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Ms. Kim Overcast  
New Appropriations Program Manager  
DNRC  
PO Box 201601  
Helena, MT 59620-1601  
SENT VIA E-MAIL TO kovercast@mt.gov

**Re: Trout Unlimited's Comments on Proposed Rules for "Net Depletion"**

Dear Ms. Overcast,

Thank you for the opportunity to provide you with Trout Unlimited's (TU's) comments on the proposed amendments to ARM §§ 36.12.101 and 120, regarding the proposed implementing rules for "net depletion" in House Bill 831. TU appreciates the Department's effort to provide timely implementing regulations to HB 831 while still inviting public comment.

TU's comments concern five areas. First, and perhaps most significantly, the proposed rules for "net depletion" do not help applicants navigate the HB 831 application process in those difficult hydrogeologic cases such as fractured bed-rock systems or in other complex, geologic situations such as in and around the West Fork of the Gallatin River. Second, and in a related vein, the over-arching purpose of defining "net depletion" should be made clear in the implementing rules—that in the final analysis an applicant only needs to make sure his or her mitigation is at least this much. In other words, whether "net depletion" is either calculated or estimated, mitigation that at a minimum meets "net depletion" should allow an applicant to get through the application review process. Third, the proposed rules do not explicitly address the *timing* of "net depletion" and whether winter-time depletions must be mitigated. Fourth, the proposed rules do not address out-of-priority groundwater pumpers, and how their impacts are to be either modeled, calculated, or mitigated. Finally, TU recommends some discrete changes to proposed rule ARM 36.12.120.

**1. The Proposed Rule Fails to Address the Difficult Cases.**

A fundamental short-coming of the proposed rule is that it fails to address those hydrogeologically complex cases in which anyone---applicant, objector, or the Department---are going to have a difficult time locating and characterizing the source aquifer. Indeed, TU has encountered such cases within the closed basins in the fractured bed-rock systems in the lower Beaverhead River and in the complex geologic folding that occurs in and around the West Fork of the Gallatin River and the upper Gallatin River. In these kinds of situations, it will be very difficult to determine the basic properties of hydraulic conductivity, aquifer thickness, and storage coefficient. This will make it even harder, then, to have sound derivations of

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WATER POLICY INTERIM COMM.  
OCTOBER 24-25, 2007  
EXHIBIT 24

transmissivity, the rate, volume, or direction of groundwater flow, and how these derived characterizations may change with time.

TU believes that for mitigation of groundwater pumping's effects on senior rights and river flows to work in Montana, the permitting and review process has to be something that applicants can get through. To that end, TU recommends that the rules for "net depletion" allow the applicant a way through the HB 831 application process where extensive characterization of the source aquifer is cost-prohibitive. Our specific suggestion on this point can be characterized by the often-quoted refrain of "bucket-for-bucket" mitigation.

**a. Bucket-for-Bucket Mitigation**

What TU means by "bucket-for-bucket" mitigation is that the required mitigation in a difficult case or where the applicant simply does not have the resources to perform extensive aquifer characterization should simply replace every acre-foot of estimated new consumptive use from new groundwater pumping with an acre-foot of senior, historically-consumed surface water, changed to a mitigation purpose. This would greatly simplify the analysis of "net depletion," and put the applicant's resources to work in fashioning a workable mitigation plan rather than a detailed hydrologic analysis and report.

**b. Recommended Change to "Net Depletion" Rules**

TU recommends that the proposed rule for net depletion afford an applicant the option to simply provide a maximum estimate of the new consumptive use of groundwater as a substitute for a full characterization of the source aquifer, at least in terms of the proposed *volume* of the "net depletion." The need to characterize the *timing* and *reach* of the depletion would still remain, at least to the extent that it affects the applicant's mitigation plan. TU addresses the concerns of timing and reach in more detail below.

TU does not advocate this approach in every case, rather we would like to see the Department's rules for "net depletion" offer a "bucket-for-bucket" mitigation plan as an option, at the applicant's discretion. The applicant can then make the determination of whether offering more mitigation water than he or she might under a rigorous hydrogeologic analysis of net depletion is worth the trade-off of predictability and ease of computation. This option will be particularly important for those applicants in complex geologic and aquifer environments, and in those cases where an applicant has more surface water rights than a budget for hydrogeologic analysis, such as an irrigator who seeks to supplement or substitute some of his surface irrigation rights with groundwater.

Notwithstanding the statutory detail in New Section 15 of HB 831, TU reads New Section 15(1)(a) and (b) to be a broad enough grant of discretion to DNRC to allow the "bucket for bucket" approach to be promulgated by rule. Nothing in New Section 15 dictates that the hydrologic report defined in New Section 15(2) be mandated as the only way to calculate net depletion in the statute. The "bucket for bucket" approach is an appropriate implementing rule under New Section 15(1).

