MEMORANDUM

To: Mary Sexton, Director

From: John E. Tubbs, Administrator

Date: November 28, 2007

Re: Bucket for Bucket w/o hydrogeologic assessment

This memorandum is first to respond to the question posed in Krista Lee Evans August email (see insert). Secondly, I hope to raise some of the complexities of the issues that make it difficult to have a "cookie cutter" approach to groundwater / surface water interactions.

> *"John and Terri --*
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> *I've heard from a couple of different applicants regarding net depletion and their applications. If an applicant offsets 100% of their net depletion or 100% + of their net depletion is there still a concern with adverse affect? Would it be reasonable to look at saying something like "if a new user offsets all of their calculated net depletion or an amount greater than the calculated net depletion and the offset occurs at the time of the net depletion the application will be deemed to not have an adverse affect." People are concerned that even if they offset all of their net depletion their application will be held up in DNRC looking at adverse affect. So, let me know what you think about all of this -- pros, cons, etc*
> *Thanks.*
> *Krista*

First, offsetting 100 percent of net depletions to surface waters is the ideal standard the Department is looking for in an application in a closed basin. We do not expect more mitigation and in fact 85-2-362 MCA precludes the department from requiring more: "(4) The department may not require an applicant, through a mitigation plan or an aquifer recharge plan, to provide more water than the quantity needed to offset the adverse effects on a prior appropriator caused by net depletion." If a correct and complete application offsets 100 + percent of net depletion to surface waters, as assumed in the question, the DNRC will issue the permit/change unless the application fails to meet other statutory criteria or in some other way may cause adverse effects.

A similar issue is raised when Trout Unlimited has advocated a "bucket for bucket" approach to simplify the hydrologic assessment. However, the devil is in the detail of how you "simplify" the hydrogeologic assessment.

The Water Resources Division does not support the total elimination of the required hydrologic assessment even if the applicant proposes to mitigate 100 percent of the net depletion. This approach fails to recognize that location and timing of mitigation may have to be considered before the Department can evaluate whether prior water users will be adversely affected by a new appropriation. In addition, inadequate information about the complexity of groundwater/surface water interactions would place the Department in the difficult situation of having no facts to base the decision to grant, modify or deny a new water right and associated change. This shifts the burden from the applicant to the Department and objectors.

For example, suppose a new application shows that a proposed groundwater development will consume 100 acre-feet of water annually. The application is accompanied by a mitigation plan where the plan shows that an agricultural groundwater right that had historically consumed 120 acre-feet annually in the general area has been purchased and will be retired. In other words, the application contends that 100 percent of the depletion is offset by 100+ percent of retired historic irrigation consumption. In this example a hydrogeologic assessment would not be required, assuming statutory changes to this effect. Without a hydrogeologic anaylsis, there is no way to determine whether this proposed mitigation will be effective in mitigating the timing and location of the projected depletions.

In many simple situations, this approach may result in net depletions to affected surface water being mitigated thereby eliminating any potential for adverse affect. Unfortunately there are many more complicated situations where this "cookie cutter" approach could result in adverse affects to senior water rights. In the final analysis eliminating the requirement for a hydrologic assessment simply shifts the burden to the objector and the Department.

I will use the Helena Valley to expand the above example. The development is a new subdivision that is proposed on the west side of the valley. The mitigation plan retires a nearby irrigation well, however, it is located more in the center of the valley. No hydrogeologic assessment is required or submitted. However, senior water right holders on Ten Mile Creek object to the application and hire a hydrogeologist who determines that the accretions to surface water associated to the retired well flow to the Missouri River at Lake Helena and do not mitigate depletions to Ten Mile Creek. Based on the objector's analysis the Department denies the application. Absent an objector, the Department is required to perform the analysis (as opposed to evaluating the applicant's analysis) to see if the mitigation is effective in the timing and location. Again the burden has shifted. We must always keep in mind that the Water Use Act purposefully placed the burden of proving no adverse effect to senior appropriators on the applicant. This was a departure from prior case law. Where there is a lack of data or failure to affirmatively prove lack of adverse effect, the permit doesn't issue.

This type of example can be found in all of the developing valleys and even gets more complicated in bedrock aquifers surrounding these valleys. Rather than eliminating the requirement for a hydrogeologic report entirely, giving the Department more discretion

on the level of hydrogeologic assessment required would allow simpler applications and assessments, where appropriate, fact based decision making, and keep the burden on the applicant.