

31.60 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; APRIL 10, 2023 RULEMAKING; FINAL ACTION APRIL 12, 2023; EFFECTIVE DATE JUNE 14, 2023

The provisions of C.R.S. 25-8-202(1)(a), (b) and (2); 25-8-203; 25-8-204; and 25-8-402; provide the specific statutory authority for adoption of these regulatory amendments. The commission also adopted, in compliance with 24-4-103(4) C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

The commission revised the total nitrogen and total phosphorus table value standards for lakes and reservoirs to protect aquatic life and recreation in Colorado. These revisions address recommendations made by EPA in its July 14, 2016 action letter regarding its review of the commission's 2012 adoption of total nitrogen and total phosphorus standards for lakes and reservoirs in Regulation No. 31. In addition, the commission continued its phased implementation of chlorophyll *a*, total nitrogen, and total phosphorus standards in prioritized waterbodies, as described below.

I. Background

Nitrogen and phosphorus are nutrients found in the environment that play strong roles in aquatic ecosystems, including promoting or limiting the growth of aquatic plants and algae. Increased concentrations of nutrients can lead to excess algal abundance that may impact Aquatic Life, Recreation, and Direct Use Water Supply (DUWS) uses.

In March 2012, the commission adopted interim numeric nutrient table value standards for chlorophyll *a* to protect the Aquatic Life, Recreation, and Direct Use Water Supply (DUWS) uses and for total nitrogen and total phosphorus to protect the Aquatic Life and Recreation uses (31.50). The standards were adopted into Regulation No. 31 at 31.17. The commission also directed the adoption of the standards into the basin regulations (Regulation Nos. 32-38) using a phased approach, starting with adoption of the standards on specific waterbodies (consistent with 31.17) beginning in 2017. In 2016, EPA approved the interim numeric values for chlorophyll *a*, approved with recommendations the numeric values for total nitrogen and total phosphorus for lakes and reservoirs, and took no action with respect to the phased implementation provisions and interim numeric values for total nitrogen and total phosphorus for rivers and streams. In October 2017, the commission reviewed the phased implementation approach, refined its nutrient control approach to include WQCC Policy 17-1, and set an updated timeline for phased implementation of nutrient standards, including revision of the nutrients standards for lakes and streams and adoption of standards on priority waterbodies through 2027 (31.55).

In this hearing, the commission adopted revised total nitrogen and total phosphorus table value standards for lakes and reservoirs to address EPA's 2016 recommendations and ensure protective table value standards are available for protection of lakes and reservoirs with Aquatic Life and/or Recreation uses. In addition, the commission adopted these standards on lakes and reservoirs that are above certain discharges; after 2027, these standards will be adopted statewide on all remaining lakes and reservoirs with Aquatic Life and/or Recreation uses.

The commission revised 31.17 to incorporate the revised total nitrogen and total phosphorus standards for lakes and reservoirs and reflect Colorado's progress on the phased implementation timeline for lakes, reservoirs, rivers, and streams. These revisions included removing language regarding phased implementation of chlorophyll *a* standards, which, consistent with the phased implementation timeline developed in 2012 (31.50) and 2017 (31.55), now apply to all waterbodies with Aquatic Life, Recreation, and/or DUWS uses in Colorado.

II. Chlorophyll *a* Standards for Lakes, Reservoirs, Rivers, and Streams

The commission made no changes to the chlorophyll *a* table value standards to protect Aquatic Life, Recreation, and/or DUWS uses in lakes, reservoirs, rivers, or streams. In addition, the commission made no changes to existing site-specific chlorophyll *a* standards.

However, adoption of chlorophyll *a* standards was previously limited to specific segments or portions of segments, as outlined in 31.50(IV)(A) (i.e., waterbodies above certain discharge facilities and site-specific situations where numeric standards were needed to protect uses). In this rulemaking hearing, consistent with the phased implementation strategy developed in 2012 (31.50(IV)(A)) and 2017 (31.55), the commission adopted chlorophyll *a* standards statewide on all segments with Aquatic Life, Recreation, and/or DUWS uses in Regulation Nos. 32-38. Specifically, the commission adopted the chlorophyll *a* table value standard of 8 µg/L for all cold water lakes or reservoirs (larger than 25 acres) with Aquatic Life or Recreation E, U, or P uses; 20 µg/L for all warm water lakes or reservoirs (larger than 25 acres) with Aquatic Life or Recreation E, U, or P uses; 5 µg/L for all lakes or reservoirs (of any size) with DUWS; and 150 mg/m² for all cold or warm water streams with a Recreation E, U, or P use. Consistent with the approach used in 2012, the chlorophyll *a* standards for Aquatic Life and/or Recreation are only applied to lakes and reservoirs that have a residence time of at least 14 days. The chlorophyll *a* standard for DUWS applies to all lakes and reservoirs with a DUWS sub-classification, regardless of residence time duration. The phased implementation of the chlorophyll *a* standards adoption is now complete.

