

## **2013 Colorado Nutrient Criteria Development Plan Update**

### **I. Overview of Colorado's Nutrients Regulations – Adopted June 11, 2012**

The Colorado Water Quality Control Commission adopted nutrients regulatory provisions composed of two major components: (1) scientifically-based numerical values for nutrients at levels to protect beneficial uses of Colorado waters, which would initially be applied only to streams and lakes above dischargers and to protect municipal water supplies taken directly from lakes or reservoirs; and (2) a new Nutrients Management Control Regulation establishing technology-based treatment requirements for many domestic (and some industrial) wastewater dischargers, enhanced nutrients control requirements for storm water dischargers, provisions encouraging voluntary controls of nonpoint sources, and monitoring requirements to develop better information to refine Colorado's nutrients management efforts over time. The new rules become effective September 30, 2012.

### **II. Regulation #31 (Surface Water Basic Standards) Revisions**

The Regulation # 31 revisions include interim numerical values for phosphorus, nitrogen, and chlorophyll *a* for (1) rivers and streams and (2) lakes and reservoirs. The numerical values are based on the maximum amounts of each pollutant that can be present in water and still protect the designated beneficial use. These numerical values can be considered for the adoption of standards for individual water bodies in phases. Adoption of standards during the first phase will protect high quality waters above current dischargers and protect direct use water supply reservoirs.

- During the first phase, from 2012-2017, the Commission can consider adopting standards for phosphorus or chlorophyll *a* to protect aquatic life, recreation, and water supply uses only in the following specific circumstances:
  - In headwaters upstream of existing dischargers;
  - In Direct Use Water Supply Lakes and Reservoirs where this type of protection is determined to be appropriate (chlorophyll *a* only); and
  - Under other circumstances where the Commission determines Regulation # 85 will not provide sufficient control of nutrients.
- From 2017-2022, the Commission will continue to consider adoption of standards as above, and can also consider adopting nitrogen standards in the same circumstances outlined above.
- Starting in 2022, the Commission can consider adopting numerical water quality standards for nutrients for all Colorado surface waters, as appropriate based on the information developed under the first phase efforts.

<b>Implementation Timeline for Regulation #31</b>	
<b>Month-Year</b>	<b>Action</b>
Mar-12	Reg 31, Reg 85 Rulemaking Hearing
June-12	Reg 31, Reg 85 Final Action
Sept-12	Reg 31, Reg 85 effective date
Nov-12	Arkansas/RioGrande Issues Formulation Hearing- consider upstream waters TP, PWSR
Jan-13	Arkansas/Rio Grande notice/proposal - consider upstream waters TP, PWSR
Mar-13	Reg 85 Monitoring commences
Mar-13	Arkansas/Rio Grande evidence due - consider upstream waters TP, PWSR
Apr-13	Monitoring: Data submitted
Jun-13	Arkansas/Rio Grande Rulemaking Hearing - consider upstream waters TP, PWSR
Nov-13	Upper & Lower Colo Basin Issues Formulation Hearing - consider upstream waters TP, PWSR
Dec-13	303(d) List Hearing - consider Arkansas/RioGrande upstream TP standards
Jan-14	Upper & Lower Colo Basin notice/proposal - consider upstream waters TP, PWSR
Mar-14	Upper & Lower Colo Basin evidence due - consider upstream waters TP, PWSR
Apr-14	Monitoring: Data submitted
Jun-14	Upper & Lower Colo Basin Rulemaking Hearing - consider upstream waters TP, PWSR
Nov-14	So Platte Issues Formulation Hearing - consider upstream waters TP, PWSR
Jan-15	So Platte notice/proposal - consider upstream waters TP, PWSR
Mar-15	So Platte evidence due - consider upstream waters TP, PWSR
Apr-15	Monitoring: Data submitted
Jun-15	So Platte Rulemaking Hearing - consider upstream waters TP, PWSR
Oct-15	Triennial Review Hearing Reg 85
Nov-15	Basic Standards Issues Formulation Hearing
Dec-15	303(d) List Hearing - consider 32,33,36, 37 38 upstream TP standards
Jan-16	Basic Standards notice/proposal
Mar-16	Basic Standards evidence due
Apr-16	Monitoring: Data submitted
Jun-16	Basic Standards Rulemaking Hearing
Jan-17	SanJuan/Gunnison notice/proposal - consider upstream waters TP, PWSR
Mar-17	SanJuan/Gunnison evidence due - consider upstream waters TP, PWSR
Apr-17	Monitoring: Data submitted
May-17	Interim Nitrogen Values in Reg 31 become effective (can be used upstream)
Jun-17	SanJuan/Gunnison Rulemaking Hearing - consider upstream waters TP, PWSR
Nov-17	Arkansas/Rio Grande Issues Formulation Hearing - consider upstream waters TP & TN, PWSR
Dec-17	303(d) List Hearing - consider upstream TP, TN stnds
Jan-18	Arkansas/Rio Grande notice/proposal - consider upstream waters TP & TN, PWSR
Mar-18	Arkansas/Rio Grande evidence due - consider upstream waters TP& TN, PWSR
Apr-18	Monitoring: Data submitted
Jun-18	Arkansas/Rio Grande Rulemaking Hearing - consider upstream waters TP& TN, PWSR
Oct-18	Triennial Review Hearing Reg 85
Nov-18	Upper & Lower Colo Basin Issues Formulation Hearing - consider upstream waters TP & TN, PWSR
Jan-19	Upper & Lower Colo Basin notice/proposal - consider upstream waters TP & TN, PWSR
Mar-19	Upper & Lower Colo Basin evidence due - consider upstream waters TP& TN, PWSR
Apr-19	Monitoring: Data submitted
Jun-19	Upper & Lower Colo Basin Rulemaking Hearing - consider upstream waters TP& TN, PWSR