## **2. Net Depletion Sets the Bar for What Mitigation Must Achieve.**

A related short-coming of the proposed rule is that it does not tie the analysis of “net depletion” to the required mitigation. Certainly under the structure of HB 831, there is an intervening analytical step of determining “adverse effect” before connecting “net depletion” with the amount, timing, and re-charged reach required for mitigation purposes. However, this should not prevent, as discussed above, the rules for “net depletion” from offering an applicant a more straight-forward way to connect estimated new consumption with a proposed mitigation amount. If the applicant is willing to simply assume the maximum amount of negative impact, and proposes to mitigate that impact, in order to make the application process more cost-effective and predictable, then the rules for “net depletion” should make that an explicit avenue for meeting HB 831’s requirements.

## **3. Reach and Timing Requirements of Mitigating Net Depletion.**

For the simplified “bucket-for-bucket” mitigation approach to work, the mitigation water needs to be returned within the reach of stream where the groundwater pumping’s impacts are likely to show up, and the mitigation water should recharge the stream during roughly the same time as the depletion. Flexibility can still be built into meeting the timing and reach requirements. For example, an exception to meeting the reach requirement of the mitigation could be if the mitigation water is returned downstream of where the groundwater pumping’s impacts are expected, but it is at the upstream end of a dewatered reach. Similarly, the timing requirement could be modified, if in a particular case, if it is determined to be more beneficial to concentrate mitigation in the low-flow months of July, August, and September, rather than require year-round mitigation to address winter depletions. While review of these issues will require hydrogeologic analysis, this analysis is much more focused on the mitigation water. This analysis will be less expensive and less demanding in the complex cases that the hydrogeologic assessment currently proposed by the “net depletion” rules.

## **4. Out-of-Priority Groundwater Pumpers.**

An additional short-coming of the proposed rule is that it fails to deal with the sticky issue of aquifer impacts from existing, out-of-priority groundwater pumpers. Those impacts include effects from already-permitted groundwater withdrawals that were not required to have a mitigation plan, and any concentration of individual, or “exempt” wells in an area. These unmitigated aquifer withdrawals have an effect on both the measured and derived aquifer characteristics asked for in the current proposed rule for “net depletion.” In addition, they will have an impact on how effective a mitigation plan is.

While TU acknowledges that the full scope of this issue may be more appropriately addressed in the implementing regulations for HB 831’s requirements for a mitigation plan, the hydrogeologic assessment required by “net depletion” should at least analyze the presence of such out-of-priority groundwater pumpers, and their impacts on aquifer characteristics. While proposed ARM 36.12.120(6)(b)(iii)(B) requires the applicant to “list and map” all groundwater rights within the “potentially affected area,” the proposed rule does not take the next step and ask how these existing groundwater pumpers change local groundwater flow characteristics.

## 5. Changes to ARM 36.12.120

### a.) Recommendations for Subsection 6(b).

Proposed rule ARM 36.12.120(6)(b) asks the applicant to determine the “degree of hydraulic connection” between the source aquifer and potentially affected surface waters. Sub-section 6(b)(i) then asks the applicant to establish the location of the aquifer boundaries.

Sub-section 6(b)(i)(B) should include the word, “results” after “testing” (the last word in that sub-section).

Sub-section 6(b)(i)(C) should first ask the applicant to provide the basic *measured* properties of the aquifer, and then ask for the applicant’s *derived* properties. This means that the applicant would first be asked for the testing results that determine the measured properties of: K (hydraulic conductivity), b (thickness), h (water levels or head), and S (storage coefficient). From these properties, sub-section 6(b)(i)(C) should then ask the applicant for the derived properties of: T (transmissivity), flow rate, volume, and direction of flow, and how these change with time.

After sub-section 6(b)(i)(D)’s first two words, “the presence,” the words “and properties” should be added.

### b.) Recommendations for Subsection 6(c).

Sub-section 6(c) should be modified to require both flow rate and volume for water diverted and consumed: “The flow rate *and volume of water* diverted and the *flow rate and volume of water* consumed by a proposed project must include an analysis of: . . .” (*additions in italics*).

### c.) Add the term, “wetlands” to the list of potentially affected surface waters.

The term “wetlands” should be added to the list of potentially affected surface water throughout section 6. Specifically, this would be in sub-sections: (6)(a)(i); (6)(b)(ii); and (6)(g)(iv).

TU appreciates this opportunity to comment. We would be happy to meet and discuss these comments with you and anyone else in the Department that would be interested in doing so. Please do not hesitate to contact me at (406) 522-7291 ext 103 or [lziemer@tu.org](mailto:lziemer@tu.org) if I can clarify these comments or otherwise be of assistance.

Yours truly,



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