

Western Hood Subbasin Temperature Total Maximum Daily Load

Revision to the 2001 Western Hood Subbasin TMDL

Response to Public Comments

February 2018



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Introduction

This Response to Public Comments document addresses comments received regarding the Draft *2017 Revision to 2001 Western Hood Subbasin TMDL* dated April 2017. All comments have been considered by the Oregon Department of Environmental Quality and, where appropriate, have been addressed in the final document that has been submitted to the U.S. Environmental Protection Agency. USEPA will then either approve or disapprove the TMDL. Not all comments resulted in modifications to the document. For clarity, the document has been renamed *Western Hood Subbasin Temperature Total Maximum Daily Load: Revision to the 2001 Western Hood Subbasin TMDL*. DEQ appreciates the time and effort of the reviewers.

Background

DEQ issued the original Western Hood Subbasin Total Maximum Daily Load for temperature in December 2001. The 2001 TMDL referenced the Oregon temperature standard which was in effect at that time. In December 2003, the Environmental Quality Commission adopted a new temperature standard for the state of Oregon, which was approved by the USEPA in March 2004. The new standard included a number of significant changes from the temperature water quality standard used in the 2001 TMDL, including changes to the biologically-based numeric criteria, spawning seasons, and the allowable anthropogenic temperature increase.

This TMDL revision updates the Western Hood Subbasin TMDL to comply with the state's current temperature standard. Wasteload allocations for facilities with National Pollutant Discharge Elimination System permits were revised and will be used to reissue many of the permits for facilities in the subbasin in the next several years. In addition, DEQ took this opportunity to update other aspects of the 2001 Western Hood Subbasin TMDL to comply with the current standard and with the state's TMDL Rule (OAR 340-042-0025).

The public comment period on the proposed 2018 Revision to the 2001 Western Hood Subbasin TMDL opened on April 6, 2017 and was scheduled to close on June 6, 2017. Upon the request of USEPA, the public comment period was extended two weeks, closing on June 20, 2017. Copies of the draft TMDL documents were made available online. A public hearing was not held for the TMDL revision and no hearing was requested.

The public notice for the public comment period was sent electronically to DEQ's GovDelivery distribution list, as well as to a list of interested local parties maintained by DEQ. The notice was also placed on DEQ's website, where the TMDL document was available for downloading throughout the comment period.

The following entities provided written comments on the TMDL during the public comment period and were received prior to closure of the comment period at 5:00 PM, June 20, 2017. There were no comments received after the close of the comment period.

Code	Comments Received From	Date Received	Media
USEPA	U.S. Environmental Protection Agency	6-20-2107	email
CRK	Columbia Riverkeeper	6-20-2017	email
AWCA	Oregon Association of Clean Water Agencies	6-20-2017	email
MFID	Middle Fork Irrigation District	6-20-2017	email

In the following sections, DEQ provides our response to the comments received. The general format of this document is a listing of comments and questions sorted by commenter, followed by DEQ's response. All comments are included in their entirety. Copies of the original comment letters are available upon request.

The changes identified in the responses have been made to the TMDL submitted to USEPA. An asterisk (*) indicates that the TMDL document was modified based on the comment. References to the TMDL document (such as numbered Sections, Tables, and Figures) mentioned in the DEQ Response refer to the final TMDL document, although reference to the equivalent sections in the Public Notice draft are included where appropriate. Additional grammatical, editorial, and formatting errors are not included here but corrections have been made in the document. Additional clarifying language was also added to the document in a number of places.

The following list is a summary of the key changes that were made to the TMDL document as a result of public comments.

- Oregon Department of Fish and Wildlife staff identified new steelhead spawning use (January 1-May 15) in Odell Creek after the removal of a small hydroelectric dam in 2016 at approximately river mile 0.5. A longer critical period of April 15-September 30 was applied to the Odell Creek watershed to be protective of this new beneficial use.
- The public notice draft focused primarily on updating the wasteload allocation section of the 2001 WHS TMDL to comply with the 2003 temperature standard and left many other sections of the 2001 TMDL unchanged. The reader was referred back to the 2001 WHS TMDL for this information. Based on a number of comments from USEPA and subsequent internal DEQ conversations, we have added additional sections to the final TMDL document to include all of the required elements of a TMDL (OAR 340-042-0040). In some situations, the pertinent sections of the 2001 TMDL document are repeated, unchanged, in the TMDL revision. The following key new sections were added or expanded:
 - Loading Capacity (Section 5) – While the general definition of loading capacity remains unchanged from the 2001 TMDL, in this revision loading capacity is calculated explicitly for watersheds with impaired streams.
 - Excess Load (Section 6) – The 2001 WHS did not calculate excess load. Excess load is presented in this revision as the difference between the applicable numeric criteria plus the human use allowance and the measured instream temperature.
 - Load Allocations (Section 7.2) – The public notice draft referenced the load allocations and surrogate shade measures included in the 2001 WHS TMDL. This information is now repeated in the revised TMDL document in Section 7.2 and in Appendix G. Appendix G also includes a discussion of the analytical methodology used in the 2001 WHS TMDL.
- We added clarifying language to the Wasteload Allocations section (Section 7.1) to better describe the calculation of the WLAs and the incorporation of cumulative effects analyses. The WLAs are summarized in Table 13.
- We more clearly articulated 26 different alternative discharge scenarios, for which WLAs were developed. These alternative WLAs would only be used if a point source makes a modification to its operation or discharge configuration that matches one of the scenarios described. A second WLA Table (Table 14) is included, which summarizes the alternative WLAs.
- While DEQ is not modifying the WQMP at this time, we did add additional information to Section 10 of the final TMDL to highlight the work being done by the Designated Management Agencies and other partners in the Subbasin to meet TMDL load allocations.
- DEQ completed a number of edits to and restructuring of the document.