Nov-19	So Platte Issues Formulation Hearing - consider upstream waters TP& TN, PWSR
Dec-19	303(d) List Hearing - consider upstream TP, TN standards
Jan-20	So Platte notice/proposal - consider upstream waters TP & TN, PWSR
Mar-20	So Platte evidence due - consider upstream waters TP& TN, PWSR
Apr-20	Monitoring: Data submitted
Jun-20	So Platte Rulemaking Hearing - consider upstream waters TP& TN, PWSR
Nov-20	Basic Standards Issues Formulation Hearing
Jan-21	Basic Standards notice/proposal
Mar-21	Basic Standards evidence due
Apr-21	Monitoring: Data submitted
Jun-21	Basic Standards Rulemaking Hearing
Oct-21	Triennial Review Hearing Reg 85
Dec-21	303(d) List Hearing - consider upstream TP, TN standards
Apr-22	Monitoring: Data submitted
May-22	TP & TN interim values can be used for all waters
May-22	Small/disadvantage community exemption expires
Jun-22	SanJuan/Gunnison Rulemaking Hearing - consider upstream waters TP & TN, PWSR
Apr-23	Monitoring: Data submitted
Jun-23	Arkansas/Rio Grande Rulemaking Hearing - consider TN & TP all waters, PWSR
Dec-23	303(d) List Hearing - consider any TP, TN stnds
Apr-24	Monitoring: Data submitted
Jun-24	Upper & Lower Colo Basin Rulemaking Hearing - consider TN & TP all waters, PWSR
Oct-24	Triennial Review Hearing Reg 85
Apr-25	Monitoring: Data submitted
Jun-25	So Platte Rulemaking Hearing - consider TN & TP all waters, PWSR
Dec-25	303(d) List Hearing - consider any TP, TN standards

Table 1. Implementation Timeline for Regulation 31

### III. New Regulation #85 (Nutrients Management Control Regulation)

Regulation # 85 requires certain larger wastewater treatment facilities to meet effluent limits for phosphorus and nitrogen based on levels determined to be achievable with available technology. It focuses control requirements on the major regulated sources of nutrient pollution in Colorado and includes provisions to fine-tune application of the new treatment requirements. For example, there are exceptions, exclusions, and delays for small facilities, facilities in disadvantaged communities, and facilities that have minimal impacts. Regulation # 85 contains a voluntary approach for agriculture and other nonpoint sources, with the potential for additional regulatory requirements after ten years if needed, and monitoring requirements that will develop better information for future nutrients management decision-making.

- Technology-based effluent limits for the larger wastewater dischargers, including industrial discharges with significant nutrient concentrations, based on biological nutrient removal (BNR), to expedite nutrient load reductions from current sources.
  - Existing dischargers must meet an annual median of 1.0 mg/L for phosphorus and 15 mg/L for total inorganic nitrogen, and a 95<sup>th</sup> percentile of 2.5 mg/L for phosphorus and 20 mg/L for total inorganic nitrogen.

- New dischargers must meet an annual median of 0.7 mg/L for phosphorus and 7 mg/L for total inorganic nitrogen, and a 95<sup>th</sup> percentile of 1.75 mg/L for phosphorus and 15 mg/L for total inorganic nitrogen.
- Provisions that fine-tune the application of these new treatment requirements:
  - 46 of the largest domestic wastewater treatment facilities in the state (out of a total of approximately 400 domestic dischargers) will be subject to the new treatment requirements during the first ten years.
  - Domestic facilities 1 MGD or less or owned by a disadvantaged community are excluded from these effluent limits.
  - There is a ten-year deferment for (1) dischargers subject to existing, basin-specific nutrients control regulations, (2) domestic facilities 2 MGD or less, and (3) domestic and industrial facilities that are in a low priority watershed.
  - There is an exception from the effluent limits for dischargers with minimal impact on nutrient levels:
    - Where a discharger demonstrates it is unlikely to cause or contribute to an exceedance of the interim values in Regulation # 31;
    - For noncontact cooling water and construction dewatering where nutrients are not added; and
    - Where a discharger demonstrates the Regulation # 31 in-stream values are attainable with a less stringent effluent limit.
  - Variances where the benefits of controls do not bear a reasonable relationship to the costs of controls for individual dischargers.
  - Provisions for nutrient trading, to enhance flexibility for dischargers' compliance.
  - Provision for long-term compliance schedules for the construction of new treatment facilities, operations, or other measures.
- Requirements for stormwater facilities (municipal separate storm sewer systems or "MS4s") to implement nutrient-focused public education programs and best management practices at municipally-owned facilities.
- Provisions encouraging voluntary controls by nonpoint sources in the first ten-year phase of implementation, with potential regulatory requirements after this initial phase.
- Discharger monitoring requirements, to better characterize relative source contributions and the effectiveness of control measures, to better inform future nutrients management decisions:
  - Ongoing monitoring requirements for wastewater dischargers.
    - Effluent and in-stream monitoring for larger dischargers.
    - Only effluent monitoring for smaller dischargers.
  - A monitoring "gap analysis" and filling in any identified gaps in water quality characterization for municipal stormwater dischargers.
  - Encouraging voluntary monitoring efforts by agriculture and other nonpoint sources.

