

# DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

## Water Quality Control Commission

### REGULATION NO. 72 - CHERRY CREEK RESERVOIR CONTROL REGULATION

#### 5 CCR 1002-72

*[Editor's Notes follow the text of the rules at the end of this CCR Document.]*

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#### **72.1 AUTHORITY**

The Water Quality Control Commission is authorized to promulgate this Control Regulation pursuant to sections 25-8-202(1)(c) and 25-8-205, C.R.S.

#### **72.2 DEFINITIONS**

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

1. "Authority" means the Cherry Creek Basin Water Quality Authority established pursuant to section 25-8.5-101, et seq., C.R.S.
2. "Background sources" include concentrations to the reservoir that are not the result of human-related activities, such as groundwater in its natural condition and precipitation on the reservoir.
3. "Best management practice (BMP)" means the best schedules of activities, prohibitions or practices, operation and maintenance procedures, and other management practices to prevent or reduce the introduction of pollutants into state waters. BMPs include, but are not limited to, structural and nonstructural controls, treatment requirements, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs can be applied before, during, and after pollution-producing activities.
4. "Cherry Creek watershed" consists of all lands that drain into the following: (a) the mainstem of Cherry Creek, from the source of East and West Cherry Creek to the inlet of Cherry Creek Reservoir (Segment 1), including alluvial groundwater; (b) Cherry Creek Reservoir (Segment 2), including alluvial groundwater; (c) all tributaries to Cherry Creek, including wetlands and alluvial groundwater, from the sources of East and West Cherry Creeks (parts of Segment 4), and (d) all lakes and reservoirs in the Cherry Creek Reservoir watershed (Segment 5, in part) as described in the Classifications and Numeric Standards - South Platte River Watershed, Regulation #38 (5 CCR 1002-38). The Cherry Creek Watershed is delineated in Figure 1 attached to this regulation.
5. "Concentration" for the purposes of this regulation only, means the total phosphorus concentration in discharges related to existing or future non-point source and regulated

stormwater discharges, wastewater facility sources, industrial process wastewater sources, individual sewage disposal systems and background sources.

6. "Concentration-Based Control of Phosphorus" means the flow-weighted concentration of total phosphorus in the inflow to Cherry Creek Reservoir that is intended to result in the attainment of water quality standards for Cherry Creek Reservoir.
7. "Designated water quality management agency" means the agency identified ~~by the Denver Regional Council of Governments Metro Vision Clean Water Plan and~~ by the Governor to implement specific control recommendations.
8. "Direct discharge" means any discharge to any surface waters or subsurface waters, including discharge from rapid infiltration basins, related to Cherry Creek or its tributaries, except by land disposal or land treatment. "Direct discharge" does not include discharges from regulated stormwater and background sources.
9. ~~"Disturbed areas" means any site, area or lands in the Cherry Creek watershed where a land disturbance has commenced but has not been permanently stabilized and/or revegetated.~~
- ~~10.~~ "Division" means the Water Quality Control Division of the Colorado Department of Public Health and Environment.
- ~~11. "Enhanced BMP" means a BMP that uses water quality capture volume as the design basis and incorporates one or more of the following treatment technologies: retention, wetlands, filtration, infiltration, or other technology with similar capabilities to reduce phosphorus concentrations in the discharge.~~
- ~~12~~10. "Effluent limitation" means any restriction or prohibition established pursuant to this regulation, the Colorado Water Quality Control Act, or the federal act on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into state waters, including, but not limited to, standards of performance for new sources, toxic effluent standards, and schedules of compliance.
- ~~13~~11. "Flow-weighted phosphorus concentrations" means the total external load, including precipitation, groundwater, stream flow, and ungaged runoff, divided by total inflow volume.
- ~~14~~12. ~~"Individual home construction" means any land disturbance or development for a single home, not including land disturbances for roads, road gutters or road improvements, that disturbs less than one acre of land and where the Owner of the single home holds a permit for construction of only one dwelling within the subdivision, if any, containing the single home.~~
- ~~15.~~—"Individual sewage disposal system (ISDS)" means a system or facility for treating, neutralizing, stabilizing, or disposing of wastewater that is not a part of or connected to a wastewater facility, as defined in this section.

- ~~16~~13. "Industrial process wastewater sources" include, but are not limited to, facilities, or activities that discharge non-domestic process wastewater, such as effluent from construction dewatering and sand and gravel mining or any water that, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. "Industrial process wastewater sources" do not include facilities or activities that discharge into a wastewater facility, as defined in this section. For the purpose of this regulation only, such sources also do not include such activities as hydrostatic testing operations, hydrant flushing, water main repairs, drinking water treatment facilities, dewatering or foundation draining, and swimming pool drainage.
- ~~17~~14. "Land application" is any discharge being applied directly to the land for land disposal or land treatment and does not include discharges to surface waters, even if such waters are subsequently diverted and applied to the land.
- ~~18~~15. "Land application return flow factor" means the return flow factor for land application sites in an augmentation plan decreed by the Colorado District Court, Water Division, or, where an augmentation plan has not been decreed, a study similar to that which would be required to support an augmentation plan.
- ~~19~~16. "Land disposal" means any discharge of pollutant-containing waters being applied to land for which no land treatment is intended.
- ~~20~~17. "Land disturbance" means a man-made change in the natural cover or topography of the land, including grading, cutting and filling, building, paving, excavating and any other activities that may result in or contribute to soil erosion or sedimentation in waters or discharge of pollutants, as identified in section 72.7.2(b) of this regulation, except individual home construction, as defined in ~~this~~ section [72.7.1\(h\)](#).
- ~~21~~18. "Land treatment" means any discharge of pollutant-containing waters being applied to the land for the purpose of treatment.
- ~~22~~19. "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.
- ~~23~~20. "Municipal separate storm sewer system" or "MS4" means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):
- (a) owned or operated by a State, city, town, county, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under section 208 of the CWA that discharges to state waters;

- (b) designed or used for collecting or conveying stormwater;
- (c) which is not a combined sewer; and
- (d) which is not part of a Publicly Owned Treatment Works (POTW).

**2421.** "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.

**2522.** "Point source" means any discernible, confined, and discrete conveyance, including but not limited to, and any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. "Point source" includes conveyances of regulated stormwater. "Point source" does not include irrigation return flows.

**2623.** "Pollutant Reduction Facility (PRF)" means projects that reduce nonpoint source pollutants in stormwater runoff that may also contain regulated stormwater. PRFs are structural measures that include, but are not limited to, detention, wetlands, filtration, infiltration, and other technologies with the primary purpose of reducing pollutant concentrations entering the Reservoir or that protect the beneficial uses of the Reservoir.

**2724.** "Process wastewater" means any water, which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

**2825.** "Regulated stormwater" ~~means stormwater discharges to state waters that are from regulated entities; i.e., industrial or commercial facilities, or municipal separate storm sewer systems regulated under Regulation #61, section 61.3(2)(e), (f), or (g), including those designated by the Division under section 61.3(2)(f)(iii)~~ means stormwater discharges to state waters that are required to be permitted under section 61.3(2)(e), (f) or (g) of Regulation #61.

**2926.** "Stormwater" for purposes of this regulation shall have the same meaning given in Regulation #61 (5 CCR 1002-61).

**3027.** "Wastewater facility" means a system or facility for treating, neutralizing, stabilizing, or disposing of domestic wastewater which system or facility has a designed capacity to receive more than two thousand gallons of domestic wastewater per day. The term "wastewater facility" also includes appurtenances to such system or facility, such as outfall sewers and pumping stations, and to equipment related to such appurtenances. The term "wastewater facility" does not include industrial wastewater treatment plants or complexes whose primary function is the treatment of industrial wastes, notwithstanding

the fact that human wastes generated incidentally to the industrial processes are treated therein.

~~31. "Water quality capture volume (WQCV)" means the runoff retention capacity of a BMP that is designed to capture and treat, at a minimum, the 80th percentile runoff event from an entire site, i.e., 80 percent of the most frequent occurring storms are fully captured and treated and larger events are partially treated.~~

### **72.3 CONCENTRATION-BASED MANAGEMENT STRATEGY FOR PHOSPHORUS CONTROL IN THE BASIN**

Activities necessary to reduce the inflow total phosphorus concentrations to Cherry Creek Reservoir will be implemented throughout the watershed. Point source controls and discharge effluent limitations are specified in Section 72.4.

