

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 65-13786
Exam Date: 06/24/2019

1. Current Owner:
C & S FAMILY LLC 1234 LOMBARDY LN OAK HARBOR WA 98277-8112
2. Accompanied by: Steve Walden
Phone No: 360-708-6120
Address: 18061 Locust Ln Caldwell, ID 83607-9770
Relationship to permit Holder: Landowner

3. **SOURCE:**
FLAT CREEK

Tributary
GOLD FORK RIVER

Method of Determination: GPS, USGS DRG Map

B. OVERLAP REVIEW

1. Other water rights with the same place of use: NO Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: N/A

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

Water Right No.	Source	Purpose of Use	Basis

Comments: N/A

C. DIVERSION AND DELIVERY SYSTEM

1. **LOCATION OF POINT(S) OF DIVERSION:**

FLAT CREEK NE¼ SE¼, Sec. 4, Twp 15N, Rge 04E, B.M. VALLEY County to NESE pond

Method of Determination: ESRI Imagery, Beneficial Use Field Exam, Meeting with Steve Walden

PLACE OF USE: RECREATION STORAGE

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
15N	04E	4													X				

PLACE OF USE: WILDLIFE STORAGE

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
15N	04E	4													X				

PLACE OF USE: STOCKWATER STORAGE

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
15N	04E	4													X				

PLACE OF USE: FIRE PROTECTION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
15N	04E	4													X				

Method of Determination:

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
N/A	N/A	N/A	N/A	N/A	N/A

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. Measurements: None required per IDAPA BU Exam Rule 35.01.r.iii

E. FLOW CALCULATIONS**Measured Method: Theoretical Calculation**

$$\frac{8.8 * 0.7 * 8.5 \text{ hp}}{15 \text{ ft} + 2.31 * 10 \text{ psi}} = 1.37 \text{ cfs}$$

Recommend 0.20 cfs for both fire protection and diversion to storage since 0.2cfs is the permitted diversion rate. Diversion rate is non-additive for Diversion to Storage and Fire Protection. Theoretical calculation indicates maximum system capability.

F. VOLUME CALCULATIONS**NESE POND: STOCKWATER/RECREATION/WILDLIFE STORAGE**

Average Depth: 6 ft

Surface Area: 0.17 Acre (GIS measurement)

Pond Capacity: 1.02 AF

Seepage: 0.2 ft/day = 12.4 AFA

Evaporative Loss: 0.2 AFA

Total annual volume: 13.6 AF

See attached Pond Calculation Spreadsheet.

STOCKWATER PER AP MEMO 3:70 head stock: $70 * 0.0134 = 0.94 \text{ AF}$

G. NARRATIVE/REMARKS/COMMENTS

This permit authorizes the diversion of 0.20 cfs and storage of 20.0 afa from Flat Creek for multiple storage uses and for fire protection. Proof of beneficial use was submitted on December 26, 2012. Cody Parker completed this field exam for 65-13786 and 65-13787 on June 24, 2019, accompanied by Mr. Walden, the new property owner.

The point of diversion is on Flat Creek located in the NESE of Sec 4, T15N, R04E. Water from Flat Creek is diverted using a 8.5 hp Robin/Subaru portable pump with a capacity of 1.37 cfs and a three-inch mainline directs water into a 0.2-acre pond which is also located in the NESE ¼ ¼ of T15N R04E S4. This pond is used, as developed, for Recreation Storage, Wildlife Storage, and Stockwater Storage. There are 70 head of cattle, which warrants the storage of 0.94 AFA per AP Memo 3, though the pond capacity totals 1.02 AF. I recommend the pond capacity of 1.02 AFA to be licensed for Stockwater Storage, non-additive to the other storage volumes. The diversion rate for Diversion to Storage should be licensed at the permitted diversion rate of 0.20 cfs, since the system capacity is capable of easily delivering the permitted diversion rate. The fire protection shape is the same as the storage shapes. It is likely that the owner would use the water in any instance of fighting an existing fire, which the locations cannot be predicted. However, because the owner can use water for fire protection without an active water right, it is not necessary to describe fire protection as the five QQs owned and all surrounding public land.

Conditions 26A was removed from the permit, as the development period is complete. Condition 01H was removed rather than replaced with R02, since the point of diversion includes a small pump which can be pulled out of the creek, providing the watermaster with the means suitable of controlling the diversion works. Condition 121 was replaced with 103 per department standard.

