

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 96-9565

Exam Date: 09/14/2018

1. Current Owner:
DAN FOGARTY PO BOX 1472 SANDPOINT ID 83864

2. Accompanied by: Dan Fogarty
Phone No: 208-290-5546
Address: Same as above
Relationship to permit Holder: Permit holder

3. **SOURCE:**
SYRINGA CREEK
SPRING

Tributary
CHUCK SLOUGH
SYRINGA CREEK

Method of Determination: Arcmap and DRG

B. OVERLAP REVIEW

1. Other water rights with the same place of use: YES Overlap

Water Right No.	Source	Purpose of Use	Basis
96-9519	SPRING	MULTIPLE STORAGE USES	LICENSE

Comments: Right 96-9519 has the same pond, used for recreation storage, aesthetic storage, and fire protection storage that is associated with this permit's domestic storage POU; this permit was applied for as the applicant used water from the pond for domestic external use that wasn't a part of right 96-9519 when licensed. Condition X35 was added to mitigate overlap concerns between rights 96-9519 and 96-9565.

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

Water Right No.	Source	Purpose of Use	Basis
96-9519	SPRING	MULTIPLE STORAGE USES	LICENSE

Comments: Rights 96-9519 and 96-9565 have the same spring source POD. Condition F06 was added to this right during licensing review to account for the same POD.

C. DIVERSION AND DELIVERY SYSTEM1. **LOCATION OF POINT(S) OF DIVERSION:**

SPRING NW¼ SE¼ SW¼, Sec. 8, Twp 57N, Rge 02W, B.M. BONNER County
SYRINGA CREEK SE¼ SW¼, Sec. 8, Twp 57N, Rge 02W, B.M. BONNER County

Method of Determination: GPS. POD(s) are a spring located at -116°36.173, 48°17.850, and a pipe diverting water from Syringa Creek located at -116°36.260, 48°17.884.

PLACE OF USE: DOMESTIC STORAGE and DOMESTIC FROM 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	
57N	02W	8												X					

Method of Determination: Field exam and Arcmap aerial imagery.

3.

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

☒ 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

☒ 1:24,000 or greater.☒ Aerial Photo Attached (required for irrigation of 10+ acres).☒ 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
NONE					

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
5 GAL BUCKET MEASUREMENT						

2. Measurements: A 5 gallon bucket measurement was completed to derive the flow rate equaling **0.01 cfs**, which was applied as the default diversion rate due to actual flow rate being 2.0 gallons per minute and less than the minimum department authorized flow rate.

E. FLOW CALCULATIONS

Measured Method: 5 gallon bucket test = 5 gal / 150 seconds x 60 seconds = 2.0 gpm. The minimum flow rate for department standards is equivalent to 4.48 gpm = **0.01 cfs**, which will be applied as the diversion rate for licensing purposes.

F. VOLUME CALCULATIONS

1. Volume Calculations for irrigation: N/A

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

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

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

2. Volume Calculations for Other Uses:

See attached pond analysis worksheet

Domestic storage and domestic from storage annual volume = **0.6 af** respectively.

Maximum diversion volume = 1.0 af (pond capacity + seepage & evaporation) + 0.6 af (domestic storage/from storage use) = **1.6 af**.

G. NARRATIVE/REMARKS/COMMENTS

Field exam performed on 9/14/2018 with the applicant, Dan Fogarty, showed a small pond filled by spring water & from Syringa Creek that was used for domestic storage & domestic (external use) from storage purposes. The spring source fed directly into the pond and an overflow discharge pipe was installed on the dam to allow flow to return back to Syringa Creek. Water was diverted from Syringa Creek via gravity flow from a screened intake pipe in the creek. The permit's diversion to storage beneficial use was determined using a 5 gallon bucket measurement from the pipe in Syringa Creek equal to 5 gal / 150 seconds x 60 seconds = 2.0 gpm, which is less than the department's smallest diversion rate. The minimum flow rate for department standards is equivalent to 4.48 gpm = **0.01 cfs**, which will be applied as the diversion rate for licensing purposes.

