DRAFT
~~FEBRUARY 2~~JULY 5, 2011

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

WATER QUALITY CONTROL COMMISSION

5 CCR 1002-85

REGULATION #85

NUTRIENTS MANAGEMENT CONTROL REGULATION

85.1 AUTHORITY

The Water Quality Control Commission is authorized by section 25-8-205 C.R.S., to promulgate control regulations to describe prohibitions, standards, concentrations, and effluent limitations on the extent of specifically identified pollutants that any person may discharge into any specific class of state waters.

Materials incorporated by reference are available for public inspection during normal business hours, or copies may be obtained at a reasonable cost, from the Administrator, Water Quality Control Commission, 4300 Cherry Creek Drive South, Denver, Colorado 80246. Unless expressly stated otherwise, materials incorporated by reference are those editions in existence as of the date this regulation is promulgated or revised by the Water Quality Control Commission and references do not include later amendments to or editions of the incorporated material. All material incorporated by reference may be examined at any state publications depository library.

85.2 APPLICABILITY

This regulation applies to point sources and nonpoint sources of nutrients as identified in this regulation.

85.3 SEVERABILITY

The provisions of this regulation are severable, and if any provisions or the application of the provisions to any circumstances is held invalid, the application of such provision to other circumstances, and the remainder of this regulation shall not be affected thereby.

85.4 DEFINITIONS

See the Colorado Water Quality Control Act and the Water Quality Control Commission codified regulations for additional definitions.

(1) “BEST MANAGEMENT PRACTICE (BMP)” means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "state waters." BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

(2) “DISADVANTAGED COMMUNITY” – means a community with a population less than 5,000 and an average household income of less than 80% of the State median household income.

(3) "LOCAL GOVERNMENT" means a city, town, county, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or a designated and approved management agency under section 208 of the federal Clean Water Act.

(4) "MS4" means a municipal separate storm sewer system.

(5) "MUNICIPAL SCREENER" means the total annualized cost of water pollution control at the DWWTW, including the cost of meeting the effluent limitations at 85.5, divided by the median household income, on a percentage basis [ie (annualized cost of treatment / median household income)*100].

(~~5~~6) "NONPOINT SOURCE" means any activity or facility other than a point source from which pollutants are or may be discharged. For the purposes of this regulation, nonpoint source includes all runoff that is not subject to the requirements provided under Regulation #61, section 61.3(2)(e), (f), or (g), including those designated by the Division under section 61.3(2)(f)(iii), whether sheet flows or collected and conveyed through channels, conduits, pipes or other discrete conveyances.

(~~6~~7) "STORMWATER" means stormwater runoff, snow melt runoff, and surface runoff and drainage.

85.5 SPECIFIC LIMITATIONS FOR DISCHARGERS OF NUTRIENTS

The effluent limitations and stormwater management practices in this section shall be implemented in the CDPS permit authorizing the discharge.

(1) Numeric Limitations for Domestic Wastewater Treatment Works (DWWTW)

(a) Domestic Wastewater Treatment Works Discharging Prior to May 31, 2012 or That Have Submitted a Complete Request For Preliminary Effluent Limits To the Division Prior to May 31, 2012

(i) Small and/or Disadvantaged Communities.

~~(A)~~ The numeric limits in subsections (~~ii~~ iii)(a) and (b) below will not be included in preliminary effluent limitations for Site Location and Design Approvals or in effluent limitations in CDPS permits ~~prior to May 31, 2022~~ for the following categories of dischargers:

(A) Any DWWTW with a design capacity of less than or equal to ~~0.5~~ 1.0 million gallons per day that uses waste stabilization pond technology as its means of treating wastewater.

(B) Any DWWTW owned by a disadvantaged community.

(C) Any DWWTW with a design capacity of less than or equal to 0.1 million gallons per day.

(ii) The numeric limits in subsections (iii)(a) and (b) below will not be included in preliminary effluent limitations for Site Location and Design Approvals or in effluent limitations in CDPS permits prior to May 31, 2022 for DWWTW subject to Watershed Protection Control Regulations 71-74 (5 CCR 1002-71, 5 CCR 1002-72, 5 CCR 1002-73, and 5 CCR 1002-74).

