

LOWER GRANDE RONDE SUBBASINS TOTAL MAXIMUM DAILY LOADS AND WATER QUALITY MANAGEMENT PLAN



State of Oregon
Department of
Environmental
Quality

Response to Public Comments

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Introduction

This Response to Public Comments document addresses comments received regarding the Draft *Lower Grande Ronde Subbasins Total Maximum Daily Loads & Water Quality Management Plan* (called TMDL hereafter) dated May, 2010. All comments have been considered by the Oregon Department of Environmental Quality (DEQ) and, where appropriate, have been addressed in the final document that has been submitted to the US Environmental Protection Agency (USEPA). USEPA will then either approve or disapprove the TMDL. Not all comments resulted in modifications to the document.

The comments received generally led to changes that improved the TMDL. DEQ appreciates the time and effort of the reviewers.

Background

The public comment period on the proposed Lower Grande Ronde Subbasins TMDL opened on May 28, 2010 and extended through July 29, 2010. One informational meeting and formal public hearing was held on July 7, 2010 at Toma's Conference Room in Enterprise, OR. Three people attended the pre-hearing presentation. No one present wished to see the presentation, as they were all familiar with the content of the TMDL, and no oral comments were received at the formal public hearing. All comments received by DEQ were submitted in written form (paper and electronic).

The public notice for the public comment period was sent to everyone on a list of interested parties maintained by DEQ. Direct mailings were sent to members of the local Wallowa County TMDL Committee and to organizations identified as designated management agencies (DMAs) in the WQMP. The notice was placed on DEQ's website and was advertised through local newspapers.

The TMDL was available for downloading from DEQ's website throughout the comment period. Hard copies of the document were also available for viewing at the Wallowa County Soil and Water Conservation District office, the Wallowa Public Library, the Enterprise Public Library and at DEQ's offices in Pendleton and Bend. Hard copies of the document were sent to DMAs: Wallowa-Whitman and Umatilla National Forests and the US Forest Service Regional office; Bureau of Land Management (BLM); Oregon Departments of Forestry (ODF), Agriculture (ODA), Transportation (ODOT), Geology and Mine Industries (DOGAMI), and State Lands (DSL); the cities of Enterprise, Joseph, Wallowa and Lostine; and Wallowa County. Copies of the document were also provided to those individuals who requested copies.

The following entities provided comments on the TMDL during the Public Comment Period and were received prior to closure of the comment period 5:00 PM, July 29 2010. There were no comments received after the close of the comment period.

Code	Comments Received From (and length of comment text)	Date Received	Media
USFS	Umatilla National Forest (1 page)	07-26-10	E-Mail
BLM	Bureau of Land Management, Vale District Office (4 pages)	07-28-10	E-Mail/Mail
EPA	US Environmental Protection Agency (4 pages)	07-29-10	E-Mail

In the following sections, responses are organized in the order of occurrence of the relevant topic in the document, beginning with the more general comments. Comments from BLM are numbered according to the number by which they are identified in the comment document. The original text of the three sets of comments is included as Appendix A. The changes identified in the following responses have been made to the TMDL submitted to EPA. An asterisk (*) indicates that the TMDL document has been modified based on a comment and modified text is included in italics in the DEQ Response. Page numbers associated with each comment are the page numbers in the public review draft of the TMDL document. Additional grammatical, editorial, and formatting errors are not addressed here but these corrections have

been made in the TMDL document. Additional clarifying language was also added to the TMDL in several places.

Comment and Response – General

(G-1) USFS Comment – The Umatilla National Forest has been a partner in the development of TMDLs with DEQ for over 10 years now and we appreciate our relationship with you and your agency.

Response: DEQ acknowledges and appreciates our partnership with the Umatilla National Forest. We look forward to working with staff at the Umatilla National Forest during implementation of this TMDL, as well as others located within the boundary of the Umatilla National Forest.

(G-2) BLM Comment #1 – Please define and use consistently the terms ‘WQMP’ and ‘Implementation Plan’ throughout the TMDL and appendices.

Response*: We added Appendix C which provides definitions of selected terms used in the TMDL document, including Water Quality Management Plan and Implementation Plan. We also searched the entire document for references to “WQMP” or “Implementation Plan” for consistent usage. Generally we think that the terms were used consistently throughout the document. We did add some clarifying language to the discussion of TMDL Implementation in the Executive Summary, to Section 2.13.1 (Implementation Responsibilities) in Chapter Two, and to Figure 4-1 in Chapter Four.

(G-3) EPA Comment - EPA would like to acknowledge the great effort that went into developing this TMDL.

Response: DEQ acknowledges EPA’s helpful participation throughout TMDL development.

(G-4) EPA Comment – In numerous locations throughout the document “Wallowa” is missing the last “a”.

Response*: These misspellings have been corrected in the final document.

Comment and Response – Executive Summary

(ES-1) BLM Comment #2 - Page i. How do you apply temperature TMDLs to water that is not there? (In response to the following statement in the TMDL document: “The temperature TMDL objectives apply throughout the stream network for all three subbasins, whether perennial or not.”)

Response: DEQ believes that it is important that TMDLs for temperature apply to intermittent and perennial streams. Intermittent streams can have significant impacts on water quality, even though water may not be present in the streams year-around. In particular, intermittent streams are important for temperature because they can:

- (1) Be “dry” but still retain residual pools primarily fed by groundwater. There is at least one published study in Oregon documenting the presence of fish in these pools over the entire summer (Wiginton et al 2006). Residual pools and the aquatic life that use them must be protected from temperature increases.

- (2) Influence temperature directly during the time in which they flow. Though this typically is not during the annual “thermal peak”, there are other times of year when temperature is a critical concern, such as at the beginning or end of the summer when downstream temperatures are still warmer than the biological criteria.
- (3) Be sources of increased sediment loading where they are modified through land and vegetation disturbance. High sediment loading often causes stream channels to widen and shallow, increasing solar heating. Stream temperature is influenced by channel shape, which is in turn influenced by upland and headwater sediment loading. Restoration and maintenance of healthy riparian condition provides for stream bank stabilization, and reduces runoff.
- (4) Be flowing subsurface because they are currently degraded. In Eastern Oregon there are examples of degraded intermittent streams becoming perennial after restoration. Restoring the riparian vegetation will allow the system to aggrade raising the water table and returning flow to the surface (Elmore and Beschta 1987).