A small pond had been developed by the applicant, which serves as the domestic storage POU. The pond has a surface area of 0.07 acres, a max depth of 6 feet, an average depth of 2.4 feet, a pond capacity of .01 af, a seepage and evaporation loss of 0.9 af, and a multiple fill allowance of **0.6 af** for domestic from storage use. The total annual volume required for the pond equals 1.6 af. The **1.6 af** volume is recommended as the maximum diversion volume for licensing purposes. The applicant utilized a 1 HP Goulds pump to draw water from the pond to irrigate up to ½ acre with tripod sprinklers associated with the permit's domestic beneficial use. Mr. Fogarty validated that water diverted from either source was not used for domestic in-home use, resulting in the domestic beneficial use as a direct flow component being removed from the permit during licensing review. The domestic from storage POU was walked during the field exam, and due to the close proximity of the pond to the home and related ½ acre irrigation, a generic rectangle shape was applied as the POU using Arcmap aerial imagery during licensing review. The applicant is limited to the ½ acre of irrigation that occurs within the license recommended POU.

Conditions 082 and 26A were removed from the permit during licensing review. Condition X15 was updated to the current X15 verbiage. Condition 239 was replaced with 240 to describe domestic use is for external use only. Condition 219 was replaced with 259 to describe the pond components and multiple fill volume associated with domestic usage. Condition 220 was updated to reflect post field exam pond component values. Condition F06 was added describing that rights 96-9519 and 96-9565 have the same spring source POD. Condition X35 was added to describe limitations between the pond storage overlap volume for rights 96-9519 and 96-9565. All other conditions on permit will remain on the license.

Right 96-9519 incorporates the same pond, used for recreation storage, aesthetic storage, and fire protection storage that is associated with this permit's domestic storage POU; this permit was applied for as the applicant used water from the pond for domestic external use that wasn't a part of right 96-9519 when licensed. Condition X35 was added to mitigate the overlap concern for 96-9519 and 96-9565. There are no additional overlap concerns for this right.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS**1. Recommended Amounts**

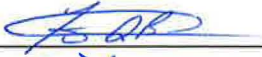
<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
DOMESTIC STORAGE	01/01 to 12/31		1.6 AF
DOMESTIC FROM STORAGE	01/01 to 12/31		0.6 AF
DIVERSION TO STORAGE	01/01 to 12/31	0.01 CFS	
<u>Totals:</u>		0.01 CFS	1.6 AF

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

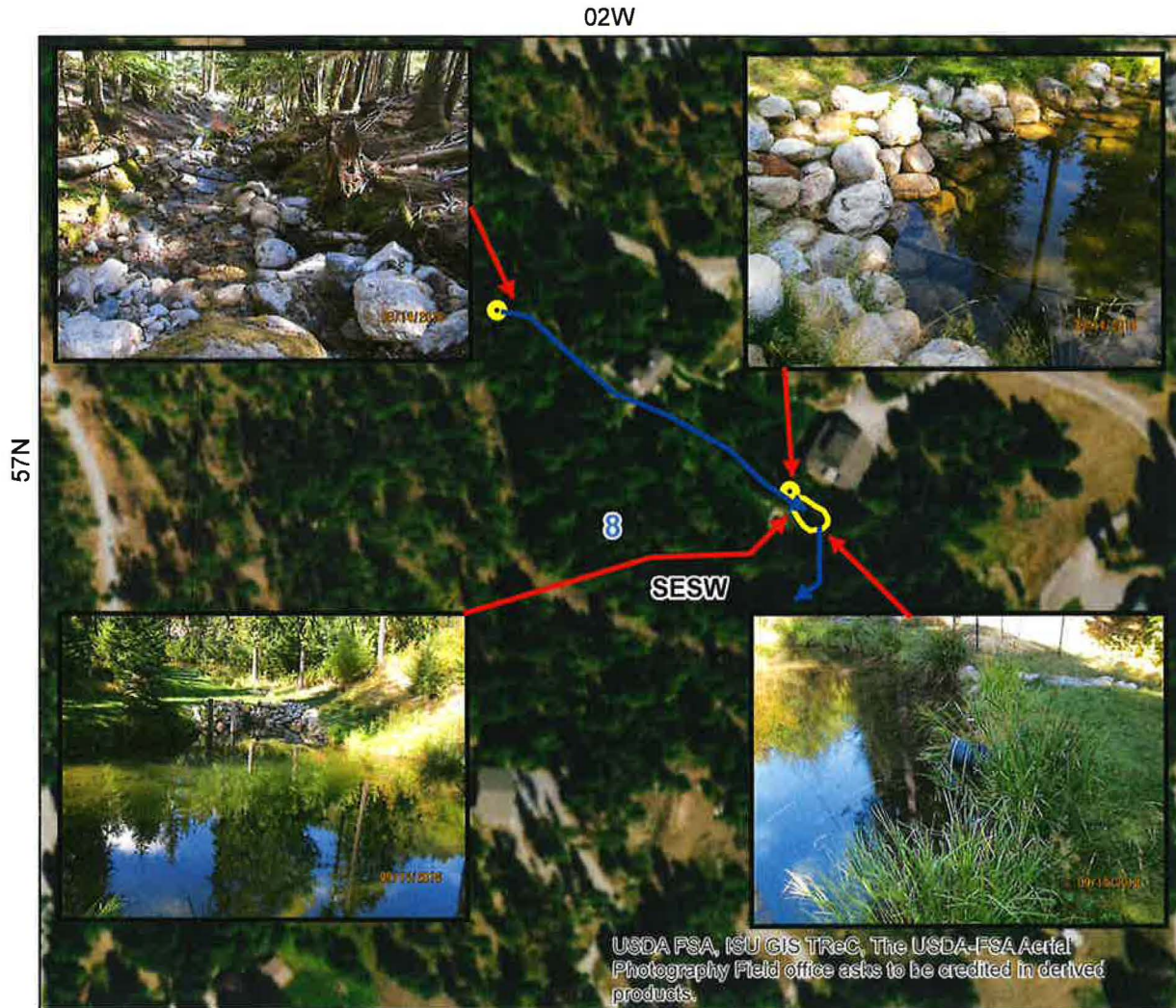
I. AUTHENTICATION Luke Bates - Water Resource Agent

