



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

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Peter Butler, Chair
Water Quality Control Commission
4300 Cherry Creek Drive South
Denver, CO 80222-1530

Subject: 2010 Revisions to the Basic Standards and
Methodologies for Surface Waters

Dear Mr. Butler:

The purpose of this letter is to notify you of the status of the U.S. Environmental Protection Agency Region 8 (EPA) review of the revisions to the Basic Standards and Methodologies for Surface Waters (Regulation #31) adopted by the Colorado Water Quality Control Commission (Commission). The revisions were adopted on August 9, 2010 with an effective date of January 1, 2011. The submission letter included an Opinion of the Attorney General certifying that the standards were duly adopted pursuant to State law. Receipt of the revised standards on August 24, 2010 initiated EPA's review pursuant to Section 303(c) of the Clean Water Act (CWA or the Act) and the implementing federal water quality standards regulation (40 CFR Part 131).

EPA review of these water quality standards (WQS) revisions is complete, with the following exceptions:

- All provisions relating to discharger-specific variances, including those adopted with a January 1, 2013 delayed effective date
- Section 31.7(3)(a)(ii)(C) (Temporary Modifications)
- Section 31.8(2)(b)(i)(C) (Antidegradation)
- Molybdenum Table Value (Agriculture)
- Nitrate and Arsenic Table Values (Water Supply)

EPA's review of these revisions, and the supporting information and analyses, is nearing completion. With the exception of the provisions relating to discharger-specific variances, which were adopted with a delayed effective date, we estimate that our review of these revisions will be complete within 60 days.

We wish to commend the Standards Unit of the Water Quality Control Division (WQCD or the Division) for their outstanding work in support of this rulemaking action. Division staff developed proposed revisions, with input from the Standards Formulation stakeholder work

group, on a wide range of topics, including: antidegradation, arsenic, dissolved oxygen, *E. coli*, mercury, molybdenum, nitrate, temperature, temporary modifications, uranium, discharger-specific variances, and zinc. Developing these proposals required the Division to present information and solicit input during a series of stakeholder work group meetings during 2007-2009. In addition, the Division explained these issues to the Commission during the October 2008 issues scoping hearing, the November 2009 issues formulation hearing, and the June 2010 rulemaking hearing. The WQCD also developed detailed comments and recommendations on the aluminum, iron and zinc revisions proposed by the Colorado Mining Association (CMA), and the nonylphenol revision proposed by the Colorado Wastewater Utility Council (CWUC). Most revisions are well supported by the evidence submitted, and we wish to recognize the high caliber of work by the Standards Unit both prior to and during the rulemaking action.

CLEAN WATER ACT REVIEW REQUIREMENTS

CWA § 303(c)(2) requires States and authorized Indian Tribes to submit new and revised water quality standards to EPA for review. EPA is required to review and approve or disapprove the revised standards pursuant to CWA § 303(c)(3). The Region's goal has been, and will continue to be, to work closely and collaboratively with States and authorized Tribes throughout the standards revision process so that submitted revisions can be approved by EPA.

TODAY'S ACTION

The Region is approving the revisions to Regulation #31 adopted by the Commission on August 9, 2010, with the exception of the new and revised provisions EPA is not acting on today. The rationale for EPA's action is briefly outlined below and discussed in detail in Enclosure 1.

Today's letter applies only to water bodies in the State of Colorado, and does not apply to waters that are within Indian Country, as defined in 18 U.S.C. Section 1151. Today's letter is not intended as an action to approve or disapprove water quality standards applying to waters within Indian Country. EPA, or authorized Indian Tribes, as appropriate, will retain responsibilities for water quality standards for waters within Indian Country.

ENDANGERED SPECIES ACT REQUIREMENTS

It is important to note that EPA approval of water quality standards is considered a federal action which may be subject to the Section 7(a)(2) consultation requirements of the Endangered Species Act (ESA). Section 7(a)(2) of the ESA states that "each federal agency...shall...insure that any action authorized, funded or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined to be critical..."

EPA has initiated consultation under ESA Section 7(a)(2) with the U.S. Fish and Wildlife Service regarding our approval of certain new or revised water quality standards. EPA also has a Clean Water Act obligation, as a separate matter, to complete its water quality standards approval action. Therefore, in approving these water quality standards revisions today, EPA is

completing its CWA Section 303(c) responsibilities. However, because ESA consultation on EPA's approval of these standards is ongoing, EPA's approval is made subject to the outcome of the ESA consultation process. Should the consultation process with the U.S. Fish and Wildlife Service identify information regarding impacts on listed species or designated critical habitat that supports amending EPA's approval, EPA will, as appropriate, revisit and amend its approval decision for those new or revised water quality standards.

STANDARDS APPROVED WITHOUT CONDITION

All new and revised water quality standards in this category are approved without condition because the revisions are consistent with the requirements of the Clean Water Act and EPA's implementing regulation. New and revised provisions in this category are:

- Section 31.5. Definitions.
- Section 31.7. Overview.
- Section 31.7(1)(b)(ii). Ambient Quality-Based Standards.
- Section 31.7(3). Temporary Modifications (with exception of 31.7(3)(a)(ii)(C)).
- Section 31.14(15). Compliance schedules for discharges to segments with temporary modifications.
- Table I. (Recreation, Agriculture).
- Table III. (Water Supply).

STANDARDS APPROVED SUBJECT TO ESA CONSULTATION

All new and revised water quality standards in this category are approved, subject to ESA consultation. New and revised provisions in this category are:

- Table I. Physical and Biological Parameters (Aquatic Life).
- Table III. (Aquatic Life).

PROVISIONS EPA IS NOT ACTING ON TODAY

- All provisions relating to discharger-specific variances. New and revised provisions in this category are:
 - Section 31.7. Overview (portions that relate to discharger-specific variances).
 - Section 31.7(4). Granting, Extending and Removing Variances to Numeric Standards (Effective January 1, 2013).
 - Section 31.14 (17). Permit Actions that Implement Discharger-Specific Variances.
- Section 31.7(3)(a)(ii)(C) (Temporary Modifications). This new provision was adopted to authorize temporary modifications where "there is significant uncertainty regarding the timing of implementing attainable source controls or treatment."

- Section 31.8(2)(b)(i)(C) (Antidegradation). This revised provision was adopted to authorize Use Protected designations¹ for segments that meet the 31.5 definition of “effluent-dependent stream” or “effluent-dominated stream.”
- Molybdenum Table Value (Agriculture). This provision consists of the new 300 µg/L table value standard for the protection of agriculture uses.
- Nitrate and Arsenic Table Values (Water Supply). These provisions include the revised table values for nitrate (Table II) and arsenic (Table III), as modified by the respective footnotes, that authorize the Division to exclude effluent limits from discharge permits if water supply uses are designated but not “actual.”

