

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 95-16536

Exam Date: 8/19/2015

1. Current Owner: HAGADONE FAMILY TRUST
PO BOX 6200
COEUR D ALENE ID 83816
(208) 667-3431

And/Or

DBH PROPERTIES LLLP
PO BOX 6200
COEUR D ALENE ID 83816

2. Accompanied by: Travis Curtis
Phone No: 208-659-3192
Relationship to Permit Holder: Head Grounds Keeper

3. SOURCE

COEUR D ALENE LAKE

TRIBUTARY

SPOKANE RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
2. Other water rights with the same point of diversion: 95-16539, 95-9048

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

COEUR D ALENE LAKE L4 SW1/4SE1/4 Sec. 22, Twp 50N, Rge 04W, B.M. KOOTENAI County

COEUR D ALENE LAKE L4 SW1/4SE1/4 Sec. 22, Twp 50N, Rge 04W, B.M. KOOTENAI County

Method of Determination: GPS and maps. POD location at 47° 39.620, 116° 48.910

2.

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	
50N 04W 22															.4 L 3	10.9 L 4	11.3

Total Acres: 11.3

PLACE OF USE: DIVERSION TO STORAGE

Twp Rge Sec	NE				NW				SW				SE				Totals
50N 04W 22	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
															X		
															L 4		

PLACE OF USE: IRRIGATION FROM STORAGE

Twp Rge Sec	NE				NW				SW				SE				Totals
50N 04W 22	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
															.4	10.9	
															L 3	L 4	11.3

Total Acres: 11.3

PLACE OF USE: IRRIGATION STORAGE

Twp Rge Sec	NE				NW				SW				SE				Totals
50N 04W 22	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
												X					

Method of Determination: GPS and maps.

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.

<u>Well or Diversion</u> <u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge</u> <u>Size</u>
		7.5			
		7.5			

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

<u>Measurement</u> <u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
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N/A

2. Measurements:

E. FLOW CALCULATIONS

☐ Additional Computation Sheets Attached

Measured Method: UNABLE TO PERFORM FLOW MEASUREMENT. TRAVIS CURTIS SAID PUMPS WERE 7.5 HP AND IDWR ASSUMED PSI WAS AT 40. THEORETICAL PUMPING EQUATION ESTIMATES

- FOR DIRECT IRRIGATION TO HIGHEST POINT OF IRRIGATION

$$(7.5 \text{ HP})(8.8)(0.8) / 140 + (40 \times 2.3087) = 0.23 \text{ CFS} \times \text{BY } 2 \text{ FOR BOTH PUMPS} = 0.46 \text{ CFS}$$

- FOR DIVERSION TO STORAGE

$$(7.5 \text{ HP})(8.8)(0.8) / 320 + (40 \times 2.3087) = 0.13 \text{ CFS} \times \text{BY } 2 \text{ FOR BOTH PUMPS} = 0.26 \text{ CFS}$$

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 11.3 \text{ AC} \times 3 \text{ AF} = 33.9 \text{ AF}$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.23 \text{ CFS} \times 246 \times 1.9835 = 112.2 \text{ AF}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{D.R.} = 33.9 \text{ AF}$$

2. Volume Calculations for Other Uses: SEE ATTACHED POND ANALYSIS SHEET

G. NARRATIVE/REMARKS/COMMENTS

FIELD EXAM SHOWED APPLICANT HAD TWO 7.5 HP PUMPS THAT WOULD DIVERT WATER FROM THE LAKE FOR EITHER IRRIGATION OR DIVERSION TO STORAGE. WATER WOULD BE USED EITHER FROM POND FOR IRRIGATION OR DIRECTLY FROM LAKE FOR IRRIGATION. UNABLE TO PERFORM FLOW MEASUREMENT SO THEORETICAL PUMPING EQUATION WAS USED. SEE ATTACHED POND ANALYSIS SHEET AND THEORETICAL PUMPING EQUATION. LICENSE WILL HAVE TO BE AMENDED TO SHOW PROPER QQ FOR IRRIGATION STORAGE.

