
Wyoming

Response to Comments on the Draft 2012 Integrated 305(b) and 303(d) Report

Prepared by:
Wyoming Department of Environmental Quality
Water Quality Division
Watershed Section
122 W. 24th St.
Herschler Building 4-W
Cheyenne, WY 82002
(307)-777-3501
richard.thorp@wyo.gov

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Overview

The Wyoming Department of Environmental Quality (WDEQ) recently received comments from 12 entities (see Appendix A) regarding Wyoming's Draft 2012 Integrated 305(b) and 303(d) Report (IR). WDEQ would like to thank the various entities for their continued interest and involvement in state surface water quality issues and acknowledges the contribution of each to the review and improvement of this year's report.

The following entities submitted comments:

Entity	Abbreviation
Campbell County Conservation District	CCCD
Laramie County Conservation District	LCCD
Lake DeSmet Conservation District	LDCD
Laramie Rivers Conservation District	LRCO
Little Snake River Conservation District	LSRCD
Popo Agie Conservation District	PACD
Sublette County Conservation District	SCCD
U.S. Environmental Protection Agency	USEPA
U.S. Forest Service	USFS
Wyoming Association of Conservation Districts	WACD
Wyoming Game and Fish Department	WGFD
Western Watersheds Project	WWP

Response to Comments

Within this document, WDEQ addresses comments by first dividing them into two sub-categories. The general comments section contains comments pertaining to the overall structure or content of the 2012 report, whereas the specific comments section refers to comments made about specific basins or surface waters. In both sections, similar or identical comments expressed by multiple entities are sometimes addressed collectively with a single response.

General Comments

Entity:	CCCD
Comment:	CCCD stated that "Can WDEQ explain why after changing the standard from fecal coliform to <i>E. coli</i> , why some source listings are <i>E. coli</i> (Belle Fourche River on page 120) and others fecal coliform (Donkey Creek, Stonepile Creek, and Belle Fourche River on page 121)? Same comment applies to Middle Prong of Wild Horse Creek on page 134 listed for <i>E.coli</i> and Little Powder River on page 136 listed for fecal coliform." Has this portion of the report been updated for 2012?"
Response:	While the concentration of <i>E. coli</i> and fecal coliform can each be used as bacteriological indicators of fecal contamination, they are not the same measurement. <i>Escherichia coli</i> (<i>E. coli</i>) bacteria are one subset of the fecal coliform group, used to detect the presence of fecal material originating from warm-blooded animals. Epidemiological studies have demonstrated that <i>E. coli</i> is more strongly correlated with incidents of gastrointestinal illnesses than fecal coliforms. Consequently, <i>E. coli</i> is considered a better indicator for monitoring water quality than fecal coliform. WDEQ has used a fecal coliform to assess contact recreational use support, but currently uses an <i>E. coli</i> criterion. It is important for WDEQ and USEPA to keep accurate records of the original pollutant or cause for each 303(d) Listing. Thus, the occurrence of both fecal coliform and <i>E. coli</i> Listings in the 2012 303(d) List is correct.

Entity: SCCD, WACD

Comment: SCCD stated that..."The Sublette County Conservation District (SCCD), along with most districts in the State, have an active water quality monitoring program. The important contribution of the districts is acknowledged in the "Draft Wyoming Water Quality Assessment and Impaired Waters List (2012 Integrated 305(b) and 303(d) Report. However, the SCCD is increasingly alarmed that the WDEQ ignores the important partnership opportunity that districts provide. The SCCD has developed Land Use Policies and among statements in those policies are the following:

- All federal and state mandates governing water or water systems shall be developed in cooperation with the district and be funded by those agencies.
- All water quality studies undertaken by or on behalf of a public land management agency must be coordinated with the District.

Given those elements of Public Land Use Policies, the district is disappointed to not being informed or invited to coordinate with WDEQ on the samples presented by WWP and which have led to three new listings.

Not long ago, the SCCD marshaled considerable resources to complete the information gathering for a WDEQ study with the promise of a timely reformation of stream use designation model. It is our contention that the Lander Creek, Pacific Creek and Clark's Draw listings may likely have been prevented had the development of the stream use designations been completed and implemented. We understand that the coliform counts exceeded any standard. However, we would argue that had they been properly designated, they are much less likely to be used as a tool to advance an agenda.

The Sublette County Conservation District has developed Land Use Policies covering most of our abundant natural resources. With those policies, we pledge to the County's citizens that we will do whatever we can to advance those policies. Therefore, we would request that in decisions about Sublette County's natural resources, we be afforded the opportunity to partner with WDEQ at the first practicable opportunity in any study or consideration of a decision regarding our resources."

"Other land use policies of the SCCD drive us to monitor the sustainability of our rangeland agriculture systems. One of the things that occurs when a stream segment (however small) is listed, is the federal grazing allotment associated with that stream segment will then fail the water quality element of the Rangeland Standards and Guides checklist agencies use. This then triggers the federal agency to begin developing new requirements for management of the grazing allotment. When it has not or can not be demonstrated that livestock grazing is the cause or source of the impairment, producers find themselves in a position of implementing a best management practice which may or may not have any bearing on the impairment. Even when the BMP should have some effect on the impairment, more often than not the BMP affects management on the entire allotment, rather than the area encompassing the small segment of stream, or the BMP may simply shift the time, place and/or magnitude of animal impact. The situation also triggers increased risk to permit renewal process. These new listings are great examples of unintended consequences. Little Sandy impairment was triggered decades ago by unknown causes. It will fail Standards and Guides. Livestock management BMP's will be ordered, even though, in the opinion of a world renowned hydrologist, livestock management will have no influence on the evolutionary trajectory of the stream in a time period spanning decades. The new E-coli listings on these other streams will trigger elevated scrutiny, jeopardize permit renewal, and foment BMPs', though the streams are most likely intermittent and the motives of the data source entity are unquestionably hostile to grazing."

"Lander Creek, Pacific Creek, and Clark's Draw are very small streams. In fact, strong arguments can be made that they are, at best, intermittent perennial streams. The lack of a Use Attainability Analysis which makes sense for these streams has created in them a dangerous tool which agenda-driven third party information sources with limited credibility can employ to seriously impair appropriate management. The Sublette County Conservation District implores WDEQ to quickly and efficiently implement sensible Use Attainability Ratings for all streams, thus removing these tiny intermittent/ephemeral waters from the weapons cache of a group like WWP."

"The very nature of intermittent and ephemeral streams impairs any ability to manage them in the context we would manage other streams in the context of recreational potential. Listing the streams to meet a regulatory function really does not advance any public interest. In fact, listing the stream causes resources to be diverted from other better applications for the public interest. Therefore, we would submit that these streams ought to have been granted variance from E-Coli listings as being "in the public interest" under water quality rules, Section 27 (d) Variances."

WACD stated that on page 46, Big Sandy Sub-basin, 2nd paragraph that..."WACD recognizes the SCCD and wishes to reference their comments. We believe that in instances where WDEQ has reason to field check third party data, or otherwise conduct water quality work in a district with demonstrated expertise, they should coordinate with that district."

Response: Comments noted. WDEQ will continue to review all available data and information and to make defensible designated use support determinations on Wyoming's surface waters. The public comment period for the Draft Integrated Report is intended to be an opportunity for all of those interested to comment on proposed use support decisions.

While collecting samples on Lander Creek, Pacific Creek, and Clark's Draw, WWP was operating under a WDEQ approved sampling and analysis plan (SAP). However, WWP selected study sites and collected samples independently of WDEQ. WWP submitted data from these and other sites for review and possible inclusion in the 2012 Integrated Report. After passing QA/QC checks, it was determined that these three sites exceeded WDEQ's *E. coli* criteria and they were therefore proposed as additions to the 303(d) List. Both Lander Creek and Pacific Creek are designated as primary contact recreational use waters by WDEQ. Concentrations of *E. coli* in these waters were 11 and 13 times higher, respectively, than the state's *E. coli* primary use recreational criterion of 126cfu/100mL. Clark's Draw is designated as a secondary contact recreation by WDEQ. The *E. coli* concentration observed on Clark's Draw was more than eight times the secondary recreational use criterion of 630cfu/100mL. By request, all of the data and other information submitted to WDEQ by WWP for both the 2010 and 2012 Integrated Reports were forwarded to NRCS/WACD on January 18th, 2012. It was WDEQ's understanding that NRCS/WACD in turn forwarded these data and other information to interested conservation districts, including SCCD, for review.

A preliminary draft of WDEQ's Recreational Use Model is currently being reviewed by USEPA. WDEQ acknowledges the importance of SCCD and other conservation districts in the development of this model. The hydrology (i.e. ephemeral, intermittent or perennial) of each stream of the state is one of several factors evaluated as part of the model. SCCD is encouraged to review and comment on WDEQ's proposed Recreational Use Model during the public comment period. For information regarding the status of WDEQ's Recreational Use Model or *E. coli* variances please contact David Waterstreet at 307-777-6709 or Lindsay Patterson at 307-777-7079.

- Entity:** USEPA
Comment: USEPA stated that....“Use of External Data – Section 2.2 discusses in some detail the monitoring done by the conservation districts and how it is used by WYDEQ. This discussion could be broadened to discuss how DEQ handles and will handle all outside data. Alternatively, a section on other data sources could simply be added.”
- Response:** Wyoming's conservation districts are an important and consistent external source of water quality monitoring data and were therefore specifically mentioned in the 2012 Integrated Report. Section 2 of the report describes in general terms how WDEQ handles external data....“Wyoming's surface waters are classified according to their designated uses using a hierarchical system (see Appendix B) described in [Chapter 1](#) of the Wyoming Water Quality Rules and Regulations. [Wyoming's Watershed Monitoring Program](#) is responsible for providing the majority of the information used in determining whether designated uses are supported for the surface waters of the state, but other groups, for example, the [U.S. Geological Survey](#) (USGS) and [Wyoming's 34 Conservation Districts](#), also contribute substantially. These data are used to determine water quality condition following methods outlined in [Wyoming's Method for Determining Water Quality Condition of Surface Waters and TMDL Prioritization Criteria for 303\(d\) Listed Waters](#). This methodology, last updated in 2008, is revised periodically to maintain consistency with changes in the state's water quality standards and to comply with Wyoming's “Credible Data” Law.” Various other sources are described individually in the narrative of the report.
- Entity:** USEPA
Comment: USEPA stated that....“WYDEQ should begin preparations for assessing narrative criteria for nutrients. This assessment and any listing decisions resulting from this assessment should be added to the 2014 Integrated Report. There are potentially a number of waterbodies with nutrient issues that could lead to listings. An example could be Crow Creek (WYSP101900090107). It was noted in the last paragraph on page 85 that “high levels of these nutrients have been an additional concern.”
- Response:** Currently, WDEQ does not have narrative or numeric nutrient criteria. While nutrients are a concern in Crow Creek through Cheyenne, it is unknown to what degree these stressors may affect Cold Water Fisheries and Aquatic Life other than Fish use support. For information regarding the development of nutrient criteria, please contact David Waterstreet at 307-777-6709 or Lindsay Patterson at 307-777-7079.
- Entity:** USEPA
Comment: USEPA stated that....“Additionally, for future Integrated Reports (including 2014), EPA encourages the inclusion of an assessment based on the state-wide probability survey that has been undertaken by DEQ.”
- Response:** It is anticipated that the WDEQ's statewide probabilistic survey will be completed by late spring-early summer 2012. The results of this study will be included in the 2014 Integrated Report.
- Entity:** USEPA
Comment: USEPA commented that...“In the GIS files there are a number of waterbodies listed as category “0”. They are in three basins: tributaries to Bear Creek in the North Platte Basin, the upper tributaries to Beaver Creek in the Big Horn Basin, and tributaries to South Paint Rock Creek in the Big Horn Basin. Were these streams assessed? What is there status?”
- Response:** In 2012, WDEQ replaced the assessment shapefiles used for the 2010 Integrated Report with two completely new shapefiles. In creating the streams shapefile, some small tributaries in the three watersheds listed above were unintentionally selected and added to the shapefile. These mistakes have been corrected in the 2012 streams shapefile.

Entity: USEPA
Comment: USEPA stated that....“A number of streams were listed for E. coli in 2010 but are now listed for fecal coliform in 2012. What was the reason for this change? The streams include Donkey Creek (BF), Middle Fork Popo Agie (BH), Granite Creek (BH), Blacks Fork (GR); Little Powder (PR), North Tongue River TR), Columbus Creek (TR), and Prairie Dog Creek (TR).”

Response: All of the streams listed above were originally added to the 303(d) List for exceeding the fecal coliform criterion. WDEQ mistakenly changed these causes to *E. coli* over several years. While fecal coliform and *E. coli* are similar measures, they are not the same. These listings have been changed to fecal coliform in the 2012 303(d) List to maintain accuracy and consistency between the 303(d) List, the GIS streams shapefile and ADB.

Entity: USEPA
Comment: USEPA stated that...“In the source summary in Table 9.1.2 – Sources labeled outside border could be referred to as abandoned mines or added to the Hardrock mining category. These categories are more descriptive than “outside the border”. Additionally, in the same table, discharges from municipal storm water is stated as 56 miles, but in ADB it is only 45 miles.”

Response: The source labeled as “outside the WY border” has been changed to Hardrock Mining in MT in Table 9.1.2 and Figure 9.1.2. The number of impaired miles with sources identified as municipal stormwater has been changed from 56 to 45 miles.

Entity: USFS
Comment: For the groundwater section of the IR, USFS stated that...“There are several locations in the text that refer to “2010” when, from the context of the sentence, it appears it should say “2012”: “This **2010** 305(b) report” and “... in **2010** WDEQ will ...” Has this portion of the report been updated for 2012?”

Response: Comment Noted. Information in the groundwater section of the draft IR has been updated for 2012.

Entity: WACD
Comment: For page 7 of the 2012 Integrated Report Introduction, WACD stated that....“WACD would encourage DEQ to strengthen the language contacted in this paragraph “The U.S. Environmental Protection Agency (USEPA) is charged with administering the CWA. However, states are encouraged to develop their own programs to prevent, reduce and eliminate water pollution.”

“Section 101(b) of the Act reads as follows: (b) It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and to consult with the Administrator in the exercise of his authority under this Act. It is the policy of Congress that the States manage the construction grant program under this Act and implement the permit programs under sections 402 and 404 of this Act. It is further the policy of the Congress to support and aid research relating to the prevention, reduction, and elimination of pollution, and to provide Federal technical services and financial aid to State and interstate agencies and municipalities in connection with the prevention, reduction, and elimination of pollution.”

Response: “WACD would encourage a brief explanation of the state primacy provisions.” Comments noted. The text on page 7 of the 2012 Integrated Report which states...“However, states are encouraged to develop their own programs to prevent, reduce, and eliminate water pollution.” has been removed and replaced with...“However,

Section 101(b) of the CWA states that "it is the policy of Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and to consult with the Administrator in the exercise of his authority under this Act."

Entity: WACD

Comment: WACD stated that for Section 305(b) Requirements...."This section discusses the requirement for the 305(b) report to contain a "description of the water quality of *navigable waters* of the state for the preceding year, including the extent to which current....." (*emphasis added*) WACD would suggest that it may be timely for a discussion of which waters meet this definition in the state and subsequently are suitable for inclusion in this report and which waters fall under state jurisdiction and should be removed from this report. As has been determined via fairly significant Supreme Court decisions, those waters that constitute "navigable waters" have been more narrowly defined. WACD believes that there are likely a number of waters that are included in this report that clearly do not meet the definition of "navigable" as determined by the Courts and arguably should be removed from the report."

Response: In 2008, USEPA amended the Clean Water Act (CWA) section 311 regulation that defines the term "navigable waters." This action was in accordance with a court order, issued by the United States District Court for the District of Columbia (D.D.C.) in American Petroleum Institute v. Johnson, 571 F.Supp.2d 165 (D.D.C. 2008). The decision removed from the Clean Water Act (CWA) the 2002 definition of navigable waters and reinstated the definition promulgated by USEPA in 1973. The term navigable waters of the United States is currently defined in section 502(7) of the CWA as: (1) all navigable waters of the United States, as defined in judicial decisions prior to the passage of the 1972 Amendments of the CWA (Pub. L. 92-500), and tributaries of such waters as; (2) interstate waters; (3) intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes; and (4) intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce. USEPA's 2008 decision to re-define navigable waters of the U.S. does not affect any categorization decisions within the 2012 303(d) List.

Entity: WACD

Comment: For Page 9, 2.2 Monitoring by Conservation Districts, WACD stated that...."WACD appreciates the recognition of the monitoring and implementation efforts of the districts. WACD is in the process of publishing an updated Watersheds Progress Report encompassing the timeframe from the 2009 report through the fall of 2011. WACD anticipates publication of this report by the end of February 2011 and it will be available on the Association's website in electronic format at www.conservewy.com."

Response: Comment Noted. WDEQ will continue to update subsequent Integrated Reports with WACD's latest Watershed Progress Reports as revised versions of this document become available.

Entity: WACD

Comment: For Page 11, TMDL development schedule, WACD stated that...."WACD appreciates DEQ retaining the opportunity for timely restorations as describe in #4 and providing the opportunity for restoration efforts to be implemented and that any such efforts would be considered by DEQ. The Association believes that this approach provides the opportunity for local implementation efforts to address these issues at a reduced cost to the taxpayers."

Response: Comment Noted.

Entity: WACD
Comment: WACD stated that for Page 12, 5. Wyoming's Nonpoint Source Program.... "This paragraph describes some common sources of point and non point source pollution. As indicated in our 2010 comments, the Association believes it would be helpful for a brief narrative were included describing the types of inputs that are considered "natural background", such as wildlife for E.coli and geology for chemical etc."

Response: WDEQ recognizes that some surface waters are affected by natural background concentrations of nonpoint source pollutants. WDEQ has changed sentence 5 of paragraph 5 of the 2012 Integrated Report to read.... "While some types of nonpoint source pollution can be natural in origin, Wyoming's Nonpoint Source Program typically only addresses those associated with anthropogenic land-disturbing activities such as urban development, road construction, agriculture, recreation, silviculture and mineral exploration." WDEQ may choose to adopt a site specific criterion for waters where a water quality criterion is exceeded due to natural background concentrations of a nonpoint source pollutant.

Entity: WACD
Comment: WACD stated that for text throughout the 2012 IR.... "SCS references and material should be updated with current NRCS information."

Response: Comment noted. WDEQ will update these references for the 2014 IR.

Entity: WACD
Comment: WACD stated that for page 96, Figure 9.1.2.... "Figure 9.1.2 indicates assumed sources of pollutants in Wyoming waters. Livestock grazing is listed as 15%. Recent efforts by WACD in watershed planning efforts throughout the state have noted that wildlife numbers and grazing are significant attributes affecting non-point source pollution. In one of four BLM grazing allotments listed in an impacted watershed within the draft report, the Little Sandy grazing allotment, the BLM has allocated 6, 934 total AUMs for grazing livestock, and stated additionally "forage must be provided for approximately 700 antelope, 1580 deer, 25 moose, and 170 elk during the winter. During the summer, forage must be provided for 430 antelope, 400 deer, and 90 elk." A total of 3700 AUMs for wildlife were prescribed or 53% of the estimated utilization of domestic livestock. Similar numbers are present throughout the state, but the impacts of wildlife grazing are not sufficiently indicated in the integrated report. Since the report indicates all sources, i.e. natural sources as 18%, it would be appropriate to brake the wildlife component out or to clarify which section of the "pie" it belongs to in the integrated report."

Response: The sources listed in the 303(d) List are based on available data and other information and are not assumed. When a suspected source of any surface water impairment is known, it is added as such to the 303(d) List. Conversely, when a suspected source is lacking, the source of an impairment is listed as unknown. In the case of the 2012 Little Sandy River 303(d) Listing (WYGR140401040203_01), it was determined that livestock and wildlife grazing were both sources of the sediment impairment. These grazing sources were combined accidentally by WDEQ in the Integrated Report in Table 9.1.2 and Figure 9.1.2. Wildlife Grazing has since been added as a separate source for 17.7 miles in Table 9.1.2 and has also been added as a source to Figure 9.1.2, representing <1% of the sources of impairment for Wyoming's streams.

Entity: WACD
Comment: WACD stated that for pages 99-140.... "For clarity, is it possible to include the title of the Section (i.e. 9.2 Category 2 Surface Waters, 9.3 Category 3 Surface Waters, etc.) within the footer of the report?"

Response: After consideration, WDEQ has decided to retain the Integrated Report's existing format, which is organized with section and subsection headings included within the main body

of the text.

Entity: WACD

Comment: For page 120-140, 2012 303(d) List, WACD stated that...."WACD supports WDEQ's clarification of impaired segment locations in the 303(d) report."

Response: Comment noted.

Entity: WACD

Comment: WACD stated that...."WACD would like to again commend DEQ on a substantially improved Integrated Report."

Response: Comment noted.

Entity: WWP

Comment: WWP stated that "One striking thing about the report is the repeated mention of the failure to complete data reporting and analysis, both from the side of the DEQ as well as conservation districts. It is of great concern that data is being collected on streams and still 5 to 10 years later the data is "not available". This is also troubling in the case of the conservation districts which are often funded by 319 grants which require that data be submitted to the DEQ upon completion of the project. Frequently, as is shown in this document many years after the completion of a project, conservation districts have still failed to provide data to the DEQ. Conservation districts which have failed in their contractual obligations should not be granted further funds until the issues have been resolved in addition to whatever other sanctions EPA regulations provide."

Response: Comments noted. WDEQ data are typically summarized as reports and are posted on [WDEQ's website](#). All completed WDEQ Surface Water Monitoring Program reports and Section 319 final reports are reviewed for possible inclusion in the Integrated Report. Specific questions regarding the status of a particular Surface Water Monitoring Program project or report should be directed to Jeremy Zumberge at (307)-673-9337. Questions regarding the status of specific Section 319 projects should be directed to Jennifer Zygmunt at (307)-777-6080.

Specific Comments

Belle Fourche River Basin

Entity: CCCD

Comment: Stated that on Page 19, paragraph 1 of the IR that..."CCCD would like to know what data supports the determination for the listing to be changed from ending at an undetermined distance to ending at Brorby Boulevard."