CONCLUSION

EPA Region 8 congratulates the Commission and the Division for the many improvements to the Basic Standards and Methodologies for Surface Waters. If you have any questions concerning this letter, the most knowledgeable people on my staff are David Moon (303 312-6833) and Lareina Guenzel (303-312-6610).

Sincerely,



Carol L. Campbell
Assistant Regional Administrator
Office of Ecosystems Protection and Remediation

Enclosure

¹ Under Colorado’s antidegradation rule, antidegradation reviews are not required for segments with a Use Protected designation.

**ENCLOSURE 1:
RATIONALE FOR THE U.S. EPA REGION 8 PARTIAL ACTION ON REVISIONS TO THE
BASIC STANDARDS AND METHODOLOGIES FOR SURFACE WATERS**

Today's EPA action letter addresses the revisions to Colorado water quality standards adopted by the Water Quality Control Commission (Commission) on August 9, 2010. This enclosure provides a summary of the major revisions and a rationale for the action taken by EPA. The discussion below is organized as follows:

- I. EPA's rationale for acting on new and revised table value standards;
- II. Revisions approved for purposes of CWA § 303(c);
- III. Revisions approved for purposes of CWA § 303(c), subject to ESA consultation; and
- IV. Revisions for which EPA is taking no action.

I. EPA'S RATIONALE FOR ACTING ON NEW AND REVISED TABLE VALUE STANDARDS

Adoption of a new or revised table value standard into Section 31.16 of the Basic Standards regulation does not have an immediate effect on the water quality standards for individual water body segments. The reason is that, with the exception of the Section 31.11 basic standards² that apply to all surface waters of the State, Colorado uses a two-step process to establish numeric standards.³ The first step is adoption of a table value standard, and the second step is assignment of a numeric standard to the individual segments identified in Colorado's seven basin-specific water quality standards regulations. The second step requires a separate rulemaking action.

When assigning numeric standards to individual segments, the Commission may consider various options. As described in Section 31.7, numeric standards are assigned based on evidence presented at basin-wide or site-specific rulemaking hearings. As a result of these hearings, numeric standards may be assigned based on table values (31.7(1)(b)(i)), existing ambient water quality conditions (31.7(1)(b)(ii)), or other site-specific analyses (31.7(1)(b)(iii)). The Commission may also adopt temporary modifications (31.7(3)). In deciding whether to adopt numeric standards for individual segments, the Commission may consider the significance of the parameter with regard to protection of the use classifications and the likelihood of the parameter being present due to natural, point or nonpoint sources.

² Section 31.11 includes, for example, statewide narrative standards and numeric standards for organic chemicals and radioactive materials. These basic standards apply to all waters of the State upon adoption (i.e., the requirements are established using a one-step rulemaking process).

³ Colorado uses the terms "narrative standard" and "numeric standard" in place of the EPA terms "narrative criterion" and "numeric criterion" and the term "use classification" in place of the EPA term "designated use."

Although adoption of a new/revised table value does not immediately change the water quality standards for individual segments, EPA's practice has been to review and act on new/revised table value standards pursuant to CWA Section 303(c). EPA's rationale for doing so can be summarized as follows:

First, new/revised table values are adopted pursuant to State law by revising Section 31.16 of the Basic Standards regulation (Regulation #31). The Commission's practice has been to submit the revisions to EPA for approval/disapproval as required by CWA Section 303(c)(2)(A) and EPA's regulation at 40 CFR Section 131.20(c).

Second, table value standards are an integral part of Colorado's response to the 40 CFR Section 131.11(a)(1) requirement (to adopt protective water quality criteria) and the more specific CWA § 303(c)(2)(B) requirement for CWA § 307(a) pollutants such as arsenic, selenium, and zinc. Table values are an important component of Colorado's effort to comply with these criteria adoption requirements, and EPA therefore reviews new and revised table values for compliance with these requirements.

Third, table values are critical to the success of Colorado's water quality program. Absent a table value, it is substantially less likely that Colorado will: (1) adopt numeric standards to protect use classifications, (2) protect assimilative capacity in reviewable waters via antidegradation reviews, (3) identify impairments via 303(d) listing, and (4) include water quality-based effluent limits (WQBELs) in NPDES permits.

Fourth, as a practical matter, it is useful for EPA to participate in the development of new/revised table values, and to approve or disapprove upon adoption and submission to EPA, to better support this key component of Colorado's water quality program. Even a disapproval has practical advantages, compared to waiting for basin-specific WQS revisions to be submitted for EPA review, because it provides additional time for resolution of deficiencies and/or development of alternative site-specific criteria, prior to the basin review process.

Fifth, revisions to the temporary modification policy (31.7(3)), discharger-specific variance policy (31.7(4)), Outstanding Waters designation criteria (31.8(2)(a)), and Use Protected designation criteria (31.8(2)(b)) also do not immediately change the water quality standards for individual segments, and yet such revisions are subject to EPA review and approval. Colorado's temporary modification and variance policies are examples of "general policies" subject to EPA review pursuant to EPA requirements at 40 CFR Section 131.13 and 131.20(c). Revisions to the eligibility criteria for water quality-based antidegradation designations in 31.8(2) are subject to EPA review pursuant to the EPA requirements at 40 CFR Section 131.6 and 131.20(c).

Adoption of a new designated use category that has not yet been applied to any individual segments (with criteria that protect the designated use category) is another example of a scenario similar to adoption of a new table value standard. Even though these actions do not immediately change the water quality standards for individual segments, EPA believes it is necessary and appropriate for the Agency to act on such revisions.

Regarding general policies, EPA’s water quality standards regulation at 40 CFR Section 131.13 provides that:

“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.”

Table values are a critical element of water quality standards “application and implementation” in Colorado, and so EPA believes it is reasonable to view each table value as a parameter-specific general policy. EPA also believes it is reasonable to view much of Regulation #31, including but not limited to Sections 31.7 and 31.16 in their entirety, as general policies within the scope and meaning of 40 CFR Section 131.13. EPA’s conclusion that table values are a critical part of Colorado’s WQS policy is supported by the plain language of Section 31.7(1)(b)(i) of the Basic Standards regulation:

“The numeric levels for various parameters in tables I, II, and III are levels determined by the Commission after careful analysis of all available information and are generally considered to protect the beneficial use classifications. They are intended to guide the Commission and others at the use classification and numeric standard-setting hearings.”

This regulatory language supports EPA’s conclusion that table values are central to Colorado’s policy guiding the “application and implementation” of water quality standards for individual water body segments, and that adoption of new and revised table values is subject to EPA review pursuant to the requirements of 40 CFR Section 131.13 and 131.20(c).

Based on the reasons and requirements outlined above, EPA concludes that it is appropriate and necessary for the Commission to submit new and revised table value standards to EPA for review, and for EPA to act on such revisions pursuant to CWA Section 303(c).

