

# RULES GOVERNING THE MEASUREMENT OF TRIBUTARY GROUND WATER DIVERSIONS LOCATED IN THE SOUTH PLATTE RIVER BASIN WITHIN WATER DIVISION NO. 1 (2011CW292)



IRRIGATIONISTS SYMPOSIUM  
MARCH 15, 2012  
DIVISION 1

Topic of Discussion:  
Recently Filed South Platte River Basin  
Ground Water Measurement Rules

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DWR Division 1

# AGENDA

Rules  
Contents

Rule Status

Q & A



# PURPOSE

- ▶ Optimize water use
- ▶ Aid compliance and administration
  - South Platte River Use Rules (1974)
  - South Platte River Compact
  - Water Rights Determination and Administration Act of 1969
  - Augmentation Plans

Defines  
Accurate  
Verification Frequency



# SCOPE – RULE 1

Applies to ALL wells (except...)

- ▶ §37-92-602, C.R.S. Exempt Wells
- ▶ Non-Tributary Wells
- ▶ Designated Ground Water Basins Wells
- ▶ Denver Basin Wells
- ▶ Augmentation Plans with an Alternate Measurement Method (Decree Specific)
- ▶ Non-exempt Wells < 50gpm not in Decreed Augmentation Plan

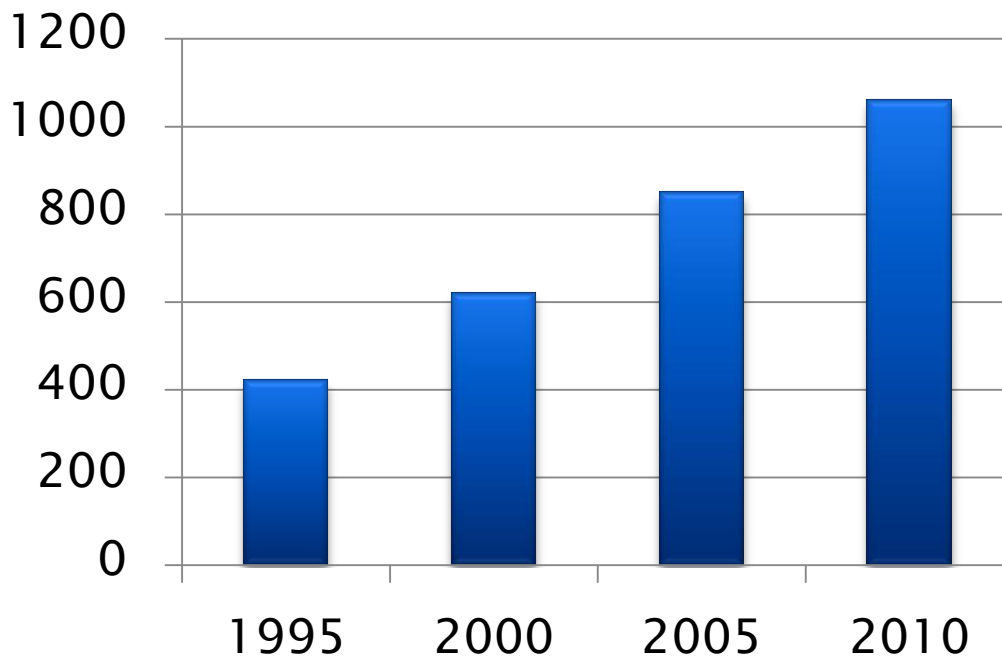
(Unless otherwise required by decree)



# SCOPE

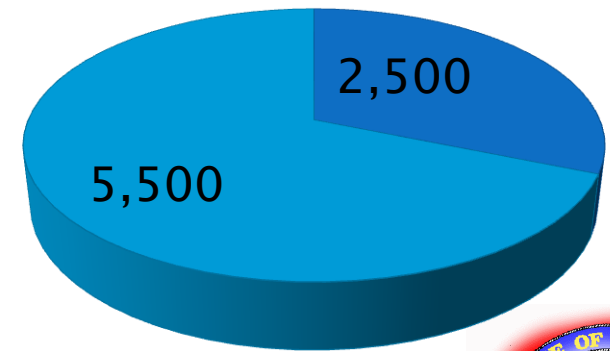
## HOW MANY PLANS AND WELLS?