Field Examiner's Name  Date 11/6/2020

Reviewer  Date 11/27/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
96-9565

DOMESTIC STORAGE system diagram.



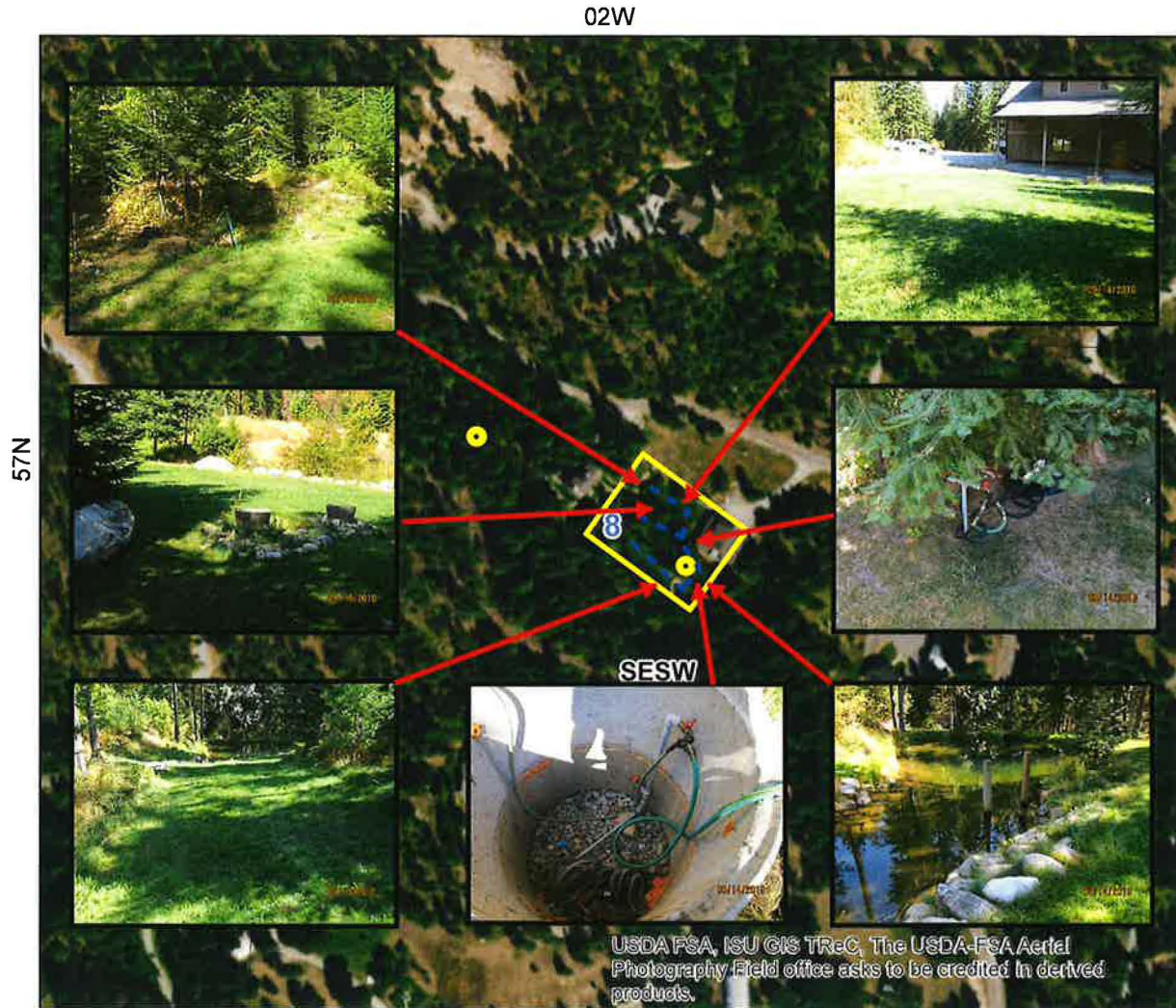
- Point of Diversion
- Place Of Use Boundary
- Townships
- PLS Sections
- Quarter Quarters

