

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 67-15058
Exam Date: 5/9/2017

1. Current Owner:
DEBRA NYBERG 1305 PRICE RD WEISER ID 83672

2. Accompanied by: Dennis Nyberg
Phone No: (208) 549-0358
Address: 1305 PRICE RD, WEISER, ID 83672
Relationship to Permit Holder: Husband

3. SOURCE:
SPRING

TRIBUTARY:
WARM SPRINGS CREEK

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 67-15069
2. Other water rights with the same point-of-diversion: None

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

SPRING NW¼NE¼NW¼ Sec. 27, Twp 12N, Rge 06W, B.M. WASHINGTON County
SPRING SW¼NE¼NW¼ Sec. 27, Twp 12N, Rge 06W, B.M. WASHINGTON County
SPRING SW¼NE¼NW¼ Sec. 34, Twp 12N, Rge 06W, B.M. WASHINGTON County

Method of Determination: Field exam and aerial imagery.

2.

PLACE OF USE: STOCKWATER STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
12N	06W	34							X										

PLACE OF USE: STOCKWATER

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
12N	06W	27								X	X								
12N	06W	34					X												

PLACE OF USE: IRRIGATION FROM STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
12N	06W	33													2.0				2.0
12N	06W	34									10.0								10.0

Total Acres: 12

PLACE OF USE: IRRIGATION STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
12N	06W	34							X										

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
12N	06W	33													2.0				2.0
12N	06W	34									10.0								10.0

Total Acres: 12

DIVERSION TO STORAGE same as IRRIGATION

Method of Determination: Field exam and aerial imagery.

3.

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

X

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
NA	NA	NA	NA	NA	NA

*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
NA	NA	NA	NA	NA	NA	NA

2. Measurements:

A 5 gallon bucket test was completed at the bottom of the system to capture all the springs that feed the diversion (three springs). Five tests were done to establish an average time it takes the bucket to fill in seconds. Below are the calculations;

1. 2.95	4. 2.74
2. 2.64	5. 2.58
3. 2.93	

E. FLOW CALCULATIONS

Measured Method:

The average fill time is 2.77 seconds ($2.95+2.64+2.93+2.74+2.58 = 13.84$ seconds / $5 = 2.77$ seconds). Therefore, the bucket fills 21.68 times in 60 seconds. 5 gallons X 21.68 = 108.4 gpm. 108.4 gpm / 9 gallons per miner's inch = 12.04 miner's inches. 12.04 X 0.02 cfs per miner's inch = **0.24 cfs**.

Reservoir Refill:

Speaking with Mr. Nyberg, he suggested the reservoir refill time is just shy of one month. He only irrigates for 11 days from the reservoir allowing it time to refill. Mr. Nyberg stated that he usually gets three water cycles in a good year irrigating 11 days at a time. To verify and calculate this, the reservoir capacity was obtained from the attached pond analysis spreadsheet and is as follows:

Reservoir Capacity = 12 AF or 3,910,200 gallons (12 AF X 325,850 gallons). Surface area is 2 acres and an average depth of 6 feet (15 feet X 0.4)

Fill Rate = 0.24 cfs or 108 gpm (obtained from 5 gallons bucket test)

108 gpm X 60 minutes = 6,480 gallons per hour

6,480 gallons per hour X 24 hours = 155,520 gallons per day

3,910,200 gallons (reservoir capacity) / 155,520 gallons per day = **25.14 days to refill**.

Irrigation from Storage:

2 wheel lines = 42 sprinkler heads @ 5 gpm / head = 210 gpm.

210 gpm / 9 gpm = 23.33 miner's inches.

23.33 miner's inches X 0.02 cfs = **0.47 cfs**

Irrigation Storage:

2 wheel lines = 42 sprinkler heads @ 5 gpm / head = 210 gpm.

210 gpm X 60 minutes = 12,600 gallons per hour

12,600 gallons per hour X 24 hours = 302,400 gallons per day

302,400 gallons per day X 11 days = 3,326,400 gallons or **~10 AF (10 AF X 3 refills will be used as the irrigation storage and irrigation from storage component for licensing).**

F. VOLUME CALCULATIONS**Irrigation:**

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.24 \text{ cfs} \times 4.0 \text{ HGR} = 48 \text{ AF}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.24 \text{ cfs} \times 231 \text{ days} \times 1.9835 = 110 \text{ AF}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 48 \text{ AF}$$

Stockwater:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 0.7 \text{ AF max volume per Admin Memo \#3}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.03 \text{ cfs} \times 365 \text{ days} \times 1.9835 = 21.7 \text{ AF}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 0.7 \text{ AF}$$

Irrigation Storage:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 12 \text{ acres} \times 5 \text{ AF/ac} = 60 \text{ AF}$$

$$V_{DR} = 10 \text{ AF} \times 3 \text{ refills} = 30 \text{ AF (Section E)}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 30 \text{ AF}$$

