
Wyoming

Response to Comments on the Draft 2014 Integrated 305(b) and 303(d) Report

Response to Comments for Comment Period Ending December 29, 2014

July, 2015

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WYOMING

1.0 Summary

The Wyoming Department of Environmental Quality (WDEQ) released a draft of the 2014 Integrated 305(b) and 303(d) Report (Draft IR) on November 14, 2014 for a 45-day public comment period that ended at 5 PM on December 29th. Based on the comments received and additional evaluation by WDEQ, WDEQ will be releasing the draft 2014 Integrated Report for another 45-day public comment period due to a number of substantive changes to the report. The primary changes to the report include removal of Pacific Creek (WYGR140401040303_01), Lander Creek (WYNP101800060104_01), and Clark's Draw (WYSR170401030305_01) recreational use impairments. These streams are being removed from the 303(d) List due to significant breaches of fundamental quality assurance quality control protocols during sample analysis.

Additional detail regarding these and other changes made to the 2014 Integrated Report are included in the response to comments, below. The full text of the comments received during the comment period can be found in Appendix A (submitted before the 5 PM deadline) and Appendix B (submitted after the 5 PM deadline). WDEQ considered all of the comments in advance of revising the 2014 Integrated Report and has provided written responses to those comments received prior to the December 29, 2014 5 PM deadline. 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 entity to the development of the 2014 IR.

In addition to the written responses, below, WDEQ did solicit feedback from the Wyoming Office of State Lands to evaluate the comment made by Mr. Jim Magagna regarding the collection of water quality samples from Lander Creek on State Lands. State Lands has reviewed Mr. Magagna's comments and determined that according to the rules in place at the time the sampling occurred, unless Western Watersheds Project can produce information indicating they used their best efforts and any available means to notify the surface lessee of its intent to conduct the sampling, the sampling was not authorized. As mentioned above, WDEQ is removing Lander Creek (WYNP101800060104_01) from the 303(d) List due to data quality concerns; therefore, WDEQ will not request additional information from Western Watersheds Project regarding their efforts to contact the surface lessees.

The following entities submitted comments:

Entity	Abbreviation
Campbell County Conservation District	CCCD
Laramie Rivers Conservation District	LRCD
Little Snake River Conservation District	LSRCD
Magagna Bros., Inc. ¹	MB
Medicine Bow Conservation District	MBCD
Sublette County Conservation District	SCCD
Uinta County Conservation District ¹	UCCD
U.S. Environmental Protection Agency	USEPA
Wyoming Association of Conservation Districts	WACD
Wyoming Department of Agriculture	WDA
Wyoming Game and Fish Department ¹	WGFD
Wyoming Stock Growers Association ¹	WSGA
Western Watersheds Project	WWP

¹ Written comments not received before the December 29, 2014 5PM deadline. These comments are available for review in Appendix B and have been considered during development of the 2014 IR, but a written response has not been provided.

Response to Comments

Within this document, WDEQ addresses comments by first dividing them into two sub-sections, general comments and specific comments. The general comments section contains comments pertaining to the overall structure or content of the 2014 IR, 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 may be addressed collectively with a single response.

General Comments

Entity: U.S. Environmental Protection Agency (USEPA)

Comment: "While EPA has a few minor issues with the draft IR, our primary concern is the lack of documentation of the State's decision to not to use water quality-related data relating to certain state waters. In the process of developing this cycle's list, water quality-related data for a number of water body segments in Wyoming was provided to the Department by several external parties. The State subsequently informed these parties that it would not be using this water quality-related data, and provided a copy of these communications to EPA. The draft 2014 IR does not use or consider the water quality-related data provided by external parties; and it provides no rationale for that omission. Because the water quality-related data that was provided to the Department was existing and readily available, the final 2014 IR must include the Department's rationale for its decision not to use the data. 40 C.F.R. § 130.7(b)(6). This rationale should discuss how the external data submitted to the Department was considered, and the Department's reasons for choosing not to rely on it for listing decisions."

Response: 40 CFR § 130.7(b)(6) states that "Each State shall provide documentation to the Regional Administrator to support the State's determination to list or not to list its waters as required by §§ 130.7(b)(1) and 130.7(b)(2)..." The federal regulations do not require that states include a rationale for not including data within the text of the Integrated Report. However, it is required that this information be submitted to the USEPA Regional Administrator. WDEQ provided USEPA with copies of six letters, dated August 18, 2014, sent to several third parties who had submitted data for the 2014 Integrated Report. These third parties included several Conservation Districts and Western Watersheds Project. These entities and USEPA were notified that WDEQ was reviewing these data submissions pursuant to "Wyoming Department of Environmental Quality Third Party Data Review Criteria"; the criteria document was included as an attachment with these letters. These letters also informed these entities and USEPA that "to ensure sufficient time to complete these reviews and to prevent further delay in submitting the 2014 Integrated Report to USEPA, WDEQ/WQD intends to exclude all third party data from being used for designated use support determinations in the 2014 Integrated Report. Data submissions found to meet all of WDEQ's Third Party Data Review Criteria will be evaluated for designated use support determinations and may be incorporated into the 2016 Integrated Report." WDEQ is providing this Response to Comments as part of the 2014 Integrated Report submission; these documents fulfill Wyoming's requirements under 40 CFR § 130.7(b)(6).

WDEQ will also provide USEPA with copies of additional letters that will be sent to the above third parties. The letters will provide information regarding WDEQ's review of the third party dataset against the data review criteria, identifying any deficiencies or other quality assurance/quality control (QAQC) issues. If appropriate, the letters will provide information about re-submitting data, with deficiencies addressed, for consideration in the 2016 Integrated Report. In addition, WDEQ has been made aware of disputes between Western Watersheds Project and public and private entities regarding the collection of water quality data from private lands. In the letters that will be sent to third

parties and USEPA, entities will be notified "Should you choose to resubmit data with deficiencies addressed, you will be required to provide documentation that data were collected with legal access to sampling sites."

Entity: U.S. Environmental Protection Agency (USEPA)

Comment: "Nutrients and Narrative Criteria – As highlighted in the 2014 IR Guidance Memo (September 3, 2013) EPA encourages states to assess for nutrients using narrative criteria. Until numeric criteria can be developed it is possible that there are waterbodies in Wyoming where narrative standards would be sufficient to determine if a waterbody is impaired for nutrients."

Response: WDEQ currently uses two narrative criteria that are contained in Chapter 1 of Wyoming's Water Quality Rules and Regulations to assess the effects of nutrients on aquatic life designated uses. Narrative criteria include those in Sections 28 (Undesirable Aquatic Life) and 32 (Biological Criteria). These criteria are evaluated using a weight of evidence approach including relevant physical, chemical and biological data. This weight of evidence approach often includes the evaluation of the numeric criteria found in Sections 24 (dissolved oxygen) and 26 (pH), which are used as secondary indicators of nutrient enrichment. Examples of waters that have been assessed as impaired due to nutrient enrichment using this approach include: Gillette Fishing Lake (WYBF101202010601_01), West Fork Loco Creek (WYLS140500030408_02) and North Fork Crazy Woman Creek (WYPR100902050100_01).

Entity: U.S. Environmental Protection Agency (USEPA)

Comment: "It appears that in the Category 5 table some dates for proposed TMDL completion are now older than 2014. If these streams are still the highest priority then the dates should be changed to another time in the near future.

Draft 2014 303(d) List, Table 9.4.1., TMDL Priority Ranking: some of the "TMDL Date(s)" shown in the draft 303(d) list are in the past with some going as far back as 2009. As explained in the draft IR Section 4.0, TMDL Prioritization, states are required to establish a priority ranking process and identify individual waterbody, impairment causes (i.e., aka waterbody / pollutant combinations (WBPCs)) targeted for TMDL development in the years subsequent to listing.

States have a significant amount of discretion in the prioritization of the WBPCs on their 303(d) list. The EPA only requires states to consider the severity of the impairment and the designated uses of the waters in the priority ranking process. States may use additional priority ranking factors suggested by EPA and/or add their own factors. The priority rankings should be either in the form of a scheduled TMDL completion date or a ranking such as high, medium, or low. The EPA expects that the resulting "high priority" (or those with dates covering the period until the next 303(d) list if expressed as a schedule) WBPCs represent the impairments the state intends to have completed TMDLs in the subsequent two years until the next 303(d) list.

In light of the current TMDL Visioning Process EPA would like to discuss further the options available to WDEQ in prioritizing TMDL development."

Response: Completion of TMDLs can be delayed due to insufficient data, staff resources, concerns from stakeholders, EPA delays, etc. As such, WDEQ has not included expected TMDL completion dates within the IR and instead focuses on the date when TMDLs are likely to be initiated. As is stated in the table heading for Table 9.4.1, the "TMDL Date" column represents the year in which WDEQ expects to initiate TMDL development. Listings with TMDL dates earlier than 2014 (e.g. Bear River, WYBR160101010303_01) represent TMDLs that are currently being developed. For clarification, text in the table heading has

been changed to "The TMDL date in the far right column represents either the year during which TMDLs that are currently being developed were initiated or the year WDEQ expects to begin TMDL development."

Section 4.0 of *Wyoming's Methods for Determining Surface Water Quality Condition and TMDL Prioritization* (Assessment Methodology) explains how the WBPCs are prioritized. The prioritization methods account for the severity of the pollutant and uses, as required by section 303(d) and CFR 130.7(c)(2)(D). These dates provide a schedule for which WBPCs will have TMDLs started in the next two years and provide the priority ranking based on a high to low ranking. WBPCs with dates closer to the current year are higher priority than WBPCs with dates further into the future. Section 4.0 also explains how WDEQ uses several other factors in the ranking and scheduling of TMDL development. The "TMDL Date" methodology used by WDEQ was initiated to provide stakeholders with a better estimate of when TMDLs would be initiated for each 303(d) Listed water.

The WBPCs and associated dates currently listed in the Draft 2014 IR Table 9.4.1 indicate that there are 25 TMDLs with higher priority ranking that will have the TMDL process started before the 2016 IR reporting cycle. These dates and prioritization schedule have taken into account the TMDL vision process. WDEQ expects to discuss this with USEPA during FY2015.

Entity:

Wyoming Association of Conservation Districts (WACD)

Comment:

"WACD appreciates the opportunity to work collaboratively with DEQ to further define numerous elements of data collection to ensure that integrity, defensibility and reliability exist in the data DEQ is utilizing to make use support determinations, as contemplated by **35-11-103 (9c)(xix)**. As a result of detailed review of data submitted by a non-governmental advocacy non-profit organization, several broader issues have arisen that the Association believes warrant further review and discussion. Those include the following:

- 1.) WACD would suggest there may be a need for the Wyoming State Legislature to revisit the credible data statute to ensure the language is more clearly defined. WACD would like to meet with the leadership of DEQ to discuss the potential for working collaboratively with the State Legislature to work on language to strengthen this statute.
- 2.) In addition to legislative action, WACD would suggest in the next revision, if not sooner, of Chapter 1, and as DEQ discussed in the Methodologies document, the rules pertaining to credible data, should be revisited. Special emphasis should be given to the following issues:
 - a. Training and qualifications for individuals conducting surface water quality monitoring.
 - b. Methods for ensuring preconceived bias are limited in data collection via sampling design and sampling activities.
 - c. Acceptable methods for collecting, processing and reporting E. coli.
 - d. Expectations for quality control/assurance of data sets submitted for consideration in making use support determinations.
 - e. Expectations that an entity conducting monitoring will abide by Standard Operating Procedures as set forth in DEQ's SOP manual.
 - f. Expectations that monitoring entities will abide by State law as it pertains to private property and trespass.
 - g. Review of prioritization and scheduling of TMDL development. Prior approaches for TMDL prioritization included but were not limited to, recognition of local

watershed efforts. WACD still believes where feasible this approach to addressing impairments locally prior to the TMDL warrants consideration in the prioritization process.

Further, the Association would suggest that DEQ give some consideration to actual recreational use and potential for human health impacts when scheduling *E. coli* TMDLs. With the average cost of a TMDL at \$150,000 it is important that resources are focused where the potential risk to human health is highest versus low flow, standing shallow puddles, isolated and remote waters where minimal opportunity for submersion exist and hence human health impact are unlikely."

Response: 1.-2.) WDEQ would be happy to discuss potential changes to W.S. 35-11-302(b) and corresponding changes to Chapter 1, Section 35 with interested stakeholders, recognizing of course that modifications to the Wyoming Statutes fall entirely within the discretion and authority of the State Legislature. However, because W.S. 35-11-302(b) directs the administrator "after receiving public comment and after consultation with the advisory board, shall recommend to the director rules, regulations and standards..." describing the use of credible data in designating uses of surface waters and the use of credible data in determining a water body's attainment of designated uses, WDEQ suggests that stakeholders determine whether they would recommend changes to both W.S. 35-11-302(b) and Chapter 1, Section 35 or changes to Chapter 1, Section 35 only.

If changes to W.S. 35-11-302(b) are pursued, WDEQ recommends that changes to Chapter 1, Section 35 occur following changes to the statute so that any modifications to W.S. 35-11-302(b) can be incorporated into Chapter 1, Section 35.

If changes to W.S. 35-11-302(b) are determined to not be necessary, WDEQ could include an evaluation of Section 35 with the next triennial review of Chapter 1 if interested stakeholders believe that would be beneficial. WDEQ would also advise stakeholders that "Wyoming's Methods for Determining Surface Water Quality Condition and TMDL Prioritization" is also an integral document in identifying data quality and sufficiency requirements and that any discussions of Wyoming's credible data requirements should include a thorough evaluation of which elements are appropriate for inclusion in the state statutes, in rules, and in policy.

During the most recent revision of *Wyoming's Methods for Determining Surface Water Quality Condition and TMDL Prioritization* (Assessment Methodology) that became effective April 29, 2014, WDEQ addressed some of the items listed by WACD, above. WDEQ is currently working on making additional revisions to the Assessment Methodology that will further address some of the other issues raised by WACD. WDEQ will work with interested stakeholders to address any identified deficiencies in the Assessment Methodology during the revision of that document.

a,b. WDEQ is evaluating the need for additional detail on "training and qualifications" and "preconceived bias" within the Assessment Methodology.

c,e. WDEQ makes recommendations on acceptable methods for collecting, processing and reporting *E. coli* in the "Escherichia coli & Total Coliform Bacteria Colilert-Defined Enzyme Substrate Method" Standard Operating Procedure. However, the Assessment Methodology also describes that "A variety of scientifically defensible laboratory and field methods may be used to collect and analyze data for water quality assessments. WDEQ's Manual of Standard Operating Procedures for Sample Collection and Analysis contains information regarding the standard sampling and analysis methods and references, data handle and field equipment *commonly* used

by WDEQ's Surface Water Quality Monitoring Program." The SOP manual is not inclusive of all scientifically defensible laboratory and field methods. In addition, since WDEQ is primarily concerned that data collection and interpretation is reproducible, scientifically defensible, and free from preconceived bias, slight deviations from the SOPs that do not impact data quality and integrity are considered acceptable.

- d. WDEQ's next revision of the Assessment Methodology will incorporate additional expectations for quality control/assurance of data sets submitted for consideration in making use support determinations.
- f. The April 29, 2014 revision of the Assessment Methodology outlined that "For data collected specifically for use support determinations (i.e., assessments), WDEQ requires a pre-approved sampling and analysis plan (SAP) and a quality assurance project plan (QAPP). All SAPs must include: study goals and objectives, site location information (latitude and longitude and map), overall study design, water quality parameters, sampling duration and frequency, sample collection and analytical methods, quality assurance project plan, documentation indicating that the entity has obtained permission to sample study sites on State, National Park Service and private lands (this includes permission to access all study sites)." WDEQ anticipates that this revision sufficiently addresses concerns regarding State law as it pertains to private property and adequate authorization to sample.
- g. WDEQ uses the factors in Section 4.0 of the Methods to prioritize, rank and schedule TMDL development. Factors three and five highlight the agency's recognition of local efforts in prioritization. For example, WDEQ recently met with the Popo Agie Conservation District several times to understand the tremendous effort taking place in the Middle Fork Popo Agie Watershed and the resulting *E. coli* reductions that have been observed. As a result, WDEQ has postponed developing TMDLs in the watershed until FY2016 or later, to recognize pollution reduction successes and to allow for further reductions through BMP implementation. The above is one of many possible examples of WDEQ's commitment to early coordination between local stakeholders during TMDL prioritization.

WDEQ currently considers the relative risk for full body contact recreation when prioritizing *E. coli* TMDLs, as outlined in factors two and six in the Methods. Nearly all USEPA approved *E. coli* TMDLs and those currently being developed have focused on waterbodies near heavily populated areas. However, in some cases, TMDLs on waterbodies located in relatively remote settings have been developed in conjunction with TMDLs in the same watershed or geographic region to maximize departmental resources and keep costs low. Lastly, WDEQ's current cost per TMDL "project" is approximately \$150,000. These projects usually include multiple stream segments within a watershed rather than single segments in an effort to maximize limited resources.

- Entity:** Wyoming Association of Conservation Districts (WACD)
- Comment:** "3.) WACD appreciates DEQ's intent to incorporate specific data quality, assurance, integrity expectations within "Wyoming's Methods for Determining Surface Water Quality Condition and TMDL Prioritization" (Assessment Methodology) in early 2015 as articulated in correspondence to the Wyoming Department of Agriculture and the Association November 18, 2014."
- "4.) WACD also appreciates DEQ's intent to collaborate more closely and provide notification to local Conservation Districts of the Agency's surface water quality

monitoring activities and site visits. Conservation Districts, as local governments, are charged statutorily with the responsibility for providing for water quality protection and are funded to do so, in part, by the Wyoming State Legislature. Close coordination between the Agency and local Districts on water quality related issues is of paramount importance to ensure a collaborative effort."

Response: WDEQ anticipates releasing a draft of the Assessment Methods in the coming months that incorporate additional QA/QC requirements and WDEQ's intent to collaborate more closely and provide notification to local Conservation Districts and land management agencies when conducting surface water quality monitoring activities and site visits. WDEQ recommends that interested stakeholders review this document when it becomes available for public comment and provide comments during the comment period so that WDEQ can adequately address any deficiencies or potentially incorporate additional recommendations.

Entity: Wyoming Association of Conservation Districts (WACD)

Comment: "WACD would also suggest that representatives of the Environmental Protection Agency may need to be involved in these discussions as well. According to field data sheets and information submitted by WWP in response to litigation, EPA accompanied Western Watershed Projects, during their field monitoring activities in 2010 in Fremont and Sublette counties. WACD understands that DEQ was unaware of EPA's involvement and certainly the local Conservation Districts were unaware of EPA's field work in Wyoming. Furthermore, the private landowner who owns the land where the EPA accompanied Western Watershed Project was unaware and had not been contacted nor provided access permission to either Western Watersheds, or EPA.

Lastly, it was conveyed by DEQ personnel during a meeting held to discuss the 2012 listings and data submitted by WWP for consideration in 2014 that EPA had conveyed to DEQ during an interagency meeting that EPA had an expectation that DEQ would accept and utilize the 2012 WWP data to list Pacific Creek, Lander Creek; and Clarks Draw. It is deeply concerning to WACD that EPA would place undue pressure on the state agency with delegated authority the requirement to accept data that does not meet quality control/assurance requirements. The issues with these data sets are articulated below in more detail. WACD fails to see how these data sets comply with EPA's own data quality criteria."

Response: WDEQ remains unaware as to the number of study sites or the locations of sites that were visited by USEPA. USEPA generally does not coordinate with WDEQ when conducting site visits. WDEQ would be happy to include USEPA in any discussions with interested stakeholders. Please notify WDEQ in advance and we will do our best to ensure that EPA is included in any meetings or discussions.

WACD's statement that..."it was conveyed by DEQ personnel during a meeting held to discuss the 2012 listings and data submitted by WWP for consideration in 2014 that EPA had conveyed to DEQ during an interagency meeting that EPA had an expectation that DEQ would accept and utilize the 2012 WWP data to list Pacific Creek, Lander Creek; and Clarks Draw" is incorrect. During the interagency meeting, WDEQ personnel described a meeting that occurred in Cheyenne between USEPA and WDEQ during which WWP's data submission for the 2010 IR as well as several other unrelated matters were discussed. During the meeting, USEPA was informed that WWP's 2010 data submission had failed WDEQ's QA/QC review and was therefore being rejected in its entirety. Also during the meeting, USEPA mentioned that although WDEQ was justified in rejecting WWP's dataset, there were other state's in USEPA Region 8 that would likely accept data of similar quality. During this meeting, USEPA did not pressure WDEQ to accept any data from WWP or any other entity for designated use support determinations. WDEQ's 2010

data submission rejection letter to WWP (see Appendix C) was emailed to Bobbie Frank of WACD on June 2, 2014 by request. The data used to list Pacific Creek, Lander Creek and Clarks Draw in the 2012 IR had not yet been submitted to WDEQ for review at the time of meeting between USEPA and WDEQ; therefore, these data could not have been discussed. WDEQ has not had any meetings with EPA regarding WWP data on Pacific Creek, Lander Creek, and Clarks Draw.

Entity: Wyoming Association of Conservation Districts (WACD)

Comment: "5.) WACD also would suggest that some consideration and discussion occur related to waters that are currently being classified in the 4(c) category as impacted by irrigation/water right diversions. As a result of the proposed categorization of Rock Creek; Medicine Bow Conservation District, the issue of appropriate categorization has been raised. WACD would appreciate DEQ revisiting this issue and the agencies determination to categorize these waters in 4(c)."

"Pages 11-12, 2.3 USEPA Categorization

COMMENT: As indicated above in general comments, WACD requests that DEQ convene a workgroup or task force to evaluate and discuss the categorization process for future Integrated Reports.

As DEQ is aware and has been conveyed by several districts and water right holders, based on DEQ's description of category 4C, which states: "Augmenting and/or decreasing natural stream flows are collectively termed "flow alterations" by WDEQ for purpose of assessing designated use support." Potentially, the 4C category could result in nearly every drainage having numerous waters categorized as such. WACD would suggest that an alternative view of stream flow modification is warranted and believe this discussion should be further developed."

Response: During meetings with the Medicine Bow Conservation District and other stakeholders, WDEQ described our intent to evaluate the surface water standards to determine how the state could more accurately describe and assign designated uses to flow altered waters. Recent legislation signed by the Governor has also directed DEQ to "prepare a schedule to develop appropriate water quality standards based on the completion of a use attainability analysis for any waters that have been identified pursuant to 33 U.S.C § 1315(b) where dams, diversions or other types of hydrologic modification preclude attainment of any existing water quality standards."

WDEQ will be developing a plan to conduct UAAs for all waters where designated uses have been identified as impaired due to flow alterations. This includes the four waters currently in category 4C of the Integrated Report and the three waters proposed for category 4C in the 2014 Draft Integrated Report. WDEQ is still evaluating the best options for addressing the seven Category 4C waters. Potential options include, but are not limited to, modifying the surface water standards to include a new flow altered biological use and/or developing site-specific criteria for waters where biological communities are impaired due to flow alterations.

Wyoming's Assessment Methodology should clearly articulate how categorization decisions are made; if this process is not clear, WDEQ suggests that stakeholders make recommendations during the upcoming revision of the Assessment Methodology. In advance of releasing the Assessment Methodology for public comment, WDEQ hopes to clarify the instances in which categorizing a water as 4C is appropriate. WDEQ will generally only use category 4C in instances where no pollutants can be identified as the cause for a designated use impairment. In instances where exercising a valid water right

is causing a designated use impairment, WDEQ will evaluate the need to conduct a UAA to more appropriately establish the water quality expectations for the water.

Entity: Wyoming Association of Conservation Districts (WACD)

Comment: **"Page 7, 1.2 Section 303(d) Requirements**

COMMENT: WACD specifically request notice of the initiation of the two week period during which the public may contact the Administrator to request a review of the proposed 303(d) list before the Water and Wastewater Advisory Board."

Response: This Response to Comments document will be released along with a second draft of the 2014 Integrated Report. Once the second comment period closes, WDEQ will produce a Response to Comments document for that comment period. If WDEQ does not release the IR for another comment period, WDEQ will notify each of the commenters of the two week period that they can contact the Administrator to request a review of the proposed 303(d) List before the Water and Waste Advisory Board.

Entity: Wyoming Association of Conservation Districts (WACD)

Comment: **"Page 8-9, 2.1 Data Requirements**

COMMENT: WACD appreciates the additional information added under this section including the Credible Data Statute and Chapter 1, Section 35 regulations. WACD and the 34 Conservation Districts within Wyoming take the Credible Data Statute very seriously and strive to ensure that district personnel are trained and qualified to conduct surface water quality monitoring activities, they are doing so under an accepted Sampling and Analysis plan abiding by quality control/assurance measures. Further, WACD supports the including of the requirement that in addition to field data sheets that the supporting qa/qc materials are also submitted. A review of these supporting field logs and lab analysis logs and qa/qc documentation is important in maintaining integrity and quality in Wyoming's surface water program. WACD has been working with districts across the state to ensure that they continue to meet all the necessary requirements resulting in credible data."

Response: WDEQ appreciates WACD's support of this change. WDEQ will continue to work with WACD and other stakeholders to ensure that sufficient detail on quality assurance/quality control requirements are included in the Assessment Methodology so that credible data requirements are clearly articulated and sufficiently met with all data submissions.

Entity: Wyoming Association of Conservation Districts (WACD)

Comment: **"Pages 9-11, 2.2 Designated Uses and 2.3 USEPA Categorization**

COMMENT: WACD appreciates the addition of the definitions of the nine designated uses, Table 1 and the USEPA Categorizations to the beginning portion of the documents rather than at the end as in previous reports. The information is more thorough; flows better and is easier to reference.

WACD would also like to commend DEQ on the completion and submittal of the Categorical Use Attainability Analysis for Recreation. This UAA will allow for a defensible designation of primary and secondary contact recreation uses on Wyoming's surface waters. WACD supports this UAA and looks forward to EPA's timely approval."

Response: WDEQ appreciates WACD's support of these changes. WDEQ also appreciates WACD's and other stakeholders' integral involvement in the development and revision of the *Categorical UAA for Recreation*. WDEQ also expects a timely approval of the UAA by USEPA following the public hearing scheduled for September 2015, given USEPA's prior and ongoing support of the technical approach WDEQ used in developing the UAA.

Entity: Wyoming Association of Conservation Districts (WACD)

Comment: **"Page 16-17, 4.0 TMDL Prioritization**

COMMENT: As indicated in general comments, WACD believes that further discussion is warranted related to DEQ's TMDL development schedule. WACD continues to believe providing local districts and watershed steering committees the opportunity to address impairments prior to TMDL development, where possible, is a preferred approach."

Response: WDEQ uses the factors in Section 4.0 of the Assessment Methodology to prioritize, rank and schedule TMDL development. Factors three and five highlight the agency's recognition of local efforts in prioritization. An example of WDEQ's efforts to provide local districts an opportunity to address impairment prior to TMDL occurred recently with the Popo Agie Conservation District. WDEQ met with PACD several times to understand the tremendous effort taking place in the Middle Fork Popo Agie Watershed and the resulting *E. coli* reductions. As a result, WDEQ has postponed developing TMDLs in the watershed until FY2016 or later, to recognize pollution reduction successes to date and to allow for further reductions through BMP implementation. WDEQ welcomes additional discussion regarding options for prioritizing TMDL development, and encourages interested stakeholders to contact David Waterstreet at 307-777-6709 regarding those issues.

