

**AMENDED  
RULES AND REGULATIONS  
GOVERNING THE DIVERSION AND USE  
OF TRIBUTARY GROUND WATER  
IN THE ARKANSAS RIVER BASIN, COLORADO**

**ORDER OF THE STATE ENGINEER**

IT IS ORDERED that the Rules and Regulations governing the use, control, and protection of surface and ground water rights located in the Arkansas River and its tributaries, which rules and regulations became effective on February 19, 1973, shall be amended and replaced by the following rules and regulations which are adopted and approved by the state engineer.

**AMENDED RULES AND REGULATIONS**

Rule 1. Scope. These Rules apply to all diversions of tributary ground water in the Arkansas River Basin in Colorado except diversions by decreed or permitted wells as described in section 37-92-602, wells located within a designated ground water basin which withdraw designated ground water, decreed and/or permitted wells which withdraw nontributary ground water, and exposure of ground water in connection with extraction of sand and gravel by open mining as defined in section 34-32-103(9), 14 C.R.S. In addition, these Rules shall not apply to ground water within the Dawson, Denver, Arapahoe, or Laramie-Fox Hills aquifers in the Denver Basin, as shown on the attached map, or to ground water within the Cheyenne and Dakota aquifers.

Rule 2. Definitions.

The following definitions are applicable to these Rules:

a. "Decreed pre-compact ground water rights" mean water rights to divert tributary ground water in the Arkansas River Basin in Colorado with a priority senior to December 14, 1948, awarded in (1) decrees entered prior to June 7, 1969; or (2) decrees which were entered in proceedings which were pending on that date; or (3) decrees which were entered on or after June 7, 1969, by the Water Judge for Water Division 2, with respect to water rights which are diverted by means of wells, the priorities for which had not been established or sought in any prior decree or proceeding, if the person claiming the water right filed an application for determination of the water right and priority not later than July 1, 1972, and such application was approved and confirmed by the Water Judge for Water Division 2.

b. "Division engineer" means the division engineer for Water Division 2.

c. "Durbin usable flow method with the Larson coefficients" means the Durbin approach to determine depletions to usable Stateline flow with modifications made

by Steven Larson, as described in the July 1994 Report by Arthur L. Littleworth, Special Master, in Kansas v. Colorado, No. 105, Original, United States Supreme Court.

d. "Kansas Hydrologic-Institutional Model" means the computer model, as revised by the Kansas replacement experts, used to determine depletions to Stateline flow in Kansas v. Colorado, No. 105, Original, United States Supreme Court, as described in the July 1994 Report by Arthur L. Littleworth, Special Master.

e. "Out-of-priority depletions to senior surface water rights in Colorado" mean stream depletions caused by diversions of tributary ground water in the Arkansas River Basin in Colorado which would deprive senior surface water rights in Colorado of the amount of water to which said surface water rights would have been entitled in the absence of such ground water diversions.

f. "Post-compact ground water diversions" mean (1) diversions of tributary ground water from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline by well users having water rights with a priority of, or junior to, December 14, 1948, and (2) diversions of tributary ground water by well users having decreed pre-compact water rights for irrigation use in excess of the pre-compact pumping allowances of such rights, except to the extent permitted by Rule 3.3.

g. "Stream depletions" means depletions to the Arkansas River or other natural streams in the Arkansas River Basin in Water Division 2 caused by diversions of tributary ground water in the Arkansas River Basin in Colorado.

h. "Tributary ground water in the Arkansas River Basin in Colorado" means all underground water as defined in section 37-92-103(11), 15 C.R.S., in the State of Colorado tributary to the Arkansas River or other natural streams in the Arkansas River Basin in Water Division 2.

i. "Unit response functions" mean a mathematical method to determine the timing and location of stream depletions or accretions from a unit stress on an aquifer.

j. "Usable Stateline flow" means the flow of waters of the Arkansas River, as defined in Article III of the Arkansas River Compact, as determined by gaging stations located at or near the Stateline in accordance with the Arkansas River Compact, the depletion of which would materially deplete waters of the Arkansas River in usable quantity or availability for use to the water users in Kansas under the Arkansas River Compact.

k. "Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline" mean those aquifers as delineated on the attached map.

l. "Waters imported into the Arkansas River Basin" or "imported waters" mean waters brought into the Arkansas River Basin from other river basins.

m. "Well user" means the owner of a water right to divert tributary ground water in the Arkansas River Basin in Colorado and any person having the right to use such a water right owned by another, including successors, lessees, contractees, or assigns.

n. Any other term used in these Rules that is defined in Article 90 or 92, 15 C.R.S. , or in Article III of the Arkansas River Compact, is used with the meaning given therein.