If resource managers demonstrate that conditions in an intermittent stream do not affect downstream temperatures during any season, or that thermal conditions in the intermittent stream are natural, then DEQ may accept alternative management on those streams. DEQ can work with DMAs on this during the development of TMDL Implementation Plans.

(ES-2) BLM Comment #4 - Page i. Recommend: ...restore more natural stream channel. There is more to a natural stream channel than geometry. (In response to the following statement in the TMDL document: “In order to implement the temperature TMDL, the DEQ requires designated management agencies to prepare plans and implement management strategies to restore or protect streamside vegetation, as well as encourage best management practices to increase stream flows, decrease warm irrigation return flows and restore more natural stream channel geometry.”)

Response*: DEQ doesn’t disagree with this comment. The word geometry has been removed from this sentence and that portion of the sentence now reads:

...and restore more natural stream channels.

Comment and Response – Chapter One

(1-1) EPA Comment - Section 1.2.2, page 1-5. The TMDL states that according to EPA’s counting this document addresses 39 TMDLs. This is not accurate. In instances where a waterbody is impaired for the same pollutant under two criteria or, in the case of bacteria, where there is a listing for both e-coli and fecal coliform in the same waterbody, only one TMDL is counted. This would total 36 TMDLs. A table of TMDLs, as EPA would count them, is attached to this letter.

Response*: DEQ appreciates the clarification and the table provided along with your comments. The difference in the count of three TMDLs appears to be in the counting of bacteria TMDLs for Spring Creek and Prairie Creek and the temperature TMDLs for Bear Creek. We had considered E. coli and fecal coliform to be different pollutants in our initial accounting (four TMDLs rather than two TMDLs). We also thought that Bear Creek represented two TMDLs according to EPA’s counting methodology, whereas your table indicates only one TMDL. For Bear Creek, there are two listings for temperature (one for the spawning criterion and one for core cold water), however the reaches for these listings do not completely overlap. Bear Creek is listed as not meeting the core cold water criterion from river mile 0 to 7.5 and not meeting spawning from river mile 2.8 to 9.0.

While drafting the response comments, we had further conversations with Helen Rueda (the commentator from EPA) to further understand her comment. She clarified that the bacteria listings for Spring and Prairie Creek do represent one TMDL each. In looking at the Bear Creek listing more

closely she agreed with DEQ that these listings represent two TMDLs. Section 1.2.2 has accordingly been modified to reflect that this document addresses 37 TMDLs (33 for temperature and 4 for bacteria). In addition, we added a new Table (Table 1-3 in the final TMDL document) to this section to reflect the number of TMDLs addressed according to EPA's method of counting.

(1-2) BLM Comment #5 – Section 1-1, page 1-2. The BLM is not listed as having representation on the Committee for development of the TMDL, yet the BLM is listed as a DMA?

Response: While DEQ agrees that it is optimal to involve all DMAs throughout the process, DMA identification is sometimes deferred until a later stage of TMDL development, when we have a better idea of a sector's potential pollutant contribution. For TMDL implementation, we see this as the beginning of a process, wherein we continue to work with BLM and others to optimize adaptive management targets and practices; and to review and revise TMDLs over time.

(1-3) BLM Comment #6 – Section 1.2.2, page 1-5. On some intermittent streams there may be no flowing water or causal link to down-channel temperature increases during periods of most probable impairment (highest solar path) or actual recorded impairment. BLM requests further definition or description on channels this TMDL applies to.

Including all intermittent streams in the TMDL is including an extensive channel networks with no causal linkage or no recorded impairment. (In response to the following statement in the TMDL document: "The temperature TMDL applies to all perennial and intermittent streams in the Lower Grande Ronde Subbasins.")

Response: See the response to **Comment ES-1** (BLM Comment #2).

(1-4) BLM Comment #7 – Section 1.3.2, page 1-10. The effects of climate change and air temperature increases are not mentioned or discussed. Climate change should be included.

Climate change information and analysis appears to be lacking throughout the document.

Response: Climate change is a global phenomenon and will influence factors addressed or used in this TMDL (water temperature, flow, vegetation, etc). TMDLs are developed based on the use of historical data and current conditions to meet current water quality standards. We develop allocations to meet these water quality standards. Water quality standards are reviewed periodically and are revised when appropriate. In addition, TMDLs are revisited and revised based on new information and conditions. If or when climate change affects water quality we expect to address those changes when we revisit TMDLs or revise water quality standards.

(1-5) BLM Comment #8 – Section 1.3.3.1, page 1-14. BLM is only 1% of the land area and in multiple cases manages land on one side of the river. This could limit recovery if there is not coordination with the other land holders.

Response: DEQ agrees with BLM that recovery could be limited without coordination between land managers. We encourage DMAs to work together to develop comprehensive riparian restoration strategies that cross jurisdictional boundaries. This could be accomplished by working with existing multi-stakeholder groups (such as watershed councils or the Wallowa County Natural Resource Advisory Committee) or through developing complementary implementation plans. If coordination is not possible, then an explanation of that and a description of what is possible for BLM to achieve could be included in BLM's Implementation Plan (Water Quality Restoration Plan).

Comment and Response – Chapter Two

(2-1) USFS Comment - In reviewing this draft, I find that the 303d listing of the Wenaha River for temperature is the one listing on the Umatilla National Forest. Nearly the entire river drainage on National Forest System (NFS) lands was congressionally designated as wilderness in 1978 as part of the Wenaha-Tucannon Wilderness. The full length of the river on NFS lands was designated “Wild and Scenic” in 1988. These two land management designations reflect the natural and undeveloped characteristic of the river as well as providing substantial legislative protections to the river.

The drainage has a long history of recreational use: for hiking, hunting, camping, and other activities that fit its remote character. No harvest or other vegetation management has occurred in this area and there has been no road construction. No motorized or wheeled travel is permitted in the wilderness or the “Wild and Scenic” River corridor.

I note that the TMDL uses system potential effective shade as the surrogate measure to meet the load allocation for nonpoint sources. There are approximately 200 miles of trail in the wilderness with an average width of approximately 6 feet from the top of cut to bottom of fill. Those trails, which are located in areas that provide shade to the Wenaha and its tributaries, are unlikely to have more than negligible affect to shade and water temperature.