II. APPROVED REVISIONS

Section 31.5. Definitions

Revisions to definitions of “chronic standard,” “existing quality,” and “maximum weekly average temperature” were adopted by the Commission. The Region supported adoption of the proposed revisions to these definitions during the rulemaking process. In addition, the Region has re-evaluated the final revisions and finds them to be appropriate and consistent with 40 CFR Part 131 requirements. Accordingly, the revisions are approved without condition.

Section 31.7. Overview

New language was adopted into Section 31.7 of the Basic Standards regulation as follows:

“Overview: Assigning or changing a standard or granting, removing before its expiration, or extending a temporary modification or variance shall be

accomplished by rule after a rulemaking hearing. The procedures for taking such action shall be the same as the procedures for assigning or changing classifications. See section 31.6(3)(a)(i).”

This new language was adopted to clarify the procedures followed to adopt or revise a standard, temporary modification, or variance. Adopting such changes via a rulemaking process that includes opportunities for public participation is consistent with 40 CFR Section 131.20(b). Accordingly, with the exception of the revisions pertaining to variances, the new language is approved without condition. As discussed in Section IV, today EPA is taking no action on the new and revised provisions pertaining to variances.

Section 31.7(1)(b)(ii). Ambient Quality-Based Standards

Minor changes were made to Section 31.7(1)(b)(ii) to clarify several points. For example, revisions were adopted to clarify that chronic ambient quality-based standards may be adopted equal to the “existing quality” of the available representative data (a definition of the term “existing quality” was added to 31.5). The previous provision specified that ambient-based standards are to be based on the 85th percentile of the available representative data. The revisions allow more flexibility to use another statistic as the basis for deriving an ambient quality-based standard (e.g., the long-standing practice of using the 50th percentile for total recoverable metals). Allowing for such flexibility, provided the resulting site-specific standard is scientifically defensible, is consistent with EPA regulations at 40 CFR Section 131.11(b)(1)(iii). EPA notes that individual ambient quality-based standards are subject to EPA review and approval. The revisions are appropriate and are approved without condition.

Section 31.7(3). Temporary Modifications

Substantive changes were made to Section 31.7(3) including revisions to reorganize the provisions and re-define situations where temporary modifications are authorized. Under the revised approach, temporary modifications are authorized in a smaller universe of situations. Specifically, temporary modifications may be adopted if the following conditions are present:

- 1) one of three types of “significant uncertainty” is shown to exist (revised requirement),
- 2) an existing permitted discharge has a demonstrated or predicted water quality-based effluent limit (WQBEL) compliance problem (new requirement),
- 3) adequate supporting information is submitted (new requirement), and
- 4) the expiration date is based on how soon resolving the issues that necessitated adoption of the temporary modification is deemed feasible (revised requirement).

The revisions to 31.7(3) on these four topics are discussed below.

Types of Significant Uncertainty

Substantive changes were adopted regarding situations eligible for temporary modifications. The Commission deleted a provision (former 31.7(3)(a)(i)) that authorized temporary modifications where “the standard is not being met because of human-induced conditions deemed correctable within a twenty (20) year period.” EPA agrees that this provision authorized temporary modifications in an overly-broad universe of situations, and that the Commission’s action to delete this provision was appropriate. The Commission also deleted a

provision (former 31.7(3)(a)(ii)) that authorized temporary modifications where “the standards cannot be met because the current imposition of the necessary controls or corrective measures would result in a substantial and widespread economic and social impact.” EPA believes it is acceptable for Colorado to apply the “substantial and widespread” test only on a discharger-specific basis (in conjunction with the new general policy at 31.7(4) authorizing discharger-specific variances). However, as discussed in Section IV of this enclosure, EPA is taking no action today on the new discharger-specific variance policy.

Because the general policy at 31.7(3) authorizing temporary modifications was adopted at Colorado’s discretion, revising the policy to eliminate the opportunity for temporary modifications based on the former 31.7(3)(a)(i) and (ii) is also at Colorado’s discretion. Accordingly, EPA believes the Commission action to delete 31.7(3)(a)(i) and (ii) is consistent with EPA’s water quality standards regulation. See 40 CFR Section 131.13.

The revised Section 31.7(3)(a)(ii) authorizes temporary modifications where one of three types of significant uncertainty is shown to exist:

- A. significant uncertainty regarding the water quality standard necessary to protect current and/or future uses;
- B. significant uncertainty regarding the extent to which existing quality is the result of natural or irreversible human-induced conditions; or
- C. significant uncertainty regarding the timing of implementing attainable source controls or treatment.

Adoption of temporary modifications based on the first two types of significant uncertainty was authorized in the previous version of Section 31.7(3). EPA approved the use of these factors in its action letter dated October 17, 2005. Accordingly, EPA does not view Section 31.7(3)(a)(ii)(A) and (B) as new or revised provisions. As discussed in Section IV of this enclosure, today EPA is taking no action on Section 31.7(3)(a)(ii)(C).

WQBEL Compliance Problem

EPA believes it is appropriate to authorize temporary modifications only in situations where there is a demonstrated or predicted WQBEL compliance problem. By limiting the opportunity for temporary modifications in this manner, the new requirement limits the authority for temporary modifications to situations where there is a compelling reason to establish a temporary modification. In the absence of this limitation, temporary modifications would be authorized in a wider variety of situations. The Statement of Basis and Purpose adopted by the Commission states that:

Since temporary modifications have no impact on other aspects of Colorado’s water quality management program such as the 303(d) list, the Non-point Source Program or the Total Maximum Daily Load (TMDL) Program, it is fitting that temporary modifications only be used where there are permitted discharges that would face unreasonable consequences in the absence of a temporary modification (e.g., a permit compliance schedule to meet a standard that is significantly uncertain).

EPA agrees that limiting the opportunity for temporary modifications in this manner is appropriate. EPA believes the revision will limit the number of temporary modifications, sharpen the focus and efficacy of Colorado's annual review process for expiring temporary modifications, and minimize the rulemaking burden on the Division and the Commission. EPA views this revision as a significant improvement to Colorado's temporary modification authorizing provision.

Adequate Supporting Information

New Section 31.7(3)(b) requires that proponents submit adequate supporting information including a justification for the interim water quality requirement, raw data describing effluent and ambient quality, a plan for eliminating the need for the temporary modification, and a justification for the proposed expiration date. EPA views this new requirement as a significant improvement to 31.7(3). The most important benefit is that the information requirements will better ensure that temporary modifications are adopted only where warranted, and that the components of each temporary modification are well justified. Since temporary modifications are established to provide time for resolution of uncertainties, our view is that it is especially important to ensure, prior to granting a temporary modification, that an appropriate plan has been developed. Section 31.7(3)(b) will result in more complete and defensible proposals, facilitate public review, increase the likelihood of EPA approval of individual temporary modifications, and better ensure that needed actions are taken to eliminate the need for temporary modifications as soon as possible.