~~(B) The numeric limits for total inorganic nitrogen in subsection (ii)(b) below will not be included in preliminary effluent limitations for Site Location and Design Approvals or in effluent limitations in CDPS permits prior to May 31, 2022 for any DWWTW with a design capacity of less than or equal to 0.5 million gallons per day that is a sequencing batch reactor (SBR) that demonstrates it can meet the total phosphorus limitation imposed pursuant to section 85.5 , but cannot meet the total nitrogen requirements.~~

(~~ii~~ iii) For all ~~Other~~ Domestic Wastewater Treatment Works Not Identified in subsections (a)(i) or (ii) above and Discharging Prior to May 31, 2012 or for which a complete request for preliminary effluent limits has been submitted to the Division prior to May 31, 2012, the following numeric limits shall apply:

PARAMETER		PARAMETER LIMITATIONS	
		Annual ~~Average~~ Median[1]	~~Quarterly~~ ~~Average~~ Semiannual Median (Jan-June; July-Dec)[2]
(a)	Total Phosphorus	~~0.7~~ 1.0 mg/l	~~1.0~~ 1.25 mg/l
(b)	Total Inorganic Nitrogen as N[3]	~~5.7~~ 10 mg/l	~~9.0~~ 15 mg/l

1 Running Annual ~~Average~~ Median: The ~~arithmetic mean~~ median of all samples taken in the most recent 12 calendar months.
2 ~~Running Quarterly Average: The arithmetic mean of all samples taken in the most recent 3 calendar months.~~ Semiannual Median: The median of all samples taken in the specified 6 calendar months.
3 Determined as the sum of nitrate as N, nitrite as N, and ammonia as N.

(b) For Domestic Wastewater Treatment Works Which ~~Begin Discharging~~Submit a Complete Request for Preliminary Effluent Limits to the Division On Or After May 31, 2012, the following numeric limits shall apply:

PARAMETER		PARAMETER LIMITATIONS	
		Annual ~~Average~~ Median[1]	~~Quarterly~~ ~~Average~~ Semiannual Median (Jan-June; July-Dec)[2]
(a)	Total Phosphorus	~~0.43~~ 0.7 mg/l	~~0.65~~ 1.0 mg/l
(b)	Total Inorganic Nitrogen as N[3]	~~3.0~~ 7 mg/l	~~5.0~~ 10 mg/l

1 Running Annual ~~Average~~ Median: The ~~arithmetic mean~~ median of all samples taken in the most recent 12 calendar months.
2 ~~Running Quarterly Average: The arithmetic mean of all samples taken in the most recent 3 calendar months.~~ Semiannual Median: The median of all samples taken in the specified 6 calendar months.
3 Determined as the sum of nitrate as N, nitrite as N, and ammonia as N.

(2) Numeric Limitations for Non-Domestic Wastewater Treatment Works

(a) Non-Domestic Wastewater Treatment Works Discharging Prior to May 31, 201~~2~~3. The provisions of section 85.5(1)(a)(~~ii~~iii) apply to non-domestic wastewater treatment works where the Division has determined, based on credible information regarding the quality of the untreated wastewater, that the facility may, without treatment, discharge total nitrogen or total phosphorus concentrations in excess of the respective effluent limitations identified in section 85.5(1)(a)(~~ii~~iii).

(b) Non-Domestic Wastewater Treatment Works Which Begin Discharging On Or After May 31, 201~~2~~3. The provisions of section 85.5(1)(b) apply to non-domestic wastewater treatment works where the Division has determined, based on credible information regarding the quality of the untreated wastewater, that the facility may, without treatment, discharge total nitrogen or total phosphorus concentrations in excess of the respective effluent limitations identified in section 85.5(1)(b).

