STATE OF COLORADO

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POLICY MEMORANDUM 94-5

SUBJECT: Remediation Project Recovery Wells

The following standards are adopted as policy for the consistent evaluation of recovery wells for remediation projects in stream systems where water is not available for appropriation. This policy shall be implemented as a rebuttable presumption of non-injury when the following conditions are met. Only wells located in tributary aquifers are affected.

This policy becomes effective immediately and can only be modified or revoked in writing.

Well Applications and Remediation System Review

1. Recovery well permit applications are evaluated pursuant to CRS 37-90-137(2).

2. The applicant must document that the consumptive use of the ground water for the entire recovery project shall not exceed 1/30 acre-foot (10,862 gallons per year). Those remediation projects consuming greater than 10,862 gallons per year must provide for replacement of depletions through a substitute water supply plan approved by the State Engineer or a court approved plan for augmentation prior to approval of a recovery well permit.

3. The Division Engineer shall be consulted for potential injury to existing water rights or other concerns that may need to be incorporated in the conditions of approval on the permit.

4. The return flow from the remediation process must be discharged into the same stream system in location, time, quality, and amount so as to prevent injury to vested water rights.

5. All permit applications shall be accompanied by an estimate of the date when recovery will be completed. Approved permits will contain a condition that the well be plugged and abandoned within 60 days of that date. Should the recovery program require additional time, the applicant may, prior to such completion of recovery date, request an extension in writing. If the extension is granted, the conditions of approval on the permit shall be amended.

6. Permanent records of all diversions, consumption, and return flows must be maintained by the well owner and submitted to the Division Engineer upon request.

7. A recovery well must be constructed by a licensed water well contractor or other authorized individual, and in accordance with the standards as specified in the Water Well Construction and Pump Installation Rules, 2CCR402.2.

8. The owner shall mark each recovery well in a conspicuous place with the well permit number, name of the aquifer, and court case number as appropriate. The recovery well owner shall take necessary means and precautions to preserve these markings.

9. Should there be a change in the recovery process after approval of the recovery well permit, the applicant shall obtain written approval from State Engineer for such changes including any changes in the estimated consumptive use of ground water.

10. Any subsequent changes in ownership or location of the wells must be filed with the State Engineer on form GWS-11 within 60 days after the effective date of such changes.

11. The provisions of Colorado Revised Statute 37-90-137(2) prohibits the issuance of a permit for a well to be located within 600 feet of any existing well, unless the State Engineer finds that circumstances so warrant after a hearing held in accordance with the procedural rules in 2CCR402-5. This hearing may be waived if the applicant is able to obtain statements from owners of all wells within 600 feet, verifying that they have no objection to the proposed recovery well.

Hal D. Simpson
State Engineer

CONSIDERATIONS AND BACKGROUND FOR POLICY MEMO 94-5

PROBLEM

Upon close examination of remediation processes there are consumptive uses whether the system is open or closed. Pursuant to CRS 37-90-137(2) permits can not be approved if there is unreplaced consumption of ground water in an overappropriated area. The request for additional information and subsequent evaluation has caused some delays in obtaining permits for the recovery wells, thus, delaying the remediation of ground water contaminants.

DISCUSSION

To protect public health, it is necessary to prevent contaminants from entering ground water that is utilized for drinking, irrigating supplies, and other beneficial uses. Remediation of ground water contaminants can be accomplished by utilizing recovery wells. A Recovery Well is a well which is constructed specifically for the removal of contaminants from an aquifer. Remediation systems utilizing recovery wells have various methods of treating the ground water. Each process must be evaluated to determine the consumptive use of water by that process. It is desired that any Corrective Action Plan should address both short and long term goals at the site. This plan should include a detailed description of the treatment process, the estimated consumptive use of ground water, and the duration of the project.

The current statutes for evaluation of recovery wells do not allow issuance of permits in overappropriated areas where consumption of ground water will occur as a result of the operation of a recovery well. Consequently, any recovery processes that involve the consumption of ground water will require a substitute water supply plan or a plan for augmentation to cover depletions. Some of the recovery processes consume as little as a few hundred gallons per year. Consumptive uses generally result from exposure of ground water to the atmosphere through vents exposed to the atmosphere in an otherwise closed system. Development of substitute supply or augmentation plans can be costly and time consuming. It appears unnecessary to require an applicant to obtain a substitute supply plan for small quantities of consumption prior to obtaining a permit and starting the project when the ground water will be restored to higher quality.

Recovery well permit applications for remediation systems must be evaluated under CRS 37-90-137(2), however, the consumptive use of some remediation processes are comparable or less than consumption attributed to household wells considered under CRS 37-92-602(3)(b)(II)(A). Based on the great need for higher quality water, if the consumptive use of ground water from the well does not exceed those amounts for ordinary purposes inside a single family dwelling, then a rebuttable presumption that such uses will not injure other vested water rights could be made.

Adoption of this policy to assist in the evaluation will help expedite implementation of remediation projects.

SOLUTION

In order to minimize individual interpretations and to facilitate evaluation of applications, two options are available.

1. Operate under a strict interpretation of the statutes that any consumption of ground water from the system, no matter how small, shall require either a substitute water supply plan approved by the State Engineer or a court approved plan for augmentation.

2. Establish a policy that allows remediation systems with consumption of ground water that does not exceed the consumption attributed to household wells considered under CRS 37-91-602(3)(b)(II)(A) be permitted to expedite the recovery of contaminants.

RECOMMENDATION

The second option appears to be the most reasonable since it will expedite the approval of recovery well permits and the recovery of contaminants, in addition to providing acceptable limits to the amounts of ground water that can be consumed out of priority for remediation processes.