



Department of Environmental Quality

LFO_RMP_10186

To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.



Matthew H. Mead, Governor

John Corra, Director

January 20, 2012

Bureau of Land Management
Lander Field Office
Attn: RMP Project Manager
1335 Main Street
Lander, WY 82520

RE: Comments on the Draft Lander RMP and EIS

The following comments regarding the Draft Lander Resource Management Plan (RMP) and Environmental Impact Statement (EIS) are specific to the agency's statutory mission within State government which is the protection of public health and the environment.

Air Quality

The Lander Air Resources Management Plan (Appendix F) outlines a strategy for managing air resources and authorizing activities that have the potential to adversely impact air resources within the planning area. The plan prescribes monitoring, modeling and mitigation based on 'pollutants of concern,' which are identified as ozone and its precursors, nitrogen oxides (NOx) and volatile organic compounds (VOCs), based on ozone data collected at the South Pass special purpose monitor, as well as PM2.5, based on data collected at the residential SLAMs monitor located in the town of Lander. Use of these data may raise unwarranted concerns that ozone and PM2.5 levels within the entire planning area are elevated, and lead to a plan that may be unnecessarily prescriptive.

The Wyoming Department of Environmental Quality-Air Quality Division (AQD) has determined that three stratospheric intrusions caused three periods in February-March 2009 where ozone exceedances occurred at the South Pass monitor. The AQD performed a careful evaluation of the February 27-28, March 6-7, and March 10-13, 2009 episodes, and is confident that the South Pass events are the result of stratospheric intrusion. Stratospheric intrusion is a natural event and not caused by anthropogenic sources. Using monitoring data that has been determined to be the result of a natural event as the motivation for management decisions may lead to ineffective management strategies.

In addition, the data collected at the SLAMs monitor located in the town of Lander is very site-specific and influenced by winter time heating, as well as meteorological conditions including inversions. Basing management strategies for the entire planning area on such site-specific data may also lead to ineffective management strategies.

While the AQD appreciates the willingness of the BLM to define a more in-depth air resources management strategy, basing management decisions on the unsound premise that ozone and PM2.5 levels in the entire planning area are elevated may not have the desired outcome. Further, prescriptive measures may limit the BLM's ability to make future management decisions in consideration of new data and emerging science.

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Water Quality

The Wyoming Department of Environmental Quality - Water Quality Division (WQD) spent months actively participating as a cooperating agency to assist the Lander BLM in developing a revised RMP. Throughout the cooperating agency process we have provided numerous comments on numerous documents and drafts, including the Analysis of the Management Situation (AMS) and Preliminary Draft EIS (PDEIS), which are foundation documents for this Draft EIS. While the WQD is in general agreement with the preferred alternative, we are disappointed that many of the comments provided regarding the accuracy and applicability of water quality information and BLM management decisions that affect water quality were not addressed in this Draft EIS.

The introduction of Chapter 3 reads: *“This chapter describes existing conditions for Bureau of Land Management (BLM) resource programs, resource uses, special designations, and the socioeconomic environment in the Lander Field Office planning area. This description of the affected environment uses the best and most recent data available. This chapter does not provide detail about environmental components that would not be affected or that are not essential to the resolution of planning issues. In addition to describing existing conditions, where appropriate, this chapter identifies management challenges for resource programs and resource uses on BLM-administered land... By describing existing conditions for resource programs in the planning area, this chapter serves as the baseline against which Chapter 4 analyzes and compares potential impacts of the alternatives.”* The Water section of Chapter 3, especially regarding surface water, does not adequately describe the existing conditions in the planning area or utilize all of the best and most recent data available. Consequently, the quality of analyses in Chapter 4 is adversely affected. The comments we provided on the PDEIS noted major inaccuracies in the Water sections of Chapters 3 and 4, unfortunately, most of these inaccuracies were not corrected.

Much of the discussion of existing conditions is based on broad generalizations rather than on data or information specific to the Lander planning area. Further, much of the information is gleaned from dated WQD statewide reports, rather than summarized from BLM inventories and monitoring data. The information that is in Chapter 3 appears to be inaccurate, irrelevant, and/or out of date. The Water section of Chapter 3 repeatedly mischaracterizes the facts about permitted discharges.