Stockwater Storage:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \text{NA}$$

$$V_{DR} = [\text{Capacity of reservoir}] + (\text{Evaporation}) + [(\text{Seepage})] + [(\text{Beneficial Use})] = 12 \text{ AF} + 4.2 \text{ AF} + 2.2 \text{ AF} + 0.7 \text{ AF} = 19.5 \text{ AF (see attached pond analysis for pond capacity and consumptive variables).}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 19.1 \text{ AF}$$

Irrigation from Storage:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 12 \text{ acres} \times 5.0 \text{ AF/AC} = 60 \text{ AF}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 30 \text{ AF per Section E Calculation}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 30.0 \text{ AF}$$

G. NARRATIVE/REMARKS/COMMENTS**BACKGROUND**

Water Permit No. 67-15058 allows a diversion rate of 0.30 cfs for irrigation of 49 acres and 0.03 cfs for stockwater (50 cattle). The purpose of this permit was to add three points of diversion (POD) and beneficial uses irrigation and stockwater. There is an overlapping decreed Water Right (WR) No. 67-15069. The PODs for the decreed right have since dried up or do not provide adequate water for beneficial use. This permit developed three (3) 700 gallon troughs to water the same 50 cattle outlined in the decreed WR. The field exam redefined the irrigation of 12 acres in the NESE of Section 33 (2 acres) and in the NWSW of Section 34 (10 acres) as the permitted 49 acres are dry farmed and never developed. An amendment will be necessary to include the 2 acre reservoir (surface area) that is used to store water and change spring locations/tributary to match development. The developed system uses water from the reservoir and has the ability to bypass the reservoir and directly irrigate the 12 acres in Section 33/34.

Although the decreed PODs have dried up, a combine use limit is recommended for this permit and will establish new PODs for the same delivery system used by the decreed right. Water is diverted from two springs at the very top of the property in Section 27 into a 36" corrugated pit via 5" perforated PVC pipe and a third spring in Section 34 adds more spring water via a 36" corrugated pit capturing water from all three of the springs. The springs are tributary to Warm Springs Creek not Springs Creek as outlined in the permit. This clarification was noted during the field exam and verified by the USGS topo map of the area. There is no Springs Creek in the vicinity. This clarification will be shown on the licensing recommendation.

SYSTEM DESCRIPTION

The system is gravity fed. The first two springs are in the NWNENW and SWNENW of Section 27. The third spring is located in the SWNENW of Section 34 as outlined in the system diagram included in the file. A trough is located just below the corrugated pit at 44.350365, -117.047015. The 5" line runs south filling another trough at 44.34423, -117.047412. Still continuing south through the middle of the property another corrugated pit is located along the road in Section 34 in the SWNENW. The third spring is located here east of the pit at 44.336812, -117.047264. Spring water is captured in a 36" corrugated pit and flows into the pit along the road in Section 34 via 5" galvanized pipe. This pipe captures water from all three springs and continues to divert the water south for about 600' and tees off the main line to the west.

There the spring water can be diverted to the reservoir via a 5" PVC pipe or continue south to irrigate the 12 acres in the NWSW of Section 34 and in the NESE of Section 33 via a 4" PVC line. The main line runs down east of the house. At the northeast corner of the 12 acres, there are three risers 150' apart extending to the west that allow the wheel lines to be connected to the 4" main line to irrigate the 12 acres.

The reservoir has a surface area of 2 acres and a maximum depth of 15' per Mr. Nyberg. A shut off valve at the toe of the reservoir dike controls irrigation for the 12 acres specific to irrigation from the reservoir. Cattle drink directly from the reservoir, therefore, no stockwater from storage component is necessary. Another corrugated pit is located at 44.331281, -117.054035 that captures water from the reservoir and water that bypasses the tee and continues south through the property as mentioned above. The 4" PVC line delivers water to the wheel lines with three risers 150' apart. There are two wheel lines with 21 sprinklers on each line rated at 5 gpm per head. The wheel lines run for 11 days and then are turned off to allow the reservoir to refill. Mr. Nyberg can irrigate this way three times on a good water year. Another shut off valve is located at 44.331283, -117.054125 that acts as a back up to the shut off valve at the toe of the reservoir dike and can regulate flow to the 12 acres. When the reservoir is full, Mr. Nyberg uses both spring water and reservoir water to irrigate the 12 acres. Waste water from the system is fed through the valve and returns waste water back to Warm Springs Creek.

OWNERSHIP

The permit is in the name of Debra Nyberg. Dennis Nyberg, Debra's husband, accompanied me on the field exam. Current Washington County taxlot data confirms Debra Nyberg as the property owner.

Diversion Rate and Volume

A system diversion rate was measured at the corrugated pit along the road in the SWNENW of Section 34. All three springs flow through this point and establish a system diversion. A bucket test was performed and found the rate to be 0.24 cfs or 108 gpm. The permit set a diversion rate of 0.33, but licensing recommendations that include irrigation and stockwater will limit the rate to **0.24 cfs**.

