

## 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.

### 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.

### 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 nutrients for all Colorado surface waters, as appropriate based on the information developed under the first phase efforts.

### 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.

### 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:
  - 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.