Comment and Response – U.S. Environmental Protection Agency Comments

Significant or General Comments:

USEPA-1: This TMDL and its waste load allocations (WLAs) are being revised to account for changes to the temperature standard, which was approved by EPA in 2004. Additionally, since the 2001 TMDL was written, other changes have occurred to both the make-up of the potential sources of temperature to the watershed as well as some of the methods used to calculate the allocations:

- Several of the permitted dischargers no longer exist.
- The HUA has changed, and the portion allocated to nonpoint sources and point sources has changed.
- A revised load allocation has been developed for Laurence Lake Reservoir.
- Powerdale Dam, which was given a load allocation in the 2001 TMDL, has since been removed.
- The draft revision changes the way the MOS is calculated.
- The draft revision uses a cumulative effects analysis for permitted point sources, which was not part of the 2001 TMDL.

Given the changes listed above and the application of the new temperature standard in this draft revision, the loading capacity for each watershed should be revised and presented explicitly in the revised TMDL.

DEQ Response:* We have added a new section (Section 5) on Loading Capacity in response to this comment. In addition, we have expanded the section on Allocations (Section 7 in the final TMDL document) to include a more detailed discussion of the allocations of the loading capacity by sector.

USEPA-2: Table 1. The beneficial use indicated for the West Fork Hood River does not match what is shown on the 2003 Fish Use Designation map (Figure 160A) as the most stringent use, which is Core Cold Water Habitat. In addition, the beneficial use indicated for the segments needing to meet the 2003 standard of 16°C is incorrect; it should be “Core Cold Water Habitat.” Finally, the segments’ Latitude Longitude Identification Number (LLID) is more useful to EPA in this table, in addition to the record ID, for consistency with the assessment unit numbers used in the 2010 list.

DEQ Response:* In the final TMDL document, the table referenced in this comment is now Table 2. The needed corrections identified in this comment have been made. While making the change for the West Fork Hood River to “core cold water habitat”, we realized that Lake Branch (tributary to West Fork Hood River) was also incorrectly identified for salmonid rearing rather than for core cold water habitat. Additional changes were also made to this table in response to another comment (Comment USEPA-10).

USEPA-3: Table 6. The allocations of the Human Use Allowance (HUA) should be translated into heat loads so the various components of the TMDL (LA, WLA, MOS) can be shown to meet the loading capacity.

DEQ Response:* In the final TMDL document, the table referenced in this comment is now Table 11. New information (including Table 12) has been added to the Allocation section (Section 7) in response to this comment.

USEPA-4: One of the primary changes in methodologies from the 2001 TMDL to this draft revision is the cumulative effects analysis (CEA). In order to better understand the calculations in Section 5.2 and how they work together to ensure that the water quality targets are being met in each watershed, additional information or explanation is needed. For instance, it would be helpful to clarify how the values for Waste Load Allocation Heat Load in Appendix C meet the HUA and that they are not related to the calculated change in river temperature under current operations that is displayed in the adjacent line in the same table. Also, since Q_R is not provided on the same table, replicating the calculation for H_{WLA} requires returning to the table that includes the watershed's CEA or the text in Section 4. We greatly appreciate the inclusion of the underlying values and calculations in the tables so that the analysis is more transparent, but highlighting the values selected for Table 7 would be helpful.

***DEQ Response*:** In the final TMDL document, the wasteload allocation section referenced in this comment (Section 5.2) is now Section 7.1; Table 7 is now Table 13.*

*DEQ has addressed these comments through changes in the text of Section 7.1 and through changes in the formatting of the WLA tables. This response applies to Table 13 and Appendix C, as well as to Table 14 and Appendix D (see response to **Comment USEPA-5**).*

Clarifying language was added to Section 7.1 to better describe the equations used in the RPA analyses and included in the WLA tables. Clarifying language was also added to each of the subsections in Section 7.1.1 – Section 7.1.3., describing the calculation of WLAs for each facility.