~~[*For discussion: should there be an exemption for situations where an industrial process is not the source of the P or N (ie, cooling water at a power plant)?*]~~

~~[*For discussion: should there be an exemption for temporary facilities (ie, construction dewatering)?*]~~

(3) Additional Provisions Applicable to Domestic and Non-Domestic Wastewater Treatment Works

(a) Compliance Schedules

A permit shall ~~be~~ not be issued which allows a violation of the provisions of this control regulation unless it contains a schedule of compliance requiring specific steps needed to modify or install treatment facilities, operations or other measures and deadlines for completion of those steps. Factors that the Division shall consider in developing the deadlines to be included in a compliance schedule, based on information that may be provided by the permittee or is otherwise known, shall include:

(i) Availability of resources needed to modify or install treatment facilities, adjust operations or other measures, including any in-house resources, the availability of consultants and contractors in the area with the appropriate expertise, and the availability of financing for any identified facility construction or other capital project, including the Water Pollution Control Revolving Fund;

(ii) Current conditions at the site, including existing treatment processes, the physical characteristics of the property, and the layout of the facility on the property;

(iii) Sufficient time for operational startup, new plant optimization, and operator training;

(~~iii~~iv) Factors identified by the permittee that might significantly affect the time necessary to complete one or more of the steps necessary to attain compliance; and

(~~iv~~v) Other site specific factors affecting the cost and timing of construction activities.

(b) Exceptions

The numerical effluent limitations set forth in sections 85.5(1)(a)(~~ii~~iii), 85.5(1)(b), and 85.5(2) shall not apply ~~to any~~under the following circumstances:

(i) Where a discharger ~~that can demonstrate~~demonstrates to the satisfaction of the Division that its discharge has no reasonable potential to cause or contribute to ambient nutrient concentrations in its receiving waters that exceed the relevant numeric levels for total phosphorus and total nitrogen set forth in section 31.17 of Regulation #31~~.~~;

(ii) Where noncontact cooling water discharges contain nutrients (phosphorus or nitrogen) and 100 percent of the nutrients in the discharge originate from the receiving water as intake water; or

(iii) Where discharges consist solely of ground water that is pumped for the purpose of dewatering a construction site or for building sumps so long as no phosphorus or nitrogen is added to the ground water being discharged.

(c) Variances

(i) Variances from the requirements of this control regulation may be granted by the Division where it is demonstrated by the permittee to the Division's satisfaction that the nutrient reduction benefits of meeting the section 85.5 effluent limitations do not bear a reasonable relationship to the economic, environmental, or energy impacts resulting from meeting those effluent limitations. Meeting the effluent limitations in section 85.5 shall be presumed not to bear a reasonable relationship to the associated economic, environmental, or energy impacts where ~~the present worth cost of meeting those effluent limitations _____ [*For discussion – should the presumption be based on user costs? Costs per pound of TP and TN removed or per gallon of treated effluent? Other options?*]~~;

(A) 50% or more of the annual median TN or TP concentration results from regulated, non-atmospheric sources of nutrients at the point below the mixing zone of the discharge, if

- for public sector entities, the Municipal Screener value is 2 or greater.
- for private sector entities, the required increase in treatment will cause significant changes in the entity's level profitability, liquidity, solvency, and leverage.

(B) 30-49% of the annual median TN or TP concentration results from regulated, non-atmospheric sources of nutrients at the point below the mixing zone of the discharge if:

- for public sector entities, the Municipal Screener value is 1.5 or greater.
- for private sector entities, the required increase in treatment will cause significant changes in the entity's level profitability, liquidity, solvency, and leverage.

(C) 10-29% of the annual median TN or TP concentration results from regulated, non-atmospheric sources of nutrients at the point below the mixing zone of the discharge if:

- for public sector entities, the Municipal Screener value is 1 or greater.
- for private sector entities, the required increase in treatment will cause significant changes in the entity's level profitability, liquidity, solvency, and leverage.

(D) <10% of the annual median TN or TP concentration results from regulated, non-atmospheric sources of nutrients at the point below the mixing zone of the discharge.

(ii) A request for a variance shall be accompanied by proposed alternate effluent limits that represent the highest degree of nutrient removal that is consistent with the reasonable relationship test.

(iii) Variances shall be reviewed, revised and /or renewed as appropriate at the time of permit renewal.

(4) MS4 Permit Requirements for Nutrient Source Reductions

The following requirements, at a minimum, shall be incorporated into a CDPS Permit for discharges from a Municipal Separate Storm Sewer System (MS4) required to obtain a CDPS Permit pursuant to Regulation #61.

