

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 67-14500
Exam Date: 9/9/2016

1. Current Owner:
RODNEY PANIKE 1230 E PARK WEISER ID 83672 (208) 550-1414
2. Accompanied by: Rod Panike
Phone No: 208-550-1414
Address: 1230 E Park Weiser, ID 83672
Relationship to Permit Holder:

3. SOURCE:
SPRING
GROUND WATER

TRIBUTARY:
MONROE CREEK

B. OVERLAP REVIEW

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

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

SPRING NE¼SW¼SE¼ Sec. 21, Twp 11N, Rge 05W, B.M. WASHINGTON County
GROUND WATER SW¼SE¼ Sec. 21, Twp 11N, Rge 05W, B.M. WASHINGTON County

Method of Determination: Digital PLSS mapping compared with aerial photography.

2.

PLACE OF USE: AESTHETIC STORAGE and 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	
11N	05W	21															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	
11N	05W	21															6.0	38.0	44.0

Total Acres: 44

Method of Determination: Aerial photography used to measure irrigation boundaries on Panike property. Acres calculated using ArcMap tools.

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components.

X Indicate weir size/pipe as applicable.

Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be

X 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
D0038958	Unk	Unk	Unk	Unk	Unk

*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

2. Measurements: Buried system did not provide access to measure diversion rates.**E. FLOW CALCULATIONS**
☒ Additional Computation Sheets Attached
☐ Additional Computation Sheets Attached

Measured Method:

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Efficiency = 0.70

Depth to water = 180 ft.

psi = 15

hp = 5-10

Theoretical = 0.22 cfs

Permit	1.10 cfs
B.U. Standard Allowance	0.88 cfs
B. U. Proof Fee	\$125 → 1.01 to 2.00 cfs
Measurement or Theoretical Rate	0.22 cfs
License Recommendation	0.22 cfs

F. VOLUME CALCULATIONS1. Volume Calculations for Irrigation: Irrigation use not being recommended for license.

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

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

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

2. Volume Calculations for Other Uses:

$$\text{Pond capacity} = 9.6 \text{ af} \quad \text{Seepage \& Evaporation} = 3.8 \text{ af}$$

$$\text{Aesthetic storage use volume limit} = \text{pond capacity} + \text{consumptive uses} = 13.4 \text{ af}$$

$$\text{Irrigation from storage volume limit} = 44.0 \text{ ac} \times 5.0 \text{ af/ac} = 220.0 \text{ af}$$

$$\text{Total storage use} = 223.8 \text{ af}$$

See pond calculation spreadsheet attached to this report for more information.

G. NARRATIVE/REMARKS/COMMENTS

Field exam was conducted on 9/9/2016 by WRA Patrick Kelly and Aaron Skinner. We were accompanied by Mr. Rodney Panike during the field exam. Mr. Panike is the property owner and water user pertinent to permit 67-14500.

An Assignment of Permit was received from applicant Frank Moser to new property owner Rodney Panike in Mar. 2005. Current taxlot data represent Mr. Panike as the current land owner. No further action is required concerning ownership of the right.

The POD from groundwater comes from a 12" well tagged D0038958. A well log was secured showing a 12" well drilled in 2005 for this permit. A submersible pump diverts water from the well to a 4' buried line. This line runs under the road between the well and pond where it openly discharges to the storage pond. The ground water source diversion is located in the SWSE QQ and is accurately described by the permit. Water right overlap did not discover any other water rights associated with the well. No amendment required to correct the legal description.

The POD from a spring comes from under the pond. The spring was dug out to naturally fill. The spring source diversion is located in the SWSE QQ and is accurately described by the permit. Water right overlap did not discover any other water rights associated with the spring. No amendment required to correct the legal description.

ArcMap tools and aerial imagery was used to measure a POU. 44 acres total the irrigation from storage use. Fields below the storage pond were not included in the recommendation because these lands are not part of the irrigation from storage system. Mr. Panike maintains Monroe Creek shares to irrigate this land, and suggested much of the land stays wet from seepage of the pond.

Digital PLS boundaries appear to have either shifted north, or are inaccurately described with the actual land surface. This shift or error has caused a significant portion of the field's southern boundary within Section 28. This section is not described by the permit and would require a licensing amendment to correct. Because of the possible shift or error, these acres will be assumed to lie within the described QQ's of the permit. A licensing amendment will not be sought.