Table 13 and the tables in Appendix C have been re-organized. Table 13 has been simplified to only include the key variables for calculating WLAs (Q_R , Q_E and HUA_{PS}), along with the receiving stream, applicable numeric criteria (T_R) and critical period for each discharge. These same variables are the ones highlighted in the tables in Appendix C. Table 13 also includes a reference to the appropriate RPA table for each facility that is included in Appendix C.

Finally, clarifying language was added to the WLA discussion for each facility, identifying which WLA (direct discharge or CEA) is the most restrictive and applies for that facility. The most restrictive WLA (and associated variables) are the ones highlighted in the Appendix C tables and included in Table 13. If a facility was included in a CEA, the key variables used in the CEA (including Q_R) are included in the same RPA table in Appendix C as the table showing the results of the facility's direct discharge.

USEPA-5: DEQ is requesting EPA also approve the alternative Waste Load Allocations in the final TMDL that are described in Section 5.2 and calculated in the tables in Appendix D. It is our understanding that these alternative Waste Load Allocations would only be used if a point source made a modification to its operation or discharge configuration that matches one of the scenarios described in Section 5.2, and it would replace the Waste Load Allocation in Table 7 that is approved for that source for its current operation or discharge configuration. Please provide a separate table for those alternative Waste Load Allocations with the same column headings used in Table 7, and add a column with a brief description of the scenario for each Waste Load Allocation to be approved. Also, in the descriptions of various scenarios in Section 5.2, please clearly identify which H_{WLA} in the alternative Waste Load Allocation table is the appropriate one to use and why. For example, in Section 5.2.3.3 – Duckwall Pooley Fruit – Van Horn Plant and in Tables D-7, D-8, D-9, it is not clear from the description of the analysis that the alternative H_{WLA} displayed in the tables would not contribute to an exceedance of the HUA in or all most months of the critical period.

***DEQ Response*:** In the final TMDL document, the wasteload allocation section referenced in this comment (Section 5.2) is now Section 7.1; Table 7 is now Table 13.*

We have developed a second WLA table, Table 14, which is a companion table to Table 13. Table 14 summarizes the alternative WLAs that would apply under the alternative scenarios described in this section for five of the facilities. To make it easier to understand the different

*alternative scenarios, each scenario has been given a unique number (Scenarios 1-26) and described in more detail in Section 7.1. The organization of the tables in Appendix D has changed slightly, to better accommodate the presentation of the scenarios. See the response to **Comment USEPA-4** for additional information on the restructuring of Section 7.1 and the WLA tables to further address USEPA's comments.*

USEPA-6: It can be confusing to the public to see calculated temperature WLAs that are higher than the applicable temperature criteria. The T_{WLA} (the Maximum Allowable Effluent Temperature) in Table 7 and in the tables in Appendices C & D is higher than the applicable temperature criteria because of the allowable mixing zone. Oregon's water quality standards at OAR 340-041-0053 (E) require that mixing zones and effluent limits prevent or minimize adverse effects to salmonids inside the mixing zone. Please include an explanation of how these calculated temperature WLAs comply with this provision in the revised TMDL.

***DEQ Response*:** In the final TMDL document, the wasteload allocation section referenced in this comment (Section 5.2) is now Section 7.1; Table 7 is now Table 13.*

We have added a clarifying paragraph under the Reasonable Potential Analyses subsection of Section 7.1 to address this comment. In this new paragraph, we more clearly describe that T_{WLA} represents the maximum effluent temperature that could be discharged and still meet the WLA, assuming effluent discharge at design flows and low creek flows as described for each facility. However, the calculated value of T_{WLA} do not necessarily allow a facility to discharge effluent at this temperature, and compliance with OAR 340-041-0053(2)(d) is required. Where appropriate, we have also added a reference to OAR 340-041-0053(2)(d) in the WLA discussions for each facility in Section 7.1 – Section 7.3 and to the tables in Appendix C and Appendix D.

Because T_{WLA} is not necessary for calculating WLAs, this variable has been removed from Table 13.

USEPA-7: The document does not have a section describing the overall characteristics of the watershed, land uses, etc. If these things have remained constant since the original TMDL was written in 2001, then a short justification/explanation is warranted, with a reference to the original TMDL document. If these factors have changed, then the revised TMDL should include the updated information. On a related note, was any analysis done to assess the impacts on the hydrology of the watershed since the Powerdale Dam removal in 2010 (reference Section 4.2)? How did the dam removal affect flows and temperatures?

