

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 97-7276
Exam Date: 9/11/2008

1. Current Owner: DANIEL F CLARK
PO BOX 673
PRIEST RIVER ID 83856

LAURA M CLARK
PO BOX 673
PRIEST RIVER ID 83856

2. Accompanied by: Daniel Clark

Phone No: (208) 448,1374

Address: PO Box 673, Priest River, ID 83856

Relationship to Permit Holder: ~~Owner~~ (Prior Owner - Father of Current Owners)

3. SOURCE

TRIBUTARY

ALDER CREEK

SINKS

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 97-7279

2. Other water rights with the same point of diversion: (See attached Overlap Review Memo.)

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION: 116° 52' 43.7 West 48° 11' 40.4 North

ALDER CREEK

NW1/4NE1/4

Sec. 19, Twp 56N, Rge 04W, B.M.

BONNER County

Method of Determination: GPS Receiver (Garmin), USGS 'Priest River' and

2. 'Laclede' 7.5' Quadrangles

PLACE OF USE: IRRIGATION

Twp Rge Sec	NE				NW				SW				SE				Totals
56N 04W 19	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	2.8
	2.8																
Total Acres:	2.8																

DIVERSION TO STORAGE same as IRRIGATION

IRRIGATION FROM STORAGE same as IRRIGATION

IRRIGATION STORAGE same as IRRIGATION

Method of Determination:

3. ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable. (See 6/8/92 Field Exam attached)
- ☒ 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 (See 6/8/92 Field Exam attached & enclosed 2008 Photos)

97-7276

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>
726176	NA	NA	NA	NA	Gravity Flow System
-	-	-	-	-	-

*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>
Bucket	NA	Lowes	NA	NA	NA	NA
Watch	Wrist	Remington	NA	NA	5 GAL capacity	NA

2. Measurements. Alder Creek $\frac{5 \text{ GAL}}{5 \text{ SEC}} \times \frac{12}{12} = \frac{60 \text{ SEC}}{12} = 60 \text{ BPM}$ Pond Pump $\frac{4 \text{ GAL}}{2 \text{ SEC}} \times \frac{30}{30} = \frac{60 \text{ SEC}}{120 \text{ GAL}} = .27 \text{ CFS}$

E. FLOW CALCULATIONS

Measured Method:

Additional Computation Sheets Attached

<u>PUMP EQUATIONS</u>	<u>WATER</u> HP	<u>RIGHT No.</u> H in feet	<u>97-7276</u> Efficiency as a decimal	<u>Pumping lift</u> in feet	<u>System</u> pressure in PSI
Q = $\text{HP} \times 8.8 \times \text{Eff} / \text{H}$ 0.306 CFS = 135 Q = GPM	5.5	110.9524	0.7	30	35

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{\text{I.R.}} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = (2.8) \times (3.0) = 8.4 \text{ AF}$$

$$V_{\text{D.R.}} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = (.07) \times (214) \times (1.9835) = 29.71 \text{ AF}$$

$$V = \text{Smaller of } V_{\text{I.R.}} \text{ and } V_{\text{D.R.}} = 8.4 \text{ AF}$$

2. Volume Calculations for Other Uses: Diversion To storage, Irrigation storage, Irrigation From storage

① CONSTRUCTED POND CAPACITY CALCULATION
 $\frac{95' \times 130' \times (10' \times .46)}{43,560 \text{ FT}^3} = 1.89 \text{ AF Storage} = 1.9 \text{ AF}$

② REFILL & LOSSES UP TO 4.0 AF PER PERMIT (Available For Irrigation Storage & Irrigation From storage 4.0 AF)

97-7276

G. NARRATIVE/REMARKS/COMMENTS

Mr. Daniel Clark accompanied examiner. Mr. Clark stated the pond for this Permit was originally intended to supply water for a parcel or subdivision located South of the 97-7276 Place of Use. The pond was built but the Place of Use never extended to the area south of the Permit Place of Use (POU).

