Form 3.1
05/01/2010

Colorado Division of Water Resources
www.water.state.co.us

S. Platte River – Division 1 970-352-8712 Fax 970-392-1816
810 9th Street, 2nd Floor, Greeley, CO 80631
Republican River – Division 1 303-866-3581 Fax 303-866-3589
P.O. Box 450, Wray, CO 80758
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
smc
DWR REC'D 6-29-2017
6505452 - DLK

☐ Passed ☐ Failed

☐ Variance Approved

Date of variance _____

NOTICE OF TOTALIZING FLOW METER RE-VERIFICATION, INSTALLATION OR REPLACEMENT

Check appropriate box

☐ 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 (Complete pages 1-6)**

☐ To be filed in Compliance with Rules 3.1 of the Amended Rules Governing the Measurement of Tributary Ground Water Diversions in the **Arkansas River Basin (Complete pages 1-5)**

☐ To be filed in Compliance with Rule 3.1 of the Rules Governing the Measurement of Tributary Ground Water Diversions in the **Rio Grande River Basin (Complete pages 1-5)**

☒ To be filed in Compliance with the Ground Water Commission Rules Governing **Designated Basins (Complete pages 1-5)**

☐ **South Platte River Basin (Complete pages 1-5)**

Reason for meter verification (Check all that apply):

☒	Re-Verify Previously Verified TFM		**The following MUST be provided for new & replaced meters**		
☐	New TFM (No previous meter)		Date New TFM installed:		
☐	Replacing Previous TFM (also complete area at right)		Date Previous TFM removed:		
	Previous TFM Serial No.:		Previous TFM Reading (Estimate required if not readable):		
☐	Change in Measurement Method from:	Hour Meter ☐	Slave Meter ☐	Power Co Meter ☐	Previous Meter SN
☐	Register seal replaced due to:	New Seal No.	Old Seal No.	TFM Reading	K-Factor (Test req'd. if changed)
☐	(Sensor) (meter) seal replaced due to:	New Seal No.	Old Seal No.	TFM Reading	

Contact Information:

Well Owner			User (if not same as well owner)		
Name: Dennis Collette			Name: Dennis Collette		
Mailing Address: 3693 CR Q			Mailing Address: 3693 CR Q		
City: Kirk	State: CO	Zip: 80824	City: Kirk	State: CO	Zip: 80824
Phone: (970) 362-4586	Email:		Phone: (970) 362-4586	Email:	

Well Information and Location (Provide Permit No. and/or Case or Decree No. if no WDID exists or is not known)

WDID	Permit No.	Case or Decree No.	Location (¼,¼, Sec., T., R., PM)	GPS Coord. (UTM, meters, NAD 83) Northing	Easting	Zone (12/13)
6505452	12517 F		NW, SE ,17, 5 S ,46 W ,6PM			

Power Supply

☒ Electric ☐ Artesian ☐ Solar ☐ Windmill ☐ Fossil Fuel ☐ Other (describe):

Provide the following for all wells with electric power:

Power Company Name	Power Company Service No.	Meter Manufacturer	Manufacturer's Serial No.
YWEA	17313479	Elster	17313479
Power Company Meter Reading on Date of Test (including all rotating and leading zeroes): 01803		Multiplier: 100	Number of Rotating Digits: 5

Uses on power company meter:

Does the same Power Company Meter serve other devices, including other wells/pumps? If yes, describe system.

☐ Yes ☒ No

Installed TFM Information

Manufacturer	McCrometer	Model No.	MO308	Meter GPS Coordinates
	Serial No.	Reading on Test Date		Zone (12 or 13):
Sensor/Meter	GP13-0267	766.763		Northing:
Register				Easting:

Provide sensor serial no. ONLY if meter has a remote readout. Provide both sensor and meter serial no. ONLY if different

Meter type	Meter size	Multiplier	No. of recording digits
Propeller	8.625	0.001	6

Meter Units

☐ Gallons ☒ Acre Feet ☐ Cubic Feet ☐ Other (describe)

Meter Orientation	Diameters of straight pipe		Diameter of discharge pipe	
	Upstream	Downstream	ID	OD
☒ Horizontal ☐ Vertical Horizontal	6	9	8.36	8.625

Is the meter installed to manufacturer's specifications? ☒ Yes ☐ No If no, explain:

Test Meter Information

Test Meter Manufacturer:	Test Meter Serial Number:	Date of Last Calibration:
Fuji	A2P6793T	8/14/2015

Meter Orientation	Pipe Wall Thickness	Diameters of straight pipe		Diameter of discharge pipe	
		Upstream	Downstream	ID	OD
☐ Horizontal ☒ Vertical	0.135	7	7	7.731	8

Verification of Installed Meter (If more than one meter tested for same discharge, show all tests. Use second sheet if necessary):

Date of Test: 6-21-17	Time of Test (Begin): 10:45	Length of time pump has been running prior to Tester's arrival: 5:00 (HH:MM)