Entity: Wyoming Association of Conservation Districts (WACD)

Comment: **"Green River Basin – Pacific Creek; listed 2012 (page 159); North Platte River Basin – Lander Creek; 2012 (page 163) and Snake River Basin – Clarks Draw; 2012 (page 170)**

WACD would like to bring specific attention and focus to those waters listed in 2012 utilizing data provided from Western watersheds Projects. In 2012, the Association submitted comments on these proposed listings and referenced concerns with the sampling schedules, representativeness of the sampling, and biasness. Since the 2012 list was published, the Association has obtained from DEQ the data and information utilized by the Agency to make the listing decision. Plus additional subsequent information related to these monitoring sites and data.

The Association would suggest, pursuant to 40 CFR 130.7 (b)(5)(iv), which states: Any other reasonable information requested by the Regional Administrator. Upon request by the Regional Administrator, each State must demonstrate that good cause for not including a water or waters on the list. Good cause includes, but is not limited to, more recent or accurate data; more sophisticated water quality modelling: **flaws in the original analysis that led to the water being listed in the categories in 130.7(b)(5)**; or changes in conditions, e.g., new control equipment, or elimination of discharges. **(emphasis added)**

WACD believes that additional information has become available, that the DEQ did not have available at the time of listing, pertaining to data utilized to list Pacific Creek, Lander Creek, and Clark's Draw that demonstrates the original listing was in error and significant data quality and Standard Operating Procedures as described and referenced in WWP SAPs, were deviated from causing the data to fail Wyoming's credible data requirements:

1. **Wyoming Statute 35-11-103(c)(xix) "Credible data" means** 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; **(emphasis added)**

Chapter 1. Section 35. Credible Data

- (a) Development of scientifically valid chemical, physical and biological data shall:
 - (i) Consist of data collection using **accepted referenced laboratory and field methods employed by a person who has received specialized training and has field experience in developing a monitoring plan, a quality assurance plan, and employing the methods outlined in such plans or works under the supervision of a person who has these qualifications. Specialized training includes a thorough knowledge of written sampling protocols and field methods such that the data collection and interpretation are reproducible, scientifically defensible and free from preconceived bias; and (emphasis added)**
 - (ii) Includes documented quality assurance consisting of a plan that details how environmental data operations are planned, implemented and assessed with respect to quality during the duration of the project.

As a result of further review of data and information submitted by the WWP and utilized by DEQ in listing Pacific Creek, Lander Creek, and Clarks Draw in 2012 the Association believes the information described below warrants DEQ's reevaluation of these listing decisions:

1. **Laboratory methods:** Upon further review of WWP's 2005, 2008 and 2010 Sampling and Analysis Plans as well as field data sheets, it came to the Association's attention that the WWP is apparently collecting E. coli samples and processing those samples, including incubation, in field.

Given the extensive E. Coli monitoring conducted by Conversation Districts most of whom also process samples within laboratories they have established in-house due to the difficulty in meeting holding times, WACD and member districts were interested in the existence of in-field incubation procedures for E. Coli. As a result, WACD researched the two incubators WWP referenced in their 2010 SAP. After an exhaustive search, no information could be found on the referenced Philadelphia model. Subsequently, it is assumed that the WWP is utilizing the Quality Lab Model WW 64835-00 Incubator. This incubator is available from Quincy Lab as Model 10-140. Based upon review of the specifications, WACD would like DEQ to address whether this incubator meets the SOP requirements for incubation at 35+/- .5 degrees.

WACD requested field logs, lab logs and quality control/assurance documentation that accompany this data set to verify the equipment utilized by WWP. However, these records were unavailable. Subsequently WACD assumes since no indication was provided by WWP in their Water Quality data report 2012 that a change in equipment from that which was listed in the 2010 SAP occurred, and this SAP was referenced and provided by WWP in response to recent litigation, the Association assumes this is indeed the equipment utilized.

WACD has a number of questions related to sample incubation:

- a. It appears that WWP is collecting, processing and incubating samples in the field. Please see attached spreadsheet that depicts the sample times, times in the incubator and the time out. WACD would like DEQ to provide a response as to the appropriateness of this incubator for field use. Including copies of equipment calibration logs, lab logs, and any other supporting documentation evidencing that samples were incubated according to Standard Operating Procedures.
- b. In addition, the Association assumes if the samples are incubated in field then they are processed and prepared for incubation infield as well. Can DEQ provide

additional information as to in-field preparation of samples, including sealing quanta trays infield?

- c. WACD also requests a copy of the lab blanks for each set of samples processed. It would seem even more important that lab blanks be run for each set of samples processed if this is occurring infield to ensure contamination is not occurring, in the event that the issue of the incubator is determined to be suitable for infield use.
- d. Based on a review of sample times and incubation times, WACD questions whether equipment specifications and protocol are followed or if WWP has two incubators by which to process samples. Can DEQ provide additional information on the ability to utilize one incubator infield and process and begin an incubation period for one set of samples and then add additional samples during incubation period? Will this meet the requirements as described in SOP and equipment specifications requiring internal temperature be maintained at 35+/- .5 degrees?
- e. Can DEQ verify that incubation occurred in a level and stable environment? Based on the times and locations of samples it appears that samples were likely processed while traveling.
- f. The Colilert method calls for reading samples in a darkened environment. Is it possible to read the samples that are processed in the field?
- g. The incubator manual indicates the incubator is intended for indoor use. Can this incubator be utilized in the field and still meet SOPs and manufacturer's specifications?"

Response: (a) Western Watersheds Project's (WWP) most recent Sampling and Analysis Plan is dated May 2010 and applies to WWP sampling conducted in 2010 and subsequent years. As stated in the SAP: "For the *E. coli* analyses, WWP has purchased two complete sets of equipment from IDEXX Laboratories to run Colilert® tests for each sample. This method has been approved by USEPA. The equipment set includes a Quality Lab Model WW-64835-00 Incubator or similar incubator that meets temperature stability requirements, the Idexx Quanti-Tray® Sealer Model 2X, sealing tray(s), 200 Quanti-Tray® 2000 cards, 200 ampoules [*sic*] of Colilert® reagent, a Spectroline EA-160 ultraviolet lamp for *E. coli* delineation, and 100ml Whirl-Pak® bags." The SAP indicates that the Quality Lab incubators would have a certificate of calibration and that maintenance would include checking to ensure that temperature is within specifications (+/- 0.25 of 35 °C). The SAP also references a Philadelphia Equipment Incubator for collection of *E. coli* samples, with a "Sensor calibrated to NIST traceable device" and temperature specifications (+/- 0.1 of 35 °C). Equipment manuals are referenced for both incubators but were not provided with the SAP. WDEQ staff concluded in 2010, based on the representations in the SAP, that the equipment to be used by WWP during the 2010 and subsequent monitoring seasons was manufactured by a scientific instrument company with calibration protocols and temperature specifications.

Maintaining incubation temperatures is critical for quality control when employing the Colilert® method, the *E. coli* analysis test method used by WWP. The Colilert® method is a type of enzyme substrate test method described in Standard Method (SM) 9223B, *Standard Methods for the Examination of Water and Wastewater*; and is included in USEPA's List of Approved Microbiological Methods for Ambient Water (40 CFR 136.3 and Table 1H). By following the reference in the method foot note to IDEXX Laboratories procedures, it states that samples should be incubated at 35°C ± 0.5°C. The protocols defined in SM9223B concur with the WDEQ *Manual of Standard Operating Procedures for Sample Collection and Analysis* (SOP) for *E. coli* analysis using Colilert®. The SOP indicates that incubation temperatures must be 35°C ± 0.5°C, and also states: "For this method, temperature is used to distinguish *E. coli*; therefore, checking and maintaining incubator temperature is critical. If the temperature is not maintained for the entire test time, the test results are not valid and must be reported as "not valid" with the reason

described in the Remarks section of the Analysis Log Form.”

In order to address comment (a) above, the WDEQ contacted Mr. Jonathan Ratner of WWP on January 21, 2015 to obtain additional information about the incubator that WWP was using. Mr. Ratner responded on January 23, 2015 and indicated that WWP had “created their own” incubator. Mr. Ratner said that in 2004, WDEQ staff in Lander had recommended a portable incubator model for field use, which he bought and used during the 2004 sampling season. Mr. Ratner said he had many problems with the purchased incubator and that he subsequently stopped using it. He indicated that he started to use an incubator that he built using Styrofoam, a fan, and a thermostat that plugs into the vehicle adaptor. Mr. Ratner provided thermostat specification information from Philadelphia Instruments & Controls, Inc., the company he purchased the thermostats from.

Table 4 in the 2010 WWP SAP describes equipment calibration and maintenance protocols and includes the referenced “Philadelphia Equipment Incubator”; however, the SAP gives no further narrative description of the equipment, as is done with the Quality Lab Incubator. Based on WDEQ’s January 2015 phone conversation with Mr. Ratner, it now appears that the table reference to the Philadelphia Equipment Incubator is more likely a reference to WWP’s self-made incubator that used a thermostat from Philadelphia Instruments & Controls, Inc. Using a calibrated thermostat within a self-made incubator is not sufficient to consider the entire incubator certified and calibrated. Not using a calibrated incubator with certified ability to maintain consistent temperatures represents a breach of protocol with significant QAQC concerns. For example, it is unknown if WWP’s incubator was built such that the heat source was properly placed to prevent localized overheating, whether sufficient air circulation provided even heating, and how external temperatures (e.g., being located within a closed vehicle) may have affected temperatures within the incubator. Scientific instrument and equipment companies address these types of QAQC issues through testing, calibration, and certification of the incubators they manufacture; end-users of that equipment can rely on those protocols for QAQC purposes. Self-made incubators do not provide the same QAQC validation, unless very specific information is provided and verified prior to sampling to confirm that any self-made units have undergone similar testing, calibration and certification procedures. Such information was not provided with WWP’s 2010 SAP prior to sampling.

Since 1999, Wyoming Statute 35-11-103(c)(xix) has defined credible data 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 [emphasis added].” Since 2001, Section 35, Chapter 1 of the Wyoming Water Quality Rules and Regulations has established that credible data “consist of data collection using **accepted referenced laboratory and field methods**... [emphasis added].” Based on the January 2015 information obtained from Mr. Ratner, the WDEQ Watershed Protection Program has determined there is insufficient QAQC information associated with WWP’s incubator for WDEQ to have confidence in its accuracy, its ability to maintain proper temperatures, or its suitability for field use. The use of a self-made incubator, without associated QAQC information, does not meet WDEQ’s referenced laboratory and field methods, nor did it meet accepted referenced laboratory and field methods in 2010-2013 when WWP collected and analyzed the data. Furthermore, the lack of full disclosure about WWP’s self-made incubator in the 2010 SAP - referencing the Philadelphia Equipment Incubator as the one built and used by WWP - impaired WDEQ’s ability to fully evaluate the credibility of WWP’s monitoring program and calls into question whether all sample collection and analysis procedures are being accurately described, followed, and reported. This concern is heightened by the potential misrepresentation by WWP in the 2010 SAP that it was still using the Quality

Lab Incubator from IDEXX Laboratories (Quality Lab Model WW-64835-00 Incubator or similar incubator) for fieldwork when – according to Mr. Ratner – he stopped using that model in or about 2005.

The WWP incubator information represents additional information that was not available at the time the WDEQ listed Clark's Draw, Lander Creek, and Pacific Creek on the 2012 303(d) List. Because the WDEQ cannot verify the accuracy of the self-made WWP incubator, its ability to maintain proper temperatures or its suitability for field use, the WDEQ cannot validate or ensure the credibility of the data produced through use of the self-made incubator. This means that the original listings of Clark's Draw, Lander Creek, and Pacific Creek were based on flawed information, as the listings were entirely based on data collected by WWP in 2010. Therefore, the WDEQ has removed Clark's Draw, Lander Creek, and Pacific Creek from the 303(d) list in the 2014 Draft Integrated Report pursuant to 40 CFR 130.7(b)(6)(iv). WDEQ will be releasing the 2014 Draft Integrated Report for another 45-day public comment period without those listings.

(b) It is possible to prepare samples for incubation in the field in accordance with Standard Operating Procedures. The IDEXX Quanti-Tray® Sealer 2X listed in WWP's SAP is suitable for field use; this is the same model used by WDEQ. It requires only an inverter to plug it in to the adaptor of a vehicle for a power source. The WDEQ does not have any further information specific to WWP's preparation of samples for incubation in the field. Based on QA/QC procedures in place at the time WWP's 2012 Integrated Report data submission was reviewed, no issues regarding how samples were prepared for incubation were noted.

(c) Based on the WWP "Data Report-2012 Cycle" and accompanying field data sheets, lab blanks were not obtained during WWP's 2010 monitoring season. Based on QA/QC procedures in place at the time, the "Data Report-2012 Cycle" submission was reviewed, the lack of lab blanks was not determined to be a sufficient reason to disqualify WWP's dataset for designated use support determination. Trip blanks were obtained every sampling day in 2010 and indicated no contamination.

(d) It is possible to use one incubator in the field and add a second set of samples while an initial set is incubating. However, the temperature must be monitored closely during this time to ensure that the internal incubator temperature does not fluctuate to the point that data results would be affected. Due to concerns regarding the type of incubator used by WWP in 2010 (see response to comment (a) above), the WDEQ cannot ascertain whether the incubator used has the ability to maintain consistent temperatures and whether, if only one incubator was used, it would have been possible for WWP to add a second set of samples while maintaining temperatures for an initial set.

(e) Based on the incubator used by WWP during the 2010 monitoring season (see response to comment (a) above), the WDEQ cannot verify that incubation could be consistently maintained while traveling in a vehicle.

(f) Photographs of WWP's 2010 processed Quanti-Trays were included in the 2012 data submission to WDEQ. The photographs show that the Quanti-Trays are readable and are in a darkened environment.

(g) See response to comment (a) above. The WDEQ cannot determine if the self-made incubator meets SOP specifications and is suitable for field use.

Entity: Wyoming Association of Conservation Districts (WACD)
Comment: **"2. Quality Control/quality assurance procedures:**

In addition to the above issues, WACD remains concerned with the lack of quality control/assurance. In 2009, DEQ rejected prior data submitted by WWP for listing on the 2010 303(d) list. This letter articulated in great detail significant quality control issues existing with WWP data. In a review of the data QA/QC, WACD found many of the same deficiencies exist with the 2010 data utilized to list in 2012. WACD assumes DEQ's decision to overlook these deficiencies lie in no small part to the fact that EPA communicated their expectation that the DEQ do so to facilitate accepting the data. WACD specifically requests additional information pertaining to meetings between DEQ and EPA in which these discussions occurred, including but not limited to meeting date, times, meeting notes, correspondence between EPA and DEQ pertaining to this particular data set.

Below are qa/qc issues which specifically exist in addition to those detailed above:

- a. **Pacific Creek** – WACD also questions the validity of the geometric mean on Pacific Creek. There were five samples taken as required to establish a geometric mean, however on the July 31, 2010 field data sheet it has "Redo" written on the sheet. Can DEQ provide additional data that may have been submitted and utilized in calculating the geometric mean or explain why the notation made by the sampler "Redo" did not disqualify this data?

Clarks Draw – WACD has reviewed the sample information provided by WWP, including the photographs, for the site location on Clark's Draw. Based on DEQ SOPs for sample site selection and methods WDEQ 2011 SOP Coliform Bacteria Sampling Procedure – Surface waters, Page 61: Grab samples collected from flowing waters (streams and rivers) should be collected from well-mixed sections of the channel below the water surface...

It appears that the photographs provided by WWP do not clearly depict this particular site location. Please find attached photographs taken by the Sublette County Conservation District that provide additional photo documentation of the site conditions. WACD would appreciate DEQ's view of sampling just below a culvert in a standing pool of water. Would this meet the SOP procedure discussed above?

In addition, many of the identified deficiencies such as scribbles, variability in the lat/longs provided on the field data forms do not in all cases correspond to the lat/longs on the electronic data forms for the same sampling events. Can DEQ clarify which data were utilized in calculating the geometric mean?

Lander Creek: Specifically, WACD would like clarification on whether the WWP submitted field data sheet dated 7/31/10 was used to calculate the mean as this site plots 1,250 feet to the east of the other sample site locations."

Response: WDEQ submitted a letter to Mr. Ratner of WWP on October 22, 2009 detailing the reasons why WWP data submitted for the 2010 Integrated Report could not be used for designated use support determinations. The letter noted several quality assurance/quality control (QA/QC) issues regarding collection and analysis of *E. coli* data; however, the two key issues that represented major breaches in protocol that invalidated the data for designated use support determination were (1) latitude and longitudes indicating that sample locations were not consistent between sampling events and (2) the lack of

duplicate collection. Regarding the first issue, the letter states that "Because of the issues surrounding the use of multiple sampling locations for study sites as described above, and the lack of location information, which should have been recorded in the field by other WWP staff members, all of the *E. coli* data submitted by WWP must be rejected by WDEQ." Regarding the lack of duplicates, the letter states that..."this breach of protocol invalidates the data set for the sites sampled."

These two key QA/QC issues which caused WDEQ to reject the 2010 IR submission were corrected by WWP for the 2012 IR data submission (data collected in 2010). 2010 field data sheets indicated that sample site locations did not change between sampling events and daily duplicates were obtained during the 2010 monitoring season. The WDEQ determined, based on QA/QC procedures in place at the time for 2012 data submission reviews, that any remaining QA/QC issues with the 2012 data submission were not sufficient to disqualify the entire *E. coli* dataset for designated use support determinations. Thus, data from the 2012 WWP submission were accepted for designated use support determinations with approval of the 2012 Integrated Report.

However, based on new QA/QC information not available at the time WWP's 2012 data submission was originally reviewed, WDEQ has now determined that the 2012 WWP data submission does not meet QA/QC requirements for credible data; therefore, Clark's Draw, Lander Creek, and Pacific Creek will be removed from the 2014 303(d) List (see response to previous WACD comment regarding WWP 2012 data, above).

WDEQ has not had any meetings with EPA regarding WWP data on Pacific Creek, Lander Creek, and Clark's Draw, as noted in previous responses, above.

Pacific Creek: The WDEQ does not know what was intended by the "Redo" comment on the 7/31/10 field data sheet. However, because the information provided on the field data sheet did not indicate any QA/QC concerns with sample collection or analysis that day, the "Redo" comment was not seen as sufficient reason to disqualify the sample.

Clark's Draw: The photographs provided by WWP focus on one area of Clark's Draw, located directly below a road that crosses the channel. WDEQ accompanied Jonathan Ratner to WWP's Clark's Draw study site on September 28, 2011 in order to become familiar with the study site. Photographs were taken by WDEQ personnel, some of which are shown in Figure 1, below. During the site visit, Jonathan Ratner of WWP relayed his concerns that the large pool (depicted in photograph A) located directly below the road crossing regularly served as a water source for large numbers of cattle. Further, he felt that the channel below the road was physically degraded and that downstream reaches of Clark's Draw was polluted due to fecal contamination from cattle waste. Photograph A was taken by WDEQ to document the location and condition of the pool below the road. The remaining photographs (B-D) indicate where the WWP sampling site on Clark's Draw was located, as indicated by Jonathan Ratner during the site visit. WDEQ observed flowing water at this site, as can be seen in photographs B-D.

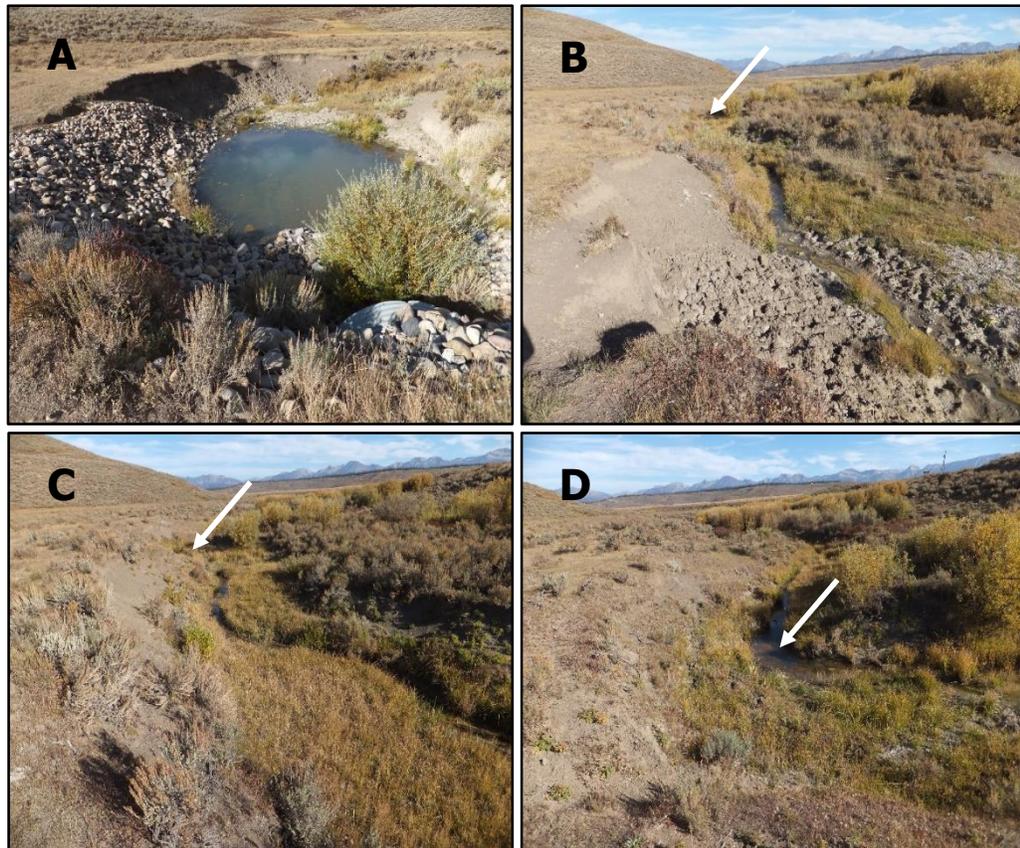


Figure 1. Photographs (A-D) taken by WDEQ of Clark's Draw on September 28, 2011. The photos are arranged in upstream to downstream order and white arrows show the location where *E. coli* samples were collected by WWP from several perspectives. Photo A is of a large pool located directly below a culvert spanning a two track road crossing; photo B was taken just downstream of the pool; photo C depicts the main channel of Clark's Draw between the pool and the study site; and photo D shows the location where *E. coli* samples were collected.

The WDEQ reviewed field data sheets for Clark's Draw and found one instance it would consider a "scribble." The correction made was legible and initialed to indicate the correction.

Variability between latitudes and longitudes on the field data sheets and electronic data forms indicates maximum variability of 10 meters; this amount of variability does not indicate a QA/QC concern.

The geometric mean for Clark's Draw was calculated by WWP using the following values (followed by the date of collection in parentheses): 1,553.1 MPN (6/26/10); 2,419.6 MPN (6/27/2010); 2,419.6 MPN (6/29/2010); 24,196 MPN (7/1/2010); 24,196 MPN (7/4/2010). This results in a geometric mean of 5,562.0 MPN. If the following MPN values (listed by WWP as results before dilution) are instead used for a geometric mean—1,553.1; 2,419.6; 2,419.6; 2,419.6; and 2,419.6—the resulting geometric mean is 2,214.3 MPN. If the geometric mean had been calculated using all six samples collected on Clark's Draw, including the 6/12/10 value of 19.3 MPN, the resulting geometric mean would be 1,004.5 MPN (using the following MPN values: 19.3; 1,553.1; 2,419.6; 2,419.6; 2,419.6; and 2,419.6).

Lander Creek: The sample from 7/31/10 was used to calculate the geometric mean. Based on the other five field data sheets and six electronic data forms for this site, the longitude should be -109.156175. The -109.1516175 reported for the 7/31/10 field data sheet is assumed to have a typographical error in that a "1" was inserted between the "5" and the "6."

Entity: Wyoming Association of Conservation Districts (WACD)

Comment: "3. Field methods: WACD believes that some question exists as to the field methods employed by WWP in their sampling programs and seeks to get DEQ clarification on the purpose and intent of ambient surface water monitoring. WWP's sampling personnel has indicated via testimony in an administrative hearing that he "only monitors when cattle are present". WACD believes that further discussions are necessary to clarify the intent and purpose of the E. coli standard and how to achieve data collection that is representative of water quality conditions over the recreational season versus targeted isolated locations.

Response: Dilutions: WACD would like DEQ to further clarify those sample sheets that indicate sample dilutions. Can DEQ clarify which of the samples on the respective field data sheet was used in determining geometric mean, if there are differences in results?"

As stated on page 28 of WDEQ's Manual of Standard Operating Procedures for Sample Collection and Analysis (a 2004 version in place at the time of sampling)...."**Sample site location:** Site locations should be determined in accordance with the purpose or objective(s) that necessitate sampling. Monitoring of permitted discharge facilities (i.e., sewage treatment facilities) requires samples be collected at outfalls and at locations on receiving waters to determine compliance with effluent limits and in-stream water quality standards. Site selection may be based upon upstream/downstream or paired watershed approaches to evaluate water quality changes due to non-point source pollution loading, land use changes, and/or land management changes. Knowledge of site-specific water conditions may also influence sample site selection. Water temperature, turbidity, nutrient and metal concentrations, solar insolation and streamflow regime are a few factors that affect bacteria survival. Bacterial populations are often higher along lake shores and river/stream banks where water seepage, runoff or discharge is greater. Manure spread on agricultural land may contribute coliforms for many months to nearby streams or aquifers through leaching, direct seepage and/or runoff. Animals, wild or domesticated, defecating in streams or ponds, contribute fecal coliform (which may live for months) directly to the water. Coliform bacteria in the feces of wild birds (seagulls) and waterfowl (ducks, geese) are about five times greater than that of human origin." Page 29 of the manual states "**Number of samples:** The number of samples and the sample site locations for each project should be the minimum number which adequately reflect the effluent or body of water from which they are taken. Both are determined before sampling, and are a part of each project's objectives, Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP)." The study objectives and design were reflected in WWP's WDEQ-approved SAP. WWP's 2010 SAP stated within the Purpose Statement section that "The primary goal/task of this project is to provide current information on *E. coli*, temperature, pH, dissolved oxygen, conductivity and turbidity on a wide range of infrequently or never before monitored streams throughout the state." WWP followed the above conditions as set forth in their SAP and WDEQ's SOP manual.

The only dilution values that WWP used for geometric mean calculations were for Clark's Draw (sample dates 7/1/10 and 7/4/10). See response to previous WACD comment, above, as to how re-calculating the geometric mean with non-diluted values would change the results.

Entity: Wyoming Association of Conservation Districts (WACD)

Comment: **"4. Specialized training: 'Specialized training includes a thorough knowledge of written sampling protocols and field methods such that the data collection and interpretation are reproducible, scientifically defensible and free from preconceived bias.'**

WACD noted that the 2005, 2008 and 2010 versions of the WWP's SAP, included members of their staff that would be conducting monitoring. It is further noted, that for the three waterbodies in questions, staff that conducted the actual monitoring activities consisted of:

Clark's Draw – Jonathan Ratner

Lander Creek - Jonathan Ratner – On one sampling day 7/20/10 Mr. Ratner was apparently accompanied by an EPA person, although the data sheet does not specifically indicate who accompanied Mr. Ratner, in response to interrogatories Mr. Ratner indicated that Mr. Tom Johnson, Region 8 EPA accompanied him.