0 0.025 0.05 0.1 Miles



State of Idaho
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DOMESTIC FROM STORAGE system diagram.



- Point of Diversion
- Place Of Use Boundary
- Townships
- PLS Sections
- Quarter Quarters

0 0.035 0.07 0.14 Miles



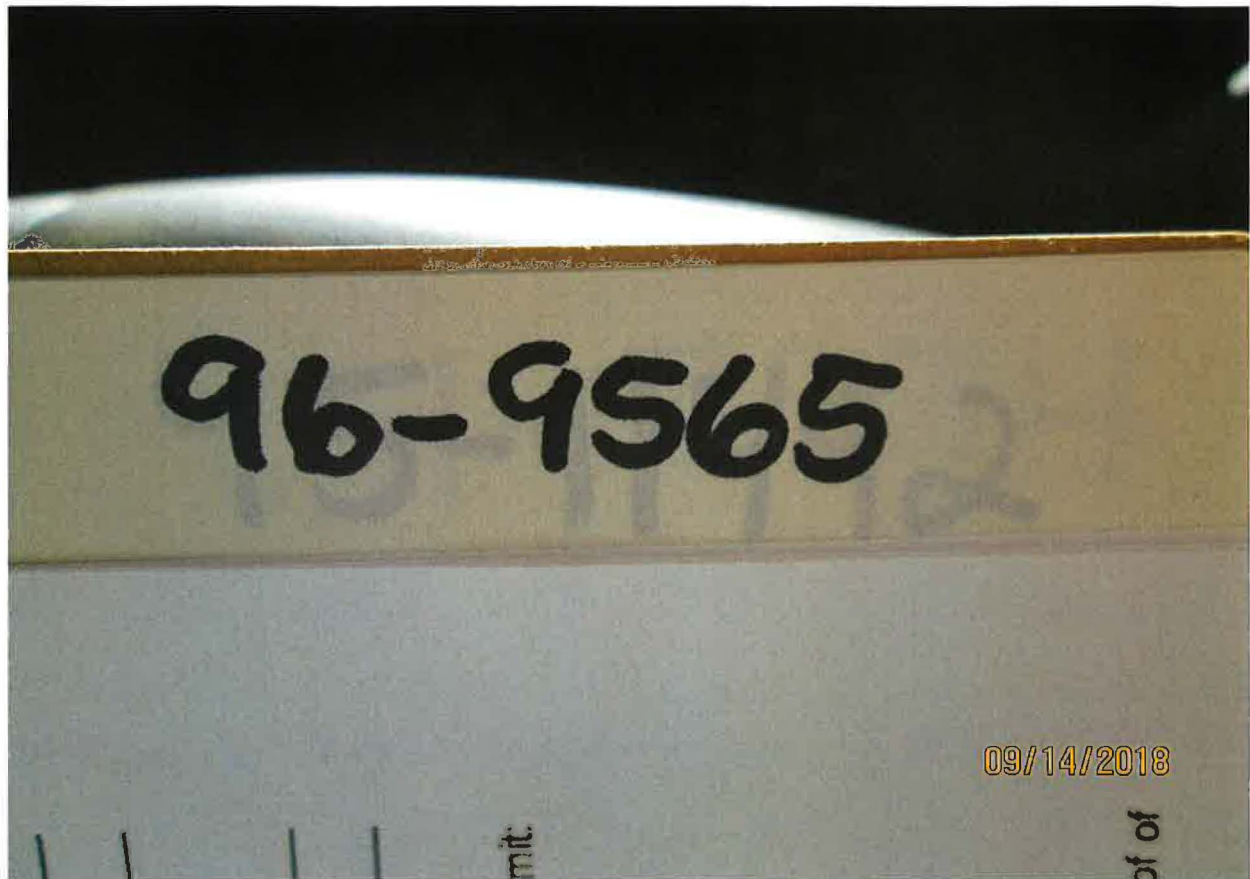
Total Storage Calculations

FILE NUMBER	96-9565
REVIEWER	Luke Bates
DATE	11/6/2020

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

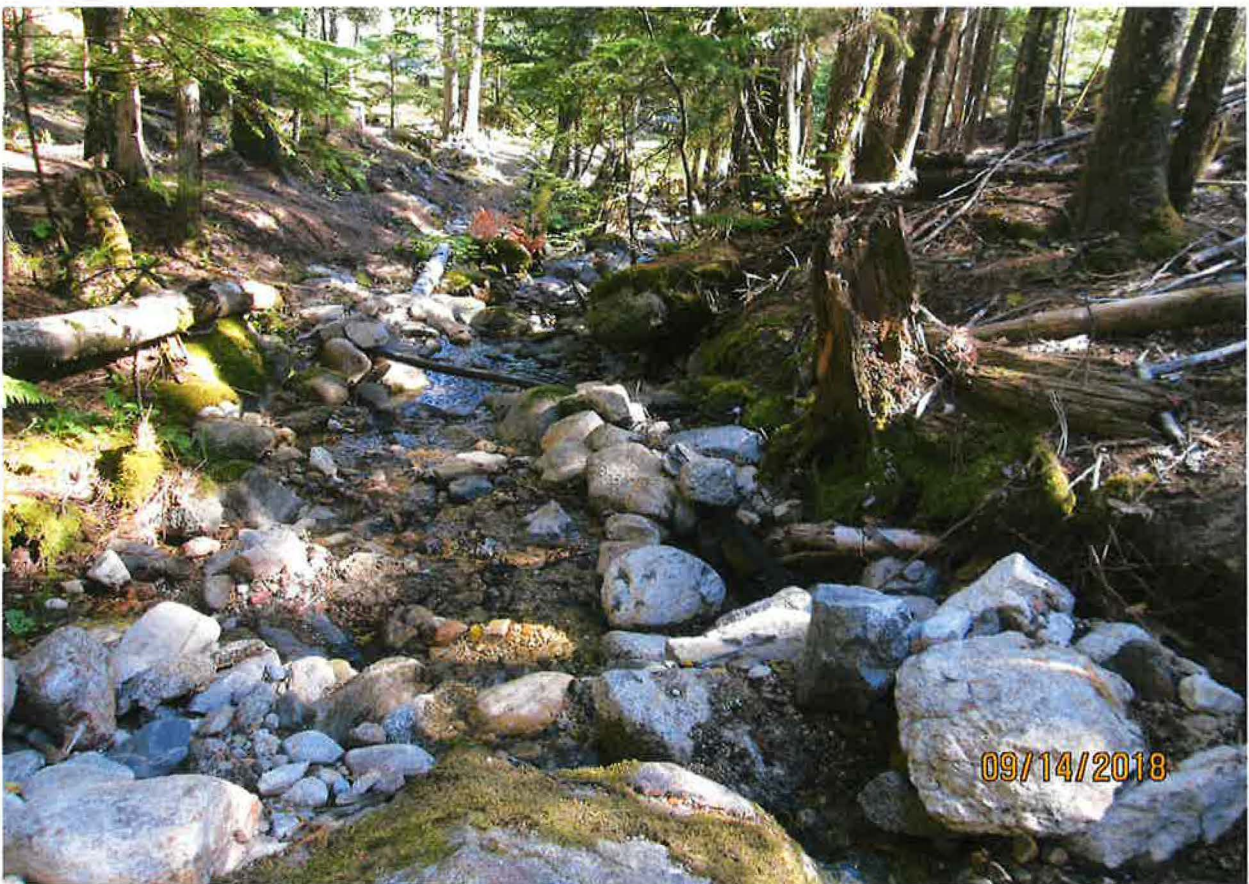
Surface Area (AC.)	0.07	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	2.4	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: If you know the maximum depth and not the average depth, the Field Examiner's 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)	0.1	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)	0.6	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)	0.3	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.6	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	1.6	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.



