

<b>Form 3.1</b> 06/15/2014	<b>S. Platte River – Division 1</b> 970-352-8712    Fax 970-392-1816 810 9 <sup>th</sup> Street, 2 <sup>nd</sup> Floor, Greeley, CO 80631    dnr_div1spgwm@state.co.us <b>Republican River – Division 1</b> 970-352-8712    Fax 970-392-1816 810 9 <sup>th</sup> Street, 2 <sup>nd</sup> Floor, Greeley, CO 80631    dnr_div1rrgwm@state.co.us <b>Arkansas River – Division 2</b> 719-542-3368    Fax 719-544-0800 310 E. Abriendo, Suite B, Pueblo, CO 81004 <b>Rio Grande River – Division 3</b> 719-589-6683    Fax 719-589-6685 P.O. Box 269, 301 Murphy Drive, Alamosa, CO 81101 <b>Designated Basins – Division 8</b> 303-866-3581    Fax 303-866-2223 1313 Sherman St. Rm. 818, Denver, CO 80237	<b>For Office Use Only</b>  <input type="checkbox"/> Passed <input type="checkbox"/> Failed  <input type="checkbox"/> Variance Approved Date of variance _____
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<h2 style="margin: 0;">NOTICE OF TOTALIZING FLOW METER RE-VERIFICATION, INSTALLATION OR REPLACEMENT</h2>
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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 <b>Republican River Basin (Complete pages 1-6)</b>
<input type="checkbox"/> To be filed in Compliance with Rules 3.1 of the Amended Rules Governing the Measurement of Tributary Ground Water Diversions in the <b>Arkansas River Basin (Complete pages 1-5)</b>
<input type="checkbox"/> To be filed in Compliance with Rule 3.1 of the Rules Governing the Measurement of Tributary Ground Water Diversions in the <b>Rio Grande River Basin (Complete pages 1-5)</b>
<input type="checkbox"/> To be filed in Compliance with the Ground Water Commission Rules Governing <b>Designated Basins (Complete pages 1-5)</b>
<input type="checkbox"/> To be filed in Compliance with Rule 3.1 of the Rules Governing the Measurement of Tributary Ground Water Diversions in the <b>South Platte River Basin (Complete pages 1-5)</b>

<b>Reason for meter verification (Check all that apply):</b>
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<input type="checkbox"/>	Re-Verify Previously Verified TFM	<b>The following MUST be provided for new &amp; replaced meters</b>			
<input type="checkbox"/>	New TFM (No previous meter)	Date New TFM installed:			
<input type="checkbox"/>	Replacing Previous TFM (also complete area at right)	Date Previous TFM removed:			
	Previous TFM Serial No.:	Previous TFM Reading (Estimate required if not readable):			
<input type="checkbox"/>	Change in Measurement Method from:	Hour Meter <input type="checkbox"/>	Slave Meter <input type="checkbox"/>	Power Co Meter <input type="checkbox"/>	Previous Meter SN
<input type="checkbox"/>	Register seal replaced due to:	New Seal No.	Old Seal No.	TFM Reading	K-Factor (Test req'd. if changed)
<input type="checkbox"/>	Sensor / meter seal replaced due to:	New Seal No.	Old Seal No.	TFM Reading	

<b>Contact Information:</b>					
Well Owner Name			User (if not same as well owner) Name		
Mailing Address			Mailing Address		
City	State	Zip	City	State	Zip
Phone	Email		Phone	Email	

<b>Well Information and Location (Provide Permit No. and/or Case or Decree No. if no WDID exists or is not known)</b>					
Visit Aquamap to find well information: <a href="http://water.state.co.us/DataMaps/GISandMaps/AquaMap/Pages/default.aspx">http://water.state.co.us/DataMaps/GISandMaps/AquaMap/Pages/default.aspx</a>					
WDID	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	

<b>Power Supply</b>			
<input type="checkbox"/> Electric <input type="checkbox"/> Artesian <input type="checkbox"/> Solar <input type="checkbox"/> Windmill <input type="checkbox"/> Fossil Fuel <input type="checkbox"/> Other (describe):			
Provide the following if the well's power supply is electric:			
Power Company Name	Power Company Service No.	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:
Uses on power company meter:			
Does the same Power Company Meter serve other devices, including other wells/pumps? If yes, describe system.			
<input type="checkbox"/> Yes <input type="checkbox"/> No			