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>
RECREATION STORAGE	01/01 to 12/31		13.6 AF
WILDLIFE STORAGE	01/01 to 12/31		13.6 AF
DIVERSION TO STORAGE	01/01 to 12/31	0.20 CFS	
STOCKWATER STORAGE	01/01 to 12/31		1.02 AF
FIRE PROTECTION	01/01 to 12/31	0.20 CFS	

Totals: 0.20 CFS 13.6 AF

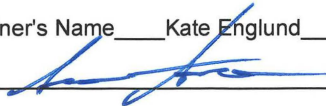
2. Recommended Amendments

 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 Kate Englund - Water Resource Agent

Field Examiner's Name Kate Englund Date May 13, 2026

Reviewer  Date 6/25/2026

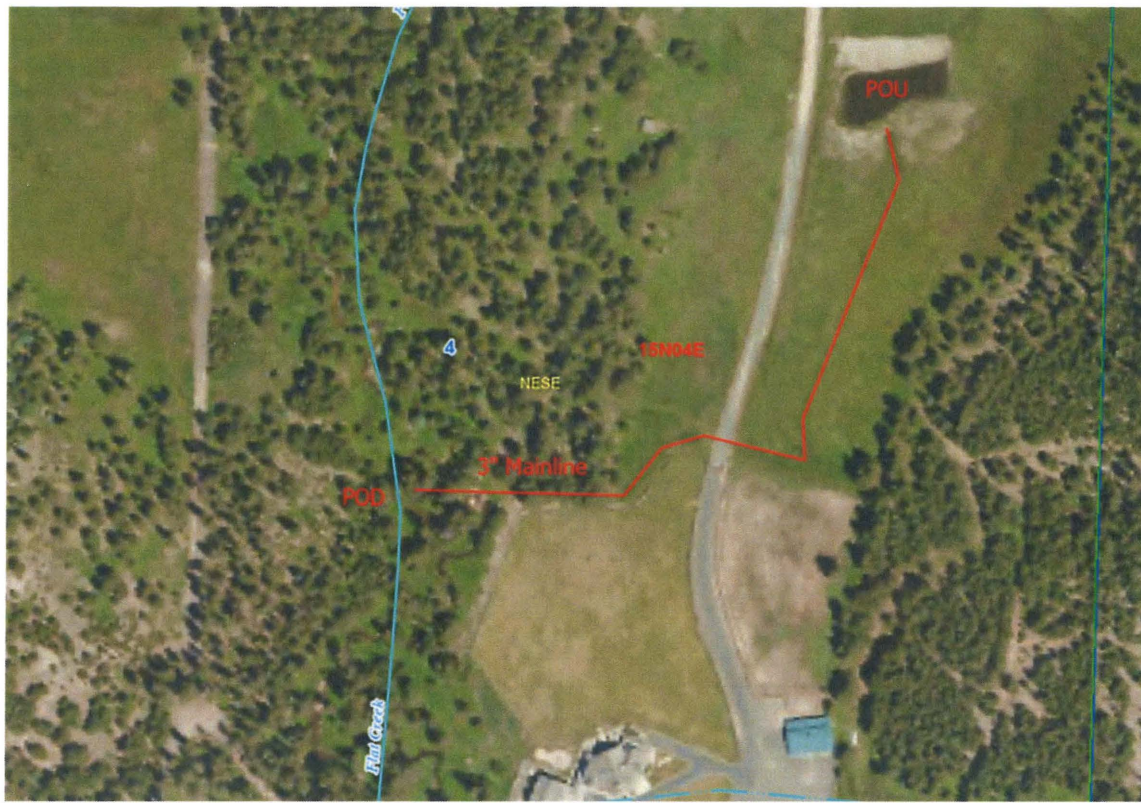


Figure 1 System diagram showing point of diversion from Flat Creek, 3" Mainline, and storage pond.

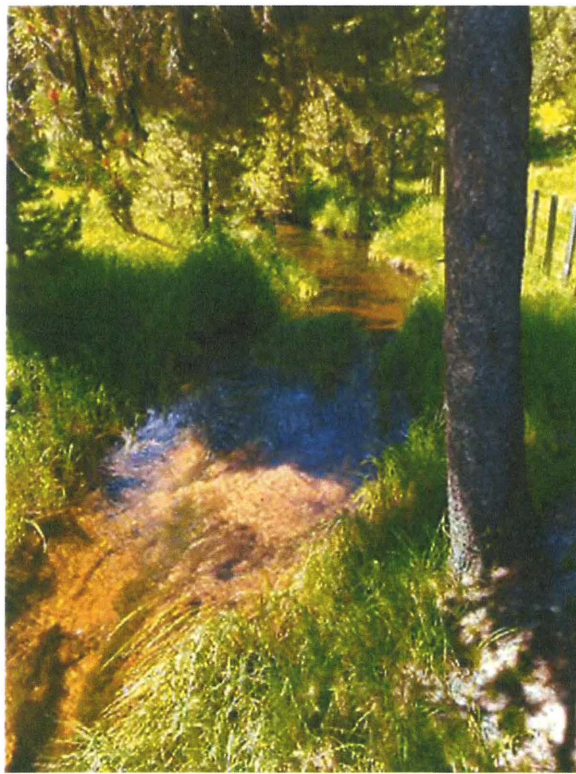


Figure 2 Flat Creek at Point of Diversion. The movable pump was not present at the time of the field exam.

