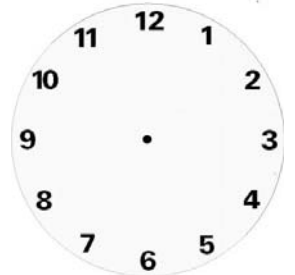


Form 3.2 06/15/2014	S. Platte River – Division 1 970-352-8712 Fax 970-392-1816 810 9 th Street, 2 nd Floor, Greeley, CO 80631 dnr_div1spgwm@state.co.us Republican River – Division 1 970-352-8712 Fax 970-392-1816 810 9 th Street, 2 nd Floor, Greeley, CO 80631 dnr_div1rrgwm@state.co.us Arkansas River – Division 2 719-542-3368 Fax 719-544-0800 310 E. Abriendo, Suite B, Pueblo, CO 81004 Rio Grande River – Division 3 719-589-6683 Fax 719-589-6685 P.O. Box 269, 301 Murphy Drive, Alamosa, CO 81101 Designated Basins – Division 8 303-866-3581 Fax 303-866-2223 1313 Sherman St. Rm. 818, Denver, CO 80237	For Office Use Only <input type="checkbox"/> PASSED <input type="checkbox"/> FAILED <input type="checkbox"/> Variance Approved Date of variance _____
COLORADO Division of Water Resources Department of Natural Resources www.water.state.co.us		
NOTICE OF POWER CONSUMPTION COEFFICIENT RATING OR RE-RATING		
Check appropriate box		
<input type="checkbox"/> To be filed in Compliance with Rule 16.5 of the Rules Governing the Measurement of Tributary Ground Water Diversions in the Republican River Basin		
<input type="checkbox"/> To be filed in Compliance with Rules 3.2 of the Amended Rules Governing the Measurement of Tributary Ground Water Diversions in the Arkansas River Basin		
<input type="checkbox"/> To be filed in Compliance with Rule 3.2 of the Rules Governing the Measurement of Tributary Ground Water Diversions in the Rio Grande River Basin		
<input type="checkbox"/> To be filed in Compliance with the Ground Water Commission Rules Governing Designated Basins		
<input type="checkbox"/> To be filed in Compliance with Rules 3.2 of the Rules Governing the Measurement of Tributary Ground Water Diversions in the South Platte River Basin		
Contact Information:		
Well owner		User (if not same as well owner)
Name		Name
Mailing Address		Mailing Address
City	State	Zip
City	State	Zip
Phone	Email	Phone
		Email
Well Information and Location (Provide Permit No. and/or Case or Decree No. if no WDID exists or is not known) Visit Aquamap to find well information: http://water.state.co.us/DataMaps/GISandMaps/AquaMap/Pages/default.aspx		
WDID	Well Permit No.	Water Court Case No.
Location (¼, ¼, Sec., T., R., PM)		
Well GPS Coordinates must be in NAD83, UTM Zone 12/13N		
Northing		Easting
Type of Meter:		
<input type="checkbox"/> Power Company Electric Meter <input type="checkbox"/> Electric Hour Meter <input type="checkbox"/> Privately Owned Electric Meter (Slave Meter)		
Power Supply And Use		
Power Company Name		Power Company Customer Account No.
		Power Company Service No.
Electric Meter Manufacturer		Manufacturer's Serial No.
Power Company Meter Reading on Date of Test (including all rotating and leading zeroes):		Multiplier
		Number of Rotating Digits:
Voltage/potential transformer factor (Pt): <input type="checkbox"/> None (1.0) <input type="checkbox"/> 2.5:1 (2.5) <input type="checkbox"/> 2.4:1 (2.4) <input type="checkbox"/> Other (specify)		
Current transformer factor (Ct): <input type="checkbox"/> None (1.0) <input type="checkbox"/> 200:5 (40) <input type="checkbox"/> 400:5 (80) <input type="checkbox"/> 800:5 (160) <input type="checkbox"/> Other (specify)		
Kh factor: _____ shown on meter (If no Kh factor is shown, use 1.0)		Pkh = Kh x Pt x Ct = _____ (use on page 4)
Does the same power company meter serve other devices, including other wells/pumps?		
<input type="checkbox"/> Yes If yes, describe: _____		If yes, were all devices operating during test?
<input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No