Pacific Creek – Jonathan Ratner

Mr. Ratner lists as his training and qualifications in the 2010 SAP's as a "private study" of USDA National Water Quality handbook. WACD provided DEQ in March 2014, with a copy of Mr. Ratner's resume as submitted by Mr. Ratner before the Office of Hearing and Appeals in the case of Western Watersheds Project et al. v. BLM, WY-050-11-01. Please find this resume' attached and incorporated herein.

WACD would point out that this resume' fails to describe any type of specific water quality training that Mr. Ratner has to meet the statutory requirements, other than to indicate that he established 'Wyoming's only non-governmental water quality monitoring program.'

In 1998 and 1999, the Association in cooperation with DEQ, the University of Wyoming, the Department of Agriculture and USDA Natural Resource Conservation Service developed a water quality monitoring training program to ensure that those conservation districts personnel who would be monitoring would have specific and specialized training in order to meet the statutory requirements. The initial program consisted of five modules, equating to approximately 4-5 full weeks of training, including in-field training with DEQ personnel. Subsequent revisions to the program have resulted in the training consisting of three Modules, plus refresher training which was added to the program, a test component and an infield audit component.

This program has been funded, in part by the State legislature.

WACD would question how a self-study of the NRCS National Water Quality Handbook as indicated in the Sampling and Analysis Plan and no formal training or education is this or a related field meets the requirements of "specialized training" as contemplated in the statute or regulation."

Response: Chapter 1, Section 35 currently defines specialized training as "includes a thorough knowledge of written sampling protocols and field methods such that the data collection and interpretation are reproducible, scientifically defensible and free from preconceived bias." WDEQ does not currently have guidance or specifications on what does and does not qualify as adequate "specialized training" per credible data requirements in Section 35, Chapter 1 Wyoming Water Quality Rules and Regulations. Determinations of adequate specialized training to-date have been made based on professional judgment of and evaluation of data submissions by the WDEQ QA/QC officer. As contemplated in

credible data language, the key of specialized training is that the resulting data collection and interpretation are reproducible, scientifically defensible and free from preconceived bias. It is possible that self-study of water quality monitoring methods could result in data collection and interpretation being reproducible, scientifically defensible, and free from preconceived bias. WDEQ is evaluating the need to better define specialized training within the Assessment Methodology in order to satisfy credible data requirements.

Entity: Sublette County Conservation District (SCCD)

Comment: "The Sublette County Conservation District offers the following comments with regard to the 2014 Integrated Report.

The Sublette County Conservation District is a subdivision of the State, provided broad authority to provide for the District's natural resources.

The Sublette County Conservation District (SCCD), has an active water quality monitoring program. The important contribution of the district is acknowledged in the draft, Wyoming 2014 Integrated 305(b) and 303(d) Report.

In 2012 we had made specific comment regarding the listing of segments of the Little Sandy River, Lander Creek, Clark's Draw, and Pacific Creek. Upon review of those comments, we find they continue to be valid and we recommend WDEQ review those comments as they pointed out factual errors in the text of the 2012 report which are propagated into the 2014 report. For example, the error in referencing the "Bar X" road in describing Clark's Draw location."

The Sublette County Conservation District specifically requests the delisting of Clarks Draw, Lander Creek and Pacific Creek from the 2014 303(d) list of impaired waters. The district believes new information has become available to indicate the original listing was in error.

Since the publication of the 2012 Integrated Report, much has transpired to expose considerable evidence calling to question veracity of data used to support the listing of segments of Clark's Draw, Lander Creek, and Pacific Creek in 2012.

The district continues to question, as articulated in comments submitted on the 2012 Integrated Report, whether the data collected by the third party, Western Watersheds Project (WWP) and utilized for these listings meets the Credible data statutory and regulatory requirements based on bias, lack of representativeness of the sampling and failure to abide by Standard Operating Procedures as contemplated in §§ 35-11-103 (c)(xix) and Chapter 1; Water Quality Rules and Regulations; Section 2(a)(i) and the Department's Standard Operating Procedures.

The district has further reviewed the data and information utilized by DEQ to make the 2012 listing decision and is aware that the following significant deficiencies and issues have been discovered:

1. The WWP's personnel who conducted the monitoring lack qualification, training or certification required to assure reliability of data collection.
2. WWP's implementation of their SAP and referenced Standard Operating Procedures cannot be clearly demonstrated
3. WWP's has demonstrated inherent bias within their sampling activities based on testimony provided by WWP in which they indicate their monitoring activities are intentionally conducted only when land use activities they are actively attempting to

are occurring.

The laboratory equipment WWP's indicates it is using for processing E. coli samples is being used in a manner that is inconsistent with manufacturer equipment specifications. The Sublette County CD after the 2012 303(d) report was published conducted a site visit to the WWP site on Clarks Draw. The attached photographs taken in July 2012 clearly demonstrate that the WWP did not attempt to gather data from a site that is representative of the stream. Clarks Draw is an intermittent ephemeral draw. As is demonstrated in the photograph the sampling conducted by WWP occurred in a standing pool of water just below a culvert outfall. The District would suggest that this particular site fails to meet the required SOP for site selection.

4. Although not specific to these three waterbody listings, WWP has failed to follow state statute and their Sampling and Analysis Plan and referenced DEQ Standard Operating Procedures as it pertains to access permissions from private property owners resulting in illegal trespass. This calls into question the integrity of the entire sampling program.

The Sublette County Conservation District incorporates by reference herein, those comments and supporting documentation submitted by the Wyoming Association of Conservation Districts related to Pacific Creek, Lander Creek, and Clarks Draw.

This total aggradation of new information acquired since the 2012 listing must be considered now, as it exposes a flaw in the original determination. Again, the District would reiterate that upon further review and discovery of the above new and additional information, the original listing decision was in error and that in order to maintain compliance with statutory and regulatory requirements and abide by Standard Operating Procedures as set forth by DEQ Clarks Fork, Lander Creek, and Pacific Creeks should be delisted in 2014."

Response:

Since many of Sublette County Conservation District's comments are similar to those provided by WACD, please refer to responses to the WACD comments, above. WDEQ has provided the additional responses below to the unique elements of SCCD's comments.

(2) Based on quality assurance/quality control (QA/QC) procedures in place at the time the WWP "Data Report-2012 Cycle" and associated data were reviewed, the WDEQ determined that WWP followed their SAP and applicable SOPs sufficiently such that there were no QA/QC issues that warranted rejecting the data for designated use support determination. However, the WDEQ has recently become aware of QA/QC concerns regarding equipment used by WWP during the 2010 monitoring season that have led to WDEQ's determination that credible data requirements were not met. For additional detail, see response to WACD's comments, above.

(3) Per Section 35 of Chapter 1 Wyoming Water Quality Rules and Regulations, credible data requirements refer to bias in the following context:

Section 35. Credible Data.

(a) Development of scientifically valid chemical, physical and biological monitoring data shall:

*(i) Consist of data collection using accepted referenced laboratory and field methods employed by a person who has received specialized training and has field experience in developing a monitoring plan, a quality assurance plan, and employing the methods outlined in such plans or works under the supervision of a person who has these qualifications. **Specialized training includes a thorough knowledge***

of written sampling protocols and field methods such that the data collection and interpretation are reproducible, scientifically defensible and free from preconceived bias...(emphasis added).

Bias refers to an aspect of inadequate specialized training that would result in a sampler skewing data results by sampling incorrectly within a given study design. In addition, the WDEQ's "Quality Control Measures, Summary of" SOP defines scientific bias as "...a deviation of test result value from the true value, which is caused by systematic errors in a procedure (field or laboratory). For example, recovery of the substance in a spiked sample establishes bias." WDEQ does not presume bias based on study objective, but does evaluate for bias during both SAP review and QA/QC of data submissions.

Please see response to WACD comment, above, regarding the incubator used by WWP during the 2010 monitoring season and WDEQ's evaluation of that incubator and the site location of Clark's Draw.

(4) WDEQ/WQD will not use any obtained through trespass or other unauthorized collection methods to support WQD decisions. WDEQ will also continue to require demonstration of access to study sites as part of sampling and analysis plan approval.

Entity:

Wyoming Department of Agriculture (WDA)

Comment:

"Following are the comments from the Wyoming Department of Agriculture on Wyoming Department of Environmental Quality's (DEQ) 2014 Integrated 305(b) and 303(d) Report (Report).

Our comments are specific to our mission: dedication to the promotion and enhancement of Wyoming's agriculture, natural resources, and the welfare of our citizens, it's important you continue to inform us of proposed actions and decisions and provide us the opportunity to express pertinent issues and concerns.

The WDA would like to thank DEQ for the opportunity to comment on the Draft Report. The WDA works closely with the Wyoming Association of Conservation Districts (WACD) as well as the local conservation districts across the state by funding their efforts with water quality grants to develop educational workshops, sample and analyze data, implementation of Best Management Practices, and development of Watershed Implementation Plans.

We believe WACD has the most comprehensive set of comments regarding the Report. The local conservation districts may also have provided their own comment letters. We strongly encourage the DEQ work closely with WACD and local conservation districts and consider their comments as accurate and complete.

The WDA has the following general comments:

The WDA would like to highlight the requirements detailed in Chapter 1, Section 35(a)(i) of the Wyoming Environmental Quality Act, and ask DEQ to ensure all data submitted meets all credible data requirements listed on past, present and future data submissions. This entails ensuring proper laboratory and field methods are being used, making sure proper Quality Control/Quality Assurance procedures are used, ensuring individuals have the required specialized training needed to perform the proper submissions, and ensuring there is no preconceived bias associated with the data collection process. Clarity in these areas will only help DEQ in the integrity and defensibility of data submitted.

The WDA is very concerned about the acceptance of data being collected and submitted by special interest groups with a significant bias toward Wyoming's livestock industry. Any submission submitted by such organizations should not be accepted due to their inherent bias towards one of Wyoming's leading economic industries.

Response: Again, we would like to thank DEQ for the opportunity to comment and urge DEQ to consider our comments as well as those from WACD and local conservation districts." WDEQ will continue to work with interested stakeholders to ensure that data submissions for Wyoming's Integrated Report meet the credible data requirements intended in W.S. 35-11-302(b) and outlined in Chapter 1, Section 35. WDEQ also includes additional detail regarding our data submission requirements within "Wyoming's Methods for Determining Surface Water Quality Condition and TMDL Prioritization" (Assessment Methodology). WDEQ intends to release this document for public comment in 2015 and recommends that interested stakeholders review the language in Chapter 1, Section 35 and the Assessment Methodology to ensure that WDEQ's data submission requirements are consistent with the credible data requirements outlined in Chapter 1. If inconsistencies are found, WDEQ recommends that stakeholders make suggestions of ways to modify the Assessment Methodology to ensure that data submissions are consistent with Chapter 1, Section 35.

Entity: Western Watersheds Project (WWP)
Comment: "I am in receipt of the DEQ's letter claiming to not have had time to review our data in time for this one year delayed draft 303(d) list.

When Mr. Thorp joined us in October of 2013 for site visits, the data had already been fully reviewed and decisions made as to which streams would be listed. It is disingenuous, at best, to claim a year later not to have had time to review the data.

Of course, the real reason for the delay is obviously the direction coming down to DEQ from Bobby Frank and the rest of the livestock industry telling the DEQ not to list streams for e. coli.

It is problematic when DEQ's implementation of the Clean Water Act is based on politics instead of data.

We also reiterate 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 cannot argue that the secondary contact standard applies."

Response: WDEQ's Water Quality Assessment and QA/QC Program personnel routinely visit study sites as part of a preliminary review of water quality data during preparation of the IR. WDEQ personnel visited several WWP study sites in October 2013 to become more familiar with study site characteristics. Following a thorough review all of water quality data submissions, an evaluation of study sites, and quality assurance/quality control review, Water Quality Assessment Program personnel make water quality assessment recommendations to the Watershed Protection Program Manager and the Water Quality Division Administrator. No final water quality assessment decisions had been made by WDEQ prior to the October 2013 study site visits.

WDEQ sent letters to third parties, including WWP, who had submitted data for the 2014 Integrated Report (WDEQ included Middle Fork Fishermans Creek along with other data submitted for the 2014 Integrated Report). These entities and USEPA were notified that WDEQ was reviewing their data submissions pursuant to "Wyoming Department of

Environmental Quality Third Party Data Review Criteria;" the criteria document was included as an attachment to the letter. The letter also informed these entities and USEPA that "to ensure sufficient time to complete these reviews and to prevent further delay in submitting the 2014 Integrated Report to USEPA, WDEQ/WQD intends to exclude all third party data from being used for designated use support determinations in the 2014 Integrated Report. Data submissions found to meet all of WDEQ's Third Party Data Review Criteria will be evaluated for designated use support determinations and may be incorporated into the 2016 Integrated Report."

WDEQ will be providing WWP and other entities a follow up letter describing which elements of "WDEQ's Third Party Data Review Criteria" that data submitted for the 2014 Integrated Report failed to meet, along with any other QAQC deficiencies.

Specific Comments

Belle Fourche River Basin

Entity: Campbell County Conservation District (CCCD)

Comment: **"Page 23, Upper Belle Fourche Sub-basin paragraph 1, last sentence**

'A watershed plan and implementation strategy was completed by CCCD in 2010 to address these listing; efforts mainly focused on septic system improvements.'

Comment: CCCD submitted the following comments on the Draft 2012 IR which are not reflected in the Draft 2014 IR as stated by WDEQ's Response to Comments page 10:

- 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.
- 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.

WDEQ's Response to comments on Draft 2012IR: The text which stated..'CCCD completed WDEQ approved watershed plans for Donkey and Stonepile Creeks in 2010.' Has been removed from the 2012IR and replaced with...'A watershed plan for the 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.

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.'

Comment: CCCD submitted monitoring results from 2010-2013 on Donkey Creek and Stonepile Creek to WDEQ after the July 15, 2013 deadline and will be further reviewing the data in comparison to the current standards.

Page 24, paragraph 2

Comment: WDEQ response does not appear in the Draft 2014 IR as stated in the WDEQ Comments in Draft 2012 IR page 11

The text which stated...‘The City of Gillette is currently pursuing a grant from the Wyoming Wildlife and Natural Resources 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 Resources 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: Wyoming Association of Conservation Districts (WACD)

Comment: **“Page 23, Upper Belle Fourche Sub-basin**

COMMENT: As noted in WACD’s comments for the 2012 Integrated Report, CCCD completed a watershed plan for Donkey and Stonepile Creeks in 2006 not 2010.

Other comments including the incorporation of data from 2007-2009, that were made by CCCD and WACD on Pages 10-11 of the ‘Wyoming Response to Comments on the Draft 2012 Integrated 305(b) and 303(d) Report’ that WDEQ was going to incorporate into the 2012 report, have not been made as well.”

WACD incorporates, by reference herein those comments submitted by the Campbell County Conservation District and CCNRD.”

Response: WDEQ completely revised the narrative portion of the IR in 2014 and accidentally omitted some text in the Upper Belle Fourche Sub-basin section. Therefore, text in the Draft 2014 IR for this section that stated “A watershed plan and implementation strategy was completed by [Campbell County Conservation District](#) (CCCD) in 2010 to address these listings; efforts mainly focused on septic system improvements.” has been removed and replaced with “A watershed plan for the Donkey and Stonepile Creeks was developed by [Campbell County Conservation District](#) (CCCD) in 2006. The plan will likely be updated now that the Belle Fourche River TMDL has been completed. 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.”

Text has also been added to the third paragraph of the Upper Belle Fourche Sub-basin section of the 2014 IR which states...“The City of Gillette has received funding from the Wyoming Wildlife and Natural Resources 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.”

WDEQ recommends working with the QAQC Program regarding the monitoring results from 2010-2013 on Donkey Creek and Stonepile Creek to ensure that all data sufficiency elements are adequately addressed.

Entity: U.S. Environmental Protection Agency (USEPA)

Comment: “4) Category 4A Surface Waters, Table 9.3.1, pages 142-143: the Belle Fourche River Watershed TMDL document addressed 5 listed segments and 7 impairment causes. The final document was submitted for approval in September 2013 and EPA approval was in December 2013. However, the ‘Year TMDL Completed’ column in this table shows some

as 2013 and some as 2014. If the 'Year' is meant to be the calendar year, then they should all be '2013'. If the 'Year' is meant to align with the EPA Fiscal Year, then they should all be '2014'."

Response: WDEQ has changed all of the "Year TMDL Completed" dates for the seven Belle Fourche TMDLs to 2013 in the 2014 IR.

Entity: Wyoming Association of Conservation Districts (WACD)

Comment: "Page 23, 2nd Paragraph

COMMENT: As noted in WACD's comments for the 2012 Integrated Report, CCNRD completed a watershed plan for the Belle Fourche in 2005 not 2010."

Response: Text that states "Crook County Natural Resource District (CCNRD) completed a watershed plan for the Belle Fourche River in 2005." has been added to the 2014 IR.

Bighorn River Basin

Entity: U.S. Environmental Protection Agency (USEPA)

Comment: "1) Is Medicine Lodge Creek (WYBH100800080605_01) meant to be included in the 2014 list of impaired waters? It is found in the Assessment Database (ADB) and GIS files, but not in the actual 303(d) List. The impaired segment length appears to be 2.8 miles."

Entity: Wyoming Association of Conservation Districts (WACD)

Comment: "Page 37, 2nd paragraph

COMMENT: Medicine Lodge Creek is shown as a Category 5 (Use(s) Not Supported) on the map on page 37; however there is no description of the impairment in the narrative or on the 303(d) list. The description indicates 'WDEQ monitored a site on Medicine Lodge Creek in 2010, and data from a single sample indicated that E. coli bacteria concentrations may be elevated in and around Medicine Lodge State Park. The results of this study are still under evaluation and designated use support has not yet been assessed.' (Underline added) Clarification on the status of Medicine Lodge Creek would be beneficial."

Response: Medicine Lodge Creek has not been assessed by WDEQ. A segment of the creek was accidentally included in the Draft IR map, ADB and GIS shapefiles for the Nowood Sub-basin (10080008) and has since been removed. The narrative description of WDEQ monitoring of Medicine Lodge Creek in the Nowood Sub-basin (HUC 10080008) has been changed to "WDEQ monitored a site on Medicine Lodge Creek in 2010, and data from a single sample indicated that *E. coli* bacteria concentrations may be elevated in and around Medicine Lodge Archaeological Site State Park. WDEQ collected data in 2012 and 2013; results of are still being evaluated and designated use support has not yet been determined."

Entity: U.S. Environmental Protection Agency (USEPA)

Comment: "3) Category 4A Surface Waters, Table 9.3.1, page 145: the ID shown for Paint Rock Creek (WYBH100800080603) is incorrect. That ID has been used for Soldier Creek in the past IR reports. The Paint Rock Creek ID shown on page 153 (de-listing table), WYBH100800080607_01, is the correct ID. The Paint Rock Creek ID on page 145 should be changed to match the ID on page 153. Note: the EPA approval of the Big Horn River Watershed TMDLs was revised to reflect the correct Paint Rock Creek ID (see the following link and screen shot:)"

Response: The entity identification number for Paint Rock Creek in Table 9.3.1 has been changed in the 2014 IR from WYBH100800080603_01 to WYBH100800080607_01.

Entity: U.S. Environmental Protection Agency (USEPA)

Comment: "5) Category 4A Surface Waters, Table 9.3.1, page 148: there is no record of EPA-approved TMDLs for the Clarks Fork Yellowstone River impairments in Wyoming. However, in 2003 EPA approved TMDLs for similar causes for the Montana portion of the Clarks Fork Yellowstone River from the headwaters to the Montana border (see screen shot below). If the sources of the WY impairments are located in MT, and if this table is referencing the approved MT TMDLs, then we recommend changing the TMDL completion year to '2003' and adding a note that references the approved TMDLs and the explanation within the IR document that describes how the MT TMDLs will address the WY impairments."

Response: The second paragraph of Clarks Fork Yellowstone Sub-basin (HUC 10070006) section of the Draft 2014 IR states that "[USGS gage data \(station 06205450\)](#) collected during the late 1990s showed that cadmium, silver and copper concentrations in the Clarks Fork Yellowstone River near the WY/MT border regularly exceeded WDEQ's aquatic life copper, cadmium and silver criteria. A 6.8 mile segment of the of the Clarks Fork Yellowstone River (WYYR100700060101_01) from the Montana border downstream to the confluence with Crazy Creek was subsequently added to the 303(d) List in 2000. Montana also listed portions of the upper Clarks Fork Yellowstone River on its 303(d) List. The primary source of elevated metals was identified on the Montana 303(d) List as acid mine drainage, impacts from abandoned mine lands and mine tailings from historic mining activities in the New World Mining District near Cooke City, Montana. [USEPA approved TMDLs](#) have been completed by Montana and heavy metals remediation continues to occur within the New World Mining District. Montana's TMDLs for the Clarks Fork Yellowstone River were also used by WDEQ to address the three impairments on the river in Wyoming. These TMDLs were approved by USEPA in 2008 and therefore the three impairments were removed from the 303(d) List in 2008 and placed in category 4A." As described in the narrative, the sources of elevated metals in the upper Clarks Fork Yellowstone River in Wyoming are legacy impacts from mining operations in Cooke City, Montana. USEPA approved the Montana TMDLs in 2003; however, USEPA did not approve these TMDLs for use on the Clarks Fork Yellowstone River impairments in Wyoming until the 2008 IR was approved. Changing the TMDL date in the IR to 2003 would therefore be inaccurate and would likely create confusion with the public and within the agency's records since the Clark Fork Yellowstone River remained on Wyoming's 2004 and 2006 303(d) Lists. Therefore, a TMDL date of 2008 has been retained in the 2014 IR for the three Clarks Fork Yellowstone River impairments. WDEQ would consider changing the TMDL date from 2008 to 2003 in the 2016 Integrated Report if EPA can provide documentation describing that the 2003 approval date of the Montana TMDLs can be used by Wyoming.

Entity: Wyoming Association of Conservation Districts (WACD)

Comment: "Page 32, 1st paragraph

COMMENT: A Use Attainability Analysis (UAA) to change the classification of Poison Creek from primary to secondary recreational use was submitted to WDEQ by LWRCD in 2010. Information in the Poison Creek UAA was incorporated into the statewide UAA for recreation that is currently in review. The Muddy Creek and Poison Creek Watershed Plans were completed in 2007."

Response: Text has been added to the first paragraph of the Lower Wind Sub-basin (HUC 10080005) section of the 2014 IR that states "A Use Attainability Analysis (UAA) to change the recreational use of Poison Creek from primary to secondary was submitted to WDEQ by LWRCD in 2010. Information in the Poison Creek UAA was incorporated into the statewide UAA for recreation that has been submitted to USEPA for approval. The Muddy Creek and Poison Creek Watershed Plans were completed in 2007."

Entity: Wyoming Association of Conservation Districts (WACD)

- Comment:** **"Page 34, 1st paragraph**
COMMENT: As noted in WACD's comments for the 2012 Integrated Report, Hot Springs Conservation District should be listed HSCD not HSCCD. This is also incorrect on page 5 as listed in the Acronyms."
- Response:** The acronyms for Hot Springs Conservation District have been changed from HSCCD to HSCD in Upper Big Horn Sub-basin (HUC 10080007) section and on page 5 in the list of acronyms.
- Entity:** Wyoming Association of Conservation Districts (WACD)
- Comment:** **"Page 36, 1st paragraph**
COMMENT: As noted in WACD's comments for the 2012 Integrated Report, WCCD submitted a Use Attainability Analysis on Fifteen Mile and Nowater Creeks to change the classifications from primary to secondary recreation used in 2009. We understand that these are incorporated into a statewide UAA for recreation that is currently in review, however, the language that WDEQ was going to incorporate on behalf of these UAA's in the 2012 IR, has not been included in the 2014 report."
- Response:** Text has been added to the last paragraph of the Upper Big Horn Sub-basin (HUC 10080007) section of the 2014 IR that states "Use Attainability Analyses (UAA) to change the recreational uses of Fifteen Mile and Nowater Creeks from primary to secondary were submitted to WDEQ by WCCD in 2009. Information in these UAAs was incorporated into the statewide UAA for recreation that has been submitted to USEPA for approval."
- Entity:** Wyoming Association of Conservation Districts (WACD)
- Comment:** **"Page 36, 1st paragraph**
COMMENT: "The WCCD initiated watershed planning within the Sage Creek / Slick Creek watershed in 2012 to coincide with the Bighorn TMDL. A steering committee was formed and met monthly to develop the Sage Creek / Slick Creek Watershed Implementation plan which outlines goals and objectives for reducing *E. coli* contributions within the watershed. As part of this planning process the WCCD applied for and received NRCS National Water Quality Initiative Funding in 2013 and applied for and received funding for a 319 grant also in 2013."
- Response:** Text has been added to the last paragraph of the Upper Big Horn Sub-basin (HUC 10080007) section of the 2014 IR that states "WCCD initiated watershed planning within the Sage and Slick Creek watersheds in 2012 to coincide with TMDL development. A steering committee was formed and met monthly to develop the Sage Creek/Slick Creek Watershed Implementation plan which outlines goals and objectives for reducing *E. coli* contributions within these watersheds. As part of this planning process, WCCD received NRCS National Water Quality Initiative Funding and a Section 319 grant in 2013."
- Entity:** Wyoming Association of Conservation Districts (WACD)
- Comment:** **"Page 36, Nowood Sub-basin – 3rd paragraph**
COMMENT: SBHCD collected and submitted data results from 2008-2010 monitoring to WDEQ on February 2, 2012. WACD will follow up with the District to ensure all required elements have been submitted."
- Response:** On February 2, 2012, SBHCD submitted three memoranda between WWC Engineering and SBHCD to WDEQ for review. These documents contained QA/QC and data summaries for water quality monitoring data collected between 2008 and 2010. WDEQ found that the data summarized within these documents were insufficient to conduct a QA/QC evaluation and determine designated use support. WDEQ recently contacted SBHCD to discuss the agency's conclusions regarding the data submission. In an effort to more clearly communicate WDEQ's QA/QC requirements, a spreadsheet containing WDEQ's QA/QC criteria was sent to SBHCD via email on March 17, 2015.

Entity: Wyoming Association of Conservation Districts (WACD)
Comment: **"Page 39, Greybull Sub-basin – 1st paragraph**
COMMENT: As noted in WACD's comments from the 2012 Integrated Report, The Greybull River Watershed Plan was completed in 2010 by the Meeteetse Conservation District."
Response: Text has been added to the last paragraph of the Greybull Sub-basin (HUC 10080009) section of the 2014 IR that states "The Greybull River Watershed Plan was completed in 2010 by the MCD."

Entity: Wyoming Association of Conservation Districts (WACD)
Comment: **"Page 40, Bighorn Lake Sub-basin – 2nd paragraph**
COMMENT: Granite Creek is another a small tributary to Shell Creek...WACD would suggest removing 'a' after another in first sentence."
Response: The text has been corrected and now states "Granite Creek is another small tributary to Shell Creek in upper Shell Creek Canyon."

Entity: Wyoming Association of Conservation Districts (WACD)
Comment: **"Page 41, Bighorn Lake Sub-basin – 3rd paragraph**
COMMENT: Last sentence. ..is considered to have an impaired aquatic life other than fish use, and this reach was been place in Category 4C in 2006" WACD suggests removing 'been' after was in the last sentence."
Response: The text has been changed and now states "The de-watered segment downstream of this diversion (WYBH100800100500_01) is considered to have an impaired aquatic life other than fish use, and this reach was placed in Category 4C in 2006."