(a) **Public education and outreach on stormwater impacts associated with nutrients.** The MS4 permittee must develop, document, and implement a public education program to reduce water quality impacts associated with nitrogen and phosphorus in stormwater runoff and illicit discharges~~, that includes:~~

~~(i) Evaluation, identification~~ and ~~targeting of specific~~ distribute educational materials or equivalent outreach to targeted sources (e.g., residential, industrial, agricultural, ~~and/~~or commercial ~~nitrogen and phosphorus sources~~) that are contributing to, or ~~to~~ have the potential to contribute, nutrients to the waters receiving the discharge authorized under the MS4 permit.~~permit for the MS4. Evaluation and identification shall be documented and include, at a minimum, identification and assessment of current potential nutrient contributions to the MS4, identification of sources for which a reduction in nutrient discharges are likely to be obtained through education, and prioritization of sources for implementation of the education program based on these assessments.~~

~~(ii) Distribution of educational materials or equivalent outreach focused on sources identified in subparagraph (i) of this section.~~

CDPS Permits shall authorize MS4 permittees to meet the requirements ~~of subparagraphs (i) and (ii)~~ of this section through contribution to a collaborative program to evaluate, identify, target and provide outreach that addresses sources state-wide or within the specific region or watershed that includes the receiving waters impacted by the MS4 permittee's discharge(s).

(b) **Pollution Prevention/Good Housekeeping for Municipal Operations associated with nutrients.** The permittee must develop and implement ~~an operation and maintenance~~a municipal operations program that has the ultimate goal of preventing or reducing nitrogen and phosphorus in stormwater runoff associated with the MS4 permittee's operations. ~~The program must include the following:~~

~~(i) Evaluation, identification and targeting of specific nitrogen and phosphorus sources that are contributing, or to have the potential to contribute, nutrients to the MS4 permittee's receiving waters.~~

~~(ii)~~ Written procedures for an operation and maintenance program to prevent or reduce nitrogen and phosphorus in stormwater runoff associated with the MS4 permittee's operations~~.~~ shall be developed. The program must specifically list the municipal operations (i.e., activities and facilities) that are impacted by this operation and maintenance program.

CDPS Permits shall authorize MS4 permittees to meet the requirements of ~~subparagraphs (i) and (ii) of~~ this section through contribution to a collaborative program to evaluate, identify, and target sources state-wide or within the specific region or watershed that includes the receiving waters impacted by the MS4 permittees discharge(s).

(5) Nonpoint Source Discharges

(a) Best Management Practice Implementation

(i) Local governments, individuals, corporations, partnerships, associations, agencies, and other entities with responsibility for activities or facilities that cause or could reasonably be expected to cause nonpoint source nutrient pollution of waters are encouraged to adopt and implement/install BMPs to the maximum extent practicable to reduce nutrient loads from such sources.

(ii) Agricultural operations that apply supplemental nutrients as part of crop production activities are encouraged to develop and implement nutrient management plans to the maximum extent practicable to reduce nutrient loads from such sources. Nutrient planning should be based on current soil, manure, and plant tissue test results developed in accordance with guidance or industry practice, such as that developed or recognized by Colorado State University.

(iii) The choice of which type of voluntary nonpoint source control measures shall be made by the entities identified in paragraphs (i) and (ii) above.

(iv) The Division shall collaborate with owners/operators of agricultural operations in pursuing incentive, grant, and cooperative programs to control nonpoint source pollution related to agricultural and silvicultural practices.

(b) Public Information and Education

(i) The Division and entities identified in Section 85.5(5)(a)(i) are encouraged to develop and implement a public information and education program. This

program will focus on the prevention of pollution from sources that could be mobilized from present and future activities as well as measures that could abate known nonpoint source pollution. Areas for abatement include, but are not limited to, general agricultural and silvicultural practices, landscaping activities, and other nonpoint sources of nutrients.

(ii) The program will be consistent with the voluntary, incentive-based approach and focus on the general public, and agricultural and local government sectors.

(c) Additional Nonpoint Source Actions

(i) During the triennial review of this control regulation, the Division shall report to the Commission on the progress ~~and~~ implement~~ation~~ing ~~of~~ the activities ~~required~~addressed under this section.

(ii) If voluntary nonpoint source BMPs are not effective in managing nutrients by May 31, 2022, the Commission may consider the adoption of prohibitions or precautionary measures to further limit nutrient concentrations.