Activities, which include, but are not limited to, construction of nonpoint source projects, called PRFs, and regulated stormwater projects, called BMPs, shall be implemented and designed to reduce phosphorus concentrations to the maximum extent practicable. The construction of any PRFs and BMPs shall be consistent with the requirements in Section 72.6.1. The Authority and the permittees shall implement these activities prior to the next triennial review, as allowed by applicable funding levels. The Authority shall annually submit an updated list of activities in their annual report to the Commission, due March 31 of each year.

### **72.4 POINT SOURCE EFFLUENT LIMITATIONS**

1. The Division shall not issue industrial process wastewater and wastewater facility discharge permits (pursuant to Regulation #61) or notices of authorizations for use of reclaimed water (pursuant to Regulation #84) to any point source discharges, including new point sources, that allow effluent limitations (permitted phosphorus concentration) exceeding 0.05 mg/l total phosphorus.
2. The Division shall not issue discharge permits (pursuant to Regulation #61) for discharges from drinking water treatment facilities that allow effluent limitations exceeding 0.20 mg/l total phosphorus concentration as a 30-day average except that, at the request of a permittee, the Division is authorized to allow up to a 90-day averaging period for this limit in the discharge permit. Nothing in this regulation should be construed to supersede the Colorado Primary Drinking Water Regulations.
3. Nutrient monitoring for industrial process wastewater sources and wastewater facilities shall be in accordance with the requirements of subsection 72.8.1.
4. No industrial process wastewater source or wastewater facility within the Cherry Creek watershed shall discharge an effluent with a total phosphorus concentration greater than 0.05 mg/l total phosphorus as a 30-day average except that, at the request of a permittee, the Division is authorized to allow up to a 90-day averaging period for this limit in the discharge permit or in the notice of authorization issued pursuant to Commission

Regulation #84. No land application with a return flow factor established in accordance with section 72.4.5(a) or (b) shall discharge a 30-day flow-weighted average phosphorus concentration greater than 0.05 mg/l divided by the return flow factor except that, at the request of a permittee, the Division is authorized to allow up to a 90-day averaging period for this limit in the discharge permit or in the notice of authorization issued pursuant to Commission Regulation #84. Where land application is relying on lysimeters to determine the amount of water returned to ground water in accordance with section 72.4.5(c), the effluent concentration prior to being applied to the land shall not exceed 1.0 mg/l total phosphorus as a thirty-day flow weighted average except that, at the request of a permittee, the Division is authorized to allow up to a 90-day averaging period in the discharge permit or in the notice of authorization issued pursuant to Commission Regulation #84.

5. For purposes of this regulation, return flow factors for land application sites shall be determined as follows:
  - (a) For land application sites with decreed augmentation plans, the return flow factor shall be determined from the applicable augmentation plan.
  - (b) For land application sites with available studies of return flow factors, but no approved augmentation plan, the return flow factor may be determined upon Division approval from the study results.
  - (c) Where no approved augmentation plan or available study exists, or where the Division has not approved the use of an available study, lysimeters shall be installed in accordance with a plan approved by the Division and readings from such lysimeters will be used to determine the monthly volume discharged at each land application site.
6. Whenever a discharger requests a compliance schedule in connection with a permit issuance or permit renewal, the discharger shall (on the same date) notify the Authority of that request, solicit Authority comments, and submit evidence of that notice to the Division. The Division shall not take final action on any compliance schedule until Authority comments are received or 45 days after the date that notice was provided to the Authority, whichever occurs first. This provision shall not apply in the case of minor modifications to permits as defined by Regulation #61, section 61.8(8)(e).
7. For all land application sites, the phosphorus concentration shall be determined by:
  - (a) Phosphorus concentrations for each direct discharge and land disposal site using a return flow factor will be calculated by the following formula:  
$$\text{Applied Phosphorus Concentration (mg/l)} = (\text{Sum of the concentrations of all samples (mg/l as P) for the outfall or land application site for the month} / \text{the number of samples collected and analyzed for that month}) / \text{the return flow factor}$$

- (b) Phosphorus concentrations for each land treatment site using lysimeters will be calculated by the following formula:

Applied Phosphorus Concentration (mg/l) = Sum of concentrations of all samples (mg/l as P) for each lysimeter in the land application site for the month / the number of lysimeters

## **72.5 POINT SOURCE EFFLUENT LIMITATION MODIFICATIONS (RESERVED)**

## **72.6 NONPOINT SOURCE AND INDIVIDUAL SEWAGE DISPOSAL SYSTEM NUTRIENT CONTROLS**

The nonpoint source nutrient controls identified in subsections 72.6.1 through 72.6.2 below shall be implemented.

### **1. NONPOINT SOURCE BEST MANAGEMENT PRACTICES**

- (a) Local governments, individuals, corporations, partnerships, associations, agencies, or other entities with responsibility for activities or facilities that cause or could reasonably be expected to cause nonpoint source pollution of waters in the Cherry Creek Watershed shall adopt and implement/install BMPs and Pollutant Reduction Facilities (PRF) to the maximum extent practicable to reduce nutrient concentrations from such sources.
- (b) The choice of nonpoint source control measures shall be made by such local governments, individuals, corporations, partnerships, associations, agencies, or other entities, either individually or jointly. Entities with responsibility for existing flood and drainage control facilities shall consider application of nonpoint source BMPs for those facilities.
- (c) A prioritized list of future PRFs designed to permanently reduce phosphorus concentration, including a schedule for construction, shall be developed by the Authority and submitted to the Division on an annual basis. These PRFs will be compiled based upon their ability to reduce phosphorus concentrations to the maximum extent practicable. The list of PRFs and associated schedule may be updated as necessary when new information becomes available.
- (d) The Authority shall provide for the long-term operation and maintenance of Authority nonpoint source projects, and individual PRFs shall be operated and maintained by PRF owners, with oversight from the Authority.
- (e) The Division shall collaborate with owners/operators of agricultural or silvicultural facilities in the Cherry Creek Watershed in pursuing incentive, grant, and cooperative programs to study and control nonpoint source pollution related to agricultural and silvicultural practices. Pursuant to section 25-8-205(5), C.R.S., 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 such programs are inadequate and that control regulations are necessary to attain water quality standards in the reservoir.

- (f) The Division shall collaborate with local governments in the Cherry Creek watershed to encourage connection of existing ISDS and new development to central wastewater facilities in an effort to reduce nutrient concentrations from individual sewage disposal systems.

## 2. PUBLIC INFORMATION AND EDUCATION

- (a) The Authority is identified ~~by the Denver Regional Council of Governments Metro Vision Clean Water Plan and~~ by the Governor to implement specific control recommendations as the designated water quality management agency for the Cherry Creek watershed. The Authority shall develop and implement a public information and education program in addition to the stormwater requirements in section 72.7. This program will focus on the prevention of pollution from sources that could be mobilized during storm events 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, individual sewage disposal systems, large lot development greater than one acre, and other potential nutrient sources.
- (b) The Authority shall consult with the Division and other interests in developing the program. The program will be consistent with the voluntary, incentive-based approach and focus on the general public, work force, and local government sectors within the Cherry Creek watershed. The program shall be implemented on an annual basis.

## 3. NONPOINT SOURCE PHOSPHORUS ADJUSTMENT

If voluntary controls on phosphorus contributions from nonpoint sources are not effective in reducing the phosphorus concentration in the inflow to the reservoir and attaining water quality standards, the Commission may adjust the phosphorus concentration outlined in subsection 72.3 of this regulation to attain the chlorophyll a standard.

## 4. LIMITATION ON CONSTRUCTION OF NEW INDIVIDUAL SEWAGE DISPOSAL SYSTEMS

Within the Cherry Creek Watershed in Arapahoe and Douglas counties, no new ISDS shall be constructed within the 100-year flood plain as designated by Urban Drainage and Flood Control District, or the Federal Emergency Management Agency if no Urban Drainage and Flood Control District designation exists. This restriction shall not apply to the replacement of, or improvements to the operation of, existing ISDS systems located within the 100-year flood plain.