Test Meter Calculations (Show All Work)	Installed Meter Calculations (show all work):
Collins Meter: GPM factor_____ Stop Clamp Settings: _____	
8546 gallons in 15 minutes 569.70 gallons per minute	Flow Meter Reading: 0.028 acre feet acre feet x 325851 gallons: 9123.83 gallons number of seconds for test: 928.00 seconds gallons divided by seconds: 9.83 gal / sec gallons per minute: 589.90
	Existing K-factor _____ Adjusted K-factor _____ Flow rate with Collins tube removed:
(Show Q to nearest 0.00 GPM) AVG **QT**: 569.70	*(Show Q to nearest 0.00 GPM)* AVG **QI**: 589.90

Correction Factor = AVG **QT** 569.70 / AVG **QI** 589.90 = 0.966

Calibration Coefficient must be shown to the nearest 0.000.

If Calibration Coefficient is:	Div. 2 and Republican River Calibration Coefficient Policies	Div. 3 Calibration Coefficient Policies
0.950 to 1.050	The installed TFM is in accurate working condition.	*No Request for Variance is required.*
0.920 to 0.949 OR 1.051 to 1.080	**Test will be valid for a maximum of four years.** The Variance Request to Use Calibration Coefficient portion of this Form must be completed and signed by the Owner/User.	**May** grant a request for a variance to allow the use of a Calibration Coefficient. **Test will be valid for one year** 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 an accuracy within ±5.0%. The Variance Request to Use Calibration Coefficient for TFM portion of this Form must be completed and signed by the Owner/User.
0.900 to 0.919 OR 1.081 to 1.100	Test will be valid for one year only. 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 test must confirm an accuracy of within ±5.0%. The Variance Request to Use Calibration Coefficient portion of this Form must be completed and signed by the Owner/User.	**Test will be rejected** and the installed TFM must be repaired or replaced AND a new Test conducted. The second Test must confirm an accuracy of within ±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? ☐ Yes ☒ No

If yes, check all that apply: ☐Open ☐Pressure ☐Artesian ☐Other

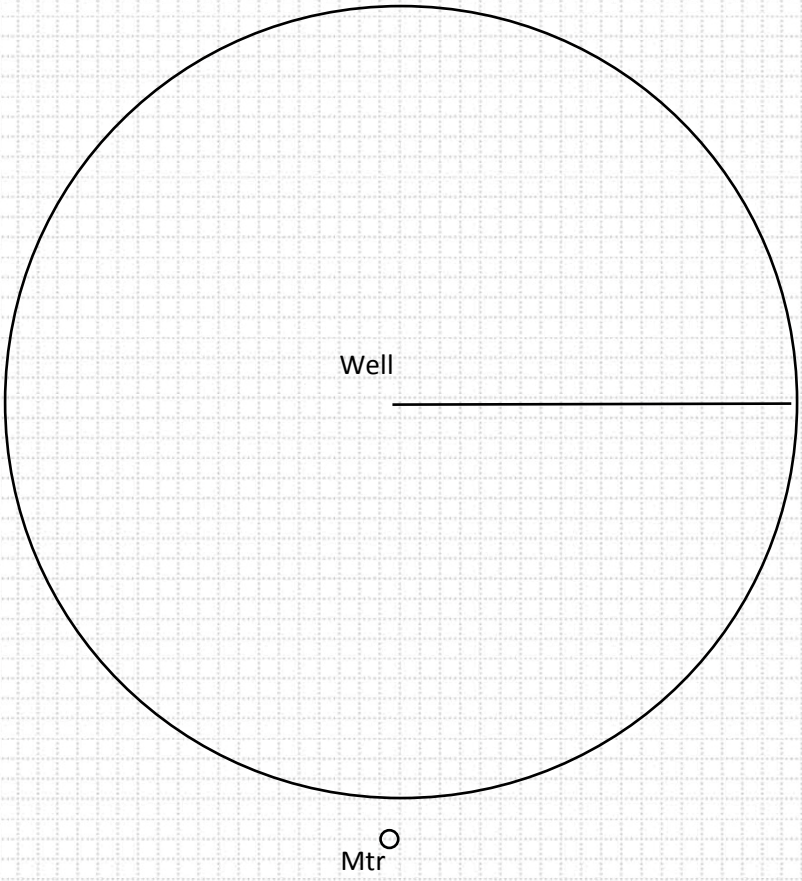
Use this space to describe all discharges _____

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 _____

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.

1 well for 1 sprinkler

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 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 **OR** have advised the Owner/User to complete the Variance Request below of this form.

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.

Signature of Tester: Kyle Sprouse Date 6-21-17

Tester Name, Company, Phone, Email

Name:	Kyle Sprouse	Company Name:	Y-W Well Testing LLC
Phone:	(970) 630-3662	Email:	ywwelltesting@hotmail.com

Variance Request to Allow a Calibration Coefficient to be used when calculating use with the installed TFM:

I request a Variance to allow the use of the Calibration Coefficient. I understand that a Variance WILL NOT be issued to allow a Calibration Coefficient 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.

