Colorado Stream Lines

QUARTERLY NEWSLETTER OF THE OFFICE OF THE STATE ENGINEER
COLORADO DIVISION OF WATER RESOURCES

1313 Sherman St. Room 818, Denver, CO 80203 - (303) 866-3581

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New Rules Announced for Arkansas River Basin

Hal Simpson has announced that new rules were published in the March resume for Water Division No. 2 which require the installation of totalizing flow meters on tributary wells or use of power coefficient data to determine the amount of water pumped on wells tributary to the Arkansas River. These requirements became necessary in light of the Kansas v. Colorado lawsuit that is currently before the United States Supreme Court. Certain wells within the basin are exempt from such requirements.

The rules as published are reprinted below in their entirety.

Rules Governing the Measurement of Tributary Ground Water Diversions Located in the Arkansas River Basin

Authorization

In order for the State Engineer and Division Engineer for Water Division No. 2 to properly administer the waters of the Arkansas River basin and to comply with the Arkansas River Compact, it has become necessary to require the metering of tributary wells within the basin. The State Engineer's authority to promulgate these rules is based on section 37-80-104, C.R.S., which requires the State Engineer to make and enforce such regulations with respect to deliveries of water as will enable the state of Colorado to meet its compact commitments; section 37-92-501, C.R.S., which authorizes the State Engineer to adopt rules and regulations to assist in the administration, distribution and regulation of the waters of the state in accordance with the constitution of the state of Colorado, the provisions of Article 92 (The Water Rights Determination and Administration Act of 1969) and other applicable laws; and section 37-92-502(5), C.R.S., which authorizes the State Engineer to order any owner or user of a water right to install and maintain at such owner's or user's expense necessary meters, gauges, or other measuring devices and to report at reasonable times to the appropriate Division Engineer the readings of such meters, gauges or other measuring devices.

Order of the State Engineer

It is ordered that the following rules are adopted and approved by the State Engineer.

Rule 1. **Scope.** These rules are applicable to all wells located in the Arkansas River basin **except** decreed and/or permitted wells as described in section 37-92-602, C.R.S.; wells located within a designated ground water basin; decreed and/or permitted nontributary wells; permitted wells subject to sections 37-90-137(4), C.R.S.; and wells permitted and decreed for not more than 50 gallons per minute that are part of a judicially-approved plan for augmentation.

Rule 2. **Definitions:**

A. The following definitions are applicable to these rules governing the measurement of tributary

ground water diversions located in the Arkansas River basin:

1. **"Compound or complex system"** means any well for which the method of delivery varies during a single reporting year (November 1 to October 31) between open discharge, sprinkler system or gated pipe or where more than one electrical device is operated from the same electric power meter.

2. **"Inactive well"** means any well that is not in use and is disconnected from a power source.

3. **"Power coefficient"** means the amount of electrical energy expressed as kilowatt hours (KWH) consumed in pumping one acre-foot of water.

B. Any other term used in these rules that is defined in Article 90 or 92 is used with the meaning given therein.

Rule 3. All wells within the scope of these rules shall either, **by June 15, 1994,** be equipped with a totalizing flow meter that is installed and maintained according to manufacturer's specifications and recommendations or, **by October 1, 1994,** be rated to determine a power coefficient.

3.1 When a totalizing flow meter is used, it shall be the owner's responsibility to keep the meter in acceptable operating condition. The State Engineer may adopt standards and specifications for totalizing flow meters and the installation, repair, and maintenance of meters. As a minimum, totalizing flow meters shall be: properly field calibrated under the supervision of a registered professional engineer when installed; contain sufficient recording digits to assure that "roll over" to zero does not occur within three years; and maintained by the well owner so as to provide a continuous, accurate record of withdrawals. If the meter is not operational, the well shall not be pumped until a working meter is installed or a specific backup water measurement program approved by the State Engineer is put into effect. Totalizing flow meters are required to be recalibrated in the field under the supervision of a registered professional engineer every four years after the date of original installation and flow meters in existence as of the effective date of these rules shall be certified as in calibration under the supervision of a registered professional engineer by June 15, 1995, and recalibrated every four years thereafter. The Division Engineer shall be notified in writing of the date of and person supervising the recalibration.

3.2 The State Engineer may adopt standards and specifications for power coefficient rating. As a minimum, power coefficients shall: be determined utilizing rating procedures conducted under the supervision of a registered professional engineer and approved by the State Engineer; be conducted when the pumping system has stabilized, i.e., both operating pressure and pumping drawdown have not changed more than 10% in the last hour; have been rated on or after April 1, 1992; and be updated through re-rating at least every four years. The Division Engineer shall be notified in writing of re-rating results, the date of and person supervising the re-rating.

3.3 If the well(s) are part of a complex or compound system, or if the pump is driven by internal combustion means, the owner or user of the well must utilize the totalizing flow meter method and the provisions of rule 3.1 apply.

3.4 All flow measuring equipment utilized in field calibration or rating of wells must be accurate within plus or minus 5%.

Rule 4. All owners of wells within the scope of these rules who choose to install totalizing flow meters shall provide notice in writing to the Division Engineer for Water Division No. 2 **by June 15, 1994,** stating: the name and address of the owner of the well(s); the name and address of the user of the well(s) (if different than the owner); the well permit number(s); the decree or case number(s); the legal description of the location of the well(s); the meter manufacturer; the meter model number; the meter size; the meter serial number(s); the volumetric units (gallons or acre-feet); the power utility company name (if applicable); the power company account number (if

applicable); the kilowatt hour meter reading on the date of installation (if applicable); the beginning totalizing flow meter reading; and the date of installation. Notification to the Division Engineer shall be on a form prescribed by the State Engineer.

Rule 5. All owners of wells within the scope of these rules who choose to utilize the power coefficient method shall provide notice in writing to the Division Engineer for Water Division No. 2 **by October 1, 1994,** stating: the name and address of the owner of the well(s); the name and address of the user of the well(s) (if different than the owner); the well permit number(s); the decree or case number(s); the legal description of the location of the well(s); the power meter serial number(s); the power utility company name; the power company account number; the power coefficient; the date of power coefficient rating; the kilowatt hour meter reading on the date of the power coefficient rating; the name and address of the registered professional engineer supervising the power coefficient rating; the current transformer (C.T.) factor (if applicable); and the potential transformer (P.T.) factor (if applicable). Notification to the Division Engineer shall be on a form prescribed by the State Engineer.

Rule 6. **Data Submittal.**

6.1 Data as to the monthly amounts of water pumped shall be submitted to the Division Engineer no later than **January 31, 1995 and every year consecutive year thereafter**. The reporting period is from November 1 to October 31 (coinciding with the Arkansas River compact year).

6.2 For the year 1994, owners using the power coefficient method shall calculate the amount of water pumped using monthly power records from the period of November 1, 1993 through October 31, 1994, in order to obtain a complete year of record.

6.3 Data shall be submitted on forms prescribed by the State Engineer. Such forms shall require owner consent to release power company data to the Division Engineer.

Rule 7. Inactive wells are excluded from these rules provided a sworn notarized affidavit is filed with the Division Engineer **by June 15, 1994, and March 1, every consecutive year thereafter,** stating the status of the well as inactive. Such sworn statement shall include: the name and address of the owner of the well(s); the name and address of the user of the well(s) (if different than the owner); the well permit number(s); the decree or case number(s); the legal description of the location of the well(s); and a statement that the well(s) are disconnected from any power source. Should the well(s) become active at any time, the owner shall immediately notify the Division Engineer and all aspects of these rules shall apply. Notification to the Division Engineer shall be on a form prescribed by the State Engineer.

Rule 8. No water shall be withdrawn from any well not in compliance with these rules except as necessary to determine a power coefficient or to install a totalizing flow meter.

Rule 9. Failure to comply with any of these rules will subject the well owner and/or user to court proceedings and the state's costs, including reasonable attorneys fees, associated with the enforcement of these rules pursuant to section 37-92-503, C.R.S.

Rule 10. If any portion of these rules is found to be invalid, the remaining portion of the rules shall remain in force and unaffected.

Rule 11. If the strict application of any provisions of these rules would cause unusual hardship, upon written request, the State Engineer may grant a variance under these rules.

IT IS FURTHER ORDERED that these rules shall become **effective on the 15th day of June, 1994,** and shall remain in effect until amended as provided by law. Any person desiring to protest these rules may do so in the manner provided in section 37-92-501, C.R.S. Any such protest to these rules must be filed by the end of the month following the month in which these rules are published.

New Director of DNR Appointed

Jim Lochhead, formerly of the Glenwood Springs law firm of Leavenworth and Lochhead, P.C. has been appointed the new Executive Director of the Department of Natural Resources. Jim replaces Ken Salazar as Director of the Department. Salazar, who served for almost four years at the post, resigned after providing nearly 8 years of public service.

The Division of Water Resources would like to take this opportunity to welcome Jim aboard and looks forward to working under his leadership and direction.

Keith Kepler Moves to Pueblo Office

Hal Simpson announced that Mr. Keith Kepler has been transferred to the position of Assistant Division Engineer for Water Division 2 in Pueblo, Colorado, effective March 1, 1994. He desired to expand his professional experience by working in a challenging environment related to the conjunctive use of groundwater and surface water. Keith has extensive experience in water resource engineering which will be instrumental in the regulation of tributary groundwater wells and collection of well water use data. Ken Knox, former assistant to Keith, has been appointed Acting Division Engineer in the interim.

Forest Service Travel Plan Conflicts With Dam Safety Objective

by Jim Norfleet, Dam Safety Engineer, Montrose

The United States Forest Service (U.S.F.S.) is continually struggling to achieve a balance between multiple use on national forests and management of the resources. As a result, Mr. Bob Storch, Supervisor for the Grand Mesa, Uncompahgre, and Gunnison National Forest, released an Environmental Assessment (EA) of a proposed revision to the existing Travel Plan.

Behind the scene, the favored plan, Alternative III in the EA, was formulated by a working group comprised of individuals representing the various interests. These interests included outfitters, cattlemen, water users, lodge owners, motorized vehicle users, wildlife, Trout Unlimited, environmentalists, and the Forest Service. The working group spent most of 1993 hashing out their differences before making a recommendation to the Forest Service.

The proposed plan has met controversy with some interest groups since it requires special use permits for motorized travel on non-designated routes. Special use permits would also be required of Water Resource staff in the performance of their regular duties under the proposed plan. water users believe the special use permit requirement violates their prior right since many of the structures and the associated access roads predate the existence of the Forest Service. During the public comment period, the State Engineer also expressed concern about possible conflicts affecting public safety. The closure of existing roads to motorized travel hinders proper and timely maintenance of the various dams, ditches, headgates, and measuring devices located on Grand Mesa. Water Commissioners also depend on an efficient trail system to manage the water owned by irrigators in the valleys below. More importantly, the quality of some existing roads prevent quick response to dams in the event of an emergency. These issues would not only have fiscal impact on the Division, but conflict with the objectives of the dam safety program.

A committee of water users met in January to prepare more specific language for the proposed Travel Plan. Jim Norfleet and John Blair, Dam Safety Engineers, are representing the State Engineer interests and participating in the committee meetings.

Division 6 Office Relocation

The Steamboat Springs office of the Division of Water Resources have moved to a new location in Steamboat Springs. They are now located at 625 South Lincoln, #104. The new space is located at ground level and is accessible to the disabled. The mailing address and phone numbers are:

P.O. Box 773450
Steamboat Springs, CO 80477

Phone: (303) 879-0272
Fax: (303) 879-2332* You must phone prior to faxing.

DWR Long Range Plan Implemented

In January of this year, the Division of Water Resources prepared and began implementation of a five-year long range plan that sets forth achievable and verifiable goals for the future. These goals are global in nature and go beyond the division's yearly key areas and objectives.

There are several areas of emphasis in the plan. These areas were identified by in-depth discussions with employees, managers and our customers.

The area of highest emphasis is the management of our **human resources** -- our most valuable asset. The plan focuses heavily on employee recognition, communication, diversity in the work force, career path development and management skills.

Because technology is so important in achieving the mission of the division, the plan focuses on maintaining **high quality data** and ready access to computer hardware, software and communication technology that link computers, data and people. This will be achieved by enhanced training, data communication links and data verification standards. The division will also complete, in cooperation with the Colorado Water Conservation Board and assigned consultants, the Colorado River Decision Support System and the South Platte Water Resource Management System.

The division is also committed to improving water resources administration and well permitting to **improve service to our customers**. Quality data collection and record keeping will be a focus, as well as a review of the well permitting process.
Finally, the long range plan focuses on the **allocation of the division's human and fiscal resources** to find new ways to communicate with and serve our customers. These goals will be accomplished in a number of ways, including staffing analyses, educational efforts and increased public contact and communication.

The distribution and allocation of water will be faced with challenges in the future unlike any it has seen in the past. Only through vision and planning can the demands of the future be met. The Division of Water Resources believes that through implementation of its long range plan an excellent beginning has been made in preparation for those future challenges and the employees of the division look forward to bringing the goals into reality.

NEW GROUND WATER POLICY

The State Engineer has approved a new ground water policy with respect to expanding the use of pre-May 8, 1972 wells located on intact pre-June 1, 1972 lots of less than 35 acres to allow for the addition of one single family dwelling. In the past, this practice was allowed in the county referral process from the State Engineer when they requested serving one additional dwelling on a pre-72' lot, served by a pre-72' well for a one time split by exemption of 1 lot from an original pre-72' parcel. However, no corresponding written policy was ever established to handle a new well permit application for the expanded use of the well. Therefore, when the applicant would attempt to late register the well or obtain a new permit for the expanded use, the application was often denied under the provisions of section 37-92-602(3)(b)(I), causing the appearance of a lack of coordination with regard to the issuance of this type of request.

The new policy is as follows:

When a county referral proposes to allow adding one single family dwelling to an intact pre-1972 lot with an existing pre-1972 well as the proposed water supply, the State Engineer will respond that we have no objection to approval if the following conditions are met:

1. The applicant can document that the property was recorded with the county prior to June 1, 1972, or the date the county adopted Senate Bill 35 rules, and the well will be the only exempted well ont the tract.

2. The property has not been previously subdivided or exempted sine June 1, 1972.

3. The well that is proposed as the supply was constructed and placed to use prior to May 8, 1972.

4. The only expansion of use of the well will be for ordinary household purposes inside one single family dwelling, and return flows will be to the same stream system in which the well is located.

5. The wastewater disposal system for the added dwelling must be of the non-evaporative type.

6. The applicant must apply for and obtain a new well permit for the expanded use of the well.

7. The State Engineer's letter to the county must state that no additional well permits will be issued under 37-92-602, as the water supply for any new lots created from the subject property by either subdivision or exemption, as long as the permit for the expanded use discussed above is in force.

When an application involving the same circumstances as described above is received directly by this office and not through the county referral a new well permit will be issued for the expanded use of the well under 37-92-602(3)(b)(I), when the following conditions are met:

1. The applicant provides documentation that the property the well is located on was recorded with the county prior to June 1, 1972 or the date the county adopted Senate Bill 35 rules, and that the property has not been subdivided or exempted since June 1, 1972, or the county has adopted Senate Bill 35 rules.

2. The applicant must provide documentation that the well was constructed and put to use prior to May 8, 1972. A well permit issued prior to May 8, 1972 will constitute adequate documentation.

3. A field report from the Water Commissioner will be required to detail the existing and historic uses of the well specifically addressing the number of dwellings served, area historically irrigated and the number of domestic animals watered. Total single family dwellings served may not exceed three and irrigated garden and lawn cannot exceed 1 acre.

4. The wastewater disposal system for the added dwelling must be of the non-evaporative type and the return flow must be to the same stream system as the well is located in.

5. The expanded use is limited to ordinary household purposes inside one single family dwelling. No expanded outside use will be allowed under the permit.

6. Permit conditions will include the limitation to historic pre-May 8, 1972 uses plus the additional use for ordinary household purposes inside one additional single family dwelling, not to exceed three single family dwellings.

7. The pumping rate will be limited to 15 gallons per minute pursuant to section 37-92-602(1)(b).

8. A condition on the permit will state that no additional well permits will be issued under section 37-92-602 as the water supply for any new lots created from the subject property by either the subdivision or exemption, as long as this permit is in force.

Water Resources Names Manager, Support and Professional of the Year Awards

Each year the Division of Water Resources recognizes one manager, one support person and one professional who exhibits outstanding dedication to the public and the Division. This year's awards went to: **Orlyn Bell**, Division Engineer for Water Division 5; **Nancy Hitchcock**, Clerical Support, Water Division 5; and **Jeff Deatherage**, Professional Engineer, Denver office, respectively.

The Manager of the Year Award was awarded to Mr. Bell specifically because of his dedication to water resource management in Colorado, along with his sincere devotion to his employees. Mr. Bell has been an employee of the state for 24 years, and was appointed Division Engineer in 1984. Throughout that tenure, he has encouraged teamwork, been an excellent motivator and teacher, and has exhibited outstanding people skills in his managerial position. As a manager he motivates his personnel by verbalizing his appreciation of their work publicly and privately; has the courage to delegate responsibility to his staff and water commissioners; he teaches and gives direction without making people feel inadequate; and he answers questions and

discusses tough topics with his employees. Above all, staff and field personnel believe him to be a compassionate person who cares and is willing to listen and will give of himself and his abilities to help others both inside and outside the Division of Water Resources.

Nancy Hitchcock is another division employee truly worthy of receiving recognition for outstanding service. If you have ever had the pleasure of calling the division office in Glenwood Springs you know well her cheerful attitude and sincere willingness to offer the customer excellent service above all else. Her willingness to go the extra mile for her customers is a commendable asset to the division and her services are greatly appreciated.

Jeff Deatherage was awarded the Professional of the Year Award. Jeff works as a Water Resource Engineer on the Division 5 Team of the Denver office, which truly made the award ceremonies a sweep by Water Division No. 5. Jeff was given the award for his willingness to go the extra mile during a time of staff shortage in which he was asked to take on the duties of two for 3 months. His "get the job done attitude" along with his sense of humor made him an excellent choice for receiving this award.

The Division congratulates and thanks all three of these team members for a job well done.

Total Quality Management Teams Review Well Permitting Process

For approximately 3 years now the Division of Water Resources has been utilizing the tools and concepts of Total Quality Management (TQM) in the workplace as a means of achieving better overall customer satisfaction, a higher quality product, and better employee fulfillment. In its infancy, the Division TQM team focused on small projects, ranging from computer services to public in-house customer service. However, management and the employees understood that there was a large project well suited for quality management review, except the scope of the project meant that it would take a lot of effort and time to see it through. That project was the well permitting process.

The Division of Water Resources has now embarked on such a challenge. To accomplish this task, two TQM teams have been convened. One team is addressing the well permit application form and the other team is looking at the permit issuance process itself.

The application form team began its work early in 1993 and is nearing completion of recommendations to the management council as to the types of forms that will be more user friendly and provide more consistent, correct information to the Division for the review process. Presently, forms are being sent to a designer who will take the recommended information and place it in a easy to fill out format for a testing phase to begin in the near future. While not final,

(TQM cont.) one way the Division may test the form is to have walk-in customers fill out two forms, both the old and the new, along with a questionnaire as to the customers' likes and dislikes. Since the Division knows that this is a time consuming process customers would rather avoid a priority incentive may be offered to those who cooperate in the testing phase.

The well permit process TQM team was formed in January of this year and currently is focusing on the exempt well permit process. Approximately 75 to 80% of the permits received by the Division are for wells of this type and current team thinking is that the greatest amount of savings will be achieved if adjustments can be made to this process. An internal interview process of the employees who participate in the well permit review is currently underway whereby the team will gain specific insight into both the positive and negative aspects of the process. The results of those interviews will then be processed by the team and it is hoped that innovative recommendations will be forthcoming. After the internal interviews are complete, the team will look at including outside customers in the process and the water users for suggestions and insight.

Current projections for specific preliminary recommendations to management council are scheduled for January of 1995. Look for updates in future Streamlines articles.

Calendar of Events

April 12, 1994	Board of Examiners of Water Well Construction and Pump Installation Contractors meeting to be held in Room 615, starting at 8:30 a.m., 1313 Sherman Street, Denver, CO. Contact Marta Ahrens, at (303) 866-3581.
April 28, 1994	Colorado Rural Water Association is presenting a seminar "Mechanized Maintenance and Chlorination at City Hall in Walsenburg, CO. Contact Colorado Rural Water Association at (719) 545-6748.
May 20, 1994	Colorado Ground Water Commission to be held in Room 318, starting at 9:00 a.m., 1313 Sherman Street, Denver, CO. Contact Marta Ahrens, at (303) 866-3581.
May 25 - 26, 1994	Colorado Water Conservation Board meeting to be held in Denver. for more information contact the Colorado Water Conservation Board at (303) 866-3441.
June 14, 1994	Board of Examiners of Water Well Construction and Pump Installation Contractors meeting, 8:30 a.m., 1313 Sherman Street, Room 719, Denver, CO. For further information contact Marta Ahrens at (303) 866-3581.
July 16, 1994	Colorado Water Well Contractors Association, Mid Year Conference at Beaver Run in Breckenridge. Contact Carol Brooks at (303) 759-1756.

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