**Rule 3. Ground Water Diversions and Depletions Affecting Usable Stateline Flow.**

**Rule 3.1. Ground Water Diversions for Irrigation Use by Post-compact Ground Water Rights Affecting Usable Stateline Flow.** On or after April 1, 1996, all diversions of tributary ground water for irrigation use from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline by well users having water rights with a priority of, or junior to, December 14, 1948, shall be totally discontinued unless depletions to usable Stateline flow caused by such diversions are replaced in accordance with a plan approved by the state and division engineers pursuant to these Rules.

**Rule 3.2. Ground Water Diversions for Irrigation Use By Decreed Pre-Compact Ground Water Rights Affecting Usable Stateline Flow.** On or after April 1, 1996, all diversions of tributary ground water for irrigation use from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline by well users having decreed pre-compact ground water rights shall be limited to an aggregate total of 15,000 acre-feet per year (November 1 through October 31) unless depletions to usable Stateline flow caused by diversions of amounts greater than 15,000 acre-feet per year are replaced in accordance with a plan approved by the state and division engineers pursuant to these Rules.

**Rule 3.3. Pre-compact Pumping Allowances.** For the purpose of implementing Rule 3.2, each decreed pre-compact ground water right for irrigation use from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline shall be allocated an annual pre-compact pumping allowance for the purpose of determining depletions to usable Stateline flow. The annual pre-compact pumping allowance for each decreed pre-compact ground water right for irrigation use shall be determined by multiplying 15,000 acre-feet times the decreed capacity of that ground water right, weighted depending on whether the ground water right is used as a supplemental or as a sole source supply, and dividing by the total weighted decreed capacity of all decreed pre-compact ground water rights for irrigation use. Ground water rights used as a supplemental supply shall be given a weight of sixty percent (60%) and ground water rights used as a sole source supply shall be given a weight of one-hundred percent

(100%). The state and division engineers shall prepare a list of all decreed pre-compact ground water rights for irrigation use from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline by the effective date of these Rules, which list shall set forth the annual pre-compact pumping allowance for each such right. A well user having a decreed pre-compact ground water right for irrigation use may divert more than the annual pre-compact pumping allowance of that right in any one year (November 1 through October 31), provided, that the well user having such a right is included in a plan approved by the state and division engineers which includes other well users having such rights and who will not divert more than their combined annual pre-compact pumping allowances in any one year unless they replace depletions to usable Stateline flow caused by such additional diversions. Notwithstanding this annual pre-compact pumping allowance, well users having decreed pre-compact ground water rights for irrigation use shall be subject to all other rules and regulations applicable to diversions of tributary ground water in the Arkansas River Basin in Colorado, including replacement of out-of-priority depletions to senior surface water rights in Colorado pursuant to Rule 4.1.

Rule 3.4. Determination of Depletions to Usable Stateline Flows. The state and division engineers shall use the Kansas Hydrologic-Institutional Model (HIM) and the Durbin usable flow method with the Larson coefficients, or such other method approved by the Special Master, the United States Supreme Court, or the Arkansas River Compact Administration to determine depletions to usable Stateline flow caused by post-compact ground water diversions for irrigation use. To the extent that replacement of out-of-priority depletions to senior surface water rights in Colorado in accordance with these Rules is not sufficient to replace all depletions to usable Stateline flow caused by post-compact ground water diversions for irrigation use, the state and division engineers shall allocate all unreplaced depletions to usable Stateline flow caused by post-compact ground water diversions for irrigation use to well users based upon the well's location, the amount pumped, whether the well is a sole source or supplemental source of supply, the method of irrigation, and such other information as is available to the state and division engineers to allocate such unreplaced depletions, and taking into account reductions in depletions to usable Stateline flow resulting from augmentation water provided in accordance with these Rules, including return flows from imported or other fully consumable waters to which well users, or their successors, lessees, contractees, or assigns are entitled based on their right to use or reuse such return flows.