When determining if a site-specific chlorophyll *a* standard more or less stringent than the table value standard would be protective of a DUWS, the commission may consider factors such as whether disinfection byproducts (DBPs) have been or are currently being produced, the type of treatment technology in use, expected organic carbon removal efficiency during treatment, if the duration of the use is sufficient to result in chronic exposure or require management of disinfection byproducts, and any other relevant factors.

III. Revision of Total Nitrogen and Total Phosphorus Table Value Standards for Lakes and Reservoirs

In a rulemaking hearing in March 2012 (31.50), the commission adopted interim numeric table value standards for chlorophyll *a*, total nitrogen, and total phosphorus to protect the Aquatic Life, Recreation, and/or Direct Use Water Supply (DUWS) uses in lakes, reservoirs, rivers, and streams. The lakes and reservoirs standards were developed using a single empirical response relationship (using a compilation of data for both Cold and Warm lakes) that was intended to represent the cross-lake geometric mean response of chlorophyll *a* per unit of total nitrogen and total phosphorus.

In its July 14, 2016 action letter, EPA approved the commission's 2012 adoption of interim numeric values for chlorophyll *a*, and approved with recommendations the numeric values for total nitrogen and total phosphorus for lakes and reservoirs. For Warm lakes, EPA recommended that the commission should apply the total nitrogen and total phosphorus table value standards only where a site-specific analysis demonstrated that uses would be protected. For Warm and Cold lakes, EPA recommended evaluation of options for developing more protective table value standards to ensure that numeric standards for total nitrogen and total phosphorus could be assigned to individual segments with confidence that uses would be protected. EPA also suggested a classification analysis for lakes to account for the variability between lakes (e.g., Cold and Warm lakes), evaluating confounding factors in the stressor-response relationship between nutrients and chlorophyll *a*, and evaluating whether the standards are protective of lakes with a high chlorophyll *a* yield per unit of total nitrogen and total phosphorus.

The revised total nitrogen and total phosphorus table value standards adopted in this rulemaking hearing were developed in collaboration between the division and the lakes nutrients technical advisory committee (TAC), and included stakeholder outreach through the 10-year Water Quality Roadmap workgroup starting in May 2018. The methods used to develop these standards are described below and the technical analysis to support these revisions can be found in the division's prehearing and rebuttal statements and accompanying exhibits. The revised standards, which were added to new Table V at

31.17, are intended to address EPA's 2016 recommendations and ensure that the uses of Colorado's lakes and reservoirs are protected. Nutrient standards for rivers and streams were not revised during this process.

A. Data used in Total Nitrogen and Total Phosphorus Table Value Standards Revisions

Revisions to the numeric total nitrogen and total phosphorus standards for lakes and reservoirs were developed using an updated statewide dataset. The lake data averaging period of July - September was unchanged. While the dataset used in 2012 was limited to lakes that had at least three samples per growing season (July - September) at a dam location, the updated dataset included lakes with any representative sampling events during the growing season (July - September) from both dam and mid-lake locations to ensure that the range of lake and nutrients conditions throughout Colorado was represented. This approach more than doubled the number of lakes and reservoirs in the dataset, including waterbodies and conditions that were previously unrepresented in the dataset.

B. Approach to Developing Revised Total Nitrogen and Total Phosphorus Table Value Standards

The commission made refinements/changes to the multi-step method that was used to derive the interim nutrient standards in 2012. The method consists of four steps: Step 1) set the target chlorophyll *a* values (8 µg/L for Cold lakes and 20 µg/L for Warm lakes) to an 80th percentile for the purpose of incorporating a one in five year exceedance frequency into the numeric nutrient standards; Step 2) translate the chlorophyll *a* target from an 80th percentile to the median using a subset of well-sampled lakes and reservoirs with at least five years of chlorophyll *a* data; Step 3) use the statewide relationships between chlorophyll *a* and total nitrogen or total phosphorus to derive protective total nitrogen and total phosphorus target concentrations; Step 4) use the relationships for well-sampled lakes to translate the target concentrations back to 80th percentile (of the summer averages) concentrations, which are the final numeric nutrient standards that incorporate the one in five year exceedance frequency.