In the Wenaha drainage natural disturbance factors, fire and flood, will cause variability over time, but the undeveloped condition of the watershed and the long standing land management designations lead me to the conclusion that the Wenaha River on National Forest Lands is at system potential vegetation and effective shade and so, water temperature.

Response: DEQ agrees that Wilderness status provides a high degree of protection. This is not inconsistent with the presence of 303(d) listings and TMDLs in Wilderness areas. The lower Wenaha River is 303(d) listed for temperature based on biologically based numeric criteria. The temperature 303(d) listings are re-classified upon TMDL issuance and addressed through TMDL implementation. As a designated management agency, the Umatilla National Forest will have the opportunity to further evaluate the degree of impairment seen in the Wenaha River (or if conditions are natural) in their Implementation Plan. As indicated in the USFS comment, recreational trails are one type of human-caused activity which could impair water quality in a Wilderness Area. Legacy impacts and bio-invasives are other human-caused conditions which the Umatilla Forest should consider in preparing their Implementation Plan.

We also note that the application of TMDL allocations, while setting a maximum pollutant limit, does not imply that the limit is exceeded. TMDLs are sometimes established in areas of uncertainty, or to address future protection or future identification of impairment. For example, the nearby upper South Fork of the Walla Walla River has temperature load allocations which appear to be met with the existing amount of heat loading. At this point, DEQ does not assume that Wenaha River allocations are met, or not being met.

(2-2) BLM Comment #9 – Section 2.1, page 2-1. As in the comments above BLM recommends that “all” intermittent channels not be included in the TMDL.

A significant number of intermittent channels do not flow during the peak temperature period (mid July to Mid August) or do not flow during the May 1 – October 31 criteria. They do not contribute to the listed segments or the appropriate species during these periods. Effective shade targets are not appropriate for these streams in terms of solar loading and the temperature TMDL. BLM recommends that ODEQ be explicit on which intermittent streams are applicable through

definition either in the text or in the definitions provided. The definitions should contain an explanation of intermittent channels and specifically those that pertain to the TMDL.

BLM recognizes these are more easily defined than mapped at this time. This is why it is important to define the water body appropriate for application of targets. (In response to the following statement in the TMDL document: “This temperature TMDL applies to all perennial and intermittent streams within the Lower Grande Ronde Subbasins.”)

Response*: See the response to **Comment ES-1** (BLM Comment #2) and **Comment 2-7** (BLM Comment #14). The discussion of the seven generalized potential vegetation communities provided in the response to **Comment 2-7** also applies to BLM’s comment here about applying effective shade targets to intermittent streams.

(2-3) BLM Comment #10 - Table 2-1, Row 8, page 2-3. The Grande Ronde below Mud Ck (RM50?) is wide enough that shading from riparian vegetation is limited. Therefore, the surrogate measure of shading from the natural potential riparian vegetation is not appropriate for the mainstem. For streams with channel widths (under natural conditions) greater than 100 feet (30 meters), other sources of heating such as sedimentation and channel widening could be targeted using bank stability, turbidity, channel width, and % upland ground disturbance as surrogate measures for this part of the system. (In response to the following statement in the TMDL document: “Surrogate Measures are used throughout the temperature TMDL. Effective shade targets translate nonpoint source solar radiation loads into measurable riparian vegetation targets.”)

Response: Effective shade is inversely proportional to solar flux (incident solar power per stream surface area). Because of this, even where potential effective shade is quite low, solar loading potential is quantified and serves as a ‘not-to-exceed’ target. Target attainment would generally be met by natural potential vegetation and/or topography. It is plausible that in some places the effective shade targets, once specified, are already being met by topography. Natural vegetation provides improvements in the other attributes mentioned in this comment: bank stability, turbidity, channel width, etc. Spatially explicit specification of natural thermal potential vegetation is an ongoing process, where we value BLM’s expertise. All of these factors weigh in DEQ’s selection of effective shade, translated into solar heat units, as an appropriate target – one that doesn’t necessarily imply that increased vegetation would increase stream shading in wide streams.

(2-4) BLM Comment #11 - Section 2.9.2, page 2-21. To assure adequate estimation of the system potential vegetation, we request DEQ recommend standard protocols relevant to the Lower Grande Ronde Subbasin. (In response to the following statement in the TMDL document: “When using the effective shade curves presented in Figure 2-8, the determination of the appropriate system potential vegetation community is the responsibility of each designated management agency (DMA). Since there is not a map showing where each potential vegetation community is located, it is the responsibility of the resource manager to consult with the appropriate experts to make that determination.”)

Response: Best protocols to use for determining natural potential vegetation at broad scales are evolving, and we look forward to working with BLM, other DMAs and local experts in these developments. In the interim, we recommend that DMAs select the system potential community which they believe is most representative of the stream being assessed, or produce alternative studies. We expect that this determination of potential vegetation will be made in consultation with local experts and DEQ. As mentioned in the response to **Comment (2-3)**, we value BLM’s expertise in this arena. As to pre-specifying protocols or vegetation types, the local Lower Grande Ronde TMDL Committee specifically requested that the determination of system potential communities be left up to land managers during TMDL implementation. TMDL implementation plans should lay out steps to removing stressors and managing for natural potential vegetation, as well as needs for ongoing estimation of vegetation types, where there is uncertainty. For such areas, we envision that this as an

adaptive and interactive process. Additional Eastern Oregon vegetation potential literature sources have been compiled in the draft Malheur and John Day Basin TMDLs, available at the DEQ website (<http://www.deq.state.or.us/WQ/TMDLs/basinmap.htm>).

(2-5) BLM Comment #12 - Section 2.9.2, page 2-21. Question: At what water level is this to be evaluated (base flow, bankfull, etc.)? Question: At which channel features is this to be evaluated (pools, riffles, etc.)? (In response to the following statement in the TMDL document: "In order to quantify solar loading, one would: (1) choose a stream location, (2) choose the appropriate system potential vegetation community and the corresponding chart in Figure 2-8, (3) measure the existing channel width, and (4) select the appropriate curve based on the channel compass direction. The effective shade indicated by the curve for that channel width is the expected shade if system potential vegetation height and density is in place.")