Two diversion to storage components are recommended for licensing to allow yearlong filling to occur and is broke into two seasons. Season of use for irrigation is limited to 03/15 – 10/31 at a rate of 0.24 cfs. A season of use for the non-irrigation season from 11/1 – 03/14 at a rate of 0.03 cfs (max permitted rate for stockwater) completes the yearlong season.

Volume rates were calculated as outlined in Section F of this report. **The total overall volume is 97.1 AF** (48 AF + 30 AF + 19.1 AF). A reservoir was added to the licensing recommendation as was stockwater storage, irrigation storage, and irrigation from storage. Historically, the reservoir has been used to store water, so adding it to the license clarifies how the system was developed. A pond analysis was completed and set a reservoir capacity of 12 AF, seepage of 2.2 AF, and evaporation of 4.2 AF. Soil classification for the reservoir was CL – low to medium plasticity clays. The precipitation deficit station used to estimate evaporation was Weiser (NWS – 109638). These volumes were added to the stockwater storage component totaling 19.1 AF (12 AF + 2.2 AF + 4.2 AF + 0.7 AF).

Overlap

There is no POD overlap. POU overlap exists with WR No. 67-15069 relative to stockwater use and irrigation of 10 of the 12 acres. WR No. 67-15069 authorizes irrigation of 13 acres in the NWSW of Section 34. Of that 13 acres, 10 acres from this permit are the same ground. So, 2 acres on this permit are unique. As a result, max acreage for both WRs is 15 acres. Therefore, combine use limit of irrigating 15 acres will be recommended to licensing.

Conditions

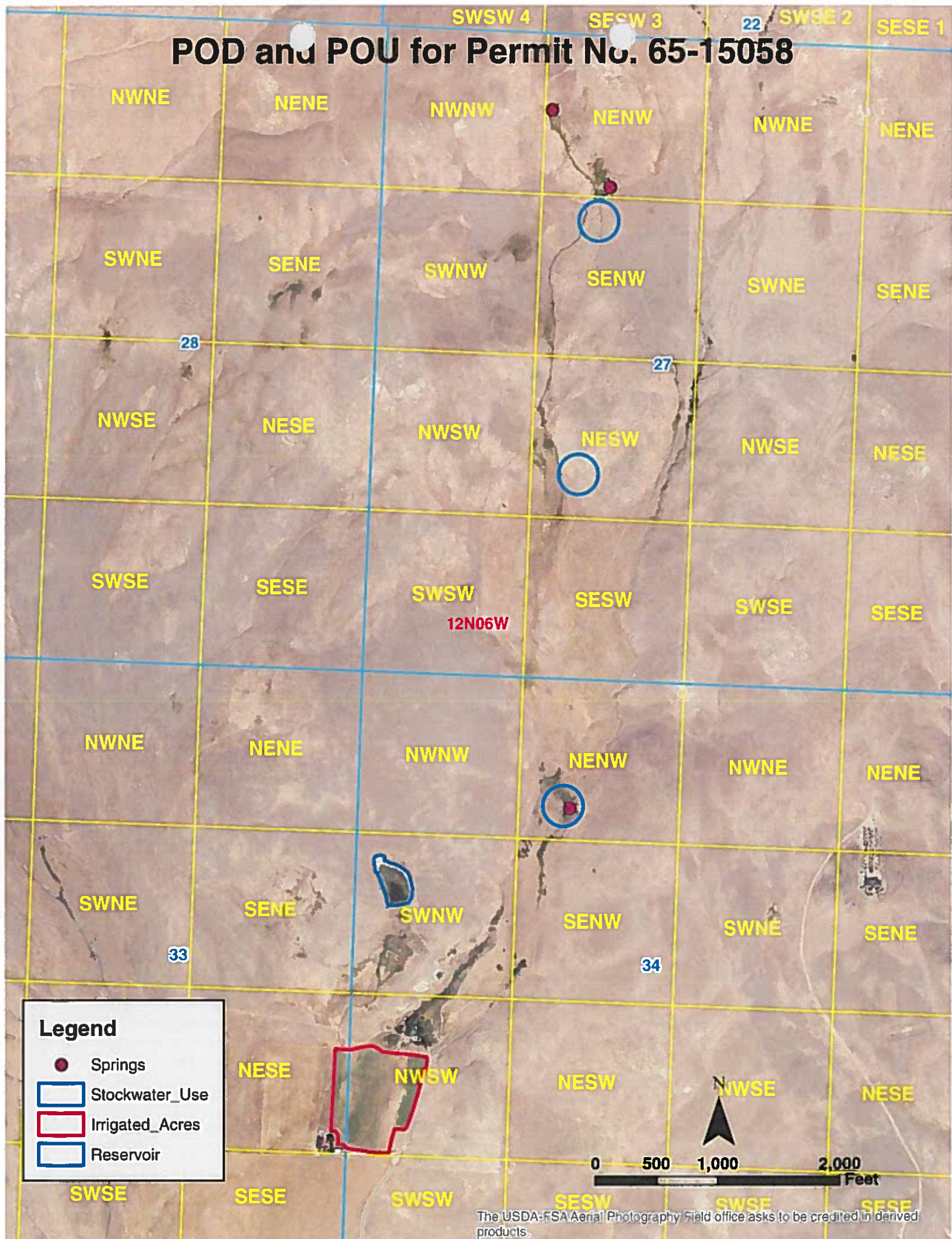
Conditions X02, 26A, and 004 were removed for licensing. Condition 01H was changed to R02 and verified out in the field. The main shut off valve located at the top of the system in the SENW of Section 27 can be locked by the watermaster. Condition 121 was changed to 103 and forwarded to licensing. Conditions 086, R64, R70, and R05 were forwarded to licensing. X35 was added for both irrigation and stockwater combine use limits and forwarded to licensing. Condition 220 and 259 were added to establish reservoir capacity, surface area, and outline reservoir replacement losses.