INSTALLED TFM INFORMATION					
Manufacturer			Model No.		Meter GPS Coordinates (if not same as well coordinates) NAD83 UTM Zone 12/13N
Sensor/Meter		Serial No.		Reading on Test Date	
Register				Northing:	
Meter Type		Meter Size	Multiplier		No. of recording digits
Meter Units					
<input type="checkbox"/> Gallons <input type="checkbox"/> Acre Feet <input type="checkbox"/> Cubic Feet <input type="checkbox"/> Other, describe:					
Meter Orientation		Diameters of Straight Pipe		Diameter of Discharge Pipe	
<input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical		Upstream	Downstream	ID	OD
Is the meter installed to manufacturer's specifications? <input type="checkbox"/> Yes <input type="checkbox"/> No    If no, explain:					
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	
<input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical		Upstream	Downstream	ID	OD
Verification of Installed Meter (if more than one meter tested for same discharge, show all tests. Use second sheet if necessary):					
Date of Test:		Time of Test (Begin):	Length of time pump has been running prior to Tester's arrival:		
			_____ : _____ (HH:MM)		
Test Meter Calculations (Show All Work)			Installed Meter Calculations (Show All Work)		
Collins Gauge: GPM Factor: _____ Stop Clamp Settings: _____ Ultrasonic Transducer Space Settings: _____			Existing K-factor _____ Adjusted K-factor _____ Flow rate with Collins tube removed: _____		
(Show Q to the nearest 0.00 GPM)    Avg QT: _____ . _____			(Show Q to the nearest 0.00 GPM)    Avg QI: _____ . _____		
Correction Factor = $\frac{\text{AVG QT}}{\text{AVG QI}}$ = _____ . _____    Shown to the nearest 0.000					

If Correction Factor is:	Div. 1, Div. 2 and Republican River Correction Factor Policies	Div. 3 Correction Factor Policies
0.950 to 1.050	<b>Test will be valid for a maximum of four years.</b> The installed TFM is in accurate working condition. <i>No Request for Variance is required.</i> No Correction Factor is Applied to determine diversions.	
0.920 to 0.949 OR 1.051 to 1.080	<b>Test will be valid for a maximum of four years.</b> The Variance Request to Use Correction Factor portion of this Form must be completed and signed by the Owner/User.  *Note: A Correction Factor will be applied to determine diversions.	<b>May</b> grant a request for a variance to allow the use of a Correction Factor.  <b>Test will be valid for one year</b> from the date of the test. A variance will be allowed for a maximum of three years, after which the TFM must be repaired or replaced AND a new Test conducted. That Test must confirm accuracy within $\pm 5.0\%$ .  The Variance Request to Use Correction Factor for TFM portion of this Form must be completed and signed by the Owner/User.  *Note: A Correction Factor will be applied to determine diversions.
0.900 to 0.919 OR 1.081 to 1.100	<b>Test will be valid for one year only.</b> No later than one year from the date of this Test the installed TFM must be repaired or replaced AND a new test conducted that confirms an accuracy of within $\pm 5.0\%$ .  The Variance Request to Use Correction Factor portion of this Form must be completed and signed by the Owner/User.  *Note: A Correction Factor will be applied to determine diversions.	<b>Test will be rejected</b> and the installed TFM must be repaired or replaced AND a new Test conducted. The second Test must confirm an accuracy of within $\pm 5.0\%$ .  If TFM fails test and is re-calibrated (k-factor modified), show failed Test, indicate below k-factor before and after, AND show new test on additional duplicate page (include failed and passed test page 3).

<0.900 OR >1.100 Test will be **rejected** and the installed TFM must be repaired or replaced AND a new Test conducted.

Uses through this totalizing flow meter:

Does well have multiple discharges measured through TFM? <input type="checkbox"/> Yes <input type="checkbox"/> No	Check all that apply: <input type="checkbox"/> Open <input type="checkbox"/> Pressure <input type="checkbox"/> Artesian <input type="checkbox"/> Other
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Use this space to describe all discharges \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