Response*: Several sentences were added to the referenced paragraph in Section 2.9.2 to further describe how and where channel width should be determined in response to these questions. This paragraph now reads (new text is underlined in this response):

*When using the effective shade curves presented in **Figure 2-8**, the determination of the appropriate system potential vegetation community is the responsibility of each designated management agency (DMA). Since there is not a map showing where each potential vegetation community is located, it is the responsibility of the resource manager to consult with the appropriate experts to make that determination. This would typically be part of implementation plan development, subject to DEQ review. In order to quantify solar loading, one would: (1) choose a stream location, (2) choose the appropriate system potential vegetation community and the corresponding chart in Figure 2-8, (3) measure the existing channel width, and (4) select the appropriate curve based on the channel compass direction. The effective shade indicated by the curve for that channel width is the expected shade if system potential vegetation height and density is in place. The determination of channel width should be evaluated at bankfull stage, or where bankfull indicators are lacking, at the boundary of the active channel area of disturbance. For field assessment, riffles may be the best feature to characterize a reach, consistent with various channel classification methods. TMDL attainment of effective shade targets would be assessed throughout the longitudinal profile.*

(2-6) BLM Comment #13 - Figure 2-7, page 2-20. The downstream trend of system potential effective shade indicates the decreasing effect of shading due to riparian vegetation. If this trend were extrapolated to the mainstem Grande Ronde between RM 50 and RM 36.3, the effective shading due to riparian vegetation would be minimal. Ground conditions for this stretch of the Grande Ronde mainstem show channel widths beyond those where riparian vegetation would have an effect on surface water temperature.

Response: This figure applies to the Wallowa River. The lower Grande Ronde River is not explicitly assessed in the document. Refer to the response to **Comment 2-3** (BLM comment #10).

(2-7) BLM Comment #14 - Figure 2-8, page 2-24. Please justify the appropriateness of the 35 foot average height for vegetation for this section of the Lower Grande Ronde Subbasin. The experience of BLM personnel on the mainstem of the Grande Ronde below river mile 45 (Elevation 2000') is that this is an overestimate of average tree height for the riparian species expected. (In response to the following reference in the TMDL document: Figure 2-8 Graph "Mixed Deciduous <2000' Elev.: 35 Ft. Avg. Tree Height, 75% Density")

Response*: Table 2-7 provides further details of the system potential vegetation communities associated with each shade curve in Figure 2-8. The average range in tree height for the lower

elevation mixed deciduous community was defined as 30-35 feet by the local stakeholder committee who helped with TMDL development.

The goal of the temperature TMDL is to minimize human-caused impacts on natural vegetation conditions and the associated levels of effective shade. Seven generalized vegetation communities (Table 2-7) were developed to describe average communities throughout the subbasins. It is very likely that other system potential communities will be defined as more information becomes available through TMDL implementation. If BLM believes that system potential vegetation along a given stream reach does not match one of the communities described in Table 2-7 and Figure 2-8, DEQ encourages BLM to provide an explanation and alternative target in their Implementation Plan (Water Quality Restoration Plan). The following paragraph was added to the end of Section 2.9.2 to further explain this:

*There may be instances where a given stream reach may not match one of the seven generalized communities described in **Table 2-7** and **Figure 2-8** and a resource manager may have more site specific information about the appropriate system potential community. In such instances, the resource manager should describe the expected community. This determination would typically be part of implementation plan development and would be subject to DEQ review.*

In responding to this comment, we also noticed that there was an error in Figure 3-8 for this community type. The shade curve for this community was developed using 32.5 feet as the average height, not 35 feet as was indicated in the figure. That error has been corrected in the Y-axis title for that figure.

(2-8) BLM Comment #15 - Section 2.13.1, page 2-36. Question: Should this statement read “These agencies are responsible for developing implementation plans to fulfill TMDL load allocations and surrogate measures.” (In response to the following reference in the TMDL document: “These agencies are responsible for developing and implementing plans to fulfill TMDL load allocations and surrogate measures.”)

Response*: The sentence is correct as written in the TMDL document. DMAs are responsible for both developing plans (called “Implementation Plans”) and then implementing those plans once they are developed. We did modify this sentence slightly to address this comment and to provide further clarity in response to BLM Comment #1 (**Comment G-2** in this RTC document). This sentence now reads:

These agencies are responsible for developing and implementing plans (called Implementation Plans) to fulfill TMDL load allocations and surrogate measures.

(2-9) EPA Editorial Comments - Section 2.10.3, Tables 2 – 12 through 2-14 pages 2-31 & 2-32. The second footnote in these tables has one asterisk and it should have two.

Figure 2-9, page 2-30. The figure does not have any labels for the x-axis and y-axis.

Response*: These editorial comments have been corrected in the final document.

Comment and Response – Chapter Three

(3-1) EPA Comment - Section 3.7.1, pages 3-13 though 3-14. All of the permitted point sources are discussed here except the City of Enterprise stormwater discharge. This source should be discussed as well.

Response*: This omission has been corrected. This City of Enterprise permit is a general stormwater construction permit for the upgrade of their sewage treatment plant. The discussion of general permits under Section 3.7.1 (pages 3-13 and 3-14) was modified to include a more complete discussion of general permits. NPDES general permitted point sources are not expected to be a significant source of fecal bacteria or to exceed available loading capacity. Pollution prevention strategies and/or plans, site controls and monitoring requirements minimize the impact of permitted facilities on receiving streams. Section 3.7.1.2 now reads:

3.7.1.2 Facilities with General Permits

In addition to the individually permitted sewage treatment plants, there are three facilities in the Wallowa River Subbasin that discharge with general NPDES permits. These facilities include Wallowa Forest Products (permits for industrial stormwater and boiler blowdown), the Wallowa River fish hatchery, and the City of Enterprise (construction stormwater) (see discussion in Chapter 1). Given the relatively small size of the discharges, the controls required through the existing permits, and the fact that these are not considered to be significant sources of bacteria, these facilities are not likely to cause or contribute to significant water quality impairment for bacteria or to exceed available loading capacity.

(3-2) EPA Comment - Section 3.8.2.1, page 3-22. No wasteload allocation is given for the City of Enterprise stormwater discharge. If no allocation is specified in the TMDL it is assumed that this point source is receiving a zero allocation.