Have conditions of permit approval been met? ☒ Yes ☐ No**H. RECOMMENDATIONS****1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
STOCKWATER STORAGE	01/01 to 12/31		19.1 AF
IRRIGATION STORAGE	01/01 to 12/31		30.0 AF
IRRIGATION FROM STORAGE	03/15 to 10/31		30.0 AF
IRRIGATION	03/15 to 10/31	0.24 CFS	48.0 AF
STOCKWATER	01/01 to 12/31	0.02 CFS	0.7 AF
DIVERSION TO STORAGE	11/01 to 03/14	0.03 CFS	
DIVERSION TO STORAGE	03/15 to 10/31	0.24 CFS	
<u>Totals:</u>		0.240 CFS	97.10 AF

2. Recommended Amendments☒ Change P.D. as reflected above ☐ Add P.D. as reflected above ☐ None☐ Change P.U. as reflected above ☒ Add P.U. as reflected above ☒ Other**I. AUTHENTICATION**Field Examiner's Name Aaron Skinner Date 5/8/17Reviewer  Date 7/17/2017

POD and POU for Permit No. 65-15058



System Diagram for Permit No. 65-15058

Legend

- Shut_Off_Valves
- Valve_Pit
- Springs
- Troughs
- Buried_PVC_Pipe
- Irrigated_Acres

0 500 1,000 2,000 Feet

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	67-15058
REVIEWER	Aaron Skinner
DATE	5/24/2017

User Input
Calculated value
Formula Explanations

INPUTS

Pond Surface Area (AC.)	2	AC.
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Pond Surface Area (SQ. FT.)	87120	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	CL	
Suggested Seepage Rate (FT./DAY)	0.0030	FT./DAY

Formula: (Surface Area X Seepage Rate) X 7.48 = Gallons Per Day Loss
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Convert to GPD	1955	GPD
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Total Seepage Loss (AFA)	2.2	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.

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	67-15058
REVIEWER	Aaron Skinner
DATE	5/24/2017

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

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

Precipitation Deficit

Station: Weiser (NWS-109638)			
Month	mm/day ¹	Days per month	mm/Month
Jan	-1.06	31	0.00
Feb	-0.27	28	0.00
March	0.96	31	29.76
April	2.13	30	63.90
May	2.96	31	91.76
June	3.42	30	102.60
July	4.27	31	132.37
August	3.51	31	108.81
September	2.39	30	71.70
October	1.09	31	33.79
November	-0.31	30	0.00
December	-1.11	31	0.00

Total mm/year = 634.69

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.

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

$$\left(\frac{634.69}{304.8} \right) \times 2.00 = 4.2 \text{ AFA}$$

Total Storage Calculations

FILE NUMBER	67-15058
REVIEWER	Aaron Skinner
DATE	5/24/2017

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.)	2	"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)	12	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.
Multiple Fill Volume Above Initial Fill to Fulfill From Storage Needs- "Multiple Fills" (AF)	30.7	The "Multiple Fill Volume Above Initial Fill" is the acre-feet of water required to meet a <i>from storage</i> component if the <i>from storage</i> component exceeds a one time fill. This section should not include the amount of water needed to fill the pond initially or the amount of water needed to maintain the pond level due to evaporation or seepage. For example: if a pond has a capacity of 5 acre feet and 2.5 acre feet of seepage and evaporation, but the pond is used for irrigation that requires 10 acre feet of from storage for the irrigation use, then you would insert 5 acre feet into this location (10 acre feet needed - 5 acre feet from the initial fill = 5 acre feet of additional storage needed). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	2.2	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	4.2	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	49.1	The "Total Volume Required" is calculated by adding the Pond Capacity, Multiple Fills, Seepage Loss, and Evaporation Loss amounts to determine the total amount of storage required.

