

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 97-7342
Exam Date: 07/26/2001

1. Current Owner:
PRIEST LAKE GOLF CLUB INC 4777 W LAKESHORE RD PRIEST LAKE ID 83856
2. Accompanied by: Craig Hill
Phone No: 208-443-2551
Address: Same as above
Relationship to permit Holder: President, Priest Lake Golf Club Inc.

3. **SOURCE:**
LAMB CREEK

Tributary
PRIEST RIVER

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
97-2052	LAMB CREEK	IRRIGATION	LICENSE
97-7142	GROUND WATER	DOMESTIC	LICENSE
97-7397	GROUND WATER	MUNICIPAL	PERMIT IN PROCESS FOR LICENSING

Comments: Right 97-2052 is a surface water source irrigation license that overlaps right 97-7142, irrigating the front 9 holes of the Priest Lake Golf course. Condition X35 was added to this license to mitigate overlap concerns.

Right 97-7142 is a groundwater source license that uses water for domestic purposes that overlaps this right. Upon conclusion of a meeting with Mr. Hill, President of the Priest Lake Golf Club Inc., it was determined that the 5 homes covered for domestic purposes under right 97-7142 has not been used by the applicant's system for decades, and will be considered forfeiture and not a concern for overlap.

Right 97-7397 is being licensed in conjunction with this right, and uses groundwater for municipal purposes; the overlapping POU is based on complete service area for the Priest Lake Golf Course, but is not a concern for overlap with this right.

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

Water Right No.	Source	Purpose of Use	Basis
97-2052	LAMB CREEK	IRRIGATION	LICENSE

Comments: Right 97-2052 and 97-7342 have the same point of diversion from Lamb Creek, and use same infrastructure piping from creek to the golf course for irrigation purposes. Condition F06 was added to this license to describe the same POD.

C. DIVERSION AND DELIVERY SYSTEM

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

LAMB CREEK NE¼ NW¼, Sec. 36, Twp 60N, Rge 05W, B.M. BONNER County

Method of Determination: GPS. POD is located at -116°55.881, 48°30.901.

PLACE OF USE: IRRIGATION 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	
60N	05W	25															X		

PLACE OF USE: IRRIGATION and IRRIGATION 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	
60N	05W	25													5.5	6.4	18.0	2.1	32.0

Total Acres: 32.0

Method of Determination: Field exam and Arcmap aerial imagery.

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
SUBMERSIBLE PUMP		7.5			

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
GE PANOMETRIC	ULTRASONIC		PT878	PCC1316134		4/2/2019

2. Measurements: flow measurement taken using GE Panemetric Ultrasonic Flowmeter.

E. FLOW CALCULATIONSMeasured Method: flow rate determined by GE Panemetric Ultrasonic Flowmeter = 107 gpm = **0.24 cfs****F. VOLUME CALCULATIONS**

1. Volume Calculations for irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 32.0 \text{ ac} \times 3.0 \text{ afa} = 96 \text{ af}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 0.24 \text{ cfs} \times 214 \times 1.9835 = 102$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 96 \text{ af}$$

2. Volume Calculations for Other Uses:

This is a surface water right; there will be no annual volume applied to the irrigation beneficial use component, nor a maximum diversion volumes applied to this water right.

Irrigation from Storage Annual Volume = **32.0 af**

See attached pond analysis sheet

G. NARRATIVE/REMARKS/COMMENTS

Admin note: an initial field exam was performed by department staff on 7/26/2001; due to inadequate information provided in field exam notes, multiple overlapping rights and how they interact with this right, and a substantial time gap between the initial exam and licensing, a second field exam was performed on 7/29/2017 in order to finalize this right. The permitted seasons of use were corrected from 04/01-11/01 to the current department standard of 04/01-10/31 for Irrigation, Irrigation Storage, Irrigation from Storage, and Diversion to Storage beneficial uses during licensing review.

Field exam performed on 6/29/2017 with Craig Hill, President of the Priest Lake Golf Club Inc., showed water being diverted from Lamb Creek for irrigation purposes. At the POD, the applicant's system used a 7.5 HP pump that diverted water to a pond located on the golf course for direct flow irrigation use, irrigation storage, and irrigation from storage use. A flow measurement using a GE Panametric Ultrasonic Flowmeter was performed, resulting in a diversion rate equal to 107 gpm = **0.24 cfs**, which will be applied as the annual and maximum diversion rate for licensing purposes. Water was piped using a PVC main trunk line routed along roads to the pond, where it discharged for irrigation storage and irrigation/irrigation from storage use. Water was then pumped from the pond for irrigation of the front nine of the golf course.