***DEQ Response*:** We have added a new Section 1.2 in the Introduction to address these comments. We have provided a reference to the 2001 WHS TMDL document for much of this information; however we did update the section on Stream Flow Characteristics (Section 3.4 in the 2001 TMDL and Section 1.2.1 in the 2018 revision). Because of the importance of stream flow in determining loads, the description of 7Q10 low flows from the three gaging stations in the Subbasin was updated in the revision.*

As is indicated in Section 1.2.1, there are no permanent flow or temperature monitoring stations in the Hood River below the former Powerdale Dam site to evaluate the impacts of the dam removal. However, temperature modeling done for the 2001 TMDL indicated that there should be significant improvement in stream flow and temperature below the dam site with the removal of the dam. This is described further in Section 10.1.1 of the TMDL revision.

USEPA-8: Sometimes, the new temperature is referred to as the '2003 standard' and sometimes it is referred to as the '2004 standard.' Please correct this inconsistency. Since it was approved by EPA in 2004, that would be the appropriate year to use.

***DEQ Response*:** In the Executive Summary and in Section 1.1, the document describes the standard as being adopted by the Environmental Quality Commission in December 2003 and approved by USEPA in March 2004. After this introduction, the new standard is referred to as the “2003 standard” throughout the rest of the document. DEQ typically refers to our standards by the year that they are adopted by the state, and have kept with this practice in this document. We added clarifying language to both the Executive Summary and Section 1.1 to address this comment.*

Specific Comments:

USEPA-9: Section 1.1, Background (and Sections 5.1 and 5.3.2). These sections state that “this revision modestly increases the allowable nonpoint source load” but “it does not modify estimates of nonpoint source loading or the effective shade surrogate measures established in the 2001 WHS TMDL.” Why would the estimated nonpoint source load stay the same if several stream segments were added to the 2017 TMDL? Is this assuming the 2001 TMDL applied to the entire basin (i.e., loads were also developed for non-impaired segments)? Please provide a rationale, and reference/restate the appropriate parts of the 2001 TMDL, as necessary. Also, more explanation is needed on what is considered background and why background is included along with the nonpoint source allocation as a portion of the human use allowance.

***DEQ Response*:** In the final TMDL document, Section 1.1 remains the same; the Nonpoint Source Load Allocation Section referenced in this comment (Section 5.3.2) is now Section 7.2.2; the human use allowance section referenced in this comment (Section 5.1) is now included in Table 11 at the beginning of Section 7.*

The 2001WHS TMDL applied to all perennial and/or fish bearing streams in the Hood River watershed. This is stated on page 17 under “Summary of Temperature TMDL Development and Approach” at the beginning of Chapter 4 and is also included in Table 2 under the description of waterbodies covered by the TMDL. To avoid confusion, a new section (Section 1.2) has been added to the 2018 TMDL Revision document, which identifies the geographic area and scope of the TMDL, which also includes the whole subbasin. The geographic scope of the TMDL is further demonstrated in new figures added to this revision showing maps of the TMDL area (Figure 1 and Figure 2).

The inclusion of background as a portion of the human use allowance in Section 5.1 and Table 6 of the Public Comment draft of the TMDL was in error and has been removed. A new section (Section 7.2.1) has been added to the Load Allocations section (Section 7.2) to describe what is considered background.

USEPA-10: Section 1.2, Water Quality Impairments and 303(d) Listings. The date of the 303(d) list being used to identify impairments in Table 1 is not mentioned for this revised TMDL; the 2010 list should have been used (and, although it was approved in 2012, it should still be referred to as the 2010 list since there is another 2012 list that has been partially approved and is still being finalized). It would also be helpful if Table 1 indicated which segments are new versus which ones were in the 2001 TMDL. Similarly, Table 2 only states that six additional segments are covered under this revised TMDL but does not indicate where those segments are located (31.3 miles in 2001 versus 96.9 miles in 2017). Please provide a description of the underlying reasons for the increase in impairment listings and the increase in their geographic scope in this watershed. A map of the segments (old and new) would be helpful.

***DEQ Response*:** In the final TMDL document, this section is now Section 1.3 and the tables referenced are Table 2 (replaces Table 1) and Table 4 (replaces Table 2).*

In this section, we added reference to the Assessment Year (2012) used in determining impairments for this TMDL revision. DEQ submitted our 2012 Integrated Report to EPA in 2014. EPA approved most of the submitted listings and de-listings on December 21, 2016. This approved

2012 list is currently effective for Clean Water Act purposes and is the one referenced in this TMDL revision. As EPA references in their comment, the 2012 list may change at a later date based on proposed additions to the list by EPA.

Additional discussion was added to this section to describe the increase in impairment listings between the 2001 WHS TMDL and the 2018 Revision. The increase was because seven new segments in the Subbasin were classified as impaired in Oregon's 2002 Integrated Report. In some cases, the river miles of the listed segments were also modified slightly. Additional information was added to Table 2 of the TMDL document to indicate the Integrated Report Assessment Year for each waterbody. A new table (Table 5) was added to better show the reasons for the differences between the TMDLs covered under the 2001 and 2018 TMDLs.