Response*: We thank EPA for pointing out this omission. As with the other facilities with general permits, the City of Enterprise stormwater construction discharge is allocated the current condition. We also clarified in Table 3-1 that waste load allocations for facilities with general permits were assigned their current load. This paragraph in Section 3.8.2.1 now reads:

As identified in the source assessment the facilities with general permits are not likely to cause or contribute to the bacteria impairment. Therefore, these facilities are allocated their current pollutant load and their impacts are expected to be negligible. Additionally, similar future facilities with new general NPDES permits are not expected to contribute to these impairments and are allocated the same loading rate.

(3-3) EPA Comment - Section 3.8.1.2, page 3-21. The description of the allocations for Spring and Prairie Creeks here suggests that they will be given the same reductions as the Wallowa River and its other tributaries. Tables 3-6 and 3-7 show that the reductions required for these waters are greater than those for the Wallowa River and seem to be the reductions needed to bring the greatest exceedences in the existing data from those streams into compliance with the water quality standards. Please clarify how the reductions for Spring and Prairie Creeks were derived.

Response*: This paragraph in Section 3.8.1.2 has been modified to clarify this and describe more completely how the reductions for Spring and Prairie Creeks were derived. The first column in Table 3-6 was also modified slightly to indicate that the reductions were based on the highest observed *E. coli* concentration. The paragraph now reads:

*Because there is insufficient data to calculate load duration curves for Spring Creek or Prairie Creek, loading capacities as such are not established. The percent concentration reduction needed to meet both numeric criteria is used as a TMDL surrogate for loading capacity for these creeks. The concentration-based percent reduction targets were calculated by comparing the highest observed *E. coli* values (either as a log mean or single sample) to the appropriate criterion (Table 3-6).*

(3-4) EPA Comment - Section 3.9, page 3-23. The basis for the implicit margin of safety for Prairie and Spring Creek TMDLs is not described here. Given the lack of data and the level of uncertainty

for bacteria in Prairie and Spring Creek it may be appropriate to consider an explicit margin of safety.

Response*: We believe that we used conservative assumptions by basing our calculation of the percent reduction targets for Spring Creek and Prairie Creek on the highest observed *E. coli* concentrations, as we more completely described in the response to **Comment (3-3)**. We added several clarifying sentences to this section in the TMDL document. The final sentences of Section 3.9 now read:

For Spring Creek and Prairie Creek, the percent reduction targets were developed by comparing the highest observed E. coli concentrations to the criterion. This is a conservative approach, and as with the Wallowa River, will lead to larger reductions than are necessary during most of the year and at most stations.

We added further clarification to the discussion of the implicit Margin of Safety in Table 3-1 as well.

(3-5) EPA Editorial Comments - Figure 3-3, page 3-10. The legend and labels for the x- and y-axes are missing.

Page 3-13 first line of first paragraph “sources” is missing the final “s”.

Page 3-23. Section 3.11. “Reasonable” is misspelled in the title.

Response*: These editorial comments have been corrected in the final document.

Comment and Response – Chapter Four

(4-1) BLM Comment #16 – Section 4.2 (E), page 4-10. Are the annual and effectiveness reporting requirements new? (In response to the following reference in the TMDL document: “DMAs are expected to prepare an annual report and undertake an evaluation of the effectiveness of their plans every five years to gauge progress toward attaining water quality standards. If it is determined that an Implementation Plan is not sufficient to achieve the load allocation, the DMA will be required to revise the plan accordingly. All of these actions, taken together, will target attainment of water quality standards.”)

Response: Annual and effectiveness (every five years) reporting requirements are not new. In May, 2007 DEQ developed guidance for TMDL implementation plan development, including a section on reporting requirements (Section 3.2). This section identifies that the frequency of reporting is typically specified in the WQMP, but if not, a progress report should be submitted to DEQ once a year and a review report once every five years. This is the reporting cycle adopted in the Lower Grande Ronde Subbasins WQMP. This Implementation Plan Guidance document can be accessed from the DEQ website: <http://www.deq.state.or.us/wq/tmdls/implementation.htm>.

Prior to the development of this guidance document, annual and/or five-year reporting requirements were still included in most WQMPs. For examples, please see the Western Hood Subbasin TMDL (2001), Willow Creek Subbasin Temperature, pH and Bacteria TMDLs and WQMP (2006), Willamette Basin TMDL (2006) and Rogue River Basin TMDL (2008).

(4-2) BLM Comment #17 – Section 4.2 (H), page 4-17. This appears to reference a point source for bacterial contribution. Wildlife, humans as well as livestock can contribute bacteria in water. It is often difficult to identify one source in wildland situations. We would like clarification on this statement. (In response to the following reference in the TMDL document: “It is also expected that

WQRPs will address bacterial contributions to the Wallowa River Watershed, such as from livestock grazing, where appropriate.”)

Response: In Chapter 3, bacterial contributions from livestock grazing are primarily identified as nonpoint sources of pollution, not point sources. Confined Animal Feeding Operations (CAFOs) are livestock point sources of pollution and they are not allowed to discharge wastes to surface waters under the terms of the CAFO NPDES general permit. We agree that it is often difficult to sort out nonpoint sources of fecal bacteria, as many sources may overlap in time and space. It is our expectation that Implementation Plans will address anthropogenic nonpoint sources of pollution. For bacteria, this could include concentrated sources of human and pet waste (such as from an on-site septic system, sewage treatment plants or camp grounds) and livestock (domesticated animals as contrasted with wildlife).

References

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The comments on the following pages are provided in their entirety.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
OREGON OPERATIONS OFFICE
805 SW Broadway, Suite 500
Portland, Oregon 97205

July 29, 2010

Reply to:

Mr. Don Butcher,
Oregon Department of Environmental Quality
700 SE Emigrant Avenue, Suite 330
Pendleton, OR 97801

Dear Mr. Butcher,

The following are EPA's comments on the draft Lower Grande Ronde Subbasins Total Maximum Daily Load (TMDL). EPA would like to acknowledge the great effort that went into developing this TMDL. Below are our comments on the report.

