217' | 50 psi | 750 gpm | 1.67 cfs |
| LL06 | Pierce | 1338' | 50 psi | 750 gpm | 1.67 cfs |
| LL07 | Valley | 1654' part circle | 50 psi | 750 gpm | 1.67 cfs |
| LL08 | Valley | 1291' | 50 psi | 750 gpm | 1.67 cfs |
| LL09 | Valley | 1281' | 50 psi | 750 gpm | 1.67 cfs |
| LL10 | Pierce | 1389' | 50 psi | 750 gpm | 1.67 cfs |
| LL11 | Pierce | 1315' | 50 psi | 750 gpm | 1.67 cfs |
| LL12 | Valley | 1312' | 50 psi | 750 gpm | 1.67 cfs |
| LL13 | Pierce | 1333' | 50 psi | 750 gpm | 1.67 cfs |
| LL14 | Valley | 1272' | 50 psi | 750 gpm | 1.67 cfs |
| LL15 | Pierce | 1313' | 50 psi | 750 gpm | 1.67 cfs |
| LL16 | Pierce | 1327' | 50 psi | 750 gpm | 1.67 cfs |
| LL17 | Valley | 1328' | 50 psi | 750 gpm | 1.67 cfs |
| LL18 | Valley | 1322' | 50 psi | 750 gpm | 1.67 cfs |
| LL19 | Valley | 1305' | 50 psi | 750 gpm | 1.67 cfs |
| LL20 | Valley | 1276' | 50 psi | 750 gpm | 1.67 cfs |
| LL21 | Valley | 537' | 50 psi | 750 gpm | 1.67 cfs |
| LL22 | Valley | 537' | 50 psi | 750 gpm | 1.67 cfs |
| LL23 | Valley | 537' | 50 psi | 750 gpm | 1.67 cfs |
| LL24 | Valley | 1328' | 50 psi | 750 gpm | 1.67 cfs |
| LL25 | Valley | 1306' | 50 psi | 750 gpm | 1.67 cfs |
| LL26 | Valley | 1314' | 50 psi | 750 gpm | 1.67 cfs |
| LL27 | Valley | 1313' | 50 psi | 750 gpm | 1.67 cfs |
| LL28 | Valley | 1333' | 50 psi | 750 gpm | 1.67 cfs |
| LL29 | Valley | 1318' | 50 psi | 750 gpm | 1.67 cfs |
| | | | | | |

C. Storage

1. Does the distribution system include in-system storage (e.g. storage tank, bulge in system / reservoir)?

NO

If "NO", item 2 and 3 relating to this section may be deleted.

If "YES" is it a: Storage Tank
 Bulge in System / Reservoir

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NO

NO

Complete appropriate table(s), unused table may be deleted.

2. Storage Tank:

| MATERIAL (CONCRETE, FIBERGLASS, METAL, ETC.) | CAPACITY (IN GALLONS) | ABOVE GROUND OR BURIED |
|---|--------------------------|------------------------|
| Not Applicable | | |

3. Bulge in System / Reservoir:

| RESERVOIR NAME OR NUMBER (CORRESPOND TO MAP) | APPROXIMATE DAM HEIGHT | APPROXIMATE CAPACITY (IN ACRE FEET) |
|---|------------------------|-------------------------------------|
| Not Applicable | | |

D. Gravity Flow Pipe

(THE DEPARTMENT TYPICALLY USES THE HAZEN-WILLIAM'S FORMULA FOR A GRAVITY FLOW PIPE SYSTEM)

1. Does the system involve a gravity flow pipe?

YES

There is a 30" gravity flow pipe from the Sparks Reservoir to the Sparks Reservoir Pumping Station.

If "NO", items 2 through 4 relating to this section may be deleted.

2. Complete the table:

| PIPE SIZE | PIPE TYPE | "C" FACTOR | AMOUNT OF FALL | LENGTH OF PIPE | SLOPE | COMPUTED RATE OF WATER FLOW (IN CFS) |
|-----------|-----------|------------|----------------|----------------|-------|--------------------------------------|
| 30" | HDPE | 150 | 3.0 ft | 600 ft | 0.5% | 41.28 cfs |

3. Provide calculations:

Refer to attached Sparks Reservoir Pipe Capacity Calculator.