Entity: Wyoming Association of Conservation Districts (WACD)
Comment: **"Page 44, Shoshone River Sub-basin – 1st paragraph**
COMMENT: In 2006, PCFCD received a Section 319 grant to improve eligible septic systems in the Bitter Creek watershed. To evaluate the water quality after the modifications were implemented, the PCFCD commenced sampling from 2007-2009 as part of this project. Sampling has been conducted by the PCFCD on the Shoshone River and Bitter Creek from 2010-2014."
Response: Text has been added to the second paragraph of the Shoshone River Sub-basin (HUC 10080014) section of the 2014 IR that states "In 2006, PCFCD received a Section 319 grant to improve eligible septic systems in the Bitter Creek watershed. To evaluate water quality after the modifications were implemented, the PCFCD collected *E. coli* samples from 2007-2009 as part of this project. Sampling by PCFCD continued on the Shoshone River and Bitter Creek between 2010-2014."

Green River Basin

Entity: Wyoming Association of Conservation Districts (WACD)
Comment: **"Page 57, Bitter Creek Sub-basin – 2nd paragraph**
COMMENT: WDEQ indicated in a response to comments the following would be included in the 2012 Integrated report '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.' This was not added to 2014 report."
Response: Text has been added to the last paragraph of the Bitter Creek Sub-basin (HUC 14040105) section that states "The SWCCD recently received a Section 319 grant to continue educational outreach and implementation, as well as data analysis in preparation for the development of a TMDL."

Entity: Wyoming Association of Conservation Districts (WACD)

Comment: "Page 58, Blacks Fork Sub-basin – 4th paragraph
COMMENT: E. coli data in 2009 and 2010 that showed that bacterial concentration on the Blacks and Smiths Fork were still exceeding WDEQ's recreational use criteria." UCCD has collected and provided additional 2011, 2012 and spring 2013 monitoring data and information to SWCA, to be used in validating the Smiths and Blacks Fork TMDLs.

'WDEQ initiated TMDLs for the Smiths and Blacks Forks in 2013.' Both of these TMDLs have been completed and submitted to EPA.

WACD incorporates by reference those comments submitted by Uinta County Conservation District."

Response: WDEQ's TMDL Program initiated TMDLs for the Smiths and Blacks Forks in 2013. To date, drafts of these TMDLs have not been completed and submitted to USEPA for approval. For information regarding the status of these TMDLs, please contact David Waterstreet 307-777-6709.

Little Snake River Basin

Entity: Little Snake River Conservation District (LSRCD)

Comment: "Pg 62 – Savery Creek listing (WYGR140500030405_01)
LSRCD has implemented several watershed wide BMP's to address the issues on Savery Creek. Temperature data has been collected during the years of 2012 and 2013 during two high drought years. Data shows that with High Savery releases, temperatures are managed throughout Savery Creek, for cold water fisheries. Data will be submitted during the next data submission.

Pg 62 – West Fork of Loco Creek listing (WYGR140500030408_02)

Comments on the Draft 2012 IR from DEQ 'The temperature listing on West Fork of 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 has collected two years of data and will be analyzing it and submitting it next data submission."

Entity: Wyoming Association of Conservation Districts

Comment: "Page 63, Little Snake River Sub-basin
COMMENT: WACD incorporates by reference herein those comments submitted by Little Snake River Conservation District."

Response: WDEQ recommends working with the QAQC program in advance of the July 15, 2015 data submission deadline to ensure that your submissions are complete and all data requirements are met.

Entity: Little Snake River Conservation District (LSRCD)

Comment: "Pg 64 – Muddy Creek listing (WYGR140500040308_01)
LSRCD worked with USGS on a study on this section of Muddy Creek. The paper has just been released as a USGS approved paper and is in review for publication in the Journal of Hydrology. Soil disturbance as a driver of increased stream salinity in a semiarid watershed undergoing energy development, Carlton R. Bern, cbern@usgs.gov, 303-236-1024."

Response: It is anticipated that this study will be reviewed and potentially incorporated into the 2016 Integrated Report.

North Platte River Basin

Entity: Laramie Rivers Conservation District (LRCD)
Comment: "I am writing to submit a few comments on the 2014 Draft Integrated Report regarding the Laramie River and Little Laramie on Page 81

-Please note that LRCD continues to sample all four sites, but could not obtain credible data in 2013 due to high runoff.
-In 2012 our sampling indicated that only two of the four sites in question exceeded standards for *E. coli* bacteria, not three of four as written in the report.
-In the last sentence please replace 'continued to have high bacterial concentrations' with 'continued to exceed standards...'. The word 'high' is relative and our numbers aren't very high compared to polluted waters with truly high *E. coli* numbers in the thousands or tens of thousands.

Response: Thank you for considering our comments."
The text in the last paragraph of the Upper Laramie Sub-basin (HUC 10180010) has been changed from "... and the Laramie River below Bosler Junction continued to have high bacterial concentrations..." to "...and the Laramie River below Bosler Junction continued to exceed *E. coli* criteria."

Entity: Medicine Bow Conservation District (MBCD)
Comment: "The Medicine Bow Conservation District appreciates the opportunity to review and provide comment for Wyoming's Draft 2014 Integrated 305(b) and 303(d) Report. The Medicine Bow Conservation District operates under, and is guided by, legislative declarations and the Wyoming State Legislature W.S. 11-16-103 et. al, with specific charge to protect water as defined.

The MBCD appreciates the opportunity to provide comment on the Wyoming Draft Integrated 305(b) and 303(d) Report and will make some general comments about process and limit our watershed specific comments to the sections of the Integrated Report that deal specifically with the Little Medicine Bow Sub-basin (HUC 10180005) and the Medicine Bow Sub-basin (HUC 10180004).

General Comments

Public outreach both at the beginning of this process and once the draft report was issued was noticeably lacking. Where it did happen, it was reactionary rather than proactive. While the district is aware that there is no policy in place to notify landowners of changes in status of a water body, even if it will negatively impact their livelihood, we believe there should be greater effort, whether policy is in place or not, to engage landowners in the process and explain the consequences of those changes in status. A simple phone call to notify landowners who would be directly affected would be beneficial. In urban situations, with more population affected that would be difficult to do, but in less populated watersheds such as ours, it could be easily done."

Response: From project planning back in 2009 to development of the draft 2014 Integrated Report, WDEQ sent multiple letters containing data or updates to MBCD and the private landowners that granted permission to access monitoring sites, attended meetings with MBCD and stakeholders to discuss objectives, findings, and possible outcomes from the water quality evaluation, and also made revisions to the Rock Creek evaluation report based on comments received from MBCD and a stakeholder. WDEQ recognizes that comprehensive stakeholder outreach is important, but we also need to operate efficiently within our constrained resources as effectively as we can. WDEQ undertook significant efforts to inform interested parties of the Rock Creek evaluation via MBCD and other

outreach efforts. The following is a chronology of communications with MBCD and stakeholders related to the Rock Creek evaluation:

- May 2009: WDEQ met with MBCD to discuss monitoring plans, objectives, and hypothetical outcomes for the planned Rock Creek evaluation.
- May-June 2009: WDEQ contacted private landowners to request access for monitoring sites on Rock Creek.
- Summer 2009-2010: WDEQ conducted the evaluation of Rock Creek
- May 2010: The year 2009 Rock Creek data was submitted to MBCD, LRCD, and private landowners who granted WDEQ permission to monitor.
- May-June 2010: WDEQ contacted the same private landowners to request access for monitoring sites on Rock Creek.
- May 2012: The year 2010 Rock Creek data was submitted to MBCD, LRCD, and private landowners who granted WDEQ permission to monitor.
- July 2013: WDEQ met with MBCD to discuss findings from the Rock Creek evaluation and the proposed 4C categorization.
- July 2013: WDEQ sent a letter to MBCD, LRCD, and landowners that granted permission for monitoring on Rock Creek. This letter summarized the findings and proposed 4C categorization for the 2014 Integrated Report.
- December 2013: WDEQ met with MBCD and stakeholders regarding the Rock Creek evaluation and proposed 4C categorization in the 2014 Integrated Report.
- December 2013: MBCD and Jeb Steward provided comments to WDEQ regarding the Rock Creek evaluation report.
- February 2014: WDEQ attended a MBCD regional winter meeting (including neighboring districts and the public) to discuss findings of the Rock Creek and Little Medicine Bow River evaluations.
- March 2014: WDEQ responded to comments received from MBCD and Jeb Steward.
- March 2014: WDEQ held a radio interview with Bigfoot Radio out of Saratoga regarding the findings of the Rock Creek evaluation.
- April 2014: WDEQ revised, per MBCD's and Jeb Steward's comments, the Rock Creek evaluation report to emphasize WDEQ's absence of authority over water rights/quantity and correct errors in water allocation estimates.
- November 2014: Released the revised final assessment report for Rock Creek
- November 2014: Released the draft 2014 Integrated Report for public comment
- December 2014: MBCD submitted comments on the draft 2014 Integrated Report.

Entity: Medicine Bow Conservation District (MBCD)

Comment: "**Medicine Bow Sub-basin (HUC 10180004)**

On page 73 of the Draft Integrated Report it is stated that, 'In the mid-1990's, NRCS suggested that siltation may be impairing the cold water fishery and aquatic life other than fish uses on lower Rock Creek; however quantitative data were lacking.' The MBCD finds this language problematic for several reasons and would like to see this sentence removed from the report. There is no reference for the statement regarding NRCS's suggesting that siltation could be impairing the cold water fishery and aquatic life other than fish uses on lower Rock Creek. It is anecdotal at best and implicates NRCS in a regulatory action that they have no control or regulatory authority over, and it could complicate their further interactions with producers on Rock Creek unnecessarily. Furthermore, we understand that this information pertains to general survey forms that were utilized by DEQ in 1996 and prior years, and as a result of the TMDL litigation and subsequent actions taken by DEQ, this type of information was deemed inappropriate for use due to lack of ability to verify the specifics provided, the qualitative nature of the information, and in ability of DEQ to verify the submitting entity. As a result, those streams appearing on the 1996 based on this type of information, were moved to a

'needs monitored' list with the intent that DEQ would conduct actual monitoring activities to determine, based on quantitative data the condition of the waters. Given that the information from 1996 was disqualified as credible, we would suggest it is inappropriate to reference that information as the basis for any type of surface water quality summary.

Within the same paragraph on page 73, it is further stated that: 'The Medicine Bow Conservation District (MBCD) and students from the University of Wyoming (UW) conducted monitoring on Rock Creek between 1999 and 2001. Results suggested that biological condition declined in a downstream direction, due to the combined effects of sedimentation, flow alterations and drought. WDEQ (2013) conducted a study during 2009 and 2010 to collect the necessary data to make designated use support determinations on Rock Creek. Results of this study corroborate earlier studies. Specifically, the cold water fishery and aquatic life other than fish uses on Rock Creek (WYNP101800040202_02) from the town of Arlington downstream 106.5 miles to the confluence with the Medicine Bow River were not supported due to flow alterations associated with irrigation." It is the understanding of the MBCD that the data from the MBCD/UW report was not used in the decision to move Rock Creek to a 4C status, thus the need for WDEQ to collect data in 2009 and 2010 in order to make the determination. MBCD recommends removing mention of the earlier MBCD/UW report as it was not used to make that determination and placing it in the report adds nothing of substance. WDEQ collected the data that resulted in the change of status. WDEQ placed the stream in the 4C category. MBCD does not want to be implicated in the change of status of Rock Creek."

Response: As stated in the introduction of Water Quality Condition and Designated Use-Support Recommendation for Rock Creek, North Platte Basin, 2009-2010 (WDEQ 2014): "Rock Creek, from Threemile Creek downstream to its confluence with the Medicine Bow River in Albany and Carbon Counties, Wyoming, was originally placed on Wyoming's 1996 303(d) List for partial-support of cold-water fisheries and other aquatic life uses. This listing was based on information provided by the WDEQ/WQD and the Natural Resources Conservation Service (NRCS) (formerly the United States Soil Conservation Service). Suspected causes of the impairment were siltation (sedimentation) and unknown environmental stressors that possibly originated from rangeland, irrigated crop and/or pasture lands. However, over 300 waterbody segments on the 1996 303(d) List, including Rock Creek, had only anecdotal data suggesting that designated uses may not be fully supported. These waterbody segments in question were ultimately removed from the 1996 303(d) List and subsequently placed on Table E (i.e. the 'needs monitoring' list) of the 1998 305(b) report. The WDEQ/WQD thereafter committed, as part of the 1997 TMDL Work Plan, to collect chemical, biological and physical data to determine the validity of impairments on many of the 300+ waterbody segments described on the 1996 303(d) List.

Graduate students with the University of Wyoming (UW) – Department of Natural Resources, in cooperation with the Medicine Bow Conservation District (MBCD), accepted the responsibility of gathering the necessary credible data on Rock Creek with the intent that a designated use-support determination could be made. From 1999 to 2001, UW/MBCD collected chemical, physical and biological data at three locations on Rock Creek. These three monitoring locations were approximately located near the Town of Arlington, Fetterman Road and the now inactive Wyoming Game and Fish Department (WGFD) fish hatchery in the Como Bluffs area. Final results and interpretation of the data collected during the three year project were presented in two UW graduate theses (Holzerland 2001, Miller 2002) and subsequently submitted to WDEQ/WQD. Holzerland (2001) and Miller (2002) concluded that the biological condition of Rock Creek declined with distance downstream. Lower Rock Creek (downstream of Fetterman Road) exhibited

the lowest biological condition among the three sites, apparently due to degraded habitat conditions caused by high sediment loads, elevated coarse particle embeddedness and insufficient flows. The channel's natural low gradient and drought conditions during the period of study were implicated as possible causes of the observed sedimentation and consequently the low biological condition. However, other information in the theses suggested that anthropogenic stressors such as flow alterations, incised and unstable channels with mobile sand substrates and low riparian vegetative densities as other potential causes of the observed sedimentation in lower Rock Creek.

In 2006, the WDEQ/WQD re-evaluated the UW Rock Creek biological data with two new biological indicator tools (e.g. the redesigned Wyoming Stream Integrity Index (WSII) and the Wyoming River InVertebrate Prediction and Classification System (WY RIVPACS) (Hargett and ZumBerge 2006, Hargett et al. 2007 and 2005). These analyses corroborated the spatial patterns in biological condition previously reported by Holzerland (2001) and Miller (2002). Results from these models increased the level of confidence that the biological condition was compromised in lower Rock Creek.

Though the UW theses were informative, a conclusive designated uses-support determination could not be derived. Specifically, information from the UW theses were 1) limited in their spatial representation of the watershed and 2) inconclusive as to the primary cause(s) and source(s) of the low biological condition.

The WDEQ/WQD implemented a two-year watershed-scale assessment of Rock Creek in 2009 and 2010. The objectives of this watershed-scale assessment were to 1) collect and evaluate additional credible data, including chemical, physical and biological, with respect to Wyoming water quality standards and to determine designated use-support and 2) identify the source(s) of excess sediment in Rock Creek. The WDEQ/WQD met with MBCD in May 2009 to discuss the agency's monitoring objectives for the two year assessment of Rock Creek that was conducted in July 2009 and 2010. This report describes the monitoring, data analysis and designated use-support determinations from the 2009-2010 WDEQ/WQD Rock Creek study."

An abbreviated version of the above text was presented in the Draft 2014 IR to provide a general historical background and chronology for all known water quality studies on Rock Creek and to demonstrate the need for the 2009-2010 WDEQ study. As outlined in the 2014 report on Rock Creek, conclusions from these early studies (i.e. WDEQ, NRCS and MBCD/UW) were not used to assess designated use support on Rock Creek, but were the impetus behind the 2009-2010 study. The WDEQ surface water quality assessment report entitled *Water Quality Condition and Designated Use-Support Recommendation for Rock Creek, North Platte Basin, 2009-2010 (WDEQ 2014)* was used to assess the designated uses on Rock Creek that resulted in the 4C categorization in the 2014 Integrated Report. A reference has been added to the text in the Medicine Bow Sub-basin section of the Draft 2014 IR. The text which stated "In the mid-1990's, NRCS suggested that siltation may be impairing the cold water fishery and aquatic life other than fish uses on lower Rock Creek; however quantitative data were lacking." now states that..."In the mid-1990's, WDEQ/WQD and NRCS suggested that siltation may be degrading biological communities on lower Rock Creek; however, the quantitative data necessary to make cold-water fisheries and aquatic life other than fish designated use support determinations were lacking." The NRCS and MBCD/UW data and information are important in that they provide professional opinions from a historical perspective on the water quality of Rock Creek. As such, this information has been retained in the 2014 IR.

Entity: MBCD

Comment: "The district would like to see more work done on the ultimate causation and location of the beginning of the impairment. Staff, money and time are of course problems across agencies nationwide, but water users and producers have the most to lose, they are heavily invested in water quality and quantity at the local level, and they deserve WDEQ's best efforts to identify the problem at the finest level of detail realistically possible.

A final point about Rock Creek: There is great benefit beyond agriculture in the use of water irrigation on Rock Creek. Wet meadows provide habitat to a variety of local and migratory those wet meadows are the result of irrigation. Irrigation is responsible for there being water Rock Creek later in the season. Where would the fish and other aquatic life habitat be late in the season if there were no return flows from irrigation? Impairment is impairment, and there is argument against that here, however, there is also wider context to consider that tells a different, fuller story. That is something the MBCD would like to see DEQ acknowledge."

Response: WDEQ's 2009-2010 Rock Creek evaluation was a watershed-scale study conducted in accordance with standard operating procedures and *Wyoming's Methods for Determining Surface Water Quality Condition and TMDL Prioritization*. The Rock Creek study was a comprehensive, multiple site study designed to evaluate Rock Creek with respect to Wyoming surface water quality standards, identify cause(s) and source(s) of documented degraded biological condition of Rock Creek and, ultimately, to determine designated use support. Multiple lines of chemical, biological and physical evidence were derived from the study, including several that represented long-term indicators of water quality condition. Findings from WDEQ's study corroborated those presented in the Rock Creek evaluation performed by the University of Wyoming/Medicine Bow Conservation District during 1999-2001. Combined, the WDEQ and UW/MBCD evaluations along with other sources of information spanned at least a decade of data collection on Rock Creek. WDEQ recognizes the importance of providing the best level of information necessary to determine the cause and extent of an impairment while also balancing the allocation of limited resources. It is WDEQ's belief that the two-year evaluation, combined with other sources of information, were sufficient to infer the predominant cause and extent of the impairment on Rock Creek.

However, WDEQ may need to conduct additional work on Rock Creek to determine whether the designated uses and criteria used to evaluate Rock Creek are reflective of existing and attainable uses of the stream. Given recent legislation passed in Wyoming to develop "water quality standards for surface waters where hydrologic modification resulting from the exercise of valid water rights precludes attainment of existing water quality standards," WDEQ will be preparing a "schedule to develop appropriate water quality standards based on the completion of a use attainability analysis for any waters that have been identified pursuant to 33 U.S.C § 1315(b) where dams, diversions and other types of hydrologic modification preclude attainment of any existing water quality standard." Since Rock Creek has been proposed for category 4C of the Integrated Report, WDEQ will be preparing a schedule to complete a UAA for Rock Creek. Completion of the UAA may require additional monitoring and evaluation of the stream to ensure that the designated uses and criteria are appropriate. This analysis will ultimately result in additional evaluation of the impairment.

When WDEQ evaluates a waterbody, the scope is generally limited to determining whether surface water quality standards are exceeded or met. If standards are exceeded, to the fullest extent possible, WDEQ will determine the cause(s) and source(s) of those exceedances. Recognizing other beneficial uses for the use of the water is generally beyond the scope of WDEQ's evaluations. Where WDEQ can improve in

recognizing the beneficial uses of water is in ensuring that the designated uses and criteria to protect those uses are attainable given the current use of the water.

Entity: Medicine Bow Conservation District (MBCD)

Comment: "**Little Medicine Bow Sub-basin (HUC 10180005)**

On page 73, there is further reference to a report generated by MBCD and UW between 1999 and 2001.

'Between 1999 and 2001, MBCD and graduate students from UW collected water quality data to evaluate the health of the aquatic community of the LMBR. Results of this work indicated that there was biological degradation due to excess sedimentation along the LMBR downstream of the reclaimed uranium mine site and that the sources of this pollutant were predominantly natural. However, this study lacked sufficient credible data to make use support determinations on LMBR.'

MBCD would like to see reference to this report removed from this section. If the report generated by UW/MBCD was not deemed to have sufficient credible data, it seems superfluous to the discussion and unnecessary to bring up in the decision to place the Little Medicine Bow River on the 303(d) list, which, again, was based upon WDEQ's own data."

Entity: Wyoming Association of Conservation Districts (WACD)

Comment: WACD stated for "**Page 74, Little Medicine Bow Sub-basin - 2nd paragraph**

COMMENT: 'In contrast, the cold water fisheries and aquatic life other than fish uses were not supported on the Little Medicine Bow River from County Road 2E downstream 26.2 miles to the confluence with Sheep Creek and this segment has been added to the 303(d) List in 2014.'

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

Response: The work by the MBCD and graduate students from UW was described in the Draft 2014 IR to provide a general historical background and chronology for the known water quality studies on the Little Medicine Bow River and to highlight the need for further study. The MBCD/UW data and information were deemed insufficient for making use support determinations on the Little Medicine Bow River. However, the data and information do provide important expert opinions from a historical perspective on the water quality of Little Medicine Bow River and have therefore been retained in the 2014 IR.

Entity: Medicine Bow Conservation District (MBCD)

Comment: "Mention of the reclamation efforts that have been successful in the reconstructed channel of the Little Medicine Bow River would not be remiss, as the river is in far better condition than it could be without the work of AML and others to reclaim mining areas to an acceptable condition. And there are many people locally and at the University of Wyoming who believe that the Little Medicine Bow River is naturally a sand bottomed stream. Ultimately, the source of the sediment impairment is likely a mix of in-channel erosion and off-channel sediment episodes driven by intense precipitation events.

The Medicine Bow Conservation District appreciates the opportunity to comment on the Wyoming Draft 2014 Integrated 305(b) and 303(d) Report."

Response: Text has been added to the 2nd paragraph of the Little Medicine Bow Sub-basin (HUC 10180005) section which states "Further incision of the drainage upstream of the reclaimed mine region could have occurred if channel reconstruction work had been forestalled for several more years. Instead, the channel reconstruction disturbance and subsequent time period for channel stabilization were limited to 20-years."

Entity: U.S. Environmental Protection Agency (USEPA)
Comment: "2) No mileage is listed for the Little Medicine Bow River (WYNP101800050103) in the 303(d) List. It is listed as 26.2 miles in the ADB and GIS files."
Response: WDEQ has added 26.2 miles as the distance of the Little Medicine Bow River impairment in the Draft 2014 303(d) List.

Entity: Wyoming Association of Conservation Districts (WACD)
Comment: "**Page 76, Sweetwater Sub-basin – 3rd paragraph**
COMMENT: In addition to the discussion above pertaining to the 2012 listing of Lander Creek, there appears to be an error in the description of the impairment on Page 163. The location is described as a 0.5 mile section of Lander Creek between two unnamed tributaries and adjacent to County Route 132 (in NW S8 T29N R103W, within HUC 12 boundary 101900060104). Lander Creek only flows through the NE quarter of Section 8. WACD would like clarification on the location of this impairment."
Response: Lander Creek and its description has been removed from the 2014 Draft IR. For additional details, see responses to other WACD comments, above. WDEQ's understanding is that this impairment was a 0.5 mile section between two unnamed tributaries and adjacent to County Route 132 (in NE S8 T29N R103W, within HUC 12 boundary 101800060104).

Entity: Wyoming Association of Conservation District (WACD)
Comment: "**Page 76, Middle North Platte Sub-basin, 2nd paragraph**
COMMENT: Last sentence, WACD suggests adding the word 'to' in front of 'the North Platte River.'"
Response: The last sentence of paragraph two in the Middle North Platte Sub-basin (HUC 10180007) has been changed to state that "In addition, conversion from flood to sprinkler irrigation in the Kendrick Irrigation District may reduce loading, but increase selenium concentrations to the North Platte River."

Powder River Basin

Entity: Campbell County Conservation District (CCCD)
Comment: "**Page 90, paragraph 3**
Comment: CCCD submitted monitoring results from 2010-2013 on Middle Prong Wild Horse Creek to WDEQ after the July 15, 2013 deadline. The District looks forward to communicating with WDEQ on the use of these data in the next Integrated Report."

Entity: Wyoming Association of Conservation Districts (WACD)
Comment: "**Page 90, Upper Powder River Basin, 3rd paragraph**
COMMENT: WACD incorporates by reference herein those comments submitted by the Campbell County Conservation District."

Entity: Campbell County Conservation District (CCCD)
Comment: "CCCD submitted monitoring results from 2010-2013 on Little Powder River to WDEQ after the July 15, 2013 deadline and will be further reviewing the data in comparison to the current standards."
Response: Since the close of the public comment period for the 2014 Draft IR, WDEQ's QAQC officer has correspond with CCCD regarding the Middle Prong Wild Horse Creek and Little Powder River data submissions. If you have further questions regarding these data submissions, please contact Cathy Norris at 307-777-6372.

Entity: Campbell County Conservation District (CCCD)
Comment: "**Page 101, paragraph 1**
Comment: CCCD submitted the following comments on the Draft 2012 IR page 30 and 31 which are not reflected in the Draft 2014 IR:

- 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 the Little Powder River?
- Comment: CCCD has not completed a watershed plan for the 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.

WDEQ's Response to comments on Draft 2012 IR: 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 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 the 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.'

Comment: Soda Well should be Soda Wells"

Entity: Wyoming Association of Conservation Districts (WACD)

Comment: "Page 101, Little Powder Sub-basin – 1st paragraph
COMMENT: As noted in WACD's comments for in 2012 Integrated Report, CCCD completed a watershed plan for Little Powder River Creeks in 2006 not 2010."

Response: The text in the Draft 2014 IR stating "CCCD and local citizens sponsored a watershed plan for the Little Powder River in 2010. To date, 8 AFO and 14 septic improvement BMP projects have been implemented ([WACD 2011](#))." has been removed from Little Powder Sub-basin (HUC 10090208) and replaced with "CCCD and NRCS have assisted landowners in implementing 13 water quality improvement projects in the watershed ([WACD 2011](#)), 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. 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 Wells exceeded the primary recreational use criterion. CCCD completed a watershed plan for Little Powder River in 2006."

Entity: Wyoming Association of Conservation Districts (WACD)
Comment: **"Page 86, Powder River Basin – 3rd paragraph**
COMMENT:'both the water quality and aquatic life monitoring task groups were formed and monitoring plans developed for the affected areas of NE Wyoming (see inset map)' WACD was unable to locate the inset map."
Response: The text stating "(see inset map)" has been removed from the Draft 2014 IR.

Entity: Wyoming Association of Conservation Districts (WACD)
Comment: **"Page 94, Crazy Woman Sub-basin, 2nd paragraph**
COMMENT: WACD appreciates that WDEQ acknowledges that it is very unlikely that lower Crazy Woman Creek will ever be used as a drinking water source due to its intermittent hydrology and that WDEQ is going to reassess the listed segment for the 2016 Integrated Report. Crazy Woman Creek has been on the 303(d) list for 14 years and like other streams in the Powder River Basin, high manganese concentrations are common due to the natural geology, and there are no known sources of anthropogenic manganese in the Lower Crazy Woman Creek. WACD and the Lake DeSmet Conservation District (LDCD) again request WDEQ highly consider re-evaluating Crazy Woman Creek and remove it from the 303(d) list by 2016."
Response: WDEQ appreciates WACD's support of the reassessment of these listing in the 2016 IR.

