



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

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August 21, 2008

Ref: EPR-EP

David Waterstreet
Wyoming Department of Environmental Quality
Water Quality Division
West 25th Street
Herschler Building – 4W
Cheyenne, WY 82002

Dear Mr. Waterstreet:

The purpose of this letter is to provide the United States Environmental Protection Agency's (EPA's) comments on the State's proposal to revise Chapter 1 of the Wyoming Water Quality Rules and Regulations (Chapter 1) and the new Appendix H, "Agricultural Use Protection" of Chapter 1.

In the public notice to the proposal, the Wyoming Department of Environmental Quality (DEQ) described Appendix H as serving "to interpret the Section 20 [of Chapter 1] narrative standard into procedures for setting effluent limits and conditions in Wyoming Pollution Discharge Elimination System permits." Based on our review, it is not clear at this time whether the regulations in Appendix H are WYPDES permitting procedures that might be considered part of the State's permitting program or new or revised water quality standards provisions. It appears, however, that the processes for establishment of permit limits outlined in the procedure are solely based on the protection of the agricultural uses of either livestock watering or irrigation, as opposed to the application of treatment technologies or other considerations that might more generally relate to the permitting program.

Although more detailed comments on certain parts of the regulations are enclosed, we have the following questions regarding the State's intended use of Appendix H as it relates to the narrative provisions of Section 20 of Chapter 1 for protection of the Agricultural Water Supply use:

- Is the State bound by the regulations in Appendix H for interpretation of the water quality standards provisions in Chapter 20? In other words, does Appendix H establish a binding norm for the levels of the pollutants in ambient waters of the State to protect the uses of the Agricultural Water Supply classification?

- If so, after the adoption process is complete, could the State apply a different interpretation of the narrative standards of Section 20 without modifying either Chapter 1 or Appendix H?
- Does DEQ consider the Appendix H procedures to be part of the State's WYPDES permitting program, as opposed to a new water quality standard or a new interpretation of Section 20 of Chapter 1?

We appreciate the steps that DEQ has taken to amend and revise the procedures in Appendix H and the time and resources involved in this process. If you feel that discussion of our comments would be helpful in addressing them, we will meet with you and/or your staff at your earliest convenience. Also, please call me at (303) 312-6236 if you have questions on our comments.

Sincerely,

A handwritten signature in cursive script that reads "Karen Hamilton".

Karen Hamilton, Chief
Water Quality Unit

Enclosure

EPA Comments on Appendix H of Chapter 1:

General comments:

Subsection (b) of Appendix H states that the limits for TDS, sulfate, and chloride for protection of the livestock watering use apply “at the end-of-pipe prior to mixing with the receiving stream.” Although it may be generally understood that the same point of application is intended for any limits established for protection of the irrigation use, it may be helpful to state so in the regulation.

Several terms that govern implementation of the regulation are not defined, for example, “relatively good” and “salt tolerant” in (c)(vi)(A), and “significantly better than would otherwise be required based on a theoretical 100% yield” in (c)(vi)(A)(II). We suggest that DEQ include definitions of these terms in the regulation.

The State’s “Analysis of Comments,” as posted on DEQ’s Surface Water Standards web site is useful as it explains certain aspects of how the new rule will be implemented. We suggest that it would be beneficial in understanding the intent of the rule if some of the details provided on the web site were included in the rule language. Some examples of these clarifying statements made by the State on its web site include:

Regarding implementation of the waiver provision:

When more than one landowner will be affected by the quality of discharge water which is unable to meet the prescribed effluent limits, then all landowners must be in agreement as to what quality of water is appropriately protective of their personal agricultural uses.

Conditions for approving a waiver include (1) discharges have been occurring prior to that date with no prior indication or complaint of reduced agricultural production, and (2) that effluent limits on historic discharges may be made where the quality of the discharge is shown to [not] constitute a threat to any other designated uses described in Chapter 1 of the Wyoming Water Quality Rules and Regulations. If these conditions are met then it will not be necessary to modify permit limits issued prior to January 1, 1998, and would include the limits/conditions of the approved waiver. [We believe that the State omitted the word “not” in the first sentence.]

A waiver can be obtained when default and background limits are not achievable if all affected landowners are willing to accept the risk of the lower water quality.

Regarding the Tier 3 criteria development process:

A Tier 3 analysis allows an applicant to conduct a site specific scientifically defensible study and recognizes that default values and site specific soil conditions may not be the

only factors affecting crop productivity. It is not limited to an analysis of irrigation practices. It does allow cooperation between discharge producers and landowners desiring beneficial use of produced water to demonstrate that water quality will not cause a measurable decrease in crop production. Some examples of what factors might be evaluated in a Tier 3 study include a more comprehensive evaluation of soil conditions and/or natural water quality conditions, enhanced irrigation management practices, review of historical and expected crop yields or other relevant factors related to crop production.

Although repeating all of the text from these responses may not be appropriate for inclusion in the rule, including these aspects of how the State intends to implement the regulation in the rule language would clarify the intent of the rule.