A map of the Category 4A listed stream segments was added as a new Figure 2, in response to this comment.

A new table (Table 3) was added to this section to indicate additional waterbodies that were identified as impaired during this TMDL assessment. These impaired waterbodies are asos covered by this TMDL.

USEPA-11: Section 2, Water Quality Standard Identification. Please include the 2003 spawning use map, which was approved after the 2001 WHS TMDL was approved, and is the standard currently under effect for CWA purposes. Also please indicate that this TMDL is being written to address the most sensitive uses.

DEQ Response:* The 2003 spawning use map is included in Appendix A of the 2018 TMDL Revision. For clarity, an additional reference to this Appendix was added to Section 2. The following sentence was also added to this section to address USEPA's other comment: "As with the 2001 WHS TMDL, this TMDL revision is being written to protect the most temperature-sensitive beneficial uses."

USEPA-12: Figure 3. Please add a label to show what the solid black line represents.

DEQ Response:* In the final TMDL document, Figure 3 is now Figure 5. As requested, the label – "Core Cold Water Habitat Criterion" – has been added to the figure.

USEPA-13: Figure 5. Please add a label to show what the second dotted black line represents on the first chart. What do the vertical lines represent on the second chart?

DEQ Response:* In the final TMDL document, Figure 5 is now Figure 7. The second dotted line on the first chart was an error and has been removed. The vertical lines on the second chart represent the time period (August 15-May 15) when a site-specific numeric criterion applies to Clear Branch above and below Laurance Lake Reservoir (OAR 340-041-0028(4)(f)). A description of the significance of these lines has been added to this figure. These lines have also been added to the first chart in the figure for consistency. Figures 1-5 of the public notice draft also included vertical lines, which were not identified on the figures. These lines represent the critical period and have been identified as such in the titles of each final figure (Figures 3-7).

USEPA-14: Section 4.1, Point Sources and Dams. The third paragraph's second sentence contains a typo, in "do not to contribute."

DEQ Response:* This typo has been corrected.

USEPA-15: Table 5: Please describe how anti-backsliding has been addressed for any permittees that received an increase to their waste load allocation since the 2001 TMDL, if applicable. For instance, Table C-1 indicates that the 2001 WLA was 0.45 gals/day, while the revised draft WLA is 3.0 gcal/day.

DEQ Response: In the final TMDL document, Table 5 is now Table 8.

We believe that anti-backsliding does not need to be addressed in this TMDL revision. As is described in CWA Section 303(d)(4)(A), anti-backsliding does not apply if a TMDL is developed that demonstrates compliance with water quality standards. As described in this TMDL document, the WLAs are expected to assure attainment of the temperature standard, therefore this approach is consistent with this section of the CWA (see below).

CWA Section 303(d)(4)(A): (4) LIMITATIONS ON REVISION OF CERTAIN EFFLUENT LIMITATIONS.— (A) STANDARD NOT ATTAINED.—For waters identified under paragraph (1)(A) where the applicable water quality standard has not yet been attained, any effluent limitation based on a total maximum daily load or other waste load allocation established under this section may be revised only if (i) the cumulative effect of all such revised effluent limitations based on such total maximum daily load or waste load allocation will assure the attainment of such water quality standard, or (ii) the designated use which is not being attained is removed in accordance with regulations established under this section.

USEPA-16: Sections 4.1.1 – 4.1.4. Since 7Q10 could not be estimated for all watersheds, alternative methodologies were used. Please ensure that the methods used are fully described. For example, in Section 4.1.1, the minimum flows each year were averaged. Does this mean that the lowest flow from each year was taken, then averaged across the data range (2009-2014)? Or, were a set of low flows from each year taken and then averaged? And if so, what was the cutoff for what constituted a low flow? Also, for all of the flow calculations, were the time periods during normal weather years or do they cover an unusually dry, wet, or warm period? A brief description will clarify whether the flows are representative of typical weather patterns in the watershed.

DEQ Response:* We felt that we had clearly described the alternative methods used to determine the average low flows used to represent Q_R , given that we did not have enough data to calculate 7Q10 low flows in most situations. Given there were still questions about the methods used, we have modified the description of the methods in Sections 4.1.1 – 4.1.4 to be more explicit. In re-evaluating the flow data used, we obtained some additional information for Neal Creek and Hood River flows, which resulted in a slight modification of low stream flows and WLAs.

As requested, we did an evaluation of flow and climate data to verify that the years used in low flow calculations are representative of typical weather patterns in the watershed. We used two different sources of long-term information for this analysis: flow data from the USGS gage on the Hood River at Tucker bridge (#14120000) and air temperature and precipitation data from two COOP weather stations (Greenpoint [USS0021D01S] and Hood River Agricultural Experiment Station [USC00354003]). We evaluated data for the 30-year period of 1985-2014. We added a description of this to Section 4.1, and as described there, the years with data used for low flow estimates appear to fall within the range of normal variability and were not representative of unusually dry, wet or warm years.