Snake River Basin

Entity: Wyoming Association of Conservation Districts (WACD)
Comment: **"Page 105, Greys-Hoback Sub-basin, 2nd paragraph**
COMMENT: As noted by SCCD in the Response to Comments in the Draft 2012 Integrated Report 305(b) and 303(d) Report on page 34 'We would point out that the descriptions of the location in the text is incorrect. The text describes the Pacific Creek listing...For our purposes, the upper and lower and lower points of the reach should be defined.' WDEQ's response was '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 the town of Bondurant has been added to the 2010 303(d) List. This section has not been updated in the narrative portion of the 2014 Draft report. Please see additional comments above pertaining to Clarks Draw.'
Response: As outlined above, the Pacific Creek 303(d) Listing (WYGR140401040303_01) has been removed from the 2014 Integrated Report. Likewise, the descriptions of Pacific Creek have been removed from the 2014 Draft IR.

Tongue River Basin

Entity: Wyoming Association of Conservation Districts (WACD)
Comment: **"Page 113-117, Tongue Sub-basin**
COMMENT: The Sheridan County Conservation District had submitted data for consideration in the 2014 IR. WACD understands the district will be resubmitting their data package as per the correspondence received from DEQ."
Response: WDEQ will be communicating with each entity on the status of the data submission in the near future. WDEQ anticipates that each of these entities will submit any necessary additional information that is requested so their data can be evaluated for inclusion in the 2016 Integrated Report.

Appendix A. Public Comments Received by December 29, 2014 5 PM on the Draft 2014 Integrated Report

Figure 1. Campbell County Conservation District (3 pages).

<p>OFFICE 601 4J Court, Suite D PO Box 2577 Gillette, WY 82717-2577 Phone: 307-682-1824 Fax: 307-682-3813 www.cccdwy.net</p>	 <p>CAMPBELL COUNTY CONSERVATION DISTRICT</p>	<p>BOARD OF SUPERVISORS Lindsay Wood, Chair Bob Maul, Sec/Treas. BJ Clark Travis Hakert Acacia "Casey" Elkins</p>
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December 17, 2014

VIA: MAIL – Certified Return Receipt Requested

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

RECEIVED

DEC 22 2014

WATER QUALITY DIVISION
WYOMING

RE: Comments on DRAFT 2014 Integrated 305(b) and 303(d) Report

Dear Mr. Thorp,

Below are the comments of the Campbell County Conservation District (CCCD) regarding the Draft 2014 Integrated 305 (b) and 303(d) Report.

Page 23. Upper Belle Fourche Sub-basin paragraph 1. last sentence

"A watershed plan and implementation strategy was completed by CCCD in 2010 to address these listing; efforts mainly focused on septic system improvements."

Comment: CCCD submitted the following comments on the Draft 2012 IR which are not reflected in the Draft 2014 IR as stated by WDEQ's Response to Comments page 10:

- o 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.
- o 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.

WDEQ's Response to comments on Draft 2012IR: The text which stated.."CCCD completed WDEQ approved watershed plans for Donkey and Stonepile Creeks in 2010." Has been removed from the 2012IR and replaced with ..."A watershed plan for the 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.

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.”

Comment: CCCD submitted monitoring results from 2010-2013 on Donkey Creek and Stonepile Creek to WDEQ after the July 15, 2013 deadline and will be further reviewing the data in comparison to the current standards.

Page 24. paragraph 2

Comment: WDEQ response does not appear in the Draft 2014 IR as stated in the WDEQ Comments in Draft 2012 IR page 11.

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.”

Page 90. paragraph 3

Comment: CCCD submitted monitoring results from 2010-2013 on Middle Prong Wild Horse Creek to WDEQ after the July 15, 2013 deadline. The District looks forward to communicating with WDEQ on the use of these data in the next Integrated Report.

Page 101. paragraph 1

Comment: CCCD submitted the following comments on the Draft 2012 IR page 30 and 31 which are not reflected in the Draft 2014 IR:

- 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.

WDEQ’s Response to comments on Draft 2012IR: 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 the 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.”

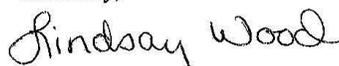
The text in the Little Powder River Sub-Basin section of the 2012 Integrated Report which stated...”CCCD completed a watershed plan for Little Powder River that was approved by WDEQ in 2010.” Has been removed and replaced with ...”CCCD completed a watershed plan for Little Powder River in 2006.”

Comment: Soda Well should be Soda Wells.

Comment: CCCD submitted monitoring results from 2010-2013 on Little Powder River to WDEQ after the July 15, 2013 deadline and will be further reviewing the data in comparison to the current standards.

CCCD appreciates the opportunity to provide comments on the Draft 2014 Integrated 305(b) and 303(d) report.

Sincerely,



Lindsay Wood, Chair

Figure 2. Laramie Rivers Conservation District (1 page).



Laramie Rivers Conservation District

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

Tony Hoch
Director

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

December 23, 2014

Re: Comments on Draft 2014 Integrated 305b and 303d Report

Mr. Thorp,
I am writing to submit a few comments on the 2014 Draft Integrated Report regarding the Laramie River and Little Laramie River on Page 81.

- Please note that LRCD continues to sample all four sites, but could not obtain credible data in 2013 due to high runoff.
- In 2012 our sampling indicated that only two of the four sites in question exceeded standards for E. coli bacteria, not three of four as written in the report.
- In the last sentence please replace "continued to have high bacterial concentrations" with "continued to exceed standards...". The word "high" is relative and our numbers aren't very high compared to polluted waters with truly high E. coli numbers in the thousands or tens of thousands.

Thank you for considering our comments.

A handwritten signature in black ink, appearing to read "Tony Hoch", written over a horizontal line.

Tony Hoch

RECEIVED

DEC 29 2014

WATER QUALITY DIVISION
WYOMING

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.

Figure 3. Little Snake River Conservation District (2 pages).

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LITTLE SNAKE RIVER CONSERVATION DISTRICT
P.O. BOX 355
BAGGS, WY 82321
PHONE: (307) 383-7860
FAX: (307) 383-7861

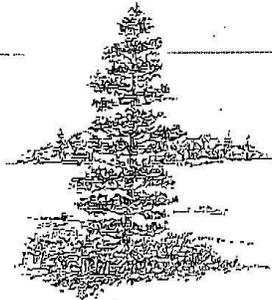
Date: December 22, 14

Number of pages
in this transmittal
including cover sheet: 2

To: Richard Thorp

Fax Number: 307-777-5973

From: Jawn Arnell



Message

2014 Draft comments

Comments for the Draft 2014 Integrated report – Little Snake River Conservation District

Pg 62 – Savery Creek listing (WGR140500030405_01)

LSRCD has implemented several watershed wide BMP's to address the issues on Savery Creek. Temperature data has been collected during the years of 2012 and 2013 during two high drought years. Data shows that with High Savery releases temperatures are managed throughout Savery Creek, for cold water fisheries. Data will be submitted during the next data submission.

West Fork of Loco Creek listing (WYGR140500030408_02)

Comments on the Draft 2012 IR from DEQ, "The temperature listing on West Fork of 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 has collected two years of data and will be analyzing it and submitting it next data submission.

Page 64 – Muddy Creek listing (WYGR140500040308_01)

LSRCD worked with USGS on a study on this section of Muddy Creek. The paper has just been released as a USGS approved paper and is in review for publication in the Journal of Hydrology. Soil disturbance as a driver of increased stream salinity in a semiarid watershed undergoing energy development, Carleton R. Bern, cbern @usgs.gov, 303-236-1024

Figure 4. Medicine Bow Conservation District (3 pages).



MEDICINE BOW CONSERVATION DISTRICT

PO Box 6 – Medicine Bow, WY 82329 – Phone (307) 379-2221 – Fax (307) 379-2224

December 24, 2014

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

RE: Wyoming's Draft 2014 Integrated 305(b) and 303(d) Report- Little Medicine Bow Sub-basin (HUC 10180005) and Medicine Bow Sub-basin (HUC 10180004)

The Medicine Bow Conservation District (MBCD) appreciates the opportunity to review and provide comment for Wyoming's Draft 2014 Integrated 305(b) and 303(d) Report. The Bow Conservation District operates under, and is guided by, legislative declarations and the Wyoming State Legislature W.S. 11-16-103 et al, with specific charge to protect water as defined.

The MBCD appreciates the opportunity to provide comment on the Wyoming Draft Integrated 305(b) and 303(d) Report and will make some general comments about process and limit our watershed specific comments to the sections of the Integrated Report that deal specifically with the Little Medicine Bow Sub-basin (HUC 10180005) and the Medicine Bow Sub-basin (HUC 10180004).

General Comments

Public outreach both at the beginning of this process and once the draft report was issued was noticeably lacking. Where it did happen, it was reactionary rather than proactive. While the district is aware that there is no policy in place to notify landowners of changes in status of a water body, even if it will negatively impact their livelihood, we believe there should be greater effort, whether policy is in place or not, to engage landowners in the process and explain the consequences of those changes in status. A simple phone call to notify landowners who would be directly affected would be beneficial. In urban situations with more population affected that would be difficult to do, but in less populated watersheds such as ours, it could be easily done.

Medicine Bow Sub-basin (HUC 10180004)

On page 73 of the 2014 Draft Integrated Report it is stated that, " In the mid-1990's, NRCS suggested that siltation may be impairing the cold water fishery and aquatic life other than fish uses on lower Rock Creek; however quantitative data were lacking."

CONSERVATION – DEVELOPMENT – SELF-GOVERNMENT

The MBCD finds this language problematic for several reasons and would like to see this sentence removed for the report. There is no reference for the statement regarding NRCS's suggesting that siltation could be impairing the cold water fishery and aquatic life other than fish uses on lower Rock Creek. It is anecdotal at best and implicates NRCS in a regulatory action that they have no control or authority over, and it could complicate their further interactions with producers on Rock Creek unnecessarily. Furthermore, we understand that this information pertains to general survey forms that were utilized by DEQ in 1996 and prior years, and as a result of the TMDL litigation and subsequent actions taken by DEQ, this type of information was deemed inappropriate for use due to lack of ability to verify the specifics provided, the qualitative nature of the information, and in ability of DEQ to verify the submitting entity. As a result, those streams appearing on the 1996 based on this type of information, were moved to a "needs monitored" list with the intent that DEQ would conduct actual monitoring activities to determine, based on quantitative data the condition of the waters. Given that the information from 1996 was disqualified as credible, we would suggest it is inappropriate to reference that information as the basis for any type of surface water quality summary.

Within the same paragraph on page 73, it is further stated that:

"The Medicine Bow Conservation District (MBCD) and students from the University of Wyoming (UW) conducted monitoring on Rock Creek between 1999 and 2001. Results suggested that biological condition declined in a downstream direction, due to the combined effects of sedimentation, flow alterations and drought. WDEQ (2013) conducted a study during 2009 and 2010 to collect the necessary data to make designated use support determinations on Rock Creek. Results of this study corroborated earlier studies. Specifically, the cold water fishery and aquatic life other than fish uses on Rock Creek (WYNP101800040202_02) from the town of Arlington downstream 106.5 miles to the confluence with the Medicine Bow River were not supported due to flow alterations associated with irrigation."

It is the understanding of the MBCD that the data from the MBCD/UW report was not used in the decision to move Rock Creek to a 4C status, thus the need for WDEQ to collect data in 2009 and 2010 in order to make a determination. MBCD recommends removing mention of the earlier MBCD/UW report as it was not used to make that determination and placing it in to the report adds nothing of substance. WDEQ collected the data that resulted in the change of status. WDEQ placed the stream in the 4C category. MBCD does not want to be implicated in the change of status of Rock Creek.

The district would like to see more work done on the ultimate causation and location of the beginning of the impairment. Staff, money, and time are of course problems across agencies nationwide, but water users and producers have the most to lose, they are heavily invested in water quality and quantity at the local level, and they deserve WDEQ's best efforts to identify the problem at the finest level of detail realistically possible.

A final point about Rock Creek: There is great benefit beyond agriculture in the use of water irrigation on Rock Creek. Wet meadows provide habitat to a variety of local and migratory those wet meadows are the result of irrigation. Irrigation is responsible for there being water

Rock Creek later in the season. Where would the fish and other aquatic life habitat be late in season if there were no return flows from irrigation? Impairment is impairment, and there is argument against that here, however, there is also wider context to consider that tells a different, fuller story. That is something the MBCD would like to see DEQ acknowledge.

Little Medicine Bow Sub-basin (HUC 10180005)

On page 73, there is further reference to a report generated by MBCD and UW between 1999 and 2001.

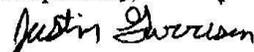
"Between 1999 and 2001, MBCD and graduate students from UW collected water quality data to evaluate the health of the aquatic community of the LMBR. Results of this work indicated that there was biological degradation due to excess sedimentation along the LMBR downstream of the reclaimed uranium mine site and that the sources of this pollutant were predominantly natural. However, this study lacked sufficient credible data to make use support determinations on LMBR."

MBCD would like to see reference to this report removed from this section. If the report generated by UW/MBCD was not deemed to have sufficient credible data, it seems superfluous to the discussion and unnecessary to bring up in the decision to place the Little Medicine Bow River on the 303(d) list, which, again, was based upon WDEQ's own data.

Mention of reclamation efforts that have been successful in the reconstructed channel of the Little Medicine Bow River would not be remiss, as the river is in far better condition than it could be without the work of AML and others to reclaim mining areas to an acceptable condition. And there are many people locally and at University of Wyoming who believe that the Little Medicine Bow River is naturally a sand bottomed stream. Ultimately, the source of the sediment impairment is likely a mix of in-channel erosion and off-channel sediment episodes driven by intense precipitation events.

The Medicine Bow Conservation District appreciates the opportunity to comment on the Wyoming Draft 2014 Integrated 305(b) and 303(d) Report.

Respectfully,



Justin Garrison

District Manager, Medicine Bow Conservation District

Figure 5. Sublette County Conservation District (3 pages).



December 19, 2014

Via Certified Return Receipt Requested

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

DEC 22 2014

WATER QUALITY DIVISION
WYOMING

Dear Richard,

The Sublette County Conservation District offers the following comments with regard to the draft 2014 Integrated Report.

The Sublette County Conservation is a subdivision of the State, provided broad authority to provide for the District's natural resources.

The Sublette County Conservation District (SCCD), has an active water quality monitoring program. The important contribution of the district is acknowledged in the draft, Wyoming's 2014 Integrated 305(b) and 303(d) Report.

In 2012 we had made specific comment regarding the listing of segments of Little Sandy River, Lander Creek, Clark's Draw, and Pacific Creek. Upon review of those comments, we find they continue to be valid and we recommend WDEQ review those comments as they pointed out factual errors in the text of the 2012 report which are propagated into the 2014 report. For example, the error in referencing the "Bar X" road in describing Clark's Draw location.

The Sublette County Conservation Districts specifically request the delisting of Clarks Draw, Lander Creek and Pacific Creek from the 2014 303(d) list of impaired waters. The district believes new information has become available to indicate the original listing was in error.

Since the publication of the 2012 Integrated Report, much has transpired to expose considerable evidence calling to question veracity of data used to support the listing of segments of Clark's Draw, Lander Creek, and Pacific Creek in 2012.

The district continues to question, as articulated in comments submitted on the 2012 Integrated Report, whether the data collected by the third party, Western Watersheds Project (WWP) and utilized for these listings meets the Credible data statutory and regulatory requirements based on bias, lack of representativeness of the sampling and failure to abide by Standard Operating Procedures as contemplated in §§ 35-11-103 9c)(xix) and Chapter 1; Water Quality Regulations; Section 2(a)(i) and the Department's Standard Operating Procedures.

The district has further reviewed the data and information utilized by DEQ to make the 2012 listing decision and is aware that the following significant deficiencies and issues have been discovered:

Phone 307-367-2257

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Email: sccd@sublettecd.com

Website: www.sublettecd.com

Conservation - Development - Self-Government

1. The WWP's personnel who conducted the monitoring lack qualification, training or certification required to assure reliability of data collection.
2. WWP's implementation of their SAP and referenced Standard Operating Procedures cannot be clearly demonstrated.
3. WWP's has demonstrated inherent bias within their sampling activities based on testimony provided by WWP in which they indicate their monitoring activities are intentionally conducted only when land use activities they are actively attempting to eliminate are occurring.

The laboratory equipment WWP's indicates it is using for processing E. coli samples is being used in a manner that is inconsistent with manufacturer equipment specifications. The Sublette County CD after the 2012 303(d) report was published conducted a site visit to the WWP monitoring site on Clarks Draw. The attached photographs taken in July 2012 clearly demonstrate that the WWP did not attempt to gather data from a site that is representative of the stream. Clarks Draw is an intermittent ephemeral draw. As is demonstrated in the photograph the sampling conducted by WWP occurred at a standing pool of water just below a culvert outfall. The District would suggest that this particular site fails to meet the required SOP for site selection.

4. Although not specific to these three waterbody listings, WWP has failed to follow state statute and their Sampling and Analysis Plan and referenced DEQ Standard Operating Procedures as it pertains to access permissions from private property owners resulting in illegal trespass. This calls into question the integrity of their entire sampling program.

The Sublette County Conservation District incorporates by reference herein, those comments and supporting documentation submitted by the Wyoming Association of Conservation Districts related to Pacific Creek, Lander Creek, and Clarks Draw.

This total aggregation of new information acquired since the 2012 listing must be considered now, as it exposes a flaw in the original determination. Again, the District would reiterate that upon further review and discovery of the above new and additional information, the original listing decision was in error and that in order to maintain compliance with statutory and regulatory requirements and abide by Standard Operating Procedures as set forth by DEQ Clarks Draw, Lander Creek, and Pacific Creeks should be delisted in 2014.

Sincerely,



Darrell Walker, Chairman
Sublette County Conservation District

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



Figure 1 Clark Draw Sample site from road above culvert (upstream)



Figure 2 Clark Draw Sample site from downstream

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Conservation – Development – Self-Government



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

1595 Wynkoop Street
Denver, CO 80202-1129
Phone 800-227-8917
www.epa.gov/region08

December 29, 2014

Ref: 8EPR-EP

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

Re: Draft 2014 Wyoming Integrated Report

Dear Mr. Thorp:

We have reviewed Wyoming's draft 2014 Integrated Report (IR) and appreciate the opportunity to provide comments. The Integrated Report is clear, organized and readable. With a few minor exceptions, the information provided in the Report, the Assessment Database, and GIS files are consistent.

While EPA has a few minor issues with the draft IR, our primary concern is the lack of documentation of the State's decision to not use water quality-related data pertaining to certain state waters. In the process of developing this cycle's list, water quality-related data for a number of water body segments in Wyoming was provided to the Department by several external parties. The State subsequently informed these parties that it would not be using this water quality-related data, and provided a copy of these communications to EPA. The draft 2014 IR does not use or consider the water quality-related data provided by external parties; and it provides no rationale for that omission. Because the water quality-related data that was provided to the Department was existing and readily available, the final 2014 IR must include the Department's rationale for its decision not to use the data. 40 C.F.R. § 130.7(b)(6). This rationale should discuss how the external data submitted to the Department was considered, and the Department's reasons for choosing not to rely on it for listing decisions.

We have a few additional comments that should be addressed prior to finalizing the 2014 IR that are included in the Attachment. Please contact Tom Johnson at 303-312-6226, if you have any questions with regard to any of our comments. We appreciate your diligent work on this report.

Sincerely,

A handwritten signature in black ink, appearing to read "H. Garcia, Jr.", written over a horizontal line.

Humberto L. Garcia, Jr.
Director, Ecosystems Protection Program

Attachment



Printed on Recycled Paper

Attachment

Additional Comments on Wyoming's Draft 2014 Integrated Report

Overall Issues

- 1) Nutrients and Narrative Criteria – As highlighted in the 2014 IR Guidance Memo (September 3, 2013) EPA continues to encourage states to assess for nutrients using narrative criteria. Until numeric criteria can be developed it is possible that there are waterbodies in Wyoming where narrative standards would be sufficient to determine if a waterbody is impaired for nutrients.
- 2) It appears that in the Category 5 table some dates for proposed TMDL completion are now older than 2014. If these streams are still the highest priority then the dates should be changed to another time in the near future.

Comments on Specific Waterbodies

- 1) Is Medicine Lodge Creek (WYBH100800080605_01) meant to be included in the 2014 list of impaired waters? It is found in the Assessment Database (ADB) and GIS files, but not in the actual 303(d) List. The impaired segment length appears to be 2.8 miles.
- 2) No mileage is listed for the Little Medicine Bow River (WYNP101800050103_02) in the 303(d) List. It is listed as 26.2 miles in the ADB and GIS files.
- 3) Category 4A Surface Waters, Table 9.3.1, page 145: the ID shown for Paint Rock Creek (WYBH100800080603_01) is incorrect. That ID has been used for Soldier Creek in past IR reports. The Paint Rock Creek ID shown on page 153 (de-listing table), WYBH100800080607_01, is the correct ID. The Paint Rock Creek ID on page 145 should be changed to match the ID on page 153.

Note: the EPA approval of the Big Horn River Watershed TMDLs was revised to reflect the correct Paint Rock Creek ID (see the following link and screen shot:

http://ofmpub.epa.gov/waters10/attains_impaired_waters.tmdl_report?p_tmdl_id=56783)

Listed Water Causes of Impairment for Escherichia Coli (E. Coli)

Click on the underlined Waterbody ID for a Waterbody Report. Click on the underlined "Waterbody Map" literal for a map of the Assessment Unit.

Waterbody ID	Waterbody Name	Map	Cycles Listed	Cause(s) of Impairment Addressed
<u>WYBH100800080607_01</u>	Paint Rock Creek	<u>Waterbody Map</u>	2008, 2010, 2012	Fecal Coliform

- 4) Category 4A Surface Waters, Table 9.3.1, pages 142-143: the Belle Fourche River Watershed TMDL document addressed 5 listed segments and 7 impairment causes. The final document was submitted for approval in September 2013 and the EPA approval was in December 2013. However, the "Year TMDL Completed" column in this table shows some as 2013 and some as 2014. If the "Year" is meant to be the calendar year, then they should all be "2013". If the "Year" is meant to align with the EPA Fiscal Year, then they should all be "2014".
- 5) Category 4A Surface Waters, Table 9.3.1, page 148: there is no record of EPA-approved TMDLs for the Clarks Fork Yellowstone River impairments in Wyoming. However, in 2003 EPA approved TMDLs for similar causes for the Montana portion of the Clarks Fork Yellowstone River from the headwaters to the Montana border (see screen shot below). If the sources of the WY impairments are located in MT, and if this table is referencing the approved MT TMDLs, then we recommend changing the TMDL completion year to "2003" and adding a note that

references the approved MT TMDLs and the explanation within the IR document that describes how the MT TMDLs will address the WY impairments.

MT	<u>Clarks Fork Of The Yellowstone River - Cooke City Planning Area</u>	Jan-06-2003	EPA Approved	Cadmium
MT	<u>Clarks Fork Of The Yellowstone River - Cooke City Planning Area</u>	Jan-06-2003	EPA Approved	Copper
MT	<u>Clarks Fork Of The Yellowstone River - Cooke City Planning Area</u>	Jan-06-2003	EPA Approved	Lead
MT	<u>Clarks Fork Of The Yellowstone River - Cooke City Planning Area</u>	Jan-06-2003	EPA Approved	Silver
MT	<u>Clarks Fork Of The Yellowstone River - Cooke City Planning Area</u>	Jan-06-2003	EPA Approved	Zinc
MT	<u>Clarks Fork Of The Yellowstone River - Cooke City Planning Area</u>	Jan-06-2003	EPA Approved	pH

- 6) Draft 2014 303(d) List, Table 9.4.1., TMDL Priority Ranking: some of the "TMDL Date[s]" shown on draft 303(d) list are in the past with some going as far back as 2009. As explained in the draft IR Section 4.0, TMDL Prioritization, states are required to establish a priority ranking process and identify individual waterbody, impairment causes (i.e., aka waterbody / pollutant combinations (WBPCs)) targeted for TMDL development in the years subsequent to listing.

States have a significant amount of discretion in the prioritization of the WBPCs on their 303(d) list. The EPA only requires states to consider the severity of the impairment and the designated uses of the waters in the priority ranking process. States may use additional priority ranking factors suggested by EPA and/or add their own factors. The priority rankings should be either in the form of a scheduled TMDL completion date or a ranking such as high, medium, or low. The EPA expects that the resulting "high priority" (or those with dates covering the period until the next 303(d) list if a schedule) WBPCs represent the impairments the state intends to have *completed TMDLs* in the subsequent two years until the next 303(d) list.

In light of the current TMDL Visioning Process EPA would like to discuss further the options available to WDEQ in prioritizing TMDL development.

Figure 7. Wyoming Association of Conservation Districts (23 pages).



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

December 29, 2014

Via: Hand Delivery

RECEIVED

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

DEC 29 2014

WATER QUALITY DIVISION
WYOMING

RE: *Comments on DRAFT 2014 Integrated Report*

Dear Mr. Thorp,

On behalf of the Wyoming Association of Conservation Districts, below are the Association's comments and input on the above referenced report. We appreciate the opportunity to provide feedback and comment on the 2014 integrated report. The Association and Conservation Districts are committed to the long standing partnership with DEQ in addressing and implementing provisions of the Clean Water Act at the state and local level.

General Comments:

WACD appreciates the opportunity to work collaboratively with DEQ to further define numerous elements of data collection to ensure that integrity, defensibility and reliability exist in the data DEQ is utilizing to make use support determinations, as contemplated by *35-11-103(c)(xix)*. As a result of detailed review of data submitted by a non-governmental advocacy non-profit organization, several broader issues have arisen that the Association believes warrant further review and discussion. Those include the following:

- 1.) WACD would suggest there may be a need for the Wyoming State Legislature to revisit the credible data statute to ensure the language is more clearly defined. WACD would like to meet with the leadership of DEQ to discuss the potential for working collaboratively with the State Legislature to work on language to strengthen this statute.
- 2.) In addition to legislative action, WACD would suggest in the next revision, if not sooner, of Chapter 1, and as DEQ discussed in the Methodologies document, the rules pertaining to credible data, should be revisited. Special emphasis should be given to the following issues:
 - a. Training and qualifications for individuals conducting surface water quality monitoring.
 - b. Methods for ensuring preconceived bias are limited in data collection via sampling design and sampling activities.
 - c. Acceptable methods for collecting, processing and reporting E. coli.

CONSERVATION – DEVELOPMENT – SELF-GOVERNMENT

- d. Expectations for quality control/assurance of data sets submitted for consideration in making use support determinations.
- e. Expectations that an entity conducting monitoring will abide by Standard Operating Procedures as set forth in DEQ's SOP manual.
- f. Expectations that monitoring entities will abide by State law as it pertains to private property access and trespass.
- g. Review of prioritization and scheduling of TMDL development. Prior approaches for TMDL prioritization included but were not limited to, recognition of local watershed efforts. WACD still believes where feasible this approach to addressing impairments locally prior to the TMDL warrants consideration in the prioritization process.

Further, the Association would suggest that DEQ give some consideration to actual recreational use and potential for human health impacts when scheduling E. Coli TMDLs. With the average cost of a TMDL at \$150,000¹ it is important that resources are focused where the potential risk to human health is highest versus low flow, standing shallow puddles, isolated and remote waters where minimal opportunity for submersion exist and hence human health impacts are unlikely.