1. Classification: Warm Lakes and Cold Lakes

The commission relied on the same chlorophyll *a* table value standards that were used to derive the interim total nitrogen and total phosphorus standards in 2012: 8 µg/L for Cold lakes and 20 µg/L for Warm lakes. The total nitrogen and total phosphorus values based on these chlorophyll *a* table value standards are intended to maintain a trophic condition that balances and is protective of both Recreation and Aquatic Life uses in lakes and reservoirs. In 2012, the classification and stressor-response work used a single simple linear regression to characterize the average nutrient response for the target trophic condition for all lakes statewide. Based on EPA's 2016 recommendation, a key feature of the updated evaluation to support the current revision was that separate analyses were conducted for Cold and Warm lakes. Separating the analyses better addresses the wide range of physical conditions found in Colorado and the variability of the algal response to nutrients from lake to lake.

2. Stressor-response Relationship: Confounding Factors and High-yield Lakes

The stressor-response relationship between chlorophyll *a* and total nitrogen or total phosphorus was modeled using quantile regression to determine the appropriate threshold for establishing numeric standards (Step 3). Quantile regression analysis was selected over the simple linear regression approach used in 2012 because the updated dataset violated the statistical assumptions that linear regression relies upon (i.e., normally distributed regression residuals and constant variance). By selecting a quantile above the median, quantile regression analysis is also able to tailor the analysis to target high-yield lakes and

address non-specific confounding factors that affect the chlorophyll *a* response to nutrients in a lake. Given EPA's 2016 recommendation to account for and protect lakes that are more productive than average (i.e., high-yield), the 75th quantile of the statewide relationship between chlorophyll *a* and total nitrogen or total phosphorus was selected. This quantile is useful for nutrient standards development, and is intended to be representative of the relationship between chlorophyll *a* and nutrients with higher-yield lake-year averages (i.e., lake years in the upper half of responsiveness to nutrients).

The stressor-response analysis also evaluated a range of confounding factors, as recommended by EPA. "Secchi observed over expected" (O/E) values were used as an indicator of non-algal turbidity. A Secchi O/E term was included in the models used to develop total nitrogen and total phosphorus standards for Cold lakes because its inclusion improved correlation and provided for greater explanation of variance. A Secchi O/E value of 0.94, which represents the long-term typical existing quality of Cold lakes and reservoirs, was calculated from the median existing quality Secchi O/E values of Cold lakes with at least three years of data.

Warm lakes in the dataset exhibited less variability; therefore, no covariates were used in the models to derive table value standards for Warm lakes.

3. Exceedance Frequency

For the revised total nitrogen and total phosphorus table value standards, the commission retained the exceedance frequency of one in five years that was adopted in 2012. The only change in the method from 2012 was that the relationships used for steps 2, 3, and 4 (31.60(III)(B)(2)) were derived separately for Cold and Warm lakes.

C. Site-Specific Conditions

The commission recognizes that the response of algae to nutrients can vary based on lake-specific conditions. During the development of the revised nutrients table value standards for lakes and reservoirs, accompanying models ("Secchi-based Site-specific Equations") were developed that utilize site-specific covariate data to develop site-specific total nitrogen and total phosphorus standards (31.17, Table V Footnote 9). Use of lake-specific Secchi O/E data in these models recognizes the influence of non-algal turbidity on the relationships between chlorophyll *a* and nutrient constituents in lake systems. The commission acknowledges that, where representative lake-specific data exist for Secchi O/E, these equations are available to support development of site-specific standards in conjunction with a longevity plan. WQCD Rebuttal Revised Exhibit C includes considerations for use, minimum data requirements, and a calculator to support use of the equations at 31.17, Table V Footnote 9. As with any site-specific standard, each site-specific standard that is developed using the Secchi-based Site-specific Equations may be considered for adoption by the commission during basin-wide water quality standards reviews or other rulemaking actions.

Some parties provided information in this rulemaking that consideration of site-specific standards on some segments may be warranted in future commission reviews of water quality standards and classifications when and where data and information to support such a proposal are available. The commission continues to support the use of site-specific standards where determined appropriate in future rulemaking hearings.