I understand that the Calibration Coefficient as computed by the above Qualified Well Tester will be verified by or revised by the Division of Water Resources and that final Calibration Coefficient will be applied to ALL use records until the TFM is repaired/replaced and/or a new test conducted for this Well.

I understand and agree to the required conditions of the variance as indicated below:

Division 2 or Republican River Basin (Check only one)

☐	If Calibration Coefficient is between 0.920 to 0.949 or is between 1.051 to 1.080, the Test will be valid for no more than **four years**.
☐	If Calibration Coefficient is between 0.900 to 0.919 or is between 1.081 to 1.100, the Test will be valid **one year**. 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 ±5.0%. 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.

Division 3

☐	If Calibration Coefficient is between 0.920 to 0.949 or 1.051 to 1.080, **and** Division 3 approves this Variance Request, the Test will be valid for no more than **one year**. 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 ± 5%.

For Electrically Powered Wells/Pumps, I agree to the release of information pertaining to my Electric Service and Use, including Current Transformer Factor, Voltage/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.

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 Calibration Coefficient to my TFM, I agree to such Variance.

I am the ☒ Well Owner OR ☐ Well User

Signature of Well Owner/User Kyle Sprouse Date 6-21-17

Print Name of Well Owner/User Dennis Collette

For Republican River Basin Only: 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: YWEA	Power Company Customer Account No.: 17313479
Electric Meter Manufacturer: Elster	Manufacturer's Serial No.: 17313479
Power company meter reading on day of test (Include all rotating digits and leading digits): 01803	Multiplier: 100 / Number of rotating digits: 5

Voltage/potential transformer factor: ☐ None (1.0) ☒ 2.5:1 (2.5) ☐ 2.4:1 (2.4) ☐ Other (specify) 2.5

Current transformer factor: ☐ None (1.0) ☐ 200:5 (40) ☐ 400:5 (80) ☐ 800:5 (160) ☒ other (specify) 40

Kh factor: 1.8 (shown on meter) (If no Kh factor is shown, use 1.0.) | Pkh = Kh x Pt x Ct = 180.00

Does the same **Power Company Meter** serve other devices, including other wells/pumps?

☐ Yes If yes, describe: _____ ☒ No

If yes, were all devices operating during test? Yes ☐ No ☐

Static Level	Pumping Level	Total Dynamic Head	Elev. at Site	Operating Pressure	Yield
				38	

Determination Of Power Demand (Minimum Of Three Tests)

	No. Of Disk Revolutions	Second (sec)	Rate (rev/sec)
1.			
2.			
3.			
4.			
5.			
6.			
	Average Rate		

Power Demand (P) = Average rate x 3.6 x Pkh

P = _____ . ____ ____ ____ KW (to nearest 0.000)

Calculation Of Power Consumption Coefficient (Pcc) = 5433 X P / Q

PCC = _____ . ____ ____ KWH/AF (to nearest 0.00)

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**)
☐ Open discharge/low pressure pipeline
☒ Sprinkler
☐ Drip tape
☐ Pressurized system (including household, stock and/or humidification uses)
☐ Other (describe)

Describe all discharges and provide detailed sketch on Page 5 or as attachment

End gun On ☒ Off ☐ No End Gun ☐ | **If use of end gun is part of normal operating conditions, test must be conducted with the end gun on**

Sprinkler ☒ On ☐ Off If Off, explain why:

Percent speed of sprinkler running: 26 %

Sprinkler operating at normal speed? ☒ Yes ☐ No
If no, explain why:

Position of sprinkler (12:00 is due north)

Description of irrigated terrain (i.e. flat, rolling hills, etc.)

Does the system have working pressure regulators installed? ☒ Yes ☐ No

Pump Information

Pump type
☒ Turbine
☐ Centrifugal
☐ Submersible
☐ Other (specify)

Motor Horsepower: 100

Discharge pipe at test site
Pipe ID 8.36 inches
Pipe OD 8.63 inches
Wall thickness 0.134 inches

Y-W Well Testing LLC

121 S. Main Yuma, CO 80759
Telephone - 970-630-0612
Fax - 970-848-5358

January 30, 2012

Dear Mr. Dennis Collette,

Thank you for choosing Y-W Well Testing to provide your well testing and/or reporting needs.

In order to properly expedite the test results to the correct State of Colorado office, we would like your permission to sign off on these reports. Therefore, we need you to sign on the portion below and return this letter and payment in the enclosed self-addressed envelope provided. A signed copy of the final complete well test or report will be sent to you as we submit them to the state.

We hope this method will streamline the well approval process at the state level. Please feel free to contact me at (970) 630-0612 with any questions or concerns.

Sincerely,

John Lovell
Manager

Staff of Y-W Well Testing LLC, has the authorization to sign and approve well tests and/or reports for wells owned by Dennis Collette.

Dennis Collette, Well Owner or User