Response: Donkey Creek was originally added to the 2000 303(d) List for fecal coliform using WDEQ and CCCD data. The extent of the impairment at that time was from the Belle Fourche River upstream to the confluence with Stonepile Creek. In 2006, the segment was extended upstream to "an undetermined distance above the confluence with Antelope Butte Creek". The upstream extent of the "undetermined distance" description in the 2006-2010 303(d) Lists actually terminated at Brorby Boulevard in the GIS shapefile and the associated mileage was 56 miles in the shapefile and the 303(d) List. For the 2012 Integrated Report, WDEQ changed from using National Hydrography Database (NHD) at 1:100K resolution to the higher resolution 1:24K. WDEQ used this higher resolution data layer to create a new GIS shapefile for all of the state's assessed streams. In some cases, this higher resolution added or subtracted mileage to the extent of stream segments. This was the case with Donkey Creek, as 5.4 miles were added to this impairment due to an improvement in NHD resolution.

Entity: CCCD, WACD

Comment: CCCD stated that on Page 19, paragraph 1 of the IR that..."CCCD submitted a Section 319 report to WDEQ in April 2010 with data from 2007-2009. Why has CCCD data from 2007-2009 not been reviewed and incorporated in this draft 2012 report in relation to Donkey Creek and Stonepile Creek?"

Response: WACD for page 19, 1st paragraph, page 74, 2nd paragraph, page 80, 2nd paragraph that..."CCCD submitted a Section 319 report to WDEQ in April 2010 with data from 2007-2009. WACD is curious as to why CCCD data from 2007-2009 not been reviewed and incorporated in this draft 2012 report in relation to Donkey Creek and Stonepile Creek, Middle Prong of Wild Horse Creek and the Little Powder River?"
Section 319 reports ON 701 (completed by CCCD) and ON 502 (completed by CCNRD) were reviewed by WDEQ in 2010. However, information from these reports were accidentally left out of the 2012 Integrated Report. Text has been added to the upper Belle Fourche River Sub-Basin section of the 2012 Integrated Report which states..."CCCD completed a Section 319 project in 2010, which included data spanning 2007-2009. These data indicated that *E. coli* concentrations at nearly all sampling sites along the currently listed segments of Stonepile and Donkey Creeks exceeded the state's primary recreational use criterion. The study also found elevated chloride and ammonia concentrations in both creeks, but because neither is classified as a fishery, the state's aquatic life acute and chronic chloride standards do not apply. CCNRD also completed a Section 319 project in 2010 for the upper Belle Fourche River Watershed, which included data spanning 2005-2009. Multiple *E. coli* samples during the sampling period showed that Donkey Creek exceeds the primary contact recreational use criterion from the confluence with the Belle Fourche River upstream to the Campbell County line. *Escherichia coli* samples were also collected from the Belle Fourche River from the Campbell County line to below the outfall of the Hulett WWTF that showed exceedances of the primary contact recreational use criterion. The study reported no chloride concentrations exceeding of the chronic Aquatic Life other than Fish criterion on the Belle Fourche River. However, USGS data indicate that exceedances of the chronic chloride criterion continue to occur."

Entity: CCCD

Comment: Stated that..."CCCD would concur the watershed plan focuses on septic system improvements to address the listing, but it also focuses on education of urban and rural residents, urban sewage treatment, storm water runoff, solid waste management, small acreage land use management, and rural development issues."

Response: The text which stated..."A watershed plan and implementation strategy to address this listing focuses on septic system improvements." has been removed from the 2012 IR and replaced with..."A watershed plan for this listing was approved by WDEQ in 2006. The plan will likely be updated following completion of the Belle Fourche River TMDL. Implementation strategies in Campbell County will focus on septic system improvements, education of urban and rural residents, urban sewage treatment, storm water runoff, solid waste management, small acreage land use management, and rural development issues."

Entity: CCCD

Comment: Stated that..."CCCD has not completed a WDEQ approved watershed plan for Donkey and Stonepile Creeks in 2010. CCCD will be updating the watershed plan after the Belle Fourche River TMDL is complete so the watershed plan is consistent with the TMDL. Until the TMDL is complete, CCCD will operate under the 2006 watershed plan."

Response: The text which stated..."CCCD completed WDEQ approved watershed plans for Donkey and Stonepile Creeks in 2010." has been removed from the 2012 IR and replaced

with...“A watershed plan for Donkey and Stonepile Creeks was developed by CCCD and approved by WDEQ in 2006. The plan will likely be updated following completion of the Belle Fourche River TMDL.”

Entity: CCCD

Comment: Stated on page 19, paragraph 2 that...“The City of Gillette has received funding from the Wyoming Wildlife and Natural Resource Trust to help offset the costs of upgrading the Gillette Fishing Lake. These funds were utilized to purchase three (3) floating islands to mitigate the pollution within the Lake.”

Response: The text which stated...“The City of Gillette is currently pursuing a grant from the Wyoming Wildlife and Natural Resource Trust to help offset the costs of upgrading Gillette Fishing Lake.” has been removed from the 2012 IR and replaced with...“The City of Gillette has received funding from the Wyoming Wildlife and Natural Resource Trust to help offset the costs of upgrading the Gillette Fishing Lake. These funds were utilized to purchase three floating islands that may mitigate nutrient concentrations within the Lake.”

Entity: CCCD

Comment: Stated on page 19, paragraph 2 that...“The UAA submitted by the City of Gillette has been approved by WDEQ and USEPA and the classification of Gillette Fishing Lake has been changed from a cold water game fishery (2AB) to a warm water game fishery (2ABww). The Gillette Fishing Lake TMDL is moving forward and allowable pollutant loads are being adjusted for the classification change.”

Response: The text in the upper Belle Fourche River Sub-basin section which stated...“The TMDLs, which were initiated in 2008, were recently delayed to allow a UAA submitted by the City of Gillette to be reviewed. If approved by WDEQ and USEPA, the classification of Gillette Fishing Lake would be changed from a cold water game fishery (2AB) to a warm water game fishery (2ABww). This classification change may affect the allowable pollutant loads associated with these TMDLs.” has been removed from the 2012 IR and replaced with...“The TMDLs, which were initiated in 2008, were recently delayed to allow a UAA submitted by the City of Gillette to be reviewed. The UAA was approved by WDEQ and USEPA in 2011, changing the classification of Gillette Fishing Lake from a cold water game fishery (2AB) to a warm water game fishery (2ABww). This classification change may affect the allowable pollutant loads associated with these TMDLs.”

Entity: USEPA

Comment: Stated that...“Belle Fourche River (WYBF101202010504_00) – The length for one of the listings in the IR (chloride) does not match the other two. It is correct in both the GIS files and ADB. It should be changed from 21.2 to 14.2 in the IR.”

Response: The length of chloride listing for the Belle Fourche River (WYBF101202010504_00) has been changed from 21.2 to 14.2 miles in the 2012 303(d) List.

Entity: USFS

Comment: Stated that on Page 17 of the IR that...“Exploration and mining of rare earth minerals has been significantly increasing on the Bearlodge Ranger District of the Black Hills National Forest. This has the potential to be the most significant issue affecting water quality on the District in the future. We expect that these activities will influence the quality and quantity of water in Beaver Creek, and eventually in the Belle Fourche River, in the not too distant future. We recommend adding mention of rare earth mining as a disturbance in the descriptions of these watersheds.

Response: Text has been added to the IR that states...“Mineral extraction includes rare earth, bentonite and coal mining, and oil, gas and CBM development. Rare earth mineral exploration and mining has significantly increased within the Black Hills National Forest in

recent years. The USFS has suggested that these activities have the potential to significantly affect water quality in the Belle Fourche River watershed."

Entity: WACD

Comment: Stated that for Page 17, 8.2 Belle Fourche River Basin -2nd Paragraph..."CCNRD completed a watershed plan for the Belle Fourche River in 2005. The CCNRD plans to revisit and update the watershed plan after the completion of the Belle Fourche River TMDL."

Response: The text in Section 8.2, which stated..."CCNRD completed a watershed plan for the Belle Fourche River in 2010, which has been approved by WDEQ." has been changed to state..."CCNRD completed a watershed plan for the Belle Fourche River in 2005. The plan will likely be updated following completion of the Belle Fourche River TMDL."

Entity: WACD

Comment: WACD stated that on page 19, Upper Belle Fourche Sub-basin..."WACD incorporates by reference herein those comments submitted by the Campbell County Conservation District."

Response: Comment noted.

Entity: WACD

Comment: WACD stated that on page 19, Upper Belle Fourche Sub-basin..."According to the 303(d) list on page 120, the Belle Fourche River's cause for not supporting its Recreational Use criteria is due to E.coli and two segments were listed in 1996. On page 121, another segment of the Belle Fourche River was listed the same year for not supporting its Recreational Use criteria, however this segment's cause is Fecal Coliform. Can WDEQ explain why three separate segments of the Belle Fourche River were listed for both E.coli and Fecal Coliform in 1996?"

Response: All of the causes in the 303(d) List are intended to be the original causes used for each listing. All three of the Belle Fourche River recreational use impairments were originally listed for fecal coliform. Over the years, fecal coliform was accidentally changed to *E. coli* in the 303(d) List for two Belle Fourche River listings (WYBF101202010501_01, WYBF101202010504_00). These two errors have been corrected in the 2012 303(d) List.

Bighorn River Basin

Entity: PACD

Comment: PACD stated that on page 23..."PACD suggests that in the first paragraph, the statement "...has been monitoring 19 sites in the sub-basin since 1999 to assist with watershed planning efforts..." Should be changed to, "...monitored 19 sites in the sub-basin from 1999-2002 to assist with watershed planning efforts..."in order to be accurate."

Response: WDEQ has changed the sentence to state..."Popo Agie Conservation District (PACD) monitored 19 sites in the sub-basin from 1999-2002 to assist with watershed planning efforts and to provide baseline data and monitor trends in condition (PACD, 2001; WACD, 2004; PACD, 2005)."

Entity: PACD

Comment: PACD stated that on page 23..."Changes should be made to the sentence,...."an additional 1.1 mile section of the Middle Fork of the Popo Agie River downstream from the confluence with Hornecker Creek has been added to the 2012 303(d) List." PACD submits that the WDEQ upstream point of the newly listed segment is not the location where PACD data demonstrates the delineation of bacterial impairment. If this is true, the distance of the section would also change.

PACD also stated that for page 115 of the 2012 Integrated Report that...“The 303(b) identifier associated with the new listing should end with “_03” not “_01”. The new segment is correctly identified in the watershed shapefile on page 23.” and “After it is determined which confluence point is the upstream terminus of the newly listed impairment, “the confluence with Hornecker Creek” may need to be changed. The change in confluence point will also change the distance of the new segment from, “1.1 Miles downstream” to a distance yet to be determined.”

PACD commented for page 122 of the IR that...“Under the location column, “the confluence with Hornecker Creek “will need to be changed to reflect the actual location and distance that PACD monitoring data determined as the delineation of the impairment.”

PACD stated that on page 122 of the Integrated Report that...“Septic waste has been considered a likely source of *E. coli* contamination based on PACD monitoring data and land use observations. PACD suggests that “Septic Waste” should be added as a source. PACD would prefer if unknown would remain as a source also.”

Response: The bacterial monitoring sites contained in PACD’s 2006-2011 Section 319 reports are different than the site locations submitted to WDEQ during the draft 2012 Integrated Report public comment period. The uncertainty surrounding site locations is a serious concern and is currently considered an unresolved issue. WDEQ has therefore decided not to make any use support determinations for the 2012 Integrated Report. The data and other information will be re-examined for potential inclusion in the 2014 Integrated Report. WDEQ has therefore removed the text from page 23 of the 2012 Integrated Report that stated...“As part of this project, PACD collected *E. coli* data showing exceedances of the primary recreational standard and an additional 1.1 mile section of the Middle Fork Popo Agie River downstream from the confluence with Hornecker Creek has been added to the 2012 303(d) List. PACD data shows that much of the bacterial loading to the impaired sections appears to originate from Hornecker Creek. The influence of this tributary is often pronounced in August, when much of the discharge in the Middle Fork Popo Agie River is typically diverted for irrigation. Data collected by PACD in 2010 indicate that BMPs in the Hornecker Creek watershed may have significantly reduced *E. coli* levels in Middle Fork Popo Agie River. WDEQ and PACD will continue to work together to identify additional bacterial sources in the watershed.” WDEQ has also removed this segment of the Middle Fork Popo Agie River, (303(d) identifier WYBH100800030207_03; from the confluence with Hornecker Creek to a point 1.1 miles downstream) from the 2012 303(d) List, ADB and GIS streams shapefile.

Entity: PACD

Comment: On page 122 of the Integrated Report, PACD stated that...“Under the source column, PACD suggests that the word “grazing” used throughout the 303(d) list (pages 115-140) be replaced by a word or phrase that identifies the cause more precisely such as “livestock waste”

Response: WDEQ adds causes and sources to 303(d) Listed waters based on available data and other information. The causes of contact recreation use listings are correctly identified as either fecal coliform or *E. coli* throughout the 2012 303(d) List. In cases where the source of these impairments is thought to be due to livestock grazing, the source is identified by WDEQ as “grazing” or “livestock grazing” in the 303(d) List source column.

Entity: USEPA

Comment: USEPA stated that...“Muddy Creek (WYBH100800050607_01) – The source is not listed in ADB. It is listed as unknown in the IR, but for consistency it should be listed as unknown in the ADB also.”

Response: WDEQ has added "unknown" to the ADB as the source of impairment for Muddy Creek (WYBH100800050607_01).

Entity: USEPA

Comment: USEPA stated that..."Kirby Creek (WYBH100800070909_01) – The source is not listed in ADB. It is listed as unknown in the IR, but for consistency it should be listed as unknown in the ADB also."

Response: WDEQ has added "unknown" to the ADB as the source of impairment for Kirby Creek (WYBH100800070500_01).

Entity: USEPA

Comment: USEPA stated that ..."Paint Rock Creek (WYBH100800080607_01) – The identifier is listed as WYBH100800080603_01 in both the GIS files and ADB. These should match with the IR."

Response: WDEQ has changed the identifier for Paint Rock Creek in the 2012 303(d) List to WYBH100800080603_01.

Entity: USEPA

Comment: USEPA stated that..."Greybull River (WYBH100800100102_01) – Both the IR and the ADB list the segment as 38.0 miles long, but in GIS it is 44.7 miles."

Response: WDEQ has changed the mileage of Greybull River (WYBH100800090405_01) in both the IR and the ADB to 44.7 miles.

Entity: WACD

Comment: WACD stated that on page 20, 8.3 Big Horn River Basin that..."While Marston, Anderson and Wohl have been quoted in this document in relation to theories on the nature of the basin and historic events that might have led to erosion and down cutting, little data is in fact available to quantify the effects of historic grazing and to compare them to pre-historic wildlife grazing and other possible influences. WACD believes that available data suggests that good management and stewardship within the basins agricultural community has in fact increased the amount of water, forage, and other resources available in the basin for both domestic and wildlife, and that the positive nature of these actions on the resources, economy, and culture of the area should be noted."

WACD stated that on page 20, 8.3 Big Horn Basin..."WACD has not had the opportunity to thoroughly review the Wohl et. al report, however the above comment leads one to believe that there is irrigated crop production within the Bighorn National Forest. WACD would question what type of irrigated crop production is occurring on the Bighorn National Forest."

Response: Peer reviewed scientific literature such as Marston and Anderson (1991) and Wohl et. al (2007) can provide an important historical context to management activities and resource conditions. WDEQ encourages WACD to submit the available data and other information for the Big Horn River Basin discussed above for review and possible inclusion in subsequent Integrated Reports.

The statement that irrigated crop production occurs in the Bighorn National Forest was a mistake made by WDEQ. Wohl et. al actually refers to the "Big Horn Mountains and surrounding lowlands" as being areas that have been affected by irrigated crop production. WDEQ has changed the text that stated..."[Wohl et. al. \(2007\)](#) reported that many streams within the Bighorn National Forest have been substantially impacted by cattle grazing, irrigated crop production, flow regulation and diversion, and timber harvest." to instead state that..."[Wohl et. al. \(2007\)](#) reported that many streams within the Bighorn Mountains and surrounding lowlands have been substantially impacted by

cattle grazing, irrigated crop production, flow regulation and diversion, and timber harvest."

Entity: WACD

Comment: WACD stated that on page 21, Upper Wind Sub-basin – 1st Paragraph..."Please change Dubois County Conservation District to Dubois Crowheart Conservation District"

Response: WDEQ has changed the text on page 21 that states..."The Dubois County Conservation District (DCCD) collected chemical, biological and physical data at several sites along the Upper Wind River and its tributaries, and completed a provisional report in 2004 (DCCD, 2004)." to instead state that..."The Dubois Crowheart Conservation District (DCCD) collected chemical, biological and physical data at several sites along the Upper Wind River and its tributaries, and completed a provisional report in 2004 (DCCD, 2004)."

Entity: WACD

Comment: WACD stated that on page 23, Popo Agie Sub-basin..."WACD incorporates by reference herein those comments submitted by the Popo Agie Conservation District."

Response: Comment noted.

Entity: WACD

Comment: WACD stated that on page 25, Upper Big Horn Sub-basin..."Washakie County Conservation District (WCCD) completed a watershed plan for the Upper Big Horn watershed in 2006 and has recently completed implementation. The WCCD plans to revisit and update the watershed plan after the completion of the Big Horn River and Greybull River TMDL's."

Response: The text on page 25 which stated..."[Washakie County Conservation District](#) (WCCD) is pursuing watershed planning for this watershed (WACD, 2005)." has been changed to state that..."[Washakie County Conservation District](#) (WCCD) has completed and implemented a WDEQ approved watershed plan for this watershed. WCCD plans to update this plan following the completion of the Big Horn River and Greybull TMDLs."

Entity: WACD

Comment: WACD stated that on page 26, 1st Paragraph..."Please change HSSCD to HSCD"

Response: WDEQ has changed HSSCD to HSCD on page 26 and within the list of acronyms on page 5.

Entity: WACD

Comment: WACD stated that on page 27, Upper Big Horn Sub-basin – 3rd Paragraph..."WCCD submitted a Use Attainability Analysis (UAA) on Fifteen Mile and Nowater Creeks to change the classification from primary to secondary recreation use in 2009. Why are these UAAs not mentioned in this report?"

Response: WDEQ has added text to IR which states..."In 2009, WCCD submitted Use Attainability Analyses (UAAs) for Fifteen Mile and Nowater Creeks to change the recreational use designation from primary to secondary. WDEQ has decided to delay the processing of all recreational use UAAs during the development of WDEQ's statewide recreational use UAA." A preliminary draft of the UAA and associated model is currently being reviewed by USEPA. Once the UAA is approved by USEPA, WDEQ will review these two UAAs and determine whether the designated use changes proposed by WCCD differ from the model's designations. WDEQ acknowledges the importance of WACD and Wyoming's 34 conservation districts in the development of this model. WACD and WCCD are encouraged to review and comment on the UAA during the public comment period. For information regarding the status of WDEQ's Recreational Use Model, please contact David Waterstreet at 307-777-6709 or Lindsay Patterson at 307-777-7079.

Entity: WACD

Comment: On page 27, Upper Big Horn Sub-basin – 3rd Paragraph, WACD stated that....“WCCD also reported high levels of E.coli to WDEQ in a 2009 Section 319 Final Report. Please update from 2008.”

Response: WDEQ has changed the text in the IR which stated....“For the 2010 303(d) List, the status of the Bighorn River above Nowood River, and Fifteen Mile, Nowater, Sage and Slick Creeks were changed from threatened to not supporting their recreational uses after high levels of *E. coli* were again reported by WCCD in 2008 and 2009 Section 319 Reports.” to state that...“For the 2010 303(d) List, the status of the Bighorn River above Nowood River, and Fifteen Mile, Nowater, Sage and Slick Creeks were changed from threatened to not supporting their recreational uses after high levels of *E. coli* were again reported by WCCD in a 2009 Section 319 Report.”

Entity: WACD

Comment: WACD stated that on Page 27, Nowood Sub-basin. 2nd Paragraph, Page 31, 4th Paragraph and Page 32, 2nd Paragraph...“SBHCD’s data were not available for this report. WACD contacted SBHCD to inquire as to the status of their data. SBHCD has submitted their water quality data to WWC Engineering in Sheridan for analysis since 2005. SBHCD recently submitted WWC’s analysis reports from 2005, and 2008-2010 to WDEQ.”

Response: The deadline for data submission for the 2012 Integrated Report was July 15th, 2011. WDEQ received SBHCD’s water quality data on February 2nd, 2012. These data will be reviewed by WDEQ for possible inclusion in the 2014 Integrated Report.

Entity: WACD

Comment: WACD stated that on Page 27, Nowood Sub-basin, 2nd Paragraph for the text that states...“A Watershed Plan has been approved by WDEQ and efforts..” that “WACD suggests the addition of implementation before “efforts””.

Response: The text which stated...“A Watershed Plan has been approved by WDEQ and efforts are underway on Paintrock Creek and the Nowood River (WACD, 2005).” has been changed to state that...“A Watershed Plan has been approved by WDEQ and implementation efforts are underway on Paintrock Creek and the Nowood River (WACD, 2005).”

Entity: WACD

Comment: WACD commented on Page 29, 1st Paragraph for the text that states...“...WGFD suggested that the banks should be stabilized with woody vegetation and that the reach should be given a significant rest from livestock grazing”. WACD commented that...“Is WGFD the only entity suggesting this recommendation? It might be beneficial for NRCS, etc. input here as well? Good conservation management should not only contain a preferred alternative, but also other options and alternatives for management that can be selected by land managers based on needs.”

Response: WGFD is the only entity that made the above suggestions regarding Canyon Creek. WACD’s statements regarding NRCS and conservation management have been noted.

Entity: WACD

Comment: WACD commented on the text on Page 30, 1st Paragraph which states that...“Watershed planning is in progress for the Greybull River watershed in both Big Horn and Park Counties.” WACD stated that...“The Greybull River Watershed Plan was completed in 2010 by the Meeteetse Conservation District. Implementation activities and tasks are underway within the watershed in both Big Horn and Park Counties.”

Response: The text has been changed to...“The Greybull River Watershed Plan was completed in 2010 by the Meeteetse Conservation District. Implementation activities and tasks are underway within the watershed in both Big Horn and Park Counties.”

Entity: WACD
Comment: WACD commented on text on Page 30, 1st Paragraph which states that..."TMDLs are scheduled to be completed in July 2012 for the fecal coliform listings on the Nowood River and Paint Rock Creek." WACD commented that..."WACD questions why this is listed under the Greybull Sub-basin narrative?"