## 5. ADDITIONAL PROHIBITIONS AND PRECAUTIONARY MEASURES

If voluntary controls on phosphorus contributions from nonpoint sources are not effective in reducing phosphorus concentration and attaining water quality standards, the Commission may consider the adoption of prohibitions or precautionary measures to further limit nutrient concentrations, including but not limited to, the following nutrient sources:

- (a) Individual sewage disposal systems;
- (b) Sod farms;
- (c) Plant nursery facilities;
- (d) Chemical de-icers;
- (e) Commercial fertilizer retail facilities;
- (f) Phosphate detergents;
- (g) Golf courses; and
- (h) Road and highway sand.

## 6. FLOODPLAIN PRESERVATION AREAS AND CONSERVATION EASEMENTS

The Commission recognizes protection of floodplain, riparian corridor, and other environmentally sensitive lands through public acquisition or conservation easement and restoration of the same lands for nutrient control through erosion control, revegetation or other means, as nonpoint source nutrient controls. The Authority and local governments may collaborate with other entities in pursuing easements, ownerships, and rights to protect the streams, riparian corridors, tributaries, and wetlands in the Cherry Creek watershed.

### **72.7 STORMWATER PERMIT REQUIREMENTS**

#### 1. Definitions

- (a) “Applicable MS4 permit” means the Division-issued MS4 permit that authorizes discharge of stormwater to state waters in accordance with Regulation #61, including anti-backsliding provisions. The Division authorizes several different types of MS4 permits in the basin including individual permits for large MS4s, a general permit for regulated small MS4s that drain to the Cherry Creek Reservoir Basin, and a non-standard small MS4 permit. Section 72.7 of this regulation establishes the minimum requirements for applicable MS4 permits in the Cherry Creek Basin, whereas detailed conditions to meet these minimum requirements are described in the applicable MS4 permits.
- (b) “Construction activity” refers to ground surface disturbing and associated activities (land disturbance), which include, but are not limited to, clearing, grading, excavation, demolition, installation of new or improved haul roads and access roads, staging areas, stockpiling of fill materials, and borrow areas. Construction activity

does not include routine maintenance to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. Activities to conduct repairs that are not part of regular maintenance or for replacement are construction activities and are not routine maintenance. Repaving activities where underlying and/or surrounding soil is cleared, graded, or excavated as part of the repaving operation are considered construction activities unless they are otherwise excluded. Construction activity is from initial ground breaking to final stabilization regardless of ownership of the construction activities. ~~(a)~~

~~(b)~~ “(Common Plan of Development or Sale)” means a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules, but remain related. “Contiguous” means construction activities located in close proximity to each other (within ¼ mile).

~~(c)~~ “(Control Measure (CM))” means any best management practice or other method used to prevent or reduce the discharge of pollutants to waters of the state. Control Measures include, but are not limited to, best management practices. Control Measures can include other methods such as the installation, operation, and maintenance of structural controls and treatment devices.

~~(d)~~ “(Design Standard)” means post-construction Control Measure design standards or base design standards. These performance-based standards include, but are not limited to, options to meet post-construction stormwater quality requirements by treating the Water Quality Capture Volume, implementing runoff reduction measures, attaining a pollutant reduction standard, and treating runoff with a regional stormwater quality control measures or facility. Design standards are further described in the applicable MS4 permits.

~~(e)~~ “(Development Tiers)” mean the three categories of land disturbance associated with development or redevelopment referenced in this regulation for purposes of post-construction stormwater quality requirements:

“Tier 1 development and redevelopment” means land disturbance that results in less than or equal to 500 square feet of impervious area for new development or 500 square feet of increased imperviousness for redevelopment and disturbs less than one acre and is not part of a larger common plan or development or sale that disturbs one acre or more.

“Tier 2 development and redevelopment” means land disturbance that results in greater than 500 square feet of impervious area for new development or more than 500 square feet of increased impervious area for redevelopment and disturbs less than one acre of land and is not part of a larger common plan or development or sale that disturbs one acre or more.

“Tier 3 development and redevelopment” means land disturbance of one acre or more or land disturbance that is part of a larger common plan of development or

sale that disturbs one acre or more. Tier 3 projects are subject to MS4 permit requirements.

- (fg) "Disturbed areas" means any site, area or lands in the Cherry Creek watershed where a land disturbance has commenced but has not been permanently stabilized and/or revegetated.
- (gh) "Individual home construction" means a land disturbance or development for a single home, not including land disturbances for roads, road gutters or road improvements, that disturbs less than one acre of land and is not part of a larger common plan of development or sale, and where the owner of the single home holds a permit for construction of only one dwelling within the subdivision, if any, containing the single home.
- (hi) "MS4 permittee" for the purposes of this section of the regulation only, means the Municipal Separate Storm Sewer System or MS4 that has been issued a stormwater discharge permit by the Division.
- (ij) "Owner," for the purposes of this section of the regulation only, means the owner or authorized representative of the facility or construction project. ~~(b) "Permittee," for the purposes of this section of the regulation only, means the Municipal Separate Storm Sewer System or MS4 that has been issued a stormwater discharge permit by the Division.~~
- ~~(e) "Large lot single family development" for the purpose of this section of the regulation only, means a land disturbance greater than one acre on a single family residential lot with an area greater than or equal to two and one-half acres in size and having a total site imperviousness, including, but not limited to roadways, building footprints, and driveways, less than ten percent gross density.~~
- ~~(d) "Excluded Roadway Project" for the purpose of this section of the regulation only, means activities associated with the maintenance, repair, preservation, and associated minor modifications to roadways, and associated appurtenant features, that do not permanently expand the original footprint of the roadway and do not increase the impervious area.~~
- (jk) "Receiving pervious area" means land area that is capable of infiltrating runoff from impervious areas. Examples of receiving pervious areas include grass buffers, grass swales, other landscaped areas, and permeable pavement. Receiving pervious areas can be used to minimize directly connected impervious area.
- (l) "Stream restoration" means stream or channel improvements including practices such as bed and bank stabilization, riparian buffers, in-stream enhancement, floodplain reconnection and other practices that improve hydrologic, geomorphic and ecological

stream function. The term includes “stream or channel bank stabilization,” “stream or channel reclamation,” and “stream or channel rehabilitation.”

- ~~(e) "Rural road construction and maintenance" for the purpose of this section of the regulation only, means land disturbances greater than one acre for rural residential roads and rural collector roads that serve or are adjacent to large lot single family developments. Rural Roads are typically characterized by having parallel ditches for conveyance of storm runoff, rather than curb and gutter. Although urban roadways sometimes use roadside ditches for runoff conveyance, they are not classified as rural roads. In the context of this regulation, the word road does not include temporary haul roads used for construction purposes. Construction activities occurring within a Census Designated Urbanized Area are excluded from this definition.~~
- ~~(f)(m) "Tier 1 development and redevelopment" for the purpose of this section of the regulation only, means any land disturbance less than one acre that is developed independently of a larger common plan of development or sale, and which results in less than 500 square feet of imperviousness for new development or 500 square feet of increased imperviousness for redevelopment.~~
- ~~(g) "Tier 2 development and redevelopment" for the purpose of this section of the regulation only, means any land disturbance less than one acre that is developed independently of a larger common plan of development or sale, and which results in more than 500 square feet but less than 5,000 square feet of imperviousness for new development, or more than 500 square feet and less than 5,000 square feet of increased imperviousness for redevelopment, including disturbances of existing impervious areas.~~
- ~~(h) "Tier 3 development and redevelopment" for the purpose of this section of the regulation only, means any land disturbance greater than one acre, or which results in more than 5,000 square feet of imperviousness for new development or 5,000 square feet of increased imperviousness for redevelopment, including disturbances of existing impervious areas.~~
- ~~(i) "Trails" for the purpose of this section of the regulation only, means permanent access areas constructed primarily for the purpose of recreation but that also provide access for operations and maintenance. This includes trails that consist, for at least some portion of the trail, of sidewalks adjacent to roadways: "Water Quality Capture Volume (WQCV)" means the volume equivalent to the 80th percentile storm, meaning that 80 percent of the most frequent occurring storms are fully captured and treated and larger events are partially treated.~~

2. The following requirements, at a minimum, shall be incorporated into any Stormwater Permit issued to a Municipal Separate Storm Sewer System (MS4) in the Cherry Creek watershed, in addition to the requirements included in Regulation #61 (5 CCR 1002-61). Permittees may also incorporate requirements into their programs that are more restrictive than those outlined in this control regulation.