We are concerned with both the tone and inaccuracy of the statement: *“The BLM preferred method of discharge of produced water in the planning area is reinjection. However, the State of Wyoming permits point source discharges where water containing high levels of selenium is being discharged pursuant to WYPDES permits, such as the Gun Barrel Oil and Gas Unit in the northeast portion of the planning area.”* This is an inaccurate statement since this is not current BLM management nor the preferred alternative (see Mineral Resources Record #2013). The Wyoming Pollutant Discharge Elimination System (WYPDES) discharge limit for selenium in these permits is the water quality criterion for protection of aquatic life: 5 µg/L. The State of Wyoming has not permitted any discharges of selenium over the water quality criterion, and the discharges are in compliance with their discharge limits for selenium.

The statement *“the BLM is working with the operator in the Gun Barrel Unit area to decrease soil erosion resulting from state-authorized discharges”* is also misleading. It implies that WYPDES permits authorize erosion, when in fact erosion control is a requirement in the permit. When the erosion problems have occurred, the operator has worked with the WQD to develop an erosion control plan, obtained appropriate permits from the US Army Corps of Engineers and worked with the BLM to implement the erosion control structures. Although, this area has some of the greatest amounts of surface disturbance in the planning area, which the BLM authorizes, and some may be in areas of low reclamation potential, there is no discussion of it in Chapter 3.

The WQD recognizes that many riparian areas have improved with better management. However, based on the 129 miles of streams with riparian conditions in a Functional at-Risk Downward Trend or Non-Functional condition – over 25% of the lotic riparian areas in the planning area (Table 3.36), it would appear the planning area has possible erosion and/or water quality concerns which need to be discussed in the Water Section of Chapter 3.

Although the BLM cannot make the determination whether a water is supporting its designated uses, as stated in Section 4.1.4.2, *“potential surface water and groundwater quality impairments are identified through inventories and routine monitoring activities and reported to the Wyoming DEQ...”* the statement gives the reader the impression that the BLM actually inventories and monitors, which from what is written in Chapter 3, is not the case.

The 305(b) Report is published every two years. It is unclear why the BLM chose to use the 2006 Report in Table 3.7, and elsewhere in the DEIS, instead of the 2010 Report. This was pointed out in the December 2010 WQD comments on the PDEIS, but was not addressed. The EIS should use the most current 305(b) Report so that the assessment is based on the best available and most relevant information.

Table 3.7 includes information not associated with or relevant to the LFO and for which the BLM has no jurisdiction. For example, there is reference to a matter concerning untreated human sewage in Big Horn County, which was resolved in 2006 with the installation of package plant. As another example, Paintrock Creek is entirely within Big Horn County which has no bearing on BLM’s management of the LFO resources.

The first sentences on page 594 describe adverse and beneficial impacts to water quality, and the first sentence in Section 4.1.4.3.1 recognizes that most activities will have some type of adverse impact to water quality: *“Surface water quality on BLM-administered surface lands and federal mineral estate could degrade under each alternative from activities proposed across a variety of resource programs. Impacts to water quality associated with these disturbances are projected to occur under each alternative, although the intensity of the impacts would vary across alternatives.”* However, the Resources and Resource Uses sections for the different alternatives often state that activities will result in beneficial impacts to water quality. For example: *“Alternative A, air quality and soils management would result in moderate beneficial impacts to water quality because it applies only statewide standard restrictions to surface-disturbing activities.”* Please note that in most cases, the “benefit” of these activities is relative to other alternatives, and will not benefit water quality because surface disturbance will still occur; although some actions may be more or less beneficial than others.

The recent Bighorn Basin RMP Draft EIS used the Water Erosion Prediction Project (WEPP) soil erosion model to analyze impacts to soil and water resources. Although soil erosion rates predicted with the WEPP model, or most other models, have a large margin of error, they do provide a quantifiable assessment of impacts associated with the different alternatives. However, the Lander RMP Draft EIS did not model soil erosion, and only qualitatively compared alternatives. This weakens the impact analyses for soil and water resources, and WQD suggests that the Lander RMP Draft EIS be revised to include quantitative analyses of soil erosion.

