

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No. 37-20801

1. Owner: Magic West Side Water Users, INC C/O Warren Merrill Phone No. (208) 324-8420

Current Address: 1016 4th Ave Drive Jerome, ID 83338

2. Accompanied by: Tom Wortman EXAM DATE: April 13th, 2008

Address: 106 3rd Street West Magic, ID 83352 Phone No (208) 487-02004

Relationship to Permit Holder: President of the Magic West Side Water Users Corporation

3. Source: Ground water tributary to

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 34-4172

2. Other water rights with the same point of diversion:

C. DIVERSION AND DELIVERY SYSTEM

1. Point(s) of Diversion:

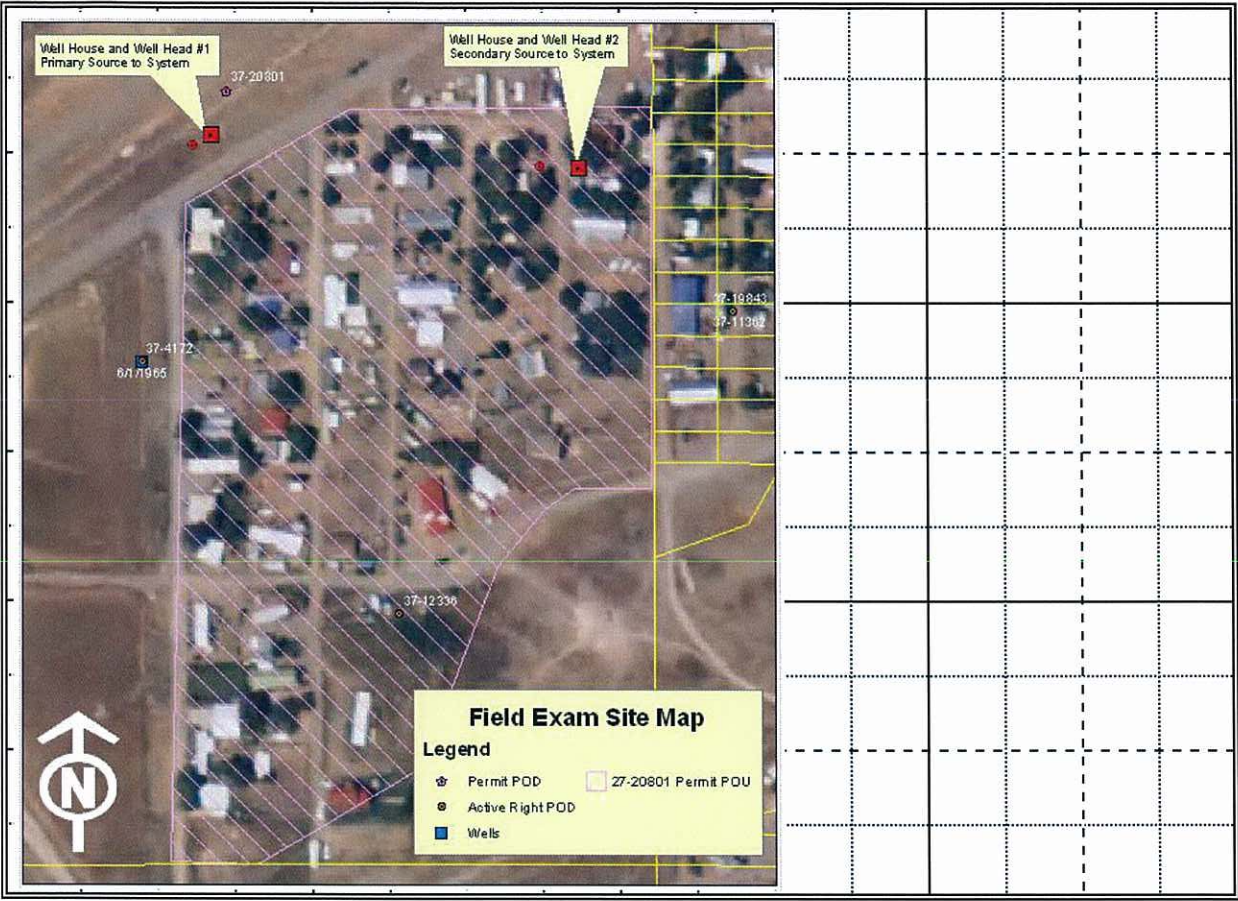
[illegible]

2. Place(s) of Use:

Indicate Method of Determination

[illegible]

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe i.d. as applicable.