Response: WDEQ accidentally placed the text in the wrong sub-basin section within the 2012 IR and has therefore been moved to the end of paragraph 2 of the Nowood Sub-basin.

Entity: WACD
Comment: WACD commented on text on Page 31, 4th Paragraph that..."First sentence - Insert of the word "by" in front of WDEQ (2002)."

Response: The suggested edit has been made and the sentence now reads..."Fecal bacteria monitoring on the Bighorn River by [WDEQ \(2002\)](#) below its confluence with the Greybull River indicated that it is not supporting its contact recreation use...."

Entity: WACD
Comment: WACD commented on text on Page 32, Dry Creek Sub-basin and Page 34 –Shoshone River Sub-basin, 2nd paragraph which states..."As with other areas of the Bighorn basin, historic livestock grazing has shifted upland vegetation from native bunchgrasses to blue grama." WACD stated that..." Blue grama is a native, warm-season, low-growing, perennial bunchgrass (From Montana Interagency Plant Materials Handbook * *By S. Smoliak, R.L. Ditterline, J.D. Scheetz, L.K. Holzworth, J.R. Sims, L.E. Wiesner, D.E. Baldridge, and G.L. Tibke*). WACD requests that a reference be provided for the above statement."

Response: The source(s) used to make these statements are unknown. The text in the Dry Creek Sub-basin stating..."As with other areas of the Bighorn Basin, historic livestock grazing has shifted upland vegetation from native bunchgrasses to blue grama. Plant communities dominated by blue grama often result in higher peak flows and reduced base flows (i.e., more precipitation runs off and erosion is often elevated on those areas that have been converted), causing reduced forage productivity," and the text in the Shoshone Sub-basin section stating..."Much of this area has elevated erosion rates due to historic livestock grazing and conversion of native bunchgrasses to blue grama." have been removed from the 2012 Integrated Report.

Entity: WACD
Comment: WACD commented on the last paragraph of page 35..."The last paragraph references that the Shoshone CD has monitored the Shoshone River for two years and the data were not available for the report. WACD has inquired as to the status of this data with the district."

Response: Comment noted.

Entity: WACD
Comment: WACD commented on page 122-124, 2012 303(d) List..."Does the 2010 TMDL date for the Bighorn River and its tributaries reflect when WDEQ internally started planning the TMDL or when the TMDL was initiated?"

Response: The column in the 303(d) List labeled "TMDL Date" contains the anticipated TMDL initiation date for each 303(d) Listing.

Entity: WGFD
Comment: "We continue to believe that the water quality of our Blue Ribbon trout fisheries and spawning habitat continues to degrade due to anthropomorphic influences such as large volume water inputs to small drainages from irrigation. These occurrences cause widening of the stream and stream bank erosion with resultant sediment loading to the

main stem Shoshone River."

"We recommend the Shoshone River from Buffalo Bill to Bighorn Lake be listed as impaired for sediment from non-point sources to make 319 funding available to irrigation districts to reduce their sediment inputs."

Response: All surface water use support decisions by WDEQ are made using credible data as required by Wyoming State Law. Section 35 (b) of [Chapter 1](#) of Wyoming's Water quality Rules and Regulations states that.... *Credible data shall be collected on each water body, as required in this section and shall be considered for purposes of characterizing the integrity of the water body including consideration of soil, geology, hydrology, geomorphology, climate, stream succession and the influences of man upon the system. These data in combination with other available and applicable information shall be used through a weight-of-evidence approach to designate uses and determine whether those uses are being attained.* Credible data will need to be collected on the Shoshone River to determine whether Aquatic Life other than Fish and Cold Water Game Fishery uses are supported. Such a study will need to address the relative effects of flow manipulation on sedimentation in this system from the many dams, irrigation withdrawals and irrigation returns along the mainstem Shoshone River versus the effects of other anthropogenic sources. Waters with "large volume water inputs" that "...cause widening of the stream and stream bank erosion with resultant sediment loading..." are typically categorized as 4C by WDEQ. Such waters are considered impaired, but a TMDL is not necessary because the impairment is caused by pollution (e.g. flow manipulation, channelization). The 303(d) List contains only category 5 waters, or those impaired waters for which a Total Maximum Daily Load (TMDL) for a pollutant is required and can be written. WDEQ encourages WGFD to submit available credible data and other information that demonstrate whether the Shoshone River's cold water fishery use is supported. WDEQ is currently in the process of designing a study to assess sediment impacts to the Shoshone River. A TMDL will be initiated in 2012 to address pathogen impairments and will likely supply much of the hydrology modeling needed to evaluate sediment impacts.

The potential availability of USEPA Section 319 funding is not a factor that is considered by WDEQ when making use support determinations. Questions regarding Section 319 funding availability should be directed to Jennifer Zygmunt at (307)-777-6080.

Entity: WGFD

Comment: "Page 34 – Shoshone River sub-basin. A study of the sediment influences to the Shoshone River as referenced in the Shoshone River Sediment Study, a watershed monitoring plan by Scott Collyard, March 2008, has not been referred to in the narrative. No results have been reported or even acknowledged from this study. To our knowledge, this study was slated to be continued in 2009-2010 and we recommend the results should be noted in this document."

Response: To date, WDEQ has produced no finalized sediment studies on the Shoshone River. A 2002 study to evaluate the river's recreational designated use was completed by WDEQ in 2002, resulting in a 303(d) Listing from the confluence with Bighorn Lake to a point 9.7 miles upstream. WDEQ is currently in the process of designing a study to assess sediment impacts to the Shoshone River. A TMDL is will be initiated in 2012 to address pathogen impairments and will likely supply much of the hydrology modeling needed to evaluate sediment impacts. Questions regarding the status of any of WDEQ's Surface Water Quality Monitoring studies should be directed to Jeremy Zumberge at (307)-673-9337.

Green River Basin

Entity: SCCD

Comment: Commented on text in the draft 2012 Integrated Report that states...“In an effort to evaluate the effectiveness of BMPs on reducing sedimentation within the impacted reach, identify potential sources of sediment and determine designated use support, WDEQ committed to monitoring the reach of concern for a period of five years (2004-2008). The resulting study (WDEQ, 2012) found that a section of the Little Sandy River from the northern boundary of Section 33-Township 28 North-Range 104 West-downstream 17.7 miles to the Sublette/Sweetwater County line was not supporting its aquatic life other than fish and cold water fisheries uses, and this segment was added to the 2012 303(d) List. Accelerated bank erosion is the primary cause of the excess sediment and the sources have been identified as livestock and wildlife grazing and historic habitat/channel modifications. WDEQ has received a formal commitment from the above stakeholder group to complete a watershed based plan for the Little Sandy River Watershed.”

SCCD commented that...“We would point out that accelerated bank erosion is the source of sediment, not the cause, and that the cause (incorrectly labeled as “source”) has not been identified. While livestock and wildlife grazing and historic habitat/channel modifications are handy scapegoats, there is no information supporting the assertion in “Water Quality Condition and Designated Use-Support Determination for the Little Sandy River, Green River Basin, 2004-2008, WDEQ, June 2010”. (Which we presume is the WDEQ, 2012 study mentioned above but is not listed in references.) When one points to grazing and modifications as the likely cause there is an implication that the alteration of management will be the remedy. A 2011 report on a field visit with Dave Rosgen of Wildland Hydrology indicates that there is nothing which can be accomplished with grazing management to alter the channel evolution which is underway. We are sure that report has been shared with WDEQ.”

Response: Comments noted. The text in the 2012 IR that stated...“Accelerated bank erosion is the primary cause of the excess sediment and the sources have been identified as livestock and wildlife grazing and historic habitat/channel modifications.” has been changed to state that...“Excess sediment from accelerated bank erosion is the primary cause of the impairment, and sources have been identified as livestock and wildlife grazing along with historic habitat modifications.” In addition, the reference...“[WDEQ \(2012\)](#)” in the 2012 Integrated Report text has been modified to include a hyperlink to WDEQ’s report.

The effects of livestock grazing on bank erosion within the impaired segment of the Little Sandy River are demonstrated in WDEQ, 2012. The study compares bank erosion rates at sites which are grazed by cattle to those within a livestock enclosure. The large difference in erosion rates between these adjacent sites indicates that livestock grazing is impacting the impaired segment. The Bureau of Land Management (BLM) has also indicated that livestock grazing is an issue within the impaired segment of the Little Sandy River. As a result, BLM has modified livestock grazing practices in the Little Sandy grazing allotment in an effort to improve riparian and stream channel conditions. These management changes were implemented to comply with their standards for healthy rangelands. As stated on pages x and xi of WDEQ (2012)“Findings from the WDEQ/WQD 1998 and 2003 assessments were conveyed to the USBLM in March 2004 where it was learned that the USBLM in cooperation with the Little Sandy Grazing Association were working on a plan to modify grazing practices within the Little Sandy grazing allotment (which encompassed the reach of concern) which included USBLM, Wyoming State Lands and private holdings. Grazing practices would be modified through additional fencing and rotational grazing, to improve riparian habitat and bank/channel conditions and ultimately allow the USBLM to comply with their standards for healthy

rangelands. Recognizing the cooperative work by the USBLM and the Little Sandy Grazing Association to improve conditions of the Little Sandy River, the WDEQ/WQD determined that a multi-year monitoring of the reach of concern was warranted to evaluate trends in physical, biological and chemical conditions of the stream following the initiation of the modified grazing management plan." The effects of historic habitat/channel modifications on the current channel condition were noted by Dave Rosgen during a watershed tour attended by WDEQ, SCCD and other stakeholders in September, 2011.

Entity: SCCD

Comment: Commented on text in the draft 2012 Integrated Report that states..."In 2010, Western Watersheds Project (WWP) collected E. coli samples on Pacific Creek, including a geometric mean that exceeded both WDEQ's primary and secondary standards protective of recreational use. A segment of stream from Bar X Road to a point 0.4 miles upstream has been added to the 2012 303(d) List. The source of the bacteria is unknown."

SCCD stated that..."While this listing is in Sweetwater County, we would make comment. This is probably the more correct way to handle any discussion of what the source of bacteria might be. Pacific Creek, at the point of data collection is certainly not a body of water whose E-coli bacteria would pose any risk to recreating mankind, pointing out the risk of applying regulations to the point of absurdity."

Response: When a suspected source of any surface water impairment is known, it is added as a source to the 303(d) List. Conversely, when a suspected source is lacking, the source of an impairment is listed as unknown. Supplemental information was provided by WWP which indicated that grazing is a source of bacterial loading to Lander Creek and Clark's Draw. There is some evidence that livestock grazing may contribute to the bacterial loading on Pacific Creek. However, uncertainty regarding this source was expressed by WWP during a site visit, and thus the source was listed as unknown in the 2012 303(d) List.

Pacific Creek is currently designated for primary recreational use by WDEQ. A preliminary draft of WDEQ's Recreational Use UAA is currently being reviewed by USEPA. WDEQ anticipates that this statewide categorical UAA will change the recreational designated uses on many of Wyoming's surface waters, and Pacific Creek may or may not be affected. For information regarding the status of WDEQ's Recreational Use Model, please contact David Waterstreet at 307-777-6709 or Lindsay Patterson at 307-777-7079.

Entity: USEPA

Comment: Stated that..."Page 43; First Paragraph – The Sublette County Conservation District found in a study from 2007 that 2 streams (Middle Piney Creek and Muddy Creek) were not meeting aquatic life uses using biological metrics. Sources were identified as a wastewater treatment facility and irrigation return flows. Was this information evaluated for a possible listing? The poor biological condition is noted in the Integrated Report, but no reason is given as to why a listing was not pursued."

Response: The goal of the above study was to establish baseline chemical and biological conditions for several waters within the upper Green River Basin. These conditions were also compared between sites in this study. As is stated in Wyoming's Method for Determining Water Quality Condition of Surface Water and TMDL Prioritization for 303(d) Listed Waters and State Law, W.S. §§ 35-11-302(b) (ii), requires that only "credible data" be used in making use support determinations. "Credible data" is defined in W.S. § 35-11-103(c) (xix), as *scientifically valid chemical, physical and biological monitoring data collected under an accepted sampling and analysis plan including quality control, quality assurance procedures and available historical data*. To help characterize surface water conditions, *considerations of soil, geology, hydrology, geomorphology, climate, stream*

succession and the influences of man upon the system are necessary to ensure proper use-support determinations. When evaluating aquatic life use support using narrative criteria, decisions are based on a weight of evidence approach. This approach must involve the evaluation of macroinvertebrate, water chemistry and stream channel morphological data. Macroinvertebrate data must be evaluated using the Wyoming Stream Integrity Index (WSII) and Wyoming's RIVPACS (River InVertebrate Prediction And Classification System). SCCD used only the WSII in comparing sites in their study. Language has been added to the 2012 Integrated Report which states that..."Credible data (chemical, physical and biological) were not reported for this study and thus no Aquatic Life other than Fish use support determinations were made by WDEQ."

Entity: WACD

Comment: Stated that for page 47, Bitter Creek Sub-basin..."The Bitter Killpecker Creek Watershed Advisory Group and SWCCD continue to be actively involved in watershed planning, monitoring, and implementation activities. The SWCCD recently received a 319 grant to continue educational outreach and implementation, as well as data analysis in preparation for the development of a TMDL."

Response: Text has been added to the end of paragraph 2 of the Bitter Creek Sub-basin section which states that..."The Bitter Killpecker Creek Watershed Advisory Group and SWCCD continue to be actively involved in watershed planning, monitoring, and implementation activities. The SWCCD recently received a 319 grant to continue educational outreach and implementation, as well as data analysis in preparation for the development of a TMDL."

Entity: WACD

Comment: WACD stated that on page 47, Big Sandy Sub-basin, 2nd paragraph that..."Pacific Creek is being proposed for listing based on data from Western Watersheds Project (WWP). WACD and its districts made a request to review the public data that was submitted by that group. Proposed EPA guidelines are recommending that bacteriological sampling should occur with geometric mean data distribution during a minimum 30 day period and as much as a 90 day period to avoid bias by episodic pulse events while capturing the overall state of the stream. New proposed protocol from WDEQ would follow this guidance by specifying that the sampling events that compose the geometric mean be evenly distributed throughout the 30 day sampling period. WWP data was collected using a different approach to that being advocated by the EPA and WDEQ. Pacific Creek sampling by WWP occurred with three sampling events within 4 days, with one event a week prior, and one a week later. The only field notes taken, and they are taken in every case, deal directly with the presence or absence of livestock sign or livestock. There are no other notes dealing with other factors that may or may not influence the stream. We believe that if WWP had followed either the new EPA or the WDEQ recommendations, listing of this stream would not occur. We further believe that by following these new protocols, it is highly likely that no exceedences for the required duration would be found, and therefore, it does not make practical sense to classify this small stream as a water requiring the development of a TMDL."

Response: Pacific Creek is currently designated as a primary contact recreational use water by WDEQ. Section 27(a) of [Chapter 1](#) of the Wyoming Water Quality Rules and Regulations recreation states that..."In all waters designated for primary contact recreation, during the summer recreation season (May 1 through September 30), concentrations of E. coli bacteria shall not exceed a geometric mean of 126 organisms per 100 milliliters based on a minimum of not less than 5 samples obtained during separate 24 hour periods for any 30-day period. All waters in Table A of the Wyoming Surface Water Classification List are designated for primary contact recreation unless identified as a secondary contact water by a"(s)" notation. Waters not specifically listed in Table A of the Wyoming Surface Water

Classification List shall be designated as secondary contact waters. During the period October 1 through April 30, all waters are protected for secondary contact recreation only." The samples collected by WWP on Pacific Creek consisted of a 5 sample geometric mean, collected during separate 24 hour periods. The five sampling dates spanned a 19 day period, ranging from July 20th to August 7th, 2010. The sample collection methods, including sampling date selection are consistent with WDEQ's currently adopted water quality standards. When a suspected source of any surface water impairment is known, it is added as a source to the 303(d) List. Conversely, when a suspected source is lacking, the source of a given impairment is listed as unknown. There is evidence that livestock grazing may contribute to the bacterial loading on Pacific Creek. However, uncertainty regarding this source was expressed by WWP during a site visit in September of 2011. Thus, the source of the impairment was listed as unknown in the 2012 303(d) List.

The public comment period for USEPA's draft Guidance on Recreational Water Quality Criteria closed February 21, 2012; WDEQ submitted comments toward the development of this document. As part of WDEQ's current Triennial Review, WDEQ has proposed that changes be made to Section 27(a) of Chapter 1. However, as outlined in WDEQ's [Outreach Document](#) for the Triennial Review these proposed changes are currently in the review process. For information regarding the status of WDEQ's Recreational Use Model, USEPA's draft Recreational Water Quality Criteria or WDEQ's current Triennial Review please contact David Waterstreet at 307-777-6709 or Lindsay Patterson at 307-777-7079.

Entity: WWP

Comment: Stated that..."Also why would the Pacific impairment end at the sampling site instead of downstream at least a mile or more? With this logic one would have to sample 2,000'. The DEQ does not apply this same logic to the streams it monitors. One DEQ site on a stream and the whole stream is listed as supporting."

Response: The data submitted by WWP for Pacific Creek were from a single site. The distance to which the impairment extends upstream and downstream of this site is currently unknown. In such cases, WDEQ will usually extend the segment to the nearest tributary or road crossing in the upstream and downstream direction. Using this method, a 0.4 mile segment was selected from Bar X Road upstream to an unnamed tributary to Pacific Creek.

Little Snake River Basin

Entity: LSRCD, WACD

Comment: Stated that....."Savery Creek (WYLS140500030408_01) - this reach has been listed on the 303(d) list by DEQ for physical degradation. Chemical data proves that all the state water quality standards are being met. The physical degradation has been remedied by rotational grazing management plan. LSRCD has conducted Benthic Macro invertebrate sampling which demonstrates the stream is meeting aquatic life use support. Data was submitted and DEQ responded this data would be evaluated for the inclusion in the 2012 IR."

"West Fork of Loco Creek (WYLS140500030408_02) - Second paragraph states - Monitoring by WDEQ in the Little Snake watershed indicates that aquatic life other than fish uses are fully supported in Dirtyman Fork, Loco Creek, portions of Savery Creek and North Fork Little Snake River within the Medicine Bow National Forest and much of the upper watershed of Little Savery Creek. However, physical degradation of West Fork Loco Creek and lower Savery Creek is considered a threat to aquatic life other than fish and these streams were added to the 303(d) List in 1996 and 1998, respectively. A Section 319 watershed improvement project was completed by the [Little Snake River](#)

Conservation District (LSRCD) to address these issues.

-West Fork of Loco Creek was included in the Section 319 study when Loco Creek was delisted. There is no physical degradation in this section of stream. Best Management Practice (BMP) - Rotational grazing has been implemented by the permittees to address the listing in 2008 by DEQ. The LSRCD has obtained credible scientific data that demonstrates the stream is meeting the beneficial uses. The physical, biological and chemical data supports the de-listing of the West Fork of Loco Creek. LSRCD will work with WDEQ to provide the necessary documentation to delist this stream. Data was submitted and DEQ responded this data would be evaluated for the inclusion in the 2012 IR."

WACD stated that...."A brief description of the WDEQ assessment of the 319 project on Savery Creek and its implications to status of the listing would be helpful. WACD incorporates by reference herein those comments submitted by the Little Snake River Conservation District."

Response: Comments noted. Savery Creek was originally added to the 1998 because the Coldwater Game Fishery and Aquatic Life other than Fish uses were determined to be threatened. The cause of the threat was habitat alterations caused by livestock grazing. West Fork Loco Creek was originally added to the 1996 303(d) List because the Coldwater Game Fishery and Aquatic Life other than Fish uses were determined to be threatened. The cause of the threats were habitat alterations, nutrient enrichment and high temperatures caused by grazing. Credible data, including physical, biological and chemical data, are required to change the use support status of Savery Creek for habitat alterations and West Fork Loco Creek for the habitat alteration and nutrient threats. The temperature listing on West Fork Loco Creek can be removed from the 303(d) List when 2 consecutive years of credible data show no exceedances of the coldwater fishery temperature criteria. LSRCD submitted only macroinvertebrate data to WDEQ for Savery Creek in 2010. Currently, WDEQ does not have the credible data necessary to delist either Savery Creek or West Fork Loco Creek.

Entity: LSRCD

Comment: Stated that..."Muddy Creek Sub-basin (HUC 1450004) Muddy Creek (WYLS1405000401104_01) Reach of Muddy Creek, West of Highway 789, LSRCD staff and WDEQ staff toured this area in 2011. Jointly we will work together to delist this section of stream."

Response: Since the 2010 Integrated Report, WDEQ compiled and analyzed the available credible data relating to the Muddy Creek watershed. This effort led to the removal of Muddy Creek (Little Snake River Basin, WYLS140500040103_01) and McKinney Creek (Little Snake River Basin, WYLS140500040102_01) from the 2012 303(d) List. The lower impaired section of Muddy Creek (Little Snake River Basin, WYLS140500040104_01) remains on the 2012 303(d) List because there were insufficient available credible data for a delisting. WDEQ met with LSRCD's staff and board of directors on December 13, 2011. At that time, it was decided that LSRCD and WDEQ would continue to work together to compile and evaluate additional credible data for the lower section of Muddy Creek for a possible delisting.

Entity: LSRCD

Comment: Stated that..."The final paragraph states USGS data collected on Muddy Creek below Youngs Draw between 2006 and 2009 showed exceedances of the chronic aquatic life other than fish chloride and selenium criteria. Muddy Creek was placed on the 2010 303(d) List for both of these pollutants from below Youngs Draw upstream to Deep Creek."

"Comment – LSRCD's concern is there is no anthropogenic input into the system that is typically seen with these readings with Selenium and Chloride, this is of natural background. This site needs to be evaluated on natural background, rather than attributed to energy development. Previous studies conducted by USGS indicate natural background sources in some portions of the Little Snake watershed. Rangelands in lower reaches of Muddy Creek have a high occurrence of both Astragalus and Asteracea, which are selenium indicating plants. Based on these findings, the stream needs to have a site specific listing for these parameters rather than listing the entire stream reach."

Response: The sources of the chloride and selenium 303(d) Listings on lower Muddy Creek are currently considered to be unknown and of natural origin. Energy development has not been included as a source in the 303(d) List.