Point of Diversion location is a vertical pipe buried in the bed of Alder Creek. The pipe was completely submerged beneath the surface of Alder Creek at the time of the 9/11/08 Exam. Measurements were taken after a winter with high precipitation. The pond water level had been lowered at the time of the 9/11/08 Exam past the outlet irrigation pipe to allow for pond maintenance and to allow ground to be worked in part of the irrigated area.

Water entering the vertical pipe flows via gravity through a underground four inch diameter plastic PVC pipe for a distance of approximately 100 feet down slope before reaching a point where an end cap can be removed. There is an elbow immediately above the end cap that diverts water approximately 45 degrees into another four inch line. The second four inch line extends approximately 50 feet before emptying into ditch that leads to a off stream storage pond. Water can be diverted from the ditch into the irrigated area or allowed to pass through a short four-inch diameter inlet pipe into the east end of the pond. Water can be prevented from entering the pond with an end cap on the inlet pipe.

A five gallon bucket filled in five seconds from the Alder Creek pipe when the end cap was removed. This is equivalent to 60 gallons per minute (0.13 Cubic Feet per Second) (CFS) and exceeds the Permit amount of .07 CFS for Diversion to Storage.

The diversion capacity of the irrigation system from the pond also exceeds the Permit Irrigation CFS (.07 CFS). A 5.5 Horsepower pump positioned on the west side of the pond is theoretically capable of diverting .306 CFS for irrigation. The pump has a 1.5 inch flexible output hose. The pump was placed into operation for the exam and put four gallons into a five gallon bucket in two seconds. This is equivalent to .27 CFS. There is also a four inch outlet pipe that leads out of the pond into the irrigated area.

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	0.070 CFS	
IRRIGATION	03/15 to 11/15	0.070 CFS	8.4 AF
IRRIGATION FROM STORAGE	03/15 to 11/15		4.00 AF
IRRIGATION STORAGE	01/01 to 12/31		4.00 AF
<u>Totals:</u>		0.070 CFS	12.4 ~~100~~ 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

Shawn M. May

Date

9/25/08

Reviewer

[Signature]

Date

11/28/8

97-7276

MEMORANDUM

Date: September 23, 2008
To: Water Right File 97-7276
From: smaxey
Re: Overlap Review

Water Right 97-7279 has a different POD but the same POU.