Flow Rate into Pond (CFS)	0.24	The "Flow Rate into Pond" depicts the actual flow, either measured or estimated, into the pond. For offstream facilities, this will be equivalent to "diversion to storage" rate.
Highest Daily Evaporation Rate From Evaporation Tab. (mm/Day)	4.27	This number is carried over from the "Evaporation Loss" sheet. It is the highest recorded number in the "Precipitation Deficit Table".
Required Daily Maintenance Volume (AF/Day)	0.03	"Required Daily Maintenance Volume" is the maximum volume of water needed on any given day during the year to maintain pond volume. It is calculated by adding the highest daily evaporation loss to the average daily seepage loss in acre feet. The average daily seepage loss is calculated by dividing the "Estimated Seepage Loss" by 365 days. This is acceptable, since the seepage rate shouldn't vary throughout the season unless the pond completely freezes over during the winter months. The highest daily evaporation loss is calculated by dividing the Highest Daily Evaporation Rate by the 304.8 conversion factor and multiplying this number by the pond surface area to attain a combined daily acre feet requirement.
Minimum Maintenance Flow (CFS)	0.02	The "Minimum Maintenance Flow" is the minimum amount of flow required to maintain the level of the pond. This number is determined by dividing the "Maximum Required Daily Maintenance Volume" by 1.9835. This flow can be used to determine if the flow rate into the pond is adequate to maintain the pond level.
Days Required to Fill the Pond	27	The "Days Required to Fill the Pond" is calculated by dividing the "Pond Capacity" by the "Flow Rate" minus "Minimum Maintenance Flow" multiplied by 1.9835. This section will assist you in determining if the flow rate being diverted to the pond is adequate to fill the pond while maintaining the pond level. The length of time to fill the pond will help determine if the flow rate is adequate for the size of pond being proposed. If this number is approximately 6 months (180 days) or more, the reviewer should have a discussion with the applicant to make sure he/she understands that it will take a significant length of time to fill the pond.
Days Required to Fill the Pond at 13,000 Gallons per Day	2042	Some water users may want to fill a pond under the 13,000 gallons per day domestic exemption. The "Days Required to Fill the Pond at 13,000 Gallons per Day" is calculated by converting the "Pond Capacity" and the "Required Daily Maintenance Volume" to gallons. The "Pond Capacity" is then divided by 13,000 gallons minus the "Required Daily Maintenance Volume" in gallons to determine the number of days to fill pond. If this number is approximately 6 months (180 days) or more, the reviewer should have a discussion with the applicant to make sure he/she understands that it will take a significant length of time to fill the pond. Negative values indicate that the supply of 13,000 gallons per day is not enough volume to overcome the required daily maintenance volume; the pond will never fill.

Overlap Analysis for Permit No. 67-15058 POD

12N06W27

Process	BasinSequence	Draft	Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	TotalAcres
Water Right	67-15058	Y	NYBERG, DEBRA	SPRING						X	X											
Water Right	67-15069	N	NYBERG, DEBRA; PRICE, WARREN J	SPRINGS						X					X							
Water Right	67-15070	N	BAKER, DANA M; PRICE, WARREN J	SPRINGS						X					X							

no overlap; spring is dry and west of POD.

Overlap Analysis for Permit No. 67-15058 POU

12N06W27

Process	BasinSequence	Draft	Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	TotalAcres
Water Right	67-15058	Y	NYBERG, DEBRA	SPRING	STOCKWATER									X	X							
Water Right	67-15069	N	NYBERG, DEBRA; PRICE, WARREN J	SPRINGS	STOCKWATER					X				X	X	X	X	X				
Water Right	67-15070	N	BAKER, DANA M; PRICE, WARREN J	SPRINGS	STOCKWATER						X	X			X							

] overlap; different POD sam
bottle.

Overlap Analysis for Permit No. 67-15058 POD

Process	BasinSequence	Draft	Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	TotalAcres
Water Right	67-10102	N	BAKER, DANA M; NYBERG, DEBRA; PRICE, WARREN J	GROUND WATER														X				

Overlap Analysis for Permit No. 67-15058 POU

Process	BasinSequence	Draft	Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	TotalAcres
Water Right	67-10102	N	BAKER, DANA M; NYBERG, DEBRA; PRICE, WARREN J	GROUND WATER	DOMESTIC													X				
Water Right	67-15058	Y	NYBERG, DEBRA	SPRING	IRRIGATION													2				2
Water Right	67-15058	Y	NYBERG, DEBRA	SPRING	IRRIGATION FROM STORAGE													2				2
Water Right	67-15070	N	BAKER, DANA M; PRICE, WARREN J	SPRINGS	IRRIGATION													8				8

] overlap; saw
2 acres of
the 8.