At a minimum, the MS4 permit will require that the regulated MS4 develop, implement, and enforce a stormwater management program designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Colorado Water Quality Control Act (25-8-101 et seq., C.R.S.). Implementation of ~~BMPs~~ CMs consistent with the applicable MS4 requirements included in Regulation #61 (5 CCR 1002-61) and the requirements of the subsection herein constitute compliance with the standard of reducing pollutants to the MEP.

- (a) Public education and outreach on stormwater impacts. The ~~permittee~~ MS4 permittee must implement a public education program that includes the following:
  - (1) Distribution of educational materials or equivalent outreach focused on residential, industrial, agricultural, and/or commercial sources that have the potential to contribute significant nutrient concentrations to State waters at a rate that could result in or threaten to result in exceedance of the chlorophyll a standard in Cherry Creek Reservoir. Examples of sources that may need to be addressed by the MS4's program include chemical deicing, retailers with outdoor storage of fertilizers, concentrated agricultural activities such as turf farms and landscape plant facilities, and animal feeding operations.
- (b) Construction site stormwater runoff control.

- (1) Regulated Activities. For disturbances that are greater than or equal to one acre or part of a larger common plan of development or sale that disturbs one acre or more, the MS4 permittee must comply with the applicable MS4 permit and the additional requirements in section 72.7.2.(b)(4)(iii).

For disturbances less than one acre and not part of a larger common plan or development or sale that disturbs one acre or more, the MS4 permittee must develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that disturb land, including, but not limited to, the following, unless otherwise excluded in section 72.7.2(b)(2): ~~The permittee must develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that disturb land, including, but not limited to, the following:~~

- (i) Clearing, grading, or excavation of land;
      - (ii) Construction, including expansion or alteration, of a residential, commercial or industrial site or development; and

(iii) Construction of public improvements and facilities such as roads, transportation corridors, airports, and schools.

~~(2) Individual Homes. Individual Home Construction, including any Land Disturbance or Development for a single home, not including Land Disturbance for roads, road gutters or road improvements, that disturb less than one acre of land and where the Owner of the single home holds a permit for construction of only one dwelling within the subdivision, if any, containing the single home, must be required to meet the requirements of section 72.7.2(b)(5)(i)(D), but is not required to meet the other requirements in section 72.7.2(b) of this regulation.~~

(3) Exclusions.

(i) Automatic Exclusions. The ~~permittee~~MS4 permittee may exclude the following activities from the requirements in section 72.7.2(b) of this regulation.

(A) Agricultural ~~Activities~~activities (i.e., agricultural and silvicultural activities generating nonpoint source discharges, including runoff from orchards, cultivated crops, pastures, range lands, and forest lands, but not Concentrated Animal Feeding Operations~~CAFOs~~). This exclusion does not extend to the construction of facilities or other activities generating stormwater runoff associated with industrial (i.e., construction) activity~~);~~.

(B) Emergency and routine repair and maintenance operations for all underground utilities that does not result in a land disturbance greater than or equal to one acre, or otherwise part of a larger common plan of development or sale~~;~~.

(C) Land ~~d~~Disturbances at residential or commercial subdivisions that already have adequate Construction CMs installed and operating for the entire subdivision, approved in compliance with this regulation and the MS4 permit, as applicable, provided the original owner who obtained approval retains legal authority. If residential, as lot specific development or redevelopment occurs, the homeowner or the original owner shall prevent the erosion and transport of sediment from the property and are required to provide permanent stabilization of the lot, in accordance with the MS4 permittee's regulations.

~~(D) BMPs and Post-construction BMPs installed and operating for the entire subdivision, approved in compliance with this~~

~~regulation, and where the original owner who obtained approval retains legal authority; and~~ Individual home construction that disturbs less than one acre of land is not part of a larger common plan of development or sale and meets conditions in section 72.7.1(h). Roads, road gutters or and road improvements associated with individual home construction are still required to meet section 72.7.2(b) of this regulation.

(~~D~~E) -Routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility (maintenance operations performed by the ~~permittee~~MS4 permittee may still be covered under the Municipal Operations minimum control measure).

(~~E~~F) -Emergency operations related to flood, fire, or other force majeure that does not result in a land disturbance greater than or equal to one acre, or otherwise part of a larger common plan of development or sale.

(ii) Authorized Exclusions. The ~~permittee~~MS4 permittee may exclude the following activities from the requirements in section 72.7.2(b) of this regulation, if authorized through a developed procedure for determination that water quality is adequately protected without imposing the requirements. This procedure may either be on a site-specific basis, upon submission by the owner of a written request for exemption to the ~~permittee~~MS4 permittee, or, if the determination can be simplified to allow for determination by the owner, through certification by the owner to the ~~permittee~~MS4 permittee that the waiver criteria have been met.

(A) Construction Activities with R-Factor Waiver, for the purposes of this section, means the MS4 permittee may exclude the waived activity from being an applicable construction activity if the Division waives requirements for stormwater discharges associated with a small construction activity in accordance with Regulation 61.3(2)(f)(ii)(B) (the “R-Factor” waiver).

The Division may waive the otherwise applicable requirements in a general permit for a stormwater discharge from a small construction activity that disturbs less than five acres where the value of the rainfall erosivity factor (“R” in the Revised

Universal Soil Loss Equation) is less than five during the period of construction activity. The rainfall erosivity factor must be determined using a State Approved method. The operator or owner must certify to the Division that the construction activity will only take place during a period when the value of the rainfall erosivity factor is less than five. If unforeseeable conditions occur that are outside of the control of the applicant for a waiver, and that will extend the construction activity beyond the dates initially applied for, the owner or operator must reapply for the waiver or obtain coverage under a general permit for stormwater discharges. The waiver reapplication or permit application must be submitted within two business days after the unforeseeable condition becomes known. This waiver does not relieve the operator or owner from complying with the requirements of local agencies.

- (~~AB~~) -Construction of a sidewalk or driveway that does not result in a land disturbance greater than or equal to one acre, or otherwise part of a larger common plan of development or sale. A driveway is limited to access for residential development. A sidewalk may be attached or detached from the roadway but where possible should be detached.~~;~~ ~~and~~
  
- (~~BC~~) Underground utility construction that does not result in a land disturbance greater than or equal to one acre, or otherwise part of a larger common plan of development or sale, including the installation and maintenance of all utilities under hard surfaced roads, streets, or sidewalks, provided such land disturbance activity is confined to the area which is hard surfaced and provided that stormwater runoff and erosion from soil and materials stockpiles are confined and will not enter the drainage system~~including the installation and maintenance of all utilities under hard surfaced roads, streets, or sidewalks, provided such land disturbance activity is confined to the area which is hard surfaced and provided that stormwater runoff and erosion from~~

~~soil and materials stockpiles are confined and will not enter the drainage system.~~

- (iii) Additional Exclusions. ~~The Division may allow, at the request of the MS4 permittee, The permittee may allow for~~ additional automatic and/or authorized exclusions, with ~~recommendation from the Authority, approval of the Division,~~ when it can be reasonably shown that excluding the activity will not pose an increased threat to water quality, ~~or that the cost of administering the program for a specific activity with low risk of stormwater pollution outweighs the benefits to water quality and the Additional Exclusion does not conflict with the applicable MS4 permit. or that the cost of administering the program for a specific activity with low risk of stormwater pollution outweighs the benefits to water quality.~~ The Division reserves the right to not allow any additional exclusions.

~~(34)~~ Submittal requirements.