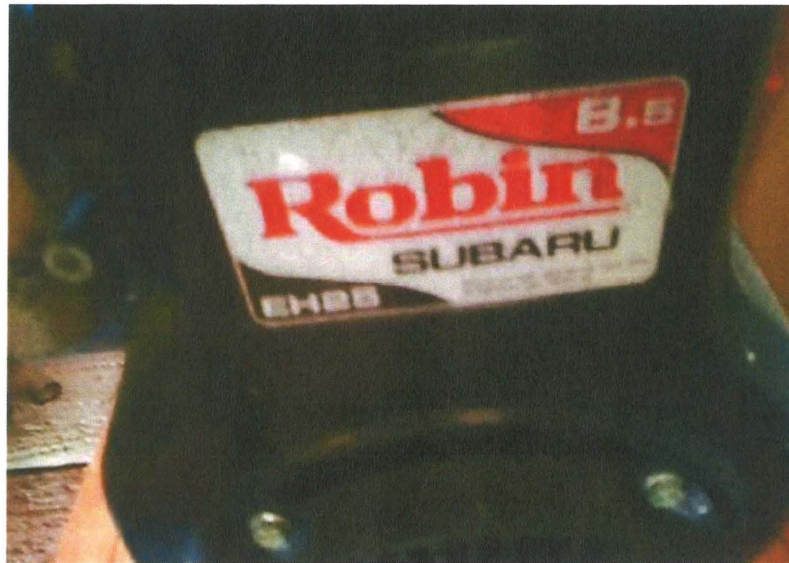


Figure 3 Subaru 8.5hp pump used to divert water from Flat Creek.

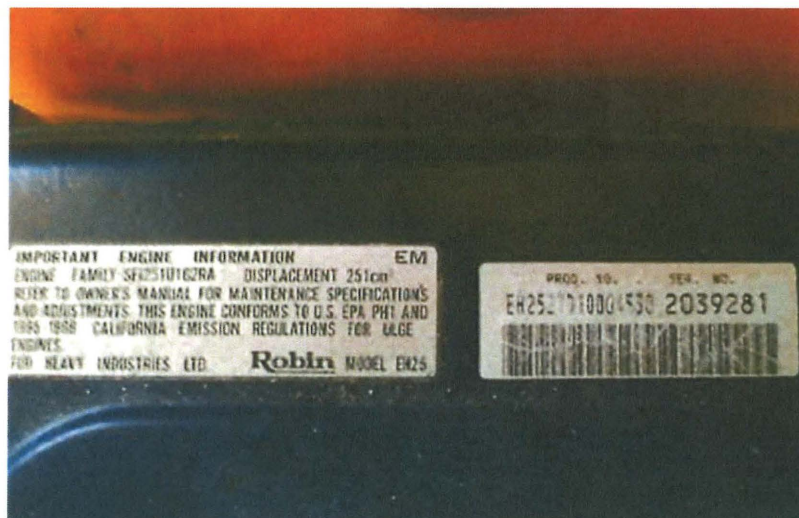


Figure 4 Serial number for pump: 2039281.

Seepage Loss Calculations

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total annual seepage losses from a pond.

FILE NUMBER	65-13787
REVIEWER	Cody Parker
DATE	11/23/2016

User Input
Calculated value
Formula Explanations

INPUTS

Pond Surface Area (AC.)	0.17	AC.
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Pond Surface Area (SQ. FT.)	7405	SQ. FT.
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I used the following method to obtain my Soil Classification Information:	NRCS Web Soil Survey	
My Soil Classification is	SM	
Suggested Seepage Rate (FT./DAY)	0.2000	FT./DAY

Formula: (Surface Area X Seepage Rate) X 7.48 = Gallons Per Day Loss
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Convert to GPD	11078	GPD
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Total Seepage Loss (AFA)	12.4	AFA
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Though sand and gravel seepage rates may actually be higher, the maximum allowable rate is 0.2 ft/day, pursuant to Administrative Memo "Seepage Loss Standards for Ponds and Reservoirs."