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>
IRRIGATION	03/15 to 11/15	0.230 CFS	33.90 AF
DIVERSION TO STORAGE	03/15 to 11/15	0.260 CFS	
IRRIGATION FROM STORAGE	03/15 to 11/15		33.90 AF
IRRIGATION STORAGE	01/01 to 12/31		35.60 AF
<u>Totals:</u>		0.260 CFS	35.60 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 Greg Fendall Date 2-12-16

Reviewer [Signature] Date 3-9-16

State of Idaho
Department of Water Resources
Water Right License
95-16536

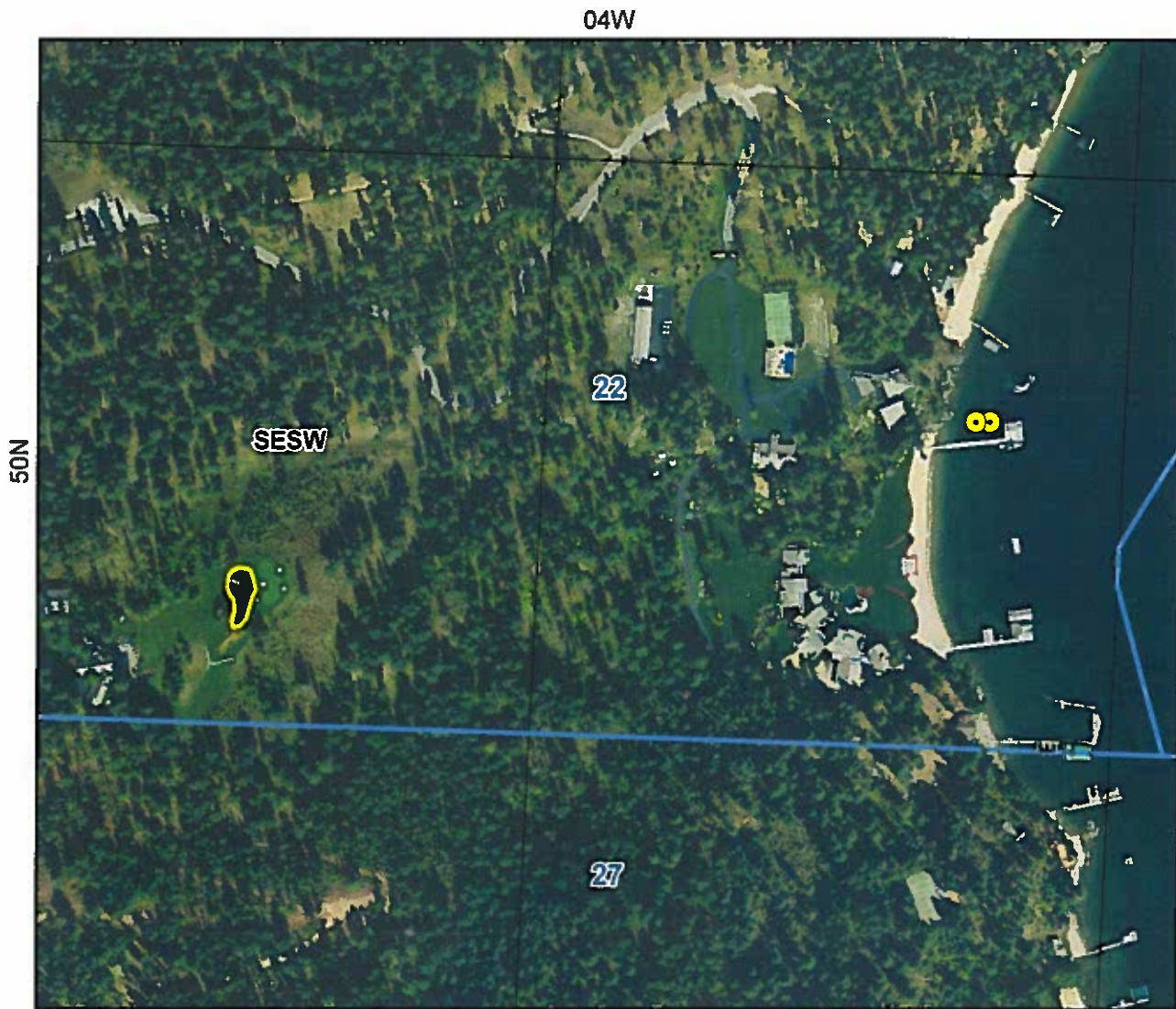


0 0.0475 0.095 0.19 Miles

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



State of Idaho
Department of Water Resources
Water Right License
95-16536