Soil/Reclamation

Soil management and reclamation are major factors affecting water quality, however there appears to be a huge disconnect between Chapter 2 and Chapter 3 regarding soil and reclamation. Chapter 3 Soils section only briefly discusses soils with Limited Reclamation Potential (LRP), and does not mention the Wyoming Reclamation Policy or the Continental Divide – Creston Reclamation Planning Document.

Again, Chapter 3 should be the basis for the analyses in Chapter 4. This information needs to be expanded on in Chapter 3 and Table 3.6 should include acreage for soils with LRP.

The Soils sections of Chapter 3 and 4 place a lot of emphasis on the WYPDES Stormwater permits, which are valuable tools for erosion control and reclamation. The BLM also has many requirements for erosion control and reclamation, yet there is limited discussion of the BLM's requirements in the DEIS. We encourage the BLM to work closely with the WQD to better control erosion and ensure successful reclamation.

The WQD was a cooperating agency in the development of the Wyoming Reclamation Policy as well as the Continental Divide – Creston Reclamation Planning Document. The statement that soil management (Management Action 1018) is not an RMP decision is erroneous. The Wyoming Reclamation Policy does require: *“Areas posing the most extreme reclamation challenges will be identified as having Limited Reclamation Potential (LRP). These areas are often characterized by highly sensitive and/or erosive soils, extremely sensitive vegetation types, soils with severe physical or chemical limitations, extremely steep slopes, etc. These LRP areas may require site-specific reclamation measures not specifically addressed in the Wyoming Reclamation Policy. Each Field Office shall develop a unique set of reclamation success requirements for those areas within the framework of the attached Policy. The additional difficulty of reclaiming these areas of Limited Reclamation Potential (LRP) should be considered in the Resource Management Plan and evaluated when planning surface-disturbing activities. During the NEPA process, alternatives to approving development activities in LRP areas should be carefully analyzed. Alternatives considered should include: avoidance and/or unconventional site specific reclamation requirements. Resource development activities approved in these areas may require additional bonding.”* The Wyoming Reclamation Policy should be followed and the EIS should analyze how it will handle reclamation in LRP areas. Additionally, the LFO should consider developing, with cooperators and public input, a “default” reclamation plan that can be adapted with site specific information, so that individual reclamation plans will not need to be developed for every surface disturbance.

We appreciate the opportunity to comment in this process and look forward to working with you in the future. If you have any questions about the content of this letter, please contact Kelly Bott regarding Air Quality at 307-777-6088 and Mark Conrad regarding Water Quality at 307-777-5802.

Sincerely,



Todd Parfitt
Deputy Director

Attachments (2)

cc: Jerimiah Rieman, Governor's Planning Office
John Corra, DEQ Director
John Wagner, WQD
Mark Conrad, WQD
Steve Dietrich, AQD
Kelly Bott, AQD

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Comments on RMP and ARMP provided to Kristin Yannone: December 9, 2011