Discharge methods (mark all that apply) <input type="checkbox"/> Open discharge/low pressure pipeline <input type="checkbox"/> Sprinkler <input type="checkbox"/> Drip tape <input type="checkbox"/> Pressurized system (including household, stock and/or humidification uses) <input type="checkbox"/> Other (describe) _____	DESCRIBE ALL DISCHARGES AND PROVIDE DETAILED SKETCH ON PAGE 5 OR AS ATTACHMENT
End Gun On Off No End Gun <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	 <p style="text-align: center;">POSITION OF SPRINKLER (WHERE 12:00 IS DUE NORTH)</p>
If use of end gun is part of normal operating conditions, test must be conducted with the end gun on Sprinkler <input type="checkbox"/> On <input type="checkbox"/> Off If Off, explain why: _____	
Percent speed of sprinkler running: _____ %	
Sprinkler operating at normal speed? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, explain why: _____	
Description of irrigated terrain (i.e. flat, rolling hills, etc.)	Does the system have working pressure regulators installed? <input type="checkbox"/> Yes <input type="checkbox"/> No

Pump Information									
Pump type <input type="checkbox"/> Turbine <input type="checkbox"/> Centrifugal <input type="checkbox"/> Submersible <input type="checkbox"/> Other (specify) _____	<table style="width:100%;"> <tr> <th style="text-align: center; border-bottom: 1px solid black;">Motor Horsepower</th> <th style="text-align: center; border-bottom: 1px solid black;">Discharge pipe at test site</th> </tr> <tr> <td style="border: none;"></td> <td style="padding: 2px 5px;">Pipe ID _____ inches</td> </tr> <tr> <td style="border: none;"></td> <td style="padding: 2px 5px;">Pipe OD _____ inches</td> </tr> <tr> <td style="border: none;"></td> <td style="padding: 2px 5px;">Wall thickness _____ inches</td> </tr> </table>	Motor Horsepower	Discharge pipe at test site		Pipe ID _____ inches		Pipe OD _____ inches		Wall thickness _____ inches
Motor Horsepower	Discharge pipe at test site								
	Pipe ID _____ inches								
	Pipe OD _____ inches								
	Wall thickness _____ inches								

Determination Of Stabilized Operating Condition
 This test must be conducted **only after the system has stabilized**; both drawdown (pumping level minus static water level) and operating pressure must not have changed more than 10% in the hour previous to conducting the test. Measurements must be documented for at least four 15-minute intervals.

For wells* that are running for at least 2 hours prior to the Tester's arrival, stabilization may be demonstrated by a determination that the change in pumping level does not exceed one foot per hour, by measurements made over at least two 15-minute intervals.
***Note: for Arkansas River Wells, applies to alluvial and other shallow wells ONLY.**

Example: Tester arrives at 11:00 am and obtains pumping level. At 11:15 and 11:30 a second and third pumping level is obtained. If the change in pumping level does not exceed 6 inches over that 30 minute period, the well is ready to test.

Date of Test: _____	Time of Test (begin): _____	Length of time pump has been running prior to Tester's arrival: _____ (HH:MM)
Static Water Level below centerline of discharge (Required ONLY when pump is <u>NOT</u> running upon arrival): _____ Ft.		
Pumping level below centerline of discharge (must show that drawdown has not changed more than 10% in last hour OR more than one foot per hour) OR discharge rate if pumping levels cannot be obtained or if Owner won't allow access (must show discharge rate does not exceed 2.5% over a 15 minute interval measuring a minimum of five intervals)		

Time (HH:MM:SS)	Pumping Level In Ft OR Discharge Rate In Gpm	Time (HH:MM:SS)	Pumping Level In Ft OR Discharge Rate In Gpm
1.		5.	
2.		6.	
3.		7.	
4.		8.	

Discharge Pressure At Well Head (must show that drawdown has not changed more than 10% in last hour)			
Time	Pressure in PSI	Time	Pressure in PSI
1.		5.	
2.		6.	
3.		7.	
4.		8.	

Comments Section on next page ...