- (i) ~~For land disturbances that are greater than or equal to one acre or part of a larger common plan of development or sale that disturbs one acre or more, the MS4 permittee is regulated by the applicable MS4 permit. For land disturbances less than one acre, and not part of a larger common plan of development or sale that disturbs one acre or more, An Erosion and Sediment Control~~ a Plan describing ~~MS4 P~~permittee-approved construction ~~BMPs~~ CMs for land disturbance regulated by this program must be submitted to and, following adequate review, approved by the MS4 permittee prior to the commencement of ~~l~~Land ~~d~~Disturbances.

~~(45)~~ Required Construction ~~BMP~~CMs.

- (i) ~~For land disturbances that are greater than or equal to one acre or part of a larger common plan of development or sale that disturbs one acre or more, the MS4 permittee is regulated by the applicable MS4 permit. For land disturbances less than one acre, not part of a larger common plan of development or sale that disturbs one acre or more, the following requirements for construction CMs to be implemented by the owner prior to the commencement of land disturbances must be included in the MS4 permittee's program.~~

(A) Reduce stormwater runoff flow to non-erosive velocities when practicable using CMs.

(B) Protect state waters located on construction sites from erosion and sediment damages resulting from land disturbance, using CMs.

- (C) Control sediment before it leaves a construction site. All stormwater runoff from disturbed areas must be managed by at least one sediment entrapment CM before the stormwater exits the site.
- (ii) In addition, the following construction CMs must be required where ground disturbing construction activity has permanently ceased, or temporarily ceased for more than 14 calendar days. Schedules for requiring stabilization and revegetation may be modified by the MS4 permittee to allow for physical considerations, including, but not limited to, constraints on establishing vegetation due to weather, such as temporary excessive soil moisture conditions that are adverse to stabilization or revegetation goals.

  - (A) Stabilize soils. All disturbed areas that remain exposed and where construction activities are not taking place for longer than 14 days shall be stabilized to protect the soils from erosion, using CMs.
  - (B) Revegetate disturbed areas. Within 14 days after construction activity has temporarily or permanently ceased, owners must plant temporary or, where applicable, permanent vegetative cover on disturbed areas, as follows:

    - (I) Temporary revegetation. Owners must provide temporary revegetation on all disturbed areas that will be exposed prior to completion of land disturbance activities. When seeding is not practicable (e.g., growing season constraints) the MS4 permittee may allow for temporary stabilization until planting is practicable.
    - (II) Permanent revegetation. Owners must provide permanent revegetation and/or stabilized landscaping on all disturbed areas that will be exposed for more than two years.
  - (C) Variances. Schedules for requiring stabilization may be modified by the MS4 permittee to allow for special considerations such as stabilizing access areas and areas in close proximity to continuing

construction. Additionally, the MS4 permittee may allow for alternative approaches to stabilization if they can be shown to have erosion control capabilities similar to temporary or permanent revegetation.

(iii) Additional requirement to minimize disturbed areas for section 72.7.2(b)(4). The following requirements for construction ~~C~~**BMPs** to be implemented prior to the commencement of ~~I~~**L** and ~~d~~**D** Disturbances must be included in the permittee's program.

~~(A) Phase Construction.~~ Owner shall schedule construction activities to minimize the total amount of soil exposed, including stockpiles, at any given time in order to reduce the period of accelerated soil erosion. Areas of ~~I~~**L** and ~~d~~**D** Disturbance equal to 40 acres or greater must not be exposed for more than 30 consecutive days without temporary or permanent stabilization.

The ~~Permittee~~**MS4 permittee** may allow authorized exemptions to the 40-acre limit for removal and storage of cut material where geotechnical limitations restrict the use of temporary or permanent stabilization of the stored material (e.g., swelling soils, rock).

The ~~Permittee~~**MS4 permittee** may allow authorized exemptions to the 40-acre limit when the ~~o~~**Owner** can demonstrate that the 40-acre limit is physically and/or financially impracticable. For sites granted this exemption, a phasing and earthwork quantities plan shall be submitted to and, following adequate review, approved by the ~~Permittee~~**MS4 permittee** prior to the commencement of land disturbance activities.

~~Submittal requirements include:~~

~~(I) Phasing Plan showing cut and fill volumes and locations for each Phase and project totals.~~

~~(II) Earthwork Quantity Plan showing cut and fill volumes and locations for each phase and project totals,~~

~~(III) Erosion Control Plan showing specific erosion and sediment controls for each phase.~~

~~(B) Reduce Stormwater Runoff Flow to Non-Erosive Velocities when practicable using BMPs, which include, but are not limited to:~~

~~Swales,~~

~~Roadside swales,~~

~~Slope diversion dikes,~~

~~Terracing/Contouring,~~

~~Slope drains, and/or~~

~~Check dams.~~

~~(C) Protect State Waters Located on Construction Sites from Erosion and Sediment Damages resulting from Land Disturbance, using BMPs such as, but not limited to:~~

~~Waterway crossing protection,~~

~~Outlet protection,~~

~~Temporary diversions, and/or~~

~~Bank stabilization.~~

~~(D) Control Sediment before it Leaves a Construction Site~~

~~(I) All stormwater runoff from Disturbed Areas must be managed by at least one sediment entrapment BMP before the stormwater exits the site, such as, but not limited to:~~

~~Silt fence,~~

~~Filter strips,~~

~~Sediment basins,~~

~~Straw bale barriers, and/or~~

~~Inlet protection.~~

~~(II) Vehicle Tracking. Owners must prevent deposition of sediment off-site by controlling vehicle tracking onto paved surfaces, using BMPs such as, but not limited to:~~

~~Grates, and/or~~

~~Vehicle tracking control pads.~~

~~(ii) The following construction BMPs must be required within 14 days after the commencement of Land Disturbances. Schedules for requiring stabilization and revegetation may be modified by the permittee to allow for physical considerations, including, but not limited to constraints on establishing vegetation due to weather, such as temporary excessive soil moisture conditions, adverse to stabilization or revegetation goals.~~

~~(A) Stabilize soils. All Disturbed Areas that remain exposed and where construction activities are not taking place for longer than 14 days shall be stabilized to protect the soils from erosion, using BMPs such as, but not limited to:~~

~~Mulching,~~

~~Erosion control mats, blankets, and nets,~~

~~Seeding,~~

~~Soil Binders,~~

~~Cover crops, and/or~~

~~Soil Roughening.~~

~~(B) Re-vegetate Disturbed Areas. Within 14 days after construction activity has temporarily or permanently ceased, owners must plant temporary and, where applicable, permanent vegetative cover on Disturbed Areas.~~

~~(I) Temporary Revegetation. Owners must provide temporary revegetation on all Disturbed Areas that will be exposed prior to completion of Land Disturbance activities. When seeding is not practicable (e.g., growing season constraints) the permittee may allow for temporary stabilization until planting is practicable.~~

~~(II) Permanent Revegetation. Owners must provide permanent revegetation and/or stabilized landscaping on all Disturbed Areas that will be exposed for more than two years or for an indeterminate amount of time.~~

~~(C) Variances. Schedules for requiring stabilization may be modified by the permittee to allow for special considerations such as stabilizing access areas and areas in close proximity to continuing construction. Additionally, the permittee may allow for alternative approaches to stabilization if they can be shown to have erosion control capabilities similar to temporary or permanent revegetation.~~

~~(iii5) Inspection, Operation and Maintenance.~~

~~(A) Inspection.~~

~~(i) For land disturbances greater than or equal to one acre or part of a larger common plan of development or sale that disturbs one acre or more, the MS4 permittee is regulated by the applicable MS4 permit.~~

(ii) For land disturbances less than one acre, not part of a larger common plan of development or sale that disturbs one acre or more, ~~(1) These requirements apply:~~

(A) The owner must be held responsible for inspection of construction ~~CM~~BMPs at the following times and intervals at a minimum:

After installation of any ~~C~~construction ~~BMP~~CM;

After any runoff event; and

At least every 14 days.

(HB) For sites where construction activities are completed but final stabilization has not been achieved due to a vegetative cover that has been planted but has not become established, the MS4 permittee may allow for the owner to reduce inspection frequency to once per month.

(B6) Operation and Maintenance.