D. Implementation of the Revised Total Nitrogen and Total Phosphorus Table Value Standards for Lakes and Reservoirs

1. Magnitude, Duration, and Frequency

The revised numeric nutrients standards for total nitrogen and total phosphorus are intended to address EPA's 2016 recommendations regarding the magnitude of the standards, but do not make adjustments to either the duration or frequency. These standards continue to be applied using growing season (July through September) annual average concentrations with an allowable exceedance frequency of once in five years. Consistent with the approach used in 2012, these numeric values are only applied to lakes and reservoirs greater than 25 acres in size that have a residence time of at least 14 days. The standards apply at a dam or mid-lake assessment location and do not apply to shore samples.

2. Phased Implementation

In this rulemaking hearing, the commission updated the table value standards for total nitrogen and total phosphorus for lakes and reservoirs at 31.17, and adopted them on specific waterbodies in Regulation Nos. 32-38. Specifically, the commission adopted into Regulation No. 31 standards of 380 µg/L total nitrogen and 21 µg/L total phosphorus for Cold lakes or reservoirs (larger than 25 acres) and 670 µg/L total nitrogen and 47 µg/L total phosphorus for Warm lakes or reservoirs (larger than 25 acres) with Aquatic Life or Recreation E, U, or P uses that are above certain discharges. These standards will apply to specific waterbodies upon adoption into the segment tables in Regulation Nos. 32-38. The commission made no changes to existing site-specific phosphorus standards.

The phased implementation strategy developed in 2012 (31.50(IV)(A)) and revised in 2017 (31.55) also included plans for adoption of total nitrogen and total phosphorus standards on other high priority waters, including DUWS reservoirs and lakes and reservoirs with public swim beaches (defined as waterbodies with a natural swimming area per C.R.S § 25-5-801, including having a fee-based cordoned off swim area) in this rulemaking hearing. However, the commission did not adopt total nitrogen and total phosphorus standards for these waterbodies at this time. The commission has determined it is appropriate to further delay the adoption of nutrient standards for these waterbodies to allow additional time for the division to work with stakeholders to address implementation challenges, as discussed below in 31.60(III)(D)(3).

By delaying adoption of nutrients standards for additional high priority lake and reservoir segments in Regulation Nos. 32-38, the commission understands that the division will not require the consideration of, and potential inclusion of, water quality based effluent limits in discharge permits based on the 31.17 total nitrogen and total phosphorus standards for a receiving water and/or downstream segment where the commission has not yet adopted total nitrogen and total phosphorus standards into Regulation Nos. 32-38. Additionally, it is the commission's understanding that permits issued by the division will not include compliance schedules based solely on the commission's intention to adopt these standards into Regulation Nos. 32-38 for the additional segments in 2027. The division will continue to meet the requirements in Regulation No. 61 for establishing permit effluent limits and issuing compliance schedules as necessary and appropriate to address a receiving water and/or downstream segments for waters where the commission has adopted nutrient standards in Regulation Nos. 32-38. Note that this in no way limits the application of the exception in section 85.5(3)(b)(iv) that allows a less stringent effluent limit than would otherwise be required by Regulation No. 85 if the Regulation No. 31 numeric stream criteria would be satisfied. Consistent with the intent of this delay, the commission also understands that the total nitrogen and total phosphorus standards in section 31.17 will not result in the division's implementation of water quality

based effluent limits in discharge permits for implementing Colorado's narrative water quality standards, set forth in section 31.11, in discharge permits.

The commission continues to acknowledge the need to protect these high priority waters. As noted in the Cost-Benefit Analysis, of the approximately 34 lakes and reservoirs with DUWS and swim beaches originally proposed to receive total nitrogen and total phosphorus standards in this rulemaking, 27 are in counties with EnviroScreen scores above 60, which means that 75% of these waterbodies are in disproportionately impacted communities. The commission anticipates that, in 2027, the division will propose the adoption of the total nitrogen and total phosphorus standards for lakes and reservoirs established in this rulemaking for these priority waterbodies, along with the statewide adoption of nutrient standards in Colorado. By revising the total nitrogen and total phosphorus table value standards for lakes and reservoirs through its actions at this hearing, the commission is providing significant time for permitted entities to prepare for the statewide adoption of these standards by the commission and the subsequent incorporation of water quality based effluent limits in permits by the division. This delay in adoption of standards to protect water quality in Colorado's lakes and reservoirs continues the decade-long delay incorporated into the phased implementation strategy adopted in 2012 and 2017 (31.50(IV)(A) and 31.55).