Entity: USEPA

Comment: Stated that..."TMDLs for West Fork Battle Creek and Haggarty Creek have been approved by EPA. Therefore, these waterbodies can be moved from Category 5 to 4a. Additionally, be sure to make this change in both the ADB and GIS files."

Response: The text from page 51 of the Integrated Report that states..."TMDLs for cadmium, copper and silver for Haggarty Creek and copper for West Fork Battle Creek were initiated in 2008 and it is anticipated that they will be approved by USEPA in 2012." has been changed to "TMDLs for cadmium, copper and silver for Haggarty Creek and copper for West Fork Battle Creek were approved by USEPA in December 2011." This change in categorization from 5 to 4A was also updated in the GIS streams shapefile, ADB and the 2012 303(d) List.

North Platte River Basin

Entity: LRCD

Comment: Stated that..."We understand that the WDEQ has proposed a segment of the Little Laramie River and two segments of the Laramie River in Albany County for the 303d list of impaired streams based upon our sampling data at 4 sites in the Spring 2011. We are writing to comment on the proposed listings.

We appreciate the opportunity to collaborate, and these data are a result of a good working relationship we have had with the WDEQ for a decade, starting with a 319 grant to take proactive steps to improve water quality and conduct baseline water quality monitoring in 2002. We believe we have established a good set of baseline data over the past several years for the two hydrologic regimes of spring runoff (4 to 6 weeks in May-June) and base flow in October, which we feel represents the majority of the year.

The data upon which the draft "decision to list" are from Spring 2011, during a time of the some of the highest runoff levels for these two streams in recent history. We compiled a table (attached) of geometric means for E. coli concentrations from the past 5 years. These are samples taken over 5 week periods, generally from early May to early June, and early October to early November. Also included are the range of discharge levels for those sites on the days of sampling. Discharge numbers for the lower sampling site (Mandell Lane) on the little Laramie are unavailable, but we feel the discharge at Millbrook Lane is a good proxy for relative flows a few miles upstream.

We feel it critical to note in the data that the discharge during Spring runoff event in question, as with some other outlying events is more than an order of magnitude greater than in the typical Fall flows. During Spring sampling, when we feel streams are too deep and fast to wade, or when the streams are out of their banks, we have sampled by

scooping from the bank or from the flood plain when we can't get close to the bank. Thus, these data (particularly the geometric means) don't represent what we believe to be normal in-channel flows, but rather overland flows from areas only submerged during extraordinary flood events. If you look at the data table, 2011 data do not represent normal or ongoing condition in the streams because it is a) an extremely high water year and b) the Spring sampling has always been intended by the district to capture the high runoff events and extraordinary conditions, rather than the average or base flow conditions.

We believe that looking at the past 5 years of data there is precedence for DEQ seeing and understanding these abnormal conditions, and not listing based on anomalous high geometric means during spring runoff and overbank flow or during other periods that do not represent the normal condition of the system. Additionally we have submitted data in the recent past that were well above the standards, but that DEQ was aware these samples were taken during stream restoration activities when people and machines were present in the channel. No listing occurred as a result of these data. Other data taken during extreme runoff/precipitation events have been collected by our district, and likewise listing has not occurred. It has been our assumption that the DEQ understood the exploratory nature of these endeavors because these data were gathered during high flow anomalies. These data have never resulted in a listing prior to this draft integrated report, and we do not believe that they should do so now.

Making a correct use support determination is important, and in this case it is critical to not that there has been no major land use change in the vicinity of the sampling sites since we started sampling in 2002. Our data indicate that during normal flow conditions over this long period of time these streams have supported all their beneficial uses appropriately. In fact, our riparian conditions have only improved over time (coming out of the last severe drought cycle) and we have witnessed tremendous improvement in bank vegetation (willows) at all of our sampling sites. It seems then that putting these streams on the list of waters requiring TMDLs would not only be inaccurate, but that it result in a large number of human and capital resources going towards an effort that is entirely unnecessary.

To recap, we do not believe the Laramie River and Little Laramie River should be placed on the 303d list because a) the data cited that resulted in the listing were obtained during a particularly high-runoff period (extraordinary conditions) and samples were taken varying from our standard protocol, from the bank or from the flood plain, b) numbers obtained during high runoff years were not used to list the streams in the past when DEQ was aware of extraordinary activities affecting the stream, c) the higher than normal spring runoff is a "pulse event" and does not represent the average condition of the stream for most of the year, d) land use has not changed appreciably, rather, stream bank conditions have improved since the early 2000's. If listed, the ensuing watershed planning and TMDL, along with the work involved, would do little to improve conditions as there are no glaring problems, issues, or concerns to be addressed that would change the condition of this system."

Response: Section 27(a) of [Chapter 1](#) of Wyoming's Water Quality Rules and Regulations states that "In all waters designated for primary contact recreation, during the summer recreation season (May 1 through September 30), concentrations of E. coli bacteria shall not exceed a geometric mean of 126 organisms per 100 milliliters based on a minimum of not less than 5 samples obtained during separate 24 hour periods for any 30-day period." Samples collected at a variety of discharges, including high flows are used for making use support determinations by WDEQ. LRCD's May-June 2011 data showed exceedances of the primary recreational use criterion at two sites on the Laramie River; geometric

means were 222cfu/100mL at site 1.1 and 152 cfu/100mL at site 1.6. Sites 2.2 and 2.3 on the Little Laramie River had geometric means of 270 cfu/100mL and 174 cfu/100mL respectively. The monthly average discharge (USGS 06661585, 1973-2011) in the Laramie River near Bosler averages 268 and 726 cfs for May and June respectively. The average discharge at this gage in 2011 for these months was 366 (approx. 140% of average) for May and 2,010 (approx. 277% of average) cfs for June. Additional data submitted by the district (see LRCD's comments in appendix A) show that all four of these sites also exceeded the state's primary recreational use criterion during spring 2007. USGS data indicate that discharge in 2007 was 105% of average in May and 36% of average in June. Combined, the 2007 and 2011 data indicate that high bacterial concentrations occur at these sites in spring, regardless of whether there is high, average, or low snowmelt runoff. Geometric means also exceeded the primary recreational use criterion at 3 of the 4 sites in spring 2009. At WDEQ's request, LRCD submitted QA/QC documentation for the 2010-2011 data. Documents included site photographs and laboratory and field datasheets. These documents indicated that the data were accurate and usable for use support determinations by WDEQ. The decision by LRCD to collect baseline data during the recreational season during both spring and fall is important. The spatial and temporal patterns observed in LRCD's data may help to refine additional sampling dates and locations, and may indicate potential sources. The two segments of the Laramie River (from State Highway 10 to a point 0.3 miles upstream and a 2.9 mile section of stream intersecting Ione Lane, below Bosler Junction) and one Little Laramie River segment (From Mandel Lane upstream to Snowy Range Road) have been correctly added to the 2012 303(d) List.

Entity: SCCD, WACD

Comment: SCCD commented on text in the 2012 Integrated Report that states..."In 2010, Western Watersheds Project (WWP) collected E. coli samples on Lander Creek, and a five sample geometric mean exceeded both WDEQ's primary and secondary standards protective of recreational use. The suspected source of the excess bacteria is livestock grazing. A 0.5 mile segment of Lander Creek between two unnamed tributaries and adjacent to County Road 132 was added to the 2012 303(d) List. A 0.5 mile segment of Lander Creek between two unnamed tributaries and adjacent to County Road 132 was added to the 2012 303(d) List."

SCCD stated that..."Since there is no apparent information beyond an un-substantiated suspicion that livestock is the source, we would request that the unsubstantiated assertion be removed. Lander Creek, at the point of the listed impairment is largely a stream comprised of and augmented by irrigation water returns."

WACD stated that for page 63, 3rd paragraph for the Sweetwater Sub-basin..."Lander Creek is being proposed for listing based on Western Watersheds Project data. WACD and its districts made a request to review the public data that was submitted by that group. Proposed EPA guidelines are recommending that bacteriological sampling should occur with geometric mean data distribution during a minimum 30 day period and as much as a 90 day period to avoid bias by episodic pulse events while capturing the overall state of the stream. On Lander Creek WWP geometric mean data included samples from 4 consecutive days, a single sample one week prior, and a single sample one week after. Field notes were taken at every event, but only deal with a single factor: livestock. On the surface it appears that WWP data was collected using a different approach to that being advocated by the EPA. New proposed protocol from WDEQ would follow this guidance by specifying that the sampling events that compose the geometric mean be evenly distributed throughout the 30 day sampling period. We believe that if WWP had followed either the new EPA or the WDEQ recommendations,

listing of this stream would not occur. We further believe that by following these new protocols, it is highly likely that no exceedences for the required duration would be found, and therefore, it does not make practical sense to classify this stream as a water requiring the development of a TMDL."

Response:

Lander Creek is currently designated as a primary contact recreational use water by WDEQ. Section 27(a) of [Chapter 1](#) of the Wyoming Water Quality Rules and Regulations recreation states that..."In all waters designated for primary contact recreation, during the summer recreation season (May 1 through September 30), concentrations of *E. coli* bacteria shall not exceed a geometric mean of 126 organisms per 100 milliliters based on a minimum of not less than 5 samples obtained during separate 24 hour periods for any 30-day period. All waters in Table A of the Wyoming Surface Water Classification List are designated for primary contact recreation unless identified as a secondary contact water by an "(s)" notation. Waters not specifically listed in Table A of the Wyoming Surface Water Classification List shall be designated as secondary contact waters. During the period October 1 through April 30, all waters are protected for secondary contact recreation only." The samples collected by WWP on Lander Creek consisted of a 5 sample geometric mean, collected during separate 24 hour periods. The five sampling dates spanned a 19 day period, ranging from July 20th to August 7th, 2010. The sample collection methods, including sampling date selection are consistent with WDEQ's currently adopted water quality standards.

When a suspected source of any surface water impairment is known, it is added as a source to the 303(d) List. Conversely, when a suspected source is lacking, the source of an impairment is listed as unknown. By request, all of the data and other information submitted to WDEQ by WWP for both the 2010 and 2012 Integrated Reports were forwarded to Mr. Nephi Cole of NRCS/WACD on January 18th, 2012. It is WDEQ's understanding that Mr. Cole in turn forwarded these data and other information to interested conservation districts for review. WWP provided several supplemental sources of information along with *E. coli* data suggesting cattle grazing as a source of bacterial loading to Lander Creek. Field notes were taken during sample collections, noting the presence or absence and abundance of cattle within the riparian zone. The lowest concentration (410cfu/100mL) grab sample for Lander Creek for this data submission was collected when "livestock moved about ½ mile upstream". The other four samples were collected during heavy livestock utilization, and concentrations ranged from 1203 to 2419 cfu/100mL. Second, photographs were taken during sample collections that show the presence of many cattle within the riparian zone. Lastly, WDEQ visited Lander Creek on September 28th, 2011 at which time cattle were observed within the riparian zone. Grazing will be retained as a source for the Lander Creek listing; however, additional sources can be added when available data or other information indicate the presence of additional significant sources. If SCCD or WACD have data suggesting that there are other significant sources of the bacterial loading to Lander Creek, WDEQ would recommend that these data be submitted to WDEQ for review.

The public comment period for USEPA's draft Recreational Water Quality Criteria closed February 21, 2012. WDEQ submitted comments toward the development of this document. As part of the WDEQ's current Triennial Review, WDEQ has proposed that changes be made to Section 27(a) of Chapter 1. However, as outlined in WDEQ's [Outreach Document](#) for the Triennial Review, these proposed changes are currently in the review process. For information regarding the status of USEPA's draft Recreational Water Quality Criteria or WDEQ's current Triennial Review please contact David Waterstreet at 307-777-6709 or Lindsay Patterson at 307-777-7079.

Entity: USEPA

Comment: Stated that...."Page 57; Last Paragraph – EPA believes that it is most appropriate for Bear Creek (WYNP101800020104_01) to be listed as impaired in Category 5 unless and until site specific standards for copper can be developed. It could be placed into a low priority TMDL category to allow time to work on the new criteria. While the biological metrics show evidence of an unimpaired benthic macroinvertebrate community, both the acute and chronic copper criteria are exceeded. Under EPA's policy of Independent Applicability, the waterbody is considered impaired until the reason for the disagreement between the chemical and biological measures can be determined and criteria modified. Site-specific copper criteria may be appropriate for this waterbody, but it would need to be derived through an analysis of the stream chemistry and the biota present in the waterbody. If WYDEQ decides to list Bear Creek (WYNP101800020104_01) in Category 2 in the final submittal, EPA will review the information and determine whether it is more appropriate to approve, disapprove, or defer action on this waterbody while a resolution to this issue is pursued."

Response: WDEQ has decided to place Bear Creek (WYNP101800020104_01) in Category 3 until this matter can be resolved with USEPA. Category 3 waters include those waters where there are insufficient data to determine whether designated uses are supported. This change has been noted in the text and 303(d) List of the IR and within the GIS streams shapefile and ADB.

Entity: USEPA

Comment: USEPA stated that...."Lander Creek (WYBH100800060104_01) – The IR states that the source is grazing, but the ADB lists the source as "unknown". This should be changed in the ADB."

Response: WDEQ has changed the source of Lander Creek (WYBH100800060104_01) in the ADB to grazing.

Entity: USEPA, WWP

Comment: USEPA stated that...."Page 59; Last Paragraph – EPA continues to believe that a listing for mercury would be justified for Pathfinder and Seminoe Reservoirs since a numeric criterion is not necessary in order to list a waterbody as impaired. A known impairment to the fish tissue consumption designated use could be enough reason to list the waterbody."

Response: WWP stated that "We are disappointed with the method DEQ has chosen to deal with the mercury contamination in fish. Clearly if there are fish consumption warnings issued, the water body is not supporting its designated uses. The DEQ needs to revise its approach in order to be in compliance with the Clean Water Act."

Response: Wyoming currently does not have narrative or numeric fish tissue criteria for persistent bioaccumulating toxins (PBTs). The state's current fish consumption designated use support is assessed on the water column concentration of the pollutant of concern using criteria in Appendix B of [Chapter 1](#). Unless a current water quality criterion is exceeded, the state does not have the basis to make a designated use support determination of non-support. Wyoming fish generally have among the lowest fish tissue concentrations of methylmercury in the country. The concentration threshold (1.0 ppb) for fish consumption advisories in the state has only been exceeded in a few of the largest predatory fish sampled in three reservoirs of the many sampled by WGFD: one 24 inch channel catfish in Bighorn Lake; one 28 inch walleye in Pathfinder Reservoir, and two 30 inch walleyes in Seminoe Reservoir. The vast majority of game fish in these reservoirs have methylmercury concentrations below 1.0 ppb. These reservoirs are appropriately absent from the 2012 303(d) List for methylmercury.

Entity: WACD

Comment: Stated that for page 60, Medicine Bow Sub-basin...“WACD incorporates by reference herein those comments submitted by the Medicine Bow Conservation District.”

Stated that for page 66, Upper Laramie Sub-basin, 6th Paragraph...“WACD incorporates by reference herein those comments submitted by the Medicine Bow Conservation District.”

Response: Comments noted. The Medicine Bow Conservation District did not submit comments to WDEQ regarding the draft 2012 Integrated Report.

Entity: WACD

Comment: Stated that for page 63, Sweetwater Sub-basin...“As per WACD comments from 2010, WACD requests that an update on the status of Crooks Creek be expanded upon. WACD understood that DEQ was going to write a TMDL for this waterbody and proceed with delisting. No further information has been provided on this issue.”

Response: The TMDL dates contained in the 303(d) Lists of the Integrated Reports are considered approximate TMDL initiation dates. Questions regarding the change in TMDL prioritization on Crooks Creek from 2010 to 2012, and any other questions regarding the TMDL Program, should be directed to Kevin Hyatt at 307-777-8582.

Entity: WACD

Comment: Stated that for page 63, Middle North Platte Sub-basin...“In response to the 2010 Integrated Report, it was noted that although the Kendrick area has significant irrigated agriculture, it shares base geology with some other areas of the state that likewise have selenium impairments. The Cody Shale geologic formation underlies many areas of the state that have elevated levels of selenium and chloride. It was forwarded that it was appropriate for the WDEQ to look at the need for site specific criteria at streams that are underlain by this natural load source rather than expect these streams that may have naturally elevated levels to meet the same standards as the rest of the waters of the state. As of this time, we are unaware of effort from WDEQ to develop site specific criteria for selenium on Cody Shale.

In 2011, the Natrona County Conservation District received a large 319 grant to work on continued implementation in the watershed. The TMDL for the North Platte identified opportunities for improvements in irrigation efficiency and delivery, as well as education activities, monitoring, and on farm practices that will be implemented as a result of the grant program in the district. As noted above, The TMDL also identified large numbers of streams in the watershed over Cody Shale that have naturally high levels of selenium, and consultants indicated that it may be necessary to develop site specific criteria on many of these streams.”

Response: Comments noted. The TMDLs for the selenium listed waters within the Kendrick area have not been finalized. Questions regarding these TMDLs, and any other questions regarding the TMDL Program, should be directed to Kevin Hyatt at 307-777-8582. Questions regarding anticipated development of UAAs for site specific criteria should be directed the Water Quality Standards Program by contacting David Waterstreet at 307-777-6709 or Lindsay Patterson at 307-777-7079.

Entity: WGFD

Comment: “Page 57 – “Today, A number of gold dredgers still operate in the watershed within the Platte River Wilderness Area boundary.” We know of gold dredgers operating within the Douglas Creek watershed, but we do not know of any operations inside the Platte River Wilderness Area boundary.”

Response: WDEQ has changed the text on page 57 to read "Today, a number of gold dredgers still operate in the Douglas Creek watershed outside of the Platte River Wilderness Area boundary."

Entity: WGFD

Comment: "Page 66 – "Meeboer Lake is in the Laramie Plains Lake complex southwest of Laramie. Because it is a shallow lake, less than six feet at maximum depth....." Please provide the correct depth as the maximum depth of Meeboer Lake is actually 11 feet."

Response: WDEQ has changed the text on page 66 to read "Meeboer Lake is in the Laramie Plains Lake complex southwest of Laramie. Because it is a shallow lake, eleven feet at maximum depth, summer water temperatures can sometimes rise above the 20°C standard protective of coldwater fish; however, cooler refugia habitat are available for fish."

Powder River Basin

Entity: CCCD, WACD

Comment: CCCD stated that on Page 74, paragraph 2 of the IR that..."CCCD submitted a Section 319 report to WDEQ in April 2010 with data from 2007-2009. Why has CCCD data from 2007-2009 not been reviewed and incorporated in this draft 2012 report in relation to Middle Prong of Wild Horse Creek?"

CCCD stated that on Page 80, paragraph 2 of the IR that..."CCCD submitted a Section 319 report to WDEQ in April 2010 with data from 2007-2009. Why has CCCD data from 2007-2009 not been reviewed and incorporated in this draft 2012 report in relation to Little Powder River?"

"CCCD has not completed a watershed plan for Little Powder River that was approved by WDEQ in 2010. CCCD will be working with the steering committee to amend and extend the plan through 2014 when the TMDL will be complete. This will ensure the watershed plan is consistent with the TMDL."

WACD for page 19, 1st paragraph, page 74, 2nd paragraph, page 80, 2nd paragraph that..."CCCD submitted a Section 319 report to WDEQ in April 2010 with data from 2007-2009. WACD is curious as to why CCCD data from 2007-2009 not been reviewed and incorporated in this draft 2012 report in relation to Donkey Creek and Stonepile Creek, Middle Prong of Wild Horse Creek and the Little Powder River?"

WACD stated that for page 80, Little Powder Sub-basin, 2nd Paragraph..."CCCD completed a watershed plan for Little Powder River in 2006. CCCD will be working with the steering committee to amend and extend the plan through 2014 in accordance with the proposed TMDL."

Response: Section 319 report ON701, which was completed by CCCD, was reviewed by WDEQ in 2010. However, information from these reports was accidentally left out of the draft 2012 Integrated Report. The text in the Little Powder River Sub-Basin section of the 2012 Integrated Report which stated..."CCCD and NRCS have assisted landowners in implementing 13 water quality improvement projects in the watershed, but the effects of these actions on water quality are currently unknown. Local stakeholders and CCCD initiated watershed planning in this watershed in 2007 (WACD, 2007)." has been changed to state that..."CCCD and NRCS have assisted landowners in implementing 13 water quality improvement projects in the watershed, but the effects of these actions on water quality is unknown. Local stakeholders and CCCD initiated watershed planning in this watershed in 2007 (WACD, 2007). CCCD completed a Section 319 project in 2010,

which included data spanning 2007-2009. Data indicated that *E. coli* concentrations in 2008 and 2009 continued to exceed the primary recreational use criterion."

Text has also been added to the Little Powder River Sub-Basin section of the 2012 Integrated Report which states..."CCCD completed a Section 319 project in 2010, which included data spanning 2007-2009. These data indicated that *E. coli* concentrations in 2008 at Soda Well exceeded the primary recreational use criterion."

The text in the Little Powder River Sub-Basin section of the 2012 Integrated Report which stated..."CCCD completed a watershed plan for Little Powder River that was approved by WDEQ in 2010." has been removed and replaced with..."CCCD completed a watershed plan for Little Powder River in 2006."

Entity: LDCD

Comment: In regards to text on page 77 of the 2012 Integrated Report which states..."The USEPA has established National Secondary Drinking Water Regulations that set water quality standards for 15 contaminants, including manganese. USEPA does not enforce these secondary maximum contaminant levels (SMCLs). Instead, they are intended to serve as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor. These contaminants are not considered to present a risk to human health at these SMCLs (USEPA, 1992). Wyoming's aesthetic drinking water criterion for manganese is set at the USEPA SMCL. Crazy Woman Creek exceeds the aesthetic drinking water criterion for manganese, primarily during low flows, but the aquatic life other than fish chronic criterion for manganese has not been exceeded. Lower Crazy Woman Creek was added to the 303(d) List in 2002 for manganese. However, high manganese concentrations are common in streams in the Powder River Structural Basin due to the natural geology (Wasatch and Fort Union Formations), and thus much of the basin does not have a human health criterion for this pollutant in Chapter 1. There are no known sources of anthropogenic manganese in Lower Crazy Woman Creek, and the creek will unlikely ever be used as a drinking water source due to its intermittent hydrology. [Lake DeSmet Conservation District \(LDCD\)](#) requested that the manganese drinking water criterion from Crazy Woman Creek be removed by WDEQ."