- 3.) WACD appreciate DEQ's intent to incorporate specific data quality, assurance, integrity expectations within "Wyoming's Methods for Determining Surface Water Quality Condition and TMDL Prioritization" (Assessment Methodology) in early 2015 as articulated in correspondence to the Wyoming Department of Agriculture and the Association November 18, 2014.
- 4.) WACD also appreciates DEQs intent to collaborate more closely and provide notification to local Conservation Districts of the Agency's surface water quality monitoring activities and site visits. Conservation Districts, as local governments, are charged statutorily with the responsibility for providing for water quality protection and are funded to do so, in part, by the Wyoming State Legislature. Close coordination between the Agency and local Districts on water quality related issues is of paramount importance to ensure a collaborative effort.

WACD would also suggest that representatives of the Environmental Protection Agency may need to be involved in these discussions as well. According to field data sheets and information submitted by WWP in response to litigation, EPA accompanied Western Watershed Projects, during their field monitoring activities in 2010 in Fremont and Sublette counties.² WACD understands that DEQ was unaware of EPA's involvement and certainly the local Conservation Districts were unaware of EPA's field work in Wyoming. Furthermore, the private landowner who owns the land where the EPA accompanied Western Watershed Project was unaware and had not been contacted nor provided access permission to either Western Watersheds, or EPA.

Lastly, it was conveyed by DEQ personnel during a meeting³ held to discuss the 2012 listings and data submitted by WWP for consideration in 2014 that EPA had conveyed to DEQ during an interagency review meeting that EPA had an expectation that DEQ would accept and utilize the

¹ Kevin Hyatt, email correspondence

² Western Watersheds Project; Lander Creek Lower 7/20/10; Lander Creek Mid 7/20/10

³ Meeting held between WDEQ personnel; Wyoming Department of Ag; WACD May 30, 2014

2012 WWP data to list Pacific Creek, Lander Creek; and Clarks Draw. It is deeply concerning to WACD that EPA would place undue pressure on the state agency with delegated authority the requirement to accept data that does not meet quality control/assurance requirements. The issues with these data sets are articulated below in more detail. WACD fails to see how these data sets comply with EPA's own data quality criteria.⁴

- 5.) WACD also would suggest that some consideration and discussion occur related to waters that are currently being classified in the 4(c) category as impacted by irrigation/water right diversions. As a result of the proposed categorization of Rock Creek; Medicine Bow Conservation District, the issue of appropriate categorization has been raised. WACD would appreciate DEQ revisiting this issue and the agencies determination to categorize these waters in 4(c).

Specific comments;

Page 7, 1.2 Section 303(d) Requirements

COMMENT: WACD specifically request notice of the initiation of the two week period during which the public may contact the Administrator to request a review of the proposed 303(d) list before the Water and Waste Advisory Board.

Page 8 -9, 2.1 Data Requirements

COMMENT: WACD appreciates the additional information added under this section including the Credible Data Statute and Chapter 1, Section 35 regulations. WACD and the 34 Conservation Districts within Wyoming take the Credible Data Statute very seriously and strive to ensure that district personnel are trained and qualified to conduct surface water monitoring activities, they are doing so under an accepted Sampling and Analysis plan abiding by quality control/assurance measures. Further, WACD supports the including of the requirement that in addition to field data sheets that the supporting qa/qc materials are also submitted. A review of these supporting field logs and lab analysis logs and qa/qc documentation is important in maintaining integrity and quality in Wyoming's surface water program. WACD has been working with districts across the state to ensure that they continue to meet all the necessary requirements resulting in credible data.

Page 9 – 11, 2.2 Designated Uses and 2.3 USEPA Categorization

COMMENT: WACD appreciates the addition of the definitions of the nine designated uses, Table 1 and the USEPA Categorizations to the beginning portion of the documents rather than at the end as in previous reports. The information is more thorough; flows better and is easier to reference.

WACD would also like to commend DEQ on the completion and submittal of the Categorical Use Attainability Analysis for Recreation.⁵ This UAA will allow for a defensible designation of primary and secondary contact recreation uses on Wyoming's surface waters. WACD supports this UAA and looks forward to EPA's timely approval.

Page 11-12 2.3 USEPA Categorization

COMMENT: As indicated above in general comments, WACD requests that DEQ convene a workgroup or task force to evaluate and discuss the categorization process for future Integrated Reports.

As DEQ is aware and has been conveyed by several districts and water right holders, based on DEQ's description of category 4C, which states: "Augmenting and/or decreasing natural stream flows are

⁴ EPA Information Standards; Draft Final (2106-S-02.0) Quality Standard for Environmental Data Collection, Production, and Use by Non-EPA (External) Organizations.

⁵ Department of Environmental Quality submittal to US EPA, Region 8; December 1, 2014.

collectively termed "flow alterations" by WDEQ for purpose of assessing designated use support." Potentially, the 4C category could result in nearly every drainage having numerous waters categorized as such. WACD would suggest that an alternative view of stream flow modification is warranted and believe this discussion should be further developed.

Page 16 – 17, 4.0 TMDL Prioritization

COMMENT: As indicated in general comments, WACD believes that further discussion is warranted related to DEQ's TMDL development schedule. WACD continues to believe providing local districts and watershed steering committees the opportunity to address impairments prior to TMDL development, where possible, is a preferred approach.

Green River Basin - Pacific Creek; listed 2012 (page 159); North Platte River Basin – Lander Creek; 2012 (page 163) and Snake River Basin – Clarks Draw; 2012 (page 170)

COMMENT: WACD would like to bring specific attention and focus to those waters listed in 2012 utilizing data provided from Western Watersheds Projects. In 2012, the Association submitted comments on these proposed listings and referenced concerns with the sampling schedules, representativeness of the sampling, and biasness. Since the 2012 list was published, the Association has obtained from DEQ the data and information utilized by the Agency to make the listing decision. Plus additional subsequent information related to these monitoring sites and data.

The Association would suggest, pursuant to 40 CFR 130.7 (b) (5) (iv), which states:
"Any other reasonable information requested by the Regional Administrator. Upon request by the Regional Administrator, each State must demonstrate good cause for not including a water or waters on the list. Good cause includes, but is not limited to, more recent or accurate data; more sophisticated water quality modeling; **flaws in the original analysis that led to the water being listed in the categories in §130.7(b)(5)**; or changes in conditions, e.g., new control equipment, or elimination of discharges. **(emphasis added)**

WACD believes that additional information has become available, that the DEQ did not have available at the time of listing, pertaining to the data utilized to list Pacific Creek, Lander Creek, and Clarks Draw that demonstrates the original listing was in error and significant data quality and Standard Operating Procedures as described and referenced in WWP SAPs, were deviated from causing the data to fail to meet Wyoming's credible data requirements:

1. **Wyoming Statute 35-11-103(c)(xix) "Credible data" means** 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; **(emphasis added)**

Chapter 1. Section 35. Credible Data

(a) Development of scientifically valid chemical, physical and biological monitoring data shall:

- (i) Consist of data collection using **accepted referenced laboratory and field methods** employed by a **person who has received specialized training and has field experience in developing a monitoring plan, a quality assurance plan, and employing the methods outlined in such plans or works under the supervision of a person who has these qualifications. Specialized training includes a thorough knowledge of written sampling protocols and field methods such that the data collection and interpretation are reproducible, scientifically defensible and free from preconceived bias; and (emphasis added)**

(ii) Includes documented quality assurance consisting of a plan that details how environmental data operations are planned, implemented and assessed with respect to quality during the duration of the project.

As a result of further review of data and information submitted by the WWP and utilized by DEQ in listing Pacific Creek, Lander Creek, and Clarks Draw in 2012 the Association believes the information described below warrants DEQ's reevaluation of these listing decisions:

1. **Laboratory methods:** Upon further review of WWP's 2005, 2008 and 2010 Sampling and Analysis Plans as well as field data sheets, it came to the Association's attention that the WWP is apparently collecting E. coli samples and processing those samples; including incubation, in field.

Given the extensive E. Coli monitoring conducted by Conservation Districts most of whom also process samples within laboratories they have established in-house due to the difficulty in meeting holding times, WACD and member districts were interested in the existence of in-field incubation procedures for E. Coli. As a result, WACD researched the two incubators WWP referenced in their 2010 SAP. After an exhaustive search, no information could be found on the referenced Philadelphia model. Subsequently, it is assumed that the WWP is utilizing the Quality Lab Model WW 64835-00 Incubator.⁶ This incubator is available from Quincy Lab as Model 10-140.⁷ Based upon a review of the specifications, WACD would like DEQ to address whether this incubator meets the SOP requirements for incubation at 35C +/- .5 degrees.

WACD requested field logs, lab logs and quality control/assurance documentation that accompany this data set to verify the equipment utilized by WWP. However, these records were unavailable. Subsequently WACD assumes since no indication was provided by WWP in their Water Quality data report 2012 that a change in equipment from that which was listed in the 2010 SAP occurred, and this SAP was referenced and provided by WWP in response to recent litigation, the Association assumes this is indeed the equipment utilized.

WACD has a number of questions related to sample incubation:

- a. It appears that WWP is collecting, processing and incubating samples in the field. Please see attached spreadsheet that depicts the sample times, time in the incubator and time out.⁸ WACD would like DEQ to provide a response as to the appropriateness of this incubator for infield use. Including copies of equipment calibration logs, lab logs, and any other supporting documentation evidencing that samples were incubated according to Standard Operating Procedures.
- b. In addition, the Association assumes if the samples are incubated in field then they are processed and prepared for incubation infield as well. Can DEQ provide additional information as to in-field preparation of samples, including sealing quanta trays infield?

⁶ Quincy Lab; Quality Lab Incubators; 64835-00; See attached

⁷ Model Series 140 & 180; General Purpose Incubators; Operating Manual

⁸ Spreadsheet; Prepared by WACD; WWP 2010 sampling/incubation times; Cathy Rosenthal 12-22-14

- c. WACD also requests a copy of lab blanks for each set of samples processed. It would seem even more important that lab blanks be run for each set of samples processed if this is occurring infield to ensure contamination is not occurring, in the event that the issue of the incubator is determined to be suitable for infield use.
- d. Based on a review of sample times and incubation times, WACD questions whether equipment specifications and protocol are followed or if WWP has two incubators by which to process samples. Can DEQ provide additional information on the ability to utilize one incubator infield and process and begin incubation at varying times? For example, is it within operating procedures to begin an incubation period for one set of samples and then add additional samples during incubation period? Will this meet the requirements as described in SOP and equipment specifications requiring the internal temperature be maintained at 35C +/- .5 degrees?
- e. Can DEQ verify that the incubation occurred in a level and stable environment? Based on the times and locations of samples it appears that samples were likely processed while traveling.
- f. The Colilert method calls for reading samples in a darkened environment. Is it possible to read the samples that are processed in the field?
- g. The Incubator manual indicates the incubator is intended for indoor use. Can this incubator be utilized in the field and still meet SOPs and manufacturer's specifications?

2. Quality Control/quality assurance procedures:

In addition to the above issues, WACD remains concerned with the lack of quality control/assurance. In 2009, DEQ rejected prior data submitted by WWP for listing on the 2010 303(d) list.⁹ This letter articulated in great detail significant quality control issues existing with WWP data. In a review of the data QA/QC, WACD found many of the same deficiencies exist with the 2010 data utilized to list in 2012. WACD assumes DEQ's decision to overlook these deficiencies lie in no small part in the fact that EPA communicated their expectation that the DEQ do so to facilitate accepting the data. WACD specifically requests additional information pertaining to meetings between DEQ and EPA in which these discussions occurred, including but not limited to meeting date, times, meeting notes, correspondence between EPA and DEQ pertaining to this particular data set.

Below are qa/qc issues which specifically exist in addition to those detailed above:

- a. **Pacific Creek** –WACD also questions the validity of the geometric mean on Pacific Creek. There were five samples taken as required to establish the geometric mean, however on the July 31, 2010 field data sheet it has "Redo" written on the sheet. Can DEQ provide additional data that may have been submitted and utilized in calculating the geometric mean or explain why the notation made by the sampler "Redo" did not disqualify this data?

Clarks Draw – WACD has reviewed the sample information provided by WWP, including the photographs, for the site located on Clark's Draw. Based on DEQ SOPs for sample site selection and methods WDEQ 2011 SOP Coliform Bacteria Sampling Procedure - Surface waters, Page 61: Grab samples collected from flowing waters

⁹ DEQ correspondence dated October 22, 2009; Richard Thorpe, DEQ to Jonathan Ratner.

(streams and rivers) should be collected from well-mixed sections of the channel below the water surface...

It appears that the photographs provided by WWP do not clearly depict this particular site location. Please find attached photographs taken by the Sublette County Conservation District that provide additional photo documentation of the site conditions.¹⁰ WACD would appreciate DEQ's view of sampling just below a culvert in a standing pool of water. Would this meet the SOP procedure discussed above?"

In addition, many of the identified deficiencies such as scribbles, variability in the lat/longs provided on field data forms do not in all cases correspond to the lat/longs on the electronic data forms for the same sampling events. Can DEQ clarify which data sheets were utilized in calculating the geometric mean?

Lander Creek: Specifically, WACD would like clarification on whether the WWP submitted field data sheet dated 7/31/10 was used to calculate the mean as this site plots 1,250 feet to the east of the other sample site locations.

3. **Field methods:** WACD believes that some question exists as to the field methods employed by WWP in their sampling programs and seeks to get DEQ clarification on the purpose and intent of ambient surface water monitoring. WWP's sampling personnel has indicated via testimony in an administrative hearing¹¹ that he "only monitors when cattle are present". WACD believes that further discussions are necessary to clarify the intent and purpose of the E. coli standard and how to achieve data collection that is representative of water quality conditions over the recreation season versus targeted isolated locations.

Dilutions: WACD would like DEQ to further clarify those sample sheets that indicate sample dilutions. Can DEQ clarify which of the samples on the respective field data sheet was used in determining the geometric mean, if there are differences in results?

4. **Specialized training:** "Specialized training includes a thorough knowledge of written sampling protocols and field methods such that the data collection and interpretation are reproducible, scientifically defensible and free from preconceived bias."

WACD noted that the 2005, 2008 and 2010 versions of the WWP's SAP, included members of their staff that would be conducting monitoring. It is further noted, that for the three waterbodies in questions, staff that conducted the actual monitoring activities consisted of:

Clarks Draw – Jonathan Ratner

Lander Creek – Jonathan Ratner – On one sampling day 7/20/10 Mr. Ratner was apparently accompanied by an EPA person, although the data sheet does not specifically indicate who from EPA accompanied Mr. Ratner, in response to interrogatories Mr. Ratner indicated that Mr. Tom Johnson, Region 8 EPA accompanied him.

Pacific Creek – Jonathan Ratner

¹⁰ Sublette County Conservation District; photos

¹¹ Office of Hearing and Appeals; Western Watersheds Project et. al. v. BLM, WY-050-11-01.

Mr. Ratner lists as his training and qualifications in the 2010 SAP's as a "private study" of USDA National Water Quality handbook. WACD provided DEQ in March 2014, with a copy of Mr. Ratner's resume as submitted by Mr. Ratner before the Office of Hearing and Appeals in the case of Western Watersheds Project et al. v. BLM, WY-050-11-01.¹² Please find this resume' attached and incorporated herein.

WACD would point out that this resume' fails to describe any type of specific water quality training that Mr. Ratner has to meet the statutory and regulatory requirements, other than to indicate that he established "Wyoming's only non-governmental water quality monitoring program."

In 1998 and 1999, the Association in cooperation with DEQ, the University of Wyoming, the Department of Agriculture and the USDA Natural Resource Conservation Service developed a water quality monitoring training program to ensure that those conservation districts personnel who would be monitoring would have specific and specialized training in order to meet the statutory requirements. The initial program consisted of five modules, equating to approximately 4-5 full weeks of training, including in-field training with DEQ personnel. Subsequent revisions to the program have resulted in the training consisting of three Modules, plus a refresher training which was added to the program, a test component and an infield audit component.

This program has been funded, in part by the State legislature.

WACD would question how a self-study of the NRCS National Water Quality Handbook as indicated in the Sampling and Analysis Plan and no formal training or education in this or a related field meets the requirements of "specialized training" as contemplated in the statute or regulation.

Page 23 – 2nd Paragraph

COMMENT: As noted in WACD's comments for the 2012 Integrated Report, CCNRD completed a watershed plan for the Belle Fourche River in 2005 not 2010.

Page 23, Upper Belle Fourche Sub- basin

COMMENT: As noted in WACD's comments for the 2012 Integrated Report, CCCD completed a watershed plan for Donkey and Stonepile Creeks in 2006 not 2010.

Other comments including the incorporation of data from 2007-2009, that were made by CCCD and WACD on Pages 10-11 of the "Wyoming Response to Comments on the Draft 2012 Integrated 305(b) and 303(d) Report" that WDEQ was going to incorporate into the 2012 report, have not been made as well.

WACD incorporates by reference herein those comments submitted by the Campbell County Conservation District and CCNRD.

¹² Resume' Johnathan Bradford Ratner; Western Watersheds

Page 32, 1st paragraph

COMMENT: A Use Attainability Analysis (UAA) to change the classification of Poison Creek from primary to secondary recreational use was submitted to WDEQ by LWRCD in 2010. Information in the Poison Creek UAA was incorporated into a statewide UAA for recreation that is currently in review. The Muddy Creek and Poison Creek Watershed Plans were completed in 2007.

Page 34, 1st paragraph

COMMENT: As noted in WACD's comments for the 2012 Integrated Report, Hot Springs Conservation District should be listed as HSCD not HSCCD. This is also incorrect on page 5 as listed in the Acronyms.

Page 36, 1st paragraph

COMMENT: As noted in WACD's comments for the 2012 Integrated Report, WCCD submitted a Use Attainability Analysis (UAA) on Fifteen Mile and Nowater Creeks to change the classification from primary to secondary recreation used in 2009. We understand that these are incorporated into a statewide UAA for recreation that is currently in review, however the language that WDEQ was going to incorporate on behalf of these UAA's in the 2012 IR, has not been included in the 2014 report.

Page 36, 1st paragraph

COMMENT: The WCCD initiated watershed planning within the Sage Creek / Slick Creek watershed in 2012 to coincide with the Bighorn TMDL. A steering committee was formed and met monthly to develop the Sage Creek / Slick Creek Watershed Implementation plan which outlines goals and objectives for reducing E.coli contributions within the watershed. As part of this planning process the WCCD applied for and received NRCS National Water Quality Initiative Funding in 2013 and applied for and received funding for a 319 grant also in 2013.

Page 36, Nowood Sub-basin – 3rd paragraph

COMMENT: SBHCD collected and submitted data results from 2008-2010 monitoring to WDEQ on February 2, 2012. WACD will follow up with the District to ensure all required elements have been submitted.

Page 37, 2nd paragraph

COMMENT: Medicine Lodge Creek is shown as a Category 5 (Use(s) Not Supported) on the map on page 37; however there is no description of the impairment in the narrative or on the 303(d) list. The description indicates "WDEQ monitored a site on Medicine Lodge Creek in 2010, and data from a single sample indicated that E.coli bacteria concentrations may be elevated in and around Medicine Lodge Archaeological Site State Park. The results of this study are still under evaluation and designated use support has not yet been assessed." (Underline added) Clarification on the status of Medicine Lodge Creek would be beneficial.

Page 39, Greybull Sub-basin - 1st paragraph

COMMENT: As noted in WACD's comments from the 2012 Integrated Report, The Greybull River Watershed Plan was completed in 2010 by the Meeteetse Conservation District.

Page 40, Bighorn Lake Sub-basin – 2nd paragraph

COMMENT: "Granite Creek is another a small tributary to Shell Creek..." WACD suggests removing "a" after another in the first sentence.

Page 41, Bighorn Lake Sub-basin – 3rd paragraph

COMMENT: Last sentence. ".is considered to have an impaired aquatic life other than fish use, and this reach was been place in Category 4C in 2006" WACD suggests removing "been" after was in the last sentence.

Page 44, Shoshone River Sub-basin – 1st paragraph

COMMENT: “In 2006, PCFCD received a Section 319 grant to improve eligible septic systems in the Bitter Creek watershed.” To evaluate the water quality after the modifications were implemented, the PCFCD commenced sampling from 2007-2009 as part of this project. Sampling has been conducted by the PCFCD on the Shoshone River and Bitter Creek from 2010 – 2014.

Page 57, Bitter Creek Sub-basin, 2nd paragraph

COMMENT: WDEQ indicated in a response to comments the following would be included in the 2012 Integrated report “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.” This was not added to 2014 report.

Page 58, Blacks Fork Sub-basin, 4th paragraph

COMMENT: “E.coli data in 2009 and 2010 that showed that bacterial concentration on the Blacks and Smiths Fork were still exceeding WDEQ’s recreation use criteria.” UCCD has collected and provided additional 2011, 2012 and spring 2013 monitoring data and information to SWCA, to be used in validating the Smiths and Blacks Forks TMDLs.

“WDEQ initiated TMDLs for the Smiths and Blacks Forks in 2013.” Both of these TMDLs have been completed and submitted to EPA.

WACD incorporates by reference herein those comments submitted by the Uinta County Conservation District.

Page 63, Little Snake Sub-basin

COMMENT: WACD incorporates by reference herein those comments submitted by the Little Snake River Conservation District.

Page 74, Little Medicine Bow Sub-basin, 1st paragraph

COMMENT: “In contrast, the cold water fisheries and aquatic life other than fish uses were not supported on Little Medicine Bow River from County Road 2E downstream 26.2 miles to the confluence with Sheep Creek and this segment has been added to the 303(d) List in 2014.”

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

Page 76, Sweetwater Sub-basin, 3rd paragraph

COMMENT: In addition to the discussion above pertaining to the 2012 listing of Lander Creek, there appears to be an error in the description of the impairment on Page 163. The Location is described as “A 0.5 section of Lander Creek between two unnamed tributaries and adjacent to County Route 132 (in NW S8 T29N R103W, within HUC 12 boundary 101900060104). Lander Creek only flows through the NE quarter of Section 8. WACD would like clarification on the location of this impairment.

Page 76, Middle North Platte Sub-basin, 2nd paragraph

COMMENT: Last sentence, WACD suggests adding the word “to” in front of “the North Platte River.”

Page 86, Powder River Basin, 3rd paragraph

COMMENT: “..both the water quality and aquatic life monitoring task groups were formed and monitoring plans developed for the affected areas of NE Wyoming (see inset map).” WACD was unable to locate the inset map.

Page 90, Upper Powder River Sub-basin, 3rd Paragraph

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

Page 94, Crazy Woman Sub-basin, 2nd paragraph

COMMENT: WACD appreciates that WDEQ acknowledges that it is unlikely that Lower Crazy Woman Creek will ever be used as a drinking water source due to its intermittent hydrology and that WDEQ is going to reassess the listed segment for the 2016 Integrated Report. Crazy Woman Creek has been on the 303(d) list for 14 years and like other streams in the Power River Basin, high manganese concentrations are common due to the natural geology, and there are no known sources of anthropogenic manganese in Lower Crazy Woman Creek. WACD and the Lake DeSmet Conservation District (LDCD) again request WDEQ highly consider re-evaluating Crazy Woman Creek and remove it from the 303(d) list by 2016.

Page 101, Little Powder Sub-basin, 1st paragraph

COMMENT: As noted in WACD's comments for the 2012 Integrated Report, CCCD completed a watershed plan for Little Powder River Creeks in 2006 not 2010.

Page 105, Greys- Hoback Sub-basin, 2nd paragraph

COMMENT: As noted by SCCD in the Response to Comments in the Draft 2012 Integrated 305(b) and 303(d) Report on Page 34 "We would point out that the description of the location in the text is incorrect. The text describes the Pacific Creek listing...For our purposes, the upper and lower points of the reach should be defined." WDEQ's response was "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. This section has not been updated in the narrative portion of the 2014 Draft report. Please see additional comments above pertaining to Clarks Draw.

Page 113 - 117, Tongue Sub-basin

COMMENT: The Sheridan County Conservation District had submitted data for consideration in the 2014 IR. WACD understands the district will be resubmitting their data package as per the correspondence received from DEQ.

Thank you for the opportunity to comment. WACD looks forward to continuing our partnership with DEQ in the future. WACD is slated to compile and published a Watersheds Progress Report in early 2015 and looks forward to seeking DEQ's input into the draft report prior to publication.

Sincerely,



Bobbie K. Frank
Executive Director

Cc: WACD Board of Directors
Conservation Districts
Chris Wichmann, Department of Ag

Toll Free 1.866.636.2487

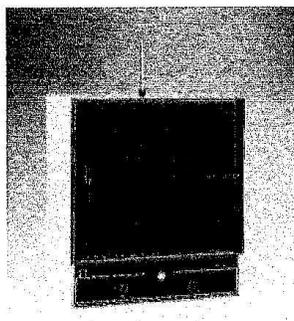


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Quincy Lab - QUINCY LAB-CORP. - Quality Lab Incubators, Large/2.0 Cu. Ft. (Each)



Manufacturer: Quincy Lab
Item #: 5975323
Mfr Part Number: QUINCY LAB-CORP.
MSRP: ~~unlisted~~
Sale Price:
[Click for Price](#)

Sale Price:
[Click for Price](#)
[Check Stock >](#)

Quality Lab Incubators, Large/2.0 cu. ft. 64835-00: *Interior dimensions: 30 cm x 25 cm x 25 cm *Maximum temperature:62C *Accuracy: .25C *Power: 120V, AC, 100W 45384-00: *Interior dimensions:46 cm x 41 cm x 30 cm *Maximum temperature:65C *Accuracy:.25C *Power: 120V, AC, 200W A combination of popular features and low cost have made 64835-00 our best-selling incubator.

With a tinted see-through acrylic door, heavy-duty steel construction, an aluminum interior and a pilot light, this incubator is ideal for cultures, test kits, eggs and other biologicals. Two chrome-plated shelves-one fixed and one adjustable-provide ample room for beakers, flasks, petri dishes and test tube trays.

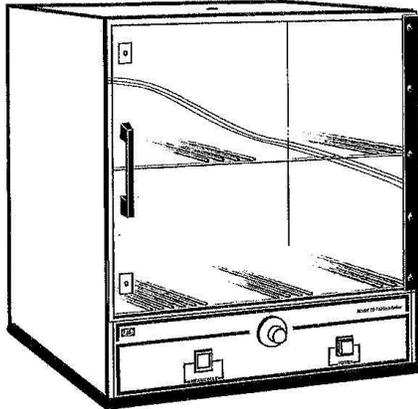
Comes with a laboratory thermometer. 45384-00 has the same features as 64835 but offers more than three times as much interior space. Please note: these items are shipped direct from the manufacturer and require a four week lead time. Unit: Each This listing is for Each.

