

IDAHO DEPARTMENT OF WATER RESOURCES  
Water Measurement Program

**POWER CONSUMPTION COEFFICIENT WORKSHEET**

(Revised 6/2006)

District 11

Diversion Name \_\_\_\_\_

Inventory Date \_\_\_\_\_

Test Date 6/27/07

Inventory Examiner \_\_\_\_\_

Person performing test CBird

PCC o.k.? ☐ Yes ☐ No

Exam complete? ☐ Yes ☐ No

Name:	<u>Lynn Keetch</u>
Water Right No.:	_____
Legal Description:	T _____ R _____ Sec. _____ $\frac{1}{4}$ $\frac{1}{4}$ $\frac{1}{4}$
Site Tag No.:	_____
Diversion Name:	_____

**Current Owner**

Name Lynn Keetch

Phone \_\_\_\_\_

Address \_\_\_\_\_

Cell \_\_\_\_\_

City \_\_\_\_\_ St \_\_\_\_\_ Zip \_\_\_\_\_

E-mail \_\_\_\_\_

**Operator** (if leased or operated by person other than owner)

Name \_\_\_\_\_

Phone \_\_\_\_\_

Address \_\_\_\_\_

Cell \_\_\_\_\_

City \_\_\_\_\_ St \_\_\_\_\_ Zip \_\_\_\_\_

E-mail \_\_\_\_\_

**Global Positioning System Data:**

Data Collection Filename \_\_\_\_\_ Offset \_\_\_\_\_

IDWR Site Tag Identification No. N/A.

Site Tag Location description: \_\_\_\_\_

PLS/USGS LOCATOR Pump off Airport Rd. Dingle  
Dingle Rd / So. 6th, to Airport Rd, Pond, Corals on Right.

For Department/District Use Only

Received by \_\_\_\_\_ Date \_\_\_\_\_

Reviewed by \_\_\_\_\_ Date \_\_\_\_\_

Data Entry By \_\_\_\_\_ Date \_\_\_\_\_

**Well Pump and Motor Information**

Pump Data		Motor Data	
Manufacturer	Marathon Elect.	Manufacturer	
Serial Number		Serial Number	
Model Number	XD 324TT 01703F	Rated Horsepower	40 hp
Type	40 hp	Rated Amps	
Impeller Diameter		Rated Volts	230V
Rated Speed		Rated Speed	175 RPM
Rated Discharge	-	Phase	
Rated Head		Service Factor	

**Booster Pump and Motor Information**

Pump Data		Motor Data	
Manufacturer		Manufacturer	
Serial Number		Serial Number	
Model Number		Rated Horsepower	
Type		Rated Amps	
Impeller Diameter		Rated Volts	
Rated Speed		Rated Speed	
Rated Discharge		Phase	
Rated Head		Service Factor	

**Power and Water Metering Information**

Kilowatt-Hour Meter		Water Measurement Equipment and Pipe Information	
Utility	Rocky mtn Power	Std. Meter Manufacturer	Fujii
Pole Number	351803	Std. Meter Model No.	
Meter Manufacturer	GE	Std. Meter Type (circle one)	Sonic Pyg Collins Hall And Dye/chem. Other
Meter Serial No.	10874583	Std. Meter Confidence (circle one)	Excl 2% Good 5% Fair 10% Poor >10%
Disc Constant (Kh)	57.6	PSI gauge ID location = discharge head	District / Owner _____ Yes / No
Rated Voltage	480	Pipe Material	steel (.174 thickness)
Demand	33.71	Pipe Outside Diameter	6.02
Multiplier (Mult)	1	Pipe Inside Diameter	
CTR (Current) PTR (Voltage)	-	Distance of straight pipe upstream and down	Upstream _____ Downstream _____

# Determination of Power Consumption Coefficient

## Kilowatts of Energy Consumed

$$KW = 3.6 \times Kh \times \text{Multiplier} \times \text{No. of revolutions (N)} \div \text{Time (T) in seconds per N}$$