(i) For land disturbances that are greater than or equal to one acre or part of a larger common plan of development or sale that disturbs one acre or more, the MS4 permittee is regulated by the applicable MS4 permit.

(ii) For land disturbances less than one acre that are not part of a larger common plan of development or sale that disturbs one acre or more, ~~t~~The owner must be held responsible for operation and maintenance of ~~BMPs~~CMs, and must make any necessary repairs to ~~CM~~BMPs immediately after a defect or other needed repair is discovered.

c) Post-construction stormwater management in new development and redevelopment.

(1) Regulated Activities include:

(i) Tier 3 Development or Redevelopment: The MS4 permittee must comply with the applicable MS4 permit and the additional requirements in section 72.7.2.(c)(6) and 72.7.2(c)(7).

(ii) Tier 2 Development or Redevelopment: MS4 permittee must develop, implement, and enforce a program that ensures that a combination of structural and/or nonstructural controls are in place that would prevent or minimize water quality impacts to the MS4 from new development and redevelopment projects unless otherwise excluded in section 72.7.2(c)(3). ~~The permittee must develop, implement, and enforce a program that ensures that a combination of structural and/or nonstructural controls are in place~~

~~that would prevent or minimize water quality impacts to the MS4 from new development and redevelopment projects.~~

- (2) Provisions for specific ~~BMPs~~ CMs or equivalent protection included in ~~Section~~ section 72.7, that for the purpose of reducing nutrient concentrations to Cherry Creek Reservoir go beyond the requirements in the Colorado Discharge Permit Regulations, Regulation #61, for post-construction ~~BMP~~ CMs, do not need to be required prior to discharge to a State water as long as ~~BMP~~ CMs are in place to control stormwater runoff from new development and/or redevelopment in compliance with Regulation #61 (5 CCR 1002-61) and a regional facility(ies) is(are) in place to control phosphorus concentrations to Cherry Creek Reservoir, that result in pollutant removal in compliance with ~~parts~~ sections 72.7.2(c)(~~65~~), 72.7.2(c)(~~76~~), and/or 72.7.2(c)(~~87~~) of this regulation.

~~(3) Individual Homes. Individual Home Construction, including development for a single home, not including for roads, road gutters or road improvements, that disturb less than one acre of land during construction and where the Owner of the single home holds a permit for construction of only one dwelling within the subdivision, if any, containing the single home is not required to meet the requirements in section 72.7.2(c) of this regulation.~~

~~(4)~~ Exclusions.

- (i) Automatic Exclusions. The MS4 permittee may exclude the following activities from the requirements in ~~Section~~ section 72.7.2(c) of this regulation:

(A) Agricultural ~~A~~ activities (i.e., agricultural and silvicultural activities generating nonpoint source discharges, including runoff from orchards, cultivated crops, pastures, range lands, and forest lands, but not Concentrated Animal Feeding Operations ~~AFOs~~). This exclusion does not extend to the construction of facilities or other activities generating stormwater runoff associated with industrial construction activity);

(B) Emergency and routine repair and maintenance operations for all utilities for disturbances less than one acre and not part of a larger common plan of development or sale. ~~underground utilities;~~

(C) Individual home construction.

- (~~CD~~) Land ~~D~~isturbances at residential or commercial subdivisions that already have adequate ~~Post Construction BMPs~~post-construction CMs installed and operating for the entire subdivision, approved in compliance with this regulation, and with adequate capacity to treat any additional discharges;
- (~~DE~~) Routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility (maintenance operations performed by the MS4 permittee may still be covered under the Municipal Operations minimum control measure);
- (~~EF~~) Emergency operations related to flood, fire, or other force majeure that maintain the original line and grade, hydraulic capacity, or original purpose of the facility, provided the land disturbance is less than one acre and not part of a larger common plan of development or sale.
- (~~FG~~) Land disturbance to undeveloped land that will remain undeveloped following disturbance, ~~and will be reclaimed in accordance with subsection 72.7.2(b)(5)(ii)(B);~~
- (~~GH~~) Excluded ~~r~~Roadway ~~p~~rojects; Activities associated with the maintenance, repair, preservation, and associated minor modifications to roadways, and associated appurtenant features, that do not permanently expand the original footprint of the roadway and do not increase the impervious area.
- (~~HI~~) Large ~~L~~ot single family development means a land disturbance greater than one acre on a single-family residential lot, or agricultural zoned lands, with an area greater than or equal to 2.5 acres in size and having a total site impervious area that is equal to or less than 20 percent of the site. using Runoff Reduction Practices, where the Permittee implements a set of requirements and/or standards for such practices with the intent of meeting WQCV requirements for typical sites and expected conditions, which may be used either in place of or in combination with the site-specific calculations and analysis otherwise required by 72.7.2(e)(6)(ii)(K) for runoff reduction practices BMPs; and

(J) Aboveground and underground utility construction, where the activities or maintenance of underground utilities or infrastructure that does not permanently alter the terrain, ground cover, or drainage patterns from those present prior to the construction activity. This includes, but is not limited to, activities to install, replace, or maintain utilities under roadways or other paved areas that return the surface to the same condition. ~~Underground utility construction, provided that stormwater runoff and erosion from soil and material stockpiles are confined and will not enter the drainage system.~~

(K) Stream restoration, as defined in section 72.7.1(l).

(L) PRFs.

(M) Stormwater facilities. MS4 permittees may exclude the installation or maintenance of stormwater facilities associated with flood control and water quality, including but not limited to flood control ponds and post-construction control measures.

(ii) Authorized Exclusions. The MS4 permittee may exclude the following activities from the requirements in ~~S~~section 72.7.2(c) of this regulation on a site-specific basis, upon submission by the owner of a written request for exemption to the MS4 permittee and following adequate review and determination by the MS4 permittee that a permit is not needed to ~~i~~ensure adequate protection of water quality:

(A) Construction of a sidewalk or driveway. Construction of a sidewalk or driveway for disturbances less than one acre and not part of a larger common plan of development or sale. A driveway is limited to access for residential development. A sidewalk may be attached or detached from the roadway.

(B) Rural road construction and maintenance, where road construction and maintenance means land disturbances less than one acre, not part of a larger common plan of development or sale, for rural residential roads and rural collector roads that serve or are adjacent to large lot single family developments. Rural roads are typically characterized by having parallel ditches for conveyance of

storm runoff, rather than curb and gutter. Although urban roadways sometimes use roadside ditches for runoff conveyance, they are not classified as rural roads. In the context of this regulation, the word road does not include temporary haul roads used for construction purposes. ~~provided that the permittee requires post-construction BMPs specific to this activity;~~

(C) Trails, where trails mean bike or pedestrian trails. Bike lanes for roadways are not included in this exclusion. ~~construction provided that permittee requires post-construction BMPs specific to this activity.~~

(D) Maintenance trails, which are permanent access areas constructed primarily for the purpose of recreation but also provide access for operations and maintenance, for disturbances less than one acre and not part of a larger common plan of development or sale. This includes trails that consist, for at least some portion of the trail, of sidewalks adjacent to roadways.

(iii) Additional Exclusions. The Division may allow for additional automatic and/or authorized exclusions, at the request of the MS4 permittee, with recommendation from the Authority. ~~The permittee may allow for additional automatic and/or authorized exclusions, with approval of the Division,~~ when it can be reasonably shown that excluding the activity will not pose an increased threat to water quality, or that the cost of administering the program for a specific activity with low risk of stormwater pollution outweighs the benefits to water quality. The Division reserves the right to not allow any additional exclusions.

(54) Submittal requirements.

(i) Post-construction Plan. For Tier 3 development and redevelopment, the owner must comply with the post-construction CM requirements of the applicable MS4 permit, including, but not limited to, design standards. For Tier 2 development and redevelopment, the owner must submit a post-construction plan in accordance with the requirements in section 72.7.2(c)(5)(ii) to the MS4 permittee for review and approval prior to the construction of the Tier 2 stormwater CM(s).

