

Montana Water Quality Standards Triennial Review



Responsiveness Summary 2020 and 2023

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INTRODUCTION

This document summarizes the process and outcomes of Montana’s 2020 and 2023 water quality standards triennial reviews, including documentation of public participation and responses to the comments received by the Montana Department of Environmental Quality (“DEQ” or “department”).

WATER QUALITY STANDARDS

The federal Clean Water Act (CWA) and Montana Water Quality Act aim to protect water quality to support important beneficial uses of water resources such as aquatic life, recreation, drinking water, agricultural and industrial water supply. Water quality standards are foundational to water quality protection – they define the water quality goals of waterbodies and serve as the regulatory basis for many actions authorized under the Clean Water Act including establishing water quality-based effluent limits, total maximum daily load targets, and identifying impaired waters.

Three Core Components of Water Quality Standards



Under the Clean Water Act Section 303(c), states, territories, and authorized tribes have the primary authority to adopt, review and revise water quality standards. The Montana Water Quality Act (75-5-301, MCA) directs the department to:

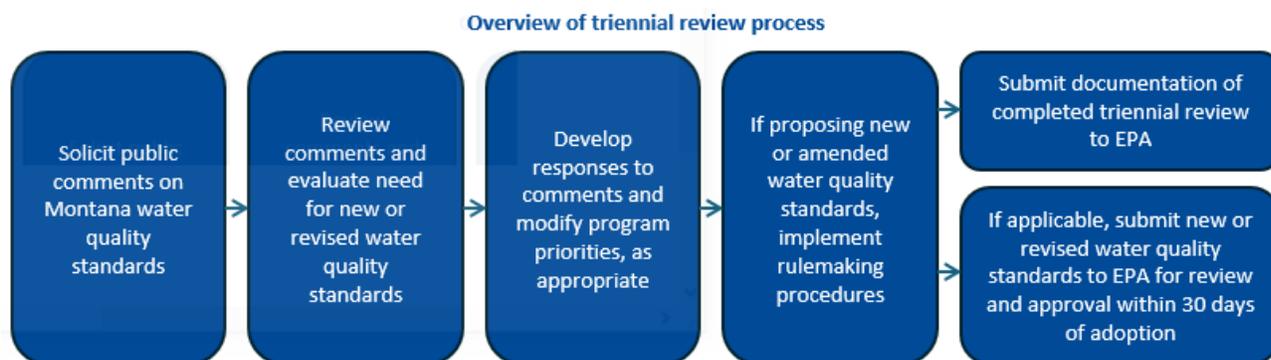
- establish the classification of all state waters in accordance with their present and future most beneficial uses,
- formulate and adopt standards of water quality, considering the economics of waste treatment and prevention,
- review standards, from time to time at intervals of not more than three years,
- adopt rules governing the granting of mixing zones, and
- adopt rules implementing the nondegradation policy.

To adopt new or amended water quality standards, the department must adhere to formal rulemaking procedures including opportunities for public participation (40 CFR Part 25; 75-5-307, MCA; 2-4-302, MCA). Water quality standards must be approved by the United States Environmental Protection Agency (EPA) before they become effective for federal CWA purposes (40 CFR §131.21).

TRIENNIAL REVIEW OF WATER QUALITY STANDARDS

The review and revision of water quality standards is an ongoing process to ensure that the beneficial uses of Montana’s waters, and the water quality required to support them, are protected. Federal and state laws and regulations require Montana to hold a public hearing to review and, as appropriate, modify water quality standards at least every three years (CWA §303(c); 40 CFR 131.20; 75-5-301, MCA). This process is known as water quality standards triennial review.

During triennial review, the department reviews Montana’s water quality standards. All interested persons are invited to submit comments regarding any aspect of Montana’s water quality standards, including suggested revisions and the basis for the suggested revisions, during a public comment period and public hearing. The department evaluates the need for new or revised water quality standards and adjusts water quality standards program priorities accordingly.



2020 AND 2023 TRIENNIAL REVIEW OUTCOMES

The department conducted a public hearing for the purpose of reviewing water quality standards in 2020. Due to resource constraints and additional program priorities, the department did not submit to EPA the responses to comments received in 2020 prior to holding the next triennial review public hearing in 2023. As such, this document contains both the 2020 and 2023 triennial review responses.

SUMMARY

No new or revised standards are proposed for immediate adoption as part of the 2020 or 2023 triennial reviews. However, during the 2020 and 2023 triennial reviews, the department identified and prioritized several water quality standards (and standards-related topics) that will receive further evaluation to determine whether changes are appropriate to propose in the future (see **Water Quality Standards Program Priorities**). These initiatives have been added to the department’s Water Quality Standards program work plan and will be allocated program resources, as available, in the coming years.

PUBLIC PARTICIPATION SUMMARY

The department held triennial review public hearings on June 10, 2020, and June 28, 2023. Interested persons were invited to provide comments and submit data, views, or arguments – orally or in writing – during these hearings and associated public comment periods. The department notified the public and encouraged participation in the 2020 and 2023 triennial reviews:

- Published notice of the triennial review public hearings in each of Montana’s seven major newspapers for three consecutive weeks (2020 and 2023).
- Sent notice to interested persons to announce the time, location, and purpose of the triennial review public hearings (2020 and 2023). *Note: the 2020 public hearing was rescheduled from April 6, 2020, to June 10, 2020, because of the global Covid-19 pandemic; notice of the public hearing was resent accordingly.*
- Coordinated with the Board of Environmental Review (BER) to initiate triennial review (2020).

- Presented to the Water Pollution Control Advisory Council (WPCAC) members and the public to describe the triennial review process and timeline (2020 and 2023).
- Posted information about the triennial review public hearings and instructions for submitting public comments on the department’s website (2020 and 2023).
- Sent a press release announcing the opening of the triennial review comment period and public hearing and responded to media inquiry (2023).
- Held public comment periods of at least 45 days (2020 and 2023).
- Enabled hybrid (in-person and remote) attendance at public hearings (2020 and 2023).

Documents associated with public notice and full court reporter transcripts of the public hearings are submitted as attachments to this document (see **Appendix A**).

The department appreciates all participants who submitted comments during the 2020 and 2023 triennial review comment periods. One hundred twelve individuals or entities submitted comments during the 2020 and/or 2023 triennial reviews (32 in 2020 and 88 in 2023) (**Appendix B**). Many commenters submitted comments on behalf of themselves as individuals; others submitted comments on behalf of governmental entities, non-governmental organizations (NGO), or industry groups (**Table 1**).

Table 1. Number of Commenters per Category in 2020 and 2023

Year	Total # of Commenters	Individuals	Government Entity	NGO	Industry
2020	32	22	6	4	0
2023	88	75	3	4	6

The department received approximately 365 comments during the 2020 and 2023 triennial review public comment periods and hearings (approximately 64 in 2020 and 301 in 2023). The department compiled all comments and grouped duplicative or similar comments together for a single response, resulting in 119 comments and associated responses (see **Responses to Comments**). The comments spanned many topics related to water quality standards as summarized in **Table 2**. The department received several comments that were outside of the scope of water quality standards triennial review in areas such as monitoring and assessment, MPDES permitting, public water supply, subdivisions, railroad safety, Total Maximum Daily Loads (or TMDLs), and wastewater inspections. Out-of-scope comments have not been specifically addressed in this document; however, interested parties are encouraged to contact specific department programs for more information.

Table 2. Summary of Topics Commented on During 2020 and 2023 Triennial Reviews

Topic	Approximate Number of Comments	Example Subjects
National 304(a) criteria recommendations	7	Aluminum; ammonia; copper; cyanotoxins; methylmercury; nutrients in lakes and reservoirs; selenium
I class waters	32	Silver Bow Creek; Prickly Pear Creek; Muddy Creek
Use classification	22	Terminology; applicability of criteria to use classes; aquatic life protections; drinking water use; fish consumption use; human health and surface waters

Topic	Approximate Number of Comments	Example Subjects
Nondegradation policy and rules	83	Existing use protections; high-quality waters; nonsignificance criteria; de minimis; assimilative capacity; outstanding resource waters
Various water quality standards	79	Arsenic; beta and gamma emitters; biotic ligand model; copper; cyanide; dissolved oxygen; hardness cap; human health criteria; lake and reservoir criteria; nutrients; pH; selenium; temperature; salinity; temporary water quality standards
Emerging contaminants	6	PFAS; manganese; 6PPD-Q
Various topics related to standards	123	Downstream use protection; ephemeral waters; fish and fish habitat protections; mixing zone policy; natural definition; public participation; science-based standards; septic; standards work plan and priorities; threatened and endangered species consultation

WATER QUALITY STANDARDS PROGRAM PRIORITIES

The department sets water quality standards program priorities, develops work plans, and allocates available resources accordingly. When setting priorities, the department must consider various factors including protection of the environment and human health, new or updated national recommended criteria, public input, legislative priorities, department regulatory program needs, availability of scientific data and information, availability of resources, and other factors.

The department considers and responds to all public comments received during each triennial review. The department prioritizes some topics that are the subject of triennial review comments for further analysis and development in the department’s water quality standards work plan. Review of water quality standards often spans across triennial review periods as the time needed to review, formulate, and adopt new or revised water quality standards varies.

Table 3 highlights several projects and initiatives included in the department’s water quality standards work plan that relate directly to comments received during 2020 and/or 2023 triennial reviews (Note: this table does not depict the standards program’s work plan in its entirety). Several may result in rulemaking proposals in the near-term, as noted in the table. Additional details are included in the **Responses to Comments** section.

Table 3. Water Quality Standards Program Priorities Related to Triennial Review Comments

Topic of Triennial Review Comment	Corresponding Standards Work Plan Priority
Nutrient criteria solutions	Nutrient rule development Adopt or amend rules related to nutrient standards following House Bill 664 (2025 Montana Legislature). Rulemaking anticipated in 2025/2026.
	Nutrient water quality standards variance for lagoons Developing multi-discharger water quality standards variance for nutrients for wastewater lagoon systems based on economic factors.

Topic of Triennial Review Comment	Corresponding Standards Work Plan Priority
	Yellowstone River nutrient model Developing water quality model for upper and middle segments of the Yellowstone River to derive nutrient criteria and inform MPDES permitting.
	Wetland nutrient treatment study Studying the use of vertical flow wetlands to treat bioavailable phosphorus (Bio-P) in wastewater.
	Ashley Creek use attainability analysis Evaluating use attainability analysis submitted by City of Kalispell which proposed modification of aquatic life use and site-specific standards for lower Ashley Creek. <i>Rulemaking possible in 2026.</i>
Nutrient 304(a) criteria for lakes and reservoirs	Lake and reservoir eutrophication assessment method development Participating in development of an assessment method to assess aquatic life and recreation use support using Montana's narrative standard and EPA nutrient models.
Aluminum 304(a) criteria Copper 304(a) criteria	Statewide metals Sampling aluminum and copper concentrations and associated parameters in water across ecoregions statewide to evaluate variability and implications of adopting national 304(a) recommended criteria.
Biotic ligand model	
Selenium 304(a) criteria	Statewide selenium Sampling selenium concentrations in water and fish tissue across ecoregions statewide to evaluate variability and implications of adopting national 304(a) recommended criteria.
Selenium standards for Lake Koochanusa and Kootenai River	Transboundary Kootenai/y coordination Coordinating with federal, state, tribal, and international partners regarding water quality protection and monitoring in the Kootenai/y Watershed.
Cyanide	Cyanide Evaluating the technical basis and programmatic implications of changing from total to free cyanide standard. <i>Rulemaking anticipated in 2026.</i>
Human health criteria errors	Human health criteria corrections in DEQ-7 Correcting errors in several human health criteria in DEQ-7. <i>Rulemaking anticipated in 2026.</i>
Hardness minimum and maximum	Hardness revisions in DEQ-7 Evaluating revision of Footnote 12 of DEQ-7.
Review I Class Waters	Silver Bow Creek I Classification Review Compiling and analyzing available information for Silver Bow Creek from the confluence of Blacktail Creek to Warm Springs Creek to evaluate appropriateness of I classification.
	Prickly Pear I Classification Review Compiling and analyzing available information for Prickly Pear Creek from Highway 433 to Lake Helena to evaluate appropriateness of I classification.
	Muddy Creek I Classification Review Compiling and analyzing available information for the Muddy Creek mainstem to evaluate appropriateness of I classification.

Topic of Triennial Review Comment	Corresponding Standards Work Plan Priority
Clarify which criteria protect each use Clarify uses per use class	Beneficial use classification and criteria clarifications Creating educational resources for DEQ webpage to clarify use classification system and applicable criteria.
Nondegradation policy and rules	Nondegradation policy and rule review Coordinating among department programs to examine how nondegradation policy and rules are implemented and evaluate suggested revisions; creating educational guide to summarize regulations.
Outstanding resource waters (ORW)	Outstanding resource waters information Creating informational content and mapping resource for DEQ webpage to inform public about Montana's outstanding resource waters.
Temporary water quality standards	Use attainability analysis for select streams in New World Mining District Conducting use attainability analysis for several waterbodies in the New World Mining District with temporary water quality standards.
PFAS update	PFAS standards development update Participating in Montana PFAS Work Group; aligning revision of PFAS human health criteria in DEQ-7 with Public Water Supply Bureau's implementation of new federal drinking water Maximum Contaminant Level (announced April 2024); reviewing new national recommended aquatic life criteria and benchmarks for PFAS (announced October 2024).

REVIEW OF I CLASS WATERS

Montana’s beneficial use classification system for surface waters includes an I classification (ARM 17.30.628) which applies to three surface waters in Montana. It is the goal of the state of Montana to have these waters fully support the beneficial uses listed at ARM 17.30.628. These waterbodies were classified as I class waters as they were heavily impaired at the time that Montana’s beneficial use classification system was established:

- Muddy Creek mainstem (tributary of Sun River) (ARM 17.30.610(1)(a)(xii))**

At the time Muddy Creek was classified, streamflow consisted entirely of irrigation return flows except during spring run-off. The magnitude and duration of irrigation return flows have driven dramatic downcutting of Muddy Creek over many years, contributing to stream impairments related to sedimentation, flow, and habitat alteration. Muddy Creek has been a focus of restoration efforts to manage irrigation return flows, reduce bank erosion, and improve overall habitat function.
- Prickly Pear Creek (mainstem) from the Montana Highway No. 433 crossing about one mile northwest of East Helena to Lake Helena (ARM 17.30.610(1)(a)(ix))**

Prickly Pear Creek flows from the Elkhorn Mountains north and enters Lake Helena, which ultimately flows through Hauser Lake into the Missouri River. At the time Prickly Pear Creek was classified, the I class segment became dry as a result of irrigation uses. This segment also historically experienced metals contamination from a smelter facility that operated from the 1800’s until 2001. In the last two decades, numerous restoration projects have occurred to improve the conditions of Prickly Pear Creek. These include efforts which began in 2008 to restore

baseflows during the summer months by reducing water consumption, and adding water purchased from the Bureau of Reclamation by the Hellena Valley Irrigation District. In 2016, the creek was also diverted to a new channel to bypass the creek away from contaminated areas.

- **Silver Bow Creek (mainstem) from the confluence of Blacktail Creek to Warm Springs Creek (ARM 17.30.607(1)(a)(iii))**

The I class segment of Silver Bow Creek is within a federal Superfund site. Mine wastes had been discharged or otherwise flowed into Silver Bow Creek and the watershed was significantly altered. Additionally, in 1908, the largest flood ever recorded in the Butte, Montana area led to the breach of mining impoundments, resulting in discharge of mine tailings and contaminated water to Silver Bow Creek, creating widespread environmental impact. Since that time, extensive remediation efforts have been conducted to improve water chemistry, biology, and habitat of the stream and have led to a decline in contamination of the stream.

Pursuant to 40 CFR § 131.20 and ARM 17.30.628, the department is to perform an analysis during triennial review to determine the factors preventing or limiting attainment of beneficial uses of I class waters. In 2024, the department initiated evaluations of each of the three I class segments which involve an analysis of available data and information and, where possible, to identify:

- the existing beneficial uses as defined at 75-5-103(11) MCA;
- the beneficial uses that are attainable considering current stream conditions;
- factors that may preclude the attainment of a beneficial use;
- the highest attainable use; and,
- determination of the beneficial use classification that most appropriately reflects present and future stream conditions.

The department will continue working in 2025 and 2026 to complete these evaluations. Any changes to the beneficial use classifications that may result from these evaluations require formal rulemaking procedures, including public participation.

NATIONAL 304(A) RECOMMENDED WATER QUALITY CRITERIA

Section 304(a) of the Clean Water Act requires EPA to develop water quality criteria that accurately reflects the latest scientific knowledge on the impacts of pollutants on human health and the environment. States are not required to adopt national recommendations; rather, they serve as guidance to states in formulating and adopting state water quality standards. Before adopting national recommended criteria, Montana evaluates applicability, data gaps, research needs, complexities and implications of adopting them.

If states choose not to adopt new or revised 304(a) recommended criteria, they must explain their decision when reporting the results of their triennial review to EPA (40 CFR § 131.20(a)). **Table 4** lists the national recommended criteria that are not proposed for adoption at this time, includes an explanation for not adopting, and summarizes actions the department is taking to consider and evaluate these criteria.

Table 4. Status of Montana’s Review of National 304(a) Criteria Recommendations

304(a) Criteria Recommendation	Year Issued	Explanation of status and next steps in Montana
Methylmercury	2001	The recommended human health criteria describes maximum advisable concentration of methylmercury in freshwater fish tissue to protect consumers of fish tissue and suggests approaches for translating fish tissue methylmercury concentrations into concentrations found in the water column. At this time, the department has insufficient information to evaluate how this tissue-based standard would be implemented. The recommended criteria requires data on methylmercury in fish tissue; Montana’s Department of Fish, Wildlife, and Parks (FWP) is the primary agency who conducts fish tissue monitoring does not analyze samples for methylmercury (only total mercury).
Copper (Biotic Ligand Model)	2007	The recommended aquatic life criteria implements the Biotic Ligand Model (BLM) which requires collection of ten parameters which are not all routinely collected by the department. The department has insufficient information to evaluate feasibility and cost of additional sampling, or to evaluate the implications of adopting this standard. In 2024, the department added parameters to an ongoing statewide metals sampling project to produce data that will enable the department to evaluate feasibility and implications of implementing the recommended criteria in Montana. This sampling is planned to continue in 2025.
Ammonia	2013	When it comes to meeting ammonia criteria, the biggest challenge for small-community lagoon treatment systems in Montana is during cold weather (winter and early spring). During cold weather, lagoon systems can have a difficult time meeting DEQ’s current (let alone the more stringent 2013) ammonia standards. Since 2017, DEQ has been continuously supporting studies to evaluate novel ammonia removal technologies applicable to wastewater lagoon systems. From 2017-2020, DEQ supported a full-scale test of a floating islands technology in an eastern Montana municipal wastewater lagoon. Ultimately this technology was not found to be effective for efficient ammonia removal during cold weather. From 2021 to present, DEQ has been supporting Montana State University (MSU) researchers who are studying the effectiveness of a pilot vertical flow wetland system. The MSU researchers are evaluating the system’s cold-weather effectiveness for treating raw wastewater and removal of ammonia. Vertical flow wetland systems of this type are widely used in France but are not yet common in the United States. This winter (winter 2024/25) will be the first winter during which the wetland plants in the pilot will have reached full maturity, and DEQ and MSU will be carefully evaluating the results. If successful, vertical flow wetlands could serve as an economical addition (or substitution) to lagoon treatment systems. Therefore, at this point in time DEQ considers it prudent to hold off on adopting the 2013 ammonia

304(a) Criteria Recommendation	Year Issued	Explanation of status and next steps in Montana
		criteria until more is known about this promising (and economical) technology.
Selenium	2016	The department is currently conducting a statewide monitoring effort to collect data on selenium concentrations in water (total and dissolved) and fish tissue to assist the department in understanding variability between ecoregions and further evaluate implications of implementing the recommended criteria in Montana (i.e., for waters not including Lake Koocanusa and the Kootenai River for which Montana adopted site-specific selenium standards).
Aluminum	2018	The department has insufficient data to evaluate implications of adopting the recommended criteria in Montana. The department has been collecting total (as well as dissolved) aluminum and the co-variables needed to run EPA's currently recommended multiple regression equation. The ongoing monitoring effort includes sites statewide in all seven major ecoregions and includes large rivers. Sampling will continue through 2025, after which DEQ will be able to evaluate the implications of adopting the new aluminum recommended criteria.
Cyanotoxins	2019	The department is evaluating the need for adopting the recommended criteria for cyanotoxins for recreational use protection. The department works collaboratively with the public, state and federal agencies to address concerns with cyanotoxins. This includes a process to document algae bloom events that are reported across the state using a map tracker system, identifying if the reported blooms are caused by blue-green or green algae, using rapid test kits for microcystins and anatoxin-a to see if there is a cyanotoxin problem, and determining if a health advisory needs to be posted at the reported site. More information is available at https://deq.mt.gov/water/Programs/habs .
Nutrients for Lakes & Reservoirs	2019	The department is taking a stepwise approach to implementing the EPA's criteria recommendations for nutrient pollution in lakes and reservoirs. DEQ has developed a draft lake/reservoir eutrophication assessment methodology that incorporates certain cause-effect EPA lake/reservoir models while maintaining a close adherence to Montana's adopted narrative nutrient standard (ARM 17.30.637(1)(e)). This is important given state laws passed via Senate Bill 358 in the 2021 Montana legislative session. The lake/reservoir assessment method includes the option to assess any site-specific criteria that have been developed for specific lakes or reservoirs. As the assessment method moves to final phase and then to implementation, DEQ will be better able to assess the EPA models embedded in it and give consideration to possible adoption of lake-specific criteria in the future.

TRIBAL RESERVED RIGHTS

No new information regarding Tribal reserved rights was received that would require updates to water quality standards consistent with 40 CFR §131.9.

REVIEW OF LAKE KOOCANUSA AND THE KOOTENAI RIVER NON-STEADY STATE STATUS

Pursuant to ARM 17.30.632(3), Lake Koocanusa and the Kootenai River are in non-steady state and the department will reassess the status of these aquatic systems triennially and amend the rule to reflect any change. The department has determined that Lake Koocanusa and the Kootenai River remain in non-steady state as of October 2025 and will not propose amendments to ARM 17.30.632 at this time.

RESPONSES TO COMMENTS

This section contains responses to comments received during the 2020 and 2023 triennial review public comment periods. Comments are sorted alphabetically by topic. Comments have been paraphrased by the department and the department's response is provided. The department grouped duplicative or similar comments together for a single response. The commenter(s), by abbreviation (see **Appendix A** for a legend of abbreviations), and the year(s) the comment was received appear in parentheses after each comment.

ALUMINUM

COMMENT 1: The commenter encouraged the state to adopt new or updated CWA § 304(a) criteria recommendations for aluminum aquatic life criteria or to provide an explanation if not adopting (40 C.F.R. § 131.20(a)). Should the state choose not to adopt these criteria at this time, EPA encourages the state to consider collecting data for parameters needed to implement these criteria in the future (e.g., pH, total hardness, dissolved organic carbon (DOC)) and evaluate the data available in EPA's Metals Aquatic Life Criteria and Chemistry Map (see below for more information). The commenter also encourages the department to change the expression of the current criterion from dissolved to total recoverable to include colloidal forms and hydroxide precipitates of the metal that can dissolve under natural conditions and become biologically available. The criteria document contains more discussion of the studies that informed the choice to use total recoverable aluminum as the basis for the final 2018 recommended national criteria. The current EPA-approved Clean Water Act Test Methods for aluminum in natural waters and waste waters measure total recoverable aluminum (40 C.F.R. § 136.3). (USEPA; 2020, 2023)

RESPONSE: See **Table 4**.

AMMONIA

COMMENT 2: The commenter suggests the state consider adoption of EPA's CWA § 304(a) aquatic life criteria recommendations for ammonia. (USEPA; 2023)

RESPONSE: See **Table 4**.

COMMENT 3: The commenter encourages the state to summarize the state’s progress in evaluating data gaps and developing implementation strategies since providing an explanation in 2017 for not adopting these ammonia criteria. (USEPA; 2023)

RESPONSE: See Table 4.

APPLICABILITY OF CRITERIA TO USES

COMMENT 4: The commenter states it is unclear which designated uses Montana’s numeric and/or narrative criteria are intended to protect, and whether the criteria protect the most sensitive uses in a given class or water body. The commenter recommends the department clarify which criteria protect waters designated for any of the aquatic life uses that are described in the state’s water quality standards (including aquatic life, aquatic life not including fish, saline tolerant aquatic life, marginal aquatic life, growth and propagation of fishes, salmonid fishes, non-salmonid fishes). The commenter recommends adding a footnote to Circular DEQ-7 to connect the aquatic life criteria in Circular DEQ-7 to the aquatic life use in a manner similar to Footnote 13 in DEQ-7 that connects *E. coli* to recreational uses. (USEPA; 2020, 2023)

RESPONSE: Numeric and narrative aquatic life criteria, including those in Circular DEQ-7, apply to all the aquatic life beneficial use descriptions — noting that the dissolved oxygen criteria in Circular DEQ-7 vary by class. These include, per Montana’s classification system: 1) propagation of fishes and associated aquatic life (A-closed); 2) growth and propagation of salmonid fishes and associated aquatic life (A-1, B-1, C-1); 3) growth and marginal propagation of salmonid fishes and associated aquatic life (B-2, C-2); 4) growth and propagation of non-salmonid fishes and associated aquatic life (B-3, C-3); and 5) growth and propagation of fishes and associated aquatic life (I). Because Montana’s classifications encompass multiple beneficial uses, the most sensitive beneficial use could also vary by class; regardless, the most sensitive use will always be protected from a pollutant by its associated water quality criteria. This structure ensures that the other uses in the class which are less sensitive to the pollutant will, in turn, be protected for that pollutant.

COMMENT 5: The commenter recommends that the department revise its website to accurately reflect where water quality criteria for each use class exist in Montana’s water quality standards. The commenter explains that currently DEQ’s website states, “Water quality criteria for each use class are detailed in the MCA” and includes a link to Title 75, Chapter 5, Part 3 which includes many sections unrelated to criteria and are generally authorizing provisions, whereas Montana’s water quality criteria for each use class are described in ARM 17.30.621 – 17.30.629 and 17.30.650 – 17.30.657. (USEPA; 2023)

RESPONSE: The department will take the commenter’s suggestions for website revisions to improve clarity into consideration.

COMMENT 6: The commenter recommends providing in rule a direct correlation between the beneficial use and the applicable criteria as the current linkage between the two is opaque and lends itself to unnecessary confusion. Without this, it is not clear how each criteria is tied to each beneficial use designation and applicability of the standards is difficult to discern. (MLCT; 2020)

RESPONSE: The department does not agree any rule changes are necessary. The department is compiling summary tables that we intend to make available on DEQ’s website to help people more easily visualize which designated uses apply to each class and associated criteria.

COMMENT 7: The commenter requests that the department clarify which criteria protect the drinking water uses that are described in the state’s water quality standards (e.g., after simple disinfection, after conventional treatment, after conventional treatment for removal of naturally present impurities, naturally marginal). The commenter states that, for example, it is unclear if the human health criteria in DEQ-7 apply to all of these drinking water descriptions and connecting the human health criteria in DEQ-7 to the drinking water use could be achieved with a footnote, as suggested above. (USEPA; 2020, 2023)

RESPONSE: Human health criteria apply to all waters that have a use classification that includes drinking water; this includes all use classifications except C-1 and C-2 use classes which do not include designated drinking water beneficial use: after simple disinfection (A-closed), after conventional treatment for removal of naturally present impurities (A-1), after conventional treatment (B-1, B-2, B-3), and naturally marginal (C-3).

COMMENT 8: The commenter requests that DEQ revise Circular DEQ-7 to clarify that Human Health Standards are not applicable to streams and rivers, stating that the more appropriate place for Human Health Standards is in MDEQ’s groundwater program since groundwater as a public water supply does not require conventional drinking water treatment. A groundwater Circular may be a useful location to house the Human Health Standards. This would make it clear that Human Health Standards are not to be utilized for Clean Water Act compliance (surface water), thus separating the CWA from the SDWA. (MLCT; 2020)

RESPONSE: Human health criteria apply to all state surface waters that have a use classification that includes drinking water; this includes all use classifications except C-1 and C-2 use classes which do not include designated drinking water beneficial use: after simple disinfection (A-closed), after conventional treatment for removal of naturally present impurities (A-1), after conventional treatment (B-1, B-2, B-3), and naturally marginal (C-3).

COMMENT 9: The commenter requests that the department clarify which criteria protect the agricultural and industrial uses that are described in the state’s water quality standards (e.g., agricultural and industrial water supply, agricultural purposes, naturally marginal). The commenter states that it is unclear whether the narrative criteria in ARM 17.30.637 apply to all of these descriptions or if there are criteria differences, for example, it is not clear that the electrical conductivity/sodium adsorption ratio criteria in ARM 17.30.670 protect agricultural uses. (USEPA; 2020, 2023)

RESPONSE: Criteria that protect the most sensitive uses (usually human health and/or aquatic life) will also protect agricultural and industrial uses. Agricultural and industrial water supply is a designated uses in all use classes (i.e., A-1, B-1, B-2, B-3, C-1, C-2, I; naturally marginal in C-3) except for A-closed waters where this use is not applicable. Standards for EC and SAR at ARM 17.30.670 were derived to protect agricultural water supply and other uses (Montana Administrative Register, 2003, Issue 8, 779-801). General prohibitions at 17.30.637, applicable to state surface waters, also affords protection for agricultural uses.

ARSENIC

COMMENT 10: The commenter recommends that the department evaluate the protectiveness of the current numeric aquatic life water quality standard for arsenic, taking into account dietary exposure of fish. The commenter is concerned that measuring arsenic in the water column may not be adequately protective or reflect the potential impacts to fish. (USFWS; 2020)

RESPONSE: The current aquatic life water quality standard for arsenic in department Circular DEQ-7 is based on the national CWA § 304(a) aquatic life criteria recommendations published by the EPA. The EPA has expressed the national aquatic life criteria for arsenic in terms of the dissolved metal concentration in the water column; however, the department has expressed the aquatic life water quality standard for arsenic in terms of the total recoverable metal concentration, as a conservative approach. EPA is responsible for updating national aquatic life criteria for toxins including arsenic and is currently engaged in efforts to develop a modeling framework to predict bioavailability and toxicity of metals in the aquatic environment. EPA periodically updates national aquatic life criteria recommendations to reflect the most current science. The department will review updated national aquatic life criteria recommendations as they are released by the EPA to determine the appropriateness of adopting these criteria for Montana.

BENEFICIAL USE CLASSIFICATION SYSTEM

COMMENT 11: The commenter recommends that the department evaluate whether the current use classification system could be simplified or whether the flexibility of a system that assigns designated uses to each water instead of grouping designated uses by class would benefit program management. (USEPA; 2023)

RESPONSE: The department will take the commenter’s suggestions to improve clarity into consideration. At this time, the department does not intend to change the surface water use classification system.

COMMENT 12: The commenter states that Montana should revisit the outdated stream classification system and look to other states that have revised their classifications, such as Washington state, in order to [sic] modernize Montana's stream classifications. (BZN; 2020)

RESPONSE: The department will take the commenter’s suggestions to improve clarity into consideration. At this time, the department does not intend to change the surface water use classification system.

COMMENT 13: The commenter requests that the department create a table or summary that clarifies which designated uses apply to each Class and make it available on DEQ’s website. (USEPA; 2020, 2023)

RESPONSE: The department is compiling summary tables that we intend to make available on DEQ’s website to help people more easily visualize which designated uses apply to each class and associated criteria.

COMMENT 14: The commenter recommends that the department define the terms “beneficial uses” and “designated uses” used in Montana’s water quality standards regulations to ensure that Montana’s definitions are consistent with the definition of “designated uses” at 40 C.F.R. § 131.3(f). (USEPA; 2020, 2023)

RESPONSE: Montana uses the terms "beneficial uses" and "designated uses" throughout its WQS. Both of these terms are congruent with the definition of designated uses at 40 CFR § 131.3(f).

COMMENT 15: The commenter recommends the department consider creating a new section that describes each designated use. (USEPA; 2023)

RESPONSE: Beneficial use descriptions are sufficiently self-evident to be interpreted without further definition.

COMMENT 16: The commenter recommends that, where Public Water Supply intakes exist, the department maintain “drinking water after conventional treatment” for an appropriate distance upstream of the intake for small streams and a shorter distance for large rivers. (MLCT; 2020)

RESPONSE: The comment presupposes that drinking water is only a beneficial use where a public water supply exists on a surface waterbody. This is not the case, however; many private water rights of landowners along Montana’s rivers and streams are classified by DNRC as “domestic use”, which can include drinking. Further, many private landowners living near streams and rivers have shallow wells for their domestic water, and in some cases the groundwater in these wells may be heavily influenced by the nearby surface water.

COMMENT 17: The commenter requests that the department remove the maintain “drinking water after conventional treatment” use designation from areas where a public water supply is not located. (MLCT; 2020)

RESPONSE: The comment presupposes that drinking water is only a beneficial use where a public water supply exists on a surface waterbody. This is not the case, however; many private water rights of landowners along Montana’s rivers and streams are classified by DNRC as “domestic use”, which can include drinking. Further, many private landowners living near streams and rivers have shallow wells for their domestic water, and in some cases the groundwater in these wells may be heavily influenced by the nearby surface water.

COMMENT 18: The commenter suggests that DEQ designate fish consumption as a separate designated use or explicitly include it as part of the aquatic life uses or the recreation uses. The EPA’s longstanding interpretation of Clean Water Act (CWA) §101(a)(2) is that it requires water quality protective of fish and shellfish as well as human consumption of fish and shellfish. (USEPA; 2020, 2023)

RESPONSE: The department will take recommendations to improve clarity into account. The department takes fish consumption use protection into account during adoption of human health criteria in Department Circular DEQ-7 by adoption of numeric criteria based on both water consumption plus organism consumption pathways. Montana has previously updated human health criteria following updates to fish consumption rate used to calculate national recommended criteria.

BETA AND GAMMA EMITTERS

COMMENT 19: The commenter requests that DEQ address inconsistencies and complications with the numeric water quality human health standard for beta emitters and gamma emitters (photon activity). The commenter states that the standard for all surface and ground waters in Montana is the federal Drinking Water Maximum Contaminant Level (MCL) of 4 millirems per year (mrem/yr). The commenter states the federal Drinking Water MCL applies to drinking water supplied to the public by community water systems, is measured in terms of mrem/yr to measure the biological effects caused by consumption, and it does not apply to non-potable surface or ground water, nor is it used in federal wastewater discharge permitting.

The commenter states the Drinking Water MCL is not an appropriate standard to apply to Montana’s nonpotable surface or ground waters or directly to industrial or other wastewater facilities because

those waters are not consumed by the public (e.g., standard requires the assumption that a set volume of wastewater is being directly consumed). Additionally, it requires a complicated measurement that is inconsistent with MPDES monitoring requirements and results in monitoring requirements for non-potable surface and ground waters as well as wastewater that are more onerous than monitoring requirements for public water supply systems (e.g., potential analysis of over a hundred radionuclides).

The standard should be revised to a more appropriate level for surface and ground waters that are not potable and should include an appropriate screening process for surface and groundwater quality monitoring, assessment, and MPDES monitoring. An appropriate screening process should clarify how naturally occurring radioactive parameters will be accounted for, should provide for reduced sampling based on acceptable screening results and, like the DEQ program that allows public water supply systems to screen for beta and gamma emitters in drinking water, could be based on EPA test method 900.00 (or equivalent), which measures beta and gamma emitters in the units picocuries per liter (pCi/L). See 40 C.F.R. § 141.26. (CHS; 2023)

RESPONSE: Department Circular DEQ-7 human health standards for state surface and ground waters (including those for beta and gamma emitters) apply to waters that include drinking water as a designated beneficial use. Beneficial uses designations are defined in ARM 17.30 sub-chapter 6 for surface water and ARM 17.30 sub-chapter 10 for ground water. The department will not revise water quality standards as requested.

COPPER – BIOTIC LIGAND MODEL

COMMENT 20: The commenter suggests the state consider adoption of EPA's CWA §304(a) aquatic life criteria recommendation for copper. The commenter states if the department chooses not to adopt these criteria at this time, then the department should consider collecting data for parameters needed to implement these criteria in the future and evaluate the data available in EPA's Metals Aquatic Life Criteria and Chemistry Map. (USEPA; USFWS; 2020, 2023)

RESPONSE: See **Table 4**.

COMMENT 21: The commenter recommends that the department adopt the EPA's biotic ligand model-based copper criteria for use in Montana waterbodies or look to develop site-specific copper criteria based on chemo-mechanosensory effects levels to fish. (USFWS; 2020, 2023)

RESPONSE: In 2024, the department began sampling at sites across the state to collect all necessary parameters required to implement the EPA's CWA § 304(a) aquatic life criteria recommendations for copper. This sampling effort will enable the department to review the feasibility of continuing with increased monitoring associated with implementing the biotic ligand model, and to evaluate the implications of adopting the national recommend criteria for copper in Montana.

COMMENT 22: The commenter asks if the department has considered EPA's Biotic Ligand Model (BLM) for Aquatic Life. The commenter suggests that if the BLM approach is not an across-the-board change, it should be considered for site specific scenarios where water quality protection is of highest priority and in waterbodies experiencing water quality impacts from sources such as abandoned and open mines. (FBIC; 2020)

RESPONSE: EPA's national recommended 304(a) aquatic life criteria for copper is based on the Biotic Ligand Model; see **Table 4**. The department considers appropriateness of formulating and adopting site-specific water quality standards as needed to protect beneficial uses. A permit

applicant, permittee, or person potentially liable under any state or federal environmental remediation statute may apply for the department to adopt site-specific standards of water quality for aquatic life pursuant to 75-5-310, MCA. The department's decision to adopt site-specific standards must be based on sound scientific, technical, and available site-specific evidence.

CYANIDE

COMMENT 23: The commenter proposes the current water quality standard for cyanide based on total cyanide should be updated to be based on free cyanide to remain consistent with the U.S. Environmental Protection Agency's (EPA's) maximum contaminant level (MCL). (MDU, NWE, ARC, TSRA, and MPA; 2023)

RESPONSE: The department intends to proceed with rulemaking to update surface and groundwater standards for both aquatic life and human health from total cyanide to free cyanide. This update will match EPA's current national recommendations for aquatic life and human health criteria.

COMMENT 24: The commenter proposes the department consider a modification of the appropriate analytical method for cyanide outlined in Department Circular DEQ-7. (ARC, NWE; 2023)

RESPONSE: The department does not include analytical methods in Department Circular DEQ-7. Specific programs that implement the standard may impose analytical method requirements.

COMMENT 25: The commenter proposes that the department make the following specific changes to from total cyanide to free cyanide: on page 23 of 80 of Department Circular DEQ-7, under the first column, "Pollutant Element / Chemical Compound or Condition §§ - Primary Synonym § - Other Names," Arcadis suggests changing "Cyanide, Total" to "Cyanide, Free"; deleting "§§"; deleting "§ Cyanide"; deleting "§ Isocyanide"; deleting "§ Cyanides, including soluble salts and complexes"; and deleting "§ RCRA Waste Number P030." Under the second column, "CASRN numbers, NIOSH number (25) (26)," Arcadis proposes deleting "GS 7175000. (ARC, NWE; 2023)

RESPONSE: The department intends to proceed with rulemaking to update surface and groundwater standards for both aquatic life and human health from total cyanide to free cyanide in Department Circular DEQ-7. This update will match EPA's current recommendation.

COMMENT 26: The commenter recommends the department modify columns 1 and 2 in Department Circular DEQ-7 to remove various synonyms associated with other forms of cyanide that are not free cyanide. (ARC, NWE; 2023)

RESPONSE: As the department proposes rulemaking to update total cyanide to free cyanide in Department Circular DEQ-7, any synonyms that are not applicable will also be removed.

CYANOTOXINS

COMMENT 27: The commenter encouraged the state to adopt new or updated CWA § 304(a) criteria recommendations for recreational criteria or swimming advisories for two cyanotoxins (microcystins and cylindrospermopsin) or to provide an explanation if not adopting (40 C.F.R. § 131.20(a)). (USEPA; 2020, 2023)

RESPONSE: See Table 4.

DISSOLVED OXYGEN

COMMENT 28: The commenter states that a provision is needed in Montana's water quality standards which allows excursions from the numeric criteria in waters that have the potential to exhibit low dissolved oxygen concentrations, either for short periods, or with extensive monitoring, and/or naturally. (BZN and MLCT; 2020)

RESPONSE: The department will not be adding a provision to the dissolved oxygen (DO) standards in Department Circular DEQ-7 as requested in the comment. The idea of adding a narrative "natural condition" criterion (NCC) to the numeric DO standards has already been adjudicated in Oregon in 2012. In that case, the NCC that Oregon DEQ included was found to supplant, rather than supplement, the numeric DO standards, and was in violation of CWA 303(c) water quality standards review. Other options for addressing the situation described in the comment are available, for example a site-specific DO standard, if the temperature patterns in the waterbody in question can be demonstrated to be at their nonanthropogenic levels.

COMMENT 29: The commenter recommends that the department add a narrative provision (see example) to supplement the existing numeric criteria for dissolved oxygen (DO). The commenter explains that, as currently written, Montana's dissolved oxygen (DO) criteria apply throughout the hypolimnion of all lakes/reservoirs, meaning that exceedances of the DO criteria in the hypolimnion would lead to identification of a water body as impaired. However, if areas of adequate refuge occur outside the hypolimnion, exceedances of DO in the hypolimnion may be acceptable. Areas of adequate refuge are locations where both the DO and temperature requirements are met for a species and to which aquatic life, such as fish, may move.

The commenter provides example narrative language as follows: In the upper portion of a stratified lake or reservoir, dissolved oxygen shall not be less than the applicable criteria. In the lower portion of a lake or reservoir, dissolved oxygen may be less than the applicable standard as long as there is adequate accessible refuge. Adequate refuge means that there is concurrent attainment of the applicable temperature and dissolved oxygen criteria when dissolved oxygen exceedances in the hypolimnion occur. A site-specific dissolved oxygen criteria will be established for the lower portion of a lake or reservoir where the expected aquatic community has habitat and more specific or stringent DO requirements within the lower portion. Implementing this approach would include developing biologically based temperature translators for species that occur in Montana lakes in order to determine whether there is adequate refuge. (USEPA; 2023)

RESPONSE: The department is aware that a strict application of DO standards to lake and reservoir hypolimnetic waters could result in unwarranted impairment decisions. The department considers these natural variations of DO in these situations. At the same time, EPA is aware that adding a narrative "natural condition" criterion to the numeric DO standards has already been adjudicated in Oregon in 2012, and it was not allowed by the courts (see response to comment 28). At this juncture, the best approach to address this issue is via the department's draft lake and reservoir assessment method. In the method, the department is proposing to use EPA's lake hypoxia model. The model is driven (in part) by DO and temperature requirements input by the user (usually based on a particular fish species) to identify a "refugia" zone where temperature and DO, together, will adequately support the species through the warm summer stratification period. Via this approach, the department will be protecting lake and reservoir aquatic life without applying an overly stringent DO standard to a lake's hypolimnetic waters.

DOWNSTREAM USES

COMMENT 30: The commenter encourages the department to comply with 40 C.F.R. § 131.10(b) and ensure that the water quality standards include protections for downstream uses. EPA has provided states/tribes with templates for narrative downstream protection criteria. The commenter recognizes that the department provided downstream use protection in DEQ-12A (Section 3.0, Endnotes 2) and encourages the department to develop downstream use protections for other parameters. (USEPA; 2020, 2023)

RESPONSE: The department will evaluate the EPA suggestion to add rule language that specifically protects downstream uses and determine if additional language is necessary. The department is already required to protect existing uses and beneficial uses of all state waters as described in 75-5-303(1), MCA and ARM 17.30.635(1)(b).

DRINKING WATER PROTECTION

COMMENT 31: Two commenters asked the department to protect drinking water supplies from discharges of pollutants. One commenter suggested implementing narrative criteria that limits any discharges that would interfere with conventional public water supply treatment or adds additional costs to the public water system. (EHar and MLCT; 2020)

RESPONSE: The existing water quality standards in Department Circular DEQ-7, ARM 17.30 subchapter 6, and ARM 17.30. Subchapter 10 provide the requested protection of state waters from pollutant sources for multiple uses including drinking water. The quality of state waters is required to be maintained for all existing and beneficial uses. Additional and more stringent limits applicable to new sources of pollutants to groundwater and surface water are included in the mixing zone and nondegradation rules (ARM 17.30 subchapter 5 and 17.30 subchapter 7).

To provide additional protection of public water supplies from potential sources of contamination each public water supply is required to complete a Source Water Delineation and Assessment Report (also referred to as PWS-6 report) to identify and manage potential contaminant sources. All PWS-6 reports are available on the department's website at: <https://deq.mt.gov/water/programs/dw-sourcewater>.

EMERGING POLLUTANTS

COMMENT 32: Multiple commenters recommended that DEQ should use this triennial review opportunity to carefully examine emerging science on new pollutants. (UMW, HA, JAp, RBa, ABe, ABr, JBr, CCas, CD, JDon, TD, CF, KH, MH, SHe, EHo, CJ, BJ, RK, KK, JLeN, AM, AMS, CN, NO, WP, EP, ZP, GJR, DR, WR, JSc, CS, KSh, BSt, TT, GW, MW, LW, and CP; 2023)

RESPONSE: The department will continue to track and consider emerging science and national recommendations and guidance as it evolves for many pollutants, including PFAS (see response to comment 85) and 6PPD-q (see response to comment 99).

EPHEMERAL

COMMENT 33: One commenter [EPA] states that the department has interpreted ARM 17.30.637(4) to mean that for ephemeral waters designated as Class A, B, or C, the designated uses apply but not the associated numeric criteria. The commenter goes on to state that the department can only remove designated uses that are not existing uses if the department demonstrates those uses are not attainable

through a UAA based on one of the six factors in 40 CFR 131.10(g). Multiple commenters stated that the department's interpretation of ARM 17.30.637(4) is inconsistent with federal regulations (including CWA § 303(c)(2)(A) and § 101(a)(2) and 40 CFR Part 131). The commenters requested that when reclassifying a stream as ephemeral and removing designated uses the department should provide public notice and comment period, obtain EPA approval, and complete a scientific study of the ephemeral nature of the waterbody. (VW, DP, SHa, KSc, JK, PS, JBo, CFC, NB, GJR, GM, KT, RS, RC, ZMC, NDJ, EHe, SW, SK, LS, WELC_others, CCare, LBy, USEPA, and MEIC_EJ; 2020, 2023)

RESPONSE: By applying ARM 17.30.637(4) to hydrologically ephemeral waters, as defined in ARM 17.30.602(10) DEQ is not removing or altering the designated uses of state waters. Those designated uses (existing and anticipated) are protected under 75-5-303(1), MCA, ARM 17.30.635(1)(b), and ARM 17.30.637(4). ARM 17.30.637(4) was also approved by EPA under 33 U.S.C. § 1313(c).

Classifying a stream as "ephemeral" using its hydrological characteristics for the purposes of ARM 17.30.637(4) is not equivalent to reclassifying the stream (for example, as an E-1 or E-2 (ARM 17.30.615(1)(c) and (d))). This interpretation has been upheld by the Montana Supreme Court (*Montana Env'tl. Info. Ctr. v. Dep't of Env'tl. Quality*, 2019 MT 213, 397 Mont. 161, 451 P.3d 493).

COMMENT 34: One commenter stated the rule has not been approved by the EPA. (WELC_others; 2020)

RESPONSE: The department disagrees with the commenter; ARM 17.30.637(4) was approved by EPA under 33 U.S.C. § 1313(c).

COMMENT 35: One commenter requested information on the number of times DEQ has used ARM 17.30.637(4) for a regulated discharge. (WELC_others; 2020)

RESPONSE: The department does not track the use of specific water quality standards in discharge permits. However, copies of individual and general MPDES permits are available at: <https://deq.mt.gov/water/assistance>.

COMMENT 36: Two commenters also requested that intermittent streams receive the same protections as perennial streams. (VW, PS; 2020)

RESPONSE: Intermittent streams are not distinguished from perennial streams in the rules, and therefore receive the same protections as perennial streams.

COMMENT 37: One commenter requested we protect ephemeral and intermittent waters to protect the health of downstream waters. (VW, PS; 2020)

RESPONSE: The department is already required to protect existing uses and beneficial uses of all state waters as described in 75-5-303(1), MCA and ARM 17.30.635(1)(b). See also Response to Comment 30.

FISH PROTECTIONS

COMMENT 38: One commenter requests that the department develop criteria for the protection of essential fish habitat from degradation due to stormwater runoff. (JCM; 2023)

RESPONSE: Montana’s beneficial use classification system for surface waters specifies that most surface waters must be maintained suitable for growth and propagation of fish and associated aquatic life (e.g., ARM 17.30.620-629). The department implements these water quality standards to protect fish and aquatic life uses.

COMMENT 39: Multiple commenters requested that the department develop criteria or designations that protect spawning grounds and other essential habitat of salmonid fishes from degradation. (UMW; 2023), HA, JAp, RBa, ABe, ABr, JBr, CCas, CD, JDon, TD, CF, KH, MH, SHe, EHo, CJ, BJ, RK, KK, JLeN, AM, AMS, CN, NO, WP, EP, ZP, GJR, DR, WR, JSc, CS, KSh, BSt, TT, GW, MW, LW, and CP; 2023)

RESPONSE: The department will not be changing Montana’s surface water use classification system at this time. Montana’s beneficial use classification system for surface waters specifies that most surface waters must be maintained suitable for growth and propagation of fish and associated aquatic life (e.g., ARM 17.30.620-629), with several classes specifying protections for salmonid fish. Montana has adopted many water quality standards to protect aquatic life which must be met by most surface waters. Further, Montana has adopted general prohibitions at ARM 17.30.637 that provide additional protections for fish and aquatic life.

COMMENT 40: The commenter expressed concern that Montana is not taking the collapse of Montana’s fisheries seriously and urged DEQ to make changes to improve the health of our waterways for both humans and wildlife and update the state's standards. (AC; 2023)

RESPONSE: As directed by the Montana Water Quality Act (75-5-301, MCA) and Clean Water Act regulations (40 CFR § 131.11), the department adopts water quality criteria based on sound science to protect designated beneficial uses, including growth and propagation of fish and associated aquatic life. DEQ reviews and revises water quality standards as appropriate and implements these standards through various programs to protect, maintain, and restore water quality of Montana’s state waters.

HARDNESS

COMMENT 41: The commenter suggested the department revise footnote 12 of DEQ-7 to remove the 25 mg/L hardness minimum. The commenter also suggested clarifying the footnote 12 text regarding the 400 mg/L hardness maximum to either include an explicit Water Effect Ratio of 1.0 or to calculate the criteria using the Water Effect Ratio and actual ambient hardness of the surface water. (USEPA; 2020, 2023)

RESPONSE: The department will consider this recommendation in the future but will not be removing the hardness minimum of 25 mg/L or adjusting the language for maximum hardness in footnote 12 at this time.

HUMAN HEALTH CRITERIA CORRECTIONS

COMMENT 42: The commenter stated that the human health criteria revisions adopted by Montana in 2017 were not approved by the USEPA due to errors related to the standards for chlorsulfuron, imazapic, pinoxaden, 1,2-dibromoethane, and nicosulfuron. The commenter suggested these errors be corrected in Department Circular DEQ-7. (USEPA; 2020, 2023)

RESPONSE: The department agrees that revision of human health standards for chlorsulfuron, imazapic, 1,2-dibromoethane, and nicosulfuron is appropriate and intends to proceed with rulemaking to adopt corrections in department Circular DEQ-7.

The department will not be proceeding with rulemaking to address corrections to the pinoxaden human health standards, as the criteria value proposed by the commenter (2,000 µg/L) is the human health standard for pinoxaden (for both surface water and groundwater) in department Circular DEQ-7 (2019). In 2016, the Board of Environmental Review and the department published a Notice of Public Hearing on Proposed Amendments which described several proposed changes to Circular DEQ-7 (MAR Notice 17-389, Issue 24, 2016), including a proposed change to the pinoxaden human health standards. However, following the public hearing for this rulemaking, the pinoxaden standard was unchanged in the final, adopted version of Circular DEQ-7 (2017).

Following the above-described rulemaking, the department provided a rule submittal package to EPA for review and approval of water quality standard changes for Clean Water Act purposes. In this rule submittal package, no change to the pinoxaden human health standards was reflected in the rule adoption materials. As the human health standards for pinoxaden remained 2,000 µg/L in Circular DEQ-7 (2017), no change to the pinoxaden human health standards is currently warranted.

I CLASS WATERS

COMMENT 43: The commenter stated that the department is required, under ARM 17.30.628(1) and 40 C.F.R. § 131.20, to evaluate I classified streams every three years to determine if new information is available that indicates beneficial uses are attainable and water quality standards need revision. The commenter suggests that the department reviews the current water quality information for the three I class streams in the state (Prickly Pear Creek, Muddy Creek, and Silver Bow Creek) and designate uses consistent with 40 C.F.R. Part 131. (USEPA; 2020, 2023)

RESPONSE: The department is performing an analysis of the current water quality data and information available for Prickly Pear, Muddy, and Silver Bow creeks that are classified as I class waters to determine, if sufficient information is available, what beneficial uses are being supported, if there are factors that may be preventing or limiting beneficial uses, and which beneficial use class most appropriately reflects attainable stream conditions (See **Review of I Class Waters**). After consideration of this analysis, the department may consider reclassification of all or part of Montana's I classified streams.

COMMENT 44: The commenter indicated the Lewis & Clark County Water Quality Protection District (WQPD) has been very active in collecting data on Prickly Pear Creek. Data collected by the WQPD since the completion of Lake Helena TMDLs include water quality (high and low flow), flow data (continual stage loggers, hydrographs, rating curves), macroinvertebrate samples, benthic sediment, BEHI, as well as field parameters and photo points. This data was submitted to DEQ in February of 2020. The WQPD requests that DEQ incorporate this information into their assessment and evaluation process for Prickly Pear Creek, as established under ARM 17.30.628(1). (LCC; 2020)

RESPONSE: The department is performing an analysis of the water quality data and information currently available for Prickly Pear Creek to determine what beneficial uses are being supported, if there are factors that may be preventing or limiting beneficial uses, and which beneficial use class most appropriately reflects current stream conditions. This analysis will include data collected by the Lewis & Clark County WQPD. See also Response to Comment 43.

COMMENT 45: Multiple commenters suggested that the department revise the beneficial use classification of Silver Bow Creek from an I class stream to a C-1 stream. (JAI, LBi, CCarn, SC, FD, JDod, CE, DE, EE, JG, CFC, EHal, BH, JH, BKH, GK, AL, LL, JLeP, TM, MS, BSi, ES, JSI, DS, NT, RH, RBo, and JBu; 2023)

RESPONSE: The department is currently compiling and performing an analysis of the current water quality data and information available for Silver Bow Creek to determine what beneficial uses are being supported, if there are factors that may be preventing or limiting beneficial uses, and which beneficial use class most appropriately reflects attainable stream conditions. The department will take the commenter's recommendation into consideration during the classification review process. See also Response to Comment 43.

LAKES & RESERVOIR CRITERIA

COMMENT 46: Several commenters suggested that DEQ should follow EPA guidance (i.e., consider the EPA's final recommended ambient water quality criteria to address nutrient pollution in lakes and reservoirs and use EPA's scientifically backed recommendations and models) and develop numeric nutrient water quality criteria for lakes and reservoirs to protect aquatic life, drinking water supplies, and recreation from pollution and degradation and begin necessary restoration work on those waterbodies that are already suffering from too much pollution. (HA, JAp, RBa, ABe, ABr, JBr, CCas, CD, JDon, TD, CF, KH, MH, SHe, EHo, CJ, BJ, RK, KK, JLeN, AM, AMS, CN, NO, WP, EP, ZP, GJR, DR, WR, JSc, CS, KSh, BSt, TT, GW, MW, LW, UMW, and CP; 2023)

RESPONSE: While lake and reservoir drinking water supplies have long had special protection in Montana (see class A-closed waters), specific criteria for lakes and reservoirs (e.g., chlorophyll a concentrations) for protection of aquatic life and recreation have not been developed and adopted. However, DEQ is completing a detailed lake and reservoir assessment methodology which will implement Montana's narrative water quality standards to protect fish and aquatic life. This detailed methodology is nearing completion and is expected to be ready for public comment in 2025. DEQ encourages the commenters to review and provide comment on that assessment method during the public comment period.

LARGE RIVERS CRITERIA

COMMENT 47: Several commenters suggested that DEQ should use this triennial review opportunity to finalize and/or develop site-specific criteria for our larger rivers. (HA, JAp, RBa, ABe, ABr, JBr, CCas, CD, JDon, TD, CF, KH, MH, SHe, EHo, CJ, BJ, RK, KK, JLeN, AM, AMS, CN, NO, WP, EP, ZP, GJR, DR, WR, JSc, CS, KSh, BSt, TT, GW, MW, LW, UMW, and CP; 2023)

RESPONSE: The department has undertaken and continues to move forward on work to develop site-specific criteria for large rivers. For example, the department completed modeling work in the lower Yellowstone River and adopted site-specific criteria for the lower Yellowstone River in 2014, modeling is underway for the upper and middle Yellowstone River, and extensive monitoring has been conducted in the Missouri River in recent years.

MANGANESE

COMMENT 48: The commenters would like to see a human health groundwater standard for manganese added to Department Circular DEQ-7. The commenters insist that the toxic criterion for manganese account for the body weight of infants, appropriate relative source contributions, and incorporate a reference dose that accounts for the neurobehavioral associated effects resulting from Mn exposure in

children through water consumption. The commenters encourage the department to propose and adopt the previously listed standard of 100 mg/L manganese into this triennial review as a human health groundwater standard in circular DEQ-7. (VW and MSLA; 2020)

RESPONSE: The department worked with the Montana Department of Public Health and Human Services (DPHHS) to develop manganese health-based guidance values; additional information is available on DEQ's website at <https://deq.mt.gov/water/Programs/dw-rules#accordion2-collapse2>. At this time the department is not proposing any updates to manganese standards. The department is evaluating data gaps, research needs, complexities and implications of developing and adopting a manganese water quality standard; any future rulemaking actions to propose or adopt a manganese standard will include public participation.

METHYLMERCURY

COMMENT 49: The commenter requested the department consider adoption of the EPA's § 304(a) recommended criterion as well as the Agency's Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion, published in April 2010, and requested an explanation if not adopting. (USEPA; 2020, 2023)

RESPONSE: See **Table 4**.

COMMENT 50: The commenter encouraged the state to update the public on the state's progress on methylmercury, including a summary of monitoring results and the next steps for the state in addressing this human health concern. (USEPA; 2020)

RESPONSE: The department does not currently monitor for methylmercury. The department frequently samples waterbodies for mercury (total and/or ultra low-level) in watersheds with human-caused metals sources (e.g., abandoned or active mines or other sources); all department data is publicly available on the national Water Quality Portal. Fish tissue monitoring for (total) mercury is completed by Montana Fish, Wildlife, and Parks and current sport fish consumption guidelines can be found at <https://fwp.mt.gov/fish>.

MIXING ZONE POLICY

COMMENT 51: One commenter recommended that DEQ undertake formal rulemaking to develop a mixing zone policy for surface waters to make surface water mixing zone development more transparent. (MLCT; 2020)

RESPONSE: The department will not be changing mixing zone rules at this time. Pursuant to 40 CFR § 131.13, "States may, at their discretion, include in their State standards, policies generally affecting their application and implementation, such as mixing zones, low flows, and variances." Such policies are subject to EPA review and approval. Montana's mixing zone rules are defined under ARM 17.30.518. The mixing zone rules have been approved by EPA and generally follow federal guidelines.

NATURAL

COMMENT 52: One commenter stated the definitions of "natural" and "naturally occurring" in 75-5-306(2), MCA and ARM 17.30.602(17), respectively should be modified to remove references to human sources of pollution. The commenter states it is EPA policy that "natural" should not include human-caused pollution or disturbance and recommends deleting the following phrase from the referenced rule

and statute: “...or from developed land where all reasonable land, soil and water conservation practices have been applied. Conditions resulting from the reasonable operation of dams in existence as of July 1, 1971,...”. The commenter stated these definitions specifically cause problems when Montana develops nonanthropogenic standards pursuant to 75-5-222, MCA or proposes changes to the state’s list of impaired waters pursuant to CWA 303(d). (USEPA; 2023)

RESPONSE: Changes to statute require action by the Montana Legislature. Montana’s current definition of "naturally occurring" in ARM 17.30.602(17) has been in rule since 1980. As a state with low population density and a large agricultural footprint that definition has served Montana well. Applying a single definition across all states and tribes may work in some instances, but for "natural" the diversity of development and density across the states and tribes necessitates allowing flexible definitions to account for the unique characteristics for rural states such as Montana. If there is a specific situation where the commenter believes the state’s definition does not provide adequate protection, the department is open to discussing how to address that situation. The department does not agree that these definitions cause problems when developing nonanthropogenic standards under § 75-5-222, MCA. See ARM 17.30.618.

NONDEGRADATION – GENERAL

COMMENTS 53: Two commenters requested the department to update the nondegradation policy using science-based research to prevent deterioration of water resources and maintain the pristine quality of water resources. (ZP and PS; 2023)

RESPONSE: The department believes the current nondegradation policy utilizes appropriate scientific principles and provides the necessary protections to state waters to maintain their existing uses and, as appropriate, their status as high-quality waters.

COMMENT 54: The commenter encouraged the state to develop a workplan for nondegradation program improvements that establishes next steps and timeframes for these longer-term projects. (USEPA; 2020)

RESPONSE: The department will take this suggestion into consideration when developing program priorities and work plans.

NONDEGRADATION – TIER 1, EXISTING USES

COMMENTS 55: The commenter requests the department to explain in regulation how Tier 1 protection (existing uses) is consistent with 40 C.F.R. 131.12(a)(1). The commenter requests the department to document in regulation that waters that don’t meet the definition of high-quality (Tier 2) are classified as Tier 1 and have Tier 1 protections to maintain existing uses. The commenter suggests the department could apply the language in ARM 17.30.706(9) that applies to Tier 2 waters to Tier 1 waters as well. (USEPA; 2020, 2023)

RESPONSE: Tier 1 protection that is consistent with 40 CFR § 131.12(a)(1) is already provided in ARM 17.30.705(2)(a): "*For all state waters, existing and anticipated uses and the water quality necessary to protect those uses must be maintained and protected.*" The phrase “all state waters” in that rule includes waters that are not high quality because high quality waters are defined as a subset of state waters in 75-5-103, MCA. The department will take the suggestions to improve clarity into consideration during future evaluations of nondegradation policy and rules.

COMMENT 56: The commenter requests the department to provide a list of Tier 1 waters documenting why they are not Tier 2 waters and provide evidence that there was adequate public participation. (USEPA; 2023)

RESPONSE: Identifying and listing all Tier 1 waters in the state is unnecessarily burdensome and does not serve any practical purpose when there is no department action required for a water body. The department uses a practical approach to focus limited resources on timely reviews of current applications and other priority tasks. That approach identifies water bodies as Tier 1 or 2 waters as needed to support protection of water resources, identifying and restoring water bodies that don't meet their classification, and in response to proposed activities/discharges that may impact water quality. This approach is consistent with the preamble to the 2015 revisions to the EPA water quality standards regulation (80 Fed. Reg. 51020, 51030-51031 (August 21, 2015)) that recognizes the importance of using limited resources to protect higher-value waters.

NONDEGRADATION – TIER 2, HIGH-QUALITY WATERS, NONSIGNIFICANCE CRITERIA, ASSIMILATIVE CAPACITY, DE MINIMIS, CUMULATIVE CAP

COMMENT 57: Multiple commenters state the department's nondegradation rules fail to adequately protect groundwater and connected surface water because they allow numerous exemptions [nonsignificance categories] that cumulatively increase pollution in state waters. The commenters requested the department to revise existing rule to use best science to account for the connection of groundwater discharges to surface waters. The commenter also stated the department rules don't comply with the CWA. (HA, JAp, RBa, ABe, ABr, JBr, CCas, CD, JDon, TD, CF, KH, MH, SHE, EHo, CJ, BJ, RK, KK, JLeN, AM, AMS, CN, NO, WP, EP, GJR, DR, WR, JSc, CS, KSh, BSt, TT, GW, MW, LW, UMW, CP, and JCM; 2023)

RESPONSE: The department does not agree that the rules need to be revised as requested by the comments. The department also does not agree that Montana's nondegradation rules do not comply with the CWA. Department rules consistently use scientific principles and account for the connection between groundwater and surface water where applicable. See 75-5-301(5)(d), MCA. DEQ's nondegradation reviews of potential activities include impacts to surface water, see ARM 17.30.506(2)(h), and the department considers ARM 17.30.715(2) factors when evaluating nonsignificance, except as otherwise provided in 75-5-301, MCA. When the department adopts or modifies rules, the public is provided a chance to review and comment on the new rules or rule modifications as required in statute.

COMMENT 58: The commenter recommends that the department provide written findings and public participation when creating nonsignificance criteria (de minimis exemption) for Tier 2 reviews (high-quality state waters) because nonsignificance criteria are a change to water quality standards and therefore require public participation pursuant to federal statute (CWA § 303(c) and 40 C.F.R. § 131.12(b)). The commenter requests the requirements for public participation be included directly into ARM 17.30.716. The commenter also requests that the department keep track of how many times each nonsignificance category is utilized and provide continued justification for the use of each nonsignificant category. (UMWK; 2020)

RESPONSE: Adding public participation requirements in ARM 17.30.716 would be unnecessary and redundant with public participation requirements already contained in state statute and federal regulations. Requirements for incorporating public participation into rulemaking when

adopting changes in water quality standards are specified at 75-5-307, MCA and 2-4-302, MCA, and in federal regulations at 40 CFR §131.20 and 40 CFR Part 25. Rulemaking to adopt Montana's current nondegradation rules, including nondegradation rules containing criteria and categories for determining nonsignificant changes in water quality (e.g., ARM 17.30.715 and 17.30.716), complied with state and federal public participation and documentation requirements. The department provides written justification of the reasonable necessity for the proposed action, and additional documentation, as part of the rule adoption process.

The department often goes beyond minimum statutory requirements to incorporate public participation when proposing water quality standards changes, for example, hosting listening sessions and informational meetings, convening stakeholder advisory groups, and considering public comments shared outside of formal rulemaking public comment periods.

The department does not track the number of times each rule is implemented, including each nonsignificant criterion. Any person may submit a public records request to obtain information related to specific department decisions, permits, etc., following procedures described here: <https://deq.mt.gov/about/public-records>.

COMMENT 59: The commenter states that prior to determining that an activity is nonsignificant pursuant to the existing nonsignificant criteria (and thus exempt the discharge from Tier 2 analysis), the department should verify that the discharge is insignificant-in-fact by undertaking a fact-based analysis with appropriate technical justification into the proposed discharge and health of the receiving water. The commenter states that Montana's categorical exemptions employ the opposite of fact-based inquiries, defining some activities as per se insignificant, or insignificant as a matter of law. The commenter states that Montana's categorical exemptions exceed the state's implied authority to create de minimis exemptions and are unlawful. The commenter states that Montana should require written finding to justify proposed and existing categorical exemptions and allow public review and participation. (UMWK; 2020)

RESPONSE: Changes to statutes (e.g., 75-5-317, MCA) require action by the Montana legislature. The department has not exceeded its authority to adopt the nonsignificant criteria in ARM 17.30.715 and 716. The department is authorized to adopt rules implementing the nondegradation policy, including nonsignificance criteria (75-5-301(7), MCA). The EPA has indicated (King, 2005) that applying antidegradation review requirements only to those activities that may result in significant degradation is a useful approach and allows them to be used to determine if an application to degrade state waters is necessary. The EPA allows states discretion to determine what constitutes significant lowering of water quality and EPA provides recommendations for developing significance thresholds (King, 2005). States have flexibility to determine what constitutes insignificant degradation and "EPA does not endorse one specific approach to identifying what constitutes insignificant degradation." 80 Fed. Reg. 51020, 51034 (Aug. 21, 2015). Public participation is included during the rulemaking process (as specified at 75-5-307, MCA, and 2-4-302, MCA) and reason statements are provided with draft rules distributed for public comment prior to rule adoption.

The nonsignificant criteria in existing rule were adopted through the rulemaking process which includes technical justification, public review and public participation as required in statute and rule. In addition, whenever the department reviews an activity for nonsignificance the department evaluates the specific details and facts of each application against the applicable nonsignificance criteria to ensure a correct significance determination is made. Therefore, the department disagrees that any rule or policy changes are necessary.

COMMENT 60: The commenter states the department allows the use of too many nonsignificant categories instead of providing Tier 2 reviews (applications to degrade state waters) to adequately protect state waters. The commenter states the department has only required an application to degrade state waters once in the past five years. (UMWK; 2020)

RESPONSE: Montana's rules related to applications to degrade high-quality state waters (now called feasibility allowances following the passage of House Bill 685 by the 2025 Montana Legislature) require a thorough analysis demonstrating that degradation is necessary and will result in important economic or social benefits. These requirements help to ensure a high level of protection for high-quality waters. Montana also has nondegradation rules that specify categories and criteria determined to represent nonsignificant changes in water quality which have been adopted and approved. See also Response to Comment 59.

Prospective applicants need to expend resources to prepare a successful application for a feasibility allowance to degrade state waters and may instead tailor proposed activities such that they meet the criteria determined to represent nonsignificant changes in water quality, thereby preventing degradation of high-quality state waters. The department views a lack of applications to degrade state waters as an indication that proposed activities are implementing environmental protections that will not cause degradation.

COMMENT 61: DEQ should use this triennial review opportunity to reduce its unscientific reliance on categorical rule exclusions for pervasive pollutants of concern, which time and again, contribute to cumulative degradation of our state's waters. (HA, JAp, RBa, ABe, ABr, JBr, CCas, CD, JDon, TD, CF, KH, MH, SHe, EHo, CJ, BJ, RK, KK, JLeN, AM, AMS, CN, NO, WP, EP, ZP, GJR, DR, WR, JSc, CS, KSh, BSt, TT, GW, MW, LW, and CP; 2023)

RESPONSE: See responses to comments 59 and 60.

COMMENT 62: The commenter recommends the nonsignificant criteria in ARM 17.30.715(1) should not be used alone to determine if an activity is nonsignificant. Rather, the commenter recommends the department should require that all the criteria in both ARM 17.30.715(1) and (2) are met before determining an activity is nonsignificant. (UMWK; 2020)

RESPONSE: The department considers ARM 17.30.715(2) factors when evaluating nonsignificance under ARM 17.30.715(1), except as otherwise provided in 75-5-301, MCA. The department may also consider nonsignificance independently of both ARM 17.30.715(1) and ARM 17.30.715(2), pursuant to ARM 17.30.715(3).

The Montana Supreme Court has held DEQ must exercise its discretion under ARM 17.30.715(2) to evaluate nonsignificance decisions to determine whether the goal of preventing degradation is met in every case. See *Clark Fork Coalition v. DEQ*, 2008 MT 407, Paragraph 42. DEQ complies with the Montana Supreme Court's direction in *Clark Fork Coal.* by considering the criteria in both ARM 17.30.715(1) and (2).

The comment also suggests that an activity has to satisfy all the criteria in ARM 17.30.715(1) to be considered nonsignificant, which is incorrect. An activity or discharge need only meet the specific criteria in ARM 17.30.715(1) that are applicable to the activity or discharge to be considered nonsignificant under this subsection.

COMMENT 63: The commenter requests the department to revise ARM 17.30.716 and 75-5-317(2) to only include nonsignificant criteria that are demonstrated to be nonsignificant. (UMWK; 2023)

RESPONSE: The nonsignificant categories in ARM 17.30.716 are provided only for wastewater discharges to groundwater that are not required to obtain a MPDES or MGWPCS permit. The department does not agree the nonsignificance criteria in ARM 17.30.716 require additional justification beyond the information provided during rulemaking when those rules were adopted, including in response to public comment. Changes to statutes (e.g., 75-5-317(2)) require action by the Montana Legislature.

COMMENT 64: Two commenters requested the department to revise ARM 17.30.715(1) and 75-5-317(2), MCA because both sections appear to apply Tier 2 (high quality state waters) exemptions to both Tier 1 (state waters) and Tier 3 (outstanding resource waters) waters. Specifically, one commenter states that the reference to 75-5-303, MCA, should not include 75-5-303(1), MCA, which are Tier 1 requirements, nor should they include 75-5-303(7), MCA, which are Tier 3 requirements. (USEPA and UMWK; 2020 and 2023)

RESPONSE: Changes to statutes (e.g., 75-5-317(2), MCA) require action by the Montana legislature. The department does not agree any rule changes are necessary. The issues noted by commenters have not resulted in any misapplication of nondegradation requirements. Nonetheless, for purposes of improving clarity, the department may consider future amendments to its nondegradation rules.

COMMENT 65: The commenter requests that the department should assume that all activities in Tier 2 waters will cause degradation unless a demonstration is made that it meets one of nonsignificant categories in ARM 17.30.715. The commenter states that the DEQ process is opposite and initially assumes an activity may be able to meet one of the nonsignificant categories and tries to apply one of those categories before requiring Tier 2 review (application to degrade state waters). (UMWK; 2020)

RESPONSE: The department's process for determining whether proposed activities are nonsignificant and whether an application to degrade state waters (now called feasibility allowances following the passage of House Bill 685 by the 2025 Montana Legislature) is necessary is described in Montana's nondegradation rules. The process is consistent with EPA Policy (King, 2005; 80 Fed. Reg. 51034 (Aug. 21, 2015)) and has been approved by EPA; therefore, the changes requested by the commenter are not warranted. The department determines whether a proposed activity may cause degradation based on information submitted by the applicant and the existing nonsignificance criteria specified in Montana rule and statute, not based on broad assumptions. When the department determines a proposed activity will result in degradation and the applicant decides to proceed with the proposed activity as planned, the applicant must complete an application for a feasibility allowance which the department must review and find, based on a preponderance of evidence, is in full compliance with Montana's nondegradation policy.

COMMENT 66: The commenter requests that the nonsignificant activities in 75-5-317(2)(a), MCA through 75-5-317(2)(u), MCA, should be corrected to include both an individual and cumulative cap to comply with the Clean Water Act. (UMWK; 2020)

RESPONSE: The CWA does not require an individual and cumulative cap for nonsignificant activities; EPA recommends the use of individual and cumulative caps to comply with the CWA

but allows states to use other methods (King, 2005; EPA, 2012). See also response to comment 59. Changes to statutes (e.g., 75-5-317(2), MCA) require action by the Montana legislature.

COMMENT 67: The commenter requested the department to clarify in regulation or an implementation document how high-quality waters are identified (parameter-by-parameter or water body-by-water body is allowed in 40 CFR 131.12(a)(2)(i)); stating that based on ARM 17.30.702(8) it appears the water body-by-water body approach is used. The commenter also requested the department to include an interpretation of 75-5-103(12)(b)(i) MCA that surface waters that: “*are not capable of supporting any one of the designated uses for their classification*” are not classified as “high-quality waters.” (USEPA; 2020, 2023)

RESPONSE: The department will take the suggestions for clarity into consideration during future evaluations of nondegradation policy and rules.

COMMENT 68: The commenter requested the department clarify that waters which do not meet the definition of high quality pursuant to 75-5-103(12)(b)(i) MCA still maintain Tier 1 protections. The commenter requests the department include a list of those waters that are not high quality pursuant to that statute. The commenter also requests documentation supporting those waters are not supporting any of their designated uses and public participation was provided and adequate in making those decisions. (USEPA; 2020)

RESPONSE: Tier 1 protection is clearly provided for at 75-5-303(1), MCA. Existing rule, ARM 17.30.705(2)(a), also provides Tier 1 protection for state waters including those that are not high quality pursuant to 75-5-103(12)(b)(i), MCA.

With few exceptions, the department uses a parameter-by-parameter approach for determining waters that are not high quality. The parameter-by-parameter approach is recommended by EPA (EPA, 2012). Unless site-specific information indicates otherwise, the department generally presumes that state water quality criteria established to protect beneficial (or designated) uses also protects existing uses. Montana’s Water Quality Integrated Reports contain a list of waterbodies that are not meeting water quality standards for one or more pollutants (i.e., waters that are not high-quality for those parameters identified as causes of impairment). The most current Water Quality Integrated Report (2020) is available on the department’s website at <https://deq.mt.gov/water/resources#accordion1-collapse1>. In addition, waters that are not high-quality for a parameter(s) are also identified in individual MPDES permit fact sheets. Public comment periods are provided for both the Water Quality Integrated Report pursuant to 75-5-702(2) and (3), MCA, and individual MPDES permits pursuant to ARM 17.30 sub-chapter 13. Any exceptions (e.g., I classifications at ARMs 17.30.607 and 17.30.610) underwent rulemaking and public participation when adopted.

COMMENT 69: The commenter requested the department to revise 75-5-301(5)(c)(i), MCA to be consistent with 40 CFR 131.12(a)(2). 75-5-301(5)(c)(i), MCA equates significant degradation with the potential for harm to human health, beneficial use, or the environment, which according to the comment is not consistent with “de minimis doctrine”. The comment also suggests that 75-5-301(5)(c)(i), MCA violates the de minimis doctrine by allowing unrestricted use of the assimilative capacity without requiring a Tier 2 analysis. In addition, the comment states that because ARM 17.30.715(3) references 75-5-301(5)(c)(i), MCA, it similarly does not comply with the de minimis doctrine. This is the reason the commenter disapproved 75-5-317(2)(u), MCA in a letter to the department dated May 10, 2022. (USEPA; 2023)

RESPONSE: The department disagrees with the commenter. Statutory sections are not read in isolation, but as a whole. Even standing alone, 75-5-301(5)(c)(i), MCA, is consistent with the de minimis doctrine as evidenced by EPA documents (King, 2005; 80 Fed. Reg. 51034 (Aug. 21, 2015), which recognize de minimis criteria can be different for different types of pollutants (e.g. bioaccumulative chemicals of concern versus other parameters). 75-5-301(5)(c)(i), MCA applies that same concept and therefore it is not necessary to revise it as requested by the commenter.

75-5-301(5)(c)(i), MCA, also does not preclude the consideration of assimilative capacity or a method that can be translated back to assimilative capacity as allowed by EPA (King, 2005). Therefore, the statute complies with federal regulations and the EPA assimilative capacity guidance (King, 2005). EPA has not acted to disapprove 75-5-301(5)(c)(i), MCA, and the validity of ARM 17.30.715(3) has been recognized by the Montana federal court. *See Save our Cabinets v. U.S. Dep't of Agric.*, 254 F. Supp 1241, 1252-53 (D. Mont. 2017). Changes to statutes, including 75-5-317(2)(u), MCA, require action by the Montana Legislature.

COMMENT 70: Two commenters requested that the department's nonsignificance criteria should be based on an assimilative capacity cap for each individual activity and a separate cumulative cap rather than the current rule that is based on the magnitude of the increase. Both commenters requested the department to revise existing rules and require individual activities to take up less than 10 percent of the waterbodies assimilative capacity. One commenter [EPA] cites ARM 17.30.715(1)(c) and (f) as examples of nonsignificance criteria that do not follow EPA guidance per a 2005 memo from Ephraim King, preamble to the 2015 revisions to federal WQS regulations, and relevant case law. One commenter [EPA] requests the department to include a definition of "de minimis" to the rules that define assimilative capacity and significance thresholds. One commenter [UMW] requested the department to develop scientifically justified cumulative caps for the nonsignificant categories. (USEPA and UMW; 2020, 2023)

RESPONSE: The department disagrees that the nonsignificant criteria in ARM 17.30.715(1)(c) and (f) do not meet the EPA guidance regarding assimilative capacity and cumulative cap for Tier 2 significance criteria, and therefore altering the existing criteria, providing additional justification, or adding definitions in rule is not necessary. The cited rules and their application ensure cumulative or combined impacts of multiple discharges remain nonsignificant. The EPA memo referenced (King, 2005) does allow de minimis levels (i.e., nonsignificance criteria) to be based on criteria other than assimilative capacity as long as it is considered carefully and can be translated back to assimilative capacity: *"Evaluations of significance based solely on the magnitude of the proposed increase without reference to the amount of change in the ambient condition of the waterbody need to be very carefully evaluated to determine how they translate to reduction in assimilative capacity in order to understand whether a significant decrease in assimilative capacity will occur."* That same memo strongly recommends states/tribes use assimilative capacity in their non-significance thresholds but does not require it: *"Therefore, OST strongly recommends that new or revised submissions of antidegradation implementation procedures to EPA that define a significant lowering of water quality define significance in terms of assimilative capacity, unless the state or tribe demonstrates that another approach is equally or more protective of the state's high quality water resources."* The nonsignificance criteria in ARM 17.30.715(1)(c) and (f) can be translated to reductions in assimilative capacity and overall provide higher protection than described in the EPA memo (King, 2005).

COMMENT 71: The commenter requests the department to exclude bioaccumulative parameters from any Tier 2 de minimis provisions. (USEPA; 2023)

RESPONSE: ARM 17.30.715(1)(b) doesn't allow any increase above ambient concentrations for parameters with a bioconcentration factor (bcf) greater than 300 (all of which are toxics in DEQ-7) or carcinogens (which includes some carcinogens with bcf of 300 or less), and therefore meets with the commenters request for those parameters. Those toxic parameters with a bcf of 300 or less are provided de minimis protections via ARM 17.30.715(1)(c). The commenter does not provide a reason why those existing protections do not comply with EPA guidance or regulations, the department does not agree that rule changes are needed for any bioaccumulative parameters.

COMMENT 72: The commenter requests the department to adopt a provision that addresses thermal discharges to be consistent with Section 316 of the CWA. (USEPA; 2023)

RESPONSE: Nonsignificance criteria for temperature is addressed in the rules under the narrative provisions of ARM 17.30.715(1)(h) and complies with the CWA. When temperature was removed as a harmful parameter from DEQ-7 in 2016 the nonsignificance criteria for harmful parameters in ARM 17.30.715(1)(f) were replaced by the narrative criteria in ARM 17.30.715(1)(h). This change was made because temperature standards are based on the natural condition of the water body (ARM 17.30 subchapter 6) and do not have a true numeric criteria that is appropriate for DEQ-7.

NONDEGRADATION – TIER 3, OUTSTANDING RESOURCE WATERS

COMMENTS 73: Two commenters requested the department to change the procedures for designating Outstanding Resource Waters (ORW) to comply with the CWA. The comment includes three specific requests: 1) to remove the evidentiary requirements in 75-5-316(3)(c)(ii) and (iii); 2) eliminate the requirement for the petitioner of the ORW to pay for the Environmental Impact Statement (EIS) because it violates provisions of the CWA 101(e) regarding public participation; and 3) remove provisions in 75-5-316 that allow the Board of Environmental Review or the legislature to veto an ORW designation. (UMW and SHe; 2020 and 2023)

RESPONSE: The department disagrees with the commenters. The current ORW designation procedures comply with the CWA. The federal regulation at 40 CFR 131.12 provides examples of what states may consider in designating ORWs, it doesn't require any specific metric or criterion that states are obligated to follow. Also note that 75-5-316(5), MCA requires public participation during the ORW process as required by the CWA. Changes to statutes (e.g., 75-5-316, MCA) require action by the Montana legislature.

COMMENT 74: One commenter requested the department to publish a map of the Tier 3 waters in a publicly accessible location such as the DEQs website. Another commenter requested the department list all Tier 3 waters in rule. (USEPA and UMWK; 2020, 2023)

RESPONSE: The department is working to create an interactive map containing relevant GIS layers and information on how outstanding resource waters are defined in Montana to be posted on the department's website to enable the public to interactively search for outstanding resource waters.

COMMENT 75: The commenter requests the department to include in rule the interpretation of the "Outstanding Resource Waters" definition in 75-5-103(23) to clarify the meaning of the phrase "wholly within" that is part of the definition. (USEPA; 2020)

RESPONSE: The department interprets the phrase “wholly within” in 75-5-103(23) to mean both banks of the river or stream (or the entire perimeter of a lake) are within (not outside or adjacent to) the boundary of a national park or wilderness area. Segments of a river or stream that meet this criterion are classified as ORW even if the entire river or stream from headwaters to mouth is not wholly within the boundaries of a national park or wilderness area; only the segments of a river or stream with both banks within the boundary is an ORW.

COMMENT 76: The commenter requested the department to adopt a process that allows the department to identify and propose new waterbodies for classification as ORWs during each triennial review period, and not restrict petitions for new ORWs to only public nominated waterbodies. (UMW; 2023)

RESPONSE: Changes to statutes (e.g., 75-5-316, MCA) require action by the Montana legislature.

COMMENT 77: The commenter recommended that the department should use similar regulations used by North Carolina and New Mexico for defining, nominating, and assessing ORWs. (UMW; 2023)

RESPONSE: Montana’s rules and statute regarding ORWs, while different than North Carolina, provide the necessary protections for ORWs and meet CWA requirements. Therefore, it is unnecessary to modify department rules as requested.

COMMENT 78: The commenter recommended that the department should change the definition of ORWs and Tier 3 protection so that ORWs are protected from permanent decreases in water quality, including activities considered nonsignificant for Tier 2 waters. (UMW; 2023)

RESPONSE: Existing rule and statute, ARM 17.30.705(2)(c) and 75-5-316(2), MCA, already provide the protection from permanent decreases in water quality for ORWs. Changes to statutes require action by the Montana Legislature.

COMMENT 79: The commenter urged the Department to put the protection of high quality and ONRWs at the top of the department’s short list of priorities that is included in your work plan, and addressed, within near future. (UMW; 2020)

RESPONSE: Statutes and rules are in effect to broadly protect high-quality waters and outstanding resource waters; the department implements these regulations when evaluating proposed activities that may impact water quality. DEQ will take this suggestion into consideration when developing program priorities and work plans.

NUTRIENTS

COMMENT 80: The commenter encouraged the state to adopt new or updated CWA § 304(a) criteria recommendations for nutrient pollution in lakes and reservoirs or to provide an explanation if not adopting (40 C.F.R. § 131.20(a)). (USEPA; 2023)

RESPONSE: See **Table 4**.

COMMENT 81: One commenter requested that DEQ does not reapply the voided numeric criteria as its interpretation of the narrative water quality standards and instead use a holistic beneficial use analysis of a given discharger's respective watershed when setting new nutrient standards. (BZN; 2020)

RESPONSE: The application of narrative criteria is done through the MPDES permitting process, which is outside the scope of this triennial review. Nonetheless, any application of narrative criteria fundamentally involves case-by-case considerations.

COMMENT 82: One commenter stated that it should be considered that algal growth in most Montana rivers generally respond more strongly to phosphorus enrichment than to nitrogen and, for many rivers, further reductions in nitrogen below current treatment levels results in little or no algal response and provides no water quality benefit. They requested that DEQ consider that comparable reductions in both nitrogen and phosphorus may not be the appropriate approach to controlling the limiting nutrient and actually preserving the beneficial use of a waterway. (BZN; 2020)

RESPONSE: DEQ understands that reduction of phosphorus to low concentrations in wastewater is generally more feasible and less costly than reducing nitrogen and, in some circumstances, may be the best approach for achieving beneficial use support. Nevertheless, there remain numerous cases where nitrogen is shown to be the limiting nutrient in the state's streams and rivers, a finding consistent with national work on this subject. The department will continue to give consideration to the importance of excess nitrogen in our waterways, as appropriate. Since the rulemaking for adaptive management was paused, the department is considering afresh the best approaches to nutrient regulations for the state; DEQ will continue to consider the idea that a focus on phosphorus control can be effective in some circumstances.

COMMENT 83: The commenter indicated that they hope that DEQ, working with the Nutrient Working Group, will be able to find a workable system, including for permitting, that allows it to continue to use the well-reasoned science that was used to set Montana's numeric nutrient criteria and standards which have been well vetted by the scientific community and are needed to protect Montana water bodies from degradation and to support beneficial uses. (VW; 2023)

RESPONSE: DEQ agrees with the commenter that we should try to find a workable permitting system that incorporates Montana's long record of solid nutrient criteria science.

COMMENT 84: One commenter stated they do not believe that numeric nutrient standards are necessary in order to protect the resource, and they look forward to coming up with a scientifically supported, but more flexible ability, to work together with DEQ, and the industry, and the point source dischargers, to come up with something that works in terms of cost effectiveness and technological availability with the numeric standards, and expect that will be reflected in the Triennial Review. (MLCT; 2023)

RESPONSE: The department hopes to work with stakeholders to craft a set of regulations that include the high-quality science the department has undertaken and a practical implementation approach to wastewater treatment technology and cost.

PFAS

COMMENT 85: The commenters suggest the department use the Triennial Review rulemaking to adopt numeric surface water quality standards for PFOA and PFOS in addition to the ground water standards it recently adopted in Circular DEQ-7. (MEIC_EJ; 2023)

RESPONSE: EPA announced final National Primary Drinking Water Regulation (NPDWR) for six PFAS on April 10, 2024. EPA also released federal 304(a) criteria for PFOA and PFOS for aquatic life on October 1, 2024. The department is reviewing and evaluating these federal

recommendations and regulations and will take them into consideration for future adoption as Montana water quality standards.

COMMENT 86: The commenter states the department should take the opportunity presented by this Triennial Review to update the public on the status of Montana's PFAS Action Plan. This plan was published in June of 2020 and the public should be updated as to what phase of the plan the state is in and what objectives have been reached to date. (UMW; 2023)

RESPONSE: The department posted a 2024 PFAS Action Plan Progress Report on its website at <https://deq.mt.gov/cleanupandrec/Programs/pfas>.

PH

COMMENT 87: One commenter stated that a provision is needed in Montana's water quality standards which allows excursions from the pH criteria for waters that have the potential to naturally exhibit varying pH concentrations as part of a water body's natural diurnal curve, either for short periods or as revealed with extensive monitoring. (BZN; 2020)

RESPONSE: The department disagrees with the comment. As written, the pH standards already account for natural variability, e.g., natural pH levels greater than 9.0. What is necessary to implement the standard, which may require complex water quality modeling, is a determination of what the natural pH patterns for a waterbody would be in the absence of anthropogenic impacts. The department has carried out such modelling work on the lower Yellowstone River and would expect a similar level of analysis if such a request were made. No changes to the pH standards will be proposed at this time.

PUBLIC PARTICIPATION

COMMENT 88: DEQ should increase its efforts to encourage public participation and ensure transparency after submission of public comments and the public hearing; DEQ should provide the public with a summary of all the comments, priorities set by DEQ in response to public comments and why, and a detailed workplan to implement these changes, detailing additional opportunities for public participation as the agency revises and improves its water quality standards. (MEIC_EJ; 2023)

RESPONSE: DEQ values public participation and will continue to fulfill public participation requirements such as those of the Clean Water Act, Montana Water Quality Act, and Montana Administrative Procedures Act, including sharing responses to public comments from water quality standards triennial reviews and rulemaking to adopt or amend water quality standards.

SALINITY

COMMENT 89: The commenter recommended that the department should expand numeric water quality standards for salinity to additional streams in eastern Montana, including Armells Creek and Sarpy Creek. The commenter stated that the Montana Board of Environmental Review (BER) established important protections for waters in eastern Montana when it established numeric standards for electrical conductivity (EC) and sodium adsorption ration (SAR) at ARM 17.30.670 and indicated these salinity standards were necessary to protect existing agricultural uses from impacts of salinity. DEQ should extend these standards. The commenter recommended that the department not weaken salinity standards in Rosebud Creek and instead strengthen and expand numeric standards from ARM 17.30.670. (MEIC_EJ; 2023)

RESPONSE: Montana adopted numeric standards for electrical conductance (EC) and sodium adsorption ratio (SAR) in 2003 for the mainstems of the Tongue River, Powder River, and Rosebud Creek, tributaries, and Tongue Reservoir at ARM 17.30.670. The department will take the commenter's suggestion for additional numeric salinity standards into consideration during development of future program priorities and work plans.

In accordance with 75-5-222(1), MCA, and ARM 17.30.618, the department may evaluate or modify salinity standards based on nonanthropogenic conditions of the water body. DEQ is currently re-evaluating EC and SAR standards for specific tributaries of Rosebud Creek in accordance with Stipulation for Final Agency Action (cause no. BER 2022-06 WQ).

COMMENT 90: One commenter indicated that the current water quality standards for electrical conductivity (EC) of 500 $\mu\text{S}/\text{cm}$ and sodium adsorption ratio (SAR) of 3.0 are unreasonable and impractical because the water quality of the receiving water bodies already exceed these standards. The commenter stated that the Spring Creek Mine is owned by Navajo Transitional Energy Authority (NTEC) and is located within the Tongue River watershed. The commenter provided additional information, including a summary of water monitoring data showing exceedances of these standards in the receiving water bodies, and cited DEQ's Tongue River Watershed Salinity Modeling Report which concludes that "while human sources contribute significantly to salinity, much of the salinity on the Tongue River is natural and water quality standards for salinity cannot be met even if all of these sources are removed". (NTEC; 2023)

RESPONSE: An analysis by the department in 2021 of available EC data for Spring Creek concluded that the numeric EC standard for Spring Creek is not more stringent than the nonanthropogenic condition and that, despite having some measurements above 500 $\mu\text{S}/\text{cm}$, existing data was not sufficient to support changing the standard. Further, increases above nonanthropogenic conditions in Spring Creek would increase the EC in the Tongue River. While additional data was submitted during the permit review indicating some measurements above 500 $\mu\text{S}/\text{cm}$ during the summer period there was not enough data to provide adequate representation during summer months in order to support changing the standard.

SELENIUM

COMMENT 91: The commenter suggests the state consider adoption of EPA's CWA § 304(a) aquatic life criteria recommendations for selenium. The commenter states if the department chooses not to adopt these criteria at this time, then the department should consider collecting data for parameters needed to implement these criteria in the future and evaluate the data available in EPA's Metals Aquatic Life Criteria and Chemistry Map. (USEPA; 2023)

RESPONSE: See **Table 4**.

COMMENT 92: The commenter states that the collective amount of data including, but not limited to, fish tissue and water chemistry collected between the USGS, KTOI, and MT DEQ in both the Montana and Idaho reach of the Kootenai River indicates that the existing 3.1 $\mu\text{g}/\text{L}$ Se water column criteria for lotic systems is not protective of the Kootenai River below Libby Dam. (KTOI; 2023)

RESPONSE: The selenium standards for the Kootenai River are written such that when the system is not in steady state, then both the water column and the fish tissue standards may be applied to determine if there is an impairment. Fish egg/ovary data is the most indicative of reproductive harm to fish, therefore, if fish egg/ovary data (or other fish tissue data) are

available and minimum data and quality assurance requirements are met, then the department's Monitoring and Assessment Section will assess selenium standards attainment using those fish tissue and water column data. The department is aware of the data collection efforts currently being carried out by numerous entities to better understand selenium in the Kootenai River and intends to remain apprised of the results of that work.

COMMENT 93: The commenter states that, since adoption in December 2020, the site-specific standards for selenium (Se) on Lake Kootenai and the Kootenai River has been challenged during the past two legislative sessions with assertions that the standards are overly protective. The commenter states that as more data is collected and studies are completed, evidence suggests the contrary. The commenter states that a study conducted in 2012 for Environment Canada and the Department of Fisheries and Oceans, only recently made publicly available, titled "Assessment of Larval Deformities in Cutthroat Trout (*Oncorhynchus clarkia lewisi*) Exposed to Elevated Concentrations of Selenium at the Teck Fording River Operations Greenhills Coal Mine in British Columbia's Elk Valley Region" (Attachment; Soloway 2014) shows that effects were seen at egg concentrations of 9 mg/kg dry weight (dw), well below the current tissue-based standard of 15.1 mg/kg dw, suggesting westslope cutthroat trout currently residing in Lake Kootenai the Kootenai are likely experiencing reproductive impairment from concentrations found in wild fish that far exceed 9 mg/kg and the current standard of 15.1 mg/kg dw.

The commenter states that while a more protective water concentration of 0.8 ug/L (lower than the EPA's general guidance concentration of 1.5 ug/L) was adopted for Lake Kootenai, the EPA general tissue guidance (egg/ovary, muscle, and whole-body) concentrations was not changed from general criteria. The comments suggest for DEQ to reassess both a protective water column value, and a protective egg/ovary concentration that would protect westslope cutthroat trout and other sensitive species. (FWP; 2023)

RESPONSE: The department adopted the EPA recommended selenium criteria for fish tissue (egg/ovary, muscle, and whole body) for Lake Kootenai and the Kootenai River. The guidance at the time from a binational selenium technical subcommittee had general agreement that the 15.1 mg/kg egg/ovary selenium standard is protective for Lake Kootenai. The work carried out to set the 2020 selenium standards was completed before the Soloway 2014 study became publicly available, therefore it was not considered in the EPA 304(a) criteria, during the binational selenium technical subcommittee discussions, or during the rulemaking. The department has reviewed the study and will consider the findings and will continue to work with EPA and others to ensure the water quality standards for Lake Kootenai and the Kootenai River are protective of the designated beneficial uses.

COMMENT 94: The commenter notes that the current standard adopted for Lake Kootenai and the Kootenai River states that "fish tissue sample results shall be reported as a single value representing an average of individual fish samples or a composite sample, each option requiring a minimum number of five individuals from the same species." The commenter explains that the requirement of five individual fish was previously a recommendation from EPA, however obtaining fish individuals from a species, especially females containing egg/ovaries, is not always practical, especially in the Kootenai River. The commenter stated that EPA has since revised their recommendation to as few as three individuals and fully supports this new recommendation for Se fish tissue standards in Lake Kootenai and the Kootenai River. (FWP; 2023)

RESPONSE: The department recognizes there may be logistical challenges of collecting egg/ovary data. The department has reviewed the final "Technical Support for Fish Tissue Monitoring for

Implementing the EPA’s 2016 Selenium Criterion” published in April 2024 which includes the recommendation for a minimum of five fish. The department recognizes the commenter submitted this comment while the draft document was publicly available which did include a range of 3-12 fish. The department has provided additional monitoring details pertaining to the five fish requirement in its draft Selenium Assessment Method.

TEMPORARY WATER QUALITY STANDARDS

COMMENT 95: The commenter recommends deleting the expired temporary Water Quality Standards in ARM 17.30.630 and clarifying what designated uses and criteria apply to the New World Mining District. (USEPA; 2023)

RESPONSE: The department is committed to performing a Use Attainability Analysis for the New World Mining District to determine what beneficial uses are being supported, if there are factors that may be preventing or limiting beneficial uses, and if site-specific criteria are needed to meet those beneficial uses. The department anticipates future rulemaking to include changes to beneficial uses, site-specific criteria, and repeal of the expired temporary water quality standards.

THREATENED & ENDANGERED SPECIES

COMMENT 96: The commenter supports the EPA’s recommendations for clarifying the water quality standards and making their implementation more consistent. The commenter explained that the Clean Water Act, section 303(c), requires that EPA approve or disapprove of any new or revised WQS, that this approval/disapproval would constitute a Federal action, and that their comment letter constitutes the beginning of discussions with the EPA regarding the potential effects of the triennial review to listed species. (USFWS; 2020, 2023)

RESPONSE: The department will take EPA’s recommendations into consideration during review of water quality standards and acknowledges potential need for consultation between federal agencies (e.g., EPA and USFWS) under the Endangered Species Act.

TRIENNIAL REVIEW

COMMENT 97: We must have strong, science-based rules that protect our streams, rivers, lakes from pollution. Massive fisheries collapses, catastrophic climate change impacts, noxious algal blooms, and unrelenting development pressure demonstrate that our current rules are not enough to protect our communities, our fisheries and wildlife, or our outdoors heritage.

You absolutely need to do this triennial review, rather than skipping it. We must protect fisheries and aquatic habitat in the face of rampant developments and recreation, stormwater pollution, climate warming. (PS; 2023)

RESPONSE: Montana adopts water quality criteria that protect the most sensitive designated use and that is based on sound scientific rationale, as directed by the Clean Water Act (40 CFR § 131.11). Montana’s adopted water quality standards are subject to review and approval or disapproval by the US Environmental Protection Agency (40 CFR§131.21).

Montana conducted a triennial review in 2023 during which the department solicited via public notice participation from all interested persons during a public hearing on June 28, 2023, and a public comment period, and submitted this summary, including responses to comments, to EPA.

COMMENT 98: The commenter encourages Montana to develop a workplan that establishes priorities, next steps, and timeframes to make progress toward addressing the foundational elements of the water quality standards program – designated uses, criteria, and nondegradation. EPA’s recommended short-term priorities are correcting errors in DEQ-7 and revising footnote 12, adopting EPA’s Clean Water Act § 304(a) aquatic life criteria recommendation for aluminum, ammonia, and selenium, and addressing dissolved oxygen criteria for stratified lakes and reservoirs. (USEPA; 2023)

RESPONSE: The department will take EPA’s recommendations into consideration when developing future program priorities and work plans. See **Water Quality Standards Program Priorities** for a summary of standards program priorities related to this triennial review.

6PPD-Q

COMMENT 99: Multiple commenters request that the department be proactive in studying the emerging contaminant 6PPD-Q, an automotive tire chemical with acute toxicity for many trout species and consider developing aquatic life criteria and rules for this pollutant to protect salmonid fish. (UMW, HA, JAp, RBa, ABe, ABr, JBr, CCas, CD, JDon, TD, CF, KH, MH, SHe, EHo, CJ, BJ, RK, KK, JLeN, AM, AMS, CN, NO, WP, EP, ZP, GJR, DR, WR, JSc, CS, KSh, BSt, TT, GW, MW, LW, and CP; 2023)

RESPONSE: The department is keeping apprised of best available science and laboratory methods for 6PPD-q as it becomes available, including the acute 6PPD-q and 6PPD aquatic life screening values for freshwater recently released by USEPA in 2024. The department communicates with Montana Fish, Wildlife, and Parks on this topic and will continue to do so.

COMMENT 100: The commenter suggests Montana take the opportunity provided by the Triennial Review to implement a strategy for protecting Montana’s salmonids from an emerging contaminant tied directly to Salmonid species toxicity. (UMW; 2023)

RESPONSE: See response to comment 99.

COMMENT 101: The commenter urges the department to review actions Washington and California have already taken to address this problem, and use those examples as a model for how Montana can respond to the emerging threat 6PPD-Q poses to salmonids in Montana’s waterways. The commenter urges the department to partner with the Montana Department of Transportation and Fish, Wildlife, and Parks in launching a control study examining the potential negative impacts of 6-PPD-Q on Montana’s salmonids and, on the basis of that data and analysis, propose any appropriate MS4 pollution control measures necessary to protect aquatic life, including but not limited to targeted retrofits of culverts et al that allow direct discharge of roadway stormwater into salmonid streams and addition of biofiltration BMPs. (UMW; 2023)

RESPONSE: The department has reviewed the work by Washington and California on 6PPD-Q. The department works closely with Montana Fish, Wildlife, and Parks and will remain apprised of 6PPD-Q studies that Montana Fish, Wildlife, and Parks carries out and will coordinate any future work pertaining to 6PPD-q with other agencies, when appropriate.

REFERENCES

- King, Ephraim S. 2005. Memo: Tier 2 Antidegradation Reviews and Significance Thresholds. EPA Office of Science and Technology. [Tier 2 Antidegradation Reviews and Significance Thresholds \(epa.gov\)](#) .
- [EPA \(United States Environmental Protection Agency\). Water Quality Standards Regulatory Revisions, 80 Fed. Reg. 51020 \(August 21, 2015\) \(amending 40 C.F.R. § 131\).](#)
<https://www.federalregister.gov/documents/2015/08/21/2015-19821/water-quality-standards-regulatory-revisions>
- EPA (United States Environmental Protection Agency). 2012. Water Quality Standards Handbook, Chapter 4: Antidegradation. Office of Water. EPA-823-B-12-002. [Water Quality Standards Handbook Chapter 4 - Antidegradation \(epa.gov\)](#)

APPENDIX A. LIST OF ATTACHMENTS

2020 – WPCAC memo (1/10/19)
2020 – BER meeting agenda (2/7/20)
2020 – BER meeting minutes (2/7/20)
2020 – legal ad – notice of public hearing (Feb 2020)
2020 – legal ad – notice of public hearing cancellation (March 2020)
2020 – legal ad – notice of public hearing reschedule (June 2020)
2020 – full transcript of public hearing (full) (6/10/20)
2020 – interested parties – notice of public hearing (Feb 2020)
2020 – interested parties – notice of public hearing cancellation (March 2020)
2020 – interested parties – notice of public hearing reschedule (June 2020)

2023 – legal ad – notice of public hearing (June 11, 18, 25, 2023)
2023 – legal ad - affidavits from 7 major newspapers
2023 – full transcript of public hearing (full) (6/28/23)
2023 – public hearing presiding officer report (6/28/23)
2023 – interested parties – notice of public hearing, letter (5/12/23)
2023 – interested parties – notice of public hearing, email (5/12/23)
2023 – interested parties – notice of public hearing, mailing list (5/12/23)
2023 – press release (5/12/25)
2023 – webpage screenshot – public hearing and comment page (5/12/23)
2023 – webpage screenshot – press release page (5/12/23)
2023 – webpage screenshot – public notice page (5/12/23)
2023 – webpage screenshot – water quality standards webpage (5/12/23)
2023 – WPCAC meeting agenda (1/27/23)
2023 – WPCAC meeting agenda (3/17/23)
2023 – WPCAC meeting agenda (5/19/23)
2023 – WPCAC meeting presentation (1/27/23)
2023 – WPCAC meeting presentation (3/17/23)

APPENDIX B. COMMENTER NAMES AND ABBREVIATIONS

Year	Entity or Individual Name	Abbreviation	Category
2023	Ada Montague Stepleton	AMS	Individual
2023	Anna Beltramo	Abe	Individual
2023	Anna Brewer	ABr	Individual
2023	Anne Millbrooke	AM	Individual
2023	Anthony Laslovich	AL	Individual
2023	Arcadis/NorthWestern Energy	ARC	Industry
2023	Benjamin Stevens	BSt	Individual
2023	Beverly Karplus Hartline	BKH	Individual
2023	Bill Henne	BH	Individual
2023	Brian Jenkins	Bj	Individual
2023	Britt Siddoway	BSi	Individual
2023	Carole Plymale	CP	Individual
2023	Caroline Sévilla	CS	Individual
2020	Catherine Carey	CCare	Individual
2023	Charles Friedman	CF	Individual
2023	Chelle Carney	CCarn	Individual
2023	Christian Jacob	CJ	Individual
2023	Christina Eggenesperger	CE	Individual
2023	CHS, Inc.	CHS	Industry
2020	City of Bozeman	BZN	Government Entity
2020, 2023	Clark Fork Coalition	CFC	NGO
2023	Clinton Nagel	CN	Individual
2023	Colin Davis	CD	Individual
2023	Corinne Casolara	CCas	Individual
2023	Dave Stratton	DS	Individual
2023	David Erickson	DE	Individual
2020	David Patenaude	DP	Individual
2023	Douglas Rohn	DR	Individual
2023	Edward Simonich	ES	Individual
2020	Eli Harmon	EHar	Individual
2020	Elin Hert	EHe	Individual
2023	Elizabeth Erickson	EE	Individual
2023	Elizabeth Hogan	EHo	Individual
2023	Emma Hall	EHal	Individual
2023	Erich Pessl	EP	Individual
2020	Fort Belknap Indian Community	FBIC	Government Entity
2023	Fritz Daily	FD	Individual
2020, 2023	Gail and John Richardson	GJR	Individual

Year	Entity or Individual Name	Abbreviation	Category
2023	Gail Waldby	GW	Individual
2020	Gary Matson	GM	Individual
2023	Grace Krutz	GK	Individual
2023	Heidi Andersen	HA	Individual
2023	Jack Brown	JBr	Individual
2023	Jackie and Craig Mathews	JCM	Individual
2020	Jane Borish	JBo	Individual
2023	Janelle Garza	JG	Individual
2023	Jay Slocum	JSI	Individual
2023	Jeff LeProwse	JLeP	Individual
2023	Jess Alexander	JAI	Individual
2023	Jesse Bunker	JBu	Individual
2023	Jesse LeNeve	JLeN	Individual
2020	Joana Kirchhoff	JK	Individual
2023	Jocelyn Dodge	JDod	Individual
2023	John Applegate	JAp	Individual
2023	John Donlin	JDon	Individual
2023	Jonathan Scott	JSc	Individual
2023	Jordan Hulla	JH	Individual
2020	Katherine Scherfig	KSc	Individual
2020	Katherine Taylor	KT	Individual
2023	Keith Shein	KSh	Individual
2023	Kenneth Hansen	KH	Individual
2023	Kootenai Tribe of Idaho	KTOI	Government Entity
2023	Kyle Kruer	KK	Individual
2023	Laurel Bitterman	LBi	Individual
2023	Lauren Wittorp	LW	Individual
2023	Laurie Alteneder	LA	Individual
2020	Lewis and Clark County Water Quality Protection District	LCC	Government Entity
2023	Lexi Lefler	LL	Individual
2020	Linda Semones	LS	Individual
2020	Lori Byron	LBy	Individual
2023	Mary Gail Sullivan	MGS	Individual
2023	Melanie West	MW	Individual
2023	Michael Harrelson	MH	Individual
2020	Missoula City-County Health Department	MSLA	Government Entity
2023	Montana Department of Fish, Wildlife and Parks	FWP	Individual
2023	Montana Environmental Information Center and Earthjustice	MEIC_EJ	NGO
2020, 2023	Montana League of Cities and Towns	MLCT	NGO

Year	Entity or Individual Name	Abbreviation	Category
2023	Montana Petroleum Association	MPA	Individual
2023	Montana-Dakota Utilities	MDU	Industry
2023	Morgan Schultz	MS	Individual
2020	Nancy and Dan Jochem	NDJ	Individual
2023	Nancy Ostlie	NO	Individual
2023	Navajo Transitional Energy Company	NTEC	Industry
2020	Norman Bishop	NB	Individual
2023	Northey Tretheway	NT	Individual
2023	Northwestern Energy	NWE	Industry
2020, 2023	Patricia Simmons	PS	Individual
2023	Rachel Hadley	RH	Individual
2023	Raleigh Koritz	RK	Individual
2023	Ranko Balog	RBa	Individual
2020	Rebecca Canright	RC	Individual
2020	Ruth Swenson	RS	Individual
2023	Ryan Bossard	RBo	Individual
2020	Sarah Halvorson	SHa	Individual
2020	Sas Weber	SW	Individual
2023	Stephen Coe	SC	Individual
2020	Sue Kronenberger	SK	Individual
2023	Suzanne Hendrich	SHe	Individual
2023	Thomas Michalek	TM	Individual
2023	Tim Driscoll	TD	Individual
2023	Todd Throckmorton	TT	Individual
2023	Tom Fisher	TF	Individual
2023	Treasure State Resources Association	TSRA	Industry
2020, 2023	Upper Missouri Waterkeeper	UMW	NGO
2020, 2023	US Environmental Protection Agency	USEPA	Government Entity
2020, 2023	US Fish and Wildlife Service	USFWS	Government Entity
2020, 2023	Vicki Watson	VW	Individual
2023	Walter Pease	WP	Individual
2020	Western Environmental Law Center; Montana Environmental Information Center; Park County Environmental Council; Upper Missouri Waterkeepers; Sierra Club	WELC_others	NGO
2023	William Ryan	WR	Individual
2020	Zinnia and Mark Cardamomum	ZMC	Individual
2023	Zygmunt Plater	ZP	Individual