The commission expects permittees to use the additional time offered under this continued delay to ensure preparation for statewide adoption of total nitrogen and total phosphorus standards on lakes, reservoirs, rivers, and streams in 2027. For instance, activities such as using existing and expanding resources to develop technical, managerial, and financial plans for funding, installation, and operation of treatment works to meet future standards; influent, effluent, and instream data collection; evaluation of treatment alternatives, feasibility, and time needed to implement selected alternatives; evaluation of the need for site-specific standards or discharger-specific variances; and collaboration with the division and other interested stakeholders will help ensure the discharger community is prepared for the adoption of these standards in 2027 without further delay. The commission is committed to ensuring protection of public health and Aquatic Life and Recreation uses from the impacts of nutrient pollution and still plans to proceed with statewide adoption of the total nitrogen and total phosphorus standards in 2027.

In addition, the commission acknowledges that total nitrogen and total phosphorus standards have not been developed specifically to protect the 5 µg/L chlorophyll *a* target associated with the DUWS sub-classification. The commission expects that future consideration of nutrients table value standards for lakes and reservoirs will include development of total nitrogen and total phosphorus standards to protect DUWS.

3. Addressing Implementation and Feasibility in Preparation for Adoption of Nutrient Standards

The commission supports the framework established by the 10-year Water Quality Roadmap (WQCD Clean Water Policy 8) and is committed to completing the phased implementation of nutrient standards in 2027. As part of the Roadmap, the division has previously committed to: 1) developing a comprehensive implementation strategy for nutrients standards, 2) evaluating treatment alternatives and feasibility, and 3) conducting outreach and engaging interested stakeholders, including a subgroup to the Roadmap workgroup to consider nutrient implementation strategies scheduled to begin in 2023. In this rulemaking hearing, the division has emphasized its commitment to this work and is prioritizing and expanding its efforts to address implementation challenges and feasibility, including other consequences (e.g., water loss, greenhouse gas emissions). Despite the delay adopted in this hearing, the commission remains committed to adopting nutrients standards for all waterbodies statewide in 2027. The commission's expectation is that this

delay provides necessary time for the division and stakeholders to find solutions to address implementation and feasibility, collect site-specific information to identify treatment challenges and feasibility information associated with attainment of the nutrient standards, and discuss the various regulatory tools available, including site-specific standards, and the information needed for those paths. This delay also provides time to develop strategies to implement discharger-specific variances when necessary, in a way that reflects the greatest pollution reduction achievable by discharges, and that represents the highest degree of protection of the use from nutrient pollution for all of Colorado's waters.

Prior to 2027, the commission intends for the division to propose an informational hearing to inform the commission on the results of the stakeholder process to address implementation and feasibility concerns.

E. Revisions to 31.17 and Other Sections of Regulation No. 31

To accommodate the revised total nitrogen and total phosphorus standards for lakes and reservoirs, additional changes were made in Regulation No. 31, including:

- The definition of “chronic standard” at 31.5(7) was expanded to include chlorophyll *a*, total nitrogen, and total phosphorus.
- The definition of “existing quality” at 31.5(20) was expanded to include chlorophyll *a*, total nitrogen, and total phosphorus.
- The layout of the tables containing the table value standards for chlorophyll *a*, total nitrogen, and total phosphorus (previously included in 31.17 (b-d)) was revised and reorganized into new Table V (nutrient standards for lakes and reservoirs) and Table VI (nutrient standards for rivers and streams). This approach improves clarity and provides consistency with the table value standards in Tables I, II, and III. This approach also recognizes that the nutrient standards for lakes and reservoirs protect different uses than the nutrient standards for rivers and streams, and better accommodates the differences in the phased implementation timeline for each waterbody type.
- References to new Table V and Table VI were added in various sections of Regulation No. 31 that discuss table value standards and previously only referenced Tables I, II, and III.
- The existing footnotes applied to the nutrient standards tables in 31.17 were revised to improve clarity, including the removal of the phrase “median of multiple depths” because the phrase was unclear and methods and processes for determining attainment of nutrient standards will be consistent with the Section 303(d) Listing Methodology as adopted by the commission for that particular listing cycle. The word “annual” was added to Footnotes 5-8 to make it clear that the seasonal average is based on data from a single year, not multiple years combined.
- New footnotes were added to Table V and Table VI to improve clarity. Footnote 1 in both tables points to the phased implementation strategy for lakes, reservoirs, rivers, and streams in 31.17(2)(a); this footnote ensures transparency and clarity regarding implementation of the standards included in the tables. Footnote 2 in Table V clarifies the basis of the chlorophyll *a*, total nitrogen, and total phosphorus standards for lakes and reservoirs. The values are the same for Aquatic Life and Recreation uses because the standards were derived based on the target trophic condition and algal abundance that balances the needs of both uses. The standards apply where there is either an Aquatic Life and/or a Recreation (E, U, or P) use and are different for Cold and Warm waters.