Irrigation from storage use was found in the field's uphill, immediately east of the storage pond. Water is delivered to the fields via a 40 hp booster pump. A still well located in the NW corner of the pond shoots water up through an 8" PVC mainline. Risers for hand lines are spaced apart every 180' for sprinkler irrigation. The irrigation use occurs through one line at a time. 32 sprinklers are found on each line with 5/32" nozzles. At 80 psi and a diversion of 6.52 gpm per sprinkler, the irrigation use from the pond runs at about 208.6 gpm or 0.46 cfs. Mr. Panike expressed that the well would not divert enough water to run a single water line, and he had to divert from the pond.

The Irrigation use of the permit is being dropped from the license. The system is not built to irrigate directly from the well or spring. Irrigated land pertinent to the permit completely runs through a 'from storage' system. The 'from storage' components of the permit are limited to 5.0 and 7.3 af. Because the irrigation use of the permit carries a diversion rate of 1.18 cfs associated with 59.1 acres ($59.1 * 0.02 = 1.18$), it suggests the permit carries a total value of $59.1 \text{ ac} * 4.5 \text{ af/ac} = 266.0 \text{ af}$. Since the irrigation component exceeds the actual beneficial use developed, we can translate the license to accurately describe the 'from storage' use.

For diversion to storage, a range of hp pumps were assumed for a typical well system that only diverts to storage. Mr. Panike was not able to attain any information on the pump since he did not drill the well, but believed the pump to be a 10 hp pump that produces about 75 gpm. Lift at 180 ft is assumed from the pump test level and max depth of well recorded on the well log. A discharge pressure of 15 psi used for common open discharge systems. Theoretical average flow rate of 0.22 cfs is slightly more than what Mr. Panike believed the well was producing, but is still less than what would be required to run one of his water lines. For these reasons, a diversion to storage rate of 0.22 cfs is reasonable.

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>
DIVERSION TO STORAGE	01/01 to 12/31	0.22 CFS	
IRRIGATION STORAGE	03/01 to 11/15		223.8 AF
IRRIGATION FROM STORAGE	03/01 to 11/15		223.8 AF
AESTHETIC STORAGE	01/01 to 12/31		13.4 AF
	<u>Totals:</u>	0.22 CFS	223.8 AF

2. Recommended Amendments

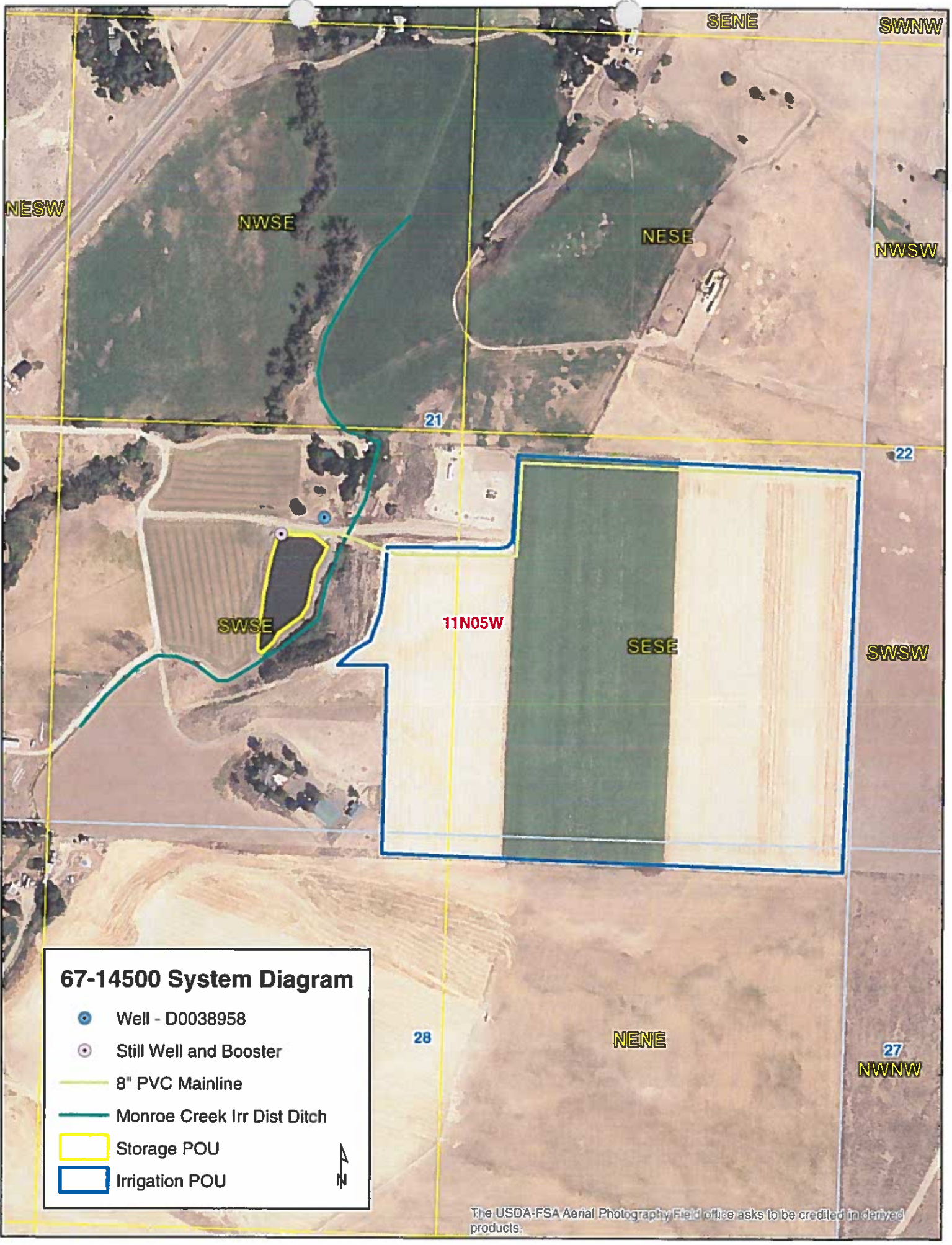
☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name Patrick Kelly Date 9/9/2016