Rule 3.5. Conditions for Approval of Plans Allowing Post-compact Ground Water Diversions. As a condition to approval of any plan allowing post-compact ground water diversions for irrigation use, the state and division engineers shall require replacement of any and all depletions to usable Stateline flow and may require a well user or entity acting on behalf of well users to furnish water in advance to replace anticipated depletions to usable Stateline flow which will not be replaced by replacement of out-of-priority depletions to senior surface water rights in Colorado.

Rule 4. Ground Water Diversions from the Valley Fill Aquifer and Other Specified Aquifers Affecting Senior Surface Water Rights in Colorado.

Rule 4.1. Diversions of Tributary Ground Water from the Valley Fill Aquifer and Other Specified Aquifers Affecting Senior Surface Water Rights in Colorado. On or after April 1, 1996, all diversions of tributary ground water

a. from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline; and

b. from the alluvium of Fountain Creek and the alluvium of the Arkansas River from Pueblo to Pueblo Dam, as shown on the attached map,

shall be totally discontinued unless out-of-priority depletions to senior surface water rights in Colorado are replaced in accordance with: (1) a decreed plan for augmentation approved by the Water Judge in accordance with the procedures of sections 37-92-302 to 37-92-305, 15 C.R.S.; or (2) a plan approved by the state and division engineers in accordance with these Rules; or (3) a substitute supply plan approved by the state engineer pursuant to section 37-80-120 which is consistent with these Rules. Replacement of depletions in accordance with this Rule shall not relieve a well user of an obligation to replace depletions to usable Stateline flow.

Rule 4.2. Determination of Stream Depletions; Presumptive Stream Depletions. To determine stream depletions for plans required by Rule 4.1, the state and division engineers shall be governed by the following:

a. For diversions of ground water used as a supplemental supply for flood and furrow irrigation, the presumptive stream depletions shall be thirty percent (30%) of the amount diverted. The state and division engineers may increase the presumptive stream depletions to more than thirty percent (30%), but not more than the presumptive stream depletions for diversions of ground water used as a sole source of supply for flood and furrow irrigation, for well users who use ground water as a supplemental supply for flood and furrow irrigation but do not have a reasonably adequate surface supply for the acreage irrigated (for example, well users who have sold a portion of their surface water rights or do not own sufficient shares in a mutual ditch company to irrigate the acreage irrigated compared to other shareholders in the company). To determine whether a well user has a reasonably adequate surface supply for the acreage irrigated, the state and division engineers shall consider the acreage which may be legally irrigated with the surface water rights owned or used by the well user and the relative amount of surface and ground water applied to such acreage averaged over the previous five years. The following table may be used as a guideline for increasing the presumptive stream depletions:

<u>Surface Water Used (%)</u>	<u>Flood/Furrow Depletion (%)</u>
50 or greater	30
40-49	33
30-39	36
20-29	39
10-19	42
1-9	45
0	50

b. For diversions of ground water used as a sole source of supply for flood and furrow irrigation, the presumptive stream depletions shall be fifty percent (50%) of the amount diverted.

c. For diversions of ground water used as a sole source of supply in sprinkler irrigation systems, the presumptive stream depletions shall be seventy-five percent (75%) of the amount diverted.

d. For diversions of ground water for other uses, the state and division engineers shall determine stream depletions based on information submitted by the well user and the individual facts and circumstances of each case or may establish presumptive stream depletions for particular uses.

**Rule 4.3. Review and Revision of Presumptive Stream Depletions.** The presumptive stream depletions established in Rule 4.2 shall be reviewed by the state engineer annually to determine whether the presumptive stream depletions are adequate to prevent material injury to senior surface water rights in Colorado and depletions to usable Stateline flows, and the presumptive stream depletions shall be revised as the state engineer determines is necessary. The state engineer shall publish any revisions to the presumptive stream depletions in the manner prescribed by statute for changes to these Rules and regulations.