Commenter Name	Comment Number	Section, Page	Comment
WDEQ-AQD	1	Page 202, Table 3.4	The NAAQS for 24-hour PM _{2.5} was set at 65 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) in 2005. In the Lander RMP PDEIS document, a comparison of the 24-hour PM _{2.5} NAAQS was conducted using monitored concentration data prior to 2005 and using the 2005 NAAQS value of 65 $\mu\text{g}/\text{m}^3$ to discuss compliance with the PM _{2.5} NAAQS; this type of comparison also exists in several references in subsequent pages [e.g., pg. 204 - Figure 3.7. Peak 24-hour Average PM _{2.5} Concentrations ($\mu\text{g}/\text{m}^3$)] within this PDEIS, and indicate that ambient PM _{2.5} concentrations were at or above the NAAQS. This type of comparison is not accurate as the PM _{2.5} NAAQS was not established prior to 2005. Additionally, in 2006, the 24-hour PM _{2.5} fine particle standard was tightened from 65 $\mu\text{g}/\text{m}^3$ to 35 $\mu\text{g}/\text{m}^3$, and compliance with the new PM _{2.5} NAAQS would be based on comparing the 98th percentile 24-hour average monitored PM _{2.5} data with the PM _{2.5} NAAQS of 35 $\mu\text{g}/\text{m}^3$.
WDEQ-AQD	2	Appendix u, Page 1546, Section U.1.3, Paragraph 1, line 7	This reference to Table U-1 is stated such that an analysis was conducted of the air quality impacts based on the various proposed alternatives, comparing those air quality impacts to the NAAQS and WAAQS. Table S-1 provides a listing of the National and Wyoming Ambient Air Quality Standards only. There are no tables found in the document that support the basis of this sentence. Please clarify and revise this sentence accordingly.
WDEQ-AQD	3	Appendix U, Page 1547, Table U.1, Footnote (f)	The current standard of 75 parts per billion set in 2008 will stay in effect until a review of the NAAQS for ozone is undertaken, which is scheduled for 2013.
WDEQ-AQD	4	Appendix U, Page 1556, Table U.5, Title	Please consider revising title to say: "Sample Emission Reduction Strategies for Oil and Gas Development" as several of the listed items included Best Available Control Technology (BACT) Requirements, which are regulatory requirements, and while these type of measures do reduce air quality impacts, they are not "mitigation" that BLM can require.
WDEQ-AQD	5	Appendix U, Section U.3 Mitigation and BMPs; Pages 13-16, Table S-5	In several places in this table, under the Environmental Benefits column, the comment that a decrease in NO _x emissions would result in decreased formation of ozone is not necessarily accurate. Ozone chemistry is complex and absent a modeling analysis to demonstrate that a decrease in NO _x emissions will result in a decrease in ozone, this portion of the statement should be removed in all instances throughout Table S-5. This comment also applies to the control strategies listed throughout the RMP and specifically, the table at the end of the ARMP (pages 13-16).
WDEQ-AQD	6	Appendix S, Section 3.0 Mitigation and BMPs; Pages 13-16, Table S-5 Control	One of the proposed options for an emission control strategy listed in this table is to "Minimize venting and/or use closed loop process where possible during

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		Strategies for Drilling and Compression	"blowdowns"...", which is represented as part of the BLM's Best Management Practices and required by WY BACT. Please revise the language to read: "Minimize or eliminate venting and/or use closed loop process where possible during "blow downs""
WDEQ-AQD	7	Section 3.1.1 Air Quality Monitoring, Visibility, and Deposition in the Lander Panning Area	A plot showing the frequency of the hourly wind speeds and wind direction for a 1-year period (i.e., a wind rose plot) was not included in the PDEIS and would serve as useful information to the reader regarding pollutant transport.
WDEQ-AQD	8	Appendix F; Section F.2.2, 1 st sentence	The South Pass Monitor is a Special Purpose Monitor (SPM) and not a SLAMs monitor. Please revise any reference contained in this document to reflect the correction.
WDEQ-AQD	9	Appendix F; Section F.2.2, page 1402, last paragraph	<p>The Final "Treatment of Data Influenced by Exceptional Events" Rule (40 CFR 50.14) allows the state to submit documentation showing that exceedances of the National Ambient Air Quality Standards (NAAQS) would not have occurred in the absence of a natural event. The Exceptional Events Rule Preamble and the 40 CFR 50 Appendices I & P specifically list stratospheric intrusion of ozone as a natural event that could affect ground level ozone concentrations.</p> <p>During the interval from late winter to late spring in the northern hemisphere, weather producing systems (i.e. tropospheric storm systems, upper level disturbances or upper level storm systems) aid in causing the tropopause to "fold" or descend into the troposphere where our weather occurs. The Wyoming Department of Environmental Quality/Air Quality Division (WDEQ/AQD) has determined that three stratospheric intrusions caused three periods in February-March 2009 where ozone exceedances occurred at the South Pass, Wyoming monitor located at the southeastern tip of the Wind River Mountain Range in Fremont County, Wyoming. The AQD performed a careful evaluation of the February 27-28, March 6-7, and March 10-13, 2009 episodes, and is confident that the South Pass events are the result of stratospheric intrusion. More information about this can be found at: http://deq.state.wy.us/aqd/Exceptional%20Events/SouthPass/SouthPass_May23_26_2007_SI_Package.pdf</p> <p>Recommend that the paragraph be deleted from "Air monitoring data..." through "...downwind location from the Upper Green river Valley (a proposed ozone non-attainment area)."</p>

