



United States Department of the Interior



BUREAU OF LAND MANAGEMENT
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Terri A. Lorenzon, Director
Environmental Quality Council

Department of Environmental Quality / Water Quality Division
Attn: David Waterstreet
122 W. 25th St
Hershler Building
Cheyenne, WY 82002

Dear Mr. Waterstreet:

The following are comments related to the proposed revisions to Chapter 1 of the Wyoming Water Quality Rules and Regulations.

Appendix H Page H-1 Lines 17-20

“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 or loss in crop production attributable to water quality.” This definition raises several concerns associated with Public Lands

- Much of the agricultural activity that occurs on public lands takes place near water bodies that would not be covered under this definition.
- There is a potential for cumulative degradation of larger water bodies through incremental changes to smaller contributing systems not covered under this definition.
- Resources other than direct agricultural production may be affected by changes to water bodies not covered by this definition. These include fisheries, wildlife, tourism, soil productivity and erosion, and salt production.
- Additional ambiguities are introduced with the term, “substantial acreage of natural sub-irrigated pasture within a stream floodplain.”
 - What determines if an area is large enough to be defined as, “substantial?”
 - Given relatively small size the disbursed nature of many of the streams on public lands, the importance of a waterbody to wildlife, agriculture, and tourism is not solely determined by the volume of water they contain. Considering only the larger systems is not practical under these conditions.


Additional consideration should also be given to the relative volume and flow pattern of the augmented flows to the natural background volumes and timing. Converting a stream channel from ephemeral to perennial or intermittent flows will produce channel adjustments that entrain additional sediments and salts into the discharge flow below the point of discharge. Given that many of the artificial discharges will be ephemeral, on a multiyear time scale, the changes in surface flow will not persist, resulting in additional physical and vegetative adjustments upon cessation of flow.

Draft regulations regarding surface discharge to Bureau of Land Management public lands are enclosed as a suggestion for discussion. The general purpose of these regulations would be to encourage surface discharge into larger perennial waterbodies that could absorb the additional energies without excessive adjustments and/or promote close monitoring in cases where discharge flows dominate flow volumes and energies.

The Hanson Chart on page H-7 provides a tool for making a definitive call on the potential effects of discharge onto a soil surface but its range is limited. A listing of the formulas used to determine the various regions of the chart and/or an additional projection of the chart over a larger range of scales would be helpful. A second scale on the X axis for TDS as well as conductivity would also be helpful. (As an example, on the July, 15, 2008 Public Notice of proposed discharges there is a proposal on page 10 From Enterprise Products Operating LP for a discharge of water with a TDS of 3541.5 and a calculated SAR of 747, which is a point located off the existing chart.)

Thank you for the opportunity to comment on this important document. For questions or further information please contact Dennis Doncaster, Hydrologist or myself at 307-352-0256.

Sincerely,


for Lance C. Porter
Field Manager

Enclosure

Streams and Flow Connected Surface Features Discharge Plans

Activities that will result in a surface discharge of produced water to channels on public lands will at a minimum contain the following in their operating plans:

- A sufficient design, monitoring plan, response plan, and funding arrangement to assure that all reasonable cautions are taken to detect and prevent violation of Wyoming State surface and ground Water Quality Standards as defined by The Wyoming Department of Environmental Quality.
- Proof of a legitimate bond sufficient to cover restoration and maintenance of land health and stream function for the length of the channel on public lands if it were determined that damage occurred as a result of stream discharge.
- An initial survey and evaluation of the public land portion of the channel from the proposed point of discharge to the downstream extent of Bureau of Land Management-(BLM) managed lands or the confluence of the nearest perennial water with a natural base flow ten times greater than the total discharge of produced water from all sources to the channel in question at the point of confluence. The evaluation will address channel geometry and record current locations (e.g., Global Positioning System [GPS], monumenting, photo points) and nature of key features such as vegetative communities, headcuts, depositional areas, existing wetlands, any other discharges, etc. The initial report will be provided to the BLM with sufficient time prior to initial discharge of produced water to allow for analysis and adjustments to the discharge plan (including potential refusal). Subsequent reports will be provided to the BLM not more than two weeks past the date of the survey.
- Channels on public lands receiving produced water discharges will be resurveyed, annually at a minimum or as requested by the BLM, by the project proponent in the manner described above. The need to take corrective actions will be determined by the BLM.
- Adequate design to minimize erosion at the point of discharge and to prevent channel drops (headcuts) from traveling up channel under augmented and natural flow conditions.
- A method to control, in a timely manner, accelerated channel erosion. Corrective actions could include but are not limited to engineered structures, vegetation augmentation, elimination of discharge(s) to the affected channel(s), etc.
- A statement that the ability to discharge to public lands is a privilege that is revocable at any time that it is determined by the BLM that the discharge is resulting in conditions that prevent the affected lands from achieving or maintaining conditions that are in compliance with Wyoming Standards for Healthy Rangelands

Upland Discharge Plans

Discharges of produced water to public land uplands will be primarily for reclamation. Other uses may be considered on a case by case basis provided that the use of the water does not hinder reclamation or cause conditions that prevent public lands from achieving or maintaining conditions that are in compliance with Wyoming Standards for Healthy Rangelands. All plans for use of produced or augmented water on public lands will contain the following within their operating plan at a minimum:

- Another avenue for the disposal of the water that can be used at any time.
- Certification that the water meets or exceeds Wyoming Department of Environmental Quality (DEQ) standards for agricultural ground water (Chapter VIII WY Water Quality Rules and Regulations).
- Information to support analysis that application of the water to the soil will not negatively affect soil quality, including infiltration or fertility.
- Information to support analysis that vegetative diversity and productivity, soil health and structure will not be negatively affected.
- Information to support analysis that volumes of water applied would not be in excess of that needed to accomplish the stated goal(s), such as establish appropriate vegetation communities or other approved uses.
- A statement that there will be no surface runoff from the discharge site and that corrective action will be taken in a timely manner if it occurs.
- An approved revegetation plan that includes a weed management plan.
- A monitoring plan and provisions for prompt action to address errors.
- A timeline for reclamation efforts to assure that irrigation efforts could be used to establish vegetation communities but not maintain them.