(iii) Pursuant to section 25-8-205(5), C.R.S., after May 31, 2022 the Commission may consider adopting, in consultation with the commissioner of agriculture, control regulations specific to agricultural and silvicultural practices if the Commission determines that sufficient progress has not been demonstrated in agricultural nonpoint source nutrient management.

85.6 MONITORING REQUIREMENTS

(1) ~~The Commission has determined that monitoring nutrient conditions is a necessary component of this control regulation. Data will be gathered~~ Monitoring requirements are established by this Control Regulation to evaluate the effectiveness of this control regulation and to ~~support quantification of~~ determine the sources and load of nutrients at selected locations, and eventual implementation of appropriate and necessary source controls.

(2) POINT SOURCE MONITORING - PROCESS WATER DISCHARGERS

(a) Applicability. The requirements of this section apply to DWWTW and non-DWWTW dischargers identified by the Division pursuant to section 85.5(2). This requirement applies to all such discharges whether or not they are subject to effluent limits. Facilities that discharge to lakes or groundwater may have modified monitoring requirements.

(b) Nutrient Monitoring Program: Facilities identified in subsection (2)(a), above, shall develop, implement, and document a routine water quality monitoring program. The monitoring program shall be designed to characterize the load (coincident flow and concentration) of nutrients in the discharge, the concentrations in the receiving water above the discharge, and the load of nutrients at selected locations in the rivers and streams below the discharge. The monitoring program shall include the following information:

(i) Effluent Monitoring:

(A) Locations: Sampling for nutrients is required in the effluent before it is discharged into the receiving water body at the location where monitoring is performed to satisfy other CDPS permit requirements.

(B) Parameters: At a minimum, ~~samples~~sufficient data shall be collected to calculate TN, TIN, and TP load. Samples of treated effluent shall be analyzed for total nitrogen (or the components to calculate total nitrogen such as total Kjeldahl nitrogen plus nitrate-nitrite) and total phosphorus (or the components to calculate total phosphorus). ~~Actual~~Daily average

effluent discharge ~~data~~ shall be collected at the same time as the ~~concentration data collection.~~nutrient concentrations are measured.

(C) Frequency: Samples shall be collected a minimum of six times a year (every two months) for minor discharges and monthly for major discharges.

(ii) Stream Nutrient Monitoring:

(A) Locations: Sampling for nutrients is required in the receiving water body~~-~~:

- upstream of the discharge; and
- at the closest active Colorado Division of Water Resources gaging station ~~(that is~~with daily flow available throughout the year downstream of the ~~discharge).~~discharge's mixing zone; or
- In lieu of the closest downstream Division of Water Resources gaging station, facilities may take part in collaborative watershed-based monitoring efforts if the parameters and frequency follow sections (B) and (C) below.

(B) Parameters: At a minimum, samples shall be analyzed for total nitrogen (total Kjeldahl nitrogen plus nitrate-nitrite, or the components to calculate total nitrogen) and total phosphorus (or the components to calculate total phosphorus). Daily streamflow record must also be available throughout the year in order to calculate loads.

(C) Frequency: Samples shall be collected a minimum of six times a year (every two months) for minor discharges and monthly for major discharges.

(iii) Lake/Reservoir Monitoring: RESERVED

(iv) Timing: Entities shall commence data collection no later than March 1, 2013. ~~to provide time to allow for coordination with proximate point source facilities, non-point sources, and other known monitoring efforts, as well as to allow for the purchase of equipment and requisite training. Where a gage is selected by more than one discharger, dischargers may share the responsibility for sampling, analysis, and reporting.~~

(3) POINT SOURCE MONITORING – MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGERS

~~(a) Applicability. The requirements of this section apply to all entities that are required to have a CDPS discharge permit pursuant to Regulation #61 for stormwater discharges from a Municipal Separate Storm Sewer System (MS4).~~

~~(b) Nutrient Monitoring Program: Entities shall develop, document, and implement a routine annual water quality monitoring program. The monitoring program shall be developed to meet the goal of quantifying and characterizing the concentrations of nutrients in discharges from the permitted MS4 outfalls. The monitoring program shall include the following information.~~

~~(i) Locations: Monitoring for nutrients will be required in the discharges from the permitted MS4, and/or at a representative location(s) within the MS4. The plan shall identify specific outfalls for monitoring and the types of discharges discussed in subsections ii and iii, below, that will be monitored. Monitoring locations shall, at a minimum, be from a number of outfalls so the data that is collected characterizes the nutrient sources, nutrient transport, and nutrient removal mechanisms for stormwater runoff and other discharges from the permitted MS4. The monitoring plan shall include a summary of the evaluation process used to meet this requirement.~~