Reviewer _____ Date _____



THEORETICAL HORSEPOWER EQUATION WORKSHEET (cjh 1/92)

Water Right No.: 67-14500
 Reviewer: Patrick Kelly
 Date of Review: 9/9/2016

P/D No.:	Senerio 1	Senerio 2	Senerio 3
PUMP HORSEPOWER	5	7.5	10
BOOSTER HORSEPOWER	0	0	0
PUMPING LEVEL	180	180	180
DISCHARGE PRESSURE	15	15	15
RATE OF FLOW (cfs)	0.14	0.22	0.29 0.22

The above calculates the formula =

$$Q = \frac{8.8 * (\text{Efficiency}) * \text{hp}}{\text{depth to water} + 2.31 * (\text{psi}) + \text{friction}}$$

Assumptions: %70 efficiency.
 No Friction

Examiners Notes:

A range of hp pumps were assumed for a typical well system that only diverts to storage. Mr. Panike was not able to attain any information on the pump since he did not drill the well, but believed the pump to be a 10 hp pump that produces about 75 gpm. Lift at 180 ft is assumed from the pump test level and max depth of well recorded on the well log. A discharge pressure of 15 psi used for common open discharge systems.. Theoretical average flow rate of 0.22 cfs, is slightly more than what Mr. Panike believed the well was producing, but is still less than what would be required to run on of his water lines. For these

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	67-14500
REVIEWER	Patrick Kelly
DATE	9/7/2016

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: Twin Falls 2 NNE (NWS -- 109294)

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.

$$((634.69 \div (\text{convert to feet})) \times (\text{Surface area of pond, in acres})) = \text{Evaporation Loss in Acre Feet}$$

(634.69 ÷ 304.8) X 1.20 = 2.5 AFA

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	67-14500
REVIEWER	Patrick Kelly
DATE	9/7/2016

User Input
Calculated value
Formula Explanations

INPUTS

Pond Surface Area (AC.)	1.2	AC.
-------------------------	-----	-----

Pond Surface Area (SQ. FT.)	52272	SQ. FT.
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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	1173	GPD
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Total Seepage Loss (AFA)	1.3	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 <X:\Spatial\Soils\USCS\PondSoils.lyr>. Use "0" if the pond fill relies on the water table.

Total Storage Calculations

FILE NUMBER	67-14500
REVIEWER	Patrick Kelly
DATE	9/7/2016

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.)	1.2	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	8	"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)	9.6	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)	210.4	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 " <u>From Storage</u> " component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	1.3	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	2.5	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	223.8	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)	0.39	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)	0.02	"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)	0.01	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	13	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. <i>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.</i>
Days Required to Fill the Pond at 13,000 Gallons per Day	493	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. <i>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.</i> 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.