4. If an actual measurement was taken, provide the following:

| DATE OF MEASUREMENT | WHO MADE THE MEASUREMENT | MEASUREMENT METHOD | MEASURED QUANTITY OF WATER (IN CFS) |
|---------------------|--------------------------|--------------------|-------------------------------------|
| Not Applicable | | | |

E. Gravity Flow Canal or Ditch

(THE DEPARTMENT TYPICALLY USES MANNING'S FORMULA FOR CANALS AND DITCHES)

1. Is a gravity flow canal or ditch used to convey the water as part of the distribution system?

NO

If "NO", items 2 through 4 relating to this section may be deleted.

Items 2 through 4 relating to this section were deleted.

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F. Additional notes or comments related to the system:

NONE

**SECTION 5
CONDITIONS**

All conditions contained in the permit, permit amendment, or any extension final order shall be addressed. Reports that do not address all performance related conditions will be returned.

1. Time Limits:

Permits and any extension final orders contain any or all of the following dates: the date when the actual construction work was to begin, the date when the construction was to be completed, and the date when the complete application of water to the proposed use was to be completed. These dates may be referred to as ABC dates. Describe how the water user has complied with each of the development timelines established in the permit or permit extension of time:

| | DATE FROM PERMIT | DATE ACCOMPLISHED* | DESCRIPTION OF ACTIONS TAKEN BY WATER USER TO COMPLY WITH THE TIME LIMITS |
|-----------------------------------|------------------|--------------------|--|
| ISSUANCE DATE | July 9, 2009 | | |
| BEGIN CONSTRUCTION (A) | Not Stated | July 9, 2009 | Construction of the irrigation system had occurred prior to the permit being issued. |
| COMPLETE CONSTRUCTION (B) | July 9, 2014 | December 2002 | The water user installed the main pipe from the Butter Creek Reservoir to the Sparks Reservoir prior to the permit being issued. |
| COMPLETE APPLICATION OF WATER (C) | July 9, 2014 | July 9, 2014 | The water user used the water from Butter Creek and Sparks Reservoirs to provide supplemental irrigation to the land. |

* MUST BE WITHIN PERIOD BETWEEN PERMIT OR ANY EXTENSION FINAL ORDER ISSUANCE AND THE DATE TO COMPLETELY APPLY WATER

2. Is there an extension final order(s)?

NO

If "NO", items a and b relating to this section may be deleted.

Items a and b relating to this section were deleted.

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3. Measurement Conditions:

a. Does the permit, permit amendment, or any extension final order require the installation of a meter or approved measuring device? **YES**

If "NO", items b through f relating to this section may be deleted.

Reminder: If a meter or approved measuring device was required, the COBU map must indicate the location of the device in relation to the point of diversion.

b. Has a meter been installed? **YES**

c. Meter Information

| POD NAME OR # | MANUFACTURER | SERIAL # | CONDITION (WORKING OR NOT) | CURRENT METER READING | DATE INSTALLED |
|---------------------------------------|--------------------------------|------------|-------------------------------|--------------------------|----------------|
| Butter Creek Reservoir To Sparks Res. | Foxboro Model 9110A-SIBA-NSJ-P | 935827T471 | Working | 364243257 gal | 2002 |
| Sparks Reservoir Line 1 | Foxboro Model 9112A-SIBA-NSJ-P | 820727T441 | Working | 107031304 gal | 2002 |
| Sparks Reservoir Line 2 | Foxboro Model 9112A-SIBA-NSJ-P | 988027T481 | Working | 909987840 gal | 2002 |
| Sparks Reservoir Line 3 | Foxboro Model 9112A-SIBA-NSJ-P | 035427T501 | Working | 920105578 gal | 2002 |

If a meter has been installed, items d through f relating to this section may be deleted.

Items d through f relating to this section were deleted.

4. Recording and reporting conditions:

a. Is the water user required to report the water use to the Department? **YES**

If "NO", item b relating to this section may be deleted.

b. Have the reports been submitted? **YES**

The water use reports are also being submitted with this COBU report.