Section 1.2.2 page 1-5. The TMDL states that according to EPA's counting this document addresses 39 TMDLs. This is not accurate. In instances where a waterbody is impaired for the same pollutant under two criteria or, in the case of bacteria, where there is a listing for both e-coli and fecal coliform in the same waterbody, only one TMDL is counted. This would total 36 TMDLs. A table of TMDLs, as EPA would count them, is attached to this letter.

Section 3.7.1 pages 3-13 though 3-14. All of the permitted point sources are discussed here except the City of Enterprise stormwater discharge. This source should be discussed as well.

Section 3.8.2.1 page 3-22. No wasteload allocation is given for the City of Enterprise stormwater discharge. If no allocation is specified in the TMDL it is assumed that this point source is receiving a zero allocation.

Section 3.8.1.2 page 3-21. The description of the allocations for Spring and Prairie Creeks here suggests that they will be given the same reductions as the Wallowa River and its other tributaries. Tables 3-6 and 3-7 show that the reductions required for these waters are greater than those for the Wallowa River and seem to be the reductions needed to bring the greatest exceedences in the existing data from those streams into compliance with the water quality standards. Please clarify how the reductions for Spring and Prairie Creeks were derived.

Section 3.9 page 3-23. The basis for the implicit margin of safety for Prairie and Spring Creek TMDLs is not described here. Given the lack of data and the level of uncertainty for bacteria in Prairie and Spring Creek it may be appropriate to consider an explicit margin of safety.

Editorial Comments

In numerous locations throughout the document "Wallowa" is missing the last "a".

Section 2.10.3 Tables 2 – 12 through 2-14 pages 2-31 & 2-32. The second footnote in these tables has one asterisk and it should have two.

Figure 2-9. Page 2-30. The figure does not have any labels for the x-axis and y-axis.

Figure 3-3. Page 3-10. The legend and labels for the x- and y-axes are missing.

Page 3-13 first line of first paragraph “sources” is missing the final “s”.

Page 3-23. Section 3.11. “Reasonable” is misspelled in the title.

We commend you for the efforts you have made to date and look forward to the submittal of the final TMDL in the near future. If you have any questions regarding comments on the draft TMDL please contact me at (503) 326-3280.

Sincerely,

Helen Rueda
TMDL Project Manager

Enclosure

Cc: W/encl
Jayne Carlin, EPA
Tracy Chellis, EPA
Bonnie Lamb, Oregon DEQ
Jenny Wu, EPA.

Table of TMDLs for the Lower Grand Ronde Subbasins

Subbasin	Record ID	Water Body	River Miles	Parameter	Criteria	Count
Imnaha	12532	Big Sheep Creek	0 to 10	Temperature	Rearing	1
Imnaha	12533	Crazyman Creek	0 to 6.8	Temperature	Bull trout	1
Imnaha	12537	Dry Creek	0 to 4.2	Temperature	Bull trout	1
Imnaha	12530	Freezeout Creek	0 to 8.5	Temperature	Rearing	1
Imnaha	20814	Grouse Creek	0 to 17.3	Temperature	Spawning	1
Imnaha	12531	Grouse Creek	0 to 17.3	Temperature	Core Cold	
Imnaha	12536	Gumboot Creek	0 to 7.4	Temperature	Bull trout	1
Imnaha	12527	Imnaha River	0 to 35.8	Temperature	Rearing	1
Imnaha	13347	Imnaha River	35.7 to 42.7	Temperature	Spawning	
Imnaha	12528	Imnaha River	35.8 to 42.7	Temperature	Core Cold	1
Imnaha	12529	Imnaha River	42.7 to 72.2	Temperature	Bull trout	1
Imnaha	827	Lightning Creek	0 to 24.8	Temperature	Rearing	1
Imnaha	12535	Little Sheep Creek	0 to 26	Temperature	Rearing	1
L. Grande Ronde	20842	Grande Ronde River	65.9 to 104.9	Dissolved Oxygen	Spawning	Not addressed
L. Grande Ronde	1084	Chesnimnus Creek	0 to 26.4	Sedimentation		Not addressed
L. Grande Ronde	1102	Elk Creek	0 to 13.7	Sedimentation		Not addressed
L. Grande Ronde	1059	Grande Ronde River	36.3 to 80.7	Sedimentation		Not addressed
L. Grande Ronde	12544	Chesnimnus Creek	0 to 26.4	Temperature	Rearing	1
L. Grande Ronde	12555	Courtney Creek	0 to 14.3	Temperature	Rearing	1
L. Grande Ronde	12543	Crow Creek	0 to 20.2	Temperature	Rearing	1
L. Grande Ronde	908	Elk Creek	0 to 13.7	Temperature	Rearing	1
L. Grande Ronde	12538	Grande Ronde River	35.6 to 172.4	Temperature	Rearing	1
L. Grande Ronde	12553	Grouse Creek	0 to 1.4	Temperature	Core Cold	1
L. Grande Ronde	12539	Joseph Creek	8.1 to 48.2	Temperature	Rearing	1
L. Grande Ronde	12560	Mud Creek	0 to 23	Temperature	Rearing	1
L. Grande Ronde	911	Peavine Creek	0 to 5.3	Temperature	Rearing	1
L. Grande Ronde	912	Salmon Creek	0 to 13.6	Temperature	Rearing	1
L. Grande Ronde	12565	Sickfoot Creek	0 to 7.5	Temperature	Rearing	1
L. Grande Ronde	12563	Wallupa Creek	0 to 10.1	Temperature	Rearing	1
L. Grande Ronde	13349	Wenaha River	6.7 to 10.3	Temperature	Spawning	