~~(ii) Wet Weather Discharges: Monitoring shall be conducted to characterize discharges associated with and representative of stormwater runoff events. Runoff events shall be selected for monitoring, and the monitoring locations and frequency shall be determined, to provide data to characterize flows representative of expected runoff events. Evaluation shall be based on consideration of factors such as duration, intensity, and if the event was a result of rainfall or snowmelt. A summary of the evaluation used in this determination shall be included in the monitoring plan. Monitoring shall be conducted of a variety of different events to characterize runoff associated with these variables. Monitoring shall be conducted using automated samplers and other methods adequate to characterize pollutant variability during the runoff event.~~

~~(iii) Dry Weather Discharges: Monitoring shall be conducted to identify and characterize dry weather flows not associated with stormwater runoff events. Monitoring locations and frequency shall be adequate to characterize flows that persist during both periods with little to no irrigation contributions (late fall/winter) and flows substantially influenced by flows from irrigation (summer). Monitoring locations and frequency shall be adequate to characterize flows representative of the dry weather flow sources present in the MS4, including but not limited to flows substantially influenced by residential, commercial, and/or municipal irrigation contributions. A summary of the evaluation process used to meet this requirement shall be included in the monitoring plan.~~

~~(iv) All monitoring required by this section shall include, at a minimum, the water chemistry parameters of total nitrogen (total kjeldahl nitrogen plus nitrate-nitrite) and total phosphorus (or components). Dry weather monitoring shall also include measurement of flow.~~

~~(v) Characteristics of Permitted Area. The Discharge Monitoring Plan shall include information on characteristics relevant to the hydrology and nutrient concentration for the runoff of the areas contributing runoff to all monitoring locations used to meet the minimum requirement in this section, and for the MS4 permittee's permitted area as a whole.~~

(a) Applicability: The requirements of this section apply to all municipalities and counties that are required to have a CDPS discharge permit pursuant to Regulation #61 for stormwater discharges from a Municipal Separate Storm Sewer System (MS4).

(b) Wet Weather Discharges: The MS4 Permittee shall develop and implement an ongoing program to provide data that assesses annual and seasonal nitrogen and phosphorus contribution to state waters in wet weather discharges from the MS4 outfalls. Data shall be representative of current conditions, including land uses, impervious areas, and water quality BMPs. Existing data, new monitoring data, or a combination of the two shall be used. To meet this requirement, the MS4 permittee shall comply with the requirements of either Option 1 in accordance with subsection (i) or Option 2 in accordance with subsection (ii), below.

(i) Option 1, Assessment of MS4 Discharges: The MS4 permittee shall implement a program to document nitrogen and phosphorus contributions in MS4 discharges by monitoring of MS4 discharges or monitoring of flows within MS4s. The data must be representative of wet weather discharges from the permitted MS4.

(A) Data shall be provided that is representative of rainfall and snowmelt events. Data shall be included that is representative of all land uses significantly present within the area contributing runoff to the permitted MS4.

(B) Where existing data is used to meet the requirements of this section, an identification of the information sources (e.g., studies, databases, monitoring plans, etc) used, the process implemented to generate and analyze the data and supporting information, and an assessment of the representativeness of the data to the discharges from the MS4. The permittee shall implement an annual review of the continued representativeness of that data and the need for additional monitoring data to adequately assess current conditions; including the impact of newly implemented nutrient controls mechanisms.

(C) Where new monitoring data is used to meet the requirements of this section, the MS4 permittee shall implement a routine annual monitoring program. The MS4 permittee shall document specific outfalls and/or in-system locations for monitoring and frequency.

(D) The MS4 permittee shall analyze the data to develop an estimate of stormwater runoff flows and associated concentrations of total nitrogen and total phosphorus in discharges from the MS4. The estimate shall take into account and document land uses, imperviousness, watershed hydrology, and precipitation data within the permitted area. Data shall be provided that includes both annual and monthly estimates.