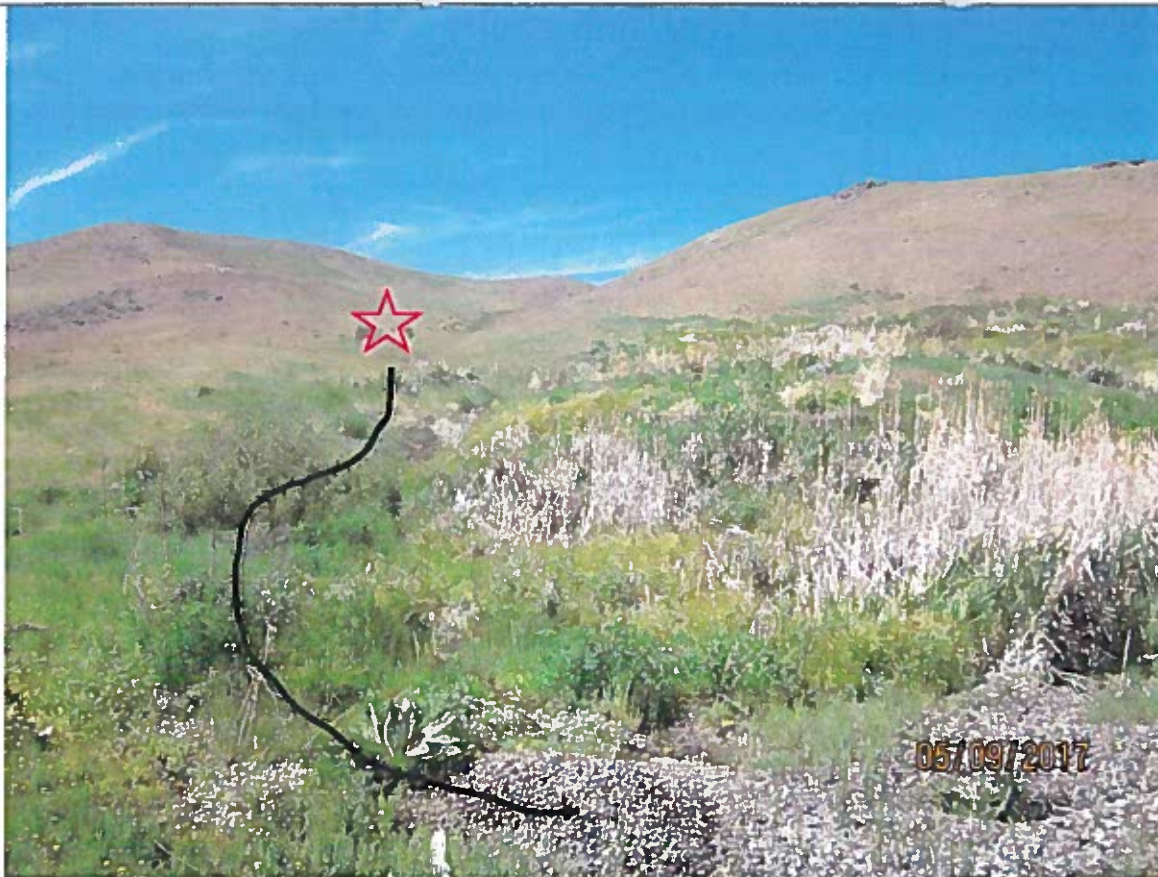
Overlap Analysis for Permit No. 67-15058 POD

Process	BasinSequence	Draft	Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	TotalAcres
Water Right	67-10931	N	MOYLE, MARJORIE; MOYLE, SUSAN L	SPRING																		
Water Right	67-14973	N	NYBERG, DENNIS D	SPRING																		
Water Right	67-15058	Y	NYBERG, DEBRA	SPRING						X												
Water Right	67-7961	N	HIGH DESERT RANCH INC	GROUND WATER					X													

Overlap Analysis for Permit No. 67-15058 POU

Process	BasinSequence	Draft	Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	TotalAcres
Water Right	67-14973	N	NYBERG, DENNIS D	SPRING	DOMESTIC																	
Water Right	67-15058	Y	NYBERG, DEBRA	SPRING	IRRIGATION											X						
Water Right	67-15058	Y	NYBERG, DEBRA	SPRING	IRRIGATION FROM STORAGE											10						10
Water Right	67-15058	Y	NYBERG, DEBRA	SPRING	IRRIGATION STORAGE											10						10
Water Right	67-15058	Y	NYBERG, DEBRA	SPRING	STOCKWATER					X												
Water Right	67-15058	Y	NYBERG, DEBRA	SPRING	STOCKWATER STORAGE							X										
Water Right	67-15069	N	NYBERG, DEBRA; PRICE, WARREN J	SPRINGS	IRRIGATION					X												13
Water Right	67-15069	N	NYBERG, DEBRA; PRICE, WARREN J	SPRINGS	STOCKWATER					X	X	X	X			13						13
Water Right	67-7961	N	HIGH DESERT RANCH INC	GROUND WATER	IRRIGATION					1												1