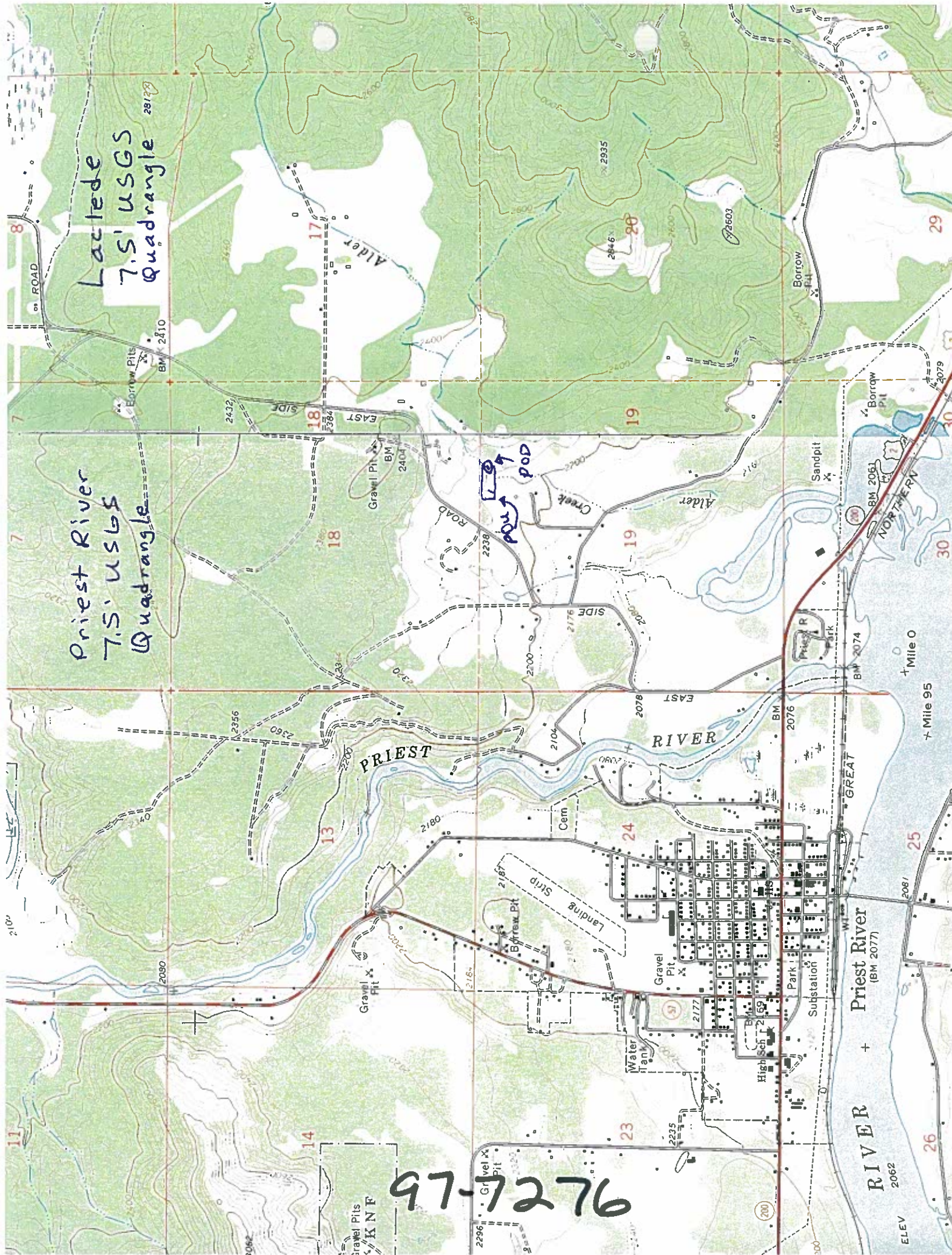
Water Right LISC 97-7292 is shown in ArcMap as having a POU boundary that encompasses the POUs for 97-7276 & 97-7279. Review of the 97-7292 Permit application indicates that this POU is actually on the property taxlot to the south of the 97-7276 & 97-7279 POU.