Comments On Above Pumping/Pressure Tests: _____

TEST METER INFORMATION

Test meter manufacturer:		Test meter serial number:		Date of last calibration:	
Meter Orientation	Pipe Wall Thickness	Diameters of Straight Pipe		Diameter of Discharge Pipe	
		Upstream	Downstream	ID	OD

Certification Of Power Consumption Coefficient

Calculations, notes times, etc., used to determine discharge Q, in gpm:
 Collins Gauge: GPM Factor _____ Stop Clamp Settings _____ Ultrasonic Transducer Space Settings: _____

SHOW Q TO NEAREST 0.00 GPM Q = _____ . _____

Determination Of Power Demand (Minimum Of Five Tests)

No. of Disk Revolutions (rev)	Seconds (sec)	Rate (rev/sec)	Power Demand (p) = Average rate x 3.6 x pkh (pkh found on page 1)
1.			P = _____ . _____ KW to nearest 0.0000
2.			
3.			Calculation Of Power Consumption Coefficient (Pcc) = $\frac{5433 \times P}{Q}$
4.			
5.			PCC = _____ . _____ KWH/AF TO NEAREST 0.000
6.			
Average Rate (4 Decimal Places 0.0000)			<i>Methods of Calculating Power Consumption Coefficient are Specified In U.S.G.S. Water Resources Investigation Report (89-4107)</i>

TESTER VERIFICATION

I, the undersigned, state that I am currently a person approved by the State Engineer to conduct well tests pursuant to the Rules Governing the Measurement of Ground Water Diversions as indicated on page 1 of this form. I have conducted a Power Consumption Coefficient Rating of the above-described well/pump. Based on the information contained on this form, I represent this test as being an accurate method of determining volume of water diverted from the well/pump and as being in compliance with the Rules. I understand that falsifying a Power Consumption Coefficient Rating can subject me to a fine of up to \$500.00.

Signature of Tester: _____ Date _____

Tester Name, Company, Phone, Email

Name:	Company Name:
Phone:	Email:

REPUBLICAN RIVER BASIN - Variance for an Alternative Method of Measurement (Power Conversion Coefficient)

The Power Conversion Coefficient (PCC) as an alternative method of measurement **requires a request for variance**. The PCC method of measurement **may not be utilized** if the well is part of a Complex or Compound System OR if the pump is not powered by electricity OR if the well produces from a confined aquifer.

Compound System means a system where the power meter records electrical usage from an electrical device other than the pumping systems from a single well and its attached sprinklers

Complex System means any system where the total dynamic head at the pump will vary due to multiple discharge locations in a pipeline, or where the method of delivery will vary between open discharge, gated pipe or sprinkler system during a single irrigation season, or where multiple wells discharge into a common pipeline.

Power Sources not eligible for PCC: Fossil Fuel (Gas, Propane, Diesel, etc...), Artesian, Solar, Windmill

SOUTH PLATTE RIVER BASIN - Variance for an Alternative Method of Measurement (Power Conversion Coefficient)

Power Conversion Coefficient (PCC) method of measurement **may not be utilized** if the well is **part of a Complex or**

Compound System. See definitions above. Power Sources not eligible for PCC: Fossil Fuel (Gas, Propane, Diesel, etc.), Artesian, Solar, Windmill. A PCC test must be conducted by a Water Well Meter Tester certified by the State Engineer or in accordance with a Court decreed plan of augmentation.

Computation of PCC Rating:

A PCC rating shall be determined by averaging the ratings obtained from at least two rating tests conducted between the dates of May 15 and October 15 of the same year, with a minimum interval of 90 calendar days between each test. The rating obtained from the first of the two rating tests shall be relied upon to calculate the total ground water diverted from a well until the second PCC test is conducted. Upon completion of the second ratings test, if the difference between the PCC ratings from the two tests is **within 5%**, the results of the two tests shall be averaged to obtain the final PCC rating **to be used** from the date of the second test forward to calculate the ground water diverted from a Well. Upon completion of the second ratings test, if the difference between the PCC ratings from the two tests is **greater than 5%**, both ratings shall be considered **invalid** and a PCC will not be considered an accurate method of measurement for the Well from the date of the second test forward, unless the Well User or APA (Augmentation Plan Administrator) submits and obtains approval of a variance providing adequate detail and documentation to explain the difference in ratings. **A PCC rating shall expire two years from the date of the second of the two rating tests.**