Subbasin	Record ID	Water Body	River Miles	Parameter	Criteria	Count
L. Grande Ronde	12558	Wenaha River	0 to 10.3	Temperature	Core Cold	1
L. Grande Ronde	12562	Wildcat Creek	0 to 16	Temperature	Rearing	1
Wallowa	938	Prairie Creek	0 to 12.5	Dissolved Oxygen	Spawning	Not addressed
Wallowa	939	Spring Creek	0 to 4.5	Dissolved Oxygen	Spawning	Not addressed
Wallowa	13659	Prairie Creek	0 to 2.4	E Coli		1
Wallowa	9273	Prairie Creek	0 to 12.5	E Coli		1
Wallowa	13786	Wallowa River	0 to 50	E Coli		1
Wallowa	924	Prairie Creek	0 to 12.5	Fecal Coliform		
Wallowa	925	Spring Creek	0 to 4.5	Fecal Coliform		1
Wallowa	926	Wallowa River	0 to 50	Fecal Coliform		
Wallowa	1151	Wallowa River	0 to 50	pH		Not addressed
Wallowa	1050	Bear Creek	0 to 7.5	Sedimentation		Not addressed
Wallowa	1051	Hurricane Creek	0 to 7.6	Sedimentation		Not addressed
Wallowa	1044	Lostine River	0 to 9	Sedimentation		Not addressed
Wallowa	1052	Minam River	0 to 10.2	Sedimentation		Not addressed
Wallowa	1054	Prairie Creek	0 to 12.5	Sedimentation		Not addressed
Wallowa	1042	Wallowa River	0 to 50	Sedimentation		Not addressed
Wallowa	13350	Bear Creek	2.8 to 9	Temperature	Spawning	
Wallowa	12564	Bear Creek	0 to 7.5	Temperature	Core Cold	1
Wallowa	890	Deer Creek	0 to 10.2	Temperature	Bull Trout	1
Wallowa	13351	Fisher Creek	0 to 0.5	Temperature	Spawning	
Wallowa	12575	Fisher Creek	0 to 5.1	Temperature	Core Cold	1
Wallowa	13352	Howard Creek	0 to 9	Temperature	Spawning	
Wallowa	12576	Howard Creek	0 to 11.2	Temperature	Core Cold	1
Wallowa	889	Little Bear Creek	0 to 8	Temperature	Bull Trout	1
Wallowa	12570	Minam River	0 to 12.6	Temperature	Core Cold	1
Wallowa	12577	Wallowa River	0 to 53.7	Temperature	Core Cold	1
					Total TMDLs	36



Forest
Service

Umatilla
National
Forest

2517 S.W. Hailey Avenue
Pendleton, OR 97801
541-278-3716

File Code: 2530

Date: July 26, 2010

Don Butcher
Basin Coordinator
Department of Environmental Quality
700 SE Emigrant, Suite 330
Pendleton, OR 97801

Dear Don:

Thank you for the opportunity to comment on the public review draft of the Lower Grande Ronde Subbasins TMDLs. The Umatilla National Forest has been a partner in the development of TMDLs with DEQ for over 10 years now and we appreciate our relationship with you and your agency.

In reviewing this draft, I find that the 303d listing of the Wenaha River for temperature is the one listing on the Umatilla National Forest. Nearly the entire river drainage on National Forest System (NFS) lands was congressionally designated as wilderness in 1978 as part of the Wenaha-Tucannon Wilderness. The full length of the river on NFS lands was designated "Wild and Scenic" in 1988. These two land management designations reflect the natural and undeveloped characteristic of the river as well as providing substantial legislative protections to the river.

The drainage has a long history of recreational use: for hiking, hunting, camping, and other activities that fit its remote character. No harvest or other vegetation management has occurred in this area and there has been no road construction. No motorized or wheeled travel is permitted in the wilderness or the "Wild and Scenic" River corridor.

I note that the TMDL uses system potential effective shade as the surrogate measure to meet the load allocation for nonpoint sources. There are approximately 200 miles of trail in the wilderness with an average width of approximately 6 feet from the top of cut to bottom of fill. Those trails, which are located in areas that provide shade to the Wenaha and its tributaries, are unlikely to have more than negligible affect to shade and water temperature.

In the Wenaha drainage natural disturbance factors, fire and flood, will cause variability over time, but the undeveloped condition of the watershed and the long standing land management designations lead me to the conclusion that the Wenaha River on National Forest Lands is at system potential vegetation and effective shade and so, water temperature.

Thank you again for the opportunity to comment.

Sincerely,

/s/Kathleen Klein
KEVIN MARTIN
Forest Supervisor



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Vale District Office
100 Oregon Street
Vale, Oregon 97918

IN REPLY REFER TO:
7000 (ORV000)

JUL 28 2010

Mr. Don Butcher
Oregon Department of Environmental Quality
Eastern Region
700 SE Emigrant, Suite 330
Pendleton, OR 97801

Dear Mr. Butcher:

Thank you for the opportunity for the Bureau of Land Management (BLM), Vale District Office (VDO) to review the Public Comment Draft: Lower Grande Ronde Subbasins Total Maximum Daily Load (TMDL) and Water Quality Management Plan (WQMP). The TMDL is very complex and we commend the Oregon Department of Environmental Quality (ODEQ) on the detailed, thorough analysis.

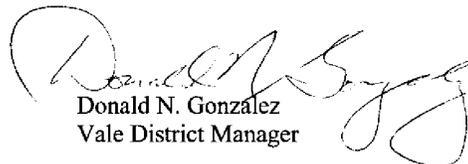
We appreciate that the plan included surrogates for the water temperature TMDL. BLM will be able to manage for potential plant communities, thus receiving benefits for the shade that these plants provide where possible. We do have concerns that the surrogates may not be appropriate for the Lower Grande Ronde and have some suggestions (Please see enclosed comments).

The monitoring of water temperature and other parameters are time consuming and expensive if they are to be completed at an intensity that allows meaningful interpretation. Due to budget constraints and lack of personnel, such extensive monitoring is currently beyond the capacity of BLM. We agree that the combination of monitoring plant community composition relative to site potential and shading will be informative indicators of our management's progress toward achieving the temperature TMDL. There are other surrogates which may be useful in the Lower Grande Ronde Subbasins. BLM also supports the encouragement of the best management practices to continue water quality restoration of the Lower Grande Ronde Subbasins.

Please accept the comments and questions in enclosure 1 on the Comment Draft: Lower Grande Ronde Subbasins Total Maximum Daily Load (TMDL) and Water Quality Management Plan (WQMP) document.

If you have any further questions, please call Linus Meyer at (541) 473-6231.