The field exam conducted on 6/29/2017 provided GPS coordinates for the POD, which did not match the previous field exam data collected. The current GPS coordinates are being used to license this right. Prior field exam notes identified two ponds were used for irrigation storage, but a recent meeting with Mr. Hill validated that only one pond was associated with irrigation storage for this right. The approved permit authorized 220 acres of irrigation, but current field exam and meeting with Mr. Hill identified that water diverted from Lamb Creek was only used to irrigate the front nine of the golf course. Prior field exam notes provide a higher diversion rate from a smaller hp pump than observed during the 6/29/2017 exam; ultrasonic flow meter values obtained during the current exam will be used to license this right. Existing right 97-2052 was licensed with a diversion rate of 0.33 cfs, and it is unclear if a pump was replaced prior to the exam conducted on 6/29/2017 that derived a smaller diversion rate; condition X35 will be added to this right in order to describe that rights 97-2052 and 97-7342 when combined shall not exceed a maximum diversion rate of 0.33 cfs, as the POD is the same system for both water rights.

The irrigation storage pond has a surface area of 1.3 acre, a maximum depth of 10 feet, an average depth of 4 feet, a pond capacity of 5.2 af, and an estimated seepage and evaporation loss of 0.7 af. There is a 32.0 af multi-fill volume applied to this pond, and the total volume required for this pond on an annual basis equals 37.9 af. Current pond analysis metrics were not used at the time this permit was developed, and the current pond analysis sheet is being used for reference only, and the complete values derived are not being considered additive for licensing purposes.

Arcmap 2013 year aerial imagery was used to trace out the irrigation area on the front nine of the golf course, which equals 32.0 acres. Irrigation areas traced out do not include large sand traps nor multiple dry land areas between fairways, that Mr. Hill verified do not receive irrigation, but remain green for part of the irrigation season. Irrigation water is pumped from the northern portion of the storage pond, and then distributed by a pressurized sprinkler system to irrigate the front nine of the

course. The annual volume for irrigation and irrigation from storage equals $32.0 \text{ ac} \times 3.0 \text{ afa} = 96 \text{ af}$, but due to permit approved limitations the irrigation storage and irrigation from storage volume equals 32.0 af. As this is a surface water source, irrigation as a direct flow does is not assigned an annual volume nor a maximum volume. The volume of water associated to the irrigation beneficial use as direct flow makes up the remaining 64 af for the 32 acres, and is accomplished during night time intensive irrigation at the golf course when the pond serves as a pass through for irrigation water. The **32.0 af** of irrigation storage and irrigation from storage occurs throughout the daytime periods as the pond is recharged from the previous night, and will be applied to annual volumes at time of licensing.

The remaining irrigation occurring throughout the golf course parcels with developed homes, and the back nine of the golf course are accounted for in water rights 97-7343 and 97-7397.

Due to this permit being approved on 4/13/1995, the following conditions have been updated to reflect current department verbiage: 03A was replaced with R62, 004 was updated, and two conditions for IDFG were replaced with conditions X15 and X16. Condition 26A was removed from permit at time of licensing. Condition F06 was added to describe that 97-2052 and 97-7342 have the same POD. Condition X35 was added to mitigate overlap concerns, and states that rights 97-2052 and 97-7342 when combined shall not exceed a total diversion rate of 0.33 cfs, and the irrigation of 50 acres. When 97-2052 was licensed, the 50 acres of irrigation was designated as two 40 acre tracts in the NWSE and SWSE of Section 25, 60N03W. Due to this, and limited backfile information identifying actual acreage irrigated by right 97-2052, is not possible to determine how the overlap between rights interacts. Mr. Hill has identified that the surface water source of Lamb Creek was historically used to irrigate the front nine of the course. As such, until time that future adjudication processes occur in basin 97, the 50 acre irrigation overlap limitation is generous considering the 32.0 acres of actual irrigation was identified.

Right 97-7142 is a groundwater source license that uses water for domestic purposes that overlaps this right. During a meeting with Mr. Hill, President of the Priest Lake Golf Club Inc., it was determined that the 5 homes covered for domestic purposes under right 97-7142 has not been used by the applicant's system for decades. It was plausible the 5 homes were connected to a well since abandoned, and will be considered forfeiture and not a concern for overlap. The 5 homes identified in right 97-7142 are currently serviced by the two wells associated with rights 97-7343 and 97-7397. Right 97-7397 is being licensed in conjunction with this right, and uses groundwater for municipal purposes; the overlapping POU is based on complete service area for the Priest Lake Golf Course, but is not a concern for overlap with this right. There are no other concerns of overlap for this water right.

Have conditions of permit approval been met? ☒ 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>
DIVERSION TO STORAGE	4/01 to 11/01	0.24 CFS	
IRRIGATION STORAGE	4/01 to 10/31		32.0 AF
IRRIGATION FROM STORAGE	4/01 to 10/31		32.0 AF
IRRIGATION	04/01 to 10/31	0.24 CFS	

Totals: 0.24 CFS

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 10/8/2020

Reviewer  Date 11/30/2020

State of Idaho
Department of Water Resources
Attachment to Field Exam
97-7342

IRRIGATION STORAGE system diagram.