USEPA-17: Section 4.1.1, East Fork Hood River Watershed. This section states “the rearing criterion could be exceeded.” What was used to make this determination? Why does it say “could” instead of “was exceeded?”

DEQ Response:* As indicated in the document, data from 2007-2014 was evaluated for this assessment and used to make the determinations of when the criteria were exceeded. The sentence stated that the rearing criterion “could” be exceeded (rather than “was” exceeded”) because it was

not exceeded in all years. The language in this section has been changed to better represent the range of conditions shown by the data. A similar change was made in other parts of Section 4.1 where similar terminology had been used in the public comment draft.

USEPA-18: Section 5.2, Waste Load Allocations. This section states, “For each CEA, it was assumed that all dischargers in the watershed were discharging at the most downstream point of discharge in the watershed.” Please confirm that this location is equivalent to or more stringent than basing the calculations on the Point of Maximum Impact, which is what the temperature standards require [OAR 340-041-0028(12)(b)(B)].

DEQ Response:* In the final TMDL document, Section 5.2 is now Section 7.1.

Clarifying language was added to section referenced in this comment, as well as in the other subsections of Section 7.1 where CEAs are discussed.

USEPA-19: It is not clear how it was concluded that industrial and construction stormwater permittees are not contributing to exceedances. Please provide a description as to where the permittees are located relative to the impaired segments, and their site-specific characteristics that support that conclusion. Also, the specific BMPs the permittees are using that are effective in reducing temperature should be identified.

DEQ Response:* In the final TMDL document, the Wasteload Allocation Section referenced in this comment (Section 5.2) is now Section 7.1.

As identified in this section, DEQ does not believe that stormwater contributes to exceedances of the 7DADM numeric temperature criteria based on literature review of available studies and an analysis of data from nearby watersheds (Miles Creeks). In the description of the three industrial facilities provided in Section 4.1.3 and Section 4.1.4, we did identify the BMPs being used by each facility. We have now added a couple of sentences to these sections explaining that none of the industrial facilities discharge directly into impaired segments.

As was also stated in Section 7.1, if data is collected at a later date indicates that stormwater in the Western Hood Subbasin is a source of thermal loading which is larger than their assigned WLA, then the stormwater facilities may access a portion of the reserve capacity.

It should be noted that one of the industrial stormwater facilities included in the public notice draft of this TMDL no longer has an NPDES permit. The permit for Mt. Hood Railroad (File Number 108947 included in Table 8) was terminated on October 24, 2017 with an approved “No Exposure Certification”.

USEPA-20: Table 7. It would be helpful to define the abbreviated headings within the header or footer of the table instead of directing the reader to reference a previous section of the document.

DEQ Response:* In the final TMDL document, Table 7 is now Table 13.

The definitions of each of the abbreviated headings were added as table notes below this table, as well as below Tables 9, 10, 12, and 14, where abbreviated headings are also used in the tables.

USEPA-21: Section 8, Reasonable Assurances and Attainment of Water Quality Standards. This section would be improved with a description of the different programs currently being implemented in the basin under the 2001 WHS TMDL’s Water Quality Management Plan (WQMP), rather than referring to that plan for further explanation. Also, since the 2017 TMDL now covers additional impairments that the 2001 TMDL did not cover, the WQMP should be updated to include the additional segments covered under the 2017 WHS TMDL. This could be accomplished by updating Table 19 from the 2001 TMDL, which has a list of the impaired streams along with the designated management agencies that have responsibility in those streams. In addition, while Section 8 cites Figure 10 as evidence of a downward

trend in temperatures in Neal Creek, specific projects and measures being taken to ensure that trend will continue should be provided in this section.

***DEQ Response*:** In the final TMDL document, Section 8 referenced in this comment is now Section 10.*

*DEQ is not planning to revise the WQMP at this time. It was issued as a state Order and is still a valid Order. However, we did add additional information to this section to describe the work being done by the Designated Management Agencies and other partners in the Subbasin to meet TMDL load allocations. Most of the information about the DMAs and proposed management measures included in the WQMP is still accurate. For example, Table 19 of the WQMP already includes the additional segments listed as impaired in Table 2 of the revised TMDL document. While Table 19 does not specifically list Lenz Creek and the two un-named creeks identified as impaired in Table 3 of the revised TMDL, these creeks are tributaries to Neal Creek and West Fork Neal Creek. As such, they would fall under the jurisdictions of the DMAs indicated in Table 19 of the WQMP. See response to **CRK-2** for additional information.*

Comment and Response – Columbia Riverkeeper Comments

Columbia Riverkeeper (“Riverkeeper”) submits the following comments on the Oregon Department of Environmental Quality’s (“DEQ”) proposed Western Hood Subbasin Temperature Total Maximum Daily Load 2017 revision (hereafter “draft TMDL”). Riverkeeper’s 12,500 members live, recreate, and work throughout the Columbia River Basin, including within the Western Hood River Subbasin.