POD – INTAKE PIPE LOCATED IN SYRINGA CREEK



POD – INTAKE PIPE IN CREEK, LOCATED UNDER ROCK CENTER IN REFLECTION



DIVERSION PIPING ROUTED ACROSS CREEK TOWARD POU

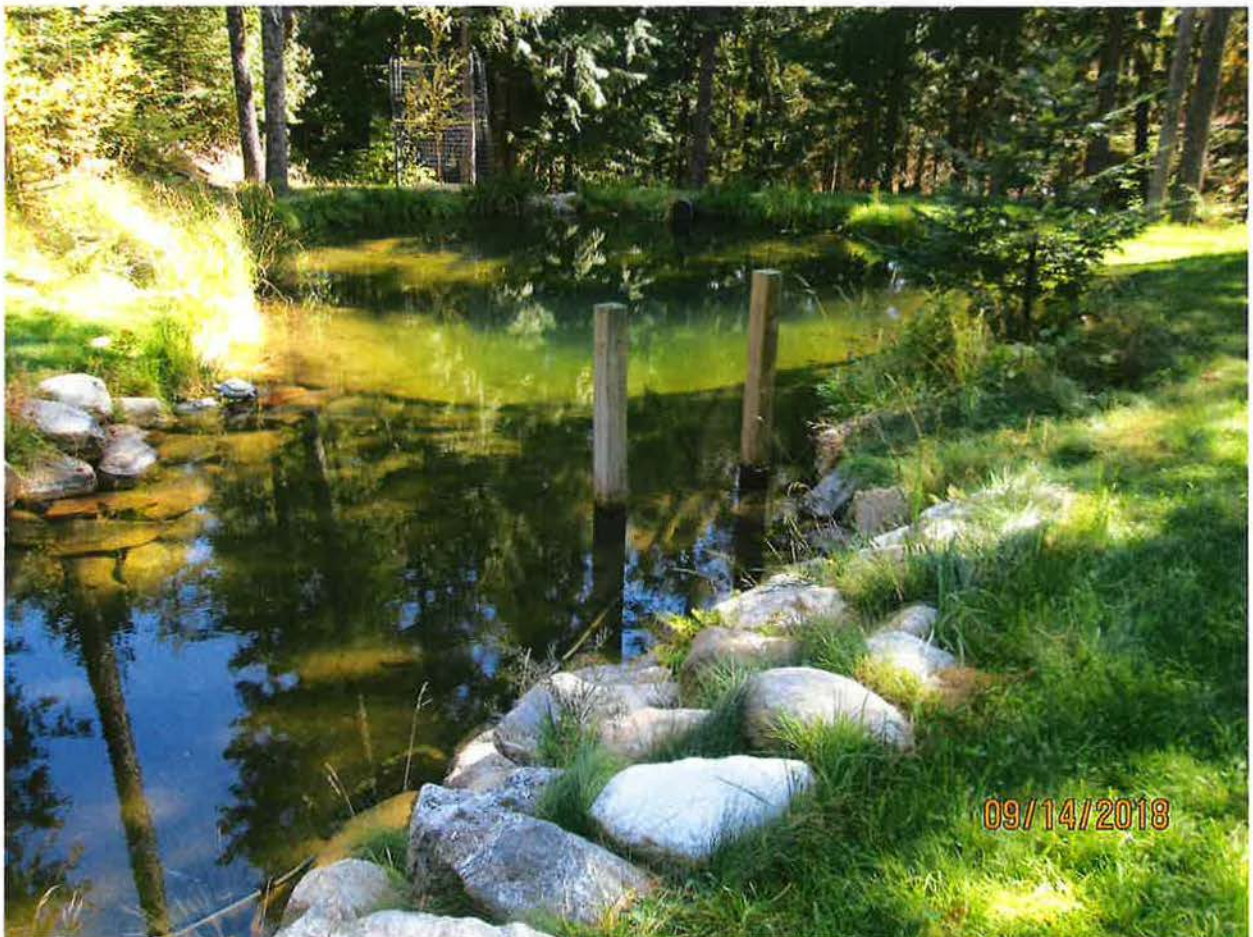


DOMESTIC STORAGE POU – POND WITH OVERFLOW DISCHARGE PIPE





DOMESTIC STORAGE POU





DOMESTIC STORAGE POU – POND WITH INTAKE SUPPLY PIPE ON BOTTOM OF POND



DOMESTIC FROM STORAGE POU – EXTERNAL USE ONLY



WATER CONVEYANCE SYSTEM – PUMP SYSTEM DRAWING WATER FROM POND





DOMESTIC FROM STORAGE POU





DOMESTIC FROM STORAGE POU