**Rule 5. Other Diversions of Tributary Ground Water Affecting Senior Surface Water Rights in Colorado.** On or after April 1, 1996, all diversions of tributary ground water in the Arkansas River Basin within the scope of these Rules and not covered by Rule 4.1 shall be totally discontinued unless out-of-priority depletions to senior surface water rights in Colorado are replaced in accordance with: (1) a decreed plan for augmentation approved by the Water Judge in accordance with the procedures of sections 37-92-302 to 37-92-305, 15 C.R.S.; or (2) a plan approved by the state and division engineers in accordance with these Rules; or (3) a substitute supply plan approved by the state engineer pursuant to section 37-80-120 which is consistent with these Rules. To determine stream depletions for plans required by this Rule, the state and division engineers shall determine such depletions based on an acceptable site-specific depletion analysis provided by the well user or plan proponent or, in the absence of such an analysis, shall determine stream depletions in accordance with Rule 4.2.

Rule 6. Criteria for Determining the Adequacy of Augmentation Water. In reviewing plans submitted pursuant to these Rules, the state and division engineers shall determine the adequacy of each source of water proposed for use as augmentation water, including, where necessary, the historical consumptive use of each water right. This determination shall be based upon acceptable studies of the augmentation source provided by the well user or plan proponent. Return flows from diversions of waters imported into the Arkansas River Basin or other fully consumable waters proposed for use as augmentation water shall be determined by the state and division engineers based on acceptable studies and information provided by the well user or plan proponent. A water right, other than imported waters or other fully consumable waters, which has not been decreed for augmentation use may be used as augmentation water in a plan approved by the state and division engineers pursuant to these Rules; however, as a condition to approval of a plan, the state and division engineers may require the well user or plan proponent to file an application for change of water right and obtain a decree approving the use of the water right for augmentation use within a reasonable period of time. In no case, however, shall a water right, other than imported waters or other fully consumable waters, which has not been decreed for augmentation use be used as a permanent source of augmentation water for more than 10 years in a plan approved by the state and division engineers pursuant to these Rules.

Rule 7. Conditions for Approval of Plans. Based on stream depletions determined in accordance with these Rules, the state and division engineers may approve a plan to divert tributary ground water which provides sufficient augmentation water in amount, time, and location to replace out-of-priority depletions to senior water rights in Colorado and any and all depletions to usable Stateline flow caused by such diversions. Acceptable plans shall be approved annually and shall include such terms and conditions as, in the opinion of the state and division engineers, are necessary to prevent injury to senior surface water rights in Colorado and depletions to usable Stateline flow. Plans may be amended during the year if approved by the state and division engineers. As a condition to approval of a plan, the state and division engineers may require augmentation water in excess of the amount necessary to replace stream depletions determined in accordance with Rule 4.2 or Rule 5 to address situations where projected augmentation water may not be available, such as a dry year.

Rule 8. Determination of the Timing and Location of Stream Depletions; Unit Response Functions. To determine the timing and location of stream depletions caused by diversions of tributary ground water, the state and division engineers shall develop unit response functions for wells diverting from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline. These unit response functions may be used to determine the timing and location of return flows from diversions of imported waters and other fully consumable waters. To determine the timing and location of stream depletions caused by other diversions of tributary ground water, water users may use appropriate ground water models or other methods acceptable to the state and division engineers to calculate the timing and location of stream depletions



based on the location of the well, the rate of pumping, the use being made of the ground water, and the aquifer's boundaries and characteristics.

Rule 9. Responsibilities of the State and Division Engineers. The state and division engineers shall administer, distribute, and regulate ground water within the scope of these Rules in accordance with the provisions of the Arkansas River Compact, the constitution of the state of Colorado and other applicable laws, and written instructions and orders of the state engineer, including these Rules, and no other official, board, commission, department, or agency of the state of Colorado, except as provided in article 92 of title 37, C.R.S., and article 8 of title 25, C.R.S., has jurisdiction and authority with respect to said administration, distribution, and regulation. The state and division engineers shall curtail all diversions of ground water within the scope of these Rules, the depletions from which are not replaced as to prevent out-of-priority depletions to senior water rights in Colorado and depletions to usable Stateline flow in accordance with these Rules.