<b>Implementation Timeline for Regulation #85</b>	
March 13/14, 2012	Commission takes preliminary final action
April 9, 2012	Commission takes final action
May 10, 2012	Regulation #85 is published in Colorado Register
May 30, 2012	Regulation #85 becomes effective
May 31, 2012	<ul style="list-style-type: none"> <li>• Domestic and industrial facilities identified in 85.5(1)(a)(iii) and 85.5(2) – effluent limits in 85.5(1)(a) and (b) will be implemented into permits as they come up for renewal. They will also be required to be met by new or modified facilities as site applications are submitted.                             <ul style="list-style-type: none"> <li>○ Compliance schedules will likely be included in permits for existing facilities.</li> <li>○ Facilities may submit applications for a variance.</li> <li>○ Facilities may submit applications for a trade.</li> </ul> </li> <li>• MS4 Permittees – BMP requirements in 85.5(4) will be implemented into permits as they come up for renewal.</li> <li>• Nonpoint sources and agricultural operations – BMP, public education measures, and nutrient management plans are encouraged. The Division will collaborate with owners/operators of agricultural operations to pursue grants to control nonpoint sources.</li> </ul>
March 1, 2013	<ul style="list-style-type: none"> <li>• All domestic dischargers, even those not subject to effluent limits, and industrial dischargers identified by the Division must begin monitoring their effluent and the receiving stream for nutrients. Compliance with these requirements is automatic – i.e., implementation of these requirements into a permit is not required. Facilities must submit a certification to the Division that the sampling and analysis plan is in place and that monitoring is taking place.</li> <li>• Nonpoint sources and unpermitted point sources are encouraged to monitor for nutrients.</li> </ul>
April 15, 2014	Data collected by entities submitted to the Division for the period from March 1, 2013 – December 31, 2013.
October 31, 2014	MS4s identified in 85.6(3)(a) must submit a Discharge Assessment Data Report.
April 15, 2015	Data collected by entities submitted to the Division for the period from January 1, 2014 – December 31, 2014.
2015 Triennial Review	<ul style="list-style-type: none"> <li>• The Division will report to Commission on progress of nonpoint source and agricultural operations nutrients reduction.</li> <li>• Based on information in the Discharge Assessment Data Reports submitted in 2014, the Division may propose additional monitoring or BMP requirements for MS4s.</li> <li>• The Division may recommend changes to the regulation to improve its effectiveness.</li> </ul>
April 15, 2016	Data collected by entities submitted to the Division for the period from January 1, 2015 – December 31, 2016.
April 15, 2017	Data collected by entities submitted to the Division for the period from January 1, 2016 – December 31, 2016.
May 31, 2017	Interim Nitrogen Values Become Effective
April 15, 2018	Data collected by entities submitted to the Division for the period from January 1, 2017 – December 31, 2017.
2018 Triennial Review	The Division may recommend changes to the regulation to improve its effectiveness.
April 15, 2019	Data collected by entities submitted to the Division for the period from January 1, 2018 – December 31, 2018.
April 15, 2020	Data collected by entities submitted to the Division for the period from January 1, 2019 – December 31, 2019.
April 15, 2021	Data collected by entities submitted to the Division for the period from January 1, 2020 – December 31, 2020.
2021 Triennial Review	The Division may recommend changes to the regulation to improve its effectiveness.

<b>Implementation Timeline for Regulation #85</b>	
April 15, 2022	Data collected by entities submitted to the Division for the period from January 1, 2021 – December 31, 2021.
May 31, 2022	If voluntary nonpoint source BMPs are not effective in managing nutrients, the Commission may consider the adoption of prohibitions or precautionary measures to further limit nutrient concentrations.
June 1, 2022	<ul style="list-style-type: none"><li>• Facilities subject to Control Regulations 71-74 will be subject to Regulation #85 effluent limits as their permits come up for renewal or a site application is submitted</li><li>• The Commission may consider the adoption of prohibitions or precautionary measures for nonpoint sources and agricultural operations.</li></ul>