Duration of Temporary Modifications (Expiration Dates)

The Commission revised Section 31.7(3)(d) - formerly 31.7(3)(c) - to clarify that expiration dates shall be determined considering how soon resolving the issues that necessitated adoption of the temporary modification is deemed feasible.

EPA agrees this revision is appropriate and views the revision as a significant improvement. Basing expiration dates on site-specific information is crucial in order to ensure that issues are resolved as quickly as possible, and avoid unwarranted delays in remedying impaired water quality conditions. EPA's perspective is that, in the past, expiration dates too often have coincided with the 5- year basin review schedule. Such decisions do not take full advantage of Colorado's annual public review process for expiring temporary modifications and may delay needed pollution controls.

Conclusion

With the exception of new provision 31.7(3)(a)(ii)(C), EPA has determined that the revisions to 31.7(3) are both appropriate and useful and that they respond to specific issues that have been identified by EPA as priorities.⁴ We greatly appreciate the efforts by the Division and the Commission to address EPA's issues and concerns. The Region notes that the federal water quality standards regulation at 40 CFR 131.13 recognizes State discretion to adopt policies

⁴ See, for example, EPA Region 8's responsive pre-hearing and rebuttal comments in letters dated April 14, 2010 and May 12, 2010, respectively.

generally affecting standards application and implementation, such as mixing zones, low flows, and variances, while also noting that such policies “are subject to EPA review and approval.” EPA views Section 31.7(3) as a general policy within the meaning of 40 CFR Section 131.13. Colorado’s policy has been approved by EPA on multiple occasions, and most recently on October 17, 2005. For the reasons identified above, EPA has concluded that, with the exception of 31.7(3)(a)(ii)(C), the changes adopted by the Commission substantially improve the temporary modification authorizing provision. Accordingly, the revisions are approved, with the exception of 31.7(3)(a)(ii)(C).

Section 31.14(15). (Compliance Schedules for Discharges to Segments with Temporary Modifications)

Consistent with the reorganization of the 31.7(3) temporary modification provisions, revisions to 31.14(15) were adopted to clarify the requirements applicable to development of permits for existing and new discharges on segments where temporary modifications are adopted pursuant to sections 31.7(3)(a)(ii)(A) and (B). Where such temporary modifications are adopted, 31.14(15) establishes that permits will not include a compliance schedule to meet limits based on the underlying standard during the period that the temporary modification is in effect, but may include a compliance schedule requiring actions that will help resolve the issues that necessitated adoption of the temporary modification (i.e., resolve the significant uncertainty). EPA notes that a similar provision was in effect previously. The revision clarifies that 31.14(15) applies to temporary modifications adopted pursuant to sections 31.7(3)(a)(ii)(A) and (B), but not to those adopted pursuant to (C).

EPA agrees that the revision is appropriate, and that the purpose of temporary modifications under 31.7(3)(a)(ii)(A) and (B) is to allow time for resolution of the significantly uncertain numeric standard. EPA notes that once the significant uncertainty is resolved and the temporary modification is eliminated, 31.14(15) requires the Division, where necessary and within a reasonable period of time, to reopen the permit and include a compliance schedule to attain limits based on the underlying standard in accordance with 31.14(4). EPA believes the revisions to 31.14(15) are consistent with State discretion to adopt general policies affecting the application and implementation of water quality standards, as recognized by the EPA water quality standards regulation at 40 CFR Section 131.13. The revisions are approved without condition.

Table I. Physical and Biological Parameters (Recreation, Agriculture)

Dissolved Oxygen in Lakes and Reservoirs

Revisions were adopted to Footnote 9 to clarify the dissolved oxygen table value standards for the protection of recreation and agriculture uses. For both designated uses, the revised footnote indicates that in the upper portion of a lake or reservoir, dissolved oxygen shall not be less than the table value or the applicable site-specific standard, and that in the lower portion, dissolved oxygen may be less than the table value except where a site-specific standard has been adopted. The revised footnote also indicates that a site-specific standard will be

established for the lower portion of a lake or reservoir where the lower portion is used for either recreation or agriculture.

EPA believes the revised table values provide for protection of recreation and agriculture uses, while reserving certain site-specific issues for the basin-specific standards review process. Although the revised approach assumes that only the upper portion of lakes and reservoirs will be used for recreation and agriculture purposes, and indicates that table values apply to only the upper portion, it also provides for adoption of site-specific standards for the lower portion where appropriate. Because the revised table values are consistent with establishing numeric standards that protect designated uses, EPA finds that the revisions comply with the federal requirement at 40 CFR Section 131.11(a)(1). Accordingly, the revisions are approved.

E. coli Averaging Period

Footnote (7) was revised to remove references to table values for fecal coliform⁵ and establish that *E. coli* table values are two-month geometric mean values. An *E. coli* averaging period of two months is one of the options available to States for protection of recreation uses. One factor supporting a two-month averaging period is that the epidemiological studies supporting EPA's recommended criteria were 8 weeks in duration. This means that the regression equations used to derive the EPA criteria recommendations predict the 8-week geometric mean *E. coli* density associated with a given illness rate. A second, more practical consideration is that a two-month averaging period provides a longer opportunity (i.e., compared to a shorter averaging period) to gather sufficient data to estimate the geometric mean for a particular water body segment. Because a two-month averaging period is consistent with the design of the epidemiological studies that provide the scientific basis for EPA's recommended criteria, EPA finds that the approach is reasonable for the protection of recreation uses as required at 40 CFR Section 131.11(a)(1). Accordingly, the revisions are approved.

Table III. (Water Supply)

Molybdenum

The Commission adopted a new 210 µg/L water supply table value for total recoverable molybdenum. The table value was calculated using a dietary reference intake and the equation in WQCC Policy 96-2 for non-carcinogens. The 0.03 mg/kg-day dietary reference intake (which is equivalent to a reference dose) was derived by the Institute of Medicine (IOM) based on the 1990 Fungwe study.^{6,7}

⁵ Fecal coliform table values were deleted from Regulation #31 in 2005.

⁶ Fungwe TV, Buddingh F, Demick DS, Lox CD, Yang MT, Yang SP. The role of dietary molybdenum on estrous activity, fertility, reproduction and molybdenum and copper enzyme activities of female rats. *Nutr Res* 1990;10:515-24.

⁷ National Academies Press (2000). *Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc* (2000). Food and Nutrition.