Rule 10. Responsibilities of Well Users and Other Entities Subject to These Rules. Well users alone or in concert may submit plans in accordance with these Rules. Water conservancy districts, irrigation districts, mutual or public ditch and reservoir companies, municipalities, or other entities which are governed by a board of directors may initiate and submit plans in accordance with these Rules. Well users shall be responsible for complying with these Rules, verifying the accuracy of information submitted in accordance with these Rules, and complying with the terms and conditions of plans approved in accordance with these Rules. Water conservancy districts, irrigation districts, mutual or public ditch and reservoir companies, municipalities, or other entities which are governed by a board of directors which initiate and submit plans in accordance with these Rules shall be responsible for notifying the state and division engineers of any well user in a plan approved in accordance with these Rules who is not in compliance with the terms of the plan and for doing all things required by such plans; however, the state and division engineers shall be responsible for enforcement of these Rules and the terms of the Arkansas River Compact; and, notwithstanding the submission of a plan by an entity on behalf of a well user, should the plan prove insufficient, the well user shall be responsible for replacement of out-of-priority depletions to senior surface rights in Colorado and depletions to usable Stateline flow.

Rule 11. Plans for April 1, 1996, to March 31, 1997, and Thereafter. To provide a reasonable period to allow well users to develop plans required by these Rules and to secure the augmentation water necessary for such plans, the state and division engineers may approve a plan to divert tributary ground water for the period April 1, 1996, to March 31, 1997, if the well user or an entity acting on behalf of the well user provides sufficient augmentation water in amount, time, and location to replace 60 percent (60%) of the out-of-priority depletions to senior surface water rights in Colorado determined in accordance with these Rules and all depletions to usable Stateline flow caused by such diversions. On or after April 1, 1997, full replacement of out-of-priority depletions to senior surface rights in Colorado and depletions to usable Stateline



flow shall be required and no plan shall be approved which does not provide for full replacement of such depletions in accordance with these Rules.

**Rule 12. Submission of Monthly Pumping or Power Records.** Any well user or entity acting on behalf of well users who desires approval of a plan to divert tributary ground water pursuant to these Rules must furnish records to the division engineer, in a manner prescribed by the division engineer, on a monthly basis, or a less frequent basis if authorized by the division engineer, of the amounts diverted pursuant to the plan. In the case of wells powered by electricity, as a condition to approval of a plan, the well user must authorize the power supplier to provide power records to the division engineer on a monthly basis. Further, if authorized by statute, in the event the well user fails to comply with the terms of a plan approved pursuant to these Rules or fails to furnish or pay for augmentation water necessary for such a plan, the state or division engineer may issue an order to the power supplier to discontinue energy to the well unless and until the well user has complied with the terms of such a plan or furnished or paid for augmentation water necessary for such a plan.

**Rule 13. Information Which Must Be Furnished.** By March 1, 1996, and by February 1 of each year thereafter (except as provided below), any well user who desires approval of a plan to divert tributary ground water pursuant to these Rules, or will be included in a plan submitted by an entity on behalf of the well user, shall file a signed statement with the division engineer, on a form approved by the division engineer, containing the following information for each well used by the well user to be included in the plan:

- a. the name, address, and telephone number of the well user and the well owner, if different than the well user;
- b. the name of the entity which will provide augmentation water;
- c. the location of each well;
- d. the structure identification number (if one has been assigned) of each well. If no structure identification number has been assigned to a well, the well user shall also furnish the following information:
  - (1) the permit or registration number of each well,
  - (2) the appropriation date and adjudication date of each water right diverted through each well,
  - (3) the court case number of the proceeding in which each water right diverted through each well was decreed;
- e. the use of ground water diverted from each well;

f. the source of energy used to divert ground water from each well;

g. in the case of wells powered by electricity, the name of the electric utility company which supplies energy used to divert ground water from each well, the power meter/service number as it appears on the bill from the electric utility company, and the account number;

h. in the case of wells used for irrigation,

(1) whether each well is used as a supplemental irrigation supply or a sole source of irrigation supply,