SWSP and Aug Plans\*



Non-Exempt Wells  
(> 50 GPM)

- Inactive (Not in SWSP or Aug Plan)
- In SWSP or Aug Plan



\* Includes plans that may be exempt from Rules



# MEASUREMENT DEVICES

## RULE 3

### WHAT IS REQUIRED?

All Wells Within Scope of Rules Shall Be:

- ▶ Equipped With Totalizing Flow Meter (TFM)
- ▶ Equipped With Verified Alternative Method of Measurement (Variance)

OR

- ▶ Filed As INACTIVE





# MEASUREMENT DEVICES



GROUND WATER  
MEASUREMENT RULES  
SOUTH PLATTE RIVER BASIN



# TFM SELECTION

## MINIMUM REQUIREMENTS

- ▶ Non-volatile Memory
- ▶ Non-Resetable Totalizer
- ▶ Measure 0.1% Annual Diversion
- ▶ 1-year Before Rollover
- ▶ Acre-Feet or Gallons
- ▶ 1 Turn in 10 Minutes
- ▶ Tamper Resistant
- ▶ Serial Number





# TFM INSTALLATION

- ▶ Upstream of any point of discharge
- ▶ Multiple TFM's for complex system
- ▶ Accessible & readable
- ▶ **Before goes underground NOT a requirement**
- ▶ Per manufacturer's specifications and recommendations
  - Ultimately performance based



# TFM INSTALLATION

## INSTALLATION (STRAIGHT PIPE)



# TFM INSTALLATION

## INSTALLATION (FULL PIPE)





# TFM CERTIFICATION

- ▶ 4-year certification schedule
- ▶ Qualified Well Tester
- ▶ In actual plumbing configuration
- ▶ Certification  $\pm 5\%$  accurate
- ▶ Submit certification to Division Engineer

\*Unless Existing Decree Specifies Differently



# ALTERNATIVE MEASUREMENT METHODS

- ▶ Demonstrate  $\pm 5\%$  accuracy
- ▶ Qualified Well Tester
- ▶ Verifiable record
- ▶ Variance approval by Division Engineer



# ALTERNATIVE MEASUREMENT METHODS

## DEFINED

PCC – POWER CONVERSION/CONSUMPTION COEFFICIENT

Number of kilowatt hours (kwh) required to produce one acre-foot (AF) of water by a particular system.





# ALTERNATIVE MEASUREMENT METHODS

## PCC – POWER CONVERSION/CONSUMPTION COEFFICIENT

- ▶ 2-year certification schedule
- ▶ 2 ratings, 90 days apart
- ▶ Dedicated electrical meter
- ▶ Minimal ground water level fluctuations
- ▶ Non-complex/compound system
- ▶ Variance approval by Division Engineer



# EXISTING VERIFIED FLOW METERS

## RULE 4

- ▶ Provide phase in period only
- ▶ Existing verified installed TFM
- ▶ Certified prior to Effective date of Rules
- ▶ Notice of Compliance submitted 12/31/2012
- ▶ Submittal to Division 1 Engineer



# EXISTING VERIFIED FLOW METERS SUBMITTAL

- ▶ Dated Copy of Verification
- ▶ Verification Detail (per decree)
- ▶ Well Owner / User information
- ▶ Well information: location (GPS), WDID, Case No., Permit
- ▶ TFM information: serial number, size, type, etc.