LDCD stated that..."The Lake DeSmet Conservation District has not seen any decision from the WDEQ in their previous request (2010) that the manganese drinking water criterion be removed. We would like to inquire as to the status of our request and look forward to your response."

"In your report, WDEQ indicates that USEPA does not enforce secondary maximum contaminant levels (SMCLs). You have, also, indicated that SMCLs are intended to serve as guidelines for public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor. These contaminants are not considered to present a risk to human health at these SMCLs (USEPA, 1992). Given this information, and the fact that it is highly unlikely that Crazy Woman Creek will ever be used as a drinking water source due to its intermittent hydrology, the District is again requesting that WDEQ remove the manganese drinking water criterion and remove Lower Crazy Woman Creek from the *2012 303(d) List – Table 9.4, 303(d) List of Wyoming's Impaired Waters Requiring TMDL studies.*"

Response: Comment noted. Currently, lower Crazy Woman Creek (below I-25) is classified as a warm water game fishery (2ABww). Waters classified as 2ABww also have a drinking water use. The removal of the drinking water use on Crazy Woman Creek will require a Use Attainability Analysis (UAA) demonstrating that the use is not attainable. WDEQ's

rules and policies regarding UAAs can be found in Sections 33 and 34 of [Chapter 1](#) of the Wyoming Water Quality Rules and Regulations and in [WDEQ's Implementation Policies for Antidegradation, Mixing Zones, Turbidity, Use Attainability Analysis and Agricultural Use Protection](#). For more information regarding UAAs and the potential for removal the drinking water use on lower Crazy Woman Creek, please contact David Waterstreet at 307-777-6709 or Lindsay Patterson at 307-777-7079.

Entity: LDCD

Comment: In regards to Pages 117 of the Integrated Report which states that..."North Fork Crazy Woman Creek (Powder River Basin, WYPR100902050100_01) – The 1996 listing for bioindicators as a cause of habitat alterations on the North Fork Crazy Woman Creek was a mistake and this listing has been removed from the 2012 303(d) List."

LDCD stated that..."The District would like to thank WDEQ for acknowledging their error in the "bioindicators" listing on the North Fork Crazy Woman Creek and its subsequent removal from the 2012 303(d) List."

Response: Comment Noted.

Entity: LDCD

Comment: In regards to Pages 76-77 of the IR, LDCD stated that..."In 2010, The District requested results from WDEQ's follow-up monitoring, conducted in 2008. To date, we have not seen any results from monitoring that has been conducted by WDEQ. We would ask that WDEQ make available the results from 2008 and any subsequent years of monitoring. We look forward to the WDEQ summary report, expected in 2012, that would provide a use support determination for North Fork Crazy Woman Creek."

In regards to Pages 135 – Table 9.4. 303(d) List of Wyoming's Waters Requiring TMDL studies – North Fork Crazy Woman – Causes/Sources LDCD stated that..."In the WDEQ's 2010 Integrated Report, 303(d) List of Wyoming's Impaired Waters Requiring TMDLs, North Fork Crazy Woman was listed as having a cause of "habitat degradation". In the 2012 DRAFT Integrated Report, 303(d) List of Impaired Waters Requiring TMDL studies, North Fork Crazy Woman is listed as having a cause of "habitat alterations". We would ask for a clarification on what "habitat alterations" signifies and why the change from the 2010 Report."

"The source for North Fork Crazy Woman is listed as grazing. We would ask whether WDEQ has conducted monitoring and analysis on grazing impacts to North Fork Crazy Woman. If so, we ask that WDEQ share whatever data is available on grazing being identified as the source for "habitat alterations"."

Response: North Fork Crazy Woman (WYPR100902050100_01) was listed in both the 2008 and 2010 303(d) Lists for "Habitat". In past 303(d) Lists, the terms habitat, habitat alterations and habitat degradation were all used interchangeably to represent the same cause. The cause associated with the North Fork Crazy Woman listing was changed in the 2012 303(d) List to "Habitat Alterations" to create consistency in terminology between this and other similar listings in the 303(d) List.

North Fork Crazy Woman Creek was originally added to the 303(d) List in 1996. The basis for this listing was in part from a 1990 Section 319 Report completed by LDCD. The report indicated that..."The intense use of rangeland by livestock has lead to deterioration of the overall condition of rangeland resources. This deterioration has lead to accelerated runoff and erosion on rangeland, and increased nutrient loading of the surface waters. Streams and Reservoirs are being used as sources of water for livestock. Concentration of livestock adjacent to streams and reservoirs has resulted in reduction

and loss of riparian zones, accelerated bank erosion on both streams and reservoirs, and increased nutrient loading of surface waters." A WDEQ summary report, including a use support determination, is expected for North Fork Crazy Woman Creek in 2012. Questions regarding the status of surface water quality monitoring and assessment on North Fork Crazy Woman Creek should be directed to Jeremy Zumberge at (307)-673-9337.

Entity: USEPA

Comment: USEPA commented that..."Page 79; Last Paragraph – Is it known when the long term monitoring data will be available and an assessment can be performed on the lower Powder River?"

Response: As is stated on pages 10 and 11 of the 2012 Integrated Report..."[USGS \(2009b\)](#) reported on the ecology of the Powder River Structural Basin in Wyoming and Montana for the years 2005 and 2006. The study indicated that the biological condition of the mainstem Tongue River and the Powder River above and below Salt Creek and between Crazy Woman and Clear Creeks decreased from upstream to downstream. Most streams in the Powder River basin, however, showed a general trend of increasing biological condition from upstream to downstream. A second [USGS \(2010\)](#) report for the Powder River Structural Basin, spanning the years 2005-2008, was completed in 2010. The goals of the study were to determine the current aquatic ecological conditions and to identify, where possible, the current and future effects of CBM produced water on the aquatic life of the basin. The study found that relatively few of WDEQ's chronic or acute Aquatic Life other than Fish use criteria were exceeded during the study period. In general, tributaries to the Tongue River had macroinvertebrate communities less pollution tolerant than those in the mainstem Tongue River. The macroinvertebrate and algal communities along the Powder River were significantly more pollution tolerant between the confluence with Willow Creek downstream to the confluence with Crazy Woman Creek than the communities above and below this segment. The report was inconclusive as to these causes of these biological patterns. Fish communities were relatively similar throughout the Powder River. Alkalinity, which was used to indicate the influence of CBM produced water, was similar throughout most of the mainstem of the Powder River. An exception to this pattern was noted below the confluence with Burger Draw, where alkalinity was relatively high; however, the same location also had the highest diversity of fish of any site sampled during this study." A third report, published by USGS in December 2011 will be reviewed for the 2014 Integrated Report. Data within the report were collected in 2010. These three reports are primarily intended to support an adaptive management approach to CBM development, but may also be used by WDEQ to make use support determinations.

Entity: WACD

Comment: Stated that for page 76, Crazy Woman Sub-basin..."WACD incorporates by reference herein those comments submitted by the Lake DeSmet Conservation District."

Response: Comment noted.

Snake River Basin

Entity: SCCD, WWP

Comment: SCCD commented on text in the 2012 Integrated Report that states..."In 2010, Western Watersheds Project (WWP) collected E. coli samples on Clark's Draw, which is a small tributary to the Hoback River near Bondurant. A five sample geometric mean exceeded both WDEQ's primary and secondary standards protective of recreational use. The primary source of the excess bacteria is livestock grazing, and a segment of stream from Bar X Road to a point 0.4 miles upstream has been added to the 2012 303(d) List."

SCCD stated that..."We would point out that the description of the location in the text is incorrect. The text describes the Pacific Creek listing. The appropriate description is more likely the following, garnered from the report's tables: "A 1.9 mile segment adjacent to US Route 189, near town of Bondurant. For our purposes, the upper and lower points of the reach should be defined."

WWP stated that..."In reviewing the draft 303d list, it appears some parts of Clarks Draw and Pacific Creek have been mixed up. Bar X road would apply to Pacific Creek not Clark's Draw. Clarks Draw would be at least from the sampling point, or more appropriately about ¼ mile above sampling point to its confluence with the Hoback River."

Response: The text on page 83 of the IR has been changed to state that "...and a 1.9 mile segment adjacent to US Route 189, near town of Bondurant has been added to the 2012 303(d) List."

The data submitted by WWP for Clark's Draw were from a single site. It is unknown to what extent the impairment extends upstream and downstream. In such cases, WDEQ will usually extend the impaired segment to the nearest tributary or road crossing in the upstream and downstream direction. In this case, the impairment was extended upstream and downstream of Forest Road 30531 to the nearest unnamed tributaries. The GIS lakes and streams shapefiles for the 2012 Integrated Report will be available on WDEQ's website in spring 2012.

Entity: SCCD, USFS, WACD

Comment: Commented on text in the 2012 Integrated Report that states... "In 2010, Western Watersheds Project (WWP) collected E. coli samples on Clark's Draw, which is a small tributary to the Hoback River near Bondurant. A five sample geometric mean exceeded both WDEQ's primary and secondary standards protective of recreational use. The primary source of the excess bacteria is livestock grazing, and a segment of stream from Bar X Road to a point 0.4 miles upstream has been added to the 2012 303(d) List."

SCCD stated that..."The source of the bacteria is, again noted as livestock. However, given the facts that there are numerous beaver dams upstream of the stream segment, and there is no information substantiating the assertion that livestock is the primary source, we would request that assertion be removed.

USFS stated that on Page 83 of the IR that..."The text on page 83 referring the listed portion of Clark's Draw should be corrected. The text here says "... a segment of stream from Bar X Road to a point 0.4 miles upstream has been added to the 2012 303(d) List." However, the text on page 116 says that the "... the secondary contact recreational use criterion was exceeded on a 1.9 mile segment adjacent to US Route 189, near town of Bondurant." and that this is the segment placed on the 303(d) list (p. 136). Clark's Draw in this area is an intermittent stream that runs dry in the summer, e.g. the recreation season. Is it appropriate to have a recreational use designation on stream that is dry during the recreation season? The report does not say when in 2010 the samples were obtained that exceeded the recreational use criteria."

WACD stated that for page 83, Greys-Hoback Sub-basin - 3rd Paragraph..."Clark's Draw is being proposed for listing based on data from Western Watersheds Project (WWP). WACD and its districts made a request to review the public data that was submitted by that group. Proposed EPA guidelines are recommending that bacteriological sampling should occur with geometric mean data distribution during a minimum 30 day period and

as much as a 90 day period to avoid bias by episodic pulse events while capturing the overall state of the stream. On the surface it appears that WWP data was collected using a different approach to that being advocated by the EPA, so as to target one land use during a small timeframe. The WWP Clark's Draw geometric mean first sample was collected on 6/12 and was well below the standard; the field notes read "livestock turned out 24 hours ago". The next sample was taken approximately two weeks later. This sample was above the standard, followed by sampling events at 24 hours, 48 hours, 48 hours, and 72 hour intervals. Although the first low sample is included, the later samples in exceedence all occur within a 9 day interval. The only field notes provided by WWP related to the event note cattle presence on or near the stream. Photographs provided by WWP for the corresponding time period show no cattle in the stream itself, or the direct riparian, though some can be observed on stream terraces outside of the direct riparian zone. No notes are present indicating either presence or absence of other contributing factors. This leads us to believe that this sampling was a targeted effort at livestock and not representative of the system over time. We believe that if WWP had followed either the new EPA or the WDEQ recommendations, listing of this stream would not have occur. We further believe that following these new protocols it is highly likely that no exceedences for the required duration would be found in the future, and therefore, it does not make practical sense to classify this small draw as a water requiring the development of a TMDL."

Response: All of Wyoming's surface waters are designated for either primary or secondary contact recreational uses. Clark's Draw is currently designated as a secondary contact recreational use water by WDEQ. Section 27(b) of [Chapter 1](#) of the Wyoming Water Quality Rules and Regulations recreation states that...."In all waters designated for secondary contact recreation, and in waters designated for primary contact recreation during the winter recreation season (October 1 through April 30), concentrations of *E. coli* bacteria shall not exceed a geometric mean of 630 organisms per 100 milliliters based on a minimum of not less than 5 samples obtained during separate 24 hour periods for any 30-day period." The samples collected by WWP on Clark's Draw consisted of 6 samples spanning a 23 day period, and collected during separate 24 hour periods, with an estimated geometric mean of 2,164 cfu/100mL. The six sampling dates ranged from June 12th to July 4th, 2010. A five sample geometric mean was also estimated as 5,562 cfu/100mL for Clark's Draw during a nine day period between June 26th and July 4th, 2010. The sample collection methods, including sampling date selection are consistent with WDEQ's currently adopted water quality standards.

The text on page 83 of the IR has been changed to state that "...and a 1.9 mile segment adjacent to US Route 189, near town of Bondurant has been added to the 2012 303(d) List."

When a suspected source of any surface water impairment is known, it is added as a source to the 303(d) List. Conversely, when a suspected source is lacking, the source of an impairment is listed as unknown. WWP provided several supplemental sources of information along with *E. coli* data that suggest cattle grazing as a source of bacterial loading to Clark's Draw. WWP provided field notes, taken during sample collections, noting the presence or absence and abundance of cattle within the riparian zone. Second, photographs were taken during sample collections that show the presence of many cattle within the riparian zone on July 4th and on adjacent terraces on June 26, July 1st and July 4th. Grazing is appropriately retained as a source for the Clark's Draw listing; however, additional sources can be added when data or other available information indicate the presence of additional sources. If SCCD or WACD has data suggesting that there are other significant sources of the bacterial loading to Clark's Draw, WDEQ would encourage that these data be submitted to WDEQ for review.

The public comment period for USEPA's draft Recreational Water Quality Criteria closed February 21, 2012. WDEQ submitted comments toward the development of this document. As part of WDEQ's current Triennial Review, WDEQ has proposed that changes be made to Section 27(a) of Chapter 1. However, as outlined in WDEQ's [Outreach Document](#) for the Triennial Review, these proposed changes are currently in review. For information regarding the status of USEPA's draft Recreational Water Quality Criteria or WDEQ's current Triennial Review please contact David Waterstreet at 307-777-6709 or Lindsay Patterson at 307-777-7079.

Entity: USFS

Comment: On Page 82 of the IR, stated that"The description of the Gros Ventre sub-basin should include mention of the erosive geology in the basin. The text currently identifies grazing impacts from livestock and wildlife as the cause of bank erosion and channel widening, but does not consider the influence of the geology. One of the largest active landslides in the lower 48 states is located in this sub-basin, as well as the famous Gros Ventre slide. The text also says thorough monitoring has not been conducted in this sub-basin. The Forest Service and partners have been monitoring stream channels and soils (Forest Service), fisheries (Trout Unlimited) and vegetation (Teton Conservation District).

Response: The text on page 82 of the IR has been modified to state that..."The geology of the sub-basin is naturally erosive. Some areas of the sub-basin are thought to be impacted by heavy grazing and browsing by wildlife, which may be causing bank erosion and channel widening. The USFS, TU and TCD have been monitoring channel morphology, riparian vegetation and the health of the fishery within the sub-basin. However, a final report has not been submitted to WDEQ for review."

Entity: USFS

Comment: Stated that on Page 82 of the IR that..."In the second paragraph in this section, there are several references to a "Kearns Meadow". The correct name is "Karns Meadow".

Response: The text on page 82 of the IR has been changed from Kearns Meadow to Karns Meadow where misspelled.

Entity: WWP

Comment: Stated that..."We also find that the DEQ failed to list Middle Fork Fisherman's Creek despite the fact that its geometric mean was 586.6 CFU or 465% of the state standard. The DEQ has not conducted a full UAA, so it can not argue that the secondary contact standard applies."

Response: Middle Fork Fisherman's Creek is currently designated as a secondary contact recreational use water by WDEQ. As stated in Section 27(a) of Chapter 1 of Wyoming's Water Quality Rules and Regulations, *all waters in Table A of the Wyoming Surface Water Classification List are designated for primary contact recreation unless identified as a secondary contact water by a "(s)" notation. Waters not specifically listed in Table A of the Wyoming Surface Water Classification List shall be designated as secondary contact waters. For secondary contact recreation waters, concentrations of E. coli bacteria shall not exceed a geometric mean of 630 organisms per 100 milliliters based on a minimum of not less than 5 samples obtained during separate 24 hour periods for any 30-day period.* The geometric mean of 586.6 cfu/100mL collected by WWP is below the criterion protective of secondary contact recreation waters.

WDEQ is in the process of developing a statewide categorical UAA to designate primary and secondary contact recreational uses for all surface waters of the state. WDEQ has submitted a preliminary draft of this UAA to USEPA for review.

South Platte River Basin

Entity: LCCD

Comment: LCCD stated that..."In review of the listing of impaired reaches on Crow Creek in the South Platte River Basin, the corrections made in this document accurately reflect the selenium, sediment and *E. coli* bacteria impairments and account for changes in stream classification."

Response: Comment Noted.

Entity: LCCD

Comment: LCCD commented on the text on page 87 of the Integrated Report for the South Platte River Basin, Crow Creek Sub-basin for the text that states..."Several years of data indicate that the high *E. coli* counts are primarily related to livestock grazing practices, but recreational users and wildlife may also contribute." LCCD's stated that..." LCCD provides stream *E. coli* bacteria data and livestock grazing proximity to the impaired reach on North Branch North Fork Crow Creek annually to WDEQ. In 2006 and 2007, cattle were often in the impaired pasture or in an adjacent pasture when bacteria levels were highest. However, 2008-2010 displayed very different patterns with elevated bacteria regardless of livestock location. While the *E. coli* data indicates continued impairment of N Branch N Fork Crow Creek, it is evident that in recent years there is no discernible relationship between high levels of *E. coli* and grazing timing. LCCD continues to identify livestock, wildlife and recreation as potential sources but does not believe that existing data supports source determination (Upper Crow Creek Watershed Water Quality Reports 2006-2010). LCCD suggests the following as replacement text: "Several years of data indicate continued *E. coli* impairment likely related to livestock grazing, wildlife and recreational uses."

Response: LCCD's 2008-2010 data demonstrate that the 303(d) Listed segment of North Branch North Fork Crow Creek continues to exceed Wyoming's contact recreational use criteria. Bacterial data from 2008 do not appear to correspond to the timing of cattle grazing in the area for either the "above willows" or "NFSR701" sites. The staff gage data that was collected by the district may indicate that higher *E. coli* concentrations relate to precipitation and higher stream flows. Data from 2009 showed that the peak *E. coli* concentration at above willows occurred when cattle were grazing in "adjacent holding pen" and "adjacent pasture #2". Likewise, peak concentrations at NFSR701 in 2009 occurred when cattle were utilizing the "new holding pasture". Bacterial concentrations at above willows and NFSR701 in August and September 2010 also appear to be correlated with the presence of cattle. There are some trends in LCCD's 2008-2010 bacterial data that do not appear to be related to the presence or absence of cattle. WDEQ recognizes that there are likely other sources of bacteria in the upper Crow Creek watershed than cattle. However, the influence of recreation and wildlife must be supported with survey data (e.g. recreational usage data, riparian vegetation browse data for wildlife) or other information to be added to the 303(d) List as sources. Recreation and wildlife will continue to be recognized as possible sources in the narrative of the 2012 Integrated Report for the Crow Creek Sub-basin.

Entity: WACD

Comment: On page 85, Crow Creek Sub-basin, LCCD stated that..." WACD incorporates by reference herein those comments submitted by the Laramie County Conservation District."

Response: Comment Noted.

Tongue River Basin

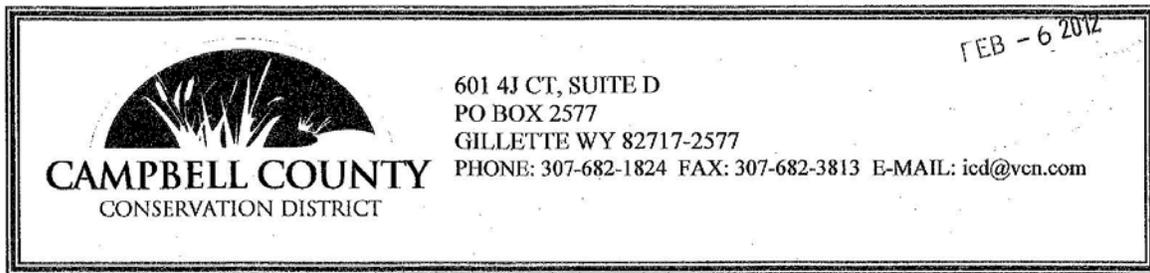
Entity: USEPA

Comment: EPA stated that...“Page 89 – It appears that the legend on this page should read “Category 4, TMDL Completed”. This may also need to be changed on page 93.”

Response: There are 13 impaired waters in the Tongue River Basin for which TMDLs have been completed (category 4A). However, Soldier Creek is considered impaired because of flow alterations and was placed in category 4C in 2010. The legend on page 89 has been changed to state...“Category 4A Waters (Use(s) Not Supported, TMDL Completed or Not Required)” and the legend on page 93 has been changed to state “Category 4A Waters (Use(s) Not Supported, TMDL Completed)”.

Appendix A

Public Comment on the draft 2012 Integrated Report



February 1, 2012

Certified Return Receipt Requested

Mr. Richard Thorp
WY Dept. of Environmental Quality
Herschler Bldg 4-W
122 W. 25th St.
Cheyenne, WY 82002

RE: Comments on Wyoming's Draft 2012 Integrated 305(b) and 303(d) Report

Dear Mr. Thorp,

Below are the comments of the Campbell County Conservation District (CCCD) regarding the state's Draft 2012 305(b) and 303(d) report.

Page 19, paragraph 1

...Belle Fourche River upstream 61.4 miles to Brorby Boulevard....

Comment: CCCD would like to know what data supports the determination for the listing to be changed from ending at an undetermined distance to ending at Brorby Boulevard.

Data from the 2008 Little Powder River and Belle Fourche Drainages Watershed.....

Comment: CCCD submitted a Section 319 report to WDEQ in April 2010 with data from 2007-2009. Why has CCCD data from 2007-2009 not been reviewed and incorporated in this draft 2012 report in relation to Donkey Creek and Stonepile Creek?

A watershed plan and implementation strategy.....

Comment: CCCD would concur the watershed plan focuses on septic system improvements to address the listing, but it also focuses on education of urban and rural residents, urban sewage treatment, storm water runoff, solid waste management, small acreage land use management, and rural development issues.