0 0.05 0.1 0.2 Miles

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



WATER RIGHT 95-16536
POND ANALYSIS SHEET

POND SIZE: 0.13 AC X 10 FEET DEEP = 1.3 AF

EVAPORATION: 353 GPD X 365 DAYS / 325,850 GAL/AF = 0.4 AF

SEEPAGE: NO SEEPAGE, LINED

IRRIGATION: 11.3 ACRES X 3.0 AF = 33.9 AF

0.26 CFS DIVERSION TO STORAGE

0.23 CFS IRRIGATION

35.6 AF IRRIGATION STORAGE

A) POND SIZE 1.3 AF

B) EVAPORATION 0.4 AF

C) SEEPAGE 0.0 AF

D) IRRIGATION 33.9 AF

TOTAL 35.6 AF

33.9 AF IRRIGATION FROM STORAGE

THEORETICAL PUMPING EQUATION FOR WATER RIGHT 95-16536

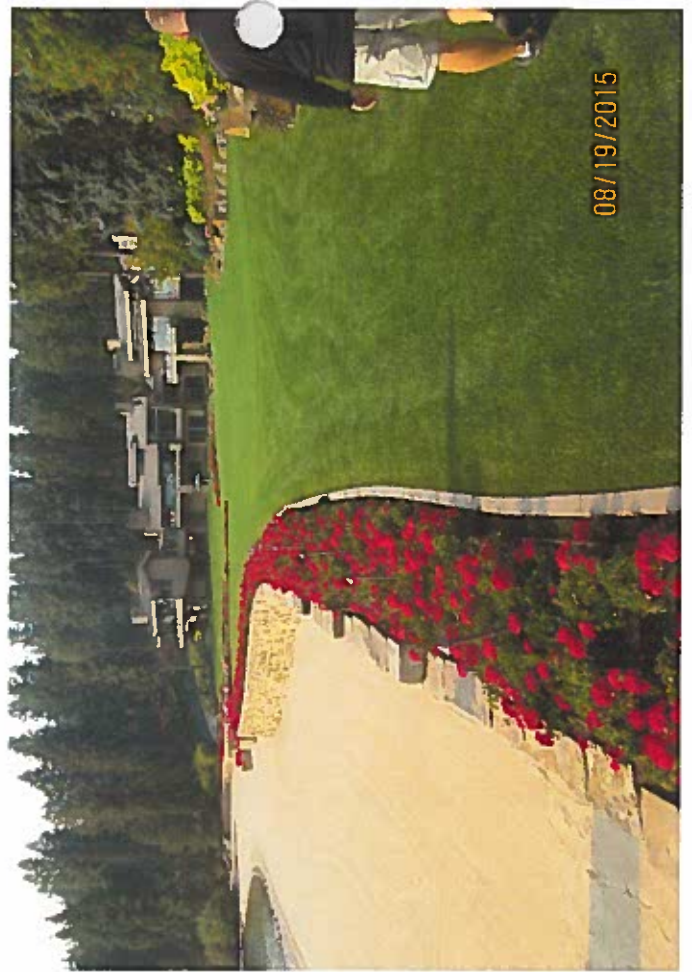
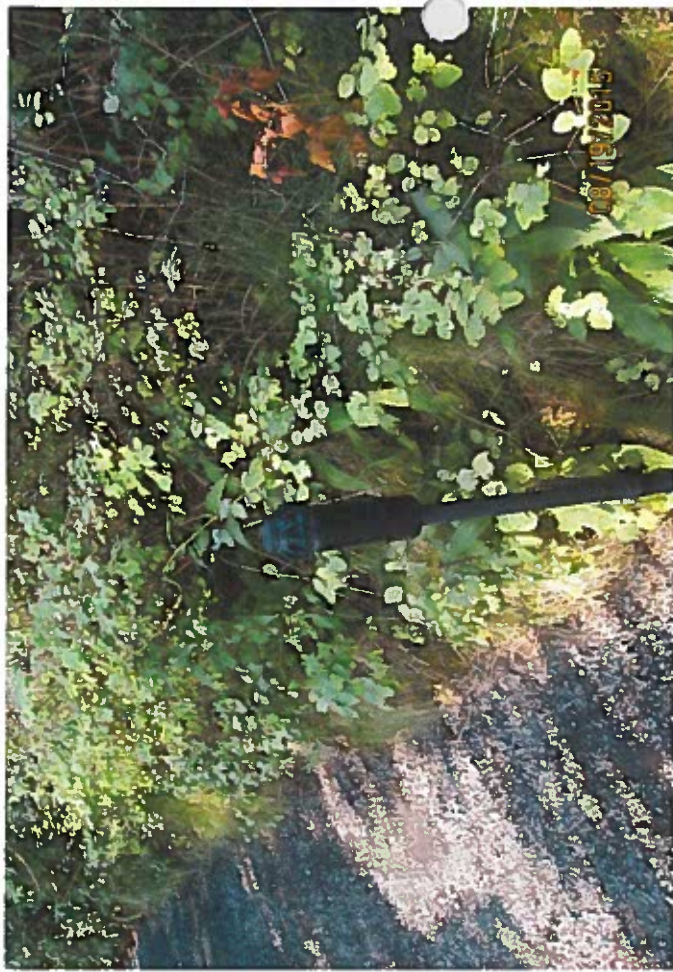
APPLICANT HAS TWO 7.5 HP PUMPS