(ii) Option 2, Assessment of Receiving Water(s): The MS4 permittee shall implement a program to document nitrogen and phosphorus concentrations in one or more of the MS4's receiving waters, in a manner that facilitates use of in-stream data through modeling or other methods to for ongoing assessment of wet weather nitrogen and phosphorus contributions from MS4 discharges on a watershed level.

(A) The monitoring data must result from multiple grab samples (e.g., using an automatic sampler) analyzed for nitrogen and phosphorus concentrations taken during periods when the flow in the receiving water(s) is under the influence of precipitation-driven discharges. Associated and relevant storm event data over the contributing watershed shall be determined.

(B) Additional monitoring shall be conducted, or existing representative information reviewed and analyzed, as necessary to characterize base flows conditions and probable contributions of nitrogen and phosphorus during the monitored events from stormwater runoff from non-point sources and in-stream sources associated with increased stream energy from storm flows (e.g., re-suspension, stream scour, bed erosion, bank erosion).

(C) Data shall be from receiving waters for which a measurable storm hydrograph associated with discharges from MS4s is present.

(D) Where existing data is used to meet the requirements of this section, the permittee shall implement an annual review of the continued representativeness of that data and the need for additional monitoring data to adequately assess current conditions, including the impact of newly implemented nutrient controls mechanisms.

(c) Dry Weather Discharges: The MS4 Permittee shall develop and implement a program to provide data that assesses annual and seasonal nitrogen and phosphorus contribution to state waters in dry weather discharges from the MS4 that are substantially influenced by residential, commercial, and/or municipal irrigation

contributions, to the extent the sources are present. Existing data, new monitoring data, or a combination of the two shall be used.

(i) Where new monitoring data is used to meet the requirements of this section, the MS4 permittee shall implement a routine annual monitoring program. The MS4 permittee shall document specific outfalls and/or in-system locations for monitoring and frequency.

(ii) Where the dry weather monitoring program relies on existing data, the permittee shall implement an annual review of the continued representativeness of that data and the need for additional monitoring data to adequately assess current conditions, including the impact of newly implemented nutrient controls mechanisms.

(d) General Monitoring Requirements: The following requirements apply to all monitoring required by 85.6(3)(b) and (c).

(i) All data required by this section shall include, at a minimum, the water chemistry parameters of total nitrogen (total kjeldahl nitrogen plus nitrate-nitrite) and total phosphorus (or components).

(ii) Monitoring shall be conducted using automated samplers and other methods adequate to characterize pollutant variability during the runoff event.

(iii) Information shall be provided on characteristics relevant to the hydrology and land uses of the areas contributing runoff to the MS4 outfalls being targeted by the monitoring, including imperviousness, surface areas, and land use characterization.

(iv) Monitoring locations shall be chosen to minimize influences on storm hydrograph from nonpoint source runoff.

(v) For runoff events, the monitoring shall be representative of the runoff event targeted to the extent practicable. Evaluation shall be based on consideration of factors such as duration, intensity, variations in nutrient concentrations during the period of the event, duration since the previous event, and if the event was a result of rainfall or snowmelt.

(e) Collaborative Monitoring Program Authorization: To comply with the requirements of subsection (b), (c) and (d) above, MS4 permittees may take part in collaborative stormwater monitoring programs to obtain data that is representative of the discharges from the MS4. An MS4 permittee participating in a collaborative stormwater monitoring program is authorized to meet the requirements of this section through development and implementation of a Collaborative Discharge Assessment Plan. Monitoring conducted as part of a Collaborative Discharge Assessment Plan may be from locations that are not from the MS4 outfalls and/or receiving water(s).

(f) Discharge Assessment Plan:

(i) The MS4 permittee shall develop and document a Discharge Assessment Plan that contains information adequate to document compliance with the requirements of subsections (b), (c) and (d) above. For existing dischargers, the Discharge Assessment Plan shall be submitted to the Division, and implementation of the plan shall commence, by March 1, 2013.

(ii) Collaborative Discharge Assessment Plan: The Plan must demonstrate that the collaborative program will provide representative data required in this section. The determination must include, as applicable, an analysis of land uses, imperviousness, and watershed hydrology, precipitation data, and

irrigation practices within the permitted area and the area monitoring shall occur.