If the reports have not been submitted, attach a copy of the reports if available.

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5. Fish Screening:

a. Are any points of diversion required to be screened to prevent fish from entering the point of diversion? NO

See attached letter from the Oregon Department of Fish and Wildlife regarding fish screening.

If "NO", items b through e relating to this section may be deleted.

Items b through e relating to this section were deleted.

6. By-pass Devices:

a. Are any points of diversion required to have a by-pass device to prevent fish from entering the point of diversion? NO

See attached letter from the Oregon Department of Fish and Wildlife regarding fish by-pass.

If "NO", items b and c relating to this section may be deleted.

Items b and c relating to this section were deleted.

Reminder: If by-pass devices were required, the COBU map must indicate their location in relation to the point of diversion.

7. Other conditions required by permit, permit amendment final order, or extension final order:

- a. Was the water user required to restore the riparian area if it was disturbed? YES

- b. Was a fishway required? See attached letter from ODF&W. NO
- c. Was submittal of a water management and conservation plan required? NO
- d. Other conditions? NO

If "YES" to any of the above, identify the condition and describe the water user's actions to comply with the condition(s):

The permit includes a condition that if the riparian area is disturbed in the process of developing a point of diversion, the permittee shall be responsible for restoration and enhancement of such riparian area in accordance with ODFW's Fish and Wildlife Habitat Mitigation Policy OAR 635-415. In this permit the PODs are off channel reservoirs and were already developed at the time the permit was issued. Therefore, no riparian areas were disturbed in development of this permit.

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SECTION 6
ATTACHMENTS

Provide a list of any additional documents you are attaching to this report:

| ATTACHMENT NAME | DESCRIPTION |
|--|--|
| COBU Map Sht 1 of 2 | COBU Map Sht 1 of 2 |
| COBU Map Sht 2 of 2 | COBU Map Sht 2 of 2 |
| Butter Creek Lagoon Gravity Flow Pipe Calculator | Calculation of flow in Butter Creek Lagoon 24" outlet pipe. |
| Sparks Reservoir Gravity Flow Pipe Calculator | Calculation of flow in Sparks Reservoir 30" outlet pipe. |
| Letter for ODFW | ODFW letter stating fish screens and by pass devices are not required. |
| Water Use Reports | Water Use Reports for 2012, 2013, and 2014 |

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SECTION 7

CLAIM OF BENEFICIAL USE MAP

The Claim of Beneficial Use Map must be submitted with this claim. Claims submitted without the Claim of Beneficial Use map will be returned. The map shall be submitted on poly film at a scale of 1" = 1320 feet, 1" = 400 feet, or the original full-size scale of the county assessor map for the location.

Provide a general description of the survey method used to prepare the map. Examples of possible methods include, but are not limited to, a traverse survey, GPS, or the use of aerial photos. If the basis of the survey is an aerial photo, provide the source, date, series and the aerial photo identification number.

The COBU map was prepared using the application map, the county assessors tax map, Google Earth images and observations and measurements made during the site visit.

Map Checklist

Please be sure that the map you submit includes ALL the items listed below.
(Reminder: Incomplete maps and/or claims may be returned.)

- Map on polyester film
- Appropriate scale (1" = 400 feet, 1" = 1320 feet, or the original full-size scale of the county assessor map)
- Township, Range, Section, Donation Land Claims, and Government Lots
- If irrigation, number of acres irrigated within each projected Donation Land Claims, Government Lots, Quarter-Quarters
- NA** Locations of fish screens and/or fish by-pass devices in relationship to point of diversion
- Locations of meters and/or measuring devices in relationship to point of diversion or appropriation
- Conveyance structures illustrated (pumps, reservoirs, pipelines, ditches, etc.)
- Point(s) of diversion or appropriation (illustrated and coordinates)
- Tax lot boundaries and numbers
- Source illustrated if surface water
- Disclaimer ("This map is not intended to provide legal dimensions or locations of property ownership lines")
- Application and permit number or transfer number
- North arrow
- Legend
- CWRE stamp and signature