Re-rating of PCC:

A PCC rating is no longer valid, and a re-rating is required when any of the following occur: the PCC rating has expired; a new or re-worked pump or motor is installed on the Well; the Well is re-worked to change the yield of the Well; the system that the pump discharges into is modified in such a manner as to change the power coefficient, the pump discharge, or the operating pressure; any other alteration to the system which changes the pump discharge or power coefficient; or the Division Engineer conducts or reviews tests and determines an error was made or if annual changes in ground water levels will make a PCC based upon the prior year's testing inaccurate by 5% or more.

A PCC alternate measurement method is NOT allowed where varying terrain makes accurate calculations impossible due to the differences in height to which the water must be pumped unless the system has working pressure regulators installed.

RIO GRANDE RIVER BASIN WELLS - Variance for an Alternative Method of Measurement (Power Conversion Coefficient)

The Power Conversion Coefficient (PCC) as an alternative method of measurement **requires a request for variance**.

Owners and/or users of Wells who use the PCC method and whose Well discharges into a pressurized pipeline system (gated pipe or similar system) with more than one point of discharge during a normal irrigation season must submit two PCC measurements as required under the scope of these rules. One measurement must be taken under maximum head (minimum yield) and one measurement must be conducted under minimum head (maximum yield) conditions. A registered professional engineer or a Certified Water Well Meter Tester must annually evaluate the range of pumping conditions and provide an analysis, which determines the representative condition and PCC for that condition.

ARKANSAS RIVER BASIN - Power Conversion Coefficient Limits

Power Conversion Coefficient (PCC) method of measurement **may not be utilized** if the well is **part of a Complex or Compound System.**

See definitions above. Power Sources not eligible for PCC: Fossil Fuel (Gas, Propane, Diesel, etc.), Artesian, Solar, Windmill

Well Owner/User Consent To Release Of Power Data, Pumping Level Tests, Variance Request And Certification

Variance requests (**initial** next to appropriate items only):

	<p>Required for Republican River Basin and the South Platte River Basin only – check only one: <input type="checkbox"/> grant <input type="checkbox"/> refuse the well tester permission to test the pumping level. I understand that without pumping level information, this PCC test may not be accepted.</p>
	<p>Required for Republican River Basin, Division 1 (South Platte River Basin) and Division 3 (Rio Grande River Basin) only: I request a variance from the Rules Governing the Measurement of Ground Water Diversions as indicated on page 1 of this form to allow the use of this alternative means of measurement of ground water usage. I have read the above information regarding a PCC variance request and confirm that the well is powered by electricity, is not a part of a complex/or compound system and does not produce from a confined aquifer. I understand that if such a variance is issued, I must abide by the terms of that variance.</p>
	<p>Required for ALL Measurement Rules listed on page 1 of this form (only if pumping levels were not obtained OR if static water level was not obtained): I request a variance from the Rules Governing the Measurement of Ground Water Diversions as indicated on page1 of this form to allow Allowable Variance to Standard System Stabilization Methods.</p>

The above information is true to the best of my knowledge. I understand that falsifying a Power Consumption Coefficient Rating can subject me to a fine of up to \$500.00.

I agree to the release of information pertaining to my Electric Service and Use, including Current Transformer Factor, Potential Transformer Factor and Electric Meter Readings, to the Colorado Division of Water Resources by my Electric Supplier for the purposes of determining or verifying water use from the Well/Pump.

I am the Well Owner OR Well User

Signature _____
 Well Owner/User Print Name Date

Detailed Sketch:

Show total system from pump to discharge, other pumps in the same well, and electrical system including other devices on the same meter. Show where test meter and pressure gauge were placed and how system was modified to perform test. Show measurements. In addition to sketch, an attached photograph is recommended.



Detailed description of system under normal operating conditions. (Example: one well pumps to two sprinklers. Each sprinkler has an end gun that operates when the sprinkler is operating.) Include number of irrigated acres