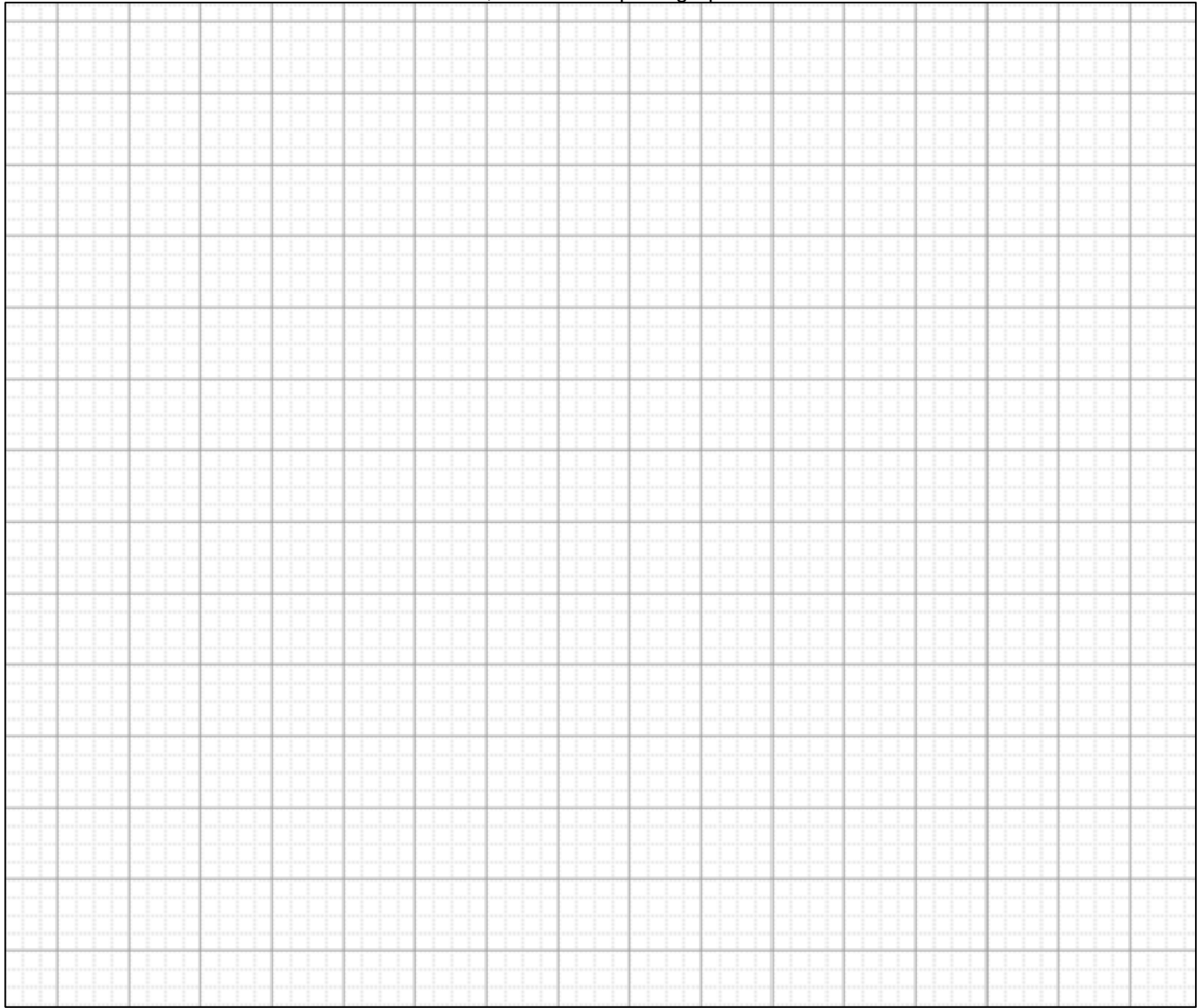
Meter Testing:

How was the well/meter tested with test equipment (open discharge, pressure, or more than one way)?

**Show information in detailed sketch on next page or as an attachment** \_\_\_\_\_  
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**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.