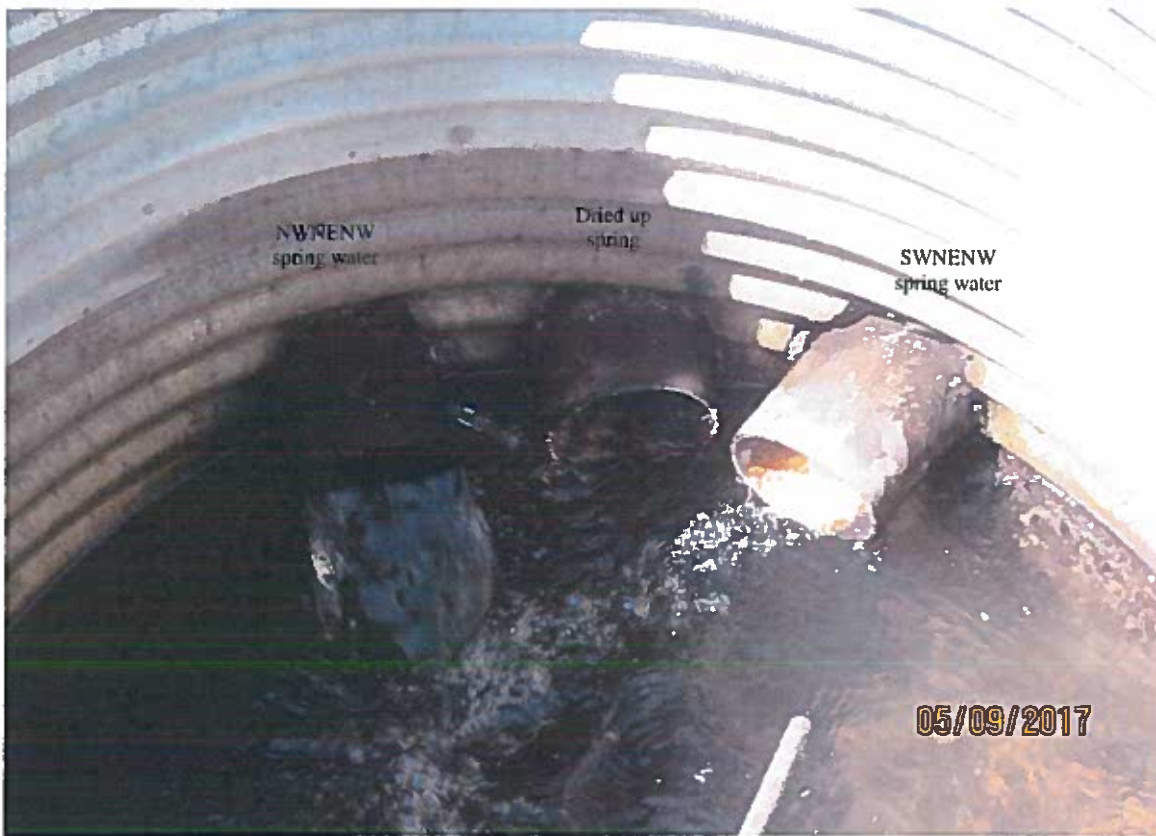
] overlap - stockwater from reservoir and 10 acres irrigation are the same.



Looking north of the corrugated pit at the top of the system. The star represents the NWNENW spring. 5" PVC pipe diverts the spring water to the 36" corrugated pit.



Looking north of the corrugated pit at the top of the system. The star represents the SWNENW spring. 5" PVC pipe diverts the spring water to the 36" corrugated pit.



36" corrugated pit that collects the spring water from the two springs and diverts the water through a 5" PVC pipe south through the property.



36" corrugated pit and air vent.



Shut off valve just south of the 36" corrugated pit. This controls the spring water flow through the system.



Northern most stockwater tank. 700 gallon trough that is fed with a 3/4" poly pipe. The location is 44.350365, -117.047015.



Spring located in the SWNENW of Section 34 at 44.336812, - 117.047264. 50 gallon barrel captures spring water and diverts it to another 36" corrugated



700 gallon trough that is fed with a ¾" poly pipe. The location is 44.336803, - 117.047503.



36" corrugated pit that catches all three springs and diverts water down south through the property and over to the reservoir. This was where the bucket test was completed.



5" inlet for the 2 acre reservoir.