Scale: 1" = NTS.

_____ Copy of USGS Quadrangle Attached Showing location(s) of point(s) of diversion and place(s) of use (required).

_____ Aerial Photo Attached (required for irrigation of 10+ acres)

☒ Photo of Diversion and System Attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Well #1 (primary)		7.5			3-inches
Well #2 (back up)		3			2-inches

*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
N/A						
N/A						

2. **Measurements:** Observed a pressure reading of 48 psi in the 3" water main at well house #1 and observed a pressure reading of 58 psi in the 2" water main at well house #2.

E. NARRATIVE/REMARKS/COMMENTS

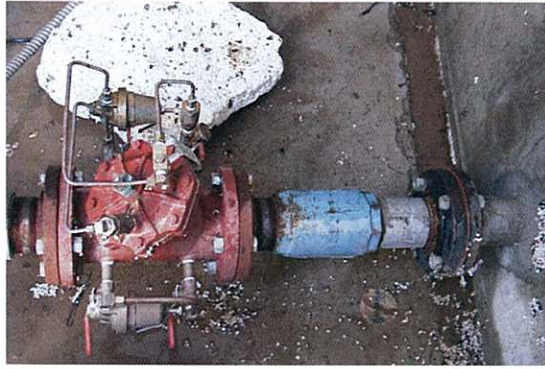
This permit supplies domestic water to 45 homes and landscaping irrigation to 15 homes within a 73 lot, 10.4 acre subdivision. The domestic water system is fed by two wells. Well head and well house #1 (drilled in 1984) are located in the northwest corner of the subdivision in a landscape strip between the runway and the road (refer to pictures) and according to Tom Wortman, well #1 is the primary source of water to the system. Well house #1 has one 20 gallon well pressure tank which **regulates pressure in the main between 30-50 psi**. An Ames 810-01-10 Pressure Reducing Control Valve is located in the well house, which regulates pressure and flow across the valve and functions as a back flow prevention device if downstream pressure exceeds upstream pressure (i.e. when well #1 is taken off line for maintenance and well #2 is functioning as primary source). I could not find any records on the well or pump; however, Warren Merrill the Director of the Magic West Side Water Users Corporation reported in a phone conversation to me on May 21, 2008, that well #1 is approximately **186 feet deep**, with a static water surface at an unknown depth, and with a **7.5 hp** submersible pump.

Well head and well house #2 (drilled in the 1950s and certified in the 1970s) is located in the northeast corner of the subdivision. The well head is located in lot 1-c of block 6, while the well house is located in lot 1-a of block 7 (refer to pictures) and according to Tom Wortman, well #2 is the secondary or backup source of water to the system. Well house #2 has two 20 gallon well pressure tanks (Well-X-Trol) which **regulates pressure in the main between 30-50 psi**. I could not find any records on the wells or pumps; however, Warren Merrill the Director of the Magic West Side Water Users Corporation reported in a phone conversation to me on May 21, 2008, that well #2 is approximately **196 feet deep**, with a static water surface at an unknown depth, and with a **3 hp** submersible pump. Warren further corroborated Tom's description of Well #2 only functioning at times when Well #1 is down for repair or maintenance.

Have conditions of permit approval been met? ☒ yes ☐ no



Pic 1. Outlet to system, well house 1



Pic 2. Inlet from well & control valve, well house 1



Pic 3. Well house 1 and well head 1.



Pic 4. Well head 2.



Pic 5. Inside well house 2 west side.



Pic 6. Inside well house 2 east side.



Pic 7. POU, 75 lot trailer park.



Pic 7. POU, 75 lot trailer park.