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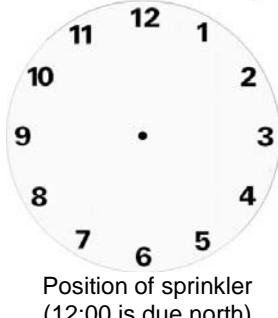
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<b>Tester Verification</b>	
<p>I, the undersigned, state that I am currently a person approved by the State Engineer to conduct well tests pursuant to the Rules Governing the Measurement of Ground Water Diversions as indicated on page 1 of this form. I have determined the installed Totalizing Flow Meter to either be in accurate working condition as defined by the Rules indicated on page 1 of this form <b>OR</b> have advised the Owner/User to complete the Variance Request below of this form.</p> <p>I understand that "accurate working condition" is determined when the indicated flow through the Installed Meter is within plus or minus 5% of an independent field measurement made using Calibrated Test Equipment. I understand that falsifying the accuracy and/or condition of a Totalizing Flow Meter can subject me to a fine of up to \$500.00.</p> <p>Signature of Tester: _____ Date _____</p>	
<b>Tester Name, Company, Phone, Email</b>	
Name:	Company Name:
Phone:	Email:
<b>VARIANCE REQUEST TO ALLOW A CORRECTION FACTOR</b> To be used when calculating use with the installed TFM:	
<p>I request a Variance to allow the use of the Correction Factor. I understand that a Variance WILL NOT be issued to allow a Correction Factor for a Totalizing Flow Meter (TFM) if the inaccuracy is due to the TFM or appurtenances being intentionally damaged or modified by the owner and/or user of the well/meter.</p> <p>I understand that the Correction Factor as computed by the above Qualified Well Tester will be verified by or revised by the Division of Water Resources and that final Correction Factor will be applied to ALL use records until the TFM is repaired/replaced and/or a new test conducted for this Well.</p> <p>I understand and agree to the required conditions of the variance as indicated below:</p>	
<b>Division 1 , Division 2 or Republican River Basin (Check only one)</b>	
<input type="checkbox"/>	If Correction Factor is between 0.920 to 0.949 or is between 1.051 to 1.080, the Test will be valid for no more than <b>four years</b> . The Correction Factor will be applied to determine diversions from the well.
<input type="checkbox"/>	If Correction Factor is between 0.900 to 0.919 or is between 1.081 to 1.100, the Test will be valid <b>one year</b> . No later than one year from the date of this Test, a new Measurement Test must be conducted and the accuracy of the new Test must be within $\pm 5.0\%$ . The Correction Factor will be applied to determine diversions from the well. Further, I acknowledge that repair and/or replacement of this Meter and/or portions of the Discharge System is required within that one year AND I agree to make the necessary changes within that time.
<b>Division 3</b>	
<input type="checkbox"/>	If Correction Factor is between 0.920 to 0.949 or 1.051 to 1.080, <b>and</b> Division 3 approves this Variance Request, the Test will be valid for no more than <b>one year</b> . A new variance including new correction factor computed by a Qualified Well Tester shall be required each year thereafter. A variance will only be allowed for TFM for a maximum of three years. After three years the TFM must be repaired or replaced and working within the required $\pm 5\%$ . The Correction Factor will be applied to determine diversions from the well.
For Electrically Powered Wells/Pumps, I agree to the release of information pertaining to my Electric Service and Use, including Current Transformer Factor (Ct), Voltage/Potential Transformer Factor (Pt) 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.	
The above information is true to the best of my knowledge. I understand that falsifying the accuracy and/or condition of a Totalizing Flow Meter can subject me to a fine of up to \$500.00. If any Variance is requested on my behalf to apply a Correction Factor to my TFM, I agree to such Variance.	
I am the <input type="checkbox"/> Well Owner OR <input type="checkbox"/> Well User	
Signature of Well Owner/User _____	Date _____
Print Name of Well Owner/User _____	

<b>FOR REPUBLICAN RIVER BASIN ONLY:</b> Complete this section to determine Power Consumption Coefficient (PCC) Rating to be used as a Back-Up Measurement Method.							
Power Supply And Use							
Power Company Name			Power Company Customer Account No.				
Electric Meter Manufacturer			Manufacturer's Serial No.				
Power company meter reading on day of test Include all rotating digits and leading digits			Multiplier	Number of rotating digits			
Voltage/potential transformer factor: <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: <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 = _____				
Does the same <b>Power Company Meter</b> 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			Yes <input type="checkbox"/>		No <input type="checkbox"/>		
Static Level	Pumping Level	Total Dynamic Head	Elev. at Site	Operating Pressure	Yield		
Determination Of Power Demand (Minimum Of Five Tests)							
No. Of Disk Revolutions		Second (sec)	Rate (rev/sec)	Power Demand (P) = Average rate x 3.6 x Pkh			
1.				P = _____ . _____ KW to nearest 0.000			
2.				<b>Calculation Of Power Consumption Coefficient (Pcc) =</b> <b><math>\frac{5433 \times P}{Q}</math></b>			
3.							
4.				PCC = _____ . _____ KWH/AF to nearest 0.00			
5.							
6.							
<b>Average Rate (4 Decimal Places 0.0000)</b>			Methods of Calculating Power Consumption Coefficient are Specified In U.S.G.S. Water Resources Investigation Report (89-4107)				
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)				<p><b>Describe all discharges and provide <u>detailed sketch</u> on Page 5 or as attachment</b></p> 			
End gun	On <input type="checkbox"/>	Off <input type="checkbox"/>	No End Gun <input type="checkbox"/>			<p><b>If use of end gun is part of normal operating conditions, test must be conducted with the end gun on</b></p>	
Sprinkler	<input type="checkbox"/> On	<input type="checkbox"/> Off	If Off, explain why:				
Percent speed of sprinkler running: _____ %						<p>Position of sprinkler (12:00 is due north)</p>	
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)		Motor Horsepower		Discharge pipe at test site Pipe ID _____ inches Pipe OD _____ inches Wall thickness _____ inches			