Comment: CCCD has not completed a WDEQ approved watershed plan for Donkey and Stonepile Creeks in 2010. CCCD will be updating the watershed plan after the Belle Fourche River TMDL is complete so the watershed plan is consistent with the TMDL. Until the TMDL is complete, CCCD will operate under the 2006 watershed plan.

Brenda Schladweiler
Chair

Richard Bonine, Jr
Vice-Chair

Richard VanCampen
Sec/Treas

Jason Oedekoven
Supervisor

Travis Hakert
Supervisor

Page 19, paragraph 2

The City of Gillette is currently pursuing.....

Comment: The City of Gillette has received funding from the Wyoming Wildlife and Natural Resource Trust to help offset the costs of upgrading the Gillette Fishing Lake. These funds were utilized to purchase three (3) floating islands to mitigate the pollution within the Lake.

The TMDLs, which were initiated in 2008, were recently delayed.....

Comment: The UAA submitted by the City of Gillette has been approved by WDEQ and USEPA and the classification of Gillette Fishing Lake has been changed from a cold water game fishery (2AB) to a warm water game fishery (2ABww). The Gillette Fishing Lake TMDL is moving forward and allowable pollutant loads are being adjusted for the classification change.

Page 74, paragraph 2

Comment: CCCD submitted a Section 319 report to WDEQ in April 2010 with data from 2007-2009. Why has CCCD data from 2007-2009 not been reviewed and incorporated in this draft 2012 report in relation to Middle Prong of Wild Horse Creek?

Page 80, paragraph 2

Comment: CCCD submitted a Section 319 report to WDEQ in April 2010 with data from 2007-2009. Why has CCCD data from 2007-2009 not been reviewed and incorporated in this draft 2012 report in relation to Little Powder River?

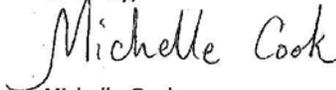
Comment: CCCD has not completed a watershed plan for Little Powder River that was approved by WDEQ in 2010. CCCD will be working with the steering committee to amend and extend the plan through 2014 when the TMDL will be complete. This will ensure the watershed plan is consistent with the TMDL.

Page 120-121, 134 & 136 Table 9.4

Comment: Can WDEQ explain why after changing the standard from fecal coliform to *E. coli*, why some source listings are *E. coli* (Belle Fourche River on page 120) and others fecal coliform (Donkey Creek, Stonepile Creek, and Belle Fourche River on page 121)? Same comment applies to Middle Prong of Wild Horse Creek on page 134 listed for *E.coli* and Little Powder River on page 136 listed for fecal coliform.

CCCD appreciates the opportunity to provide comments on the draft 2012 integrated 305(b) and 303(d) report.

Sincerely,



Michelle Cook
District Manager



Laramie County Conservation District
11221 U.S Hwy 30 – Cheyenne, WY 82009 – Phone (307) 772-2600 – Fax (307) 772-2606

January 26, 2012

Richard Thorp
WY Department of Environmental Quality
Herschler Building, 4th Floor West
122 W. 25th Street
Cheyenne, WY 82002



Dear Richard,

Thank you for the opportunity to comment on Wyoming's Draft 2012 Integrated 305(b) and 303(d) Report. In review of the listing of impaired reaches on Crow Creek in the South Platte River Basin, the corrections made in this document accurately reflect the selenium, sediment and *E. coli* bacteria impairments and account for changes in stream classification. On behalf of the Laramie County Conservation District, I would like to provide the following comment:

305(b) Report: Page 87. *South Platte River Basin, Crow Creek Sub-basin*

“Several years of data indicate that the high *E. coli* counts are primarily related to livestock grazing practices, but recreational users and wildlife may also contribute.”

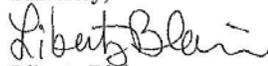
LCCD provides stream *E. coli* bacteria data and livestock grazing proximity to the impaired reach on North Branch North Fork Crow Creek annually to WDEQ. In 2006 and 2007, cattle were often in the impaired pasture or in an adjacent pasture when bacteria levels were highest. However, 2008-2010 displayed very different patterns with elevated bacteria regardless of livestock location. While the *E. coli* data indicates continued impairment of N Branch N Fork Crow Creek, it is evident that in recent years there is no discernible relationship between high levels of *E. coli* and grazing timing. LCCD continues to identify livestock, wildlife and recreation as potential sources but does not believe that existing data supports source determination (Upper Crow Creek Watershed Water Quality Reports 2006-2010).

LCCD suggests the following as replacement text:

“Several years of data indicate continued *E. coli* impairment likely related to livestock grazing, wildlife and recreational uses.”

Thank you for reviewing this comment from the Laramie County Conservation District. If you would like any clarification contact me at (307) 772-2600 or liberty@lccdnet.org.

Sincerely,


Liberty Blain
Water Specialist

CONSERVATION – DEVELOPMENT – SELF-GOVERNMENT



CONSERVATION DISTRICT 621 West Fetterman Buffalo, WY 82834 (307) 684-2526 ext. 3

February 3, 2012

FEB - 6 2012

Wyoming Department of Environmental Quality (DEQ)
Richard Thorp, Integrated Report Coordinator
Herschler Bldg., 4th Floor
122 West 25th Street
Cheyenne, WY 82002

Re: DRAFT Wyoming Water Quality Assessment and Impaired Waters List (2012 Integrated 305(b) and 303(d) Report)

Mr. Thorp,

The Lake DeSmet Conservation District (LDCD) would like to thank DEQ for the opportunity to comment on the DRAFT Wyoming Water Quality Assessment and Impaired Waters List (2012 Integrated 305(b) and 303(d) Report).

The District would like to provide the following comments on the DRAFT 2012 Integrated 305(b) and 303(d) Report.

Comments on the 305(b) Report

Page 76-77 - Crazy Woman Sub-basin (HUC10090205) – North Fork of Crazy Woman Creek

“WDEQ (2003) has conducted monitoring in the watershed, but the effectiveness of the above Section 319 project BMPs in improving physical degradation was not examined. A WDEQ summary report, including a use support determination for North Fork Crazy Woman Creek, is expected in 2012.”

COMMENT: In 2010, The District requested results from WDEQ’s follow-up monitoring, conducted in 2008. To date, we have not seen any results from monitoring that has been conducted by WDEQ. We would ask that WDEQ make available the results from 2008 and any subsequent years of monitoring. We look forward to the WDEQ summary report, expected in 2012, that would provide a use support determination for North Fork Crazy Woman Creek.

Page 77 – Crazy Woman Sub-basin (HUC10090205) – Lower Crazy Woman listing for manganese

“The USEPA has established National Secondary Drinking Water Regulations that set water quality standards for 15 contaminants, including manganese. USEPA does not enforce these secondary maximum contaminant levels (SMCLs). Instead, they are intended to serve as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor. These contaminants are not considered to present a risk to human health at these SMCLs (USEPA, 1992). Wyoming’s aesthetic drinking water criterion for manganese is set at the USEPA SMCL. Crazy Woman Creek exceeds the aesthetic drinking water criterion for manganese, primarily during low flows, but the aquatic life other than fish chronic criterion for manganese has not been exceeded. Lower Crazy Woman Creek was added to the 303(d) List in 2002 for manganese. However, high manganese concentrations are common in streams in the Powder River Structural Basin due to the natural geology (Wasatch and Fort Union Formations), and thus much of the basin does not have a human health criterion for this pollutant in Chapter 1. There are no known sources of anthropogenic manganese in Lower Crazy Woman Creek, and the creek will unlikely ever be used as a drinking water source due to its intermittent hydrology. Lake DeSmet Conservation District (LDCD) requested that the manganese drinking water criterion from Crazy Woman Creek be removed by WDEQ.”

COMMENT: The Lake DeSmet Conservation District has not seen any decision from the WDEQ in their previous request (2010) that the manganese drinking water criterion be removed. We would like to inquire as to the status of our request and look forward to your response.

In your report, WDEQ indicates that USEPA does not enforce secondary maximum contaminant levels (SMCLs). You have, also, indicated that SMCLs are intended to serve as guidelines for public water systems in managing their drinking water for aesthetic considerations, such as taste, color and odor. These contaminants are not considered to present a risk to human health at these SMCLs (USEPA, 1992). Given this information, and the fact that it is highly unlikely that Crazy Woman Creek will ever be used as a drinking water source due to its intermittent hydrology, the District is again requesting that WDEQ remove the manganese drinking water criterion and remove Lower Crazy Woman Creek from the *2012 303(d) List – Table 9.4, 303(d) List of Wyoming’s Impaired Waters Requiring TMDL studies*.

Page 117 – New De-Listings

North Fork Crazy Woman Creek (Little Snake River Basin, WYPR100902050100_01) – The 1996 listing for bioindicators as a cause of habitat alterations on the North Fork Crazy Woman Creek was a mistake and this listing has been removed from the 2012 303(d) List.

COMMENT: The District would like to thank WDEQ for acknowledging their error in the “bioindicators” listing on the North Fork Crazy Woman Creek and its subsequent removal from the 2012 303(d) List.

Comment on DRAFT 2012 303(d) List

Page 135 - Table 9.4. 303(d) List of Wyoming's Impaired Waters Requiring TMDL studies – North Fork Crazy Woman – Causes / Sources

COMMENT: In the WDEQ's 2010 Integrated Report, 303(d) List of Wyoming's Impaired Waters Requiring TMDLs, North Fork Crazy Woman was listed as having a cause of "habitat degradation". In the 2012 DRAFT Integrated Report, 303(d) List of Impaired Waters Requiring TMDL studies, North Fork Crazy Woman is listed as having a cause of "habitat alterations". We would ask for a clarification on what "habitat alterations" signifies and why the change from the 2010 Report.

The source for North Fork Crazy Woman is listed as grazing. We would ask whether WDEQ has conducted monitoring and analysis on grazing impacts to North Fork Crazy Woman. If so, we ask that WDEQ share whatever data is available on grazing being identified as the source for "habitat alterations".

The District appreciates the opportunity to provide comment on the **DRAFT Wyoming Water Quality Assessment and Impaired Waters List (2012 Integrated 305(b) and 303(d) Report**. We have enjoyed our working relationship with WDEQ.

Sincerely,



Nikki Lohse
District Manager

Cc: WACD, Bobbie Frank, Executive Director



Laramie Rivers Conservation District

5015 Stone Rd.
Laramie, WY 82070
(307) 721-0072

FEB - 2 2012

Tony Hoch, Ph.D., P.G.
Director

Richard Thorp
WDEQ-WQD
Herschler Building 4-W
122 W. 25th St.
Cheyenne, WY 82070

February 1, 2012

Mr. Thorp,

We understand that the WDEQ has proposed a segment of the Little Laramie River and two segments of the Laramie River in Albany County for the 303d list of impaired streams based upon our sampling data at 4 sites in the Spring of 2011. We are writing to comment on the proposed listings.

We appreciate the opportunity to collaborate, and these data are a result of a good working relationship we have had with the WDEQ for a decade, starting with a 319 grant to take proactive steps to improve water quality and conduct baseline water quality monitoring in 2002. We believe we have established a good set of baseline data over the past several years for the two hydrologic regimes of spring runoff (4 to 6 weeks in May-June) and base flow in October, which we feel represents the majority of the year.

The data upon which the draft "decision to list" are from Spring 2011, during a time of some of the highest runoff levels for these two streams in recent history. We compiled a table (attached) of geometric means for E.Coli concentrations from the past 5 years. These are samples taken over 5 week periods, generally from early May to early June, and early October to early November. Also included are the range of discharge levels for those sites on the days of sampling. Discharge numbers for the lower sampling site (Mandell Lane) on the little Laramie are unavailable, but we feel the discharge at Millbrook Lane is a good proxy for relative flows a few miles upstream.

We feel it critical to note in the data that discharge during Spring runoff event in question, as with some other outlying events is more than an order of magnitude greater than in the typical Fall flows. During Spring sampling, when we feel streams are too deep and fast to wade, or when the streams are out of their banks, we have sampled by scooping from the bank or from the flood plain when we can't get close to the bank. Thus, these data (particularly the geometric means) don't represent what we believe to be normal in-channel flows, but rather overland flows from areas only submerged during extraordinary flood events. If you look further at the data table, 2011 was an exceptionally high, high water runoff at all of the sites in question. For these reasons, we believe the Spring 2011 data do not represent normal or ongoing condition in these streams because it is a) an extremely high water year and b) the Spring sampling has always been intended by the district to capture the high runoff events and extraordinary conditions, rather than the average or base flow condition.

We believe that looking at the past 5 years of data there is precedence for DEQ seeing and understanding these abnormal conditions, and not listing based on anomalous high geometric means during spring runoff and overbank flow or during other periods that do not represent the normal condition of the system. Additionally we have submitted data in the recent past that were well above the standards, but that DEQ

The Laramie Rivers Conservation District offers all programs and services on a non-discriminatory basis, without regard to race, color, national origin, sex, religion, age, disability, political beliefs, or marital and familial status.

was aware these samples were taken during stream restoration activities when people and machines were present in the channel. No listing occurred as a result of these data. Other data taken during extreme runoff/precipitation events have been collected by our district, and likewise listing has not occurred. It has been our assumption that the DEQ understood the exploratory nature of these endeavors because these data were gathered during high-flow anomalies. These data have never resulted in a listing prior to this draft integrated report, and we do not believe that they should do so now.

Making a correct use support determination is important, and in this case it is critical to note that there has been no major land use change in the vicinity of the sampling sites since we started sampling in 2002. Our data indicate that during normal flow conditions over this long period of time these streams have supported all their beneficial uses appropriately. In fact, our riparian conditions have only improved over time (coming out of the last severe drought cycle) and we have witnessed tremendous improvements in bank vegetation (willows) at all of our sampling sites. It seems then that putting these streams on the list of waters requiring a TMDL would not only be inaccurate, but that it would result in a large amount of human and capital resources going towards an effort that is entirely unnecessary.

To recap, we do not believe the Laramie River and Little Laramie River should be placed on the 303d list because a) the data cited that resulted in the listing were obtained during a particularly high-runoff period (extraordinary conditions) and samples were taken varying from our standard protocol, from the bank or from the flood plain, b) numbers obtained during high runoff were not used to list the streams in the past when DEQ was aware of extraordinary activities affecting the stream, c) the higher than normal spring runoff is a "pulse event" and does not represent the average condition of the stream for most of the year, d) land use has not changed appreciably, rather, stream bank conditions have improved since the early 2000's. If listed, the ensuing watershed planning and TMDL, along with the work involved, would do little to improve conditions as there are no glaring problems, issues, or concerns to be addressed that would change the condition of this system.

Sincerely,



Tony Hoch

Attachment: Lrcd draft 303d comment data.xlsx

The Laramie Rivers Conservation District offers all programs and services on a non-discriminatory basis, without regard to race, color, national origin, sex, religion, age, disability, political beliefs, or marital and familial status.

Geometric Means and discharge ranges	Big Laramie	Big Laramie	Big Laramie	Little Laramie	Little Laramie
	1.1 Woods Landing	1.6 Below Bosler	2.2 Below Millbrook access	2.3 Above Mandell Ln	use 2.2 for relative flow
*Fall 2011 (630 std)	800 to 111	37-135	46-58	23	30
E. Coli Geometric mean	30	32			
**Spring 2011 (126 Std)	522-2254	349-2349	107-1089	270	174
E. Coli Geometric mean	222	152			
Fall 2010	71-105	30-170	31-55	27	77
E. Coli Geometric mean	57	30			
Spring 2010	238-1753	175-750	58-607	19	130
E. Coli Geometric mean	70	47			
Fall 2009	53-86	40-135	37-57	11	31
E. Coli Geometric mean	16	46			
Spring 2009	456-1072	203-1389	115-751	171	48
E. Coli Geometric mean	201	126			
Fall 2008	64-70	33-68	19-22	18	30
E. Coli Geometric mean	12	21			
Spring 2008	298-1170	120-1344	60-396	96	141
E. Coli Geometric mean	150	121			
Fall 2007	56-137	50-132	25-41	23	19
E. Coli Geometric mean	22	24			
Spring 2007	471-915	205-507	315-421	134	172
E. Coli Geometric mean	132	160			

*Fall flows i.:present hydrologic regime of rivers for 10 to 11 months/year

** During spring sampling, rivers are typically too deep to wade (samples scooped from bank) or sampled from water in flood plain

Filename: Lrcd Draft 303d comment data.xlsx

February 3, 2012

Wyoming Department of Environmental Quality

Little Snake River Conservation District, Dawn Arnell

RE: Comments and Supporting Data on Draft 2012 WY Integrated 305(b) and 303(d) Report

The Little Snake River Conservation District (LSRCD) hereby submits the following comments on the Draft 2012 WY Integrated 305(b) and 303(d) Report.

Savery Creek (WYLS140500030408_01) - this reach has been listed on the 303(d) list by DEQ for physical degradation. Chemical data proves that all the state water quality standards are being met. The physical degradation has been remedied by rotational grazing management plan. LSRCD has conducted Benthic Macro invertebrate sampling which demonstrates the stream is meeting aquatic life use support. Data was submitted and DEQ responded this data would be evaluated for the inclusion in the 2012 IR.

West Fork of Loco Creek (WYLS140500030408_02) - Second paragraph states - Monitoring by WDEQ in the Little Snake watershed indicates that aquatic life other than fish uses are fully supported in Dirtyman Fork, Loco Creek, portions of Savery Creek and North Fork Little Snake River within the Medicine Bow National Forest and much of the upper watershed of Little Savery Creek. However, physical degradation of West Fork Loco Creek and lower Savery Creek is considered a threat to aquatic life other than fish and these streams were added to the 303(d) List in 1996 and 1998, respectively. A Section 319 watershed improvement project was completed by the Little Snake River Conservation District (LSRCD) to address these issues.

-West Fork of Loco Creek was included in the Section 319 study when Loco Creek was delisted. There is no physical degradation in this section of stream. Best Management Practice (BMP) - Rotational grazing has been implemented by the permittees to address the listing in 2008 by DEQ. The LSRCD has obtained credible scientific data that demonstrates the stream is meeting the beneficial uses. The physical, biological and chemical data supports the de-listing of the West Fork of Loco Creek. LSRCD will work with WDEQ to provide the necessary documentation to delist this stream. Data was submitted and DEQ responded this data would be evaluated for the inclusion in the 2012 IR.

Muddy Creek Sub-basin (HUC 1450004) Muddy Creek (WYLS1405000401104_01) Reach of Muddy Creek, West of Highway 789, LSRCD staff and WDEQ staff toured this area in 2011. Jointly we will work together to delist this section of stream.

The final paragraph states USGS data collected on Muddy Creek below Youngs Draw between 2006 and 2009 showed exceedances of the chronic aquatic life other than fish chloride and selenium criteria. Muddy Creek was placed on the 2010 303(d) List for both of these pollutants from below Youngs Draw upstream to Deep Creek.

Comment – LSRCD's concern is there is no anthropogenic input into the system that is typically seen with these readings with Selenium and Chloride, this is of natural background. This site needs to be evaluated on natural background, rather than attributed to energy development. Previous studies conducted by USGS indicate natural background sources in some portions of the Little Snake watershed. Rangelands in lower reaches of Muddy Creek have a high occurrence of both Astragalus and Asteracea, which are selenium indicating plants. Based on these findings, the stream needs to have a site specific listing for these parameters rather than listing the entire stream reach.

Popo Agie Conservation District

221 South 2nd, Lander, WY 82520
Phone: 307-332-3114 FAX: 307-332-3855



January 30, 2012

Richard Thorp
WDEQ-WQD
Herschler Building 4-W
122 W. 25th St.,
Cheyenne, WY 82002

FEB - 2 2012

Richard,

On behalf of the Board of Supervisors for the Popo Agie Conservation District, we submit the following comments on the 2012 Draft Integrated 305(b) and 303(d) Report.

On page 23:

- PACD suggests that in the first paragraph, the statement "...has been monitoring 19 sites in the sub-basin since 1999 to assist with watershed planning efforts..." should be changed to, "...monitored 19 sites in the sub-basin from 1999-2002 to assist with watershed planning efforts..." in order to be accurate. The current wording suggests that monitoring at the 19 sites is still occurring.
- Changes should be made to the sentence, "...an additional 1.1 mile section of the Middle Fork of the Popo Agie River downstream from the confluence with Hornecker Creek has been added to the 2012 303(d) List." PACD submits that the WDEQ upstream point of the newly listed segment is not the location where PACD data demonstrates the delineation of bacterial impairment. If this is true, the distance of the section would change also. See attached map.

On page 115, PACD suggests several changes to the following listing: "Middle Fork Popo Agie River (Bighorn Basin, WYBH100800030207_01) – *E. coli* data collected by PACD in 2010 indicated that the primary contact recreational use criterion has been exceeded several times from the confluence with Hornecker Creek to a point 1.1 Miles downstream.”:

- The 305 (b) identifier associated with the new listing should end with “_03” not “_01”. The new segment is correctly identified in the watershed shapefile on page 23.
- After it is determined which confluence point is the upstream terminus of the newly listed impairment, “the confluence with Hornecker Creek” may need to be changed. The

change in confluence point will also change the distance of the new segment from, "1.1 Miles downstream" to a distance yet to be determined.

On page 122, PACD has comments on the newly listed Middle Fork Popo Agie River segment (WYBH100800030207_03).

- Under the location column, "the confluence with Hornecker Creek" and "1.1 miles downstream" will need to be changed to reflect the actual location and distance that PACD monitoring data determined as the delineation of the impairment.
- Under the "Source" column, PACD suggests that the word "grazing" used throughout the 2012 303(d) list (pages 115-140), be replaced by a word or phrase that identifies the cause more precisely such as "livestock waste".
- Septic waste has been considered a likely source of *E. coli* contamination based on PACD monitoring data and land use observations. PACD suggests that "Septic Waste" should be added as a source. PACD would prefer if "Unknown" would remain as a source also.