Cond.#1 N = 5 (No. of Disc Rev) Time (sec) =  $(31.69) + (31.41) + (31.65) / 3 = 31.58$  Ave

$$3.6 \times 57.6 (Kh) \times 1 (Mult) \times 5 (N) \div 31.58 (T) = 32.83 KW$$

Cond.#2 N = \_\_\_\_\_ (No. of Disc Rev) Time (sec) = (\_\_\_\_) + (\_\_\_\_) + (\_\_\_\_) / 3 = \_\_\_\_\_ Ave

$$3.6 \times \text{_____} (Kh) \times \text{_____} (Mult) \times \text{_____} (N) \div \text{_____} (T) = \text{_____} KW$$

Cond.#3 N = \_\_\_\_\_ (No. of Disc Rev) Time (sec) = (\_\_\_\_) + (\_\_\_\_) + (\_\_\_\_) / 3 = \_\_\_\_\_ Ave

$$3.6 \times \text{_____} (Kh) \times \text{_____} (Mult) \times \text{_____} (N) \div \text{_____} (T) = \text{_____} KW$$

**Measured Flow Rate and Discharge Pressure** – Enter flow rate as determined by the "standard" water measurement meter in GPM, and discharge pressure measured in PSI. Attach documentation to support data such as notes, printout tapes, etc.

GPM Cond. #1 \* 780 #2 \* \_\_\_\_\_ #3 \* \_\_\_\_\_

PSI Cond. #1 \* \_\_\_\_\_ #2 \* \_\_\_\_\_ #3 \* \_\_\_\_\_

## Power Consumption Coefficient (PCC) = KW × 5431 ÷ GPM

$$PCC \text{ Cond \#1} = 32.83 (KW) \times 5431 \div 780 (gpm) = 228.58 (kWh/ac.ft)$$

### Qualifier Condition 1: 1 2 3 4 5 6 7 8 9 Other

Percent of seasonal use \* \_\_\_\_\_ Description \* \_\_\_\_\_

$$PCC \text{ Cond \#2} = \text{_____} (KW) \times 5431 \div \text{_____} (gpm) = \text{_____} (kWh/ac.ft)$$

### Qualifier Condition 2: 1 2 3 4 5 6 7 8 9 Other

Percent of seasonal use \* \_\_\_\_\_ Description \* \_\_\_\_\_

$$PCC \text{ Cond \#3} = \text{_____} (KW) \times 5431 \div \text{_____} (gpm) = \text{_____} (kWh/ac.ft)$$

### Qualifier Condition 3: 1 2 3 4 5 6 7 8 9 Other

Percent of seasonal use \* \_\_\_\_\_ Description \* \_\_\_\_\_

Is the system operator required to track and report changes in system operation? ~ Yes ~ No (check one)

System Type (circle all that apply): Pivot, linear, Wheel In / Hand In / Gated pipe, flood / Drip / Open Discharge

	Crop Type	Number of Acres
1	alfalfa	77
2	oats	13
3		
4		
Total Acres =		90

WATER LEVEL DATA	
Does the well have access to measure water levels? ~ Yes ~ No (check one)	
Is this well part of USGS, IDWR, or another <u>network</u> of water level monitoring wells? ~ Yes ~ <u>No</u> ~ Uncertain	
Static Water Level <u>5</u> ft Date _____	Pumping Water Level <u>5</u> ft at condition # _____ Date _____

Further describe system operating conditions (if necessary) and how percentage of seasonal use was obtained:

Pump is used to pump surface water from the Bear River.

Sketch of pumping plan layout or photograph of pumping plant and piping:

Notes – Comments – Calculations: operates: 123 birds - 3/16" Nozzles  
46 PSI (3 wheel lines, 33 handlines)  
Soil - clay loam  
24 in - 5ets

I certify that the above information is true and correct to the best of my knowledge and ability and the measurements taken and recorded are in accordance with the standards and specifications of the equipment used.

Signature \_\_\_\_\_ Date \_\_\_\_\_  
 (person performing measurements)