(2) the method of irrigation (flood, furrow, sprinkler, surge, drip, etc.) of each well,

(3) if used as a supplemental irrigation supply, a description of the surface rights or the name of the ditch or reservoir company and number of shares used in conjunction with each well; and

i. in the case of diversions of ground water for uses other than irrigation, information sufficient to allow the state and division engineers to determine stream depletions.

An entity acting on behalf of well users may compile and submit the foregoing information for well users in a manner acceptable to the division engineer, but the well user must sign a statement on a form approved by the division engineer which verifies the information submitted by the entity. These forms shall be maintained in the files of the entity and a copy furnished to the division engineer. If a well user fails to file a statement in compliance with this Rule, the state and division engineers may deny a plan to divert tributary ground water or require the well user to be excluded from a plan submitted by an entity on behalf of the well user until the well user has complied with this Rule.

Once a well user has filed a signed statement with the division engineer in compliance with this Rule, or an entity acting on behalf of the well user has submitted the foregoing information for the well user in compliance with this Rule, the well user shall not be required to submit a statement thereafter to be included in a plan unless any information on the statement has changed; however, the state and division engineers may require any well user to provide additional information in the future to determine whether the well user has a reasonably adequate surface supply.

Rule 14. Applications for Approval of Plans to Divert Tributary Ground Water. No later than April 1, 1996, and no later than March 1 of each year thereafter, a well user or an entity acting on behalf of well users who desires approval of a plan to

divert tributary ground water pursuant to these Rules must file with the division engineer an application in writing setting forth a complete description of the plan, including:

- a. the name and address of each well user who will be included in the plan;
- b. the information required in paragraphs c. through i. of Rule 13 for each well which will be included in the plan;
- c. an estimate of the amount of ground water to be diverted by well users who will be included in the plan;
- d. each source of water to be used as augmentation water in the plan and the amount of augmentation water available on a monthly basis;
- e. the amount, time, and location of stream depletions from ground water diversions under the plan or how the amount, time, and location of such depletions will be determined; and
- f. a detailed description of how out-of-priority depletions to senior water rights in Colorado and depletions to usable Stateline flow will be replaced under the plan.

If a well user or entity acting on behalf of well users who seeks approval of a plan to divert tributary ground water pursuant to these Rules does not know every source of water to be used as augmentation water in a plan or the amount of augmentation water available by April 1, 1996 or March 1 of years thereafter, the state and division engineers may grant temporary approval of a plan until June 1 upon such terms and conditions as, in the opinion of the state and division engineers, will be adequate to prevent out-of-priority depletions to senior surface water rights in Colorado and depletions to usable Stateline flow until the well user or entity acting on behalf of well users can provide a complete description of the plan.

**Rule 15. Orders, Costs, and Attorneys' Fees.** Any person who diverts ground water in violation of these Rules or in violation of the terms of a plan approved by the state and division engineers pursuant to these Rules shall be subject to an order by the state or division engineer issued pursuant to section 37-92-502, 15 C.R.S., and may be subject to court proceedings and the state's costs, including reasonable attorney fees, and any fine authorized by statute. Because ground water diversions in violation of these Rules could deplete usable Stateline flows in violation of the Arkansas River Compact or cause material injury to water rights in Colorado having senior priorities, the state or division engineer may enter upon, and order any person to permit the entry upon, private property to plug, lock, or otherwise disable any well which has been used to divert ground water in violation of these Rules or in violation of a plan approved pursuant to these Rules.