The Commission decided not to adopt the Division's original proposal (35 µg/L) which was based on the 0.005 mg/kg-day reference dose in EPA's Integrated Risk Information System. EPA believes both reference doses are scientifically defensible and provide an acceptable basis for setting ambient water quality standards. The two reference doses can be compared as follows:

IRIS Reference Dose (RfD)

Basis: Human study in Armenians with high dietary exposure to molybdenum showing elevated serum uric acid levels, several correlated biochemical endpoints, and gout-like symptoms (joint pain, etc.) (Koval'skiy et al., 1961)

NOAEL: none

LOAEL: 0.14 mg/kg-day

Uncertainty Factors (UF): 3 for intrahuman variability, 10 for use of LOAEL (total 30)

Reference Dose = LOAEL/UF = 0.14/30 = 0.005 mg/kg-day

Strengths:

- Human study
- Biological correlation because molybdenum is a cofactor for the enzyme that produces uric acid from catabolism of purines

Weaknesses:

- Very small number of human subjects in the control group could bias the study toward an apparent effect when none is actually present
- Weaknesses of analytical methodology for measuring serum molybdenum and uric acid
- Other human studies do not support the existence of the adverse effect from dietary exposure to molybdenum
- Co-exposure to other environmental factors could influence the result
- No external peer review of IRIS assessment in 1991

Institute of Medicine Dietary Reference Intake

Basis: Laboratory animal study (rats) with dietary administration of molybdenum showing prolonged estrus cycle, decreased gestational weight gain in pups, and several adverse effects on embryogenesis (Fungwe et al., 1990)

NOAEL: 0.9 mg/kg-day (based on molybdenum content in normal diet)

LOAEL: 1.6 mg/kg-day (based on molybdenum content of supplemented diet)

Uncertainty Factors (UF): 10 for interspecies extrapolation, 3 for intrahuman variability (total 30)

Reference Dose = NOAEL/UF = 0.9/30 = 0.03 mg/kg-day

Strengths:

- Another study in mice showed adverse reproductive effects at about the same exposure
- Reasonably thorough evaluation of potential adverse effects in female rats and pups
- Controlled exposure only to additional molybdenum
- External peer review of IOM assessment

Weaknesses:

- Laboratory animal, not human, study
- Unknown biological correlation between molybdenum exposure and reproductive effects

Conclusion

The CWA and EPA's implementing regulation require that States adopt water quality criteria that protect designated uses. Although EPA supports use of the human health risk assessments in IRIS, there may be other risk assessments that can be used as a basis for deriving approvable criteria. In situations such as this one, where multiple studies have been completed, a range of reference dose values may be defensible. States have risk management discretion to adopt criteria from within this range of defensible values. States can also apply additional safety factors (e.g., more conservative exposure assumptions such as a higher fish ingestion rate) to criteria recommended by EPA. For molybdenum, EPA's perspective is that the new water supply table value complies with the requirement to adopt criteria that protect the designated use based on sound scientific rationale (40 CFR Section 131.11(a)(1)). Accordingly, the Region approves the new table value standard.

Uranium

The previous 30 µg/L water supply table value was revised to a range of 16.8 – 30 µg/L. A new Footnote 17 was also adopted to indicate that when applying table value standards for uranium to individual segments, the Commission shall consider the need to maintain radioactive materials at the lowest practical level as required by Section 31.11(2) of the Basic Standards regulation. In addition, the new water supply table value was referenced to Footnote 13, which reads as follows:

“Whenever a range of standards is listed and referenced to this footnote, the first number in the range is a strictly health-based value, based on the Commission's established methodology for human health-based standards. The second number in the range is a maximum contaminant level, established under the federal Safe Drinking Water Act that has been determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. Control requirements, such as discharge permit effluent limitations, shall be established using the first number in the range as the ambient water quality target, provided that no effluent limitation shall require an “end of pipe” discharge level more restrictive than the second number in the range. Water bodies will be considered in attainment of this standard, and not included on the Section 303(d) List, so long as the existing ambient quality does not exceed the second number in the range.”

The revised uranium water supply table value is an example of what has been referred to as the “hybrid approach.” The approach has been applied in Colorado on multiple occasions with EPA approval (e.g., see the Region's February 23, 2005 action letter). The revised table value includes two values. The first value (16.8 µg/L) is a strictly risk-based value that can be calculated using the equation in WQCC Policy 96-2 for non-carcinogens, a reference dose of 0.0006 mg/kg-day, and a relative source contribution factor of 0.8. These same reference dose

and relative source contribution factor values are discussed on page 76713 of the Federal Register notice for EPA’s December 7, 2000 final Radionuclide Rule.⁸ The second value in the range (30 µg/L) is the Safe Drinking Water Act (SDWA) Maximum Contaminant Level (MCL).

Consistent with the Region’s previous actions to approve the hybrid approach for certain parameters, the Region has determined that the revisions to the water supply table value for uranium are consistent with the flexibility available to States when setting ambient standards for the protection of the water supply classification. For example, EPA’s Water Quality Standards Handbook states that, when setting ambient water quality criteria for the protection of ambient waters used as water supplies, “States have the option of applying MCLs...” (see the *Water Quality Standards Handbook, Second Edition*, Chapter 3, pages 11 and 12). The Footnote 17 language requiring the Commission to consider the need to maintain radioactive materials at the lowest practical level is likewise consistent with the flexibility available to States when setting ambient water quality criteria. Accordingly, the Region approves the revisions to the uranium table value standard.

III. APPROVED REVISIONS, SUBJECT TO ESA CONSULTATION

Table I. Physical and Biological Parameters (Aquatic Life)

Dissolved Oxygen

Changes to Table I for dissolved oxygen were adopted to correct a previous typographical error that resulted in the cold water table values being listed in the column for warm water biota. In addition, changes were made to Footnote 9 to revise how the table values apply to lakes and reservoirs. The following new language was incorporated into Footnote 9(c):

“Aquatic Life: In the upper portion of a lake or reservoir, dissolved oxygen shall not be less than the criteria in Table 1 or the applicable site-specific standard. In the lower portion of a lake or reservoir, dissolved oxygen may be less than the applicable standard except where footnote 5(c)(iii) applies or a site-specific standard has been adopted. A site-specific dissolved oxygen standard will be established for the lower portion of a lake or reservoir where the expected aquatic community has habitat requirements within the lower portion.

- i. Fall turnover exclusion: Dissolved oxygen may drop 1 mg/l below the criteria in Table 1 in the upper portion of a lake or reservoir for up to seven consecutive days during fall turnover provided that profile measurements are taken at a consistent location within the lake or reservoir 7-days before, and 7-days after the profile with low dissolved oxygen. The profile measurements taken before and after the profile with low dissolved oxygen must attain the criteria in Table 1 in the upper portion of the lake or reservoir. The fall turnover exclusion does not apply

⁸ National Primary Drinking Water Regulations; Radionuclides; Final Rule. 65 *Federal Register* pages 76712 – 76713. December 7, 2000.

to lakes or reservoirs with fish species that spawn in the fall unless there are data to show that adequate dissolved oxygen is maintained in all spawning areas, for the entire duration of fall turnover.”

With these revisions, Colorado will also begin to use a new assessment methodology for dissolved oxygen in lakes and reservoirs. Compared to the previous table values, the revised table values do not always require assessment of the metalimnion. In addition, the revised table values include a fall turnover exclusion. Although these changes result in less-stringent criteria, EPA believes the table values as revised are still fully protective of aquatic life as required by EPA’s water quality standards regulation at 40 CFR Section 131.11(a)(1).