832126

Office Use Only

Inspected by _____

Twp _____ Rge _____ Sec _____

1/4 1/4 1/4

Lat: _____ Long: _____

11. WELL TESTS:

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian			
Yield gal./min.	Drawdown	Pumping Level	Time
100-150		180	1 Hr

Water Temp. 56 Bottom hole temp. 56

Water Quality test or comments

Depth first Water Encounter 8

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.



Twp. 11 North ☒ or South ☐
 Rge. 5 East ☐ or West ☒
 Sec. 21
 Gov't Lot _____
 Lat: _____
 Address of Well Site Monroe Creek Area
 City Weiser

1/4 SW 1/4 SE 1/4
 16 acres 32 acres 160 acres

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Water	
				Y	N
12	0	8	Moist Dark Brown Clay		
12	8	18	Brown Clay	X	
8	18	24	Gravel	X	
8	24	51	Sandy Blue Clay		
8	51	78	Sticky Blue Clay		
8	78	78	Blue Clay w/Small Cracks	X	
8	78	153	Bake Blue Clay		
8	153	184	Baked Blue Clay w/Cracks	X	
8	184	200	Baked Blue Clay		

☐ Domestic ☐ Municipal ☐ Monitor ☒ Irrigation
☐ Thermal ☐ Injection ☐ Other

5. TYPE OF WORK: check all that apply (Replacement etc.)
☒ New Well ☐ Modify ☐ Abandonment ☐ Other

☒ Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other

7. SEALING PROCEDURES:

Seal/Filter Pack			AMOUNT	METHOD
Material	From	To	Sacks or Pounds	
Bentonite	0	16	8 Sacks	Overbore

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 56

Was drive shoe seal tested? ☐ Y ☒ N How?

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
8	+2	56	.250	Steel	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

☒ Perforations Method Skill Saw
☐ Screens Screen Type

From	To	Slot Size	Number	Diameter	Material	Casing	Linear
36	196	.40	150	6	PVC	☐	☒
						☐	☐
						☐	☐

10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

5. _____ ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or control
devices: Cap _____

13. DRILLER'S CERTIFICATION:

WE CERTIFY:
We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name Treasure Valley Drilling Firm No. 560

Firm Official _____ Date 4/28/2005

Driller or Operator [Signature] Date 4/28/2005
(Sign as per Firm Official & Operator)

FORWARD WHITE COPY TO WATER RESOURCES

11N05W21

Basin	Sequence	Owner	Source	Use	NENE	NWNE	SWNE	SENE	NENW	NWNW	SWNW	SENW	NESW	NWSW	SWSW	SESW	NESE	NWSE	SWSE	SESE	Total Acres
67-10051		LONG, CLAUDE T, SMITH, DOUGLAS	GROUND WATER	DOMESTIC															X		
67-10052		LONG, CLAUDE T, SMITH, DOUGLAS	SPRING	STOCKWATER												X			X		
67-10257		NORTON, THELMA MAY	GROUND WATER	DOMESTIC			X														
67-10310		KABAT, GREGORY S, KABAT, IDA F, I	GROUND WATER	DOMESTIC												X					
67-11122		WALKER, BONNIE H	JENKINS CREEK	STOCKWATER		X															
67-11122		WALKER, BONNIE H	SPRING	STOCKWATER		X															
67-11611		CHANDLER, KEITH ELDON, CHANDLER	GROUND WATER	DOMESTIC	X																
67-14500		PANIKE, RODNEY	GROUND WATER	AESTHETIC STORAGE															X		
67-14500		PANIKE, RODNEY	GROUND WATER	IRRIGATION FROM STORAGE																6	38
67-14500		PANIKE, RODNEY	GROUND WATER	IRRIGATION STORAGE															X		44
67-14500		PANIKE, RODNEY	SPRING	AESTHETIC STORAGE															X		
67-14500		PANIKE, RODNEY	SPRING	IRRIGATION FROM STORAGE																6	38
67-14500		PANIKE, RODNEY	SPRING	IRRIGATION STORAGE															X		44
67-2032		MONROE CREEK IRRIGATION DISTRICT	MONROE CREEK	IRRIGATION FROM STORAGE	X		X	X								X	X	X	X		
67-2386		UNITED STATES OF AMERICA ACTIN MANN CREEK		IRRIGATION FROM STORAGE	X		X	X								X	X	X	X		
67-2389		UNITED STATES OF AMERICA ACTIN MANN CREEK		IRRIGATION FROM STORAGE	X		X	X								X	X	X	X		
67-634		MONROE CREEK IRRIGATION DISTRICT	MONROE CREEK	IRRIGATION	X		X	X								X	X	X	X		
67-7042		B & H INTERPRISES, MONROE CREEK	GROUND WATER	DOMESTIC												X					
67-724		MONROE CREEK IRRIGATION DISTRICT	MONROE CREEK	IRRIGATION	X		X	X								X	X	X	X		



Well tag :
D0038958



Ground water POD

44d 16'13.25"
-116d 56'24.06"

Water is diverted
via submersible
pump. Buried line
runs under road
directly to storage
pond.