# DATA SUBMISSION / REPORTING

## Rule 6

- ▶ Well Usage
  - Monthly reading – reported annually
- ▶ In Priority Diversions
  - Daily reading – reported monthly
  - Water Commissioner prior approval
- ▶ Methods
  - Paper Forms
  - Online Reporting



## DATA SUBMISSION METHODS

<b>Form 1.1</b> 05/01/2010  <b>Colorado Division of Water Resources</b> <a href="http://www.dwr.state.co.us">www.dwr.state.co.us</a>	<table style="width: 100%;"> <tr> <td style="width: 33%;">§ 14(a) Allow - Division 1 710-7 Street, 2nd Floor, Greeley, CO 80639 Registration Number - Division 1 303-665-2081 Fax 303-665-2089</td> <td style="width: 33%;">§ 14(b) Allow - Division 2 P.O. Box 493, Wray, CO 80559 Arkansas River - Division 2 719-662-3388 Fax 719-662-0080</td> <td style="width: 33%;">For Office Use Only  § 14(c) Allow - Division 3 710 E. Alameda, Suite S, Pueblo, CO 81024 Rio Grande River - Division 3 719-558-0551 Fax 719-558-0555</td> </tr> <tr> <td>§ 14(d) Allow - Division 4 P.O. Box 264, 301 Murphy Drive, Alamosa, CO 81810 Designated Basins - Division 4 303-665-2081 Fax 303-665-2223</td> <td></td> <td> <input type="checkbox"/> Passed    <input type="checkbox"/> Failed   <input type="checkbox"/> Variance Approved            Date of variance _____         </td> </tr> </table>	§ 14(a) Allow - Division 1 710-7 Street, 2nd Floor, Greeley, CO 80639 Registration Number - Division 1 303-665-2081 Fax 303-665-2089	§ 14(b) Allow - Division 2 P.O. Box 493, Wray, CO 80559 Arkansas River - Division 2 719-662-3388 Fax 719-662-0080	For Office Use Only  § 14(c) Allow - Division 3 710 E. Alameda, Suite S, Pueblo, CO 81024 Rio Grande River - Division 3 719-558-0551 Fax 719-558-0555	§ 14(d) Allow - Division 4 P.O. Box 264, 301 Murphy Drive, Alamosa, CO 81810 Designated Basins - Division 4 303-665-2081 Fax 303-665-2223		<input type="checkbox"/> Passed <input type="checkbox"/> Failed  <input type="checkbox"/> Variance Approved Date of variance _____
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## NOTICE OF TOTALIZING FLOW METER RE-VERIFICATION, INSTALLATION OR REPLACEMENT

**Check appropriate box:**

- ☐ To be filed in Compliance with Rule 16.1 of the Rules Governing the Measurement of Tributary Ground Water Overflows in the Republican River Basin (Complete pages 1-4)
- ☐ To be filed in Compliance with Rules 3.1 of the Amended Rules Concerning the Measurement of Tributary Ground Water Overflows 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 Rule 3.1 of the Rules Governing Designated Basins (Complete pages 1-5)
- ☐ South Platte River Basin (Complete pages 1-5)

**Reason for meter verification (check all that apply):**

<input type="checkbox"/> Recently previously verified TFM	The following MUST be provided for new & repaired meters
<input type="checkbox"/> New TFM (not previous meter)	Date New TFM installed _____
<input type="checkbox"/> Replacing Previous TFM (also complete area at right)	Date Previous TFM removed _____
<input type="checkbox"/> Previous TFM Serial No.: _____	Previous TFM Reading (estimate required if not readable) _____
Change in Measurement Method from: <div style="display: flex; justify-content: space-between;"><div>Hour Meter <input type="checkbox"/></div><div>State Meter <input type="checkbox"/></div><div>Paper Co Meter <input type="checkbox"/></div><div>Previous Meter OK <input type="checkbox"/></div></div>	
Meter was replaced due to: New Date No. _____ Old Date No. _____ TFM Reading _____	C/Factor / Test Reg. / C/Factor _____
(Owner) meter was repaired due to: New Date No. _____ Old Date No. _____ TFM Reading _____	