(ii) Inspection and Maintenance. For Tier 3 development and redevelopment, the owner must comply with the CM inspection and maintenance requirements of the applicable

MS4 permit. For Tier 2 development and redevelopment, the post-construction plan must contain, at a minimum, the following information to address long-term operation and maintenance of post-construction Tier 2 stormwater CMs: ~~Post-construction BMP Plan. A post-construction BMP Plan must be submitted to and, following adequate review, approved by the permittee prior to the commencement of Land Disturbances.~~

~~(ii) Inspection and Maintenance. The Post-construction BMP Plan must also contain, at a minimum, the following information to address long-term operation and maintenance of Post-construction BMPs:~~

~~(A) Procedures for maintenance and inspection protocols to ensure continued effectiveness of BMPCMs, and commitments from responsible agency/oOwner to maintain ~~Post-construction~~post-construction BMPCMs.~~

~~(B) Procedures for dedication by easements or other legal means for access at the ~~Post-construction~~post-construction BMPCM sites for operation, maintenance, and inspection of ~~Post-construction~~post-construction BMPCMs.~~

~~(65)~~ Post-construction BMPCMs.

~~(i) For all development and redevelopment, ~~t~~The MS4 permittee must require the installation, operation, and maintenance of ~~P~~post-construction BMPCMs as follows:~~

~~(Ai) For all Tier 3 development and redevelopment, the MS4 permittee must comply with the post-construction requirements for CMs in the applicable MS4 permit. Minimum performance-based design standards in the MS4 permit must include one or more of the following:~~

~~A) Install post-construction CMs that provide a WQCV designed to capture and treat, at a minimum, the 80th percentile runoff event. The design standard will be further described in the applicable MS4 permit.~~

~~B) Implement runoff reduction practices using CMs designed to infiltrate, evaporate, or evapotranspire a quantity of water equal to 60% of what the calculated WQCV would be if all impervious area~~

for the applicable development site discharged without infiltration. The design standard will be further described in the applicable MS4 permit.

C) Implement other performance-based CMs allowed in the applicable MS4 permit, such as pollutant removal CMs and regional WQCV facilities. Additional performance-based CMs allowed in the applicable MS4 permit may be implemented provided they are at least as protective as section 72.7(2)(c)(5)(i)(A) or 72.7(2)(c)(5)(i)(B).

D) Demonstrate that an alternative CM or site condition provides comparable or better nutrient load reduction relative to one or more of the criteria in section 72.7(2)(c)(5)(i)(A) through 72.7(2)(c)(5)(i)(C).

(ii) For all Tier 2 development and redevelopment, the MS4 permittee must require post-construction CMs that meet one or more of the following criteria:

A) Comply with Tier 3 CM requirements in section 72.7(2)(c)(5)(i).

B) Incorporate receiving pervious areas that are designed to infiltrate at least 60% of the WQCV for the added or increased impervious area. Such practices minimize directly connected impervious areas by reducing unnecessary impervious areas and routing runoff from impervious surfaces over permeable areas to reduce runoff rates and volumes. Where feasible, natural areas should be protected from disturbance and used for this purpose.

C) Demonstrate that an alternative CM or site condition provides nutrient load reduction that is as least as protective as one or more of the criteria allowed in section 72.7(2)(C)(5)(ii)(A) or section 72.7(2)(C)(5)(ii)(B).

~~For all Tier 3 development and redevelopment, the permittee must require installation of post-construction BMPs that provide a WQCV designed to capture and treat, at a minimum, the 80th percentile runoff event. All BMPs must be designed in~~

~~accordance with good engineering practices and the permittee may require additional design restrictions.~~

~~(B) For all Tier 2 development and redevelopment, the permittee must require the installation, operation, and maintenance of Post construction BMPs and/or hydrologic conditions at the site that meet one or more of the following criteria:~~

~~(I) The WQCV storm event is assumed not to leave the site, as demonstrated by suitable hydrologic analysis;~~

~~(II) Runoff is discharged as sheet flow across a grass buffer area, designed in accordance with Urban Drainage Flood Control District Volume 3 requirements.~~

~~(III) Runoff is discharged from the site through a grass swale in combination with implementation of Minimize Directly Connected Impervious Areas (MDCIA) practices.~~

~~(IV) Runoff is discharged from the site through a constructed wetland channel.~~

~~(V) Runoff is discharged across undisturbed and vegetated land a minimum distance of 50 feet or 3 times the distance criteria for grass buffers, whichever is greater, with a slope not exceeding 4 percent over that distance;~~

~~(VI) Allowed discharge of a storm event adequately protects water quality, as demonstrated by a hydrologic analysis accepted by permittee; or~~

~~(VII) Alternative BMPs and/or site condition requirements may be used if they are shown to have comparable or better nutrient removal characteristics for the given use, in comparison to the above listed BMPs/site condition requirements, when properly designed and implemented. These BMPs/ site condition requirements must be determined to be acceptable by the permittee on a case-by-case basis, or, if appropriate, may be added to the menu of acceptable BMPs.~~

~~(Ciii) For all Tier 1 development and redevelopment, the [MS4](#) permittee need not require installation of post-construction [BMPCMs](#).~~

~~(iiiv) Approved BMPs. One or more of the following BMPs shall be required to meet the WQCV. All BMPs must be designed in accordance with good engineering practices; the permittee may~~

~~provide additional design restrictions. Alternative BMPs may be used if they are shown to have comparable or better nutrient removal characteristics for the given use, in comparison to the below listed BMPs, when properly designed and implemented. These BMPs must be determined to be acceptable by the permittee on a case-by-case basis, or, if appropriate, may be added to the menu of acceptable BMPs.~~

- ~~(A) Constructed wetland channel, in conjunction with extended detention basin, retention pond, constructed wetlands basin, porous pavement detention, porous landscape detention, or sand filter extended detention watershed.~~
- ~~(B) Grass swale in combination with porous pavement detention or porous landscape detention.~~
- ~~(C) Constructed wetland channel preceded by modular block porous pavement.~~
- ~~(D) MDCIA. This combination BMP of MDCIA in conjunction with extended detention watershed retention pond, constructed wetlands basin, porous pavement detention, porous landscape detention, or sand filter extended detention basin. At a minimum, for MDCIA, all impervious areas at the development must flow over grass buffer strips before reaching a stormwater conveyance system.~~
- ~~(E) Extended Detention Basins (Dry Ponds).~~
- ~~(F) Retention Ponds (Wet Ponds).~~
- ~~(G) Constructed Wetlands Basin.~~
- ~~(H) Porous Pavement Detention.~~
- ~~(I) Porous Landscape Detention.~~
- ~~(J) Sand Filter Extended Detention Basin.~~
- ~~(K) Runoff Reduction Practices. A combination of planning techniques to reduce runoff peaks, volumes, and pollutant loads from urbanizing areas that includes low impact development (LID) strategies and MDCIA to reduce unnecessary impervious areas and route runoff from impervious surfaces over permeable areas to slow runoff and promote onsite storage and infiltration. The effectiveness of this BMP to reduce peak flows, volumes, and pollutant loads shall be demonstrated by site specific calculations and analysis approved by the MS4.~~

~~(iii) WQCV Alternatives. The permittee may allow alternative BMPs that do not use the WQCV approach or are in combination with the WQCV, if they are shown to have comparable or better nutrient concentration reduction characteristics for the given use when properly designed, implemented, and maintained. These BMPs must be determined to be acceptable by the permittee on a case-by-case basis, or, if appropriate, may be added to the menu of acceptable BMPs. Specifically, the permittee may allow for the owner to use stream stabilization at the development site, and conservation of open space through clustering of development or setbacks from drainage ways, to reduce the need for the WQCV for the whole site.~~

~~(iv) Long-term Operation and Maintenance. For post-construction CMs implemented for Tier 3 development and redevelopment, the MS4 permittee must comply with the applicable MS4 permit. For Tier 2 development and redevelopment, the MS4 permittee must develop a program that requires owners to operate and maintain Tier 2 CMs. For structural Tier 2 CMs, the MS4 permittee must require the owner to provide sufficient legal access for inspection, operation and maintenance by dedicating easements, including plan notes on the Site Plan, or other legal means. The permittee must develop a program that requires owners to be responsible for operation and maintenance of BMPs and requires that they provide sufficient legal access, by dedicating easements for the sites of the permanent BMPs and access thereto for the Owner/agency responsible for operation and maintenance, the permittee, and for inspections, operation, and maintenance.~~