F. FLOW CALCULATIONS

☒ Additional Computation Sheets Attached

Measured Method: Theoretical calculations.

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

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

$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 =$

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

2. Volume Calculations for Other Uses: Municipal use does not require a volume component to the water right.

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Municipal	01/ 01	12/31	0.32	N/A

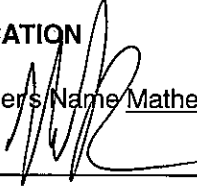
Totals: 0.32 CFS

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 (change BU from domestic to municipal)

I. AUTHENTICATION

Field Examiner's Name Mathew Weaver, PE Date May 27, 2008

Reviewer  Date 5/27/08

SEAL

GROUNDWATER FLOWRATE THEORETICAL ANALYSIS

FILE: 37-20801

DATE: 27-May-08

BY: Mat Weaver

THEORETICAL RATE OF FLOW: $Q = \frac{(8.8) \times (HP) \times (EFF.)}{TDH}$

- Q = Flowrate (CFS)
HP = Total Brake Horsepower of pumping plant (including booster)
Eff. = Pumping plant efficiency (assume 70% or 0.70)
TDH = Total Dynamic Head = [Lift + (PSI x 2.31)]
LIFT = Depth to water in FEET from land surface to pumping water level
PSI = Pumping pressure measured in PSI near pump (if open discharge assume [0])

$$Q = \frac{8.8 \times (7.5) \times 0.70}{[(45) + (30 \times 2.31)]} = 0.40$$

Denotes Cells Requiring Input

LIFT FROM:

Measurement ☐
Owner ☒
Area Estimate ☐
Well Logs ☐
Booster (Y) ☐ (N) ☒

PSI FROM:

Measurement ☐
Owner ☒
Estimate ☐
Owner Gage ☒

NOTES ON PUMP:

Motor Make, Serial or ID

Pump Make, Serial or ID

REMARKS: Well #1 - Primary POD

Horsepower and lift values were given to me by Warren Miller the Director of the Magic West Side Water Users Corporation. Observed pressure values fell in the range of 30-50 psi, which is the range of pressures that the pressure tank manual indicates the tank will typically operate at.

Well depth was reported to be 186 feet deep. A review of static water surface elevations in the 14 closest wells indicated an average depth of 45 feet, with a minimum depth of 8.5 feet and a maximum depth of 111 feet.

GROUNDWATER FLOWRATE THEORETICAL ANALYSIS

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TDH = Total Dynamic Head = [Lift + (PSI x 2.31)]
LIFT = Depth to water in FEET from land surface to pumping water level
PSI = Pumping pressure measured in PSI near pump (if open discharge assume [0])

$$Q = \frac{8.8 \times (3) \times 0.70}{[(45) + (30 \times 2.31)]} = 0.16$$

Denotes Cells Requiring Input

LIFT FROM:

Measurement ☐
Owner ☒
Area Estimate ☐
Well Logs ☐
Booster (Y) ☐ (N) ☒

PSI FROM:

Measurement ☐
Owner ☒
Estimate ☐
Owner Gage ☒

NOTES ON PUMP:

Motor Make, Serial or ID

Pump Make, Serial or ID

REMARKS: Well #2 - Secondary (back-up) POD

Horsepower and lift values were given to me by Warren Miller the Director of the Magic West Side Water Users Corporation. Observed pressure values fell in the range of 30-50 psi, which is the range of pressures that the pressure tank manual indicates the tank will typically operate at.

Well depth was reported to be 196 feet deep. A review of static water surface elevations in the 14 closest wells indicated an average depth of 45 feet, with a minimum depth of 8.5 feet and a maximum depth of 111 feet.

37-20801 - License**Summary of Adjacent Well SWL Elevations**

Well ID No.	Static Water	
	Level (ft)	Drill Date
360083	66	January
362640	31	June
386041	37	June
314157	No Results	No Results
362639	25	June
372739	45	August
342923	60	April
313036	8.5	April
372740	18	April
386768	40	April
394803	111	September
416544	42	May
340304	45	April
350644	90	August

Min:	8.5
Max:	111
Avg:	45
St. Dev.:	20