**Contact Information:**  

Web Owner: _____ Name: _____	User (if not same as web owner): _____ Name: _____
Mailing Address: _____ City: _____ State: _____ Zip: _____	Mailing Address: _____ City: _____ State: _____ Zip: _____
Phone: _____ Email: _____	Phone: _____ Email: _____

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

WCD	Permit No.	Case or Decree No.	Location (N, L, Sec., T., R., PM)	GPS Coord. (UTM, meters, NAD 83) Northing Easting Zone (12N)

**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. _____
Power Company Meter Reading on Date of Test (including all rotating and sealing device): _____	Multipplier: _____	Number of Rotating Digits: _____

**Links on power company meter:**  
☐ Is the same Power Company Meter serve other devices, including other wells/pumps? If yes, describe system.  
☐ Yes    ☐ No



## On-line Reporting

## Paper Forms

# INACTIVE WELLS

## Rule 7





# OPERATIONALLY DISABLED

- ▶ Electricity or pump is removed
- ▶ No other power readily available



CORRECT – YES



# OPERATIONALLY DISABLED

- ▶ Electricity or pump is removed
- ▶ No other power readily available



CORRECT – NO



# REACTIVATION



# VARIANCE Rule 11

## Submit in Writing

State the basis and  
attach  
documentation

## Review by Division Office

Approve: Provide any  
terms and conditions

Deny

## Well Owner Action

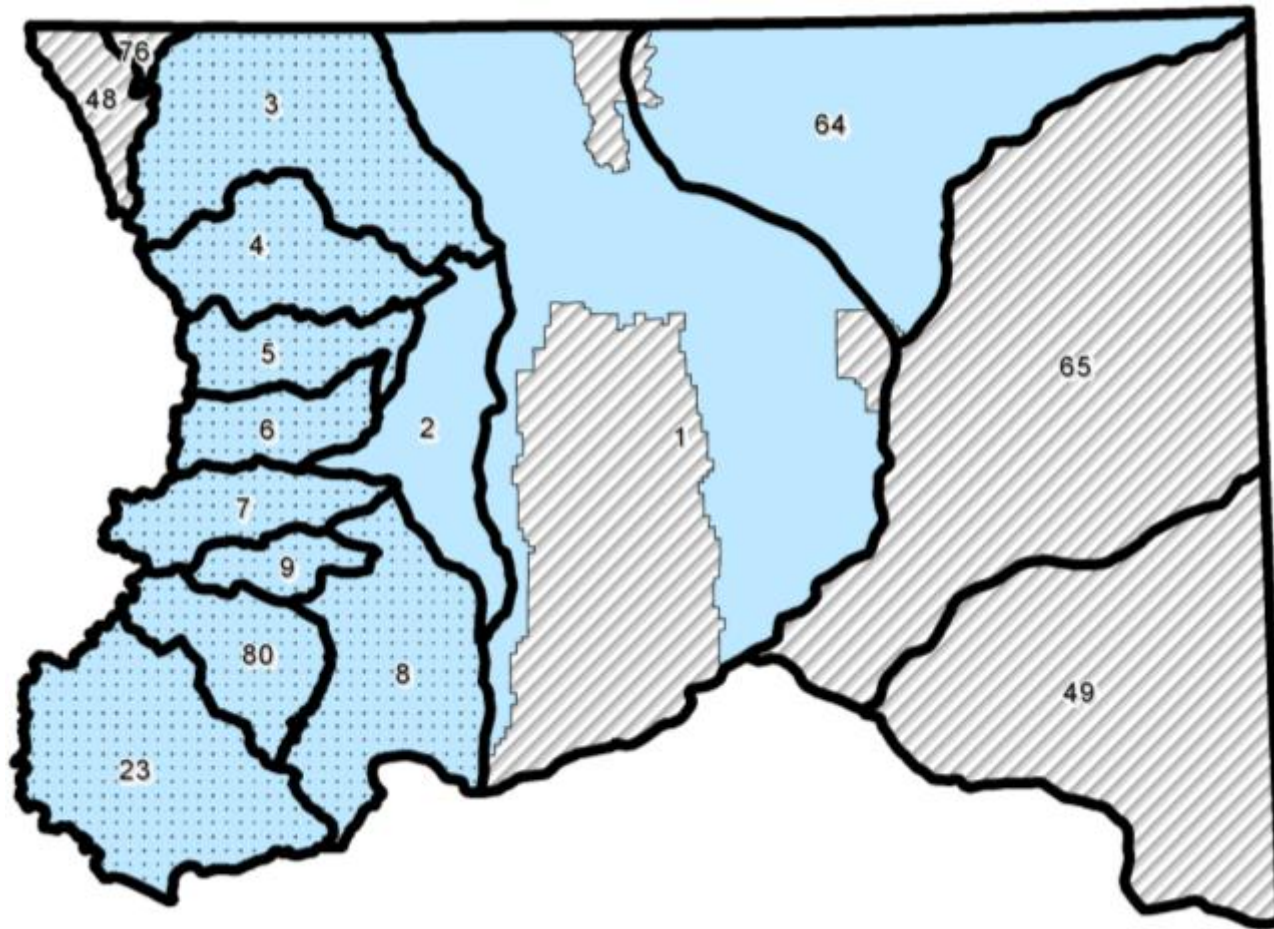
Comply with all  
terms and conditions  
as necessary