Storage POU:

Surface area =
1.2 ac

Total capacity =
9.6 af

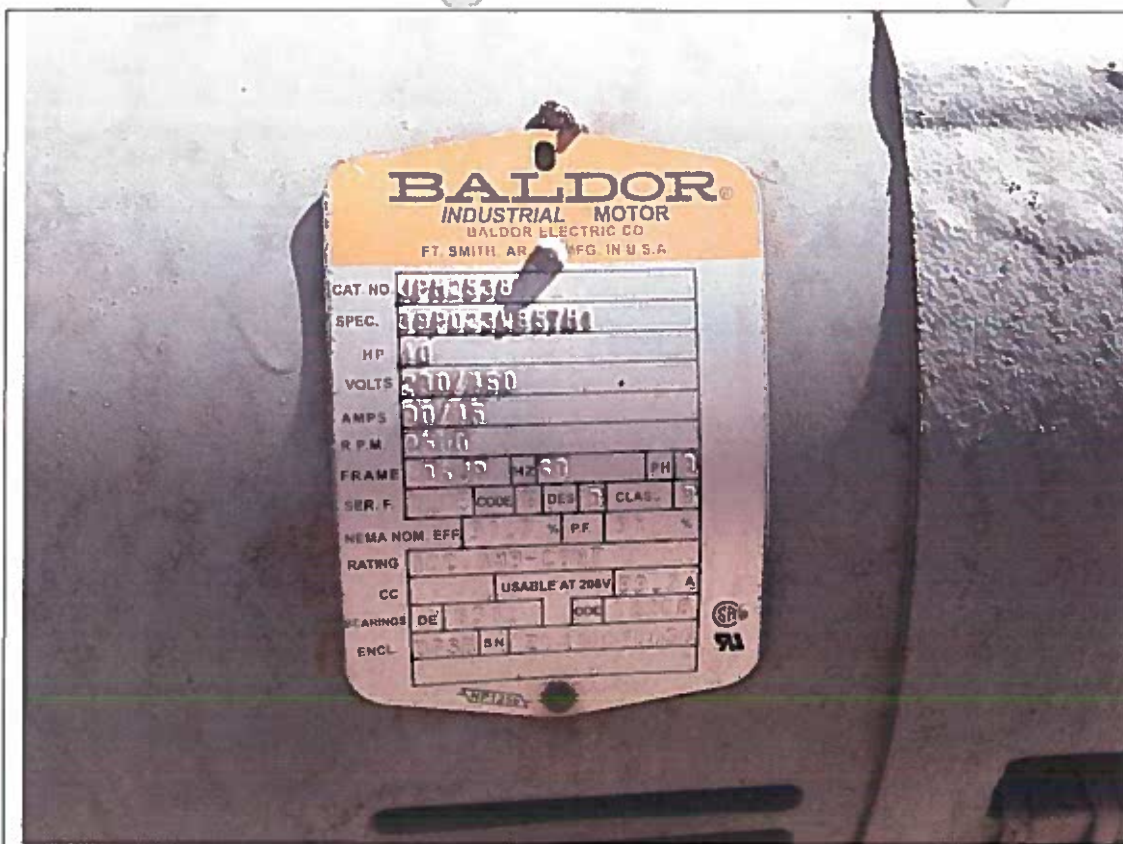
Consumptive use =
3.8 af



Still well located in
the NW corner of
storage pond.

Booster pump
shown diverts
storage water from
still well towards
fields immediately
east of pond.

Max depth of pond
measured using
high water mark in
still well (shown).



40 hp booster pump
on 'from storage'
system.



Pump system runs
at 114 psi at pump.

Lifts water approx.
160 ft to POU.



Monroe Creek Irr
Dist Ditch runs
above storage pond.



Irrigation from
Storage POU.

44.0 ac measured
using aerial
photography and
ArcMap tools.

Riser shown off
buried 8" PVC
mainline.

Sprinkler handline
shown running in
distant field.



Sprinkler on
handline with 5/32"
nozzle installed.