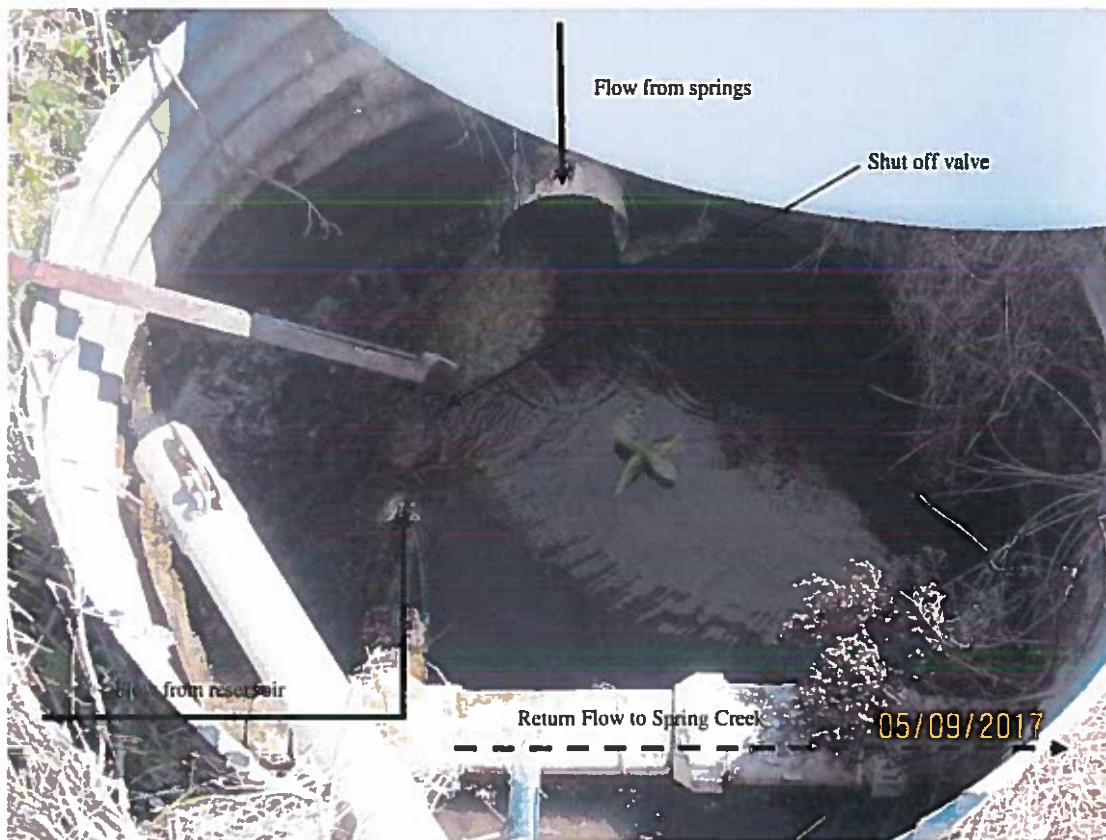
South end of the reservoir.



Gate valve that allows water to flow to the toe of the dam dike. The valve is 15' deep. The 15' depth was used as the maximum depth of the reservoir.



Shut off valve and air vent at the toe of the reservoir's dike. 4" PVC pipe continue water down to irrigate the 12 acres below.



Corrugated pit that collects reservoir/spring water to irrigate 12 acres in the NWSW of Section 34 and in the NESE of Section 33. Waste water can also be returned to Spring Creek via the 4" line. The shut off valve controls water to the wheel lines.



10 acres of alfalfa outlined as the place of use in the NWSW of Section 34.



2 acres of alfalfa outlined as the place of use in the NESE of Section 33.



State of Idaho

DEPARTMENT OF WATER RESOURCES

Western Region • 2735 Airport Way • Boise, Idaho 83705-5082

Phone: (208) 334-2190 • Fax: (208) 334-2348 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

April 5, 2017

COPY

DEBRA NYBERG
1305 PRICE ROAD
WEISER, IDAHO 83672

RE: Scheduling Field Exam for Water Right Permit No. 67-15058

Dear Permit Holder:

We are planning to conduct water right examinations in the vicinity of the above-referenced permit **during the weeks of May 8th – May 26, 2017**. An examination is needed to verify the water use in order to issue a water right license.

The above-referenced permit authorizes a diversion rate of 0.33 cfs for irrigation and stockwater use from a spring, a tributary of Spring Creek. If you have developed a beneficial use and still own the place of use property, please contact me at your earliest convenience to schedule an examination.

If you did not develop a beneficial use of water under the permit or if you did develop that use, but subsequently abandoned it, a license cannot be issued. Please relinquish the permit by submitting the enclosed Relinquishment of Permit form (no fee required). The permit will be voided if beneficial use under the permit was not developed or was developed, but is now abandoned and you do not relinquish the permit.

If you did develop a beneficial use of water under the permit, but you no longer own the place of use property identified in the permit, please submit the enclosed Assignment of Permit form with the applicable \$25 processing fee.

Please contact me within the next thirty (30) days to either schedule an examination, submit a relinquishment, or submit an assignment. If you no longer own the place of use property and/or do not respond to this letter, the department will work with the current property owner to issue a license or void the permit.

Please call me at (208) 334-2190 if you have any questions. I appreciate your attention in this matter and I look forward to hearing from you.

Sincerely,

Aaron Skinner
Water Resource Agent

Enclosures: Water Permit Report and Map
Relinquishment of Permit form
Assignment of Permit form