CRK-1. The draft TMDL states: “The Water Quality Management Plan included in the 2001 TMDL continues to serve as the implementing mechanism for the Western Hood Subbasin TMDL. The Designated Management Agencies named in this Plan and other local partners continue to be active in TMDL implementation.” The draft TMDL is a substantial modification to the 2001 TMDL. How can DEQ retain the 2001 Water Quality Management Plan to implement a substantially revised TMDL? Riverkeeper reviewed the 2001 Water Quality Management Plan. This review confirmed that the 2001 Water Quality Management Plan contains outdated information and does not implement the draft TMDL. Moreover, the 2001 Water Quality Management Plan states, in multiple places, DEQ’s intent to review and revise the Plan as part of the agency’s adaptive management approach.¹

***DEQ Response*:** See response to **USEPA-21**.*

CRK-2. With one exception, the draft TMDL fails to describe progress toward attaining temperature water quality standards since EPA approved the 2001 TMDL. DEQ should use the 2017 revision as an opportunity to evaluate progress and identify areas requiring updates. For example, DEQ’s decision to analyze progress for Neal Creek provides important information to the agency, EPA, Tribes, regulated parties, and the public on the effectiveness of the TMDL and Water Quality Management Plan. DEQ and others would benefit from understanding progress—and failures—since EPA approved the TMDL in 2001. Discussing water quality progress and failures also aligns with DEQ’s view of the TMDL and Water Quality Management Plan as adaptive management tools.

***DEQ Response:** We concur that DEQ and others would benefit from understanding progress made towards attaining temperature water quality standards since USEPA approved the 2001 Western*

¹ See Western Hood Subbasin Temperature TMDL at 6 - 7 (2001).

Hood Subbasin TMDL. Recently, data analysts at DEQ have developed a tool for evaluating water quality trends for a number of water quality parameters, including temperature. This tool was used in the Neal Creek analysis provided in the 2018 TMDL revision. Due to limited staff resources, a similar evaluation has not yet been done elsewhere in the subbasin.

A number of stakeholders, including the Hood River Watershed Group, the Confederated Tribes of Warm Springs, the Mt. Hood National Forest and the Oregon Department of Fish and Wildlife, have been collecting temperature data in the subbasin since 1998. DEQ looks forward to working with these stakeholders to compile this data and conduct trend analyses, where sufficient data exists to do so. The Hood River Watershed Group was recently awarded a two-year Capacity Building Technical Assistance Grant from the Oregon Watershed Enhancement Board. A science consultant will be hired through this process to: review, summarize and consolidate data for a number of factors, including water quality; evaluate trends seen in the data; and determine data gaps. DEQ looks forward to working with the HRWG through this process.

CRK-3. The draft TMDL fails to address steelhead spawning in Odell Creek. The draft TMDL states “There is no salmon and steelhead spawning use identified in Odell Creek.” Draft TMDL at 19. In 2016 a small hydro dam was removed at approximately mile one of Odell Creek. With this dam removal, there are no significant passage barriers on Odell Creek and, in turn, potential for steelhead spawning. Riverkeeper recommends that DEQ consult with the Oregon Department of Fish and Wildlife on spawning in Odell Creek and update the draft TMDL accordingly.

DEQ Response: DEQ consulted with Rod French, District Fish Biologist for the Oregon Department of Fish and Wildlife, on spawning use in Odell Creek. Mr. French indicates that the removal of the small hydro dam did open up Odell Creek for steelhead use, including steelhead spawning. After consultation with DEQ standards program staff and to be consistent with DEQ’s antidegradation policy (Wigal, 2014), steelhead spawning use has been added to Odell Creek. This use will be updated in rule during a future rulemaking process. The TMDL and WLAs for the facilities in the Odell Creek watershed have been updated to reflect this change of beneficial use in Odell Creek.*

Conclusion: DEQ has a critical opportunity to ratchet back pollution and prevent new pollution into the severely degraded Western Hood River Subbasin. We therefore urge DEQ to consider public comments and use its full authority to reduce pollution through the TMDL and implementing plans. Riverkeeper appreciates DEQ’s consideration of public input on this important permitting decision. Please direct any correspondence or questions to the undersigned at (541) 965-0985 or lauren@columbiariverkeeper.org.

Comment and Response – Oregon Association of Clean Water Agencies Comments

The Oregon Association of Clean Water Agencies (ACWA) appreciates the opportunity to provide comments on the draft Western Hood Subbasin Temperature TMDL. ACWA is a private, non-for-profit organization of Oregon’s wastewater treatment and stormwater management utilities, along with associated professionals. Our 135 statewide members are dedicated to protecting and enhancing Oregon’s water quality. Our members provide wastewater and stormwater services to 2.4 million Oregonians, serving 64% of Oregon’s homes and businesses.

ACWA has spent several years actively working with the Oregon Department of Environmental Quality (Department) to implement the Oregon water quality standard for temperature. In the Western Hood Subbasin Temperature TMDL, the Department has proposed to assign a waste load allocation (WLA) of "existing load" to industrial users with a NPDES 1200Z permit. It is unclear how an "existing load" WLA

is to be implemented. ACWA is also concerned that the "existing load" allocation in the TMDL could be interpreted as a "no-growth" WLA, which would preclude the issuance of NPDES 1200Z permits for any new or expanded industrial facilities. Additionally, the draft NPDES 1200Z permit requires that an individual or different general permit or other appropriate tools may be required to address discharges to impaired waterbodies where a permitted source is assigned a waste load allocation (NPDES 1200Z, Schedule A.6).

From the TMDL documents, it is apparent that the Department does not believe that industrial stormwater discharges are a concern with regards to temperature. The TMDL states that: "*we have determined that facilities with stormwater permits do not have a reasonable potential to impact stream temperature related to our 7DADM criteria.*" Given that facilities with stormwater permits do not have a reasonable potential to impact stream temperature, ACWA recommends that the TMDL be revised to clearly state that stormwater has a de minimis effect with regards to temperature, and as such, a waste load allocation is not necessary or proposed for the industrial stormwater permittees.

Thank you for the opportunity to review the draft TMDL and for your consideration of the concerns outlined in this letter. We look forward to our continued partnership with DEQ in protecting and improving Oregon's water quality.

DEQ Response: DEQ appreciates AWCA's points and their efforts working with us on the NPDES 1200Z permit. We have been advised that we need to assign wasteload allocations to any NPDES sources which discharge to waters of the state. If we did not assign a wasteload allocation to facilities with stormwater permits, we believe that could be interpreted as meaning that no stormwater discharges would be allowed.

Comment and Response – Middle Fork Irrigation District Comments

Please accept the following comments submitted on behalf of Middle Fork Irrigation District (MFID) concerning the Revised Western Hood Subbasin Temperature TMDL (Draft TMDL).

MFID services irrigation patrons over 6,300 acres of land in the Hood River Valley. MFID has long focused on the implementation of innovative solutions to provide a consistent, sufficient supply of water to its patrons while protecting the health and productivity of the aquatic ecosystem. MFID has a long history of collaboration with state and federal agencies to achieve these mutually beneficial outcomes. As MFID begins preparing for the fast-approaching renewal of its U.S. Forest Service special use permit (SUP) in 2021, MFID is acutely aware of its responsibility to continue to innovate in the development of fish-friendly policies.

MFID appreciates the recognition in the Draft TMDL that MFID has long worked with an interagency stakeholder group to develop studies and tailor its operations to address a host of environmental issues beyond those contemplated in the Draft TMDL. Earlier this year, for example, MFID completed a "Temperature Evaluation of Flow Management Strategies" analysis of water temperature implications of flow and reservoir management strategies designed to improve instream flows and aquatic habitat for spring Chinook, winter steelhead, bull trout, and resident cutthroat trout. MFID underscores that it will continue to balance a range of environmental issues as it pursues the SUP renewal and the accompanying Clean Water Act Section 401 Hydropower Certification.

MFID expects to continue collaborating with state and federal agencies to improve fish passage over the dam spillway, which has a direct impact on temperature criteria compliance. As part of implementing its Fisheries Management Plan (FMP), MFID is working with the Natural Resource Conservation Service (NRCS) and the U.S. Forest Service on a dam rehabilitation project that is addressing the very issue of accommodating both temperature and passage. MFID anticipates that that project will undergo ESA consultation, which will further refine efforts to meet both fish passage and temperature goals.

MFID is cognizant of the fact that, as the Draft TMDL contemplates, "401 certification could require a broader set of management practices than the TMDL since certification will be based on the review of a broader set of water quality issues." MFID looks forward to working with DEQ to develop creative and flexible strategies for addressing the water quality issues and management practices that will be part of the 401 certification and SUP renewal. Although MFID questions the goal of trying to make the Laurance Lake dam "thermally invisible" through the implementation of this upstream/downstream criteria-we question if this goal can be achieved in any setting, natural or manmade-MFID is eager to work through these concerns in conjunction with the renewal of its SUP and 401 certification application.

Thank you for your attention to MFID's comments concerning this important matter. Please do not hesitate to contact me if you have any questions or concerns about these comments or if I can be of any further assistance. MFID is eager to collaborate with DEQ on this matter however it can.

***DEQ Response:** DEQ appreciates MFID's continued commitment to collaboration and the development of strategies to address both water quality issues and water management practices. We look forward to continuing to work with MFID on TMDL implementation, as well as 401 certification.*