Install TFM or  
disable well





# COMPLIANCE DATE



Designated Groundwater or Non-South Platte River Basin

Measurement Rule Jurisdictional Area Compliance Date



December 31, 2013



December 31, 2014

# NON-COMPLIANCE

## HOW DOES A WELL USER GET OUT OF COMPLIANCE?

- ▶ Meter not in accurate operating condition
- ▶ Failure to submit data
- ▶ Interfering with any measurement device
- ▶ Failure to comply with the Rules (TFM/Inactive)
- ▶ Unauthorized withdrawal of water





# NON-COMPLIANCE

## WHAT HAPPENS IF I'M OUT OF COMPLIANCE?

- ▶ Cease and Desist Order
- ▶ Cannot divert water (except...)
  - Test measurement device
    - No beneficial use
    - Return to same stream system
- ▶ Install Flow Meter Order



# ENFORCEMENT

- ▶ Court Injunction §37-92-503(1)(a)
- ▶ Attorney Fees §37-92-503(2)
- ▶ Penalties §37-92-503(6)(a-c)
  - Divert against orders (\$500/day)
  - Falsify data (\$500/violation)
  - Interfere with measurement device (\$500/violation)



# DRAFT RULES STATUS

4/4/2011

Draft Rules  
Released to  
Public

Public  
Comment  
Period

Public  
Meetings

Invited  
Comments

Released FAQ

12/30/2011

Revised Draft  
Filed in Water  
Court

Case No.  
11CW292

Objection  
Deadline:  
February 29,  
2012

Current

8 Objections  
Received

Before the  
Referee

Stipulate or  
Trial



# QUESTIONS?

- ▶ Division of Water Resources Website:

[www.water.state.co.us](http://www.water.state.co.us)

- Division Offices – Division 1
  - Draft Rules
  - Well Measurement Rules – FAQ
- ▶ Send questions and comments to:
  - Jonathan Hernandez, Division 1 Water Resource Engineer
    - (970) 352-8712
    - [Jonathan.Hernandez@state.co.us](mailto:Jonathan.Hernandez@state.co.us)
  - Corey DeAngelis, Assistant Division 1 Engineer
    - (970) 352-8712
    - [Corey.DeAngelis@state.co.us](mailto:Corey.DeAngelis@state.co.us)