97-7276

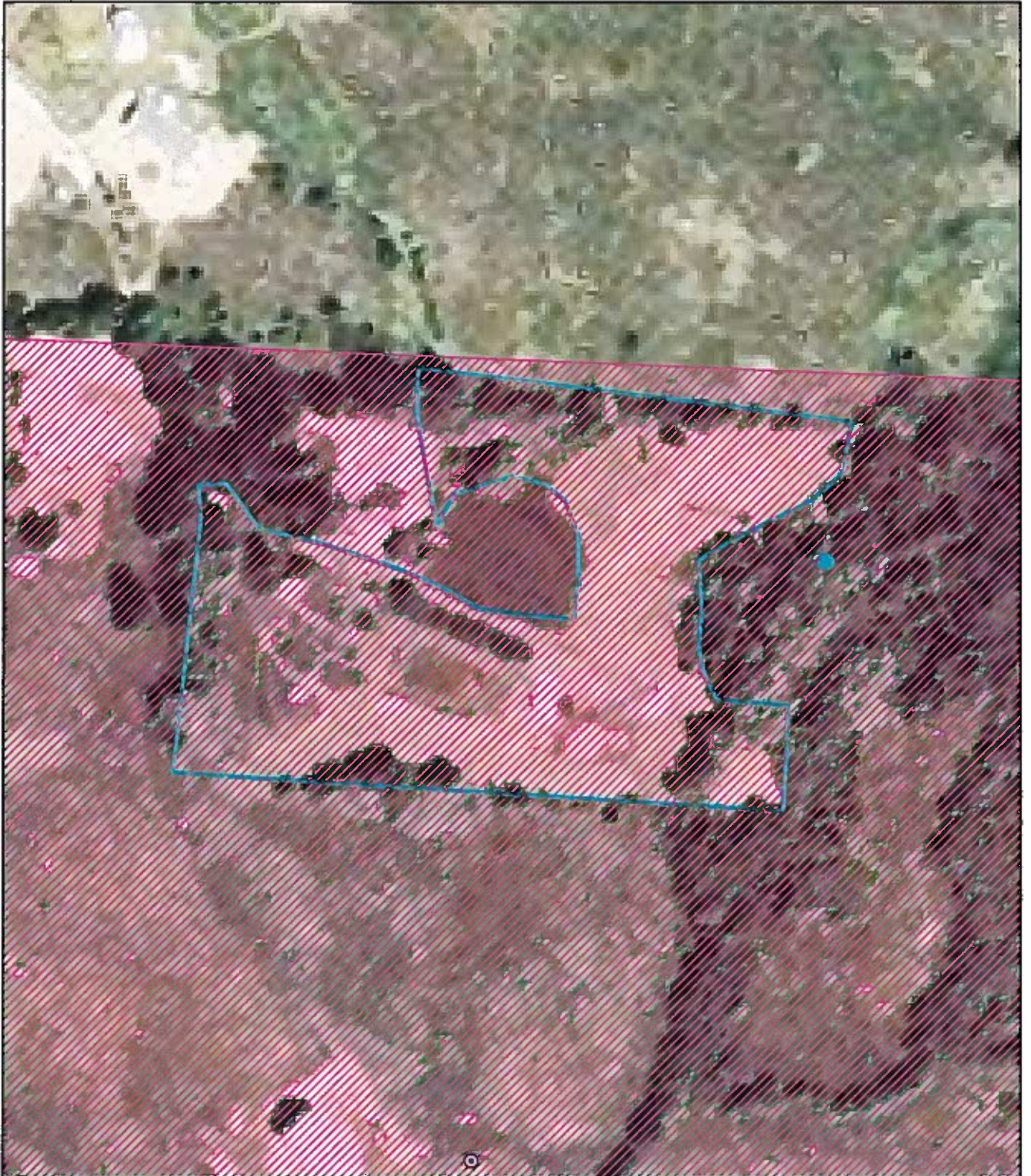
23

Lactede
7.5' USGS
Quadrangle

97-7276



97-7276



97-7276



97-7276 Submerged POD
Alder CR.JPG



97-7276 Teel Water Pump
On Honda 5.5.JPG



97-7276 Water Filling
Pond.JPG



97-7276 5.5 HP Honda on
Pond Pump.JPG



97-7276 5.5 HP Pump
Flow.JPG



97-7276 5.5 HP Pump.JPG



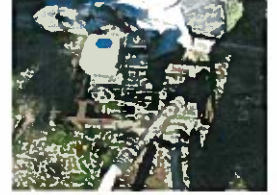
97-7276 5.5 HP Pump line
& Gravity Outflow.JPG



97-7276 Flow at 1st Elbow
from POD.JPG



97-7276 Pond.JPG



97-7276 Pump .JPG

97-7276



97-7276 Submerged POD Alder CR.jpg



97-7276 Flow at 1st Elbow From POD.jpg

97-7276



97-7276 Water Filling Pond.jpg



97-7276 Pond.jpg

97-7276



97-7276 5.5 HP Pump Line And Gravity Outflow.jpg



97-7276 5.5 HP Honda On Pond Pump.jpg

97-7276



97-7276 5.5 HP Pump.jpg



97-7276 Teel Water Pump on Honda.jpg

97-7276



97-7276 Pump.jpg



97-7276 5.5 HP Pump Flow.jpg

97-7276

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
FIELD REPORT SUPPLEMENT

PERMIT # 97-07276

P H O T O G R A P H S

gas motor



pu



1/10 hp pump

~~100~~



97-7276

PERMIT # 97-07276

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
FIELD REPORT SUPPLEMENT

PHOTOGRAPHS

2
To drip
irrigation

1
line
so 1/10 hp
pump



97-7276

PERMIT # 97-07276

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
FIELD REPORT SUPPLEMENT

P H O T O G R A P H S

P D



Pond



Trenches



97-7276