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Commenter Name	Comment Number	Section, Page	Comment
WDEQ-AQD	10	Appendix F; Section F.2.2, page 1403, 1st paragraph	The data collected at the SLAMs monitor located in the town of Lander is very site-specific and influenced by winter time heating, as well as meteorological conditions including inversions. As such, WDEQ does not recommend using the data for characterization of the entire planning area.
WDEQ-AQD	11	Appendix F; Section F.2.4, page 1404, 3 rd Bullet	Please delete "or areas with ambient air concentration levels of concern."
WDEQ-AQD	12	Appendix F; Section F.2.4, page 1404. Last paragraph in section, last sentence	Please delete "are not located upwind from areas identified as having particulate matter concentration levels of concern,".
WDEQ-AQD	13	Appendix F; Section F.2.5, page 1404	Please delete first bullet "Recent measurements at an air monitoring station in the planning area show that measured ambient concentrations of ozone have, on several occasions, exceeded the current ozone NAAQS of 75 ppb."
WDEQ-AQD	14	Appendix F; Section F.2.5, last bullet in section	Please delete "or areas with ambient air concentration levels of concern."
WDEQ-AQD	15	Appendix F; Section F.3.1, page 1406, subsections F.3.1.4 – F.3.1.6	<p>Section 3.1 discusses that the BLM will require project proponents to comply with requirements under Section F.4.1 of the RMP, with these requirements being tied to an ambient air quality threshold criterion value based on ambient monitoring data within the planning area -- this value is specified as 85% of the NAAQS or WAAQS, as applicable. The use of a threshold value, such as 85%, while somewhat practical, has no actual basis in an air quality management context. Specifically, there are no existing data or studies that link the proposed threshold value of 85% to a level of concern over air quality impacts, and setting a threshold value without the necessary rigorous scientific data and analysis may be considered arbitrary.</p> <p>3.1.4(a) and 3.1.5(a) should be deleted as it is outside of BLM's authority to require that proponents demonstration "no net increase in annual emissions of the pollutant for the life of the project (e.g., through the application of emission control technologies, offsets, or other air emission reducing strategies)."</p>
WDEQ-AQD	16	Appendix F; Section F.3.1, page 1406, Subsection F.3.1.5(b) & F.3.1.6(b)	Caution should be used when prescribing appropriate levels of modeling (e.g., air dispersion modeling, photochemical grid modeling or an equivalent level of analysis) in a planning level document. The determination for appropriate level of analysis, including modeling, should be made at the project-level and in consideration of each project's components the proponents' plans of development and proffered mitigation.
WDEQ-AQD	17	Appendix F; Section F.3.1.5, page 1406	Please delete "Ambient air monitoring data in the planning area shows that existing

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Commenter Name	Comment Number	Section, Page	Comment
			concentrations of ozone are at or above 85 percent of the WAAQS and NAAQS and “ (see comment #8 above).
WDEQ-AQD	18	Appendix F; Section F.3.1.6, page 1406	Please delete “Ambient air monitoring data in the planning area shows that existing concentrations of PM _{2.5} are at or above 85 percent of the WAAQS and NAAQS and “ (see comment #8 above).
WDEQ-AQD	19	Appendix F; Section F.3.2, Page 1406, 1 st bullet: “BLM will work cooperatively with Wyoming DEQ...”	Language does not specific what the expectations are of Wyoming DEQ. Due to the vague nature of the language, it appears to DEQ that additional work is anticipated to be handled by Wyoming DEQ’s monitoring group, yet we are not staffed to handle additional monitoring workload.
WDEQ-AQD	20	Appendix F; Section F.3.3, page 1407, last bullet	WDEQ’s Ozone Technical Advisory Group (OTAG) has been disbanded, and the functionality of the group will be absorbed by the Ozone Technical Forum (OTF), with a directory of individuals willing to serve as a resource to WDEQ for future advising needs. Please replace “Ozone Technical Advisory Group (OTAG)” with “Ozone Technical Forum (OTF) and Resource Directory.”
WDEQ-AQD	21	Appendix F, Section F.4.2	Due to the vague nature of the language with respect to Wyoming DEQ roles and responsibilities, it appears to DEQ that additional work is anticipated to be handled by Wyoming DEQ’s monitoring group, yet we are not staffed to handle additional monitoring workload.
WDEQ-AQD	22	Appendix F, Section F.4.2.1, Page 1408	Section F.4.2.1 states that monitoring will be required for projects with the potential to emit more than 100 tons per year of any criteria air pollutant. While WDEQ commends the willingness of the BLM to incorporate a requirement for collection of baseline monitoring data, caution should be used when establishing thresholds that are not based on rigorous scientific data and analysis in that such a threshold may be considered arbitrary. Further, establishing a monitoring requirement within a range of 50km of the project area with no scientific supporting data, or a time requirement of a year immediately prior to the submittal may also be considered arbitrary.
WDEQ-AQD	23	Appendix F, Section F.4.3.1, Page 1408	Section F.4.3.2 infers that air quality modeling will be required for projects with the potential to emit more than 100 tons per year of any criteria air pollutant be referring to F.4.3.1. While WDEQ commends the willingness of the BLM to incorporate a requirement for project-specific air quality analysis, caution should be used when establishing thresholds that are not based on rigorous scientific data and analysis in that such a threshold may be considered arbitrary.
WDEQ-AQD	24	Appendix F, Section F.4.4.1, Page 1409	BACT is a regulatory requirement and not mitigation. Therefore, please revise sentence to read: “The proponent of a mineral development project will be