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

0 0.05 0.1 0.2 Miles



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Department of Water Resources
Attachment to Field Exam
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IRRIGATION and IRRIGATION FROM STORAGE system diagram.



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

0 0.075 0.15 0.3 Miles



Total Storage Calculations

FILE NUMBER	97-7342
REVIEWER	Luke Bates
DATE	10/7/2020

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.)	1.3	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	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)	5.2	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)	32	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)	0.0	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	0.7	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	37.9	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 - CREEK DIVERSION



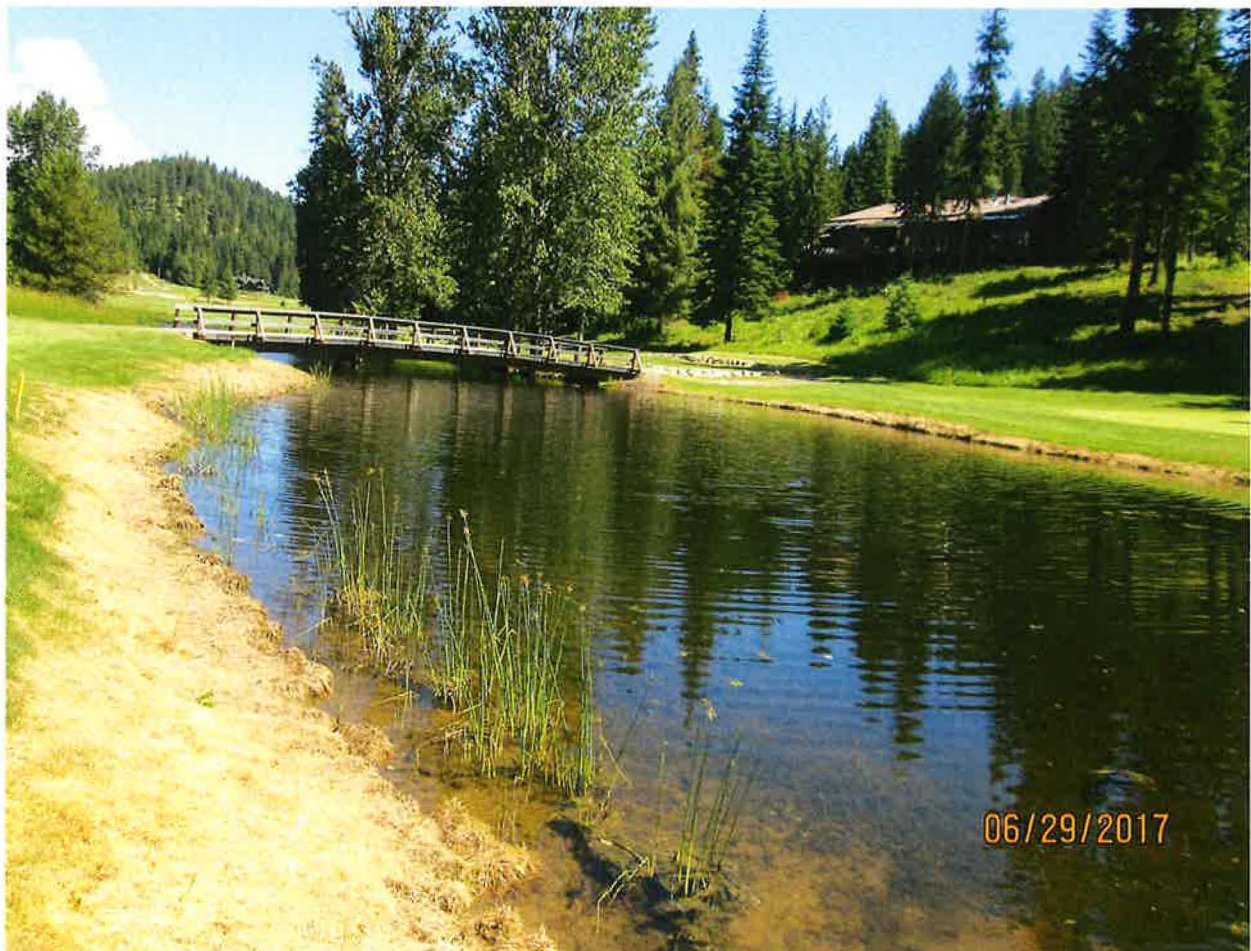
7.5 HP PUMP DIVERTING WATER FROM CREEK TO POND



FLOWMETER MEASUREMENT TAKEN FROM DIVERTING WORKS AT CREEK



IRRIGATION STORAGE POU – DISCHARGE TO POND FROM CREEK





DIVERTING WORK FOR IRRIGATION FROM STORAGE AT POND





WATER TRANSFER PUMP FOR IRRIGATION FROM STORAGE PURPOSES



POU – IRRIGATION STORAGE AND IRRIGATION FROM STORAGE



IRRIGATION FROM STORAGE POU – GOLF COURSE





IRRIGATION FROM STORAGE POU





IRRIGATION FROM STORAGE POU