Specific comments:

Subsection (a)

1. Is there a threshold that the State intends to use as a “measurable decrease in crop or livestock production”?

2. Section (a) [Purpose] states:

For livestock watering purposes, a pre-existing use will always be assumed. For irrigation purposes, there needs to be either a current irrigation structure or mechanism in place for diverting water from the stream channel, or a substantial acreage of naturally sub-irrigated pasture within a stream floodplain. Where neither of these conditions exists, there can be no irrigation use, nor loss in crop production attributable to water quality.

Is the State’s intent of this provision to restrict the designated use to places where the use is actually occurring in the manner specified in Appendix H? We understand the State’s intent of Appendix H is to establish a methodology for establishing permit limitations for water bodies to protect the irrigation and livestock uses of State waters that are designated for Agricultural Water Supply uses. Where neither the crop irrigation nor livestock watering use is occurring, the Appendix H methodology will not be applied. However, the provisions of Section 20 of Chapter 1 appear to remain in effect for any water body that is designated for Agricultural Water Supply uses, regardless of whether or not these uses occur. (This would seem to be consistent with the first sentence in Appendix H, which states, “All surface waters in Wyoming are protected to some extent for agricultural uses. ‘Agricultural uses’ are described in Section 3 as being either stock watering or irrigation.”)

3. Re: Grandfathering historical discharges – The State’s Analysis of Comments document explains: “... we have determined that the presence of those discharges occurring prior to January 1, 1998, many of which occurred before the founding of DEQ, have resulted in an established beneficial use and would create a significant impact to those uses if removed. Furthermore, the existing uses of those watercourses are largely established and defined by the

quality of those historical discharges being grandfathered. On the other hand the combination of oil and CBM (predominantly CBM) discharges occurring after January 1, 1998 increased in number from approximately 470 outfalls prior to 1998 to more than over 8,000 outfalls in the Powder River drainage alone. It was this increased number of discharges which resulted in the growing awareness of potential impacts to agricultural uses and the need to reevaluate current agricultural use protection regulations. Through this evaluation, we learned that agricultural uses should be provided with additional protections.” Does this Analysis of Comments discussion mean that the state is by this action categorically establishing a new designated use for all waters in the state with pre-1998 discharges? If so, what was the previous designated use for those waters? What is the new designated use for those waters? Does the state believe it is legally required to perform a UAA to change the designated use of those waters? If not, why not? What is the legal and scientific basis for treating pre-1998 discharge waters differently than post-1998 discharge waters?

Subsection (b)

4. Please provide the State's rationale for revising the limit for Sulfates in subsection (b) from a value of 2000 mg/L, which was discussed in the State's Analysis of Comments document prepared for deliberation at the Water and Waste Advisory Board meeting on March 28, 2008, to 3000 mg/L.

Subsection (c)

5. Does paragraph (c)(vi) only address proposed discharges, or does it also include current discharges?

6. The ambient background provisions in section (c)(vi)(B) appear to be natural background provisions, i.e., as opposed to “background” provisions, as they seem to directly speak to ambient conditions. We suggest that the State modify this provision to reflect that requirements will be based on achieving the expected natural water quality condition. If this provision is intended to address something other than natural conditions, we suggest that the State include a definition of “background conditions” either in Chapter 1 or Appendix H.

7. What type of analysis of measured data will be used to establish (natural) background conditions?

8. The waiver procedure in section (c)(vii) involving a landowner accepting additional risk appears to be a qualification or modification of the designated use, or a site-specific procedure for relaxing the degree of use protection, i.e., it allows the landowner instead of the State to make the risk management decision regarding the level of protection to be afforded for streams covered by these waivers. Does DEQ consider this process to result in use modifications, criteria adjustments, or discharger-specific variances as part of the WPDES permitting process? The Statement of Principal Reasons document states:

An exception to EC or SAR limits established under the Tier 1, 2 or 3 procedures may be made when affected landowners request use of the water and thereby accept any potential risk to crop production on their lands. Irrigation waivers will only be granted in association with an irrigation management plan that provides reasonable assurance that the lower quality water will be confined to the targeted lands. Irrigation waivers will also only be approved after all affected land owners approve of the conditions by which the produced water will be discharged, and the discharge will not result in any impairment of other designated uses downstream of the discharge.

EPA is concerned that the waiver process creates a situation where the agricultural water supply uses are no longer fully protected, in that continued use of water discharged to a water body may cause the areas under irrigation to be substantially less productive, or to be unusable for crop growth in the future. Is the State's intent to adopt a variance for the Agricultural Water Supply use? If so, does the State plan to adopt these variances as revisions to State standards and submit them to EPA for review?

9. Should the waiver process include conditions to limit the amount of risk that can be considered acceptable, e.g., to prevent practices that render soils unusable for crop growth in the future? Are there any considerations that such an agreement for continued use of discharged water would be available only in situations where viable crop production is expected to continue? In other words, does the State expect that lands under irrigation will have a reasonable limit on crop production loss that would be assured prior to allowing a waiver?