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Commenter Name	Comment Number	Section, Page	Comment
			required to minimize air pollutant emissions by complying with all applicable state and federal regulations (including application of best available control technology) and may be required to apply additional mitigation including but not limited to best management practices and other control technologies or strategies identified by the BLM or WDEQ in accordance with delegated regulatory authority."
WDEQ-AQD	25	Appendix F, Table F.1, Title	Please consider revising title to say: "Sample Emission Reduction Strategies for Oil and Gas Development" as several of the listed items included Best Available Control Technology (BACT) Requirements, which are regulatory requirements, and while these type of measures do reduce air quality impacts, they are not "mitigation" that BLM can require. Note that all references (e.g. Section F.4.4.2) would need to be updated to reflect the new title.
WDEQ-AQD	26	Appendix F, Table F.1	In several places in this table, under the Environmental Benefits column, the comment that a decrease in NO _x emissions would result in decreased formation of ozone is not necessarily accurate. Ozone chemistry is complex and absent a modeling analysis to demonstrate that a decrease in NO _x emissions will result in a decrease in ozone, this portion of the statement should be removed in all instances throughout Table F.1. This comment also applies to the control strategies listed throughout the.
WDEQ-AQD		Appendix F, Table F.1	One of the proposed options for an emission control strategy listed in this table is to "Minimize venting and/or use closed loop process where possible during "blowdowns"..."", which is represented as part of the BLM's Best Management Practices and required by WY BACT. Please revise the language to read: "Minimize or eliminate venting and/or use closed loop process where possible during "blow downs"""