Suggested Seepage Rates for Different Soil Types:

GW, GP, GM, GC, SW, SP and SM (silty sand, sand silt mixtures and gravel mixtures) = 0.2 ft per day
OL and ML (Inorganic silts - very fine sands, silty, or clayey fine sands) = 0.02 ft per day
SC (clayey sands, sand clay mixtures) = 0.007 ft per day
CL (Low to medium plasticity clays) = 0.003 ft per day
MH, OH, PT and CH (high plasticity clays) = 0.0003 ft per day
LINED PONDS (liners can be chemical, fabric, or bentonite) = 0 ft per day
Ponds Intercepting Groundwater (excavated ponds filled by ground water) = 0 ft per day

PLEASE NOTE: The initial basis for the Suggested Seepage Rates in the table above is found on Page 16 of Seepage from Fish Ponds, Bulletin 599, August 1989 Alabama Agricultural experiment Station, Auburn University, Auburn University Alabama. If you don't know the soil type, please refer to the map provided at the NRCS Web Soil Survey (Tab #1), an ArcMap Soil Classification Map (Tab #1.1), or published NRCS Soil Survey (Tab #1.2). Use "0" if the pond fill relies on the water table.

Figure 5 Seepage Loss calculations for NESE pond, calculated by original field examiner.

Total Storage Calculations

FILE NUMBER	65-13787
REVIEWER	Cody Parker
DATE	11/23/2016

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

Surface Area (AC.)	0.17	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	6	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: If you know the maximum depth and not the average depth, the Field Examiner's Handbook suggests multiplying the maximum depth by 0.4 to get the average depth, or you can use any method that seems reasonable to attain average depth.
Pond Capacity (AF)	1.02	Pond Capacity is calculated by multiplying the Pond Surface Area by the Average Pond Depth. If you know the capacity, divide the capacity by surface area and enter the average pond depth in the space above. Note: If pond capacity is determined using a method shown on the "Pond Capacity" sheet, the user may need to modify the value of "Pond Capacity" (cell B9) manually. Note that if the value is modified manually, the formula will be altered for future use.

Figure 6 Storage capacity calculation, provided by original field examiner.

Evaporation Loss Calculations

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the annual evaporation losses from a pond.

FILE NUMBER	65-13787
REVIEWER	Cody Parker
DATE	11/23/2016

User Input
Calculated value
Formula Explanations

The acronyms used on the Kimberly Research Center website are defined below:
P = Precipitation
ET = Evapotranspiration
P _d = Precipitation deficit
P _d = ET - P

USING THIS SPREADSHEET

Use the link below to access the Kimberly Research Center website. This website provides the Precipitation Deficit for a station most representative of the pond under examination. The Precipitation Deficit is the total amount of free water surface evaporation minus the precipitation for a given area, which gives the total amount of evaporative losses incurred by the pond. There are several weather sites that are used throughout the state. IDWR staff can find the nearest site using Arc Map. The shape file containing the sites can be found at X:/Spatial/Climate/ETIdahostations.shp.

Instructions:

1. Use the link below to navigate to ET Idaho 2012.
2. Select the station which is most representative to your pond location.
3. Click Submit Query.
4. Under "Land Covers with Evapotranspiration Estimates," select "Open Water - Shallow Systems (ponds, streams)" or "Open Water - small stock ponds" depending on the pond size.
5. Click the link to "Precipitation Deficit."
6. Reference and copy (ctrl + C) the first subheading "Mean" values.
7. Click the "Paste Values from ET Idaho" button. The table will automatically enter a zero (0) for any negative precipitation deficit values.

Found at: <http://data.kimberly.uidaho.edu/ETIdaho/>

Precipitation Deficit

Station: Cascade 1 NW (NWS -- 101514)

Month	mm/day ¹	Days per month	mm/Month
Jan	-1.67	31	0.00
Feb	-1.30	28	0.00
March	-0.64	31	0.00
April	0.51	30	15.30
May	1.34	31	41.54
June	2.29	30	68.70
July	3.59	31	111.29
August	3.10	31	96.10
September	1.85	30	55.50
October	0.12	31	3.72
November	-1.93	30	0.00
December	-2.54	31	0.00

PLEASE NOTE: The seasonal average for precipitation deficit should not be used for calculations because precipitation often exceeds evaporation during wetter months of the year. If the pond is kept full, excess precipitation during wetter months does not serve to refill the pond during drier months.

For example, see Sandpoint KSPT (NWS -- 108137), the annual precipitation deficit is -106 mm. However, April through September have positive precipitation deficit values. To properly estimate the annual volume of water necessary to refill a pond due to evaporation losses, the table will automatically enter a zero (0) for each month that the precipitation value is reported as a negative value.

As described above, precipitation offsets evaporation in winter months, so the net effect is that wintertime precipitation deficit is usually zero.

Total mm/year = 392.15

$$[(\text{mm/yr}) \div (\text{convert to feet})] \times (\text{Surface area of pond, in acres}) = \text{Evaporation Loss in Acre Feet}$$

$$(392.15 \div 304.8) \times 0.17 = 0.2 \text{ AFA}$$

Figure 7 Evaporative Loss calculations for NESE pond, calculated by original field examiner.