Neobits.com is your premier destination for business and facility products and services, including this Quincy Lab - QUINCY LAB-CORP. - Quality Lab Incubators, Large/2.0 Cu. Ft. (Each). In-stock items usually ship within one business day of payment receipt. We do not ship on weekends. This Quincy Lab - QUINCY LAB-CORP. - Quality Lab Incubators, Large/2.0 Cu. Ft. (Each) is currently on sale for \$580.95, a discount of 5% off the list cost. Sales tax charged for residents and businesses in the State of California only. Website security guaranteed by the

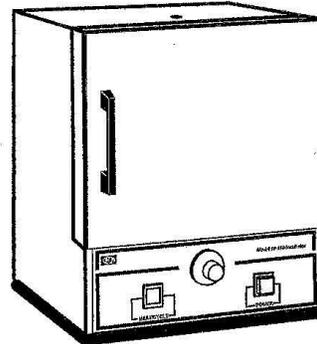
http://shop.neobits.com/quincy_lab_quincy_lab_corp_quality_lab_incubators_large_2_0_... 12/19/2014



Model Series 140 & 180 General Purpose Incubators OPERATING MANUAL



Model 12-140



Model 10-180



SPECIFICATIONS	MODEL 10-140	MODEL 12-140	MODEL 10-180	MODEL 12-180
Interior Dimensions				
INCHES W x H x D	12x10x10	18x16x12	12x10x10	18x16x12
(CM) W x H x D	31x25x25	46x41x30	31x25x25	46x41x30
Exterior Dimensions				
INCHES W x H x D	13x15x11	19x21x13	13x15x11	19x21x11
(CM) W x H x D	33x38x28	48x53x33	33x38x28	48x53x33
Weight (lbs)	19 lbs	33 lbs	19 lbs	33 lbs
Cubic Foot Capacity	.7 ft ³	2.0 ft ³	.7 ft ³	2.0 ft ³
Standard Electrical				
VOLTS / WATTS	115 / 120*	115 / 235*	115 / 270*	115 / 385*

* Standard models voltage only, optional 230 voltage available. Check label on back of unit.

Temperature Range	Ambient + 2°C to 62°C	Ambient + 3°C to 94°C
--------------------------	-----------------------	-----------------------

Common Unit Specifications

Operating Environment:	Indoor use, altitude to 6,500 ft. (2,000m) Installation Category II, Pollution Degree 2, ambient temperature 10°C/50°F to 35°C/95°F, 80% RH maximum.
Storage Temperature:	-10°C/14°F to 70°C/158°F, 70% RH maximum.
Approvals:	Underwriter's Laboratory Listed, Laboratory Equipment, C/UL United States/Canadian. E212550 (115VAC models only)
Compliance:	UL Standard 61010-1, IEC 61010-1, 2nd Edition.

Common Unit Construction

Exterior: Powder-Coated Steel	Interior: Aluminum
Insulation: Fiberglass	Door: 140: Acrylic, 180: Steel Insulated
Thermo-control: Bi-Metal	Heater: Resistive-Tubular Incoloy

Safety Precautions  **Read Operating Instructions Thoroughly Prior to Operation**

Read Operating Instructions thoroughly prior to operation. Use only a grounded outlet that is rated for your models' electrical requirement. Do not modify the oven or factory control settings to operate the oven above the stated maximum operating temperature. Exterior surfaces on the 180 models may become hot to the touch when operating at higher set temperatures. Conduct periodic maintenance as required.

Receiving

After unpacking, verify receipt of correct quantities of each component and that each component has not suffered any shipping damage. If there are any problems, please refer to the enclosed **Damaged/Missing Item Report**.

Set-up & Installation

Place the unit on its back with the bottom surface facing you. Install the (4) rubber feet into the (4) mounting holes by pressing in and turning. **(FIG 1)** Do not operate unit without the feet installed.

Place the unit upright. Position unit in its ultimate operating location. Keep a minimum of 2" of airspace around the unit and a minimum of 16" above the unit to allow for thermometer.

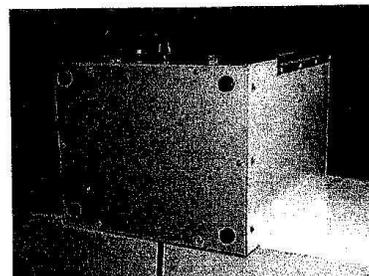


FIG. 1

Remove the glass thermometer from its container and insert into the rubber grommet. **(FIG 2)**

Insert the rubber grommet/thermometer assembly into the port through the top of the incubator. The thermometer should extend into the incubator at least 1-1/2". **(FIG 3)**

Install adjustable shelf by placing the ends of the wire shelf bracket into the corresponding holes located on the inner sides of the oven at the desired height. Push the ends of the bracket into the holes until the first bends in the bracket are against the wall, then rotate the bracket down. Place the shelf on the brackets. **(FIG 4)**

Plug the unit into a grounded outlet for your unit's rated voltage. See units electrical label located on rear panel.

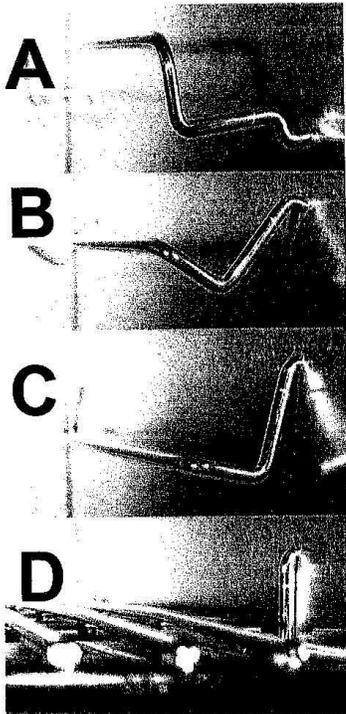


FIG. 4

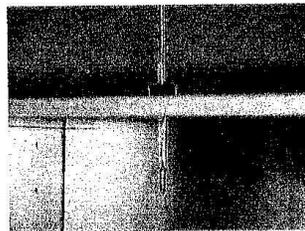


FIG. 3



FIG. 2

PAGE 2

General Operation

Push the illuminated power button. Rotate the thermostat knob clockwise to approximately the number 6 on the dial. The heat cycle light will illuminate to indicate that the heating element is energized.

Observe the thermometer. When the desired temperature is reached, slowly turn the thermostat knob counter clockwise until the heat cycle indicator turns off. The temperature will continue to rise slightly due to latent heat from the heating element.

Allow unit to cycle empty for a minimum of 20 minutes to allow the interior chamber to reach a thermal equilibrium. Check the thermometer to see if any minor adjustments to the thermostat should be made. With any subsequent adjustment allow time for chamber to achieve a steady state before determining if the desired set temperature has been reached. To keep from resetting a frequently used set temperature with each use, leave the thermostat knob at its set point and use the power button to turn the unit on or off.

Setting the unit's temperature with an empty chamber helps to establish a useful correlation between the unit's performance (heating capacity) and proper processing of various chamber loads and densities (load-effect). See Performance and Chamber Loading & Important Operational Notes.

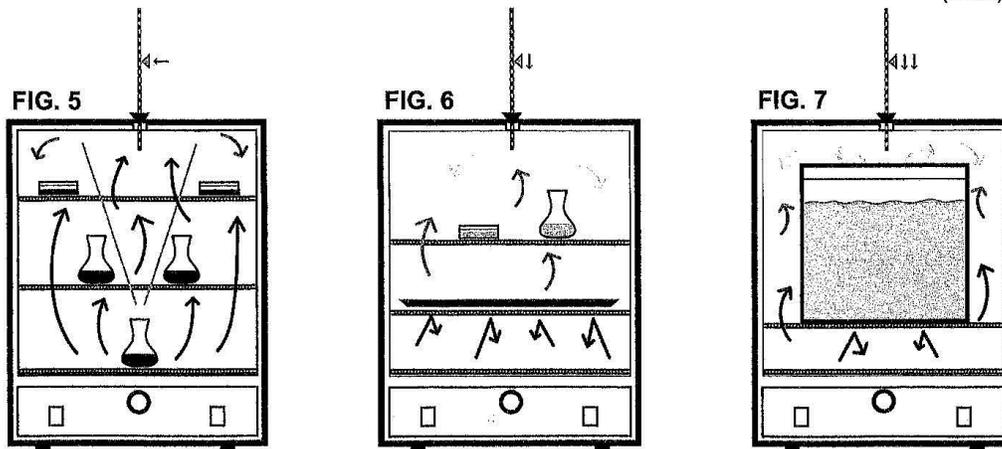
Performance and Chamber Loading

Understanding the unit's light pressure thermal convection and "load-effect" are necessary to optimizing unit performance. Article or media processing times and/or uniformity are largely dependent on load density and positioning. When processing various loads it's important to remember that the thermostat senses the temperature at the lower part of the chamber where the heat is generated and the corresponding reading of a temperature setting is taken from the top of the chamber with the installed thermometer. Since loads sit between these two points, load variations such as quantity, arrangement, density and their relative thermal properties can temporarily or permanently affect temperature readings. Here are important guidelines to chamber loading and processing:

Load the incubator so that air circulation within the chamber is not impaired. Leave a space between articles on a shelf. Stagger articles from those on lower shelves in a "V" formation. (FIG 5).

Use of large solid trays or foil on lower shelves severely limits heat to shelves and articles placed above. (FIG 6) Since not enough heat rises within the chamber, thermometer readings give false indication that the temperature setting is too low. Higher temperature adjustments made as a result of these readings could overheat lower placed articles or media.

(cont.)



PAGE 3

Performance and Chamber Loading (cont.)

Avoid extremely large (in quantity or size), or high-density loads. (**FIG 7**) This will show by non-uniform processing and long or impossible "heat-through" times. To help determine a large load's suitability, use the set-point recovery time (the time it takes for the temperature to recover to the original set temperature once load is placed), as a guide. To reduce recovery time, reduce load proportionally. Also, large loads such as a beaker containing 2 liters of solution may require an elevated set temperature for the solution to reach and maintain a lower target temperature. When possible, measure large loads or solution temperatures directly with an ancillary thermometer or probe. Probes can be inserted at top port.

Process the smallest possible load the application or workload will permit. For best processing of small multiples or a single item, adjust one shelf so that the article(s) is centered in the incubator. Avoid placing articles or media against or within an inch of the walls especially on the lower shelf. Heated air from the lower plenum openings, designed to travel up the side walls, can have a slightly elevated temperature from set point and the rest of the chamber.

Important Operational Notes:

The set point of the thermostat or chamber temperature stability can be affected by changes in ambient (room) temperature and/or equipment running in close proximity (creating micro climates) or cycling on the same electrical circuit. Take time to see how unit location or changes in room temperature from seasonal heating or air conditioning may influence the incubator's set temperature. For best chamber temperature stability, keep the ambient temperature stable.

The unit's minimum operating temperature is largely determined by ambient temperature. The unit can operate 2 degrees above room temperature but temperature stability will be degraded. Stability improves appreciably for settings that exceed ambient by 4 degrees C or better. Also, the lower the ambient temperature the lower the maximum adjustable operating temperature. Adjusting the operational temperature range of the unit for non-typical ambient conditions can be done by adjusting the calibration trim screw located recessed in the shaft, behind the knob dial. If a temperature range shift is necessary, contact factory for instructions.

Maintenance

To clean interior and exterior surfaces, use a damp cloth with or without an all-purpose cleaner. The acrylic door, (on 140 Models), should only be cleaned using a lint-free cloth. Paper towels can mar the surface of the acrylic door. Use of any commercial cleansers on the acrylic door will cause crazing and cracking of the surface of the acrylic door over time. Periodically check the temperature stability (with the unit empty of contents), by observing the temperature through several cycles of the thermostat. (See also Important Operational Notes above).

Tech Support

If you have any questions or need technical assistance, please contact Quincy Lab customer support at

Voice: 800-482-HEAT
Fax: 773-622-2282
Email: information@quincylab.com

Quincy Lab, Inc.
1925 North Leamington Avenue
Chicago, Illinois 60639

Limited Warranty

Quincy Lab, Inc. warrants to the original purchaser that this product will be free from defects in material and workmanship under normal use throughout the warranty period. The standard warranty period for



this instrument is 18 months, (3-year coverage on the heater element), from date of shipment. Please refer to your invoice or shipping documents to determine the effective warranty period. This warranty covers parts and labor (labor at factory only), and shipping cost for replacement parts.

PAGE 4

Performance and Chamber Loading (cont.)

Avoid extremely large (in quantity or size), or high-density loads. **(FIG 7)** This will show by non-uniform processing and long or impossible "heat-through" times. To help determine a large load's suitability, use the set-point recovery time (the time it takes for the temperature to recover to the original set temperature once load is placed), as a guide. To reduce recovery time, reduce load proportionally. Also, large loads such as a beaker containing 2 liters of solution may require an elevated set temperature for the solution to reach and maintain a lower target temperature. When possible, measure large loads or solution temperatures directly with an ancillary thermometer or probe. Probes can be inserted at top port.

Process the smallest possible load the application or workload will permit. For best processing of small multiples or a single item, adjust one shelf so that the article(s) is centered in the incubator. Avoid placing articles or media against or within an inch of the walls especially on the lower shelf. Heated air from the lower plenum openings, designed to travel up the side walls, can have a slightly elevated temperature from set point and the rest of the chamber.

Important Operational Notes:

The set point of the thermostat or chamber temperature stability can be affected by changes in ambient (room) temperature and/or equipment running in close proximity (creating micro climates) or cycling on the same electrical circuit. Take time to see how unit location or changes in room temperature from seasonal heating or air conditioning may influence the incubator's set temperature. For best chamber temperature stability, keep the ambient temperature stable.

The unit's minimum operating temperature is largely determined by ambient temperature. The unit can operate 2 degrees above room temperature but temperature stability will be degraded. Stability improves appreciably for settings that exceed ambient by 4 degrees C or better. Also, the lower the ambient temperature the lower the maximum adjustable operating temperature. Adjusting the operational temperature range of the unit for non-typical ambient conditions can be done by adjusting the calibration trim screw located recessed in the shaft, behind the knob dial. If a temperature range shift is necessary, contact factory for instructions.

Maintenance

To clean interior and exterior surfaces, use a damp cloth with or without an all-purpose cleaner. The acrylic door, (on 140 Models), should only be cleaned using a lint-free cloth. Paper towels can mar the surface of the acrylic door. Use of any commercial cleansers on the acrylic door will cause crazing and cracking of the surface of the acrylic door over time. Periodically check the temperature stability (with the unit empty of contents), by observing the temperature through several cycles of the thermostat. (See also Important Operational Notes above).

Tech Support

If you have any questions or need technical assistance, please contact Quincy Lab customer support at

Voice: 800-482-HEAT
Fax: 773-622-2282
Email: information@quincylab.com

Quincy Lab, Inc.
1925 North Leamington Avenue
Chicago, Illinois 60639

Limited Warranty

Quincy Lab, Inc. warrants to the original purchaser that this product will be free from defects in material and workmanship under normal use throughout the warranty period. The standard warranty period for this instrument is 18 months, (3-year coverage on the heater element), from date of shipment. Please refer to your invoice or shipping documents to determine the effective warranty period. This warranty covers parts and labor (labor at factory only), and shipping cost for replacement parts.



PAGE 4

General Operation

Push the illuminated power button. Rotate the thermostat knob clockwise to approximately the number 6 on the dial. The heat cycle light will illuminate to indicate that the heating element is energized.

Observe the thermometer. When the desired temperature is reached, slowly turn the thermostat knob counter clockwise until the heat cycle indicator turns off. The temperature will continue to rise slightly due to latent heat from the heating element.

Allow unit to cycle empty for a minimum of 20 minutes to allow the interior chamber to reach a thermal equilibrium. Check the thermometer to see if any minor adjustments to the thermostat should be made. With any subsequent adjustment allow time for chamber to achieve a steady state before determining if the desired set temperature has been reached. To keep from resetting a frequently used set temperature with each use, leave the thermostat knob at its set point and use the power button to turn the unit on or off.

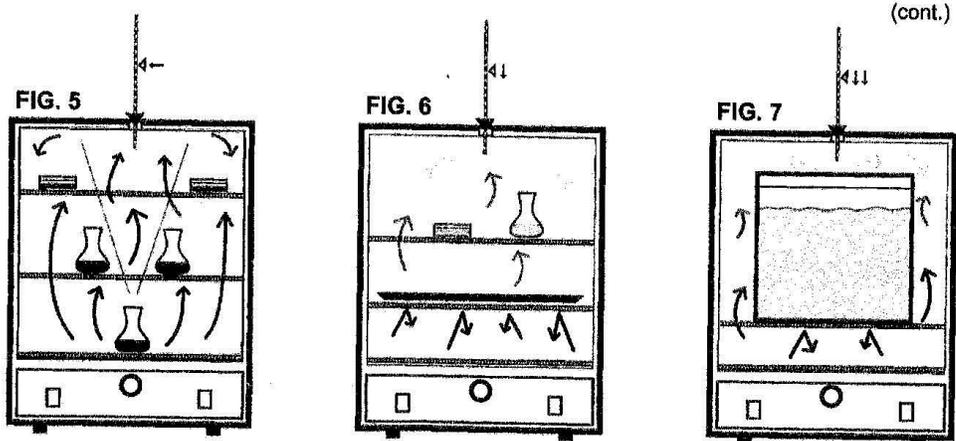
Setting the unit's temperature with an empty chamber helps to establish a useful correlation between the unit's performance (heating capacity) and proper processing of various chamber loads and densities (load-effect). See Performance and Chamber Loading & Important Operational Notes.

Performance and Chamber Loading

Understanding the unit's light pressure thermal convection and "load-effect" are necessary to optimizing unit performance. Article or media processing times and/or uniformity are largely dependent on load density and positioning. When processing various loads it's important to remember that the thermostat senses the temperature at the lower part of the chamber where the heat is generated and the corresponding reading of a temperature setting is taken from the top of the chamber with the installed thermometer. Since loads sit between these two points, load variations such as quantity, arrangement, density and their relative thermal properties can temporarily or permanently affect temperature readings. Here are important guidelines to chamber loading and processing:

Load the incubator so that air circulation within the chamber is not impaired. Leave a space between articles on a shelf. Stagger articles from those on lower shelves in a "V" formation. (FIG 5).

Use of large solid trays or foil on lower shelves severely limits heat to shelves and articles placed above. (FIG 6) Since not enough heat rises within the chamber, thermometer readings give false indication that the temperature setting is too low. Higher temperature adjustments made as a result of these readings could overheat lower placed articles or media.

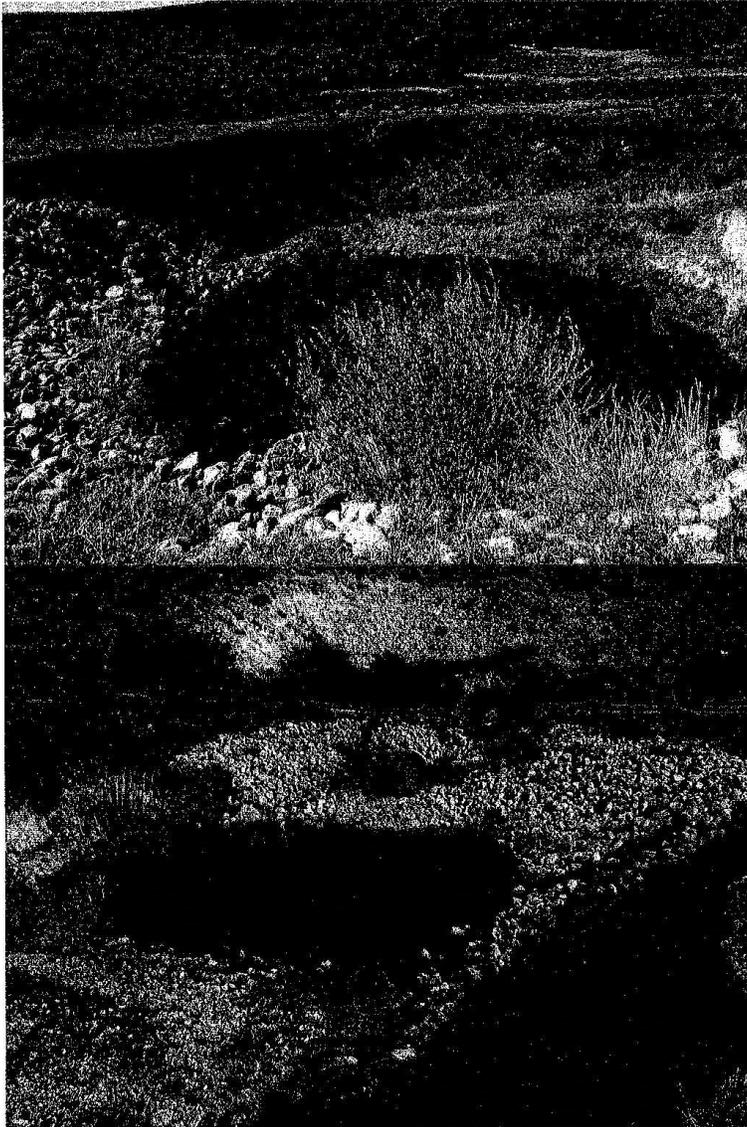


PAGE 3

2010 WWP data sample / incubation times
 Created by Cathy Rosenthal - December 22, 2014

Site Name	Sample Date & date in incubator	Collection order	Collection time / incubation time	Approx. Difference	Date out of incubator	Time out of incubator	Approx incubation time	Comment
Clarks Draw	61210		11:10 a.m. / 3:10 p.m.	4 hours	61310	6:52 p.m.	27 hrs. 40 min	
Clarks Draw	62610		1:549 p.m. / 6:45 p.m.	56 minutes	62710	10:15 p.m.	27 hrs. 30 min	
Fisherman's Creek	62610		2:16:10 p.m. / 6:45 p.m.	35 minutes	62710	10:15 p.m.	27 hrs. 30 min	Samples from 62610 would still be incubating when 62710 samples were placed in incubator.
Clarks Draw	62710		1:555 p.m. / 6:35 p.m.	40 minutes	62810	8:54 p.m.	26 hrs. 20 min	
Fisherman's Creek	62710		2:6:15 p.m. / 6:35 p.m.	20 minutes	62810	8:54 p.m.	26 hrs. 20 min	
Clarks Draw	62910		1:4:01 p.m. / 5:02 pm	1 hour	63010	8:43 p.m.	27 hrs. 40 min	
Fisherman's Creek	62910		2:4:26 (assume p.m.) / 5:02 pm	36 minutes	63010	8:43 p.m.	27 hrs. 40 min	
Clarks Draw	70110		1:5:48 p.m. / 6:45 p.m.	57 minutes	70210	9:01 p.m.	26 hrs. 15 min.	
Fisherman's Creek	70110		2:6:05 p.m. / 6:45 p.m.	40 minutes	70210	9:01 p.m.	26 hrs. 15 min.	Samples from 70110 would still be incubating when 70210 samples were placed in incubator.
Lander Lower Above Exclosure	70210		2:27 p.m. / 7:05 p.m.	4.5 hours	70310	8:45 p.m.	25 hrs. 40 min.	
Clarks Draw	70410		2:5:02 (assume p.m.) / 6:00 p.m.	58 minutes	70510	9:03 p.m.	27 hrs.	
Fisherman's Creek	70410		3:5:23 (assume p.m.) / 6:00 p.m.	37 minutes	70510	9:03 p.m.	27 hrs.	
Lander Lower Above Exclosure	70410		1:2:34 p.m. / 6:00 p.m.	3.5 hours	70510	9:03 p.m.	27 hrs.	
Lander Creek Mid at Fence	72010		2:12:45 (assume p.m.) / 2:16 pm	1.5 hours	72110	5:45 p.m.	27 hrs. 30 min.	
Lander Lower Above Exclosure	72010		3:1:45 (assume p.m.) / 2:16 p.m.	30 minutes	72110	5:45 p.m.	27 hrs. 30 min.	It would take longer than 30 minutes to get from site to Bondurant. Assume incubated in field and drove while incubating
Pacific Creek - Crossing	72010		1:10:38 (assume a.m.) / 2:16 p.m.	3.5 hours	72110	5:45 p.m.	27 hrs. 30 min.	
Lander Creek Mid at Fence	72810		1:3:01 p.m. / 6:49 p.m.	3 hours 45 min.	72910	8:48 p.m.	26 hrs.	
Pacific Creek - Crossing	72810		2:5:24 (assume p.m.) / 6:49 p.m.	1 hr. 25 min	72910	8:48 p.m.	26 hrs.	
Lander Creek Mid at Fence	72910		3:05 (assume p.m.) / 3:15 p.m.	10 minutes	73010	7:09 p.m.	27 hrs. 54 min.	He would have to have brought incubator with the 7/28/10 samples still incubating to be able to place in incubator in 10 minutes
Lander Creek Mid at Fence	73010		2:3:14 p.m. / 7:09 p.m.	4 hours	73110	8:38 p.m.	25 hrs. 30 min.	
Pacific Creek - Crossing	73010		1:2:18 p.m. / 7:09 p.m.	5 hours	73110	8:38 p.m.	25 hrs. 30 min.	Samples from 73010 would still be incubating when 73110 samples were placed in incubator, causing fluctuations.
Lander Creek Mid at Fence	73110		2:3:15 (assume p.m.) / 6:15 p.m.	3 hours	80110	8:49 p.m.	26 hrs. 30 min	
Pacific Creek - Crossing	73110		1:2:22 p.m. / 6:15 p.m.	4 hours	80110	8:48 p.m.	26 hrs. 30 min	
Lander Creek Mid at Fence	80710		1:12:48 (assume p.m.) / 4:50 p.m.	4 hours	80810	8:33 p.m.	27 hrs. 40 min.	
Pacific Creek - Crossing	80710		2:1:48 p.m. / 4:50 p.m.	3 hours	80810	8:33 p.m.	27 hrs. 40 min.	

Clarks Draw; Sublette County; WWP monitoring location; photo taken by Sublette County CD



JONATHAN BRADFORD RATNER

2003 - Present **Western Watersheds Project**

Director – Wyoming Office

- Established and ran the Wyoming office of Western Watersheds Project, a regional non-profit conservation organization
- Take action on Forest Service and BLM personnel whistle blowing -- 2/3 of the project we work on are brought to us by agency personnel needing help
- Fully participate in hundreds of NEPA processes trying to establish better management of our public lands
- Established Wyoming's only non-governmental water quality monitoring program

2000 - 01 **BLM – University of Wyoming**

Research Zoologist

- Conducted Endangered Species studies in western Wyoming -- Lynx, Wolverine, Fisher, Marten

2000 - 01 **Interagency Grizzly Bear Study Team**

Research Zoologist

Conducted Endangered Species studies in western Wyoming -- Grizzly Bear

2000 **USFS Bridger Teton NF – Pinedale RD**

- Range condition surveys
- Wilderness Ranger

1995 - 2002 **M.V.E.D. Antrim, NH**

National Administration

- Computer programming – created Global Reporting Program for daily reporting of activity at most of the 2,000 facilities world-wide, created database system for coordinated national – local data list project to keep all lists synchronized and updated automatically, created database-enabled websites for the Chronic Disease program and Jyotish programs
- Database Administrator – maintains national databases
- Server and Network Administrator
- National accounting
- INS Visa processing for all the visiting faculty from around the world
- Computer technical support and troubleshooting, and accounting support for Directors and personnel in the U.S.