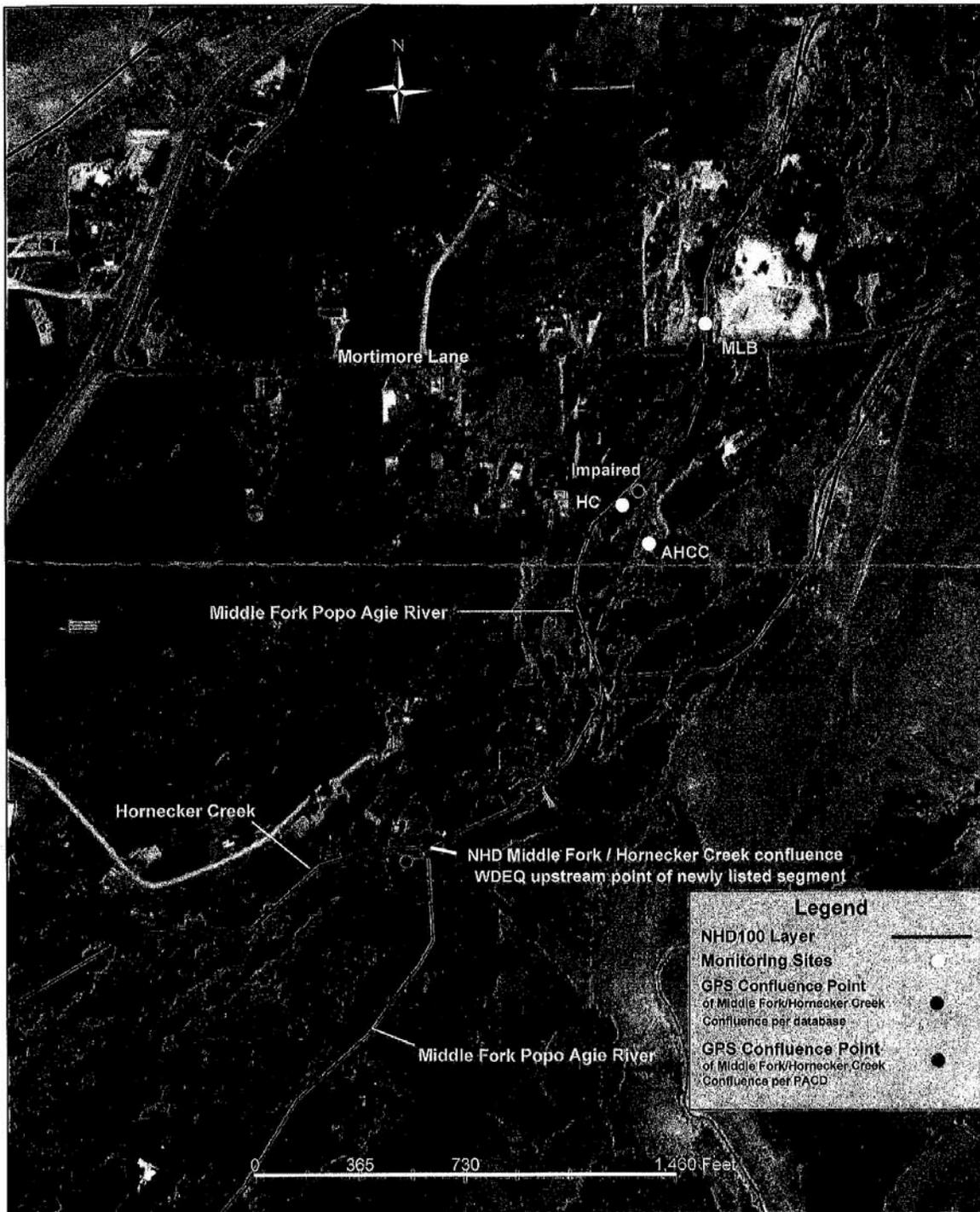
Thank you for the opportunity to provide comments.

Sincerely,



Steve Dutcher
Chairman

Locations of Middle Fork and Hornecker Creek Confluences
Popo Agie Conservation District
All points from GPS
DCM
1/20/12







JAN 23 2012

Richard Thorp, DEQ/WQD
Herschler Building 4-W
122 West 25th Street
Cheyenne, Wyoming 82002

Dear Richard,

The Sublette County Conservation District offers the following with regard to the draft 2012 Integrated Report.

THE DISTRICTS LAND USE POLICIES

The Sublette County Conservation District (SCCD), along with most districts in the State, have an active water quality monitoring program. The important contribution of the districts is acknowledged in the "Draft Wyoming Water Quality Assessment and Impaired Waters List (2012 Integrated 305(b) and 303(d) Report)". However, the SCCD is increasingly alarmed that the WDEQ ignores the important partnership opportunity that districts provide. The SCCD has developed Land Use Policies and among statements in those policies are the following:

- All federal and state mandates governing water or water systems shall be developed in cooperation with the district and be funded by those agencies.
- All water quality studies undertaken by or on behalf of a public land management agency must be coordinated with the District.

Given those elements of Public Land Use Policies, the district is disappointed to not being informed or invited to coordinate with WDEQ on the samples presented by WWP and which have led to three new listings.

Not long ago, the SCCD marshaled considerable resources to complete information gathering for a WDEQ study with the promise of a timely reformation of stream use designation model. It is our contention that the Lander Creek, Pacific Creek, and Clark's Draw listings may likely have been prevented had the development of the stream use designations been completed and implemented. We understand that the coliform counts exceeded any standard. However, we would argue that had they been properly designated, they are much less likely to be used as a tool to advance an agenda.

The Sublette County Conservation District has developed Land Use Policies covering most of our abundant natural resources. With those policies, we pledge to the County's citizens that we will do whatever we can to advance those policies. Therefore, we would request that in decisions about Sublette County's natural resources, we be

Phone 307-367-2257

Fax 307-367-2282

Email: sccd@sublettecd.com

Website: sublettecountycd.com

Conservation - Development - Self-Government

afforded the opportunity to partner with WDEQ at the first practicable opportunity in any study or consideration of a decision regarding our resources.

INDIRECT IMPACTS OF LISTINGS

Other land use policies of the SCCD drive us to monitor the threats to the sustainability of our rangeland agriculture systems. One of the things that occurs when a stream segment (however small) is listed, is the federal grazing allotment associated with that stream segment will then fail the water quality element of the Rangeland Standards and Guides checklist agencies use. This then triggers the federal agency to begin developing new requirements for management of the grazing allotment. When it has not or can not be demonstrated that livestock grazing is the cause or source of the impairment, producers find themselves in the position of implementing a best management practice which may or may not have any bearing on the impairment. Even when the BMP should have some affect on the impairment, more often than not the BMP affects management on the entire allotment, rather than the area encompassing the small segment of a stream, or the BMP may simply shift the time, place, and/or magnitude of animal impact. The situation also triggers increased risk to permit renewal processes. These new listings are great examples of unintended consequences. Little Sandy impairment was triggered decades ago by unknown causes. It will fail Standards and Guides. Livestock management BMP's will be ordered, even though, in the opinion of a world renown hydrologist, livestock grazing management will have no influence on the evolutionary trajectory of the stream in a time period spanning decades. The new E-Coli listings on these other streams will trigger elevated scrutiny, jeopardize permit renewal, and foment BMP's, though the streams are most likely intermittent and the motives of the data source entity are unquestionably hostile to grazing.

COMMENTS SPECIFIC TO THE DRAFT 303(D) REPORT

We have received and reviewed the "Draft Wyoming Water Quality Assessment and Impaired Waters List (2012 Integrated 305(b) and 303(d) Report)". There are three new listings of Sublette County Waters, and another nearby. Below are excerpts from the report and our commentary:

Little Sandy River (Class 2AB)

"In an effort to evaluate the effectiveness of BMPs on reducing sedimentation within the impacted reach, identify potential sources of sediment and determine designated use support, WDEQ committed to monitoring the reach of concern for a period of five years (2004-2008). The resulting study (WDEQ, 2012) found that a section of the Little Sandy River from the northern boundary of Section 33-Township 28 North-Range 104 West-downstream 17.7 miles to the Sublette/Sweetwater County line was not supporting its aquatic life other than fish and cold water fisheries uses, and this segment was added to the 2012 303(d) List. Accelerated bank erosion is the primary cause of the excess sediment and the sources have been identified as livestock and wildlife grazing and historic habitat/channel modifications. WDEQ has received a formal commitment from the above stakeholder group to complete a watershed based plan for the Little Sandy River Watershed."

We would point out that accelerated bank erosion is the source of sediment, not the cause, and that the cause (incorrectly labeled as "source") has not been identified. While livestock and wildlife grazing and historic habitat/channel modifications are handy scapegoats, there is no information supporting the assertion in "Water Quality Condition and Designated Use-Support Determination for the Little Sandy River, Green River Basin, 2004-2008, WDEQ, June 2010". (Which we presume is the WDEQ, 2012 study mentioned above but is not listed in references.) When one points to grazing and modifications as the likely cause there is an implication that alteration of management will be the remedy. A 2011 report on a field visit with Dave Rosgen of Wildland Hydrology indicates that there is nothing which can be accomplished with grazing management to alter the channel evolution which is underway. We are sure that report has been shared with WDEQ.

Lander Creek, Class 2AB

"In 2010, Western Watersheds Project (WWP) collected E. coli samples on Lander Creek, and a five sample geometric mean exceeded both WDEQ's primary and secondary standards protective of recreational use. The suspected source of the excess bacteria is livestock grazing. A 0.5 mile segment of Lander Creek between two unnamed tributaries and adjacent to County Route 132 was added to the 2012 303(d) List. Lander Creek between two unnamed tributaries and adjacent to County Route 132 was added to the 2012 303(d) List."

Since there is no apparent information beyond an un-substantiated suspicion that livestock is the source, we would request that the unsubstantiated assertion be removed. Lander Creek, at the point of the listed impairment is largely a stream comprised of and augmented by irrigation water returns.

Pacific Creek (Class 2AB)

"In 2010, Western Watersheds Project (WWP) collected E. coli samples on Pacific Creek, including a geometric mean that exceeded both WDEQ's primary and secondary standards protective of recreational use. A segment of stream from Bar X Road to a point 0.4 miles upstream has been added to the 2012 303(d) List. The source of the bacteria is unknown."

While this listing is in Sweetwater County, we would make comment. This is probably the more correct way to handle any discussion of what the source of bacteria might be. Pacific Creek, at the point of data collection is certainly not a body of water whose E-Coli bacteria would pose any risk to recreating mankind, pointing out the risk of applying regulations to the point of absurdity.

Clark's Draw (Class 3B)

"In 2010, Western Watersheds Project (WWP) collected E. coli samples on Clark's Draw, which is a small tributary to the Hoback River near Bondurant. A five sample geometric mean exceeded both WDEQ's primary and secondary standards protective of recreational use. The primary source of the excess bacteria is livestock grazing, and a segment of stream from Bar X Road to a point 0.4 miles upstream has been added to the 2012 303(d) List."

We would point out that the description of the location in the text is incorrect. The text describes the Pacific Creek listing. The appropriate description is more likely the following, garnered from the report's tables: "A 1.9 mile segment adjacent to US Route 189, near town of Bondurant."

For our purposes, the upper and lower points of the reach should be defined. The source of bacteria is, again, noted as livestock. However, given the facts that there are numerous beaver dams upstream of the stream segment, and there is no information substantiating the assertion that livestock is the primary source, we would request that assertion be removed.

REASONABLE USE ATTAINABILITY RATINGS

Lander Creek, Pacific Creek, and Clark's Draw are very small streams. In fact, strong arguments can be made that they are, at best, intermittent perennial streams. The lack of a Use Attainability Analysis which makes sense for these streams has created in them a dangerous tool which agenda-driven third party information sources with limited credibility can employ to seriously impair appropriate management. The Sublette County Conservation District implores WDEQ to quickly and efficiently implement sensible Use Attainability Ratings for all streams, thus removing these tiny intermittent/ephemeral waters from the weapons cache of a group like WWP.

SERVING THE PUBLIC INTEREST

The very nature of intermittent and ephemeral streams impairs any ability to manage them in the context we would manage other streams in the context of recreation potential. Listing the streams to meet a regulatory function really does not advance any public interest. In fact, listing the stream causes resources to be diverted from other better applications for the public interest. Therefore, we would submit that these streams ought to have been granted permanent variance from E-Coli listings as being "in the public interest" under water quality rules, Section 27 (d) Variances.

Sincerely,


Darrell Walker, Chairman
Sublette County Conservation District

cc: Sublette County Commission
Wyoming Association of Conservation Districts
Sweetwater County Conservation District



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
Denver, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>

Ref: 8EPR-EP

Richard Thorp
Water Quality Division
Wyoming Department of Environmental Quality
Herschler Building
122 West 25th Street
Cheyenne, WY 82002

February 2, 2012

FEB - 8 2012

Re: Draft 2012 Wyoming
Integrated Report

Dear Mr. Thorp:

We have reviewed Wyoming's draft 2012 Integrated Report and appreciate the opportunity to provide comments. The Integrated Report is well organized and very readable. With a few minor exceptions, the information in the Report, the Assessment Database, and GIS files are consistent. The DEQ has done excellent work in decreasing the confusion regarding impaired stream lengths. We understand that this required considerable effort and now the size of the listed segments is much clearer. EPA does have concerns regarding Bear Creek in the Medicine Bow drainage and feels this waterbody should be listed as impaired until the copper issue can be resolved. EPA is willing to work with DEQ on a resolution to this matter.

We have a few additional comments that should be addressed prior to finalizing the document and these can be found in the Attachment. Please contact me at 303-312-6226, if you have any questions with regard to our comments. Again, we appreciate your diligent work on this report.

Sincerely,

A handwritten signature in black ink that reads "Thomas R. Johnson".

Thomas R. Johnson
Monitoring and Assessment Team
Water Quality Unit
Ecosystems Protection Program

Attachment



Printed on Recycled Paper

Attachment

Comments on Wyoming's 2012 Draft Integrated Report

General Issues

- 1) Use of External Data - Section 2.2 discusses in some detail the monitoring done by the conservation districts and how it is used by WYDEQ. This discussion could be broadened to discuss how DEQ handles and will handle all outside data. Alternatively, a section on other data sources could simply be added.
- 2) WYDEQ should begin preparations for assessing narrative criteria for nutrients. This assessment and any listing decisions resulting from this assessment should be added to the 2014 Integrated Report. There are potentially a number of waterbodies with nutrient issues that could lead to listings. An example could be Crow Creek (WYSP101900090107). It was noted in the last paragraph on page 85 that "high levels of these nutrients [nitrates and phosphates] have been an additional concern."
- 3) Additionally, for future Integrated Reports (including 2014), EPA encourages the inclusion of an assessment based on the state-wide probability survey that has been undertaken by DEQ.

Specific Comments on the Report

- 1) Page 43; First Paragraph – The Sublette County Conservation District found in a study from 2007 that 2 streams (Middle Piney Creek and Muddy Creek) were not meeting aquatic life uses using biological metrics. Sources were identified as a wastewater treatment facility and irrigation return flows. Was this information evaluated for a possible listing? The poor biological condition is noted in the Integrated Report, but no reason is given as to why a listing was not pursued.
- 2) Page 57; Last Paragraph – EPA believes that it is most appropriate for Bear Creek (WYNP101800020104_01) to be listed as impaired in Category 5 unless and until site-specific standards for copper can be developed. It could be placed in the low priority TMDL category to allow time to work on new copper criteria. While the biological metrics show evidence of an unimpaired benthic macroinvertebrate community, both the acute and chronic copper criteria are exceeded. Under EPA's policy of Independent Applicability, the waterbody is considered impaired until the reason for the disagreement between the chemical and biological measures can be determined and criteria modified. Site-specific copper criteria may be appropriate for this waterbody, but it would need to be derived through an analysis of the stream chemistry and the biota present in the waterbody. If WYDEQ decides to list Bear Creek (WYNP101800020104_01) in Category 2 in the final submittal, EPA will review the information to determine whether it is more appropriate to approve, disapprove, or defer action on this waterbody while a resolution to this issue is pursued.
- 3) Page 59; Last Paragraph – EPA continues to believe that a listing for mercury would be justified for Pathfinder and Seminoe Reservoirs since a numeric criterion is not necessary in

order to list a waterbody as impaired. A known impairment to the fish tissue consumption designated use could be enough reason to list the waterbody.

- 4) Page 79; Last Paragraph – Is it known when the long-term monitoring data will be available and an assessment can be performed on the lower Powder River?
- 5) Page 89 - It appears that the legend on this page should read "Category 4, TMDL Completed". This may also need to be changed on page 93.
- 6) TMDLs for West Fork Battle Creek and Haggarty Creek have been approved by EPA. Therefore, these waterbodies can be moved from Category 5 to 4a. Additionally, be sure to make this change in both the ADB and the GIS files.

Discrepancies between the Draft Integrated Report, the ADB and GIS

- 1) Belle Fourche River (WYBF101202010504_00) – The length for one of the listings in the IR (chloride) does not match the other two. It is correct in both the GIS files and the ADB. It should be changed from 21.2 to 14.2 in the IR.
- 2) Muddy Creek (WYBH100800050607_01) – The source is not listed in ADB. It is listed as "unknown" in the IR, but for consistency it should be listed as unknown in the ADB also.
- 3) Kirby Creek (WYBH100800070909_01) - The source is not listed in the ADB. It is listed as "unknown" in the IR, but for consistency it should be listed as unknown in the ADB also.
- 4) Paint Rock Creek (WYBH100800080607_01) – The identifier is listed as WYBH100800080603_01 in both the GIS files and the ADB. These should match with the IR.
- 5) Greybull River (WYBH100800100102_01) - Both the IR and the ADB list the segment as 38.0 miles long, but in GIS it is 44.7 miles.
- 6) Lander Creek (WYNP101800060104_01) – The IR states that the source is grazing, but the ADB lists the source as "unknown". This should be changed in the ADB.
- 7) In the GIS files there are a number of waterbodies listed as category "0". They are in three basins: tributaries to Bear Creek in the North Platte Basin, the upper tributaries to Beaver Creek in the Big Horn Basin, and tributaries to South Paint Rock Creek in the Big Horn Basin. Were these streams assessed? What is their status?
- 8) A number of streams were listed for E. coli in 2010 but are now listed for fecal coliform in 2012. What was the reason for this change? The streams include Donkey Creek (BF), Middle Fork Popo Agie (BH), Granite Creek (BH), Blacks Fork (GR); Little Powder (PR), North Tongue TR), Columbus Creek (TR), Smith Creek (TR), Fivemile Creek (TR), Wolf Creek (TR), Kruse Creek (TR), Soldier Creek (TR), and Prairie Dog Creek (TR).
- 9) In the source summary in Table 9.1.2 – Sources labeled outside the border could be referred to as abandoned mines or added to the hardrock mining category. These categories are more descriptive than "outside the border". Additionally, in the same table discharges from municipal storm water is stated as 56 miles, but in ADB it is only 45 miles.



Forest
Service

Rocky
Mountain
Region

740 Simms Street
Golden, CO 80401
Voice: 303-275-5350
TDD: 303-275-5367

File Code: 2530

Date: FEB 16 2012

Mr. Richard Thorp
WDEQ-WQD
Herschler Building 4-W
122 W. 25th St.
Cheyenne, WY 82002

FEB - 8 2012

Dear Mr. Thorp

Thank you for the opportunity to comment on the Wyoming's Draft 2012 Integrated 305(b) and 303(d) Report. We have reviewed the document as it pertains to waterbodies on National Forest System lands in Wyoming and offer the following comments:

Page 17 – Description of Belle Fourche River Basin and Page 20 – Description of Lower Belle Fourche Sub-Basin

Exploration and mining of rare earth minerals has been significantly increasing on the Bearlodge Ranger District of the Black Hills National Forest. This has the potential to be the most significant issue affecting water quality on the District in the future. We expect that these activities will influence the quality and quantity of water in Beaver Creek, and eventually in the Belle Fourche River, in the not too distant future. We recommend adding mention of rare earth mining as a disturbance in the descriptions of these watersheds.

Page 82 – Description of Gros Ventre Sub-Basin

The description of the Gros Ventre sub-basin should include mention of the erosive geology in the basin. The text currently identifies grazing impacts from livestock and wildlife as the cause of bank erosion and channel widening, but does not consider the influence of the geology. One of the largest active landslides in the lower 48 states is located in this sub-basin, as well as the famous Gros Ventre slide. The text also says thorough monitoring has not been conducted in this sub-basin. The Forest Service and partners have been monitoring stream channels and soils (Forest Service), fisheries (Trout Unlimited), and vegetation (Teton Conservation District).

Page 82 – Description of Greys-Hoback Sub-Basin

In the second paragraph in this section, there are several references to a "Kearns Meadow." The correct name is "Karns Meadow."

Page 83 – Description of Clark's Draw (in Greys-Hoback Sub-Basin)

The text on page 83 referring the listed portion of Clark's Draw should be corrected. The text here says "... a segment of stream from Bar X Road to a point 0.4 miles upstream has been added to the 2012 303(d) List." However, the text on page 116 says that the "... the secondary contact recreational use criterion was exceeded on a 1.9 mile segment adjacent to US Route 189, near town of Bondurant." and that this is the segment placed on the 303(d) list (p. 136).



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Mr. Richard Thorp

2

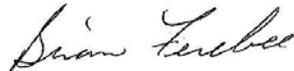
Clark's Draw in this area is an intermittent stream that runs dry in the summer, which is the recreation season. Is it appropriate to have a recreational use designation on stream that is dry during the recreation season? The report does not indicate when, in 2010, the samples were obtained that exceeded the recreational use criteria.

Page 141 – Groundwater Section

There are several locations in the text that refer to 2010 when, from the context of the sentence, it appears they should say 2012. "This **2010** 305(b) report" and "... in **2010** WDEQ will ..." -- has this portion of the report been updated for 2012?

If you have any questions on our comments, please contact Joan Carlson, Hydrologist, at (303) 275-5097 or jycarlson@fs.fed.us.

Sincerely,



BRIAN FEREBEE
Deputy Regional Forester, Resources

cc: Joan Y Carlson, Greg Bevenger, Deanna Reyher, Ronna Simon



Wyoming Association of Conservation Districts
517 E. 19th Street - Cheyenne, WY 82001 - Phone: 307-632-5716 - Fax: 307-638-4099
www.conservewy.com

February 5, 2012

Via Email: rthorpe@wyo.gov

Mr. Richard Thorpe
Wyoming Department of Environmental Quality
Herschler Building, 4th Floor
Cheyenne, WY 82002

Dear Richard,

On behalf of the Wyoming Association of Conservation Districts, we appreciate the opportunity to provide comment on the 2012 Integrated 305(b) and 303(d) report. The Association would like to commend the department on this document. Generally, this document is clear, concise, and the graphics, photographs, links and maps are excellent additions to the report.