Key points that support application of dissolved oxygen table values to the upper portion of the reservoir include the following:

- The metalimnion and/or hypolimnion will be assessed when the presence/absence of a thermal refuge below the mixed layer is in question based on the requirements of existing provisions in footnote 5(c)(iii). Footnote 5(c)(iii) addresses attainment of temperature criteria in lakes and reservoirs and states,

“Lakes and reservoirs: When a lake or reservoir is stratified, the mixed layer may exceed the criteria in Table 1 provided that an adequate refuge exists in water below the mixed layer. Adequate refuge depends on concurrent attainment of applicable dissolved oxygen standards. If the refuge is not adequate because of dissolved oxygen levels, the lake or reservoir may be included on the 303(d) List as “impaired” for dissolved oxygen, rather than for temperature.”

In other words, when temperature criteria are exceeded in the mixed layer, Colorado will evaluate dissolved oxygen and temperature at each depth in the profile to look for concurrent attainment of both standards to ensure that adequate refuge is present to support the designated aquatic life use.

- Site-specific dissolved oxygen standards may be developed that apply to the metalimnion or hypolimnion where there are species present that require the use of deep water habitat, regardless of temperature condition in the mixed layer. For example, the Division intends to work with the Colorado Division of Wildlife to propose site-specific dissolved oxygen criteria for lakes/reservoirs where lake trout are expected when the revised temperature criteria are adopted into each basin.
- An assessment of dissolved oxygen and chlorophyll in Colorado lakes and reservoirs indicated that it is not always feasible to attain the previous dissolved oxygen table values in deep waters. The Division’s analysis included a comparison of the minimum dissolved oxygen measured in deep water to the median chlorophyll concentration. This analysis showed that even when the median chlorophyll is relatively low (i.e., below chlorophyll concentrations that would be protective of aquatic life), dissolved oxygen levels are less than the applicable criteria in at least a portion of the deep water habitat for the majority of reservoirs.

Key points that support the fall turnover exclusion include the following:

- A decrease in the dissolved oxygen table value standard by 1 mg/L for 7 days results in criteria that are consistent with CWA § 304(a) recommendations for dissolved oxygen (i.e., the 7 day mean minimum for “other life stages” = 5.0 mg/L and 4.0 mg/L for cold and warm water aquatic life use designations, respectively).
- The 1 mg/L drop in dissolved oxygen allowed in the fall is not low enough to cause lethality and the short duration of the allowance is not expected to result in sub-lethal effects (e.g., reductions in growth).
- The exclusion does not apply to waterbodies where spawning occurs.
- To comply with the exclusion, weekly sampling is required to ensure that depressed dissolved oxygen does not persist beyond 7 days.

EPA’s action today recognizes that Colorado adopts numeric standards following a two-step process that includes adoption of table values in Regulation #31 and adoption of segment-specific numeric standards for the individual segments identified in Regulations 32-38 based on pertinent information. For example, during the Basin reviews, the Division will have an opportunity to propose numeric standards different than the table values where necessary to protect the aquatic life use classification. Based on review of the information submitted by the Division, EPA concludes that the revisions to footnote (9)(c) provide for protection of aquatic life use classifications with either the table value or a site-specific standard. Accordingly, the revisions are approved, subject to ESA consultation.

Temperature

Revisions to the table value standards for temperature in Table I included changes to the values, and also changes to footnote (5). Revisions to table values were adopted based on updates to the WQCD’s database of thermal effects information for Colorado fish species. The purpose of these revisions was to adjust the table values to be consistent with the latest scientific information. EPA concludes that the revised criteria will protect aquatic life designated uses based on sound scientific rationale, as required by 40 CFR Section 131.11(a)(1).

In addition, a new winter shoulder-season excursion was added to Footnote (5) for cold water streams, as follows:

“Winter shoulder-season excursion: For the purposes of assessment, ambient water temperatures in cold streams may exceed the winter criteria in Table 1 or applicable site-specific winter standard for 30-days before the winter/summer transition, and 30-days after the summer/winter transition, provided that the natural seasonal progression of temperature is maintained and that temperature exceedances during these periods are not the result of anthropogenic activities in the watershed.”

This new exclusion recognizes that in-stream temperatures are expected to gradually increase and decrease in spring and fall, respectively. The timing of these temperature changes and the expected rate of change can vary temporally and spatially making it difficult to establish exact dates that should be used to transition from winter to summer criteria and summer to winter

criteria. Setting the winter/summer transition dates too early in the spring and too late in the fall could lead to unnecessary listings of waterbodies that are not truly impaired for temperature. Adoption of the excursion footnote is a reasonable solution to address this potential assessment problem.

Based on review of the information submitted by the Division, EPA concludes that the revisions to the temperature table value standards protect the aquatic life use and are based on sound scientific rationale (40 CFR Section 131.11(a)(1)). Accordingly, the revisions are approved, subject to ESA consultation.

Table III. (Aquatic Life)

Aluminum

The Commission updated the table value standards for aluminum to include the following hardness-dependent equations and revised footnote for the chronic criterion (Footnote 11):

$$\begin{aligned} \text{Acute} &= e^{(1.3695[\ln(\text{hardness})]+1.8308)} \text{ (tot. rec.)} \\ \text{Chronic} &= 87 \mu\text{g/L or } e^{(1.3695[\ln(\text{hardness})]+0.9161)} \text{ (tot. rec.)}^{11} \end{aligned}$$

“(11) Where pH is equal to or greater than 7.0 in the receiving water after mixing, the chronic hardness-dependent equation will apply. Where pH is less than 7.0, in the receiving water after mixing, either the 87 µg/l chronic total recoverable aluminum criterion or the criterion resulting from the chronic hardness-dependent equation will apply, whichever is more stringent.”

The hardness values to be used in the equations are in mg/L as calcium carbonate and shall be not greater than 220 mg/L. The acute hardness-dependent equation replaced the existing acute criterion of 750 µg/L. The chronic hardness-based criterion, on the other hand, only applies in the circumstances described in the revised Footnote 11. Prior to this revision, Colorado’s table values for aluminum were based primarily on the information and recommendations presented in the 1988 EPA Aluminum Criteria Document (EPA 440/5-86-008).

The adopted revisions were based on a proposal from the Colorado Mining Association.⁹ The hardness-dependent equations were derived using toxicity data presented in the 1988 Aluminum Criteria Document, new acute and chronic toxicity data obtained from a literature search, and methods outlined in the 1985 Guidelines.¹⁰ The revised acute table value standard is more stringent than the CWA § 304(a) acute criterion when hardness is less than 33 mg/L and less stringent than the CWA § 304(a) acute criterion when hardness is greater than 33 mg/L (Figure 1). The revised chronic table value is more stringent than the CWA § 304(a) chronic criterion when hardness is less than 29 mg/L, equal to the CWA § 304(a) criterion when pH is

⁹ Technical rationale for the hardness-based aluminum criteria was provided in a document titled: *Ambient Water Quality Standards for Aluminum- Review and Update*, prepared by GEI Consultants, Inc., submitted to the Colorado Mining Association, March 2010. The final aluminum standards adopted by the Commission differ from the proposed standards in the technical document due to recommendations made during the public comment period.