Sincerely,



Donald N. González
Vale District Manager

Enclosure

cc: Chester Novak, State Office Hydrologist (OR932)

Vale District Office comments regarding the Lower Grande Ronde Subbasins TMDL and WQMP

Comment Number	Page	Paragraph	Statement from Document	Questions/Comment/Recommendation
1	General			Please define and use consistently the terms 'WQMP' and 'Implementation Plan' throughout the TMDL and appendices.
2	i Executive Summary	3	"The temperature TMDL objectives apply throughout the stream network for all three subbasins, whether perennial or not."	How do you apply temperature TMDLS to water that is not there?
4	i Executive Summary	7	"...restore more natural stream channel geometry."	Recommend: ...restore more natural stream channel. There is more to a natural stream channel than geometry.
5	1-2	2	The TMDL Committee had representation from the following interests:.....	The BLM is not listed as having representation on the Committee for development of the TMDL, yet the BLM is listed as a DMA?
6	1-5	2 Temperature	The Temperature TMDL applies to all perennial and intermittent streams in the Lower Grande Ronde Subbasins.	On some intermittent streams there may be no flowing water or causal link to down-channel temperature increases during periods of most probable impairment (highest solar path) or actual recorded impairment. BLM requests further definition or description on channels this TMDL applies to. Including all intermittent streams in the TMDL is including extensive channel networks with no causal linkage or no recorded impairment.
7	1-10	5 Climate		The effects of climate change and air temperature increases are not mentioned or discussed. Climate change should be included. Climate change information and analysis appears to be lacking throughout the document.
8	1-14	1	Land Ownership	BLM is only 1% of the land area and in multiple cases manages land on one side of the river. This could limit recovery if there is not coordination with the other land holders.

Vale District Office comments regarding the Lower Grande Ronde Subbasins TMDL and WQMP
(contd.)

Comment Number	Page	Paragraph	Statement from Document	Questions/Comment/Recommendation
9	2-1	3	This temperature TMDL applies to all perennial and intermittent streams within the Lower Grande Ronde Subbasins.	<p>As in the comments above BLM recommends that “all” intermittent channels not be included in the TMDL.</p> <p>A significant number of intermittent channels do not flow during the peak temperature period (mid July to Mid August) or do not flow during the May 1 – October 31 criteria. They do not contribute to the listed segments or the appropriate species during these periods. Effective shade targets are not appropriate for these streams in terms of solar loading and the temperature TMDL. BLM recommends that ODEQ be explicit on which intermittent streams are applicable through definition either in the text or in the definitions provided. The definitions should contain an explanation of intermittent channels and specifically those that pertain to the TMDL.</p> <p>BLM recognizes these are more easily defined than mapped at this time. This is why it is important to define the water body appropriate for application of targets.</p>
10	Table 2-1	Row 8	<i>Surrogate Measures</i> are used throughout the temperature TMDL. Effective shade targets translate nonpoint source solar radiation loads into measurable riparian vegetation targets.	The Grande Ronde below Mud Ck (RM50?) is wide enough that shading from riparian vegetation is limited. Therefore, the surrogate measure of shading from the natural potential riparian vegetation is not appropriate for the mainstem. For streams with channel widths (under natural conditions) greater than 100 feet (30 meters), other sources of heating such as sedimentation and channel widening could be targeted using bank stability, turbidity, channel width, and % upland ground disturbance as surrogate measures for this part of the system.

Vale District Office comments regarding the Lower Grande Ronde Subbasins TMDL and WQMP
(contd.)

Comment Number	Page	Paragraph	Statement from Document	Questions/Comment/Recommendation
11	2.9.2	3	“When using the effective shade curves presented in Figure 2-8 , the determination of the appropriate system potential vegetation community is the responsibility of each designated management agency (DMA). Since there is not a map showing where each potential vegetation community is located, it is the responsibility of the resource manager to consult with the appropriate experts to make that determination.”	To assure adequate estimation of the system potential vegetation, we request DEQ recommend standard protocols relevant to the Lower Grande Ronde Subbasin.
12	2.9.2	3	“In order to quantify solar loading, one would: (1) choose a stream location, (2) choose the appropriate system potential vegetation community and the corresponding chart in Figure 2-8, (3) measure the existing channel width, and (4) select the appropriate curve based on the channel compass direction. The effective shade indicated by the curve for that channel width is the expected shade if system potential vegetation height and density is in place.”	Question: At what water level is this to be evaluated (base flow, bankfull, etc.)? Question: At which channel features is this to be evaluated (pools, riffles, etc.)?
13	Figure 2-7			The downstream trend of system potential effective shade indicates the decreasing effect of shading due to riparian vegetation. If this trend were extrapolated to the mainstem Grande Ronde between RM 50 and RM 36.3, the effective shading due to riparian vegetation would be minimal. Ground conditions for this stretch of the Grande Ronde mainstem show channel widths beyond those where riparian vegetation would have an effect on surface water temperature.

Vale District Office comments regarding the Lower Grande Ronde Subbasins TMDL and WQMP
(contd.)

Comment Number	Page	Paragraph	Statement from Document	Questions/Comment/Recommendation
14	Figure 2-8		Graph "Mixed Deciduous <2000' Elev.: 35 Ft. Avg. Tree Height, 75% Density"	Please justify the appropriateness of the 35 foot average height for vegetation for this section of the Lower Grande Ronde Subbasin. The experience of BLM personnel on the mainstem of the Grande Ronde below river mile 45 (Elevation 2000') is that this is an overestimate of average tree height for the riparian species expected.
15	2.13.1	1	"These agencies are responsible for developing and implementing plans to fulfill TMDL load allocations and surrogate measures."	Question: Should this statement read "These agencies are responsible for developing implementation plans to fulfill TMDL load allocations and surrogate measures."
16	4.2 E	2	DMA's are expected to prepare an annual report and undertake an evaluation of the effectiveness of their plans every five years to gauge progress toward attaining water quality standards. If it is determined that an Implementation Plan is not sufficient to achieve the load allocation, the DMA will be required to revise the plan accordingly. All of these actions, taken together, will target attainment of water quality standards.	Are the annual and effectiveness reporting requirements new?
17	WQM P 4-17	4 DEQ Expectations	It is also expected that WQRPs will address bacterial contributions to the Wallowa River Watershed, such as from livestock grazing, where appropriate.	This appears to reference a point source for bacterial contribution. Wildlife, humans as well as livestock can contribute bacteria in water. It is often difficult to identify one source in wildland situations. We would like clarification on this statement.