Specific comments:

Page 7; 1.Introduction

COMMENT: WACD would encourage DEQ to strengthen the language contained in this paragraph "The U.S. Environmental Protection Agency (USEPA) is charged with administering the CWA. However, states are encouraged to develop their own programs to prevent, reduce and eliminate water pollution.

Section 101(b) of the Act reads as follows:

(b) It is the policy of the Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources, and to consult with the Administrator in the exercise of his authority under this Act. It is the policy of Congress that the States manage the construction grant program under this Act and implement the permit programs under sections 402 and 404 of this Act. It is further the policy of the Congress to support and aid research relating to the prevention, reduction, and elimination of pollution, and to provide Federal technical services and financial aid to State and interstate agencies and municipalities in connection with the prevention, reduction, and elimination of pollution.

WACD would encourage a brief explanation of the state primacy provisions.

1. Section 305(b) Requirements

COMMENT: This section discusses the requirement for the 305(b) report to contain a "description of the water quality of *navigable waters* of the state for the preceding year, including the extent to which current....." (*emphasis added*)

CONSERVATION – DEVELOPMENT – SELF-GOVERNMENT

WACD would suggest that it may be timely for a discussion of which waters meet this definition in the state and subsequently are suitable for inclusion in this report and which waters fall under state jurisdiction and should be removed from this report. As has been determined via fairly significant Supreme Court decisions, those waters that constitute "navigable waters" have been more narrowly defined. WACD believes that there are likely a number of waters that are included in this report that clearly do not meet the definition of "navigable" as determined by the Courts and arguably should be removed from the report.

Page 9, 2.2 Monitoring by Conservation Districts

COMMENT: WACD appreciates the recognition of the monitoring and implementation efforts of the districts. WACD is in the process of publishing an updated Watersheds Progress Report encompassing the timeframe from the 2009 report through the fall of 2011. WACD anticipates publication of this report by the end of February 2011 and it will be available on the Association's website in electronic format at www.conservewy.com.

Page 11, TMDL development schedule

COMMENT: WACD appreciates DEQ retaining the opportunity for timely restorations as describe in #4 and providing the opportunity for restoration efforts to be implemented and that any such efforts would be considered by DEQ. The Association believes that this approach provides the opportunity for local implementation efforts to address these issues at a reduced cost to the taxpayers.

Page 12, 5. Wyoming's Nonpoint Source Program

COMMENT: This paragraph describes some common sources of point and non point source pollution. As indicated in our 2010 comments, the Association believes it would be helpful for a brief narrative were included describing the types of inputs that are considered "natural background", such as wildlife for E.coli and geology for chemical etc.

Page 17, 8.2 Belle Fourche River Basin - 2nd Paragraph

COMMENT: CCNRD completed a watershed plan for the Belle Fourche River in 2005. The CCNRD plans to revisit and update the watershed plan after the completion of the Belle Fourche River TMDL.

Page 19, Upper Belle Fourche Sub-Basin - 2nd Paragraph

COMMENT: CCCD completed WDEQ approved watershed plans for Donkey and Stonepile Creeks in 2006. The CCCD will revisit and update these plans after the completion of the Belle Fourche River TMDL.

Page 19, 1st Paragraph, Page 74, 2nd Paragraph, Page 80, 2nd Paragraph

COMMENT: CCCD submitted a Section 319 report to WDEQ in April 2010 with data from 2007-2009. WACD is curious as to why CCCD data from 2007-2009 not been reviewed and incorporated in this draft 2012 report in relation to Donkey Creek and Stonepile Creek, Middle Prong of Wild Horse Creek and the Little Powder River?

Page 19, Upper Belle Fourche Sub-basin

COMMENT: WACD incorporates by reference herein those remaining comments submitted by the Campbell County Conservation District.

Page 20, 8.3 Big Horn River Basin

While Marston, Anderson and Wohl have been quoted in this document in relation to theories on the nature of the basin and historic events that might have led to erosion and down cutting, little data is in fact available to quantify the effects of historic grazing and to compare them to pre-historic wildlife grazing and other possible influences. WACD believes that available data suggests that good management and stewardship within the basins agricultural community has in fact increased the amount of water, forage, and other resources available in the basin for both domestic and wildlife, and that the positive nature of these actions on the resources, economy, and culture of the area should be noted.

Page 20, 8.3. Big Horn Basin – 1st Paragraph

“Wohl et. al reported that many streams within the Bighorn National Forest have been substantially impacted by cattle grazing, irrigated crop production, flow regulation and diversion, and timber harvest.”

COMMENT: WACD has not had the opportunity to thoroughly review the Wohl et. al report, however the above comment leads one to believe that there is irrigated crop production within the Bighorn National Forest. WACD would question what type of irrigated crop production is occurring on the Bighorn National Forest.

Page 21, Upper Wind Sub-basin - 1st Paragraph

COMMENT: Please change Dubois County Conservation District to Dubois Crowheart Conservation District.

Page 23; Popo Agie Sub-basin

COMMENT: WACD incorporates by reference herein those comments submitted by the Popo Agie Conservation District.

Page 25, Upper Big Horn Sub-basin - 2nd Paragraph

COMMENT: Washakie County Conservation District (WCCD) completed a watershed plan for the Upper Big Horn watershed in 2006 and has recently completed implementation. The WCCD plans to revisit and update the watershed plan after the completion of the Big Horn River and Greybull River TMDL's.

Page 26, 1st Paragraph

COMMENT: Please change HSCCD to HSCD

Page 27, Upper Big Horn Sub-basin – 3rd Paragraph

COMMENT: WCCD submitted a Use Attainability Analysis (UAA) on Fifteen Mile and Nowater Creeks to change the classification from primary to secondary recreation use in 2009. Why are these UAAs not mentioned in this report?

Page 27, Upper Big Horn Sub-basin – 3rd Paragraph

COMMENT: WCCD also reported high levels of E.coli to WDEQ in a 2009 Section 319 Final Report. Please update from 2008.

Page 27, Nowood Sub-basin. 2nd Paragraph, Page 31, 4th Paragraph and Page 32, 2nd Paragraph
SBHCD's data were not available for this report.

COMMENT: WACD contacted SBHCD to inquire as to the status of their data. SBHCD has submitted their water quality data to WWC Engineering in Sheridan for analysis since 2005. SBHCD recently submitted WWC's analysis reports from 2005, and 2008-2010 to WDEQ.

Page 27, Nowood Sub-basin, 2nd Paragraph

A Watershed Plan has been approved by WDEQ and efforts..

COMMENT: WACD suggests the addition of implementation before "efforts"

Page 29, 1st Paragraph

"...WGFD suggested that the banks should be stabilized with woody vegetation and that the reach should be given a significant rest from livestock grazing".

COMMENT: Is WGFD the only entity suggesting this recommendation? It might be beneficial for NRCS, etc. input here as well? Good conservation management should not only contain a preferred alternative, but also other options and alternatives for management that can be selected by land managers based on needs.

Page 30, 1st Paragraph

COMMENT: The Greybull River Watershed Plan was completed in 2010 by the Meeteetse Conservation District. Implementation activities and tasks are underway within the watershed in both Big Horn and Park Counties.

Page 30, 1st Paragraph

"TMDL's are scheduled to be completed in July 2012 for the fecal coliform listings on the Nowood River and Paint Rock Creek."

COMMENT: WACD questions why this is listed under the Greybull Sub-basin narrative?

Page 31, 4th Paragraph

COMMENT: First sentence - Insert of the word "by" in front of WDEQ (2002).

Page 32, Dry Creek Sub-basin and Page 34 – Shoshone River Sub-basin, 2nd paragraph

"As with other areas of the Bighorn basin, historic livestock grazing has shifted upland vegetation from native bunchgrasses to blue grama."

COMMENT: Blue grama is a native, warm-season, low-growing, perennial bunchgrass (From Montana Interagency Plant Materials Handbook * By S. Smoliak, R.L. Ditterline, J.D. Scheetz, L.K. Holzworth, J.R. Sims, L.E. Wiesner, D.E. Baldrige, and G.L. Tibke).

WACD requests that a reference be provided for the above statement.

Page 35 – 36, Throughout

COMMENT: SCS references and material should be updated with current NRCS information.

Page 35, Last paragraph

COMMENT: The last paragraph references that the Shoshone CD has monitored the Shoshone River for two years and the data were not available for the report. WACD has inquired as to the status of this data with the district.

Page 46, Big Sandy Sub-basin, 2nd paragraph

COMMENT: WACD recognizes the SCCD and wishes to reference their comments. We believe that in instances where WDEQ has reason to field check third party data, or otherwise conduct water quality work in a district with demonstrated expertise, they should coordinate with that district.

Page 47, Big Sandy Sub-basin, 2nd paragraph

COMMENT: Pacific Creek is being proposed for listing based on data from Western Watersheds Project (WWP). WACD and its districts made a request to review the public data that was submitted by that group. Proposed EPA guidelines are recommending that bacteriological sampling should occur with geometric mean data distribution during a minimum 30 day period and as much as a 90 day period to avoid bias by episodic pulse events while capturing the overall state of the stream. New proposed protocol from WDEQ would follow this guidance by specifying that the sampling events that compose the geometric mean be evenly distributed throughout the 30 day sampling period. WWP data was collected using a different approach to that being advocated by the EPA and WDEQ. Pacific Creek sampling by WWP occurred with three sampling events within 4 days, with one event a week prior, and one a week later. The only field notes taken, and they are taken in every case, deal directly with the presence or absence of livestock sign or livestock. There are no other notes dealing with other factors that may or may not influence the stream. We believe that if WWP had followed either the new EPA or the WDEQ recommendations, listing of this stream would not occur. We further believe that by following these new protocols, it is highly likely that no exceedences for the required duration would be found, and therefore, it does not make practical sense to classify this small stream as a water requiring the development of a TMDL.

Page 47, Bitter Creek Sub-basin

COMMENT: The Bitter Killpecker Creek Watershed Advisory Group and SWCCD continue to be actively involved in watershed planning, monitoring, and implementation activities. The SWCCD recently received a 319 grant to continue educational outreach and implementation, as well as data analysis in preparation for the development of a TMDL.

Page 51, Little Snake Sub-basin

COMMENT: A brief description of the WDEQ assessment of the 319 project on Savery Creek and its implications to status of the listing would be helpful. WACD incorporates by reference herein those comments submitted by the Little Snake River Conservation District.

Page 60, Medicine Bow Sub-basin

COMMENT: WACD incorporates by reference herein those comments submitted by the Medicine Bow Conservation District.

Page 63, Sweetwater Sub-basin

COMMENT: As per WACD comments from 2010, WACD requests that an update on the status of Crooks Creek be expanded upon. WACD understood that DEQ was going to write a TMDL for this waterbody and proceed with delisting. No further information has been provided on this issue.

Page 63, - 3rd Paragraph

COMMENT: Lander Creek is being proposed for listing based on Western Watersheds Project data. WACD and its districts made a request to review the public data that was submitted by that group. Proposed EPA guidelines are recommending that bacteriological sampling should occur with geometric mean data distribution during a minimum 30 day period and as much as a 90 day period to avoid bias by episodic pulse events while capturing the overall state of the stream. On Lander Creek WWP geometric mean data included samples from

4 consecutive days, a single sample one week prior, and a single sample one week after. Field notes were taken at every event, but only deal with a single factor: livestock. On the surface it appears that WWP data was collected using a different approach to that being advocated by the EPA. New proposed protocol from WDEQ would follow this guidance by specifying that the sampling events that compose the geometric mean be evenly distributed throughout the 30 day sampling period. We believe that if WWP had followed either the new EPA or the WDEQ recommendations, listing of this stream would not occur. We further believe that by following these new protocols, it is highly likely that no exceedences for the required duration would be found, and therefore, it does not make practical sense to classify this stream as a water requiring the development of a TMDL.

Page 63, Middle North Platte Sub-basin

COMMENT: In response to the 2010 Integrated Report, it was noted that although the Kendrick area has significant irrigated agriculture, it shares base geology with some other areas of the state that likewise have selenium impairments. The Cody Shale geologic formation underlies many areas of the state that have elevated levels of selenium and chloride. It was forwarded that it is appropriate for the WDEQ to look at the need for site specific criteria at streams that are underlain by this natural load source rather than expect these streams that may have naturally elevated levels to meet the same standards as the rest of the waters of the state. As of this time, we are unaware of effort from WDEQ to develop site specific criteria for selenium on Cody Shale.

COMMENT: In 2011, the Natrona County Conservation District received a large 319 grant to work on continued implementation in the watershed. The TMDL for the North Platte identified opportunities for improvements in irrigation efficiency and delivery, as well as education activities, monitoring, and on farm practices that will be implemented as a result of the grant program in the district. As noted above, The TMDL also identified large numbers of streams in the watershed over Cody Shale that have naturally high levels of selenium, and consultants indicated that it may be necessary to develop site specific criteria on many of these streams.

Page 66, Upper Laramie Sub-basin, 6th Paragraph

COMMENT: The WACD would refer DEQ to those comments submitted by the Laramie Rivers Conservation District.

Page 76, Crazy Woman Sub-basin

COMMENT: WACD incorporates by reference herein those comments submitted by the Lake DeSmet Conservation District.

Page 80, Little Powder Sub-basin - 2nd Paragraph

COMMENT: CCCD completed a watershed plan for Little Powder River in 2006. CCCD will be working with the steering committee to amend and extend the plan through 2014 in accordance with the proposed TMDL.

Page 83, Greys-Hoback Sub-basin - 3rd Paragraph

COMMENT: Clark's Draw is being proposed for listing based on data from Western Watersheds Project (WWP). WACD and its districts made a request to review the public data that was submitted by that group. Proposed EPA guidelines are recommending that bacteriological sampling should occur with geometric mean data distribution during a minimum 30 day period and as much as a 90 day period to avoid bias by episodic pulse events while capturing the overall state of the stream. On the surface it appears that WWP data was collected using a different approach to that being advocated by the EPA, so as to target one land use during a

small timeframe. The WWP Clark's Draw geometric mean first sample was collected on 6/12 and was well below the standard; the field notes read "livestock turned out 24 hours ago". The next sample was taken approximately two weeks later. This sample was above the standard, followed by sampling events at 24 hours, 48 hours, 48 hours, and 72 hour intervals. Although the first low sample is included, the later samples in exceedence all occur within a 9 day interval. The only field notes provided by WWP related to the event note cattle presence on or near the stream. Photographs provided by WWP for the corresponding time period show no cattle in the stream itself, or the direct riparian, though some can be observed on stream terraces outside of the direct riparian zone. No notes are present indicating either presence or absence of other contributing factors. This leads us to believe that this sampling was a targeted effort at livestock and not representative of the system over time. We believe that if WWP had followed either the new EPA or the WDEQ recommendations, listing of this stream would not have occur. We further believe that following these new protocols it is highly likely that no exceedences for the required duration would be found in the future, and therefore, it does not make practical sense to classify this small draw as a water requiring the development of a TMDL.

Page 85, Crow Creek Sub-basin

COMMENT: WACD incorporates by reference herein those comments submitted by the Laramie County Conservation District.

Page 96, Figure 9.1.2

COMMENT: Figure 9.1.2 indicates assumed sources of pollutants in Wyoming waters. Livestock grazing is listed as 15%. Recent efforts by WACD in watershed planning efforts throughout the state have noted that wildlife numbers and grazing are significant attributes affecting non-point source pollution. In one of four BLM grazing allotments listed in an impacted watershed within the draft report, the Little Sandy grazing allotment, the BLM has allocated 6, 934 total AUMs for grazing livestock, and stated additionally "forage must be provided for approximately 700 antelope, 1580 deer, 25 moose, and 170 elk during the winter. During the summer, forage must be provided for 430 antelope, 400 deer, and 90 elk." A total of 3700 AUMs for wildlife were prescribed or 53% of the estimated utilization of domestic livestock. Similar numbers are present throughout the state, but the impacts of wildlife grazing are not sufficiently indicated in the integrated report. Since the report indicates all sources, i.e. natural sources as 18%, it would be appropriate to brake the wildlife component out or to clarify which section of the "pie" it belongs to in the integrated report.

Page 99 - 140

COMMENT: For clarity, is it possible to include the title of the Section (i.e. 9.2 Category 2 Surface Waters, 9.3 Category 3 Surface Waters, etc.) within the footer of the report?

Page 120-121

COMMENT: According to the 303(d) list on page 120, the Belle Fourche River's cause for not supporting its Recreational Use criteria is due to E.coli and two segments were listed in 1996. On page 121, another segment of the Belle Fourche River was listed the same year for not supporting its Recreational Use criteria, however this segment's cause is Fecal Coliform. Can WDEQ explain why three separate segments of the Belle Fourche River were listed for both E.coli and Fecal Coliform in 1996?

Page 122 -124, 2012 303(d) List

COMMENT: Does the 2010 TMDL date for the Bighorn River and its tributaries reflect when WDEQ internally started planning the TMDL or when the TMDL was initiated?

Page 120 – 140, 2012 303(d) List

COMMENT: WACD supports WDEQ's clarification of impaired segment locations in the 303(d) report.

WACD would like to again commend DEQ on a substantially improved Integrated Report.

Sincerely,



Bobbie K. Frank
Executive Director

Cc: WACD Board of Directors
Wyoming's Conservation Districts
Wyoming Department of Agriculture



WYOMING GAME AND FISH DEPARTMENT

5400 Bishop Blvd. Cheyenne, WY 82006

Phone: (307) 777-4600 Fax: (307) 777-4699

Web site: <http://gf.state.wy.us>

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February 2, 2011

WER 6693
Department of Environmental Quality
Water Quality Division
Draft Water Quality Assessment and Impaired Waters List
2012 Integrated 305(b) and 303(d) Report

Richard Thorp
Department of Environmental Quality
Water Quality Division
Herschler Building, 4W
122 W 25th Street
Cheyenne, WY 82002

Dear Mr. Thorp:

The staff of the Wyoming Game and Fish Department has reviewed the Draft Water Quality Assessment and Impaired Waters List 2012 Integrated 305(b) and 303(d) Report. We offer the following comments.

We continue to believe that water quality of our Blue Ribbon trout fisheries and spawning habitat continues to degrade due to anthropomorphic influences such as large volume water inputs to small drainages from irrigation. These occurrences cause widening of the stream and stream bank erosion with resultant sediment loading to the main stem Shoshone River.

We recommend the Shoshone River from Buffalo Bill to Bighorn Lake be listed as impaired for sediment from non-point sources to make 319 funding available to irrigation districts to reduce their sediment inputs.

Page 34 - Shoshone River sub-basin. A study of the sediment influences to the Shoshone River as referenced in the Shoshone River Sediment Study, a watershed monitoring plan by Scott Collyard, March 2008, has not been referred to in the narrative. No results have been reported or even acknowledged from this study. To our knowledge, this study was slated to be continued in 2009-2010 and we recommend the results should be noted in this document.

Page 57 - "Today, a number of gold dredgers still operate in the watershed within the Platte River Wilderness Area boundary." We know of gold dredgers operating within the Douglas Creek watershed, but we do not know of any operating inside the Platte River Wilderness Area boundary.

Headquarters: 5400 Bishop Boulevard, Cheyenne, WY 82006-0001
Fax: (307) 777-4610 Web Site: <http://gf.state.wy.us>

Mr. Richard Thorp
February 2, 2012
Page 2 - WER 6693

Page 66 - " Meeboer Lake is in the Laramie Plains Lake complex southwest of Laramie. Because it is a shallow lake, less than six feet at maximum depth" Please provide the correct depth as the maximum depth of Meeboer Lake is actually 11 feet.

Thank you for the opportunity to comment.

Sincerely,



For
John Emmerich
Deputy Director

JE/mf/rh

cc: USFWS
Mike Snigg, Laramie Region
Steve Yekel, Cody Region



Wyoming Office
PO Box 11160
Pinedale, WY 82941
Email: Wyoming@WesternWatersheds.org
Web site: www.WesternWatersheds.org

Working to protect and restore Western Watersheds

**Western
Watersheds
Project**

Richard Thorp
305b Coordinator
DEQ
122 West 25th St, Herschler Building
Cheyenne, WY 82002



Wyoming Office
PO Box 1160
Plinedale, WY 82941
Tel: (877) 746-3628
Fax: (707) 597-4058
Email: Wyoming@WesternWatersheds.org
Web site: www.WesternWatersheds.org

Working to protect and restore Western Watersheds

**Western
Watersheds
Project**

Richard Thorp
305b Coordinator - DEQ
122 West 25th St, Herschler Building
Cheyenne, WY 82002

February 6, 2012

Dear Richard,

In reviewing the draft 303d list, it appears some parts of Clarks Draw and Pacific Creek have been mixed up. Bar X road would apply to Pacific Creek not Clark's Draw. Clarks Draw would be at least from the sampling point, or more appropriately about ¼ mile above sampling point to its confluence with the Hoback River.

Also why would the Pacific impairment end at the sampling site instead of downstream at least a mile or more? With this logic one would have to sample 2,000'. The DEQ does not apply this same logic to the streams it monitors. One DEQ site on a stream and the whole stream is listed as supporting.

We also find that the DEQ failed to list Middle Fork Fisherman's Creek despite the fact that its geometric mean was 586.6 CFU or 465% of the state standard. The DEQ has not conducted a full UAA, so it can not argue that the secondary contact standard applies.

We are disappointed with the method DEQ has chosen to deal with the mercury contamination in fish. Clearly if there are fish consumption warnings issued, the water body is not supporting its designated uses. The DEQ needs to revise its approach in order to be in compliance with the Clean Water Act.

One striking thing about the report is the repeated mention of the failure to complete data reporting and analysis, both from the side of the DEQ as well as conservation districts. It is of great concern that data is being collected on streams and still 5 to 10 years later the data is "not available". This is also troubling in the case of the conservation districts which are often funded by 319 grants which require that data be submitted to the DEQ upon completion of the project. Frequently, as is shown in this document many years after the completion of a project, conservation districts have still failed to provide data to the DEQ. Conservation districts which have failed in their contractual obligations should not be granted further funds until the issues have been resolved in addition to whatever other sanctions EPA regulations provide.

I look forward to a revised 303d list from you,

A handwritten signature in black ink, appearing to read "Jonathan B Ratner". The signature is written in a cursive style with large, overlapping loops.

Jonathan B Ratner
Director – Wyoming Office