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Committer Name	Chapter-Page	Paragraph # Section # Record #	Comment
WDEQ-WQD	2-64	1018	Same comment as on the PDEIS: Soil Reclamation is about soil management. Soil Management is likely the most important factor in successful reclamation and must be part of any reclamation plan. Remove "Soil management is identified in the Wyoming Reclamation Policy and is not an RMP decision" from Alts A and D.
WDEQ-WQD	2-65	1019	Contradicts Appendix D regarding responsibility for monitoring.
WDEQ-WQD	2-65	1020	Same comment as on the PDEIS: Alt D: The statement "except seeding of a cover crop is contained in the BLM Wyoming reclamation policy and is not an RMP decision" sounds more like a rationale for not doing something, rather than a management action. If it is an RMP decision in A, it can be an RMP decision in D. Make D the same as A.
WDEQ-WQD	2-256	3	Same comment as on the PDEIS: This section should discuss the BLM's requirements for reclamation in more detail, since they are stricter than DEQ's.
WDEQ-WQD	2-257	Last	Same comment as on the PDEIS: There needs to be discussion of the Wyoming Reclamation Policy in this section. Additionally, the discussion of the Policy should explain how it will affect reclamation success in the planning area.
WDEQ-WQD	2-259	Table 3.7	The 305(b) Report is published every two years. It is unclear why the BLM chose to use the 2006 Report in Table 3.7, and elsewhere in the DEIS, instead of the 2010 Report. This was pointed out in the December 2010 DEQ/WQD comments on the PDEIS, but was not addressed. The EIS should use the most current 305(b) Report so that the assessment is based on the best available and most relevant information.
WDEQ-WQD	2-259	Table 3.7	Table 3.7 includes information not associated with or relevant to the LFO and for which the BLM has no jurisdiction. For example, there is reference to a matter concerning untreated human sewage in Big Horn County, which was resolved in 2006 with the installation of package plant. As another example, Paintrock Creek is entirely within Big Horn County and has no bearing on BLM's management of the LFO resources.
WDEQ-WQD	2-259	Table 3.7	The Gros Ventre Sub-basin (Fish Creek is discussed previously) is not in the table.
WDEQ-WQD	2-260	2	Same comment as on the PDEIS: The Sweetwater is discussed in these paragraphs, but there is not any discussion of the other major waters.
WDEQ-WQD	2-260	Last	The CWA does not contain water quality standards. The State of Wyoming designates uses for all waters of the state and sets standards to protect those uses. Much of the rest of the paragraph is also inaccurate.
WDEQ-WQD	2-261	3	This paragraph attempts to define both point source and nonpoint source pollution. Although impacts of some types of point source pollution are discussed, there is no discussion of impact from nonpoint source pollution. There needs to be discussion about the types of impacts that can occur from nonpoint source pollution,

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			especially in the planning area.
WDEQ-WQD	2-261	Table 3.8	Same comment as on the PDEIS: Table 3.8 should be updated based on the 2010 305(b) to get more recent information regarding water quality and TMDLs.
WDEQ-WQD	2-261	Last	Waters associated with wetlands are protected as waters of the state; therefore Standard 2 of Wyoming Standards for Healthy Rangelands also applies to these waters.
WDEQ-WQD	2-262	2	Does the BLM have any data supporting the sentence that these designated uses are not supported? “Drops in water level” is used frequently in this document, but wording such as “reductions in annual stream flow” is much more appropriate, since most of the waters on BLM are streams, not reservoirs or lakes.
WDEQ-WQD	2-262	2	Same comment as on the PDEIS: It is unclear how BLM intends to manage stormwater and erosion in coordination with the DEQ WQD WYPDES program.
WDEQ-WQD	2-262	6	<p>We are concerned with the statement: <i>“The BLM preferred method of discharge of produced water in the planning area is reinjection. However, the State of Wyoming permits point source discharges where water containing high levels of selenium is being discharged pursuant to WYPDES permits, such as the Gun Barrel Oil and Gas Unit in the northeast portion of the planning area.”</i></p> <p>This is an inaccurate statement since this is not current BLM management nor the preferred alternative (see Mineral Resources Record #2013). The Wyoming Pollutant Discharge Elimination System (WYPDES) discharge limit for selenium in these permits is the water quality criterion for protection of aquatic life: 5 µg/L. The State of Wyoming has not permitted any discharges of selenium over the water quality criterion, and the discharges are in compliance with their discharge limits for selenium.</p> <p>The statement <i>“the BLM is working with the operator in the Gun Barrel Unit area to decrease soil erosion resulting from state-authorized discharges”</i> is also misleading. It implies that WYPDES permits authorize erosion, when in fact erosion control is a requirement in the permit. When the erosion problems have occurred, the operator has worked with the WQD to develop an erosion control plan, obtained appropriate permits from the US Army Corps of Engineers and worked with the BLM to implement the erosion control structures. Although, this area has some of the greatest amounts of surface disturbance in the planning area, which the BLM authorizes, and some may be in areas of low reclamation potential, there is no discussion of it in Chapter 3.</p>
WDEQ-WQD	2-263	3	The WQD recognizes that many riparian areas have improved with better management. However, based on the 129 miles of streams with riparian conditions in a Functional at-Risk Downward Trend or Non- Functional condition – over 25% of the lotic riparian areas in the planning area (Table 3.36), it would appear the planning area has possible erosion and/or water quality concerns which need to be discussed in the Water Section of Chapter 3.
WDEQ-WQD	2-264	2	Does the BLM have any data supporting the sentence that these water quality parameters have “become unfavorable for supporting the designated biological and recreational uses”?