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BUTTER CREEK RESERVOIR - GRAVITY FLOW OUTLET PIPE

Pipe Capacity Calculator
for pipes flowing full, using the Hazen-Williams Formula

Data Entry (fill in underlined blanks)

Interior Dia 24 inches, or 2 feet
Roughness 140
Fall = 0.83 feet per 107 feet of distance
Grade = 0.007757 , or 0.80%

Results calculated

Area of cross section = 3.141593 square feet
Wetted Perimeter = 6.283185 feet
Hydraulic Radius = 0.5
Velocity = 8.646284 feet per second

Pipe Capacity = 27.163 cubic feet per second

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SPARKS RESERVOIR GRAVITY FLOW OUTLET PIPE

Pipe Capacity Calculator
for pipes flowing full, using the Hazen-Williams Formula

Data Entry (fill in underlined blanks)

| | | |
|--------------|---------------|--------------------------|
| Interior Dia | 30 inches, or | 2.5 feet |
| Roughness | 150 | |
| Fall = | 3 feet | per 600 feet of distance |
| Grade = | 0.005 , or | 0.50% |

Results calculated

| | |
|---------------|------------------------------|
| Area of cross | 4.908739 square feet |
| Wetted Per | 7.853982 feet |
| Hydraulic R | 0.625 |
| Velocity = | 8.41114 feet per second |
| Pipe Capac | 41.288 cubic feet per second |

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Oregon

Kate Brown., Governor

Department of Fish and Wildlife
John Day Fish Screening and Passage
357 Patterson Bridge Rd.
P.O. Box 515
John Day, OR 97845
Voice: 541-575-0561
FAX (541) 575-0868
www.dfw.state.or.us/

October 12, 2021

JR Simplot Co.
Vic Conrad
PO Box 27
Boise, ID 83707



Dear Mr. Conrad,

Your fish screen was inspected on 10/12/2021. In reference to water right transfer file number T-6783 this letter confirms that two National Marine Fisheries Service criteria fish screens as approved by ODFW is located on the property near GPS coordinates: West: 45.790078, -119.304839 and East: 45.792021, -119.293156.

In regards to the inspection of the fish screens located on Umatilla River, the following has been determined:

1. The screens located at coordinates West: 45.790078, -119.304839 and East: 45.792021, -119.293156 are water user-built screens using 3/32nd diameter stainless steel perforated plate.
2. The west station is two passive screens that are 24" long and 12" diameter manifolded together.
3. The west station is approved for water use up to 1,409.54 GPM or 3.14 CFS.
4. The east station is two passive screens that are 24" long and 14.5" diameter manifolded together.
5. The east station is approved for water use up to 1,775.84 GPM or 3.95 CFS.
6. All screen and pump configurations meet National Marine Fisheries Service criteria at the time of inspection, any changes or modifications to the configurations will not be covered by this certification letter.
7. These screens are end of pipe screens; therefore, no by-pass is required.

Please contact me if you have any questions regarding this letter.

Sincerely,

Nathaniel Ashley
Fish Screening and Passage Coordinator

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CC: Oregon Water Resources Department

| Buttercreek and Sparks Reservoirs 2012 Water Use Total acre feet delivered | | | | |
|--|----------------------|----------------------|----------------------|-------|
| Month | Flow Meter Line 1 | Flow Meter Line 2 | Flow Meter Line 3 | Total |
| January | 0.0 | 0.0 | 0.0 | 0.0 |
| February | 0.0 | 0.0 | 0.0 | 0.0 |
| March | 0.0 | 0.0 | 0.0 | 0.0 |
| April | 0.0 | 0.0 | 0.0 | 0.0 |
| May | 0.0 | 1.6 | 44.8 | 46.4 |
| June | 29.6 | 39.6 | 74.8 | 143.9 |
| July | 29.8 | 46.0 | 21.3 | 97.1 |
| August | 0.0 | 0.0 | 0.0 | 0.0 |
| Sept | 19.4 | 0.0 | 5.2 | 24.6 |
| October | 0.0 | 0.0 | 0.0 | 0.0 |
| Nov | 0.0 | 0.0 | 0.0 | 0.0 |
| Dec | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 78.7 | 87.1 | 146.1 | 312.0 |