(iii) For wet weather discharge assessment, the permittee shall document in the Plan:

(A) the source(s) of data used (i.e., existing data and/or new monitoring data);

(B) which Option (i.e., 1 or 2) the permittee will comply with; and

(C) documentation of the basis for the determination that the data will be representative of current wet weather discharges from the permitted MS4.

(iv) For dry weather discharge assessment, the MS4 permittee shall document in the Plan

(A) the sources(s) of data used (i.e., existing data and/or new monitoring data); and

(B) documentation of the basis for the determination that the data will be representative of current dry weather discharges from the permitted MS4.

(v) The Plan shall include a summary of the evaluation used to determine the monitoring program's compliance with subsections (d)(iv) and (v), above.

(vi) If the Division determines that a Discharge Assessment Plan, or a Collaborative Discharge Assessment Plan, is not adequate to meet the purposes set forth is section 85.6(1) the Plan shall be revised accordingly.

(4) ~~PLANNING AND REPORTING:~~ DATA QUALITY REQUIREMENTS

(a) ~~The permittee will document, and have~~ The entities collecting the samples will document, and make publically available ~~for Division review upon request,~~ the sampling methods, analytical methods, ~~minimum~~method detection limits, required field condition and physical parameters to be recorded at each sampling event, and quality control and quality assurance protocols in a sampling and analysis plan.

(b) The information required under subsection (a~~.~~,) above, may be evaluated by the Division for compatibility with the objectives of this section. Where the Division identifies deficiencies in the protocols/methods being used to meet the objectives of subsection (a~~.~~,) above, the ~~permittee~~entities shall make appropriate revisions such that the Division-identified deficiencies are addressed.

(c) All sampling and analysis shall be performed by the ~~permittee~~entities according to specified methods in 40 C.F.R. Part 136; methods approved by EPA pursuant to 40 C.F.R. Part 136; or methods approved by the Division. The analytical method ~~and PQL~~ for all monitoring conducted in accordance with this regulation shall be capable of quantifying results at or below the ~~applicable concentration in section 31.17(2) and (3).~~following method detection limits (MDL):

Total Phosphorus	0.01 mg/L
Nitrate + Nitrate	0.02 mg N /L
Total Kjeldahl Nitrogen	0.1 mg N /L
Total Nitrogen	0.1 mg/L

All results above the MDL must be reported.

(d) The permittee shall submit a certification to the Division that the sampling and analysis plan is in place and that monitoring is taking place by March 1, 2013.

(5) NONPOINT SOURCE AND UNPERMITTED POINT SOURCE MONITORING

(a) Entities responsible for nonpoint sources and unregulated point sources of nutrients are encouraged to monitor and assess surface water resource quality as identified in Section 85.6(2) to determine the extent and magnitude of nutrient impacts. In addition, the Commission recognizes state water conservation, water conservancy, and special irrigation districts as entities that monitor and assess surface water resource quality and encourages making this data publically available for use in nonpoint source management efforts.

(b) The Division shall collaborate with these entities in developing and implementing a nutrients nonpoint source monitoring program to meet the requirements of this control regulation.

(c) Future monitoring activities are encouraged to coordinate with point source nutrient monitoring, the Colorado Agricultural Chemicals Program, and other relevant local, state, and federal monitoring efforts.

(d) The responsible entities are encouraged to identify potential funding sources and pursue options for monitoring in areas that do not have a current or future nutrient monitoring program.

(6) AVAILABILITY AND REPORTING OF DATA

All data collected under Section 85.6 shall be maintained in an electronic ~~database and shall be made available to the Division upon request either on site during an inspection or~~ form. All Data collected pursuant to this control regulation shall be submitted to the ~~Division's offices for its review. Data collected shall be submitted to the Division on December 31st~~Division by April 15th of each year~~, and~~. The submission shall include ~~data collected from October 1 of~~geographic location of sampling, CDPS permit number (if appropriate), name and identification of the stream flow gage, as follows:

(a) In electronic data deliverable as specified for receipt by the Division; or
(b) Electronic submission to an alternative publically available data repository. If this option is selected, the ~~previous~~Division must be notified by April 15 of each year ~~through September 30 of that year~~and all relevant data must be accessible to the public.

[Placeholder to address reporting of other information developed under this Control Regulation; e.g. stormwater discharge assessment.]

85.7-85.14 RESERVED