¹⁰ *Guidelines for Deriving Numerical National Water Quality Criteria for the protection of Aquatic Organisms and Their Uses*. PB85-227049.

less than 7.0 and hardness is greater than 29 mg/L, and less stringent than the CWA § 304(a) chronic criterion when pH is greater than 7.0 and hardness is greater than 29 mg/L (Figure 2). The revised table values include a chronic criterion when hardness is equal to or greater than 50 mg/L and pH is equal to or greater than 7.0. Prior to this revision, under the previous footnote 11, no chronic criterion applied under these water quality conditions.

Although the revised table value standards for aluminum are substantially different from CWA§ 304(a) recommendations for aluminum, EPA agrees that the revised standards are scientifically defensible and protective of aquatic life. EPA took the following information into consideration when evaluating the protectiveness of the criterion.

- The updated toxicity dataset contains data for 17 genera, which is increased from 14 genera represented in the 1988 Aluminum Criteria Document, and meets the minimum data requirement as specified in the 1985 Guidelines.
- Rather than using an acute-chronic ratio to calculate the final chronic value (FCV), the FCV was set to the most sensitive species mean chronic value (SMCV) to insure protection of chronically sensitive species (i.e., *Daphnia magna* and *Oncorhynchus mykiss*).¹¹
- The revised chronic criteria provide better protection for aquatic life since it is applicable to all waterbodies, rather than just waterbodies where hardness is less than 50 mg/L or pH less than 7.0.
- A comparison of the hardness-dependent criteria to the empirical acute and chronic values shows that the hardness-based criteria are expected to protect a wide range of species over a wide range of hardness concentrations (Figures 1 & 2).
- The revised Footnote 11 continues to recognize that aluminum toxicity increases at low pH by requiring that a chronic criterion equal to or more stringent than the CWA § 304(a) chronic criterion of 87 µg/L shall apply when pH is < 7.0.

¹¹ The FCV calculated using an ACR was equal to 530 µg/L, where as the most chronically sensitive species in the updated toxicity dataset was *D. manga*, with a hardness-adjusted SMCV of 189 µg/L.

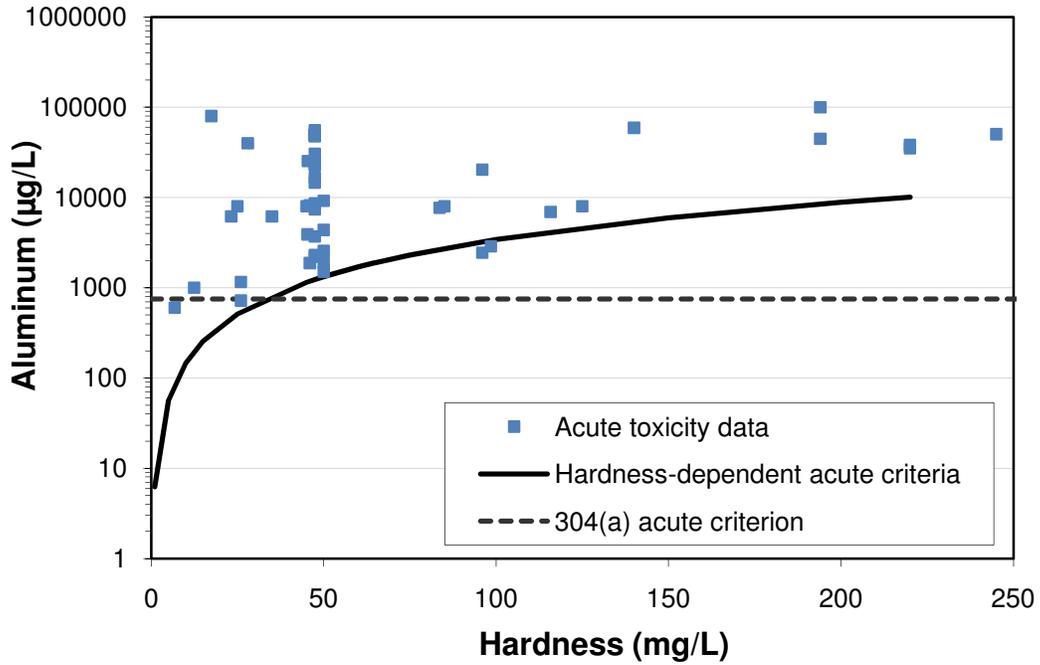


Figure 1: Comparison of the revised hardness-dependent acute criteria to existing table value standards (EPA 304(a) criterion = 750 µg/L) and empirical acute toxicity data presented by Colorado Mining Association.

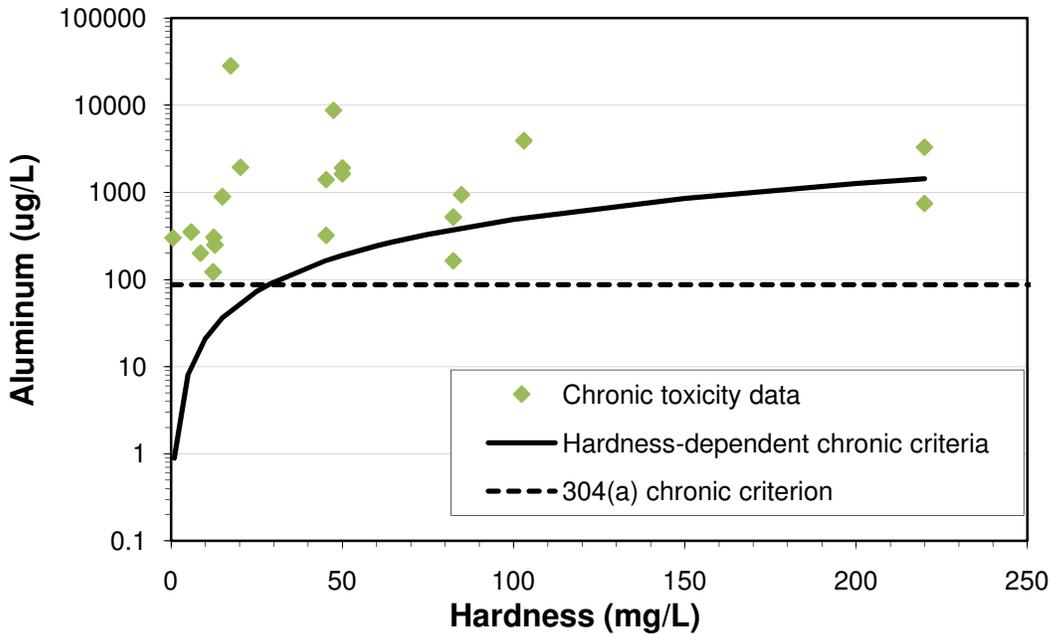


Figure 2: Comparison of the revised hardness-dependent chronic criteria to existing table value standards (EPA 304(a) criterion = 87 µg/L) and empirical chronic toxicity data presented by Colorado Mining Association. Existing table value standards apply when pH is < 7.0 or hardness is < 50 mg/L.