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| Buttercreek and Sparks Reservoirs 2013 Water Use Total arce feet delivered | | | | |
|--|----------------------|----------------------|----------------------|-------|
| Month | Flow Meter Line 1 | Flow Meter Line 2 | Flow Meter Line 3 | Total |
| January | 0.0 | 0.0 | 0.0 | 0.0 |
| February | 0.0 | 0.0 | 0.0 | 0.0 |
| March | 0.7 | 0.0 | 40.7 | 41.4 |
| April | 9.3 | 0.0 | 2.7 | 12.0 |
| May | 0.0 | 0.0 | 0.0 | 0.0 |
| June | 37.8 | 0.0 | 70.5 | 108.3 |
| July | 128.1 | 0.0 | 17.5 | 145.6 |
| August | 36.9 | 0.0 | 19.3 | 56.2 |
| Sept | 11.1 | 0.0 | 4.0 | 15.1 |
| October | 7.1 | 0.0 | 0.2 | 7.2 |
| Nov | 0.0 | 0.0 | 0.0 | 0.0 |
| Dec | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 230.9 | 0.0 | 154.9 | 385.9 |

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| Buttercreek and Sparks Reservoirs 2014 Water Use Total arce feet delivered | | | | |
|--|----------------------|----------------------|----------------------|-------|
| Month | Flow Meter Line 1 | Flow Meter Line 2 | Flow Meter Line 3 | Total |
| January | 0.0 | 0.0 | 0.0 | 0.0 |
| February | 0.0 | 0.0 | 0.0 | 0.0 |
| March | 0.0 | 0.0 | 3.3 | 3.3 |
| April | 0.0 | 0.0 | 0.0 | 0.0 |
| May | 0.0 | 0.0 | 0.0 | 0.0 |
| June | 44.6 | 0.0 | 0.0 | 44.6 |
| July | 33.7 | 0.0 | 0.0 | 33.7 |
| August | 17.4 | 0.0 | 0.0 | 17.4 |
| Sept | 7.6 | 0.0 | 2.1 | 9.7 |
| October | 21.5 | 0.0 | 14.1 | 35.5 |
| Nov | 0.0 | 0.0 | 0.0 | 0.0 |
| Dec | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 124.7 | 0.0 | 19.4 | 144.1 |

Received
 MAY 21 2025
 OWRD

CLARK Gerald E * WRD

From: CLARK Gerald E * WRD
Sent: Tuesday, March 25, 2025 2:41 PM
To: 'dalevconsulting@gmail.com'
Cc: wporfily@gmail.com; boblevy@windyriverfarms.com; KAVANAGH Kerry L * WRD
Subject: RE: COBU for Permit S-54582

Dale,

Thanks for the update. I have talked with CSG Staff and they are aware that the mylars are on their way. We will merge them with the previously received Claim materials.

Have a great day!

Gerry

Gerry Clark

Oregon Water Resources Department

*Program Analyst, Certificate Section, Water Right Services Division
725 Summer Street NE, Suite A Salem, OR 97301 | Phone 503-979-9103*

From: dalevconsulting@gmail.com <dalevconsulting@gmail.com>
Sent: Tuesday, March 25, 2025 2:33 PM
To: CLARK Gerald E * WRD <Gerald.E.CLARK@water.oregon.gov>
Cc: wporfily@gmail.com; boblevy@windyriverfarms.com
Subject: COBU for Permit S-54582

Hi Gerry,

I prepared a COBU report for Permit S-54582. The original report document was recently mailed to the department. The report document included paper copies of 11" x 17" map sheets (there are two map sheets). The mylar map sheets were not included with the original COBU document because we didn't want to fold the mylar sheets. I am mailing the 11" x 17" mylar map sheets to you today. Please watch for the mylar sheets and file them with the original COBU report.

Thank you,
Dale

DGV Consulting, PLLC
Dale VanSchoiack, PE, CWRE
2141 S. Lyle, Kennewick, WA 99337
509 627 8717
dalevconsulting@gmail.com