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WDEQ-WQD	2-264	7	Same comment as on the PDEIS: Where is there commercial thermoelectric use of groundwater in the planning area?
WDEQ-WQD	4-576	4.1.3.2	Same comment as on the PDEIS: Many of the bullets under Methods and Assumptions are redundant, and several contradict each other. The bullets should be organized by effects or actions (i.e., by reclamation, erosion, soil compaction, etc.) to better identify these problems. Additionally 4.1.3.3.1 repeats many of these bullets.
WDEQ-WQD	4-576	Bullet 2	The recent Bighorn Basin RMP DEIS used the Water Erosion Prediction Project (WEPP) soil erosion model to analyze impacts to soil and water resources. Soil erosion rates predicted with the WEPP model roughly quantify impacts associated with the different alternatives. However, the Lander RMP DEIS did not model soil erosion, and only qualitatively compared alternatives. This not only weakens the impact analyses for soil and water resources, it also appears that this would make it very difficult for the BLM to defend its decisions in this RMP. Additionally, it makes it very difficult for the reader to keep track of impacts in Chapter 4.
WDEQ-WQD	4-577	Bullet 6	Where do the criteria for final stabilization come from? This bullet appears to disagree with what is written in Appendix D.
WDEQ-WQD	4-577	Bullet 8	Since the potential for soil erosion has not been modeled, the timeline for erosion rates returning to background levels is not necessary.
WDEQ-WQD	4-578	Bullet 2	Assuming that disturbances to soils with LRP are evenly distributed across the landscape in the same proportion as their relative distribution disagrees with what is on the ground as well as with the alternatives.
WDEQ-WQD	4-578	Bullet 5	Although wind energy may have the largest footprint of surfaced disturbance per unit of electrical energy generated, the EIS should cite the source of this information.
WDEQ-WQD	4-582	Alternative A	The first sentences on page 594 describes adverse and beneficial impacts to water quality, and the first sentence in Section 4.1.4.3.1 recognizes that most activities will have some type of adverse impact to water quality: <i>“Surface water quality on BLM-administered surface lands and federal mineral estate could degrade under each alternative from activities proposed across a variety of resource programs. Impacts to water quality associated with these disturbances are projected to occur under each alternative, although the intensity of the impacts would vary across alternatives.”</i> However, the Resources and Resource Uses sections for the different alternatives often state that activities will result in beneficial impacts to water quality. For example: <i>“Alternative A, air quality and soils management would result in moderate beneficial impacts to water quality because it applies only statewide standard restrictions to surface-disturbing activities.”</i> Please note that in most cases, the “benefit” of these activities is relative to other alternatives, and will not benefit water quality because surface disturbance will still occur; although some actions may be more or less beneficial than others. Language such as “moderate beneficial” is so qualitative, it is nearly impossible to make reasonable comparisons. Again, lack of quantitative modeling significantly weakens the analyses in the DEIS.

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WDEQ-WQD	4-597	Bullet 7	<i>“Potential surface water and groundwater quality impairments are identified through inventories and routine monitoring activities and reported to the Wyoming DEQ...”</i> gives the reader the impression that the BLM actually inventories and monitors, which from what is written in Chapter 3, is not the case.
WDEQ-WQD	1318	Glossary	Same comment as on the PDEIS: “Avoid/Avoidance” must be defined in the Glossary.
WDEQ-WQD	1392-3	Appendix D tables	There should be no new INNS allowed; % INNS in reclaimed areas should be based on % in reference areas outside the reclaimed areas.
WDEQ-WQD	1393	Appendix D tables	Page 577, Bullet 6 discusses final stabilization criteria, yet there is no discussion in Appendix D.
WDEQ-WQD	1393	Last	Same comment as on the PDEIS: Appendix D appears to apply exclusively to the Preferred Alternative. Management Action 1019 Alternative D requires proponent to do monitoring, so the paragraph should be changed to reflect that. Additionally, the BLM should commit to monitoring a subset of these areas to do a check on the proponents’ monitoring.