~~(76) Additional **BMP** Requirements. In addition to other requirements in this regulation for post-construction BMPs, The MS4 the permittee must develop, implement, and enforce a program that ensures that facilities with a potential for increased nutrient sources implement source control management strategies to reduce nutrient loading, including a program with these provisions: permanent controls are in place at completed projects at the following: those facilities requiring coverage under both part 72.7.2(e)(1) of this regulation and Regulation #61, section 61.3(2)(e)(iii); and from other designated commercial and industrial facilities as discussed below. The program must address any stormwater pollutant sources at~~

~~these facilities that may require unique management strategies. The permittee shall:~~

- ~~\_\_\_\_\_~~ (i) The MS4 permittee must require the owner(s) to satisfy additional source control management strategies or measures at the time of plan review for uses that have a significant potential to contribute nutrient concentrations to state waters at a higher rate than typical. These facilities must be designed to prevent or reduce the amount of nutrients generated and/or released from the area of land disturbance. This can include the MS4 permittee ~~D~~developing a program to designate commercial facilities on a case-by-case basis or by addition of a general commercial sector, based on a determination that they have a significant potential to contribute nutrient concentrations to ~~s~~State ~~w~~Waters at a rate higher than typical for other commercial or industrial land uses (e.g., stores with outdoor fertilizer storage, facilities with deicing operations). Source control practices at these facilities include, but are not limited to:

~~\_\_\_\_\_ (ii) The Permittee must require Owners to satisfy additional special Post-construction BMP requirements designed to prevent or reduce the amount of pollutants generated and/or released from the area of Land Disturbance, which include but are not limited to:~~

- (A) Covering or enclosing activity in buildings or roofs;
- (B) Providing secondary containment area to collect leaks and spills of fuels, lubricants, and other chemicals;
- (C) Segregating or diverting stormwater runoff away from or around pollutant generating activity; and/or
- (D) Routing site drainage to recycling or otherwise preventing direct discharge of vehicle or equipment wash-water.

(87) Stream Preservation Areas: ~~The following requirements provide special~~Additional standards and procedures are required for Tier 2 and Tier 3 development and redevelopment for Land Disturbances in Stream Preservation Areas, which include Cherry Creek Reservoir, all of Cherry Creek State Park, drainage and discharges to the park within 100 feet of

the park boundary; lands overlying the Cherry Creek 100-year floodplain; and all lands within the 100-year floodplain of Cherry Creek tributaries, as defined by the ~~Urban Drainage and Flood Control~~Mile High Flood District.

(i) Additional BMPCM Requirements. For Tier 2 and Tier 3 ~~n~~New ~~d~~Development and ~~r~~Redevelopment in Stream Preservation Areas, the ~~permittees-~~ MS4 permittee must, in addition to meeting all the ~~Post-~~ post-construction BMPCM requirements in section 72.7.2(c)(~~6~~5) and/or (~~7~~6), require owners to select and implement BMPCMs that promote filtration and/- or infiltration processes ~~where appropriate,~~ to treat the WQCV or meet runoff reduction design standards for all Tier 2 and Tier 3 new development and redevelopment ~~runoff from the developed areas~~ within the Stream Preservation Area. ~~Examples of such BMPs include, but are not limited to:~~

- ~~(A) constructed wetland basins;~~
- ~~(B) sand filter basins;~~
- ~~(C) porous landscape detention; and~~
- ~~(D) porous pavement detention.~~

(ii) Authorized Exclusions. The MS4 permittee may exclude the following activities from the requirements in section 72.7.2(c)(~~8~~7)(i) if

A) where thThe disturbance is the result of implementation of an approved BMPCM, in accordance with requirements in section 72.7.2(c), ~~unless the post-construction BMP is required for new development.~~

B) Construction of roadway, highway, and underground utility crossings, provided construction BMPCMs are implemented as required in section 72.7.2(b) and post-construction BMPCMs are implemented as required in ~~Section~~section 72.7.2(c).

C) Rural road construction and maintenance, except for a land disturbance associated with a rural road within a Stream Preservation Area, and provided that ~~permittee~~MS4 permittee requires post-construction BMPCMs specific to this activity.

D) Those ~~automatic and authorized~~ exclusions defined in section 72.7.2(c)(~~4~~3).

## 72.8 NUTRIENT MONITORING

1. Monitoring of wastewater facilities shall be consistent with the requirements of section 72.4.4 of this control regulation. Wastewater facilities shall monitor nutrient concentrations including, but not limited to, nitrate, nitrite, ammonia, total phosphorus, total soluble phosphorus and orthophosphate.
2. The Authority shall develop and implement, in conjunction with local governments, a routine annual water quality monitoring program of the Cherry Creek watershed and Cherry Creek Reservoir. The monitoring program shall include monitoring of the reservoir water quality and inflow volumes, alluvial water quality, and nonpoint source flows. Monitoring shall include, but not be limited to nitrate, nitrite, ammonia, total phosphorus, total soluble phosphorus, and orthophosphate concentrations.
  - (a) Routine monitoring of surface water, ground water, and the reservoir shall be implemented to determine the total annual flow-weighted concentration of nutrients to the reservoir.
  - (b) Monitoring of PRFs shall be implemented to determine inflow and outflow nutrient concentrations.
3. The Authority shall consult with the Division in the development of the monitoring program to ensure that the monitoring plan includes the collection of data to evaluate nutrient sources and transport, to characterize reductions in nutrient concentrations, and to determine attainment of water quality standards in Cherry Creek Reservoir.
4. The Authority shall consult with the Division and other appropriate entities in development of any water quality investigative special studies.

Special studies may include, but are not limited to, the following areas of investigation:

  - (a) Feasibility study of nutrient removal from point sources;
  - (b) Quantification of effectiveness of nonpoint source concentration-based phosphorus control strategies called PRFs; and
  - (c) Quantification of effectiveness of regulated stormwater concentration-based phosphorus control strategies called **BMP**CMs; and
  - (d) Quantification of the effectiveness of source control **BMP**CMs that include low-impact development techniques.
5. The monitoring data shall be used by the Authority to determine phosphorus fate and transport, calculate annual flow-weighted phosphorus concentrations, document compliance with the applicable water quality standards, analyze long-term trends in water quality for both the reservoir and the Cherry Creek watershed, and calibrate water quality models.
6. The Authority shall maintain all data collected pursuant to this section in an electronic database for evaluation and transfer to the Division and other entities.

## 72.9 REPORTING

1. The Authority shall submit an annual report on the activities required under this regulation to the Commission and Division by March 31 of each year. The report shall include the following categories and items:
  - (a) Point Source Controls: phosphorus concentrations; permit violations; approved site applications; and effectiveness in reducing nutrient contributions.
  - (b) Regulated Stormwater Controls: Sediment and erosion control permit, inspection, and enforcement actions; Construction **BMP**CMs inspection and enforcement actions; Permanent **BMP**CMs construction, inspection, and maintenance actions; Flood control facilities retrofitting, inspection, and maintenance actions; Effectiveness in reducing phosphorus concentration; Funding and monitoring of nonpoint source control projects; and Public information and education actions.
  - (c) Nonpoint Source Stormwater Controls: Effectiveness in reducing phosphorus concentration; Funding and monitoring of PRFs.
  - (d) Riparian and Wetlands Protection: Protection, enhancement, and restoration actions.
  - (e) Concentration-based phosphorus control measures: The annual report shall provide data and information on water quality monitoring, point sources, regulated stormwater sources, nonpoint sources, status of compliance with discharge permit limits and conditions, recommendations on any new or proposed expansion of treatment facilities, and recommendations for improving water quality. The format of annual reports and information within the reports shall provide comparability among previous years.
2. The annual report shall include evidence of decisions and/or agreements for the financing of nonpoint source control projects, the implementation of the regulated stormwater permit requirements, and the adoption and implementation of **BMP**CMs by local governments. The annual report must demonstrate implementation of nonpoint source controls and regulated stormwater controls are reducing phosphorus concentrations into the Reservoir to the maximum extent practicable.

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