Cold and Warm designations are adopted as part of the Aquatic Life use, and currently all lakes and reservoirs have an Aquatic Life use. However, in the future, if a lake or reservoir is assigned a Recreation (E, U, or P) use but no Aquatic Life use, it will be necessary to determine whether the waterbody is Cold or Warm. This determination should be made on a site-specific basis using site-specific information for that waterbody.

Revisions to 31.17 were also made to reflect Colorado's progress on the phased implementation timeline, including:

- The language regarding phased implementation of chlorophyll *a* standards for lakes, reservoirs, rivers, and streams was removed. Consistent with the phased implementation timeline developed in 2012 (31.50(IV)(A)) and 2017 (31.55), chlorophyll *a* standards now apply to all waterbodies with Aquatic Life, Recreation, and/or DUWS uses in Colorado. This phase of the implementation timeline is complete.
- Section 31.17 was reorganized to more clearly describe the circumstances in which total nitrogen and total phosphorus will apply to lakes and streams throughout the phased implementation timeline.
- Section 31.17(2)(c) was revised to include discharger-specific variances in the list of site-specific flexibilities available to the commission.

IV. Water Rights Concerns

Numerous parties to the rulemaking expressed concerns regarding the potential impact of lakes nutrients standards on activities involving the exercise of water rights, including exchanges, substitute supply, and augmentation plans. The commission notes that the purpose of this rule is to protect and improve the quality of water in Colorado's lakes and reservoirs, thus resulting in continued support of the beneficial uses of downstream senior water rights. Additionally, as in all other areas of Colorado's water quality program, the potential for application of these standards in a manner detrimental to water rights is constrained by the provisions of section 25-8-104, C.R.S. ("Section 104"). The commission intends that the implementation and enforcement of these standards be in strict compliance with Section 104.

To adhere to Section 104, the commission and the division ". . . shall consult with the state engineer and the water conservation board or their designees before making any decision or adopting any rule or policy which has the potential to cause material injury to water rights." § 25-8-104(2)(d), C.R.S. The commission initiated consultation, consistent with Section 104 and the 2017 MOU between the commission, with the State Engineer's Office, and the Colorado Water Conservation Board (CWCB), on August 23, 2022. The State Engineer's Office and the CWCB circulated a response ("SEO consultation response") on March 13, 2023.

After reviewing the information provided by the parties, including their responsive prehearing statements, rebuttals and accompanying exhibits, the SEO consultation response detailed the manner in which the State Engineer would consider the nutrient criteria in the administration of exchanges and plans for augmentation and concluded, among other statements, as follows:

"[T]he SEO and CWCB do not believe the adoption of the proposed nutrient standards for reservoirs or lakes, or the standards' ultimate implementation by the WQCD, will cause the State Engineer to deny exchanges in the future that were previously approved according to the State Engineer's Statute or deny the use of substitute supplies under water court decrees that otherwise would be approved under current standards. Specifically, if after the standards' implementation, the water quality of the substitute supplies and lakes/reservoirs is the same or better than in the past, and this quality has met the requirements of use of the senior appropriator in the past, the water will continue to meet the requirements of use in the future and we are not aware of a scenario where newly-adopted nutrient standards would cause the SEO to deny such

operations in the future. Therefore, we do not believe the adoption of these standards would result in a diminution of the available water supply that a water rights holder would otherwise enjoy at the time and place and in the amount of demand for beneficial use when operating in accordance with the holder's vested water right."

The commission accepts the content of the SEO consultation response, including its description of how the nutrient criteria will be considered in the administration of exchanges and plans for augmentation, as sufficient to respond to the concerns raised by parties regarding the potential for material injury to water rights through implementation of the nutrient criteria.

V. Economic Feasibility and Cost Considerations

The commission also considered the Cost-Benefit Analysis and Regulatory Analysis prepared by the division pursuant to sections 24-4-103(2.5) and (4.5) of the State Administrative Procedure Act and Commission Regulation 21.3(J) in making its final determination and the "availability, practicality, and technical and economic feasibility of treatment techniques" related to the adopted standards, as required by section 25-8-204(4)(b), C.R.S. In sum, the commission considers the nutrient standards adopted today to be consistent with all relevant aspects of the legislative declaration in section 25-8-102 of the Water Quality Control Act, including the "economic reasonableness" consideration stated in section 25-8-102(5).