1995 **Special Projects - Madhya Pradesh, India**

Lecturer

- Worked on the establishment of schools, colleges and medical schools in East Nimar district of the state of Madhya Pradesh, central India
- Meet with Government officials, educators and industrialists
- Lectured to thousands of students and labor groups
- Conducted property acquisition search for campuses

1993 - 95 **M.V.E.D. – Chicago**

Director

- Conducted property acquisition search for Chicago. Found and completed Blackstone Hotel takeover

1993 **M.V.E.D. - International Administration, Vlodrop, Netherlands**

Course Development and Design

- Headed up team doing content development and design of health education courses

1991 - 92 **M.V.E.D. – Fairfield, Iowa**

National Administration

- Conducted property acquisition search for facilities, hotels and other properties in the states of Ohio, Michigan, Indiana and Kentucky
- Managed AE Press, a printing and distribution wing with retail and wholesale clients in all 50 states and over 80 countries

1989 - 91 **M.V.E.D. -- Washington D.C.**

National Administration

- Managed AE Press, a printing and distribution wing with retail and wholesale clients in all 50 states and over 80 countries
- Managed some of M.V.E.D.'s National accounts
- Conducted property search for Washington D.C. 1,000 acre campus

1984 - 88 **Kansas City Capital**

Capital Director

- Ran all aspects of completion, maintenance, finances, promotion and hosting for a regional training facility for the 7-state region

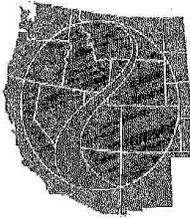
Figure 9. Western Watersheds Project (1 page).

From: Western Watersheds Fax: (208) 475-4702

To: +13077775973

Fax: +13077775973

Page 1 of 1 12/09/2014 9:28



Wyoming Office
PO Box 1160
Pinedale, WY 82941
Tel: (877) 746-3628
Fax: (208) 475-4702
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

December 9, 2014

Dear Richard,

I am in receipt of the DEQ's letter claiming to not have had time to review our data in time for this one year delayed draft 303d list.

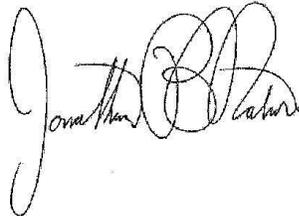
When Mr. Thorp joined us in October of 2013 for site visits, the data had already been fully reviewed and decisions made as to which streams would be listed. It is disingenuous, at best, to claim a year later not to have had time to review the data.

Of course, the real reason for the delay is obviously the direction coming down to DEQ from Bobby Frank and the rest of the livestock industry telling the DEQ not to list streams for e. coli.

It is problematic when DEQ's implementation of the Clean Water Act is based on politics instead of data.

We also reiterate the fact 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 cannot argue that the secondary contact standard applies.

I look forward to a revised 303d list from the DEQ.



Jonathan B Ratner
Director - Wyoming Office

Figure 10. Wyoming Department of Agriculture (2 pages).



Matthew H. Mead, *Governor*
Jason Fearnelyhough, *Director*
2219 Carey Ave. • Cheyenne, WY 82002
Phone: (307) 777-7321 • Fax: (307) 777-6593
Web: agriculture.wy.gov • Email: wda1@wyo.gov

The Wyoming Department of Agriculture is dedicated to the promotion and enhancement of Wyoming's agriculture, natural resources and quality of life.

December 29, 2014

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

Dear Mr. Thorp:

Following are the comments from the Wyoming Department of Agriculture (WDA) on Wyoming Department of Environmental Quality's (DEQ) 2014 Integrated 305(b) and 303(d) Report (Report).

Our comments are specific to our mission: dedication to the promotion and enhancement of Wyoming's agriculture, natural resources, and quality of life. As this proposed vegetation restoration project affects our agriculture industry, our natural resources, and the welfare of our citizens, it's important you continue to inform us of proposed actions and decisions and provide us the opportunity to express pertinent issues and concerns.

The WDA would like to thank DEQ for the opportunity to comment on the Draft Report. The WDA works closely with the Wyoming Association of Conservation Districts (WACD) as well as the local conservation districts across the state by funding their efforts with water quality grants to develop educational workshops, sample and analyze data, implementation of Best Management Practices, and development of Watershed Implementation Plans.

We believe WACD has the most comprehensive set of comments regarding the Report. The local conservation districts may also have provided their own comment letters. We strongly encourage the DEQ work closely with WACD and local conservation districts and consider their comments as accurate and complete.

The WDA has the following general comments:

The WDA would like to highlight the requirements detailed in Chapter 1, Section 35(a)(i) of the Wyoming Environmental Quality Act, and ask DEQ to ensure all data submitted meets all the credible data requirements listed on past, present and future data submissions. This entails ensuring proper laboratory and field methods and equipment are being used, making sure proper Quality Control/Quality Assurance procedures are used, ensuring individuals have the required specialized training needed to perform the proper submissions, and ensuring there is no preconceived bias associated with the data collection process. Clarity in these areas will only help DEQ in the integrity and defensibility of data submitted.

The WDA is very concerned about the acceptance of data being collected and submitted by special interest groups with a significant bias toward Wyoming's livestock industry. Any submission submitted by such organizations should not be accepted due to their inherent bias towards one of Wyoming's leading economic industries.

Equal Opportunity in Employment and Services

BOARD MEMBERS

Jana Ginter, *District 1* • Jim Hodder, *District 2* • Shaun Sims, *District 3* • John Moore, *District 4* • Alison Lass, *District 5*
Bryan Brost, *District 6* • Jim Price, Jr., *District 7*

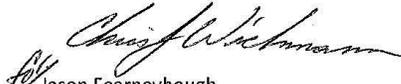
YOUTH BOARD MEMBERS

Kendall Roberts, Southeast • Richard Schlenker, Northwest • John Hansen, Southwest • Cameron Smith, Northeast

Wyoming 2014 Integrated Report
05/10/2011
Page 2

Again, we would like to thank DEQ for the opportunity comment and urge DEQ to consider our comments as well as those from WACD and local conservation districts.

Sincerely,


JF/ Jason Fearneyhough
Director

JF/cw

CC: Governor's Planning Office Wyoming
Game and Fish Department
Wyoming Board of Agriculture
Wyoming Stock Growers Association
Wyoming Wool Growers Association
Wyoming Farm Bureau Federation
Wyoming State Grazing Board
Wyoming Association of Conservation Districts

Appendix B. Public Comments Received after the December 29, 2014 5 PM on the Draft 2014 Integrated Report

Figure 1. Magagna Bros., Inc. (1 page)

Dec. 29. 2014 5:07PM Wyoming Stock Growers Assn.

No. 5719 P. 1/1

MAGAGNA BROS., INC
LAMBS & WOOL
P. O. Box 488
Rock Springs, Wyoming 82902
307-350-4446

December 29, 2014

Richard Thorp
WDEQ/WQD
Herschler Bldg., 4-W
Cheyenne, WY 82002

RE: 2014 Draft Integrated Report

Dear Mr. Thorp:

Magagna Bros., Inc is the lessee of state lands contained within the BLM Little Prospect Allotment in Sublette and Sweetwater counties. Our state lease includes that parcel on which Western Watersheds Project obtained the water samples that were the basis for your decision to list a segment of Lander Creek as an impaired water body due to livestock grazing. This sample was taken adjacent to the allotment boundary fence where the stream enters our allotment.

Of utmost importance to us, this sample was taken while trespassing on state lands. The only authorized public access to state lands off of a public right of way is that authorized by Chapter 13 of the Rules and Regulations of the Board of Land Commissioners. Chapter 13, adopted in 1993, grants public access for the exclusive purposes of hunting, fishing and "casual recreational uses" as defined in the rule. Access across our state lease for the purpose of water quality sampling by a private individual was not authorized by the Office of State Lands and Investments or by Magagna Bros. as the lessee.

Based on the occurrence of this trespass, Magagna Bros. hereby requests that Wyoming DEQ/WQD withdraw this listing at this time.

Sincerely,



Jim Magagna
President

Figure 2. Uinta County Conservation District (2 pages).



Uinta County Conservation District

P.O. Box 370 ~ 204 East Sage Street ~ Lyman, WY 82937
Phone: 307-787-3070 ~ Fax 307-787-3058

December 22, 2014

Via: Fax

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

Re: Wyoming's 2014 Integrated 305 (b) and 303 (d) Report

Dear Mr. Thorp,

The Uinta County Conservation District (UCCD) appreciates the opportunity to provide comment on the above mentioned 2014 Integrated Report. UCCD will provide comments on the Blacks Fork Sub-Basin and the Upper Bear River Sub-basin, the two basins located in Uinta County.

Blacks Fork Sub-basin (HUC 14040107)

Page 58; paragraph 4

"UCCD collected E. coli data in 2009 and 2010 that showed that bacterial concentrations on the Blacks and Smiths Forks were still exceeding WDEQ's recreational use criteria."

Comment: UCCD has collected and provided additional e.coli data to SWCA to be used to validate the Blacks Fork and Smiths Fork TMDL's. The additional data was collected in 2011, 2012 and the spring of 2013.

Page 58; paragraph 4

"WDEQ initiated TMDLs for the Smiths and Blacks Forks in 2013."

Comment: The Smiths and Blacks Fork TMDLs are beyond initiated and have been completed and submitted to EPA for approval.

Page 58; paragraph 5, entire paragraph concerning Willow Creek

Comment: According to the 319 project that was completed in 1999, the Willow Creek sediment issue was a result of beaver using all of the quakes and willows then needing to go elsewhere for food. A rather large complex of dams washed out and caused several years of erosion and increased sediment. Livestock grazing was never identified or named as the cause of excess sediment.

Board of Supervisors

Dennis Cornellson, Chairman - Kelly Guild, Vice Chairman - Spencer Eyre, Secretary/Treasurer
Shaun Sims - Kevin Condos - Carol Hamilton, Associate Supervisor

PAGE 02

UC CONSERVATION DIST

12/29/2014 17:27 1307787

Page 60; paragraph 2

"UCCD data and information from the mid-1990s suggested that the cold water fishery and aquatic life other than fish uses within the East (WYGR140401070201_01) and West (WYGR14040107203_01) Forks of Smiths Fork were not supported due to excess sedimentation."

Comment: UCCD was not monitoring the East and West Forks of Smiths Fork in the mid 1990s and does not believe that the data and information referenced was provided by UCCD.

Page 60; paragraph 2

"UCCD completed a Section 319 project in 1999 to improve stream channels and riparian areas on these and other streams in the upper Smiths Fork watershed. BMPs included repairing or replacing livestock watering tanks and constructing snow fences to divert spring snow melt to these tanks and lessen sediment input to the two streams from overland flow."

Comment: UCCD believes that the 319 project and BMPs listed here were part of the Willow Creek 319 project which did not include the East and West Forks of Smiths Fork.

Page 60; paragraph 3, last sentence

"The Assessment further suggested that these conditions are the result of historic large releases from Reed Reservoir and that livestock are not a significant contributor."

Comment: UCCD does not feel that pointing out that livestock are not a significant contributor is necessary and requests that the sentence be written as follows: *"The Assessment further suggested that these conditions are the result of historic large releases from Reed Reservoir."*

Upper Bear River Sub-basin (HUC 16010101)

Page 20; paragraph 3, last sentence

"A sediment TMDL for the Bear River was initiated in January, 2013."

Comment: The Upper Bear River Sediment TMDL has been completed and submitted to EPA for approval.

The Uinta County Conservation District appreciates the opportunity to comment on the 2014 Integrated Report. If you have questions, please feel free to contact our office.

Sincerely,



Kerri Sabey
District Manager

Board of Supervisors

Dennis Cornelison, Chairman - Kelly Guild, Vice Chairman - Spencer Eyre, Secretary/Treasurer
Shaun Sims - Kevin Condos - Carol Hamilton, Associate Supervisor

Figure 3. Wyoming Game and Fish Department (1 page).



WYOMING GAME AND FISH DEPARTMENT

5400 Bishop Blvd. Cheyenne, WY 82006

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

wgfd.wyo.gov

GOVERNOR
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DIRECTOR
SCOTT TALBOTT

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KEITH CULVER
MIKE HEALY
T. CARRIE LITTLE

December 29, 2014

WER 6693.00
Department of Environmental Quality
Water Quality Division
Draft 2014 Integrated 305 (b) and 303 (d) Report

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

RECEIVED

JAN 02 2015

WATER QUALITY DIVISION
WYOMING

Dear Mr. Thorp:

The staff of the Wyoming Game and Fish Department has reviewed the Department of Environmental Quality, Water Quality Division Draft 2014 Integrated 305 (b) and 303 (d) Report. We offer the following comments for your consideration.

We have no aquatic concerns pertaining to the 2014 Integrated 305 (b) and 303 (d) report.

Thank you for the opportunity to comment. If you have any questions or concerns, please contact Rick Huber, Staff Aquatic Biologist, at 307-777-4558.

Sincerely,

A handwritten signature in black ink, appearing to read "John Kennedy".

John Kennedy
Deputy Director

JK/mf/ns

cc: USFWS
Chris Wichmann, Wyoming Department of Agriculture, Cheyenne

"Conserving Wildlife - Serving People"

Figure 4. Wyoming Stock Growers Association (2 pages).

Dec. 29. 2014 5:14PM Wyoming Stock Growers Assn.

No. 5720 P. 1/2



WYOMING STOCK GROWERS ASSOCIATION

Guardian of Wyoming's Cow Country since 1872

President- Jim Wilson, Thermopolis

Region I Vice President- Gwen Geis, Gillette

Region III Vice President- Dustin Cushman, Lusk

Region V Vice President- John Griffin, Riverton

First Vice President- Niels Hansen, Rawlins

Region II Vice President- Scott Sims, McFadden

Region IV Vice President- Joe Nield, Afton

Executive Vice President- Jim Magagna, Cheyenne

December 29, 2014

Richard Thorp
WDEQ/WQD
Herschler Bldg., 4-W
Cheyenne, WY 82002

RE: 2014 Draft Integrated Report

Dear Mr. Thorp:

The Wyoming Stock Growers Association (WSGA) appreciates this opportunity to submit comments on the above report. WSGA has reviewed and hereby endorses the comments submitted by the Wyoming Association of Conservation Districts. We would like to provide additional emphasis on several points.

WSGA is generally comfortable with your use of data collected by your fully trained field staff and by fully trained staff of local Conservation Districts. We are very bothered by your acceptance and previous use of data collected by private individuals. Unless those individuals are at all times accompanied by DEQ staff, there is no way to verify that the collection procedures and handling of the data conform to Wyoming's credible data statute and DEQ's Standard Operating Procedures. Such data, if submitted, should be placed in your files. While it might serve to identify priority streams for your own independent analysis, it should not be considered in any listing decisions.

As you are aware, several landowners have recently found it necessary to file litigation based on numerous instances of trespass by private individuals, and possibly DEQ representatives who may have accompanied them, across private or state lands for the purpose of obtaining water samples. WSGA is supporting this litigation. It is our position that any such trespass invalidates any water quality data collected thereby. Once the outcome of this litigation has conclusively established this trespass, all such data should be removed from your files and destroyed. Pending that outcome, the data should receive no consideration by your office.

The above Report includes enumeration of three water bodies that were listed as impaired in 2012 based, according to our understanding, on 2010 data submitted by Western Watershed Project. WACD, in their testimony, identifies numerous testing deficiencies regarding the data used to support these listings. Based on the use of this flawed analysis, WSGA hereby requests that these listings be withdrawn.

"Shaping and Living The Code of The West"

P.O. Box 206, CHEYENNE, WY 82003 • PH: 307.638.3942 • FX: 307.634.1210

EMAIL: INFO@WYSGA.ORG • WEBSITE: WWW.WYSGA.ORG • BLOG: WWW.REALRANCHERS.COM

Richard Thorp
December 29, 2014
Page 2

WSGA believes that the actions that we have requested above are both legally appropriate and necessary to restore the trust and confidence of the landowner community in the work of you agency.

We would be pleased to meet with DEQ representatives to further discuss our concerns.

Sincerely,



Jim Magagna
Executive Vice President

"Shaping and Living The Code of The West"

P.O. BOX 206, CHEYENNE, WY 82001 • PH: 307.638.3942 • FX: 307.634.1210
EMAIL: INFO@WYSGA.ORG • WEBSITE: WWW.WYSGA.ORG • BLOG: WWW.REALRANCHERS.COM

Appendix C. WDEQ's Data Denial Letter for WWP's 2010 Data Submission (5 pages).



Department of Environmental Quality



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

Dave Freudenthal, Governor

John Corra, Director

October 22, 2009

Dear Mr. Ratner;

This letter is in regards to your data submissions on July 15th and 16th and August 20th 2009 on behalf of Western Watersheds Project (WWP). The data submitted by WWP have now been reviewed and their usefulness for making use support decisions has been evaluated.

The data provided by WWP follows a similar pattern established during previous submissions. WDEQ found WWP's July 15th and 16th data submissions to be largely incomplete. On August 20th, in response to these substantial shortcomings, WDEQ requested that WWP promptly submit supplemental information, including site descriptions, directions to sites, maps, photos, sampling protocols, and copies of all original field and laboratory datasheets and raw data. While WWP supplied some of the requested information, most as cursory notes sent via electronic mail, information necessary for making use support decisions was not supplied.

In a public notice sent directly to you via electronic mail and a hard copy mailer on May 21, 2009 and posted on May 22, 2009 in the Casper Star Tribune, the Wyoming Department of Environmental Quality (WDEQ) stated that "designated use support decisions will only be made if the data and assessments meet the data quality and completeness requirements of Wyoming's credible data law, are representative and objective, and clearly indicate use support status". WDEQ must perform thorough quality assurance and quality control (QA/QC) checks on all data being considered for surface water use support decisions.

The Wyoming Environmental Quality Act, W.S. § 35-11-103(c)(xix), defines "credible data" 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.* According to Section 35(a)(i) of Chapter 1 of the Wyoming Water Quality Rules and Regulations, *credible data must be collected using accepted referenced laboratory and field methods employed by a person who has received specialized training and has field experience in performing such methods, or is under the supervision of a person who has these qualifications.* Section 35(b) of Chapter 1 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.* Lastly, Section 35(d) of Chapter 1 states that *credible data shall be utilized in determining a water body's attainment of designated uses.*

The only exceptions to using credible data for use support determinations are when *numerical standards [criteria] are exceeded or on ephemeral and intermittent waters where chemical and biological sampling may not be practical or feasible.* In such cases, less than a complete suite of data (chemical, physical and biological) may be used to make a decision on designated use support.

The following is a discussion of our findings regarding your data submittal.

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Dissolved Oxygen (D.O.)

The data show D.O. as an average of 3 separate determinations, and almost all of these triplicate concentrations were very similar indicating good precision. Relative Percent Difference (RPD) is listed as being low for all of these measurements; however, when more than two measurements are made, RPD is not the appropriate method to use as an indicator of precision. For three or more samples, the method of determining the standard deviation should be used. It is also unclear whether separate samples were used for each of these 3 measurements or if measurements were made from a series of the same sample. The percent saturation of D.O. is also listed as a reportable parameter in the SAP, but this data was not reported. There is also no data to verify the accuracy or calibration of the instrument using the prescribed methods outlined by the manufacturer. There is no information presented about the type of instrument used or whether all personnel used the same type of instrument. Little QA/QC could be done on this data with the limited data provided.

Section 24 of Chapter 1 of the Wyoming Department of Environmental Quality Water Quality Rules and Regulations states that *in all Class 2A, 2D and 3 waters, wastes attributable to or influenced by the activities of man shall not deplete dissolved oxygen amounts to a level which will result in harmful acute or chronic effects to aquatic life, or which would not fully support existing and designated uses, and that in all Class 1, 2AB, 2B and 2C waters, wastes attributable to or influenced by the activities of man shall not be present in amounts which will result in a dissolved oxygen content of less than that presented on the chart in Appendix D of these regulations.*

WWP did not submit the credible data that would be necessary to demonstrate whether any of the measured dissolved oxygen levels were attributable to or influenced by the activities of man.

Temperature

Instantaneous Measurements

Instantaneous measurements of temperature should be made with a thermometer that has been checked with an NIST calibrated thermometer. It is unclear whether this procedure was done since no record of this calibration was submitted to WDEQ. WDEQ was given no documentation of the type of instrument that was used to measure temperature.

Continuous Measurements

The Idaho protocol for use and placement of continuous temperature data loggers adopted by WWP indicates that a two-point calibration should be conducted. No calibration information for the temperature loggers was submitted to WDEQ. It is unclear whether an instantaneous reading was taken when the loggers were initially placed into and removed from the stream. A description of exactly where the data logger was placed, including what was done to shade each logger from direct sunlight, and a narrative describing to what extent each site was representative of the entire reach was not submitted to WDEQ. Photographs of each site would be very helpful with this type of data. WWP's SAP indicates that they would provide photos, but none were submitted to WDEQ. At least one of the WWP temperature loggers was mistakenly set so that the time had a 12 hour offset and a.m. and p.m. are reversed. Thus, the hottest part of the daily temperature cycle occurred during the night.

As is stated in Section 25 (e) of Chapter 1, *with the exception of the provisions of Sections 9 and 11 of these regulations, temperature standards shall apply at all times and at all depths of the receiving water and may not be violated at any time or at any depth.*

Section 9 states that... *compliance with water quality standards shall be determined after allowing reasonable time for mixing.* The data submission by WWP does not give enough information about study

sites, including whether any outfalls occur in the area, and if so, where temperature was measured in relation to mixing zones.

Section 11 (a) states that *numeric water quality standards shall be enforced at all times except during periods below low flow*. No data was submitted on streamflow to indicate whether low flow was an issue. It is therefore unknown to what extent streamflow may have affected water temperatures.

No data sheets or written records for the thermometers or continuous temperature loggers were submitted to WDEQ; therefore, QA/QC and use support determinations could not be made.

Turbidity

Turbidity values should be the average of three measurements. Some of the measurements apparently exceeded the expected RPD, but RPD is not a valid calculation for measurements of more than two values as described in the D.O. section above. It is also unclear whether a separate sample was used for each measurement. The WWP report indicates that as these samples sat in the instrument the values obtained for subsequent readings tended to drop, and when samples were taken out of the instrument and gently inverted, the values were much closer to the original value. This observation by WWP indicates a lack of understanding of the sampling procedure, the nature of the measurement and the processes necessary for this type of sampling. Each of the triplicate measurements should have been done using separate aliquots of the sample, shaken so that they were well mixed and immediately placed in the instrument for measurement so that particle settling was kept to a minimum. WDEQ Standard Operating Procedures, which were incorporated as part of the WWP SAP, indicate that the correct procedure includes consecutive measurements of separate aliquots in the selected field instrument. From a QC standpoint, it is essential to take consecutive measurements from separate aliquots which are correctly mixed before readings are taken. Also, a description of what instrument was used and the calibration data for the instrument are essential elements for QA/QC of this data but were not provided to WDEQ.

Section 23 (a) of Chapter 1 of the Wyoming Department of Water Quality Water Quality Rules and Regulations states that *in all cold water fisheries and drinking water supplies (classes 1, 2AB, 2A, and 2B), the discharge of substances attributable to or influenced by the activities of man shall not be present in quantities which would result in a turbidity increase of more than ten (10) nephelometric turbidity units (NTUs)*.

WWP did not submit the credible data that would be necessary to demonstrate whether any of the measured turbidity levels in the streams studied by WWP were elevated, and if so, whether these increases were attributable to or influenced by the activities of man.

Conductivity

There are currently no criteria in Chapter 1 for conductivity. However this data might be useful for helping to determine the composition of turbidity by relating the salt concentrations with other suspended sediments. The data collected by WWP was given as an average of three measurements, but it is unclear whether three separate samples were used for each measurement. Again, a QA/QC check of the data requires both calibration data and knowledge of the instrument used.

pH

The data submitted to WDEQ were given as an average of three measurements; however, it is unclear whether there were three separate samples used for each measurement, or whether three measurements were performed on the same sample. An average of a pH measurement is not a valid

analysis since the pH is a logarithmic value. The average provides an approximation for values that are closely separated, but it is incorrect. The average is also the incorrect statistical measurement to use for more than 2 samples as noted previously. A meaningful QA/QC check of the WWP data requires calibration data and information on the instrument used, but neither was provided to WDEQ.

Section 26 (a) of Chapter 1 states that *for all Wyoming surface waters, wastes attributable to or influenced by the activities of man shall not be present in amounts which will cause the pH to be less than 6.5 or greater than 9.0 standard units.*

Section 26 (b) states that *for all Class 1, 2 and 3 waters, effluent attributable to or influenced by human activities shall not be discharged in amounts which change the pH to levels which result in harmful acute or chronic effects to aquatic life, directly or in conjunction with other chemical constituents, or which would not fully support existing and designated uses.*

WWP did not submit the credible data that would be necessary to demonstrate whether any of the measured pH levels in the streams studied by WWP are attributable to or influenced by the activities of man.

The WWP data indicated that one pH measurement (9.06 on Fall Creek on 9/11/2008) was slightly higher than the allowable range specified in Section 26 and Appendix B of Chapter 1. The WDEQ document entitled *Wyoming's Method for Determining Water Quality Condition of Surface Waters and TMDL Prioritization for 303(d) Listed Waters* states that to make a use support determination of non-support for aquatic life other than fish, the range of pH constituting the chronic criteria (6.5-9.0) cannot be exceeded more than once in a 3-year period. While a notation on any conditions or possible reasons for this anomalous measurement should have been recorded, ultimately this reading was within experimental error of the standard limit.

E. coli

The majority of QA/QC time was spent looking at the data provided for *E. coli*. Incomplete data sheets, incorrect calculations and incomprehensible entries made QA/QC checks very difficult and time consuming. The following points are errors observed in the data that are significant for making use support decisions.

1. Page 16 of the WWP SAP states that *field personnel will ensure completeness by double-checking that field data sheets are complete and accurate before leaving the sampling sites.* Only 12.4% (15 out of 121 checked) of the data sheets provided by WWP were filled out completely. All but one of the completed data sheets recorded a total coliform sample blank value and the *E. coli* sample blank value was not recorded.
2. No sample blank *E. coli* QA/QC data sheets were provided, but most of the sample data sheets indicated that the most probable number (mpn) was zero. No information regarding blanks, including how they were prepared, what water type was used, when they were prepared, when they were placed in the incubator, when they were taken out of the incubator and how many quanti-tray cells were positive was provided to WDEQ. Sample blank information is one of the most important QA/QC requirements for this type of data.
3. The WWP SAP states that photographs of quanti-trays would be taken as often as possible, but none were submitted for WDEQ to review. It is unknown how many quanti-trays were photographed and whether positive cells for *E. coli* under the black light would show up in photographs.

The WWP SAP states that project personnel would document sampling sites with photographs using a digital camera, and that photos would be geo-referenced and the time and date stamped using RoboGEO software. Photographs of general conditions at/near the site were also to be obtained as needed. No photographs of study site conditions during sampling were submitted to WDEQ.

Data Validation and Review

A large section of the WWP SAP is dedicated to the protocol that was to be used for internal review of the data by WWP personnel and for reports that would be generated by those persons. No QA/QC reports of this kind were submitted to WDEQ for review, and the final WWP report indicates very few problems were encountered.

Only when complete documentation and precise and accurate data are submitted can WDEQ fully evaluate and utilize data for use support decisions. WDEQ finds that none of the information submitted by WWP meets these qualifications, and in the final analysis, the QA/QC issues described above have not been resolved. While these issues do not render the data completely unusable, they do call into question the methods used for obtaining the data and therefore whether or not the data accurately represent conditions in the study streams.

Wyoming's credible data law is very specific regarding the quality of data necessary for making designated use support determinations. Because of the extensive qualifications on your data, it cannot be utilized for listing purposes on the 303(d) List of Waters Requiring Total Maximum Daily Loads nor can it be used for other categorization decisions. The data do, however, provide the state with some additional information which can be utilized for planning future monitoring efforts and identifying areas in need of further investigation.

If you have any questions, please feel free to contact me at (307) 777-3501.

Sincerely,



Richard Thorp
Water Quality Assessment
Water Quality Division

RT/rm/9-0901

cc: Jeremy Zumberge
Jeff Clark
Tom Johnson, EPA