

**WATER QUALITY CONTROL COMMISSION**  
**Colorado's Nutrients Rules and Implementation Status**  
**March 13, 2013**

In June 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 designated 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 became effective September 30, 2012.

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 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. More specifically:

- 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 phosphorus and nitrogen for all Colorado surface waters as appropriate, based on the information developed under the first phase.

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. It also includes monitoring requirements that will develop better information for future nutrients management decision-making. More specifically:

- 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:
  - Approximately 45 large wastewater treatment facilities in the state (out of a total of approximately 390 facilities subject to monitoring) 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.

- A ten-year deferment for (1) dischargers subject to existing, basin-specific nutrients control regulations, (2) domestic facilities discharging 2 MGD or less, and (3) domestic and industrial facilities that are in a low priority watershed.
- 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 options.
- Provision for long-term permit 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 unregulated 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 for use in 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.

EPA Actions:

As of the beginning of 2013, we are still awaiting EPA action with respect to the approval of the interim numeric value additions in Regulation #31. Regulation #85 was not submitted to EPA because it is not a water quality standard subject to federal approval, although it is an integral component of the overall nutrient management approach in Colorado.

Implementation Status:

The implementation of Regulation #85 started in the fall of 2012 and will proceed as follows:

- November 1, 2012 - Discharges from cooling towers must begin monitoring and continue through October 31, 2014.
- March 1, 2013 - All domestic dischargers (even those not subject to effluent limits) and industrial dischargers identified by the Division must begin monitoring their effluent for nutrients. Larger dischargers also do receiving water monitoring.
- July 31, 2013 – Domestic, industrial, and MS4 facilities new effluent limits will be implemented into permits as they come up for renewal. As stated above, compliance schedules will be placed into permits as appropriate to allow time to install any necessary treatment infrastructure to meet the new limits. For nonpoint sources and agricultural operations, BMPs, public education measures, and nutrient management plans are encouraged and supported by the Division to pursue grants to control nonpoint sources.
- Calendar Year 2014 - Data collected by entities submitted to the Division. MS4s submit a Discharge Assessment Data Report.
- Calendar Year 2015 - Data collected from cooling tower dischargers and other entities submitted to the Division. Report to Commission on progress of nonpoint source and agricultural operations nutrients reduction, MS4 potential additional monitoring or BMP requirements, and other recommendations.

Both regulations are subject to statutory triennial review requirements, with the first review of Regulation #85 scheduled for 2015.