PUMP EQUATIONS WATER RIGHT No. 95-16536						
		HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q =	$\frac{HP \cdot 8.8 \cdot \text{Eff}}{H}$	7.5	232.51 7	0.8	140	40
Q = 0.227 cfs 102.1 gpm						

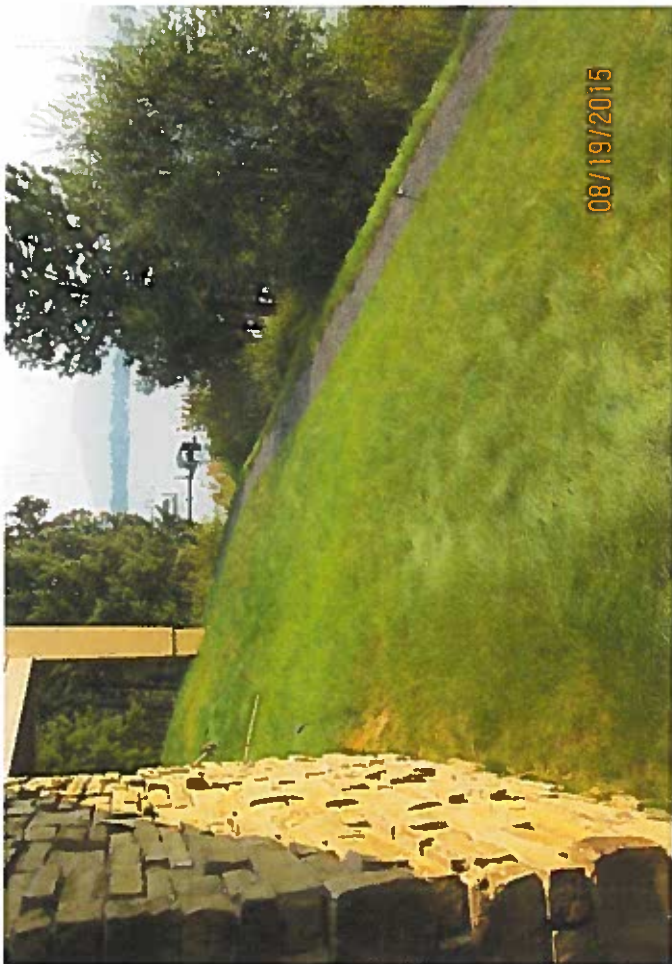
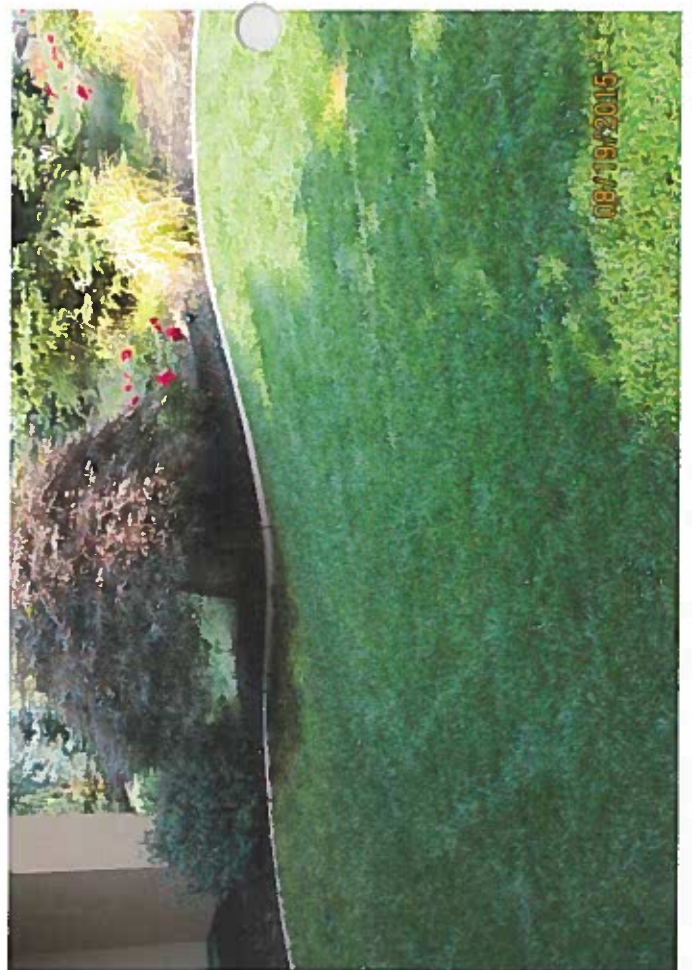
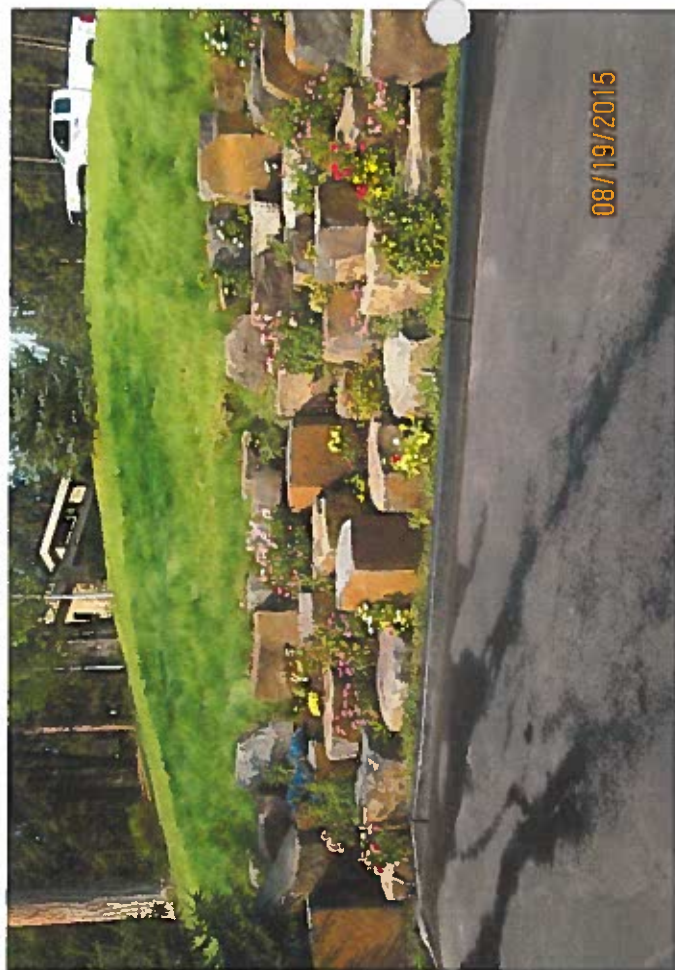
PUMPING EQUATION FOR IRRIGATION FROM LAKE. PUMPING LIFT IS BASED UPON THE DISTANCE FROM THE LAKE TO HIGHEST ELEVATION IRRIGATION OCCURS. ASSUMED SYSTEM RUNS AT 40 PSI. THIS IS FOR ONE PUMP SO APPLICANT HAS CAPABILITY TO PUMP 204 GPM OR 0.45 CFS.

PUMP EQUATIONS WATER RIGHT No. 95-16536						
		HP	H in feet	Efficiency as a decimal	Pumping lift in feet	System pressure in PSI
Q =	$\frac{HP \cdot 8.8 \cdot \text{Eff}}{H}$	7.5	412.51 7	0.8	320	40
Q = 0.128 cfs 57.5 gpm						

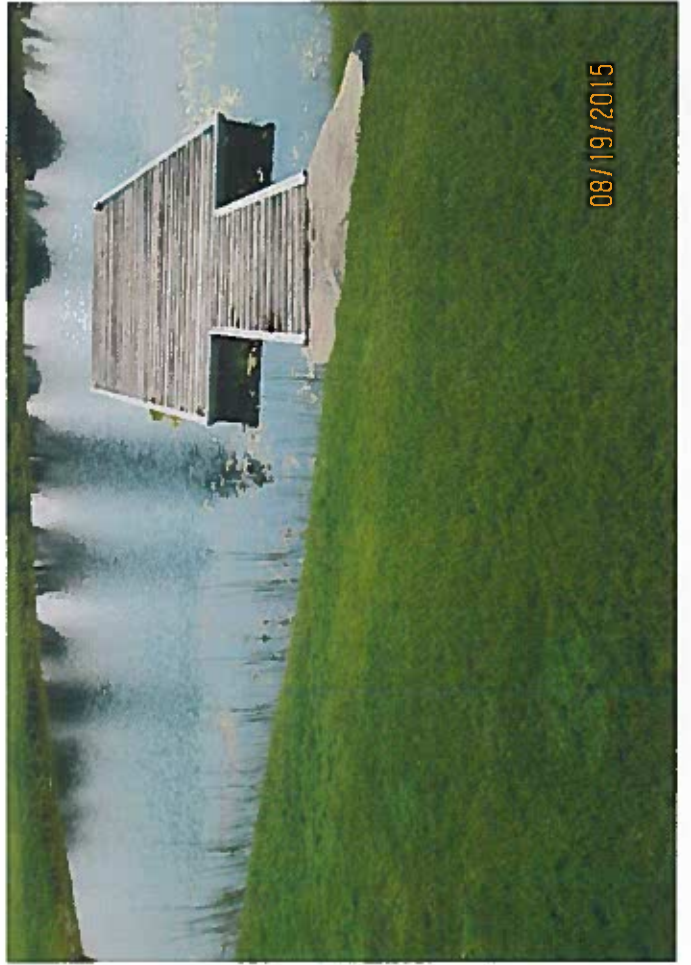
PUMPING EQUATION FOR DIVERSION TO STORAGE. PUMPING LIFT IS BASED UPON THE DISTANCE FROM THE LAKE TO THE ELEVATION OF THE POND. ASSUMED SYSTEM RUNS AT 40 PSI. THIS FOR ONE PUMP SO APPLICANT HAS CAPABILITY TO PUMP 115 GPM OR 0.26 CFS.



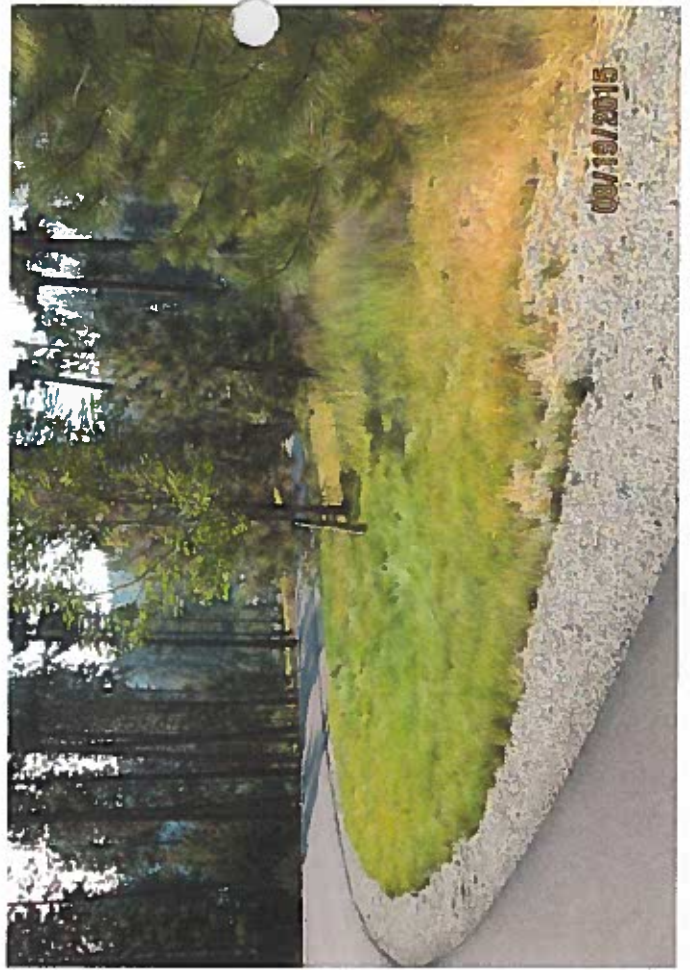
95-16536



95-165316



95-11526



95-16536