

SUPERSEDED: SEE GUIDELINE 2007-1

GUIDELINE 2006-1

CONCERNING THE STATE ENGINEER'S ADMINISTRATION OF GROUND WATER COMMISSION APPROVED REPLACEMENT PLANS FOR THE DENVER BASIN AQUIFERS WITHIN THE DESIGNATED BASINS

Purpose:

The purpose of this guideline is to establish the conditions under which Ground Water Commission approved replacement plans ("Replacement Plans") can allow replacement water to be aggregated to the alluvial stream system most affected by the pumping of not-nontributary Denver Basin aquifers within the designated ground water basins.

Basis:

C.R.S. 37-90-107(7)(c)(I)(A) and the Ground Water Commission Rules require that any depletions caused to the alluvial aquifers, must be replaced to prevent injury to prior designated ground water rights. However, ground water models calculate stream depletions, sometimes with unrealistic precision (up to the 4th decimal place) and as a result, these models will sometimes calculate very small depletions to stream systems.

The State Engineer has been given the authority to administer these Replacement Plans in C.R.S. 37-90-110(h). The question is whether it is unreasonable and unadministrable to require water users to replace very small volumes of water, at great relative expense, to different alluvial stream systems, often miles away, as well as to different tributaries of the same alluvial stream system, all within the designated basins. When dealing with small volumes of ground water, these replacements are based on an unnecessary degree of precision, creating a question as to whether a replacement requirement is truly justified. In addition, expecting a ground water user to effectively replace such small volumes of water into an intermittent alluvial stream system from the surface, without a disproportionate expense is not reasonable. Finally, the administration of such small replacement amounts by the State Engineer also represents a disproportionate effort and expense and for that reason cannot be practicably administered.

This guideline allows for the necessary amount of water to be returned to the alluvial aquifer in a place other than where the impact occurs, under a rebuttable presumption of non-injury.

For replacements in an alluvial stream system to be considered for aggregated replacement, the depletions in an alluvial stream system, as determined by the State's AUG3 model, should not exceed the consumption attributed to the most restricted domestic small capacity well in that designated basin. As an example, the Upper Black Squirrel Creek Ground Water Management District (GWMD) restricts a small capacity domestic well in a subdivision or cluster development to an annual withdraw of 0.5 acre-ft (0.30 acre-ft for in house use and 0.20 acre-ft for 3,500 square feet of lawn and

garden irrigation with 4 large domestic animals). The consumption of water under this scenario is 0.23 acre-ft per year based on consumption rates of 10% for in house use, 80% for lawn and garden irrigation and 100% for large domestic animals. Small capacity domestic wells located in the Lost Creek, Kiowa Bijou & Upper Big Sandy Designated Basins are not restricted by the local GWMDs and are therefore governed by statute. The allowed uses, withdrawal rate and consumption for the four Designated Basins that overly the Denver Basin Aquifers are indicated in the table below.

Designated Basin	Domestic Small Capacity Use Allowed	Allowed Withdrawal (ac-ft per year)	Consumption (ac-ft per year)
Upper Black Squirrel Creek	1 single family home, 3,500 square feet of lawn and garden and 4 large domestic animals	0.5	0.23
Lost Creek, Kiowa Bijou & Upper Big Sandy	3 single family homes, 1 acre of lawn and garden and 4 large domestic animals	3.2 ac-ft	1.9

Guideline:

The applicant in a Replacement Plan must replace depletions to any designated alluvial stream system, where the State's AUG3 model shows a depletion greater than the consumption caused by a domestic well in that designated basin as indicated in the table above. Any depletions caused to designated alluvial streams systems which are less than the consumption indicated for that designated basin in the table above may be replaced by aggregating them (combining them with other depletions) and replacing water to those alluvial stream systems whose depletions do not meet these criteria. If there are no streams within the designated basin with depletions greater than the consumption indicated for that designated basin in the table above, the applicant may aggregate replacement water and discharge it into the alluvial stream system where the pumping takes place.

Exceptions:

This guideline does not apply outside of the designated basins and does not apply to depletions caused by pumping from any source other than the Denver Basin aquifers.



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