Based on review of the information submitted by the Division and the Colorado Mining Association, EPA concludes that the revisions to the aluminum table value standards protect the aquatic life use and are based on sound scientific rationale (40 CFR Section 131.11(a)(1)). Accordingly, the revisions are approved, subject to ESA consultation.

Mercury

The Commission deleted the acute (1.4 µg/L) and chronic (0.77 µg/L) aquatic life table values for mercury. These criteria are based on aquatic life effects resulting from water column exposure alone and do not consider effects resulting from food chain exposure. Food chain exposure is particularly important for mercury because of its high potential to bioaccumulate and biomagnify with each trophic transfer in the food chain.

In addition, the Commission's practice has been to not apply the deleted table values to individual segments. Instead, the more stringent 0.01 µg/L final residue value (FRV) for mercury (another table value standard identified in Table III) has been applied to protect use classifications. As a result, the action to delete the acute and chronic table values will not have any effect on numeric standards previously adopted for individual segments.

The deleted acute and chronic table values are not protective of aquatic life uses based on sound scientific rationale, and it is more appropriate to rely on the 0.01 µg/L FRV to protect use classifications. EPA concludes that the Commission's action is consistent with the 40 CFR Section 131.11(a)(1) requirement to adopt water quality criteria that protect designated uses. Accordingly, EPA approves the revision, subject to ESA consultation.

Zinc

The Commission adopted revised acute and chronic table value standards for zinc that have been updated with new acute and chronic zinc toxicity data. The Commission also adopted a new chronic zinc equation for sculpin, which can be used to protect waterbodies where mottled sculpin are expected to occur and hardness is less than 102 mg/L. Although Regulation 31 has not previously included the chronic equation for sculpin, a chronic sculpin equation has been adopted in some of the basin regulations (i.e., Regulations 33, 34, 35 & 37). EPA has reviewed and approved adoption of the sculpin equation in these basins.

The adopted revisions to the state-wide equations were based on a proposal from the Colorado Mining Association.¹² The new equations were derived using a dataset containing acute toxicity data for 14 new genera, an updated final acute-chronic ratio (ACR) that includes data for three additional species, and an updated hardness-acute zinc toxicity relationship. All revisions followed methods outlined in the 1985 Guidelines.¹³ When compared to the existing criteria in the Regulation 31, the new equations result in acute criteria that are slightly less

¹² Technical rationale for the revised zinc equations was provided in a document titled: *Ambient Water Quality Standards for Zinc - Review and Update*, prepared by GEI Consultants, Inc., submitted to the Colorado Mining Association, December 2009.

¹³ *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and their Uses* (U.S. EPA, Stephan, et al., 1985).

stringent and chronic criteria that are slightly more stringent at low hardness and less stringent at greater hardness. The revised equations are slightly less stringent than CWA § 304(a) recommendations for zinc at all hardness concentrations. Provided they are based on sound scientific rationale and protective of the designated use, adoption of criteria less stringent than CWA § 304(a) criteria is consistent with EPA's water quality standards regulation at 40 CFR Section 131.11(b)(1).

The chronic sculpin equation was derived from toxicity tests conducted by the Colorado Division of Wildlife that exposed mottled sculpin to zinc in dilution water typical of their expected habitat (i.e., low water hardness).¹⁴ The equation only utilizes toxicity data for Colorado mottled sculpin populations. Additional clarification provided by the Colorado Division of Wildlife during the public comment period resulted in a slightly modified equation than what is presented in Brinkman et al 2007, or what has previously been adopted in the basin hearings. The adopted chronic sculpin equation is more stringent than the CWA § 304(a) chronic criterion when hardness is less than 112 mg/L. Since the sculpin equation will be applied only to waters with hardness levels less than 102 mg/L, application of the equation to individual segments will always result in criteria that are more stringent than CWA § 304(a) criteria. Overall, adoption of the chronic sculpin equation into Regulation 31 facilitates continued protection of mottled sculpin in waters with low hardness.

Based on review of the information submitted by the Division and the Colorado Mining Association and Colorado Division of Wildlife, EPA concludes that the revisions to the zinc table value standards are appropriate for protection of aquatic life use classifications and are based on sound scientific rationale (40 CFR Section 131.11(a)(1)). Accordingly, the revisions are approved, subject to ESA consultation.

IV. REVISIONS FOR WHICH EPA IS TAKING NO ACTION

- All provisions relating to discharger-specific variances. New and revised provisions in this category include:
 - Section 31.7. Overview (portions that relate to discharger-specific variances).
 - Section 31.7(4). Granting, Extending and Removing Variances to Numeric Standards (Effective January 1, 2013)
 - Section 31.14 (17). Permit Actions that Implement Discharger-Specific Variances.
- Section 31.7(3)(a)(ii)(C) (Temporary Modifications). This new provision was adopted to authorize temporary modifications where “there is significant uncertainty regarding the timing of implementing attainable source controls or treatment.”

¹⁴ Woodling, J., S. Brinkman, and S. Albeke. 2002. Acute and chronic toxicity of zinc to the mottled sculpin *Cottus bairdi*. *Environmental Toxicology and Chemistry*. 21: 1922-1926.

Brinkman, S. and J. Woodling. 2005. Zinc toxicity to the mottled sculpin (*Cottus bairdi*) in high-hardness water. *Environmental Toxicology and Chemistry*. 24: 1515-1517.

Brinkman, S., K. Mitchell and N. Vieira. 2007. Toxicity of zinc and cadmium to mottled sculpin (*Cottus bairdi*). (In) *Water Pollution Studies, Federal Aid Project F-243-R14 Jobs Progress Report*, Fish Research Section, Colorado Division of Wildlife, Ft. Collins, CO.

- Section 31.8(2)(b)(i)(C) (Antidegradation). This revised provision was adopted to authorize Use Protected designations¹⁵ for segments that meet the 31.5 definition of “effluent-dependent stream” or “effluent-dominated stream.”
- Molybdenum Table Value (Agriculture). This provision consists of the new 300 µg/L table value standard for the protection of agriculture uses.
- Nitrate and Arsenic Table Values (Water Supply). These provisions include the revised table values for nitrate (Table II) and arsenic (Table III), as modified by the respective footnotes, that authorize the Division to exclude effluent limits from discharge permits if water supply uses are designated but not “actual.”

¹⁵ Under Colorado’s antidegradation rule, antidegradation reviews are not required for segments with a Use Protected designation.