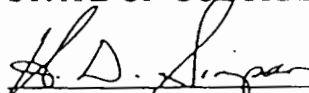
Rule 16. Tabulation, Pumping Records, and Summaries of Plans. To ensure compliance with these Rules, the state and division engineers shall tabulate diversions of ground water from the aquifers listed in Rule 4.1 at regular intervals and shall make such tabulations available for inspection by the public in the office of the division engineer. The state and division engineers shall prepare annual summaries of plans which have been approved by the state and division engineers allowing diversions of ground water from the aquifers listed in Rule 4.1 and shall make such summaries available for inspection by the public in the office of the division engineer. As a condition to approval of any plan to divert ground water pursuant to these Rules, the state and division engineers may require a well user or an entity submitting a plan on behalf of well users to prepare a summary of diversions of ground water and replacement of depletions under the plan.

Rule 17. Severability. If any portion of these Rules is found to be invalid, the remaining portion of the Rules shall remain in force and unaffected.

Rule 18. Effective date. These amended Rules shall become effective January 1, 1996, 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, 15 C.R.S. Any protest to these Rules must be filed with the water clerk for Water Division 2 by the end of the month following the month in which these Rules are published. The Statement of Basis and Purposes for these Rules has been filed with the water court and is available for review at the office of the state engineer in Denver, Colorado and at the office of the division engineer in Pueblo, Colorado.

Dated this 27<sup>th</sup> day of September, 1995.

STATE OF COLORADO



HAL D. SIMPSON

State Engineer

**FOR  
AMENDED RULES AND REGULATIONS GOVERNING  
THE DIVERSION AND USE OF TRIBUTARY GROUND WATER  
IN THE ARKANSAS RIVER BASIN, COLORADO**



## **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 performance of 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 the irrigation season between open discharge, sprinkler system or gated pipe that are used in a single irrigation season 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.

4. "Tributary well(s)" are those wells that produce underground water and ground water as defined in section 37-92-103(11), C.R.S.

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 July 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. Any meter designed and manufactured for the purpose of measuring the flow of water, and which has a totalizing feature, shall be considered to be acceptable for purposes of these rules. The State Engineer may adopt standards and specifications for the installation, repair, and maintenance of meters. As a minimum, totalizing flow meters shall be: properly verified in the field to be in accurate working condition under the supervision of an individual or entity approved annually by the State Engineer to do such tests when installed; contain sufficient recording digits to assure that "roll over" to zero does not occur within three years; and shall be 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 unless a working meter is installed or unless a specific backup water measurement program approved by the State Engineer is put into effect. Totalizing flow meters are required to be re-verified in the field to be in accurate working condition under the supervision of an individual or entity annually approved by the State 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 to be in accurate working condition under the supervision of an individual or entity annually approved by the State Engineer by June 15, 1995, and re-verified to be in accurate working condition every four years thereafter. The Division Engineer shall be notified in writing of the date and person performing the re-verification.

3.2 The State Engineer may adopt standards and specifications for power coefficient testing. As a minimum, power coefficients shall: be determined utilizing rating procedures approved by the State Engineer and conducted under the supervision of an individual or entity annually approved by the State Engineer to do such tests; be conducted when the pumping system has stabilized, i.e., both operating pressure and pumping drawdown has not changed more than 10% in the last hour; have been determined 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 the date and person performing 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 verification of accuracy and working condition in the field and/or rating of wells must provide an accuracy 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 July 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 name of power utility company and 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 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 State Engineer approved individual or entity 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.

Rule 6.1 Data as to the monthly amounts of water pumped from wells within the scope of these rules shall be for the period of November 1 to October 31 (coinciding with the Arkansas River compact year) and shall be filed with the Division Engineer no later than January 31, 1995 and every year consecutive year thereafter.

Rule 6.2 For the year 1994, owners utilizing the power coefficient method shall calculate the amount of water pumped using monthly power records for the period of November 1, 1993 through October 31, 1994.

Rule 6.3 Data shall be submitted on forms prescribed by the State Engineer. Such forms shall also include a consent to release power company data to the Division Engineer.

Rule 7. Inactive wells are excluded from these rules provided a sworn affidavit is filed with the Division Engineer by July 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. If the well owner desires to have the power to the well remain connected for any reason, approval of such must be first obtained from the State Engineer pursuant to Rule 11. Should the well(s) become active at any time, all aspects of these rules are immediately in effect. Notification to the Division